AN EMPIRICAL INVESTIGATION OF THE RELATIONSHIP BETWEEN PURCHASING PROFESSIONALS' PERCEPTIONS OF ROLE STRESS AND SELECTED ANTECEDENT AND CONSEQUENT VARIABLES

by

RAGHURAM TADEPALLI

DISSERTATION submitted to the Faculty of the

Virginia Polytechnic Institute and State University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

GENERAL BUSINESS

APPROVED:

Paul F. Anderson, Chair

Jeffrey E. Danes

Noreen M. Klein

Julie L. Ozanne

James E. Littlefield

Thirwall W. Bonham

May, 1986
Blacksburg, Virginia

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Committee Chairman: Paul F. Anderson

Marketing

(Abstract)

Public purchasing professionals bought approximately 500 billion dollars worth of products and services from marketers in 1979; this figure represented 20% of this country's gross national product for that year. Therefore, public purchasing professionals constitute a key segment of interest to marketers. Ascertaining the effects that 'marketer controlled' variables have on the role conflict and role ambiguity of the public purchasing professional can thus contribute to marketing management and to marketing thought.

Two of these variables are the perceived Customer Orientation of the vendor salesperson and the Influence Strategy/s used by the salesperson. Other variables that can provide valuable information to marketers are purchasing professionals' perceptions of Uncertainity and/or Conflict regarding their organizations' performance (or reward/measurement) indexes. These three variables along with experience are hypoth-

esized antecedents to role conflict and role ambiguity. The consequent variables to role conflict, role ambiguity, and experience, are the purchasing professional's perceptions of Satisfaction with the Salesperson, and Satisfaction with Organizational Policies.

Data was collected from a random sample (N=345) of the members of the National Institute of Government Purchasing. The usable response rate was 49.92%. Data was analyzed through the use of LISREL VI. Hypotheses were tested by examining the direction of the LISREL parameters, and the statistical significance of their t-values. Support was found for ten of fourteen hypotheses.

Findings from the study can be used in training salespeople and purchasing professionals; the study also has implications for marketing strategy. The variables being researched can provide insights that can then be used in research in sales management and organizational buying behavior.

ACKNOWLEDGEMENTS

This dissertation would not have been complete without the contributions of several people; it is with a deep sense of gratitude that these contributions are acknowledged.

Dr. Paul Anderson was instrumental in guiding me from start to finish. His patience, and support gave me a great deal of confidence and motivated me to do my best. Inspite of severe demands put on his time during the period during which this dissertation was completed, Dr. Anderson was always there to guide me. I shall always be grateful to him for his unswerving commitment to my professional growth. Dr. Noreen Klein also contributed tremendrously to the quality of this dissertation through her painstaking attention to detail. More importantly, Drs. Anderson and Klein have had a great influence on me as a person. Their commitment to excellence, their professionalism, and their high ethical standards make them ideal role models. I can repay them only by fulfilling the expectations they have of me.

Sincere thanks to Dr. Jeff Danes for his invaluable help in data analysis. Dr. Danes was always available to sort out problems that cropped up during data analysis; further, he was always very encouraging. I am very grateful to Drs. Jim Littlefield, Thirwall Bonham, and Julie Ozanne, for their advice and helpful comments in the preparation of this dissertation. I owe a special debt of gratitude to for her superb and timely typewriting, and to and , for their willingness to help whenever the need arose.

I am also extremely grateful to ·, Executive Director, National Institute of Government Purchasing Inc., and , President, Virginia Association of Governmental Purchasing, for allowing me to use their associations' members as samples for the final data collection and pretest respectively.

, Purchasing Officer, Virginia Tech, also contributed to this dissertation through his incisive comments and his very helpful attitude.

My sisters and my mother provided unquestioned support and encouragement for which I am eternally grateful. I would also like to acknowledge the positive influences of the late , who passed away while I was working on the dissertation, and the late , to whom my family is indebted. Finally, without the unquestioned help and love of my wife I could not have completed this dissertation. Indeed, had she not placed her career 'on hold' for five years, I would not have been in a position to finish as soon as I did. My feelings of gratitude towards her simply cannot be put into words.

I dedicate this dissertation, with love, to my wife and to our children, and ; they have truly enriched my life.

TABLE OF CONTENTS

Appendix

LIST OF TABLES

LIST OF FIGURES

Figure

Chapter I

INTRODUCTION

OVERVIEW

The first section of this chapter identifies the need for the study. Next, models of organizational buying behavior relevant to this study are briefly discussed. Subsequently, the reasons for studying the role perceptions of purchasing professionals are discussed, and the objectives of the study specified. Finally, the envisioned contributions of the study to marketing management are highlighted.

NEED FOR THE STUDY

The causes and deleterious effects of role conflict and role ambiguity on salespeople have received considerable attention in marketing (Walker, Churchill, and Ford 1975; Churchill, Ford and Walker 1976; Ford, Walker and Churchill 1976; Oliver & Brief 1977-1978; Teas, Wacker, and Hughes 1979; Teas 1983; and Behrman and Perreault 1984). The causes and effects of role conflict and ambiguity on purchasing professionals however have been ignored. This is unfortunate because purchases of materials and supplies for production represent approximately fifty percent of sales (Brand 1972). However, the status of the purchasing function within the organization seems to be improving. The recession of the early 1970's resulted in material shortages causing purchasing professionals to be charged with seeking alternative sources

of supply and even substituting materials in order to meet production schedules. This chain of events led to the re-evaluation of the purchasing function and the role of the purchasing professional. The purchasing function was given more responsibility and a greater corporate status (Spekman 1977).

Nonetheless, to date there is only one comprehensive study on the role stress of the purchasing professional in marketing (Michaels 1983), and there have been no publications in any of the premier marketing journals (JM and JMR). A possible reason for the lack of interest in the role conflict and role ambiguity of purchasing professionals may be that marketers are only interested in determining how best to sell their products and services to them. Therefore, while the interest in role stress of salespeople is motivated by a desire to reduce (or at least help them cope with) role conflict and role ambiguity so they can perform their duties more effectively and efficiently, the role stress of purchasing professionals has not been seen in the same light.

> Salesforce role theory has sought to identify characteristics of the sales rep's task (organizational) environment that support or undermine salesforce morale and effect. One central premise of much of this research is that special characteristics of the salesforce are conducive to a stressfull work situation, and that this job stress may have a deleterious effect on a salesrep's job outcomes (Behrman and Perreault 1984, p. 9).

The underlying reason for the interest in the role conflict and role ambiguity of the salesperson is that the person is a Boundary Role Person. Boundary Role Persons' are those people (marketing and sales, purchasing professionals, personnel recruiters, etc.,) whose activities

place them at organization boundaries for the purpose of affecting transactions with the environment (Adams 1976).

The Boundary Role Person is: 1) more distant physiologically, organizationally, and often physically from other members of the organization than they are from each other, and is also closer to the external environment and professionals of external organizations; 2) the Boundary Role Person represents his/her organization to the external environment; and, 3) the Boundary Role Person is the organization's professional of influence over the external environment.

In addition, the Boundary Role Person's role set (i.e., those who depend on him/her to perform his/her role so they can perform theirs) consists not only of those within the organization, but also those representatives of the (external) organizations who interact with him/her. For a purchasing professional (for a given transaction) the role set may include relevant departments within the organization and also the salesperson representing the vendor organization.

It is hoped that this research will prove to marketers that the purchasing professional is worth researching, and that marketers can influence purchasing professionals' role conflict and role ambiguity (through the salesperson) with an eventual impact on satisfaction with the seller.

RESEARCH ON PURCHASING PROFESSIONALS

Research on purchasing professionals has fallen under the broad rubric of Organizational Buying Behavior. Research in organizational buying can be broadly categorized into two streams: single decision participant studies, and multiple decision participant studies (Moriarty 1983). The majority of single decision participant studies focus on purchasing professionals, whereas multiple decision participant studies concentrate on (multiple person) 'buying centers'.

Literature reviews pertaining to these two streams of research and to the various models of organizational buying behavior have been published elsewhere (cf: Johnston 1981; Moriarty 1983). For the purpose of this study only those models considered relevant will be briefly discussed. These models are: the Ego-Enhancement model, the Self-Aggrandizement model, the Perceived Risk model, and the Reward/Measurement model.

Relevant Models of Organizational Buying Behavior

Self-Aggrandizement Model

According to Webster and Wind (1972), the Self-Aggrandizement Model highlights the desire of buyers to use their position in the organization as a means of obtaining favors from potential vendors. Buyers may therefore request or simply accept when offered, such gifts as entertainment, dining, tickets to sports events, or even cash.

There is the risk though that buyers will be offended by an offer of financial rewards. Appealing to the buyers' ego's can achieve the same purpose with lesser risk for the vendor. This is the objective of the Ego- Enhancement Model.

Ego-Enhancement Model

The Ego-Enhancement Model recognizes that the buyers are individuals with a self concept that is valuable. One way to cater to this self-concept is for the saleperson to make statements or behave in a manner that recognizes the buyers' individuality and worth as human beings (Webster and Wind 1972). The self-aggrandizement model, and the ego-enhancement model, focus on emotional (or non-economic) factors in organizational buying. Another such factor is perceived risk.

Perceived Risk Model

The Perceived Risk Model suggests that buyers are motivated more to reduce their perceived risk than to maximize any potential pay-off. Lazo (1960) for example, states that "fear is one of the major influences in industrial buying: fear of displeasing the boss; fear of making a wrong decision; fear of losing status; fear, indeed, in extreme cases, of losing one's job" (p. 258). The perceived-risk model, hence emphasizes the compromises associated with decision making.

Sheth (1973) suggests that buyers use the following strategies in order to reduce their perceptions of risk: reliance on suppliers orien-

tation; development of strong source loyalty; search for information; reliance on credible sources such as personal friends and experts; and, greater deliberation, thinking, and planning in high-risk situations. Another factor that can influence buyer behavior is the perception of uncertainty and/or conflict regarding the organization's reward/measurement indexes. The model of organization buying behavior that considers the influence of such perceptions on buying behavior is the Reward/Measurement model.

Reward/Measurement Model

The Reward/Measurement Model (Anderson and Chambers 1985), is based on the central assertion that organizational buying behavior is best understood as work behavior. The model consists of two submodels: the Motivational model, and the Group Consensus model. The Motivational model is heavily reliant on Expectancy theory and concerns itself with the role of rewards, the role of the measurement indexess, and the role of feedback in influencing work behavior. The group consensus model deals with consensus formation, social influence, group rewards, coalition formation, and their influence on work behavior. The Reward/Measurement model has inspired two empirical studies (Chambers 1983; and Morris 1983), making it one of the two complex models (the other being Industrial Market Response model) that have been empirically tested.

NEED FOR STUDYING ROLE PERCEPTIONS IN ORGANIZATIONAL BUYING

Neither single decision participant studies nor multiple decision participant studies seem to have made much of a contribution to knowledge in organizational buying. Both streams focus on individuals either singly (purchasing professional) or on groups (buying center). However, it can be argued that these individuals are essentially fulfilling certain roles. From this perspective, an organization is structured around people fulfilling certain roles. Relationships in an organization can thus be conceptualized as relationships between roles, rather than relationships between people. Behaviors and tasks are also functions of roles. Thus, the purchasing professional behaves and performs tasks commensurate with his/her role, as does, say, the President of the organization. No matter who occupies the role of the purchasing professional in an organization, certain behaviors and tasks are expected of that person. Therefore, the concept of role and role theory can be used to bridge the gap between the organizational and the individual unit of analysis (Johnston 1981).

Extant theory on roles in Organizational Buying Behavior

The concept of roles and their usefulness in understanding organizational buying behavior has been recognized in existing literature. Webster and Wind (1972) state that that "there are several distinct roles in the buying center: users, influencers, buyers, deciders, and gatekeepers. Understanding these roles will help one understand the nature

of interpersonal influence in the buying decision process" (p.77). Role perceptions also play an important part in the Reward/Measurement model of organizational buying behavior (Anderson and Chambers 1985).

Objectives of this research

This research therefore is an attempt to bring role perceptions of the purchasing professional within the domain of marketing management. The fact that the salesperson of an (external) organization is part of the role set of the purchasing professional provides the basis for this research. The objectives of this research are to determine whether:

> (1) selected vendor organization controlled variables can be related to role conflict and/or role ambiguity for the purchasing professional;
>
> (2) role conflict and/or role ambiguity will have dysfunctional consequences for the salesperson (buyer dissatisfaction with seller), and for the organization (buyer dissatisfaction with organizational policies); and,
>
> (3) role conflict and/or role ambiguity can be related to perceptions of uncertainty and/or conflict regarding the organization's reward measurement indexes resulting in buyer dissatisfaction with seller, and with organizational policies.

MANAGERIAL IMPLICATIONS

Sales Management

Sales management can benefit tremendously from this research. Managers can know what effect seller controlled variables (customer orientation of salesperson, and influence strategy used by salesperson) may have on the role conflict and/or role ambiguity of purchasing pro-

fessionals. Further, they will be able to know how they will be affected by role conflict and or role ambiguity. For example, if the results of this research show that purchasing professionals who perceive role conflict and/or role ambiguity are less satisfied with sellers, then sales management will be able to train their salespeople not to use selling strategies that can cause role conflict and/or role ambiguity for the purchasing professional.

Purchasing professionals and Purchasing Management

Purchasing professionals and managers can benefit because they can be informed that role conflict and/or role ambiguity can be caused by salespeople. Training programs can emphasize how purchasing professionals can cope with such role conflict and/or role ambiguity. Though a purchasing professional is dissatisfied with a seller, he/she cannot show his displeasure in a manner that may jeopardize the relationships between the two organizations. In such instances, training programs to help purchasing professionals cope with role stress may prove to be very useful. Such information can also be incorporated into sales management, and purchasing management textbooks so that students interested in careers in these areas are made aware of the challenges they can face because of the nature of the job.

As a first step towards achieving the objectives of the study and making the contributions suggested above, the concept of role and other related concepts will be introduced, and literature on role theory reviewed, in the following chapter.

Chapter II

ROLE : CONCEPTS AND LITERATURE REVIEW

OVERVIEW

This chapter begins with a definition of the concept of role and then defines role concepts. Next, variables identified in marketing literature as antecedents, consequences, and moderators of role conflict and role ambiguity are identified, and research pertaining to these variables discussed. Finally, a summary of the literature is offered.

THE CONCEPT OF ROLE

In all those situations in which complementary activities are not a direct function of symbiotic biological needs or obvious situational requirements, certain forms of behavior have been sanctioned by people, as acceptable in social relationships. For example, the person who calls the meeting to order and recognizes speakers does so in the role of chairperson. Different individuals may play this role in a different manner; one person may be scrupulously fair and conscientious, whereas another may be heavy handed and partisan. Nevertheless, the role of chairperson is the central fact for understanding the behavior of the individual presiding over the group. The role of chairperson makes certain types of decisions incumbent on the person, and also sets definite limits to that person's behavior in the meeting.

Standardized or institutionalized behavior of the kind described above is called role behavior. Within an organization there are several roles that require their incumbents to behave in a certain prescribed or standardized manner. A network of such standardized role behaviors constitutes the formal structure of an organization.

The concept of role has always enjoyed preeminence in social psychology. As early as 1926, Park stated that, "everyone is always and everywhere, more or less consciously, playing a role..... It is in these roles that we know each other; it is in these roles that we know ourselves" (p. 37). Role was used by Mead (1934) to explain the origins of social behavior, and Parsons (1951) and Merton (1957) considered it essential for understanding social action and social structure. Following this lead, Katz and Kahn (1978) have also given the role concept a central place in their theory of organizations.

The remainder of this chapter will seek to address different concepts that derive from the term "role". Concepts such as role sending, received role, role episode, role conflict, and role ambiguity are explained. The different kinds of role conflict will also be briefly identified. Attention will then be focused on a review of the literature dealing with role conflict and role ambiguity. To enable a comprehensive (and coherent) analysis, antecedents, consequences, and moderators (in that order) of role conflict and role ambiguity will be discussed. The discussion will be limited to those antecedents, consequences, and moderators found in marketing journals. However, results of research not

discussed will be identified in Table 1 (antecedents), Table 2 (consequences) and Table 3 (moderators).

Role Concepts

The preceding discussion identified the meaning of the term "role," and also showed how the concept has had a long history in such diverse fields as anthropology, sociology, and social psychology. The present section will provide a definition of the concept of "role", and identify the different kinds of roles.

Within an organizational context, the term "role" can be defined as a set of expectations applied to the incumbent of a particular position by the incumbent and by role senders within and beyond the organization's boundaries (Banton 1965; Gross, Mason, and McEachern 1958; Hunt 1971). Role behavior (i.e., the behavior of a person in a role), refers to the recurring actions of an individual, appropriately interrelated with the repetitive activities of others so as to yield a predictable outcome (Katz & Kahn 1978). According to Kahn et al. (1964), associated with each office is a set of activities, which are defined as potential behaviors. These activities constitute the role to be performed, at least approximately, by any person who occupies that office. The means by which organizations attain such predictable outcomes can be understood by such role-related concepts as : role set, role expectation and role pressure.

Role Set

The role set constitutes all of the significant others, inside and outside the organization who can influence the behavior on the job of a person. Thus, for a purchasing professional, the role set includes all those who can influence that person's behavior on the job. Also included in the role set are his/her family members, and salespeople representing other organizations, who though not members of the organization can influence the purchasing professional's behavior on the job. Each member of the role set influences the behavior of the focal person through their role expectations.

Role Expectations

All members of a person's role set depend on that person's performance in some fashion; they may be rewarded for it, or they may require it in order to perform their own tasks. Since they have a stake in the focal person's performance, they develop beliefs and attitudes about what he/she should and should not do as a part of his/her role. These prescriptions and proscriptions held by members of a role set are called role expectations. Such expectations are important because it is with reference to these that the focal person is evaluated by members of his role set. These expectations are communicated or 'sent' to the focal person. In their most basic form, they are attempts to influence the focal person and ensure behavior that is in conformity with the expectations of the role senders. Part of role expectations (of the focal

person) are communicated through an organization's reward/measurement indexes. Others sending role expectations can include co-workers, and family members.

Role Sending

Role sending can be of many kinds: instructions about preferred behaviors and behaviors to be avoided, information about rewards and penalties based on role performance, and indexes of performance evaluation. Role sending can be categorized along dimensions of sign (prescriptive or proscriptive), magnitude (strength of the influence attempt), specificity (extent to which expected behaviors are made concrete and detailed), intensity (extent to which the focal person is allowed freedom of choice in complying or refusing compliance) and range of conditions under which compliance is intended (Gross, Mason, and McEachern 1958). When the behavior of the focal person indicates compliance with role expectations, then the role senders monitoring of the focal person's activities is inconspicuous. However, if the role person's behavior indicates noncompliance with expectations, then the role senders actively monitor the focal person's performance.

The act of role-sending is of crucial importance because no matter how the role expectations are 'sent', they are received and interpreted by the focal person in light of that person's perceptions of the role. The importance arises because transforming expectations into performance indexes that can be clearly understood by the focal person is ea-

sier said than done. For some roles (e.g., purchasing professional) role sending becomes even more difficult because of the difficulty in measuring a purchasing professional's performance (Anderson and Chambers 1985). As suggested earlier, role sending has to be as clear as possible, because it is interpreted in light of the focal persons own perceptions regarding the role.

Received Role

The received role consists of the focal person's perceptions and cognitions of what was sent. Ideally, the received role should correspond to the sent role. In reality, there may be differences between the two due to properties of the senders, the focal person, the content of the communication, the clarity of the communication, etc. When sent role is received and interpreted by the focal person as illegitimate or coercive, they have the potential to arouse strong resistance by that person, resulting in outcomes different from or even opposite to the expected behavior. Other factors that can influence the focal person's perceptions regarding a sent role are: the nature of the task, previous experience, the ability of the focal person, the motivation to comply (a function of the reward-measurement indexes), the attractiveness of the rewards (extrinsic or intrinsic to the focal person), and the perceived probability that expenditures of effort will lead to those rewards.

The received role (as influenced by factors identified above) leads to role behaviors. Role behavior is the response of the focal person to the sent and perception influenced received role. These four concepts; role expectations, sent-role, received role, and role behavior, can be thought of as constituting a sequence or role episode (Katz & Kahn 1978). The role episode model is presented in Figure 1.

As the figure shows, the four concepts: role expectations, sent-role, received role, and role behavior are connected to one another in a causal sequence. However, there is also a feedback loop: the degree to which a person's behavior conforms to the expectations of the role set, at a point in time, will affect the expectations at the next moment. Influencing these expectations will be the role set's evaluations of the focal person's response to their previous role sending.

The process of role-taking within the organization is simple when a role involves only one activity, involves (relatively) little contact with others, and when it does is limited to the same level, in the same department. Actually, a role involves several activities, which may require interacting with several role sets, leading to several sent roles. For example, a purchasing professional at any one time, may have to deal with several different departments with regard to different purchase decisions, and (to complicate matters further) deal with different people in the same department for different purchase decisions. Further, the purchasing professional has to deal with salesperson's representing other organizations (who are members of the role set) and also family mem-

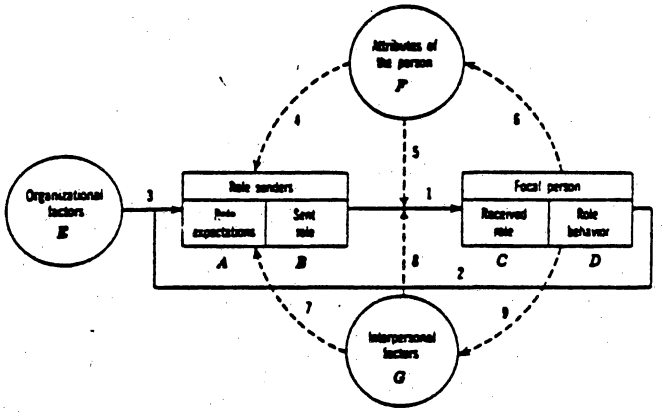


FIGURE 1

THE ROLE EPISODE MODEL

Source : Katz, Daniel and R.L.Kahn (1978), The Social Psychology of Organizations, New York : John Wiley and Sons, p.196.

bers. Thus, at any one time the purchasing professional has several role sets, sent roles, received roles all of which expect behavior to be organizationally salient (as determined by the reward/measurement indexes). It is these multiple roles and multiple expectations that can result in the focal person perceiving role conflict and/or role ambiguity.

Role Conflict

Various members of the role set may hold quite different expectations toward the focal person. Such expectations can at any given time impose pressures on the focal person towards different kinds of behavior. When there is a simultaneous occurrence of two or more role expectations such that compliance with one would make compliance with the other more difficult, the resulting consequence is called role conflict (Katz & Kahn 1978). For example, if the purchasing professional is being evaluated on the amount of price concessions obtained from a vendor, and the requisitioning department insists that the material be purchased from a particular vendor who charges (relative to competition) high prices, and who is not willing to offer price concessions, then the purchasing professional may perceive role conflict. The expectations as set forth in the reward measurement indexes would have the purchasing professional behave in a certain manner. On the other hand, a member of the role set (requisitioning department) wants the purchasing professional to behave in another manner that may be personally dysfunctional from a reward-measurement perspective.

Several types of role conflict can be identified. These are: intra-sender conflict, inter-sender conflict, inter-role conflict, and person role conflict. These will be discussed now.

Intra-Sender conflict : Intra sender conflict occurs when different prescriptions and proscriptions from a single member of the role set are incompatible.

Inter-sender conflict : Inter-sender conflict can occur when expectations of one role sender clash with the expectations of another role sender.

Inter-role conflict : Inter-role conflict may result when expectations associated with membership in one organization (or group) conflict with expectations stemming from another group.

The above three kinds of role conflict are types of sent role conflict. Another type of conflict is that which arises due to a combination of sent pressures and internal forces. For example, the internal values of a person may clash with the needs and expectations of the person's role set thereby resulting in person role conflict.

Person-role conflict : Person role conflict can occur when role requirements violate a focal person's moral values. Alternatively, a focal person's goals may cause behaviors that are not acceptable to members of the role set.

Another form of role conflict is role overload. Role overload can result when different members of the role set have different but legitimate expectations all of which are compatible if one were to ignore the

time factor. Given a certain amount of time however, the focal person may find it impossible to meet all of these expectations. In such a situation, the focal person may have to prioritize these various expectations; such conflict of priorities can result in role overload. Much of role conflict can be thought of as inadequate role sending. Lack of agreement or coordination among role senders produces a pattern of sent expectations which are incompatible or which take inadequate account of the needs and abilities of the focal person. A different pattern of inadequacy in role sending can lead to role ambiguity.

Role Ambiguity

Role ambiguity can be defined as involving a lack of understanding on the part of the role incumbent of the behavioral expectations that are held for the role, and/or a lack of predictability about the outcomes of role behavior (House & Rizzo 1972). Katz & Kahn (1978) state that role ambiguity simply means uncertainty about what the occupant of a particular office is supposed to do. Walker, Churchill, and Ford (1975) state that perceived role ambiguity occurs when the salesman (incumbent) does not feel he has the information to perform his role adequately, and when he is uncertain about what the members of his role set expect of him. However, Churchill, Ford, and Walker (1976) define role ambiguity as the degree to which a salesperson does not feel he has the necessary information to perform his job adequately; when he is uncertain about what his role partners expect of him, how to act to satisfy

those expectations, or how his ultimate performance will be evaluated. Behrman & Perreault (1984) define role ambiguity as the degree to which a sales rep is uncertain about others' expectations with respect to the job, the best ways to fulfill known role expectations, and the consequences of different aspects of role performance.

It would appear therefore that most of the research in marketing on role ambiguity takes after the House & Rizzo (1972) definition of role ambiguity. In view of the assertion that purchasing performance is difficult to evaluate due to a lack of proper indexes (Anderson and Chambers 1985), the purchasing professionals' role is susceptible to role ambiguity. There can be several organizational sources of ambiguity. Incumbents can be unclear about;the scope of their responsibilities; about objects and events that recede in space and time; consequences of actions (to themselves); how they will be evaluated; and whether those who are evaluating are satisfied with their performance or not. All incumbents (in the same role) may not experience the same intensity (or amount of) ambiguity. Experience, age, tenure in the organization, are some of the factors that can cause variations in ambiguity experienced by incumbents in the same role.

Salience of Role Conflict and Role Ambiguity

The salience of role conflict and role ambiguity lies in their relationships with attitudes, behaviors, and psychological conditions such as: dissatisfaction (with the job itself, with co-workers, with pay, with

supervision, with customers and overall), lack of commitment, low performance, anxiety-stress, and various psychomatic illnesses. More specifically, role conflict has been found to be positively related to job related tension and anxiety, and low levels of job satisfaction (Kahn et al. 1964; Greene & Organ 1973). Prolonged exposure to high levels of role conflict has also been linked to an increased incidence of coronary disease (Sales 1969). Similarly, role ambiguity has been associated with mental anxiety and tension and less job satisfaction (Rizzo, House, & Lirtzman 1970). Such results however, have not been consistent across all studies. For example, Van Sell, Schuler & Brief (1981) concluded that the relationship of organizational commitment to role conflict was unclear. On the other hand Fisher & Gitelson (1983) state that a meta-analysis of the role conflict literature shows a correlation of -.25, based on 755 subjects from six samples with negligible unexplained variance between samples.

The following analysis will therefore attempt to review, exhaustively, the literature on role conflict and role ambiguity with the objective of identifying what is known and (not known) with regard to the antecedents, consequences and moderators of these variables. The discussion will however limit its focus to those antecedents, consequences, and moderators found in the <u>marketing literature</u>. <u>All relationships, unless otherwise mentioned, are statistically significant at the .05 level or better</u>.

ANTECEDENTS TO ROLE CONFLICT AND ROLE AMBIGUITY

Various organizational and interpersonal variables have been researched as antecedents to role conflict and role ambiguity. Antecedents researched include -- boundary spanning, participation in decision making, closeness of supervision, performance feedback, and, organizational characteristics. The research dealing with these antecedents is discussed now.

Boundary Spanning

Boundary spanning is easily the most frequently used antecedent to role conflict and ambiguity. Boundary spanners are those employees whose role set is comprised of not only other employees within the organization, but also employees of other (external) organizations. The role of marketing and sales personnel, purchasing professionals, personnel recruiters, admission and placement staff among many others are called boundary roles (Adams 1976).

Kahn et al. (1964) in a study of 53 employees of six organizations and 725 labor force members established that contact across company boundary (i.e., boundary role) was positively associated with role conflict and role ambiguity. Keller and Holland (1975) investigated 51 professionals in a government R & D organization and found that there was no relationship between role conflict and boundary spanning activities. However, they found that boundary spanning activities were negatively associated with role ambiguity. Miles (1976) in a study of 61 employees

of R & D organizations split boundary spanning activities along dimensions of linking and coordination, information transfer, and feedback dissemination. His results showed that role conflict was positively associated with linking and coordination and information transfer, and not related to feedback dissemination. Role ambiguity on the other hand was negatively associated with information transfer and was not associated with linking and coordination, and feedback dissemination.

In another study of 142 employees of nine government R & D organizations Miles (1976b) found that role conflict was positively associated with boundary spanning activities whereas no relationship was found between role ambiguity and boundary spanning activities. In yet another study, Miles (1976c) investigated 202 employees of nine R & D organizations and established that role conflict was positively associated with boundary spanning activities, whereas role ambiguity was negatively associated with boundary spanning activities.

In seeking to explain the finding of a negative relationship between role ambiguity and boundary spanning activities, Miles (1976) suggested that the result was due to the atypical characteristics of his sample (R & D employees). Fisher and Gitelson (1983) however report that the negative relationship between role ambiguity and boundary spanning activity has been replicated in another study by the second author.

A posthoc explanation offered by these authors is that individuals in boundary roles are the targets of a great deal of role sending. Role set members (within and outside the organization) have an interest in

making the incumbent clearly aware of their expectations. Thus, ambiguity would be low, whereas conflict could be high (especially if these expectations are incompatible). Walker, Churchill, and Ford (1975) used a surrogate measure of boundary spanning activity: innovativeness required, in their study of 265 industrial salespeople. They found that both role conflict and ambiguity were not significantly related to boundary spanning activity.

Behrman and Perreault (1984), used innovativeness required and integration required as surrogates for boundary spanning. Their research showed that innovativeness required was positively related to role conflict, as was integration required. Surprisingly, they did not hypothesize any relationship between these two variables and role ambiguity. However, the results showed that integration required was negatively correlated with role ambiguity, whereas innovativeness required was not related (significantly) to role ambiguity.

It should be noted in this regard that the manner of operationalization may have contributed to the variance in results across studies. Keller and Holland (1975) operationalized boundary spanning activity as a measure of access to information from others outside and inside the organization. Miles (1976) however measured boundary spanning activity as the frequency and importance of contact outside the work unit. The surrogate measures of boundary spanning in the marketing literature are innovativeness required (Walker, Churchill, and Ford 1975; Behrman and Perreault 1984); and integration required (Behrman & Perreault 1984).

Innovativeness required has been operationalized by both sets of authors as the degree to which the role incumbent must provide solutions to nonroutine problems, and integration required has been operationalized as the degree to which the incumbent must negotiate compromises between the selling company and customers. The significant results obtained by Behrman and Perreault (1984), validate the findings of Miles (1976) due to the fact that relationships in these studies between role conflict and ambiguity on the one hand, and boundary spanning activity on the other, are in the same direction (positive for role conflict, negative for role ambiguity). These results suggest that boundary spanning is a multidimensional construct and future operationalization must take this fact into account.

A meta-analysis (Fisher and Gitelson 1983) supports this conclusion. Homogeneity of effect sizes was established by these authors for both role conflict (mean correlation = .26; total sample size = 967; number of samples = 3), and role ambiguity (mean correlation = -.14; total sample size = 967; number of samples = 3).

Participation in Decision Making

Participation in decision making has generally been operationalized as the degree to which the role incumbent is able to influence decisions about the job (Teas 1983). Walker, Churchill & Ford (1975) called this variable influence over standards and operationalized it as the degree of influence the salesperson has over the selling activities involved in the

job, and the criteria used for evaluating goal attainment. Behrman & Perreault (1984) have also used the same operationalization.

Churchill, Ford, and Walker (1976) found that the influence in determining standards was the best predictor of satisfaction in their study. They suggest that when salespeople feel they have influence over the policies and procedures followed by the firm, they understand and accept them more fully. Since one of the components of the definition of role ambiguity relates to how performance will be evaluated, a salespeople who perceive influence over standards are likely to perceive less role ambiguity (since they have influence over the various indexes of performance evaluation). Indeed, the (negative) correlation between role ambiguity and the closeness of supervision was among the strongest correlations for the variables in the study. However, no relationship was found between influence over standards and role conflict.

Walker, Churchill, and Ford (1975) hypothesized that both role conflict and role ambiguity would decrease if salespeople believed they had influence in determining standards. They found that role conflict was not affected by influence over standards. On the other hand, salespeople experienced less ambiguity when they felt they had some influence over how their performance was evaluated and controlled.

Behrman & Perreault (1984) found that influence over standards had a (hypothesized) negative effect on role conflict. However, they did not find any effect for influence over standards on role ambiguity.

Teas (1983) hypothesized that salesforce participation would be related negatively to role conflict and role ambiguity. He found that participation was (as hypothesized) negatively and significantly related to role conflict and role ambiguity. Teas, Wacker, and Hughes (1979) in a study of 107 salespeople established that respondents experienced greater role clarity (or lesser role ambiguity) when they were allowed to participate in decisions that affected them. Caplan et al. (1975) in a study of 2010 workers in twenty three occupations reported that role ambiguity was negatively related to participation in decision making.

A meta-analysis of the role conflict and role ambiguity literature by Fisher and Gitelson (1983) reflects the same relationships suggested by a majority of the studies discussed so far. The mean correlation between role conflict and participation in decision making over 5 samples (1200 respondents) was -.28, and the chi-square value was .59 which was not significant, indicating homogeneity of effect sizes. However, heterogeneity of effect sizes was established for the relationship between role ambiguity and participation in decision making, so no overall conclusion can be drawn as regards the relationship between these two variables.

Closeness of Supervision

Closeness of supervision has been investigated frequently in the marketing literature because it is a variable under the control of management. Walker, Churchill, and Ford (1975) hypothesized that the clo-

ser the salesperson believes performance supervision to be, the greater the perceived role conflict, and lesser the salesperson's role ambiguity. They found no statistically significant relationship between closeness of supervision and role conflict. However, closeness of supervision was found to have a negative effect on role ambiguity.

Churchill, Ford, and Walker (1976) hypothesized that the closer the supervision, the greater the salesman's overall job satisfaction. They suggest that closely supervised salesmen will have a more complete knowledge of how their performance is being evaluated. Further such salesmen will have a better understanding of company policies and procedures and will thus be more comfortable with their jobs. Given the definition of role ambiguity used by these researchers, it would appear that closer the supervision, lesser the role ambiguity.

Behrman and Perreault (1984) hypothesized that closeness of supervision would have a negative effect on role ambiguity. No effect was hypothesized for role conflict. The authors report that closeness of supervision does have a negative effect on role ambiguity. Kahn et al. (1964) on the other hand found that closeness of supervision was negatively related to role conflict and was not related to role ambiguity. Thus, greater the autonomy (or lesser the closeness of supervision) the more the role conflict.

Brief & Aldag (1976) in their study of 77 nursing aides and assistants however report that autonomy is negatively related to role conflict. These authors argue that autonomy may lead to greater freedom

from potentially conflicting sent roles and thus lead to reduced role conflict. Oliver and Brief (1977-78) in their study of 105 department managers found that both role conflict and ambiguity were negatively related to autonomy (called job control in this study).

Thus, studies differ with respect to their results. It is therefore difficult to come to any overall conclusion regarding the relationship between role conflict, role ambiguity, and closeness of supervision.

Frequency of Communication and Performance Feedback

Frequency of communication as an antecedent of role conflict and role ambiguity has received attention largely in the research on role conflict and ambiguity done in the marketing area. Walker, Churchill, and Ford (1975) hypothesized that the more frequent the communication between a salesman and his sales manager, the less the salesman's perceived role conflict, and role ambiguity. No significant relationships were found that supported their hypothesis. Behrman and Perreault (1984) hypothesized that frequency of communication would have a negative effect on role ambiguity. They found that the frequency of communication path coefficient to role ambiguity was not significant. In fact deletion of this variable (along with the influence over standards variable) did not result in any reduction in the variance explained.

One possible reason for the lack of any finding may be the operationalization of this variable. Behrman & Perreault (1984) operationalized this variable based on the respondents estimate of the number of: face

to face communications; telephone communications; written communications from the sales manager; and, written communications from the respondent to the manager.

Another group of researchers have used performance feedback as an antecedent to role conflict and role ambiguity. For example, Brief & Aldag (1976) operationalized feedback from the job as the degree to which a job provides the opportunity to learn the efficacy of one's performance. Teas, Wacker, and Hughes (1979) operationalized feedback on the basis of five indexes: (1) the extent to which the salesperson can find out how well he/she is doing; (2) the feeling that enables the person to know whether performance is good or bad; (3) the extent to which results of work are clearly evident; (4) feedback from superior on how well performance is; (5) the opportunity to find out how well the person is doing in his selling job.

Walker, Churchill, and Ford (1975) in discussing the rationale for their hypotheses regarding frequency of communication and role conflict and role ambiguity state that the more frequent the communication, the more opportunity salespeople will have to learn and understand what the role set expects of them. It therefore appears (though not conclusively) that performance feedback is a multidimensional construct, of which frequency of communication is a part.

Research using the feedback variable rather than the frequency of contact variable seems to show better and more conclusive results. Brief and Aldag (1976) reported that feedback from the job was not found to

be related to role conflict, but was found to be negatively related to role ambiguity. Teas, Wacker, and Hughes (1979) found that performance feedback was a cause of role ambiguity. Salespeople in this study perceived greater role clarity when they received performance feedback. In another study, Teas (1983) hypothesized feedback to be negatively related to role ambiguity. The results supported his hypothesis. Oliver and Brief (1977-1978) also reported the negative effect of performance feedback on role ambiguity.

The preceding discussion focused on the antecedents of role conflict and role ambiguity. The variables discussed were chosen because of their inclusion in research on role conflict and ambiguity in marketing literature. An inference was therefore made that these variables (or antecedents) were important from a marketing management perspective. Other antecedents researched are role set size (Walker, Churchill & Ford 1975), interorganizational relations (Rogers & Molnar), intraorganizational relations (Rogers & Molnar 1976), and group cohesion and employee ability (Randolph & Posner 1981). Organizational characteristics also have been researched as antecedents. However, research has tended to focus on different aspects of organizational characteristics, such as, task-structure-technology congruency (Schuler 1977), formal practices and supportive practices (House & Rizzo 1972). The results of these and other studies not discussed in this section are presented in Table 1.

TABLE 1

Studies involving antecedents to Role Conflict and Ambiguity

ANTECEDENT	DIRECTION OF SIGNIFICANT EFFECT** ROLE CONFLICT	ROLE AMBIGUITY	STUDY
Leadership Practices			
Support from leader	-	-	House & Rizzo (1972)
	-	-	Randolph & Posner (1981)
Structure and setting of standards	-	-	House and Rizzo (1972)
Closeness of supervision	-	NS	Walker, Churchill, Ford (1975)
Task Perceptions			
Task identity	NS	-	Brief & Aldag (1976)
Job autonomy	NS	-	Brief and Aldag (1976)
	-	-	Oliver & Brief (1977-78)
Organizational Characteristics			
Supportive practices	-	-	House and Rizzo (1972)
Formal practices	-	-	House and Rizzo (1972)
Task-structure-technology congruency	-	-	Schuler (1977)
Role set			
Size	NS	NS	Walker, Chuuchill, Ford (1975)
Interorganizational Relations	-	-	Rogers & Molnar (1976)
Intraorganizational Relations	-	NS	Rogers & Molnar (1976)
Group Cohesion	-	-	Randolph & Posner (1981)
Employee ability	-	NS	Randolph & Posner (1981)
Tolerance for conflict	NS	-	Randolph and Posner(1981)

** at .05 level or better

* Format for Appendices I, II, and III taken from Michaels (1983).

The centralty of role conflict and role ambiguity arises due to their several organizationally salient consequences: reduced satisfaction which can result in higher levels of turnover thereby causing an increase in recruitment and training costs (Greene 1972), reduced performance (because incumbent may be unclear as to how behavior will be evaluated and rewarded) (Greene and Organ 1973); and reduced morale (Baird 1969), to name a few. Therefore, the following section will focus on reviewing those consequences of role conflict and role ambiguity found in the marketing literature.

CONSEQUENCES OF ROLE CONFLICT AND ROLE AMBIGUITY

Role conflict and ambiguity have been found to be related to organizational commitment, performance, and satisfaction (with pay, with co-worker, with supervisor, with promotion, with work itself and with customers). These consequences will be discussed now (in the order mentioned).

Organizational Commitment

Organizational commitment as a consequence of role conflict and role ambiguity has not received much attention in the literature. This could be because role variables are conceptualized as not affecting one's commitment to an organization directly but only through job satisfaction as an intervening variable (Porter and Steers 1973).

Hrebiniak and Alutto (1972) studied 318 public school teachers, and 395 registered nurses and found that role ambiguity was negatively related to organizational commitment. However, they did not find any relationship between role conflict and organizational commitment. Oliver and Brief (1977-1978) hypothesized that role conflict and ambiguity would affect organizational commitment with job satisfaction as a intervening variable. The results showed that role conflict and role ambiguity were negatively related to organizational commitment.

Morris and Koch (1979) studied 259 non academic permanent employees of a university and showed that both role conflict and ambiguity were negatively related to organizational commitment. They segmented their sample into three groups: manual, clerical and professional. Role conflict and role ambiguity were both negatively related to organizational commitment for all three groups. Their results show that both role conflict and role ambiguity are negatively related to organizational commitment. Fisher and Gitelson (1983) based on a total sample size of 577 (6 samples) found that the mean correlation between role ambiguity and organizational commitment was -.34 and the chi-square value was 1.60, indicating homogeneity of effect sizes. The mean correlation between role conflict and organizational commitment was -.25, for a total sample size of 755 (6 samples). The chi-square value was 6.43 and was non-significant indicating homogeneity of effect sizes.

Performance

Performance is a crucial outcome of role conflict and role ambiguity because it can affect the profitability of the firm. However, in the case of purchasing, measuring performance is difficult because of the lack of availability of suitable performance measurement indexes (Anderson and Chambers 1985).

Brief and Aldag (1976) found no relationship between role conflict and performance and a negative relation between role ambiguity and performance. Greene (1972b) studied 142 managerial dyads from 4 organizations and reported a negative relationship between role ambiguity and performance. Miles (1976) also reported a similar relationship.

Schuler (1975) investigated the relationship between role conflict, ambiguity and performance for 331 employees of a large manufacturing firm. Employees were categorized into 3 levels: low, middle, high. For employees in the low category, role conflict was negatively related to performance while role ambiguity was not. For employees at the middle level, both role conflict and role ambiguity were negatively related to performance. However, at the high level, both role conflict and role ambiguity were not related to performance.

Behrman and Perreault (1984) reported that role ambiguity has a negative effect on performance. The authors suggest that uncertainty on the part of salespeople about what needs to be done and how it needs to be done has a deleterious impact on performance. Surprisingly, the authors found that role conflict was positively related to perfor-

mance. The authors interpret this finding to argue that management efforts to reduce conflict in order to improve satisfaction may be self-defeating (from the organization's point of view), if such efforts lead also to a reduction in performance. Thus, some amount of conflict leads to better performance from the salesperson, even though it causes dissatisfaction.

In view of the lack of agreement among the results, it is difficult to come to any general conclusion regarding the relationship between performance, role conflict, and role ambiguity.

Job Satisfaction

As was suggested earlier, job satisfaction is an important consequence of role stress because it can affect organizational commitment and also propensity to leave. Early research in role conflict and ambiguity focused on satisfaction as a unidimensional variable. However, after the publication of the Job Descriptive index (Smith, Kendall and Hulin 1969), satisfaction is being measured along different dimensions : satisfaction with the job itself; with co-workers; with supervision; with pay; and with opportunities for promotion. Researchers in marketing have added sixth and seventh facets : satisfaction with customers; and satisfaction with company policies and procedures.

Beehr (1976) in a study involving 587 employees of five midwestern firms, found role ambiguity to be positively correlated with job dissatisfaction. Beehr, Walsh, and Taber (1976) reported a positive relationship

between job dissatisfaction and role overload, and also between job dissatisfaction and role ambiguity. Brief and Aldag (1976) reported a negative relationship between role conflict and job satisfaction, and no relationship between role ambiguity and job satisfaction.

French and Caplan (1972) however reported a negative relationship between role ambiguity and job satisfaction, as did Greene (1972). Hamner and Tosi (1972) found no relationship between role conflict and job satisfaction and a negative relationship between role ambiguity and satisfaction. The authors suggest that their sample (61 high level managers) may have been psychologically prepared for role conflict and seen it as part of the job and therefore did not feel a lack of satisfaction. House and Rizzo (1972) found negative relationships between both role conflict and role ambiguity on the one hand, and satisfaction on the other.

Keller and Holland (1975) studied 51 professionals in a R & D organization. They reported the following relationships between role conflict and the five dimensions of satisfaction from the Job Description Index; satisfaction with work, none; satisfaction with pay, negative; satisfaction with co-workers, none; satisfaction with supervision, negative; and satisfaction with promotion, negative.

The reported relationships between role ambiguity and the five dimensions of satisfaction were as follows: satisfaction with work, negative; satisfaction with pay, none; satisfaction with coworkers, none; satisfaction with supervision, none; and satisfaction with promotion,

none. Helwig (1979) on the other hand found both role conflict and role ambiguity to be negatively related to all five dimensions of satisfaction. Stead and Scamell (1980) studied 68 professional librarians and reported that role ambiguity was negatively related to satisfaction with work, with supervision, and overall satisfaction. Role conflict was negatively related to satisfaction with: work, supervision, co-workers, promotion, pay, and overall satisfaction.

Research on the relationship between role conflict, role ambiguity and satisfaction (in marketing) has focused on seven dimensions of satisfaction. However, the results have been reported for the combined scale rather than for the separate components of satisfaction. Churchill, Ford, and Walker (1976) reported that both role conflict and ambiguity were negatively related to satisfaction. Teas (1983) found that role conflict was a negative predictor of job satisfaction. Though the pairwise correlation between role ambiguity and job satisfaction was high (-.416), role ambiguity was not a significant predictor of job satisfaction. The author argues this result to be due to shared variance between the role conflict and role ambiguity variables and urges the lack of a relationship to be interpreted with caution.

The operationalization of job satisfaction was slightly different between the two studies. While Churchill, Ford and Walker's study measured seven components of job satisfaction, Teas measured six (satisfaction with company policies and procedures was not included).

Behrman and Perreault (1984) found that both role conflict and role ambiguity were negatively related to job satisfaction. These authors used the same scale as Churchill, Ford, and Walker (1976). However they argue that role conflict and role ambiguity are not independent (role ambiguity in their model is positively related to role conflict) and therefore the path coefficients may be unstable, and conclusions based on them misleading. Since deletion of either role stress variable resulted in a statistically significant reduction in explained variance, the authors conclude that both role conflict and role ambiguity contribute to understanding satisfaction.

The overall conclusion seems to be that both role conflict and role ambiguity are negatively related to job satisfaction. The meta analysis by Fisher and Gitelson (1983) sheds light on the relationship between role conflict, role ambiguity, and the different dimensions of satisfaction.

Homogeneity of effect sizes were found between role conflict on the one hand and satisfaction with pay (mean correlation = -.20; total sample size = 2545; number of samples = 12); satisfaction with co-workers (mean correlation = -.31; total sample size = 2538; number of samples = 12); and, satisfaction with supervisor (mean correlation = -.37; total sample size = 2104; number of samples = 12). Therefore according to the meta-analysis, role conflict is negatively related to satisfaction with pay, with co-workers, and with supervisor.

Homogeneity of effect size was found for the relations between role ambiguity and satisfaction with co-workers (mean correlation = -.22; total sample size = 2540; number of samples = 12) and, satisfaction with promotion (mean correlation = -.24; total sample size = 2543; number of samples = 12). Therefore, role ambiguity according to the meta-analysis is negatively related to satisfaction with co-workers and promotions.

The proceeding review identified some of the antecedents and consequences of role conflict and role ambiguity. Consequences not discussed in this section are identified in Table 2.

Not all of the studies reviewed were unanimous with regard to their findings. An analysis of the moderators in the role conflict, role ambiguity antecedents and consequences may provide a means to explain some of the inconsistent findings. The following section will therefore focus on some of the more commonly used moderators.

MODERATORS OF ROLE CONFLICT AND ROLE AMBIGUITY

The moderators that will be discussed in this section are, Experience, and Locus of Control (in the order mentioned).

Experience

Experience has been tested with some regularity especially in the marketing literature. Walker, Churchill, and Ford (1975) hypothesized that more the experience (they used the term 'time in the position' also) less the role conflict and role ambiguity. The results supported their

TABLE 2

Studies involving consequences of Role Conflict and Ambiguity*

CONSEQUENCE	DIRECTION OF SIGNIFICANT EFFECT** ROLE CONFLICT	ROLE AMBIGUITY	STUDY
Propensity to leave			
	+	+	Brief and Aldag (1976)
	NS	+	Rizzo et al.(1970)
	NS	NS	Hamner and Tosi (1974)
		+	Ivancevich and Donnelly (1974)
	+(person-role)		Batlis (1980)
	+	+	Bedeian and Armenakis (1981)
	+	+	Helwig (1980)
	NS	NS	Senatra (1980)
		+	Paul (1975)
Tension/Anxiety			
	NS	+	Abdel-Halim (1978)
	+(person-role)		Batlis (1980)
	+	+	Bedeian and Armenakis (1981)
	+	+	Brief and Aldag (1976)
		+	Breaugh (1980)
	+	+	Hamner and Tosi (1974)
	+	NS	Senatra (1980)
	+	NS	Tosi (1971)
	+	+	Rizzo et al.(1970)
		+	Ivancevich and Donnelly (1974)
	+	+	Miles (1976)
Job involvement			
	+(NS)	-(NS)	Abdel-Halim (1978)
	-	-	Morris and Koch (1979)
Non-participation			
		+	Beehr, Walsh and Taber (1976)
Effort toward quantity			
		-(NS)	Beehr, Walsh, and Taber (1976)
Effort toward quality		-	Beehr, Walsh, and Taber (1976)
General Job interest			
		+(Role clarity)	Ivancevich and Donnelly (1974)
Perceived performance effectiveness			
		-	Miles (1976)

TABLE 2 (continued)

Studies involving consequences of Role Conflict and Ambiguity*

CONSEQUENCE	DIRECTION OF SIGNIFICANT EFFECT** ROLE CONFLICT	ROLE AMBIGUITY	STUDY
Attitudes towards role senders	-	-	Kahn et.al. (1964)
	NS	-	Miles (1976b)
	-	-	Miles (1976d)
Opportunity for innovation	-		Ivancevich and Donnelly (1974)
Higher order need fulfillment	-		Teas, Wacker, and Hughes (1979)
Termination	+	+	Brief and Aldag (1976)
Self-esteem	-		Beehr (1976)
Depression	+		Beehr (1976)

* consequences not discussed in text of paper
** at .05 level or better

hypotheses for role conflict. Churchill, Ford, and Walker (1976) hypothesized that experience would moderate the relationship between role conflict, and role ambiguity on the one hand, and job satisfaction on the other. The results were opposite to what was predicted in the hypothesis. Respondents with more experience were found to be less satisfied. Those with less than two years experience were the most satisfied. Oliver and Brief (1977-78) also hypothesized that role conflict and role ambiguity were a negative function of experience on the job. Experience was found to be negatively related to role conflict and not to role ambiguity. Teas (1983) hypothesized that experience would have a negative effect on role conflict and role ambiguity. Experience was found to have a marginally significant (p less than .10) negative relationship with role conflict. Behrman and Perreault (1984) hypothesized that experience would have a negative effect on role ambiguity. The results supported their hypothesis.

It would therefore appear on the basis of the above review that there are contradictory findings with regard to the relationship between experience on the one hand, and role conflict and role ambiguity on the other. The meta-analysis by Fisher and Gitelson (1983) supports this conclusion. The mean correlation between role conflict and tenure was .03 on a total sample size of 1796 (8 samples) and a chi-square of 26.34 indicating heterogeneity of results. On the other hand, homogeneity of effect size was established for the relationship between role ambiguity and experience (mean correlation = -.13; total sample size = 1796; number of samples = 8).

One possible reason for the conflicting findings may be the operationalization of experience. Walker, Churchill,and Ford (1975) defined it as length of time in the present job, and Teas (1983) as the total number of years of selling experience. Behrman and Perreault (1984) defined experience as a composite measure based on: time with the company, time with current product line, time in territory, time in territory, and, time in sales; the average of all of these comprised experience. The variable tenure that was tested in the meta analysis was tested as a moderator (and found to be non-significant) by Brief, Van-Sell, Aldag, and Melone (1979). These authors defined tenure as time on the present job. Therefore, experience as operationalized by Walker, Churchill, and Ford (1975) has been labelled tenure in the non-marketing literature.

Locus of Control

Locus of control measures the degree to which role incumbents make attributions that the key events in their lives are the result of chance or factors beyond their control. Organ and Greene (1974) found that an individual may experience high degrees of role ambiguity which in term may affect job satisfaction only if the individual experiences external locus of control. The authors could not determine which of role ambiguity or locus of control causally precedes the other.

In order to clarify the relationship between role ambiguity and locus of control, Organ and Greene (1974) tested the two variables as possi-

ble moderators between the other and work satisfaction. They reported that locus of control provided a greater independent contribution to differences in work satisfaction than did role ambiguity. For internals, role ambiguity was found to be related to work satisfaction. However, for externals the relationship was not significant.

Anderson (1977), on the basis of his research concluded that internals tended to perceive less role conflict and were less defensive and more task oriented in their behavior than externals. Behrman and Perreault (1984) hypothesized that locus of control would have a positive effect on role conflict. This hypothesis was supported since locus of control (along with integration required) had the largest path coefficients (.316 and .354 respectively) in the role conflict model. The authors conclude that the more salespeople think that key events in their lives are due to chance or factors beyond their control (i.e., externals) the more they perceive conflict; conversely salespeople who are more internal in their attributions of conflict feel less conflict.

Several other moderators have been studied: need for autonomy, need for achievement, level in organization, and self esteem to name a few. Table 3 provides a representative sample of studies which used other variables as moderators between role conflict, ambiguity and their consequences. The next section however, focuses on the measurement issues pertaining to role conflict and role ambiguity.

TABLE 3

Studies involving moderators to Role conflict and ambiguity**

MODERATOR	RELATIONSHIP MODERATED	STUDY
Need for autonomy	RC - Job satisfaction	Johnson and Stinson (1975)
	RA - Job satisfaction, self-esteem, depression	Beehr (1976)
Need for achievement	RA,RC - Job satisfaction	Johnson & Stinson (1975)
	Boundary spanning-RA,RC-Job satisfaction	Miles (1976b)
Higher Order need Strength	RA - Job satisfaction, tension, involvement	Beehr, Walsh, Taber (1976)
	RA,RC - Job outcomes (NS)	Brief & Aldag (1976)
Level in organization	RA,RC - Job satisfaction	Schuler (1975)
Supervisory ability	Boundary spanning-RC	Miles (1976b)
Self assurance	Boundary spanning-RC	Miles (1976b)
Group cohesiveness	RA-self esteem	Beehr (1976)
Compliance	Role accuracy - Job satisfaction	Greene& Organ (1973)
Communication frequency	RC-Job satisfaction, futility, inter-personal bonds	Kahn et.al (1964)
Functional Dependance	RC-Job satisfaction, futility, inter-personal bonds	Kahn et.al (1964)
Job enrichment	RA-Job satisfaction, involvement, anxiety	Abdel-Halim (1978)
Job category	RA,RC-supervisory support, group cohesion, employee ability, tolerance for conflict	Randolph & Posner (1981)

* Format for Appendices I, II, and III taken from Michaels (1983)
** Unless otherwise mentioned, moderator effect is significant at .05 level or better.

ROLE CONFLICT AND ROLE AMBIGUITY MEASUREMENT ISSUES

Instruments used to measure Role Conflict/Ambiguity

There seems to be more consensus on the issue of measurement of role conflict and role ambiguity than there is in the research results. Lichtman and Hunt (1973), and Graen (1976), suggest that role conflict and role ambiguity occur either: a) as objective characteristics of a role; or, b) as perceptual reactions of the role incumbent, which may or may not correspond with the objective characteristics of the role. Therefore, one can be concerned with two types of empirical indexes - observational and self-report, and the relationship between them.

Ideally, an observational measure of role conflict and role ambiguity requires: a) the identification of all the members of the different role sets of the focal person, b) the determination of each role sender's expectations for the focal person's performance, and c) an analysis of the variance between the role sets' expectations and within expectations of any one role set. Though Kahn et al. (1964) and Gross et al. (1958) undertook the exhaustive procedure outline above, most of the research on role conflict and role ambiguity has been based only on the perceptions of the focal person. These perceptions have been measured through use of self-report questionnaires.

These self report questionnaires can be classified into 3 major methods:

1) Global measures whose items tap distinctive dimensions of role conflict and role ambiguity (e.g., Rizzo, House, and Lirtzman 1970).

2) Activity-specific, role partner-specific measures (e.g., Ford, Walker, and Churchill 1975), and

3) Activity-specific, but not role partner specific measures (e.g.; Holbrook and Ryan 1982)

Global Measures

Most of the studies coded for the purpose of this research have used the Rizzo, House and Lirtzman (1970) scales. Other studies used selected items from the scales. The following studies used the Rizzo et al. scales: Brief and Aldag (1976); Brief et al. (1979); Hamner and Tosi (1974); Helwig (1979); Oliver and Brief (1977-78); Keller (1975); Keller and Holland (1975); Miles (1976a, b); Morris and Koch (1979); Morris, Steers, and Koch (1979); Nicholson and Goh (1983); Randolph and Posner (1981); Schuler (1975); Senatra (1980); Stead and Scamell (1980); and Teas (1983).

However, Tosi and Tosi (1970), and Tosi (1974), selected only 10 items from the twenty-nine in the original Rizzo et al. (1970) list for each role scale. Organ and Greene (1974) also selected eleven items for role ambiguity from the Rizzo et al. (1970) list of items. On the other hand, the following studies used scales developed by the researchers themselves : Halim (1978); Halim (1981); Batlis (1980); Greene (1972); Beehr (1976); Beehr, Walsh, and Taber (1976); Ford, Walker and Churchill (1976); Ivancevich and Donnelly (1974); Posner and Randolph (1979); Walker, Churchill, and Ford (1975); and Churchill, Ford, and Walker (1976).

Schuler, Aldag, and Brief (1977) examined the Rizzo et al. (1970) scale using psychometric techniques. After considering the results of the factor analyses, congruency coefficients, and internal reliabilities from six samples, they concluded that, "the use of Rizzo et al. (1970) role conflict and ambiguity scales in past research is supported" (p. 126). Szilagyi et al. (1976) also reached the same conclusion on the basis of their study based on two samples.

The scale however is not without its critics. Tracy and Johnson (1981) criticized the scale on the grounds that the two factor (role conflict and role ambiguity) solution proposed by Rizzo et al. (1970) corresponds more closely to a difference in the wording of the items (stress or comfort) than to the conflict-ambiguity difference. House, Schuler, and Levanoni (1983) tested the Tracy and Johnson suggestions (and their findings) and concluded that role conflict and role ambiguity are not artificial constructs, and that continued use of the Rizzo et al. (1970) scale is warranted.

It would therefore appear that some consensus exists with regard to the use of the Rizzo et al. scales. In marketing literature, Walker, Churchill and Ford (1975); Churchill, Ford and Walker (1976); and, Ford, Walker and Churchill (1976) have used the INDSALES scales for measuring role conflict and role ambiguity. However, Teas (1983), and Oliver and Brief (1977-78), used the Rizzo et al. scale without modifications, whereas Behrman and Perreault (1984) used it with some modifications, as did Michaels (1983).

One reason for the widespread use of the Rizzo et al. (1970) scale may be their availability. The same cannot be said for the INDSALES role conflict/ambiguity scale developed by Ford, Walker, and Churchill (1975).

Activity-specific, role partner specific measures

The INDSALES scales are based on a version of the Kahn et al. (1964) exhaustive measurement technique (Michaels 1983). Whereas Kahn et al. (1964) obtained responses on conflict and ambiguity for specific job activities across all named members of the role set, Ford, Walker, and Churchill (1975) obtained activity-specific role partner-specific evaluations from only the focal person (the salesperson). They (Ford, Walker and Churchill 1975), report high reliabilities as well as discriminant and convergent validity for their instrument.

However, the use of the instrument has been confined only to their research since the scales have not been public. According to Michaels (1983) the advantage of the Ford et al. (1975) instruments is that they provide information to determine which job activities are perceived to be associated with the greatest amount of conflict and ambiguity, and which role partners are perceived to be communicating incompatible expectations concerning each job activity.

One disadvantage of the INDSALES scales is that they tap only inter-sender conflict. The instrument is also very lengthy (120 items). The authors however, seek to explain away this limitation by suggesting

that inter-sender conflict is "likely to be the most persuasive and intensely felt type of role conflict experienced by industrial salesmen" (footnote 1, p. 110).

Activity-specific measures

The Ryan and Holbrook (1982) scale is an activity-specific, but not a role-partner specific scale. The authors tested their scale on a sample of automobile fleet administrators. However, they do not provide details of the reliability and validity of the instrument. No study has been conducted so far, to compare these three instruments.

Operationalization of Role Conflict

Most of the literature reviewed so far has tended to operationalize role conflict as a unidimensional construct focussing mainly on intra-sender conflict. However, Miles and Perreault (1976) broke down the role conflict concept into conflict patterns or orientations (from I to V) and discovered specific role requirements which account for differences in the degree of role conflict experienced by respondents.

They concluded that: 1) individuals vary considerably in the nature of role conflict they experience, (as represented by the five conflict orientations) and the operationalization of role conflict as a unidimensional measure may serve to obscure the real nature of the conflict an individual experiences on the job; 2) role requirements do not by themselves lead to conflict, they assume much more importance when consid-

ered in conjunction with other major demands placed on a focal person; 3) intraorganizational boundary spanners appear to have more unfavorable work outcomes as a result of conflict than interorganizational boundary spanners; and 4) the favorability of work outcomes were not distinguished by conflict orientations when they were considered in the univariate sense.

However, when these outcomes were considered simultaneously, conflict orientations were able to distinguish between them. Since this is the way these outcomes would be experienced by the incumbent, the authors suggest that studies which do not consider dependent measures simultaneously may overlook the dysfunctional consequences of role conflict.

Comparison of Role Ambiguity Scales

Breaugh (1980) undertook an evaluation of the psychometric properties of three different measures of role ambiguity. He argues that, "a strong case can be made that some of the discrepancies in the literature are due to the different operationalizations of the role ambiguity concept" (p. 584). He compared three role ambiguity scales most commonly used in the literature-- 1) the Rizzo et al. (1970) scale; 2) the Lyons (1971) scale; and 3) Beehr's (1976) scale.

The Rizzo et al. scale consists of six items that the subject responds to on a 7 point scale ranging from "very true" to "very false." Lyon's (1971) measure is made up of four items; two different five-point

response continua are used ("yes"-"no" and "very clear" - "not clear at all"). Beehr's (1976) four item index was the third role ambiguity measure tested. Responses to the questions on this scale are on a 4-point scale ranging from "very true" to "not true at all."

Breaugh compared Cronbach's coefficient alpha for each scale, determined the degree to which instruments were intercorrelated and also examined several dependent variables which theoretically should have been associated with role ambiguity in order to establish construct validity. Based on his analysis, the author concluded that: 1) the three role ambiguity measures appear to be comparable; 2) the percentage of shared variance between the role ambiguity measures was not impressive; 3) all three instruments possess modest internal consistency; 4) the intercorrelations between them are similar in magnitude; 5) the three scales are equally associated with theoretically related dependent variables; and, 6) none of the three measures of role ambiguity is superior to the others.

Though Breaugh (1980) used three different scales, his study is the exception rather than the rule in role conflict/ambiguity research. Few studies in this research area have used multiple methods. Those that have (Caplan et al. 1975; Kahn et al. 1964) report no disagreement between interview and questionnaire data on role conflict and role ambiguity. Due to a paucity of studies using multiple methods, variance in results due to method is impossible to estimate (Van Sell, Brief, and Schuler 1981). Moreover, there seems to be growing reliance on the Rizzo et al. (1970) scale.

Therefore, the inconsistent results found in the literature can be attributed at least partly, to the use of different scales to measure role conflict and role ambiguity (or to different modifications to the same scale). Inspite of the inconsistent results in the literature, some conclusions can be drawn with regard to the relationships between certain variables. The summary of literature that follows has this objective.

SUMMARY OF LITERATURE

1. Boundary spanning is positively related to role conflict and negatively related to role ambiguity.

2. Influence over standards (or participation in decision making) has a negative effect on role conflict, but has no (generalizable) effect on role ambiguity.

3. Due to contradictory findings, no conclusions can be drawn on the effect of, or relation between, autonomy on the one hand, and role conflict and ambiguity on the other.

4. Frequency of communication does not have any effect on role conflict or role ambiguity. A broader operationalization of the same variable called performance feedback has a negative effect on role ambiguity.

5. Though individual studies have come to differing conclusions on the relationship between role conflict and role ambiguity on the one hand, and organizational commitment on the other, the results of the meta-analysis (Fisher & Gitelson 1983) show that a negative relationship

exists between role conflict and role ambiguity on the one hand, and organizational commitment on the other.

6. There is no unanimity with regard to the effect of role conflict and role ambiguity on performance. Even the meta-analysis (Fisher and Gitelson 1983) concluded that there was heterogeneity of effect sizes with regard to the relationships between these variables. A noteworthy result (in marketing) is that of Behrman and Perreault (1984) who found that role conflict is positively related to performance.

7. a) Studies reviewed have come to different conclusions with regard to relationship between role conflict, role ambiguity and job satisfaction. The meta analysis (Fisher & Gitelson 1983) established heterogeneity of effect sizes with regard to the relationship between these variables. Therefore, no (generalizable) conclusion can be drawn regarding the relationships between these variables.

b) Studies in role conflict and role ambiguity in the marketing area have broadened the satisfaction variable by adding either one or two additional dimensions to the Job Description Index. These dimensions are satisfaction with company policies and procedures, and satisfaction with customers. There is agreement in this literature that both role conflict and role ambiguity have a negative effect on total job satisfaction (a composite index of the 6 or 7 different kinds of satisfaction).

8. Need for clarity moderates the relationship between role ambiguity on the one hand, and tension, propensity to leave, and satisfaction.

9. There is no unanimity even among marketing researchers on the operationalization of experience. Churchill, Ford, and Walker (1976), Teas (1983), and Behrman and Perreault (1984) all use different definitions. The definition of Walker, Churchill, and Ford (1975) has been labelled tenure in the non-marketing literature. The meta-analysis by Fisher and Gitelson (1983) contradicts the finding of Walker, Churchill and Ford (1975). Experience was found to be negatively related to role ambiguity in the meta-analysis. Walker, Churchill, and Ford (1975) however, concluded that there was a negative relationship between role conflict and experience (labelled by them as time in position).

10. The relatively meagre research on locus of control leads to the (tentative) conclusion that internals perceive less conflict.

Based on the preceding discussion, a model to guide this study is proposed, the theoritical bases for the model explicated, and the hypotheses to be tested specified, in the following chapter.

Chapter III

THEORETICAL BASES FOR MODEL AND HYPOTHESES

OVERVIEW

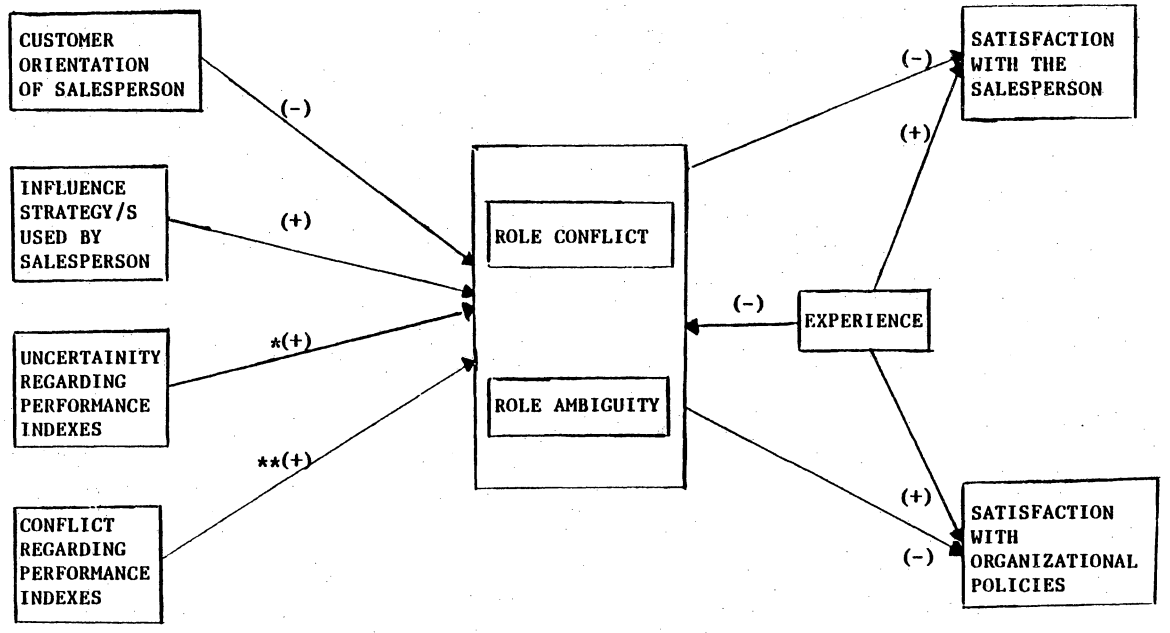
In this chapter, the model underlying the study is presented, and the features of the model identified. Subsequently role conflict and role ambiguity are operationalized. Then, the theoretical bases for the proposed antecedents and consequences of role conflict and role ambiguity are discussed, and specific hypotheses offered. Operationalization of antecedent and consequent variables will form part of this discussion.

MODEL UNDERLYING THE STUDY

The model underlying this study is shown in Figure 2, below. The hypothesized relationships between variables in the model have also been included. This model is based on the role-episode model of Katz and Kahn (1978) (Figure 1).

Features of the proposed model

The selection of the variables in the model was mainly influenced by the objectives of the study. Towards this end, two of the proposed three antecedent variables to role conflict and role ambiguity: Perceived Customer Orientation of the salesperson, and Influence Strategy/s used, are controlled by the salesperson and can therefore be influenced by management of the vendor organization.



NB : SIGN INDICATES DIRECTION OF HYPOTHESIZED RELATIONSHIP.

* relationship only with Role Ambiguity
** relationship only with Role Conflict

FIGURE 2

MODEL SHOWING HYPOTHESIZED RELATIONSHIPS BETWEEN VARIABLES

Several of the variables selected for this study have not been researched previously. Of the proposed antecedents, only Perceived Customer Orientation of the salesperson was tested on an exploratory basis by Michaels (1983). The second proposed antecedent, Influence Strategy/s used, has not been researched thus far. However, this variable is based on theory in organizational buying behavior, specifically the Self-Aggrandizement Model, and the Ego-Enhancement Model; these were discussed in Chapter 1. The third antecedent variable, Perceptions regarding the (buying) organization's Reward/Measurement Indexes is also based on theory in organizational buying, specifically the Reward/Measurement Model (Anderson and Chambers 1985). This variable has not been researched as an antecedent to role stress until now.

The proposed consequences of role conflict and role ambiguity have not received any attention in organizational buying literature until now, at least in the manner in which they have been operationalized in this study. They have however, been researched in a sales context by Churchill, Ford, and Walker (1976). The following features of the study should represent distinct contributions to research in the areas of sales management, and organizational buying behavior.

1. Boundary spanning activity has been consistently found to be related to role conflict and role ambiguity (Keller and Holland 1974; Kahn et al. (1964); Miles (1976; 1976b; 1976c; Walker, Churchill, and Ford (1975); and Behrman and Perreault (1984). Since purchasing professionals are also boundary spanners (Adams 1976), they receive conflicting expectations from salespeople representing vendor organizations (who are also part of their role set). Yet, there has been no study so far to determine whether in fact role conflict and role ambiguity for the purchasing professional can be (at least partially) attributed to the salesperson.

2. The proposed consequences of role conflict and role ambiguity attempt to show whether salesperson caused role conflict and role ambiguity can have negative consequences for the salesperson (in the form of dissatisfaction with seller).

3. The last consequent variable, satisfaction with organization policies, may help determine whether dissatisfaction with seller (on the part of the purchasing professional) also carried over to dissatisfaction with organization policy. If this part of the model is confirmed, certain prescriptive recommendations can be made to purchasing management.

4. This is the first study which seeks to determine if perceptions of uncertainty and/or conflict regarding an organization's reward/measurement indexes cause role conflict/ambiguity for the purchasing professional. If this part of the model is confirmed, certain prescriptive recommendations can be made to purchasing management. It will also be another instance where (part of) the Reward/Measurement model of organizational buying has been empirically validated.

In the next section, some purchasing specific issues will be discussed. These issues pertain to the criteria for procurement to be used by purchasing professionals, and in a sense are the assumptions on which the model for this research is based. Following this, the constructs in the proposed model will be discussed, both in terms of conceptual and empirical development. Operationalization of constructs and hypotheses to be tested will play a prominent role in this discussion.

Purchasing Specific Issues

Underlying the proposed model are certain assumptions that relate to purchasing performance and how it is measured. Anderson and Chambers (1985), argue that measurement of purchasing performance presents problems to the organization since it is known to the organization

only through various measurement 'indexes'. They further state that, "the process is complicated by practical difficulties which may prevent a perfect mapping of the measurement indexes onto the performance it seeks to represent" (1985, p. 11). Given these problems with measuring purchasing performance, this model nonetheless is based on the premise that purchasing performance is evaluated on the basis of certain well-defined criteria, and purchasing professionals make their purchasing decisions with a view to achieving favorable ratings on indexes employed by the organization to measure performance.

Admittedly, these criteria are normative, and may even be rationalistic. Not all organizations may use them. The intent here is not to suggest that ego (or other non-rational) factors do not influence purchasing decisions; as Corey (1983) suggests, buying behavior is affected by the ego involvement of those influential in making the purchase decision. However, the point being made here is that the difficulty of measuring purchasing peformance notwithstanding, there is the need for certain normative standards against which to evaluate purchasing performance, and that all organizations will have <u>some</u> criteria on which to evaluate a buyer's performance.

Further, it is these perceptions regarding performance measurement indexes that constitute (at least part of) the 'organizationally sent' role for the purchasing professionals. However, since performance indexes do not capture all aspects of performance, role expectations sent by the organization are not exhaustive and may not be clear enough. This

performance index based, 'organizationally-sent' role in conjunction with the salesperson-vendor organization sent role expectations, can cause role conflict and/or role ambiguity for the purchasing professional.

ROLE CONFLICT AND ROLE AMBIGUITY

Role conflict and role ambiguity are the key variables in this research, as they were in the research of Michaels (1983). The study by Michaels (1983) was the first comprehensive study of purchasing professionals in marketing. The present research however has one clear advantage over Michaels' (1983) study. Michaels (1983) citing boundary role theory assumed the existence of role conflict and role ambiguity for the purchasing professional. Having made this (implicit) assumption, Michaels (1983) used the role conflict and role ambiguity constructs as antecedents to such outcomes as Satisfaction, Performance, and Trust. This assumption was based on the views of Heinritz and Farrell (1981), who argue that the purchasing role is very susceptible to role stress because of: a) its boundary spanning nature, b) the large number of individuals in a purchasing professional's role set, and c) its new emphasis on innovative problem-solving.

The purpose of this research is not to refute the suggestions of Heinritz and Farrell (1981), but rather to determine if they can be substantiated. Towards this end, role conflict and role ambiguity are hypothesized consequences of: 1) the salesperson's perceived customer orientation; 2) the influence strategy (or strategies) used by a sales-

person; and 3) buyer perceptions of uncertainty and/or conflict regarding the organization's reward/measurement indexes. The hypotheses pertaining to these variables will be discussed later. At this point, attention is focused on the measurement of role conflict and role ambiguity.

Measurement Issues

Role conflict and role ambiguity were measured using a modified, buyer-specific version of the Rizzo, House, and Lirtzman (1970) instrument. The role ambiguity scale contained nine items which are listed in Table 4. Six of these items were recommended by Schuler, Aldag, and Brief (1977) on the basis of the Rizzo et al. (1970) instrument. Three additional items were selected from the original Rizzo et al. (1970) scale because of high item-total correlations and factor loadings reported in the Schuler et al. (1977) study. The items were modified so as to tap the role ambiguity (or lack of it) perceived by a purchasing professional that could be attributed to a vendor salesperson. A 7-point Likert-type format was used with end points labeled "strongly disagree" (1) and "strongly agree" (7). The role ambiguity measure is a composite of scores on the individual items comprising the scale. Reverse-scored items and the items added from the Schuler et al. (1977) factor loadings are identified in Table 4. The acronym for this scale is "RA."

The individual scale items for the role conflict scale are listed in Table 5. The scale consists of thirteen items. Eight of these items were

TABLE 4

Role Ambiguity Scale Items *

In addition to the vendor salesperson you met in the MOST RECENT buying situation, you also may have to deal with others (superiors, representatives of other departments) in YOUR organization. With respect to yourself, and the others you deal with, please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by circling any number between 1 and 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Clear, planned goals and objectives (as they relate to my dealings with salespeople) exist for my job. (R)	1	2	3	4	5	6	7
I do not know if I utilize my time properly when dealing with salespeople.	1	2	3	4	5	6	7
I know what my purchasing responsibilities (as they pertain to dealings with salespeople) are. (R)	1	2	3	4	5	6	7
There is a lack of policies and guidelines to help me in my dealings with salespeople.	1	2	3	4	5	6	7
I have to work under vague directions or orders as they pertain to my dealings with salespeople.	1	2	3	4	5	6	7
Explanations of what has to be done by me while dealing with salespeople are clear. (R)	1	2	3	4	5	6	7
I do not know if my performance (as it pertains to my dealings with salespeople) is acceptable to my supervisor.	1	2	3	4	5	6	7
I feel certain about how much authority I have in my dealings with salespeople.(R)	1	2	3	4	5	6	7
I do not know exactly what is expected of me in my dealings with salespeople.	1	2	3	4	5	6	7

End.

*Scale items are numbered RAS96 to RAS104.
NB: (R) indicates a reverse scored item.

recommended by Schuler et al. (1977) in their study. Five additional items were selected from the Rizzo, House, Lirtzman (1970) scale because of substantial factor loadings reported in the Schuler et al. study.

As in the case of the role ambiguity scale, the scales were modified to enable them to tap vendor-salesperson related role conflict. Like the role ambiguity measure, the role conflict measure is also a composite of scores on the individual items comprising the scale. Reverse scored and items taken on the basis of Schuler et al. (1970) findings have been identified in Table 5. The role conflict measure is denoted by the acronym "RC."

Role conflict and role ambiguity have been hypothesized to be negatively related to a vendor salesperson's customer orientation. The following discussion will therefore seek to lay the theoretical bases for the hypothesized antecedents of role conflict and role ambiguity.

HYPOTHESIZED ANTECEDENTS OF ROLE CONFLICT/AMBIGUITY

Perceived Customer Orientation of Vendor Salesperson

Customer-oriented selling can be viewed as implimentation of the marketing concept at the level of the individual salesperson and customer (in this instance, the purchasing professional). The marketing concept requires that an organization determine the needs of the target market and adapt itself to satisfying those needs better than its competitors. Thus, a (selling) organization seeks to generate customer sa-

TABLE 5

Role Conflict scale items*

In addition to the vendor salesperson you met in the MOST RECENT buying situation you also may have to deal with others (superiors, representatives of other departments) in YOUR organization. With respect to yourself, and the others you deal with, please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by circling any number between 1 and 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

I have to evade rules or policies in order to carry out assignments relating to my sales contacts.	1	2	3	4	5	6	7
My purchasing workload (as it relates to my dealings with vendor salespeople) seems to be at about the right level. (R)	1	2	3	4	5	6	7
I work with 2 or more groups (salespeople from other organizations and other departments in my organization, for example) who operate quite differently.	1	2	3	4	5	6	7
I receive incompatible requests from vendor-salespeople and from other departments in my organization.	1	2	3	4	5	6	7
I do things that are apt to be accepted by one person (vendor salesperson, or other depertments within my organization) and not by others (vendor salesperson, or other departments within my organization).	1	2	3	4	5	6	7
I receive assignments (pertaining to my dealings with salespeople) without adequate resources and materials to execute them.	1	2	3	4	5	6	7
I have things to do (pertaining to my dealings with salespeople) that should be done differently.	1	2	3	4	5	6	7
I am required to work on unnecessary things in dealing with salespeople from supplier organizations.	1	2	3	4	5	6	7

Continues on next page.

*Scale items are numbered RCS105 to RCS117.

NB: (R) indicates a reverse scored item.

TABLE 5 (continued)

Role Conflict scale items

1 Strongly Disagree	2 Moderately Disagree	3 Slightly Disagree	4 Neither Agree nor Disagree	5 Slightly Agree	6 Moderately Agree	7 Strongly Agree

I receive assignments (pertaining to my dealings with salespeople) without the proper manpower to complete them.	1	2	3	4	5	6	7
I work under incompatible policies and and guidelines (as they pertain to my dealings with vendor salespeople).	1	2	3	4	5	6	7
I have things to do in my dealings with vendor salespeople that are against my better judgment.	1	2	3	4	5	6	7
I frequently have much more to do (in my dealings with vendor salespeople) than I can handle during the time available at work.	1	2	3	4	5	6	7
My purchasing work (as it pertains to my dealings with vendor salespeople) is consistent with my personal values. (R)	1	2	3	4	5	6	7

End.

tisfaction by recognizing that it is the key to satisfying its goals. Though adoption of the marketing concept is far from universal (Kotler 1984), there is a trend in industrial selling toward a problem-solution approach, rather than approaches based on camaraderie and/or pressure (Rieser 1962).

Customer-oriented selling is a way of doing business on the part of salespeople. It refers to the extent to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will satisfy customer needs (Saxe and Weitz 1982). Thus, highly customer-oriented salespeople not only try to help their customers make purchase decisions that will satisfy customer needs, but also avoid behaviors which can result in customer dissatisfaction. Saxe and Weitz (1982) characterize customer-oriented selling as follows:

1. a desire to help customers make satisfactory purchase decisions;
2. helping customers assess their needs;
3. offering products that will satisfy those needs;
4. describing products accurately;
5. avoiding deceptive or manipulative influence tactics;
6. avoiding the use of high pressure;

Since the salesperson is part of the role set of the purchasing professional, role expectations are sent by the salesperson to the purchasing professional. However, a customer-oriented salesperson helps customers (purchasing professionals) make purchase decisions that will

satisfy customer needs. In the preceding section, it was argued that the purchasing professional is evaluated on the basis of performance indexes. It was also suggested that these performance indexes constitute at least part of the organizationally-sent role for the purchasing professional. Customer-oriented salespeople can therefore be expected to behave (or attempt to sell) in such a manner that purchasing professionals can satisfy the performance indexes on which they are being evaluated.

Since role conflict is the result of conflicting expectations being sent by different members of the purchasing professional's role set (in this instance the organization and the salesperson), it is argued that role conflict will be negatively related to a salesperson's customer-oriented selling. Saxe and Weitz (1982) state that, "there is a negative relationship between customer orientation and salespeoples' perception of a conflict of interest with their customers" (p. 348). Therefore, the hypothesis to be tested with regard to the relationship between salespeoples' customer-orientation, and purchasing professionals' perceptions of role conflict is as follows:

> H1: Perceived customer orientation on the part of the vendor sales representative will be negatively related to perceptions of role conflict for the purchasing professional.

Role Ambiguity has been defined (House and Rizzo 1972) as involving a lack of understanding on the part of the role incumbent of the behavioral expectations that are held for the role, and/or a lack of

predictability about the outcomes of role behavior. With regard to purchasing, there do exist various measurement indexes to evaluate purchasing performance, though the process of measurement may be problemmatic due to the imperfect mapping of the measurement indexes onto the performance it seeks to represent (Anderson and Chambers 1985). Therefore, the purchasing professional is aware of the indexes of performance evaluation.

Under such circumstances, the customer oriented salesperson can help the purchasing professional perform well on the performance measurement indexes by avoiding "behaviors which might result in customer dissatisfaction" (Saxe and Weitz 1982, p. 344). Therefore, purchasing professionals are aware of the measurement indexes used for evaluation purposes, and customer oriented salespeople for their part are interested in selling only if the product can satisfy customers' needs. It can thus be inferred that purchasing professionals are aware of the expectations of different role senders. The arguments so far suggest a lack of role ambiguity for the purchasing professional. Indeed, the findings of a meta-analysis by Fisher and Gitelson (1983) suggest that role ambiguity is negatively related to boundary spanning activity (mean correlation = .14; total sample size = 967; chi-square = 1.62).

These authors suggest that individuals representing their unit to outsiders are the targets of a great deal of role sending since unit members and outsiders have an interest in having the linking individual clearly aware of their expectations. Consequently ambiguity would be

low. In contrast literature on boundary roles suggests that boundary role persons are characterized by higher role ambiguity (Adams 1976).

Notwithstanding the above findings, there is an additional source of possible role ambiguity for purchasing professionals which derives from the newly formed emphasis (in purchasing) on "innovative problem solving" (Heinritz and Farrell 1981). Mendelson (1969), also states that the (purchasing) profession has not been able to produce a formula or method capable of general application to purchasing performance evaluation.

It is argued here that performance measurement indexes do not provide for evaluation of innovative problem solving actions of purchasing professionals. In other words, all of the purchasing professionals performance is not captured by the performance measurement indexes. As Anderson and Chambers (1985) state, "measured performance will very likely be some subset of an individuals total purchasing performance" (p. 11). Therefore, there can be components of purchasing professionals' performance that are not captured by the performance measurement indexes. It is likely that the purchasing professional will perceive some role ambiguity about how such performance will be evaluated.

The perception that a salesperson is customer-oriented and the knowledge that such a salesperson will enable the purchasing professional to achieve his/her goals is likely to result in decreasing the perceived role ambiguity of the buyer. The hypothesis pertaining to the relation between buyers' perceptions of role ambiguity and vendor organization salespersons' customer-orientation is as follows:

H2: Perceived customer orientation on the part of the vendor salesperson will be negatively related to perceptions of role ambiguity for the purchasing professional.

Measurement Issues

Saxe and Weitz (1982) developed a scale to measure the degree to which salespeople engage in customer oriented selling. They tested the scale (named SOCO ; an acronym for perceived-Customer Orientation), on (salesperson) samples of 191 and 95, and concluded that the scale possessed high levels of reliability (coefficient alpha = .86 for first sample, .83 for the second), and construct validity (by examining convergent and discriminant validity). The SOCO scale consists of 24 items, 12 of which are positively stated, and 12 negatively stated.

The scale was modified to reflect the fact that buyers were being asked about vendor salespersons' customer orientation (Saxe and Weitz tested the original scale on salespeople). The scale construction was also modified so as to make it cognitively less demanding of respondents. The scale items were modified because the intent here is to determine the relationship between vendor salespersons' customer orientation and the buyers' perceptions of role stress. So, scale items refer to a <u>salesperson</u> rather than <u>salespeople</u>. The acronym for the modified scale was COVS (Customer Orientation of Vendor Salesperson). The individual scale items are listed in Table 6.

Responses for scale items were collected on a 7-point Likert type format, the anchor's being "Strongly disagree" (1) and "Strongly

TABLE 6

Customer Orientation of Vendor Salesperson
Scale items *

The statements below describe various ways the MOST RECENT vendor salesperson might have acted with you. For each statement please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by CIRCLING any one of the numbers from 1 to 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Salespeople try to help me achieve my purchasing objectives.	1	2	3	4	5	6	7
Salespeople treat me as an opponent. (R)	1	2	3	4	5	6	7
Salespeople try to provide for my organization's satisfaction.	1	2	3	4	5	6	7
Salespeople have my best interest as a customer in mind.	1	2	3	4	5	6	7
Salespeople are always looking for ways to apply pressure to make me buy. (R)	1	2	3	4	5	6	7
Salespeople try to get me to discuss my product needs.	1	2	3	4	5	6	7
Salespeople talk first and listen to my needs later. (R)	1	2	3	4	5	6	7
Salespeople recommend the product best suited to solve my problems.	1	2	3	4	5	6	7
Salespeople spend more time trying to persuade than they do trying to discover my product needs. (R)	1	2	3	4	5	6	7
Salespeople try to influence me through information rather than by pressure.	1	2	3	4	5	6	7
Salespeople try to find out which products would be most helpful to me as a customer.	1	2	3	4	5	6	7
Salespeople apply selling pressure even though they know the product is not right for my organization. (R)	1	2	3	4	5	6	7
Salespeople answer my questions about their products as honestly as possible.	1	2	3	4	5	6	7

Continues on next page.

*Scale items are numbered COVS118 to COVS140.

NB: (R) indicates a reverse scored item.

TABLE 6 (continued)

Customer Orientation of Salesperson

1 Strongly Disagree	2 Moderately Disagree	3 Slightly Disagree	4 Neither Agree nor Disagree	5 Slightly Agree	6 Moderately Agree	7 Strongly Agree

Salespeople take a problem-solving approach in selling to me.	1	2	3	4	5	6	7
Salespeople will go as far as to disagree with me in order to help me make a better purchase decision.	1	2	3	4	5	6	7
Salespeople imply that things are beyond their control when they really are not. (R)	1	2	3	4	5	6	7
Salespeople stretch the truth in their product representations. (R)	1	2	3	4	5	6	7
Salespeople try to figure out what my needs are.	1	2	3	4	5	6	7
Salespeople paint rosy pictures of their products to make them sound as good as possible. (R)	1	2	3	4	5	6	7
Salespeople give accurate representations of what their product will do for me and my organization.	1	2	3	4	5	6	7
Salespeople make recommendations based on what they think they can sell, and not on the basis of my organization's long-term satisfaction. (R)	1	2	3	4	5	6	7
Salespeople that call on me are customer-oriented.	1	2	3	4	5	6	7
Salespeople try to convince me to buy more than I need. (R)	1	2	3	4	5	6	7

End.

agree" (7). The scores on the 24 scale items were then summed in order to provide a composite measure of a vendor salesperson's customer orientation as perceived by a purchasing professional.

In addition to the customer orientation of vendor salespeople, another hypothesized antecedent of buyers' perceptions of role conflict and role ambiguity is the influence strategy (or strategies) used by a salesperson. The ensuing discussion will therefore seek to develop the theoretical base for the hypotheses relating Influence Strategy/s used, to role conflict and role ambiguity.

Influence Strategy/s Used

Use of influence strategy/s by a vendor salesperson is another approach to sell products to the buyer's organization (Spiro and Perreault 1979). As Saxe and Weitz (1982) suggest, their study and the work of Spiro and Perreault (1979), may be useful in identifying aspects of the sales situations related to selling approaches. In light of their suggestion, the influence strategy/s used by the vendor salesperson is the second hypothesized antecedent of role conflict and role ambiguity. In an organizational buying context, the use of influence strategies is suggested by the self-aggrandizement and the ego-enhancement models of organizational buying.

Studies by Capon and Swasy (1977), and Spiro and Perreault (1979), suggest that influence techniques can be classified along the following dimensions: (a) open/direct versus closed/indirect and (b)

business/product-related versus emotional personal-related. When open/direct influence attempts are used, the purpose of the influence attempt is not hidden (Weitz 1981). Closed influence techniques on the other hand involve the use of deception and hidden purposes. Product-related influence techniques are transmitted in the form of business or task oriented messages, or messages directed toward the product and the purchase decision. Emotional messages in contrast, are designed to appeal to a buyer's psychological needs and improve buyer-salesperson relations (Weitz 1981).

Based on the categorization suggested above, Spiro and Perreault (1979) suggest five different influence strategies that can be used by salespeople: (1) Legitimate; (2) Expert, (3) Reference (4) Ingratiation, and (5) Impression Management. Legitimate influence deals with the vendor salesperson's attempts to draw on the customer's feelings of shared values concerning the relevant reputation and experience of the salesperson and his organization. Expert influence pertains to the vendor salesperson's presentation of specific information concerning the vendor organizations market offerings and how they will be used in the client organization. Both Legitimate and Expert influence strategies are open, business-oriented influence strategies (Spiro and Perreault 1979).

Referent influence pertains to the vendor salespersons' attempts to influence the customer (buyer) by relying on their personal affiliation. Use of referent influence is thus an open-personal strategy. Ingratiation influence strategy involves attempts by vendor salespeople to en-

sure an obligation and compliance on the part of customers (buyers) by providing personal favors (e.g., a free lunch). Impression management influence attempts involve manipulation by vendor salespeople of the false or deceptive impressions they creates in order to obtain a favorable response on the part of the customers. Ingratiation and Impression Management are "closed" influence strategies since there are often hidden objectives underlying what is said and done by the salesperson (Tedeschi, Schlenker, and Bonoma 1973).

Arch (1979) adapted the typology suggested by Spiro and Perreault (1979) in the manner indicated below

Spiro and Perreault (1979)	Arch (1979)
Referent influence	Similarity influence
Expert influence	Expert influence
Legitimate influence	Organizational reputation
Impression management	Impression management
Ingratiation	Ingratiation

As shown above, Arch (1979) adapted two of the influence categories suggested by Spiro and Perreault (1979). Legitimate influence was modified since legitimate influence strategies "appear weak or absent in buyer-seller relations, where the buyer has little obligation to comply with the seller's requests" (Arch 1979, p. 440). Organizational reputation influence was substituted in place of legitimate influence. Here sellers attempt to bolster their position by reference to the organization, rather than by alluding to their personal abilities. Similarity influence was substituted for referent influence since it was felt that referent influence was too broad a category (Arch 1979).

Since the primary interest here is to gauge buyers' perceptions of the appropriateness of vendor salespeoples' influence attempts, the relationship between role conflict, role ambiguity, and the various influence attempts will now be addressed. Initially however, the different influence strategy constructs will be defined.

> Similarity influence attempts focus on the personal relationship the seller has with the buyer.
>
> Expert influence attempts are based on sellers claiming superior skills, abilities, or knowledge, for which no factual evidence is presented.
>
> Organizational reputation influence attempts focus on the market standing and prestige of the organization.
>
> Ingratiation influence attempts rely on manipulative attempts to make the buyer feel a personal obligation to the seller.
>
> Impression management influence attempts are based on the sellers' presenting buyers with a false or misleading image of their business role or activities. Such attempts include the seller making false representations as to, their effort for customers, authority in the vendor organization, or skills, abilities, or knowledge.

As was emphasized earlier the performance indexes on the basis of which purchasing professionals' performance is evaluated, constitute part of their organizationally sent role expectations. Insofar as the influence strategies have in common an attempt on the part of the salesperson to make the sale by relying on criteria other than those sanctioned by the buyer's organization, they represent a selling orientation rather than a customer orientation. They imply a 'low concern for others/high concern for self' approach to selling. Salespeople using the selling concept seek to stimulate demand for their organization's pro-

ducts, rather than tailoring products in response to customer needs (Weitz 1981).

The use of influence strategies has the potential to put the buyer in a difficult position. [It is recognized that there are several other influence strategies that can be used by the vendor salesperson. The term influence strategies when used henceforth however refers only to the five influence strategies defined previously]. The purchasing professional is evaluated on the basis of rational performance indexes as price reduction, obtained quality improvements, and service provided by seller (Corey 1983). Yet, as suggested by the non-task models of organizational buying behavior, emotional motives and noneconomic or human factors also play a part in the purchase decision. Emotional motives play a key role in many industrial buying decisions, and influence buying decisions in subtle ways (Hutt and Speh 1981). In a similar vein, Corey (1983), suggests that the purchasing decision is influenced not only by economic considerations, but also the buyer's ego needs.

Under such circumstances, the purchasing professional may find that they are being evaluated on certain organizationally determined (rational) indexes. Yet, vendor salespeople stress the emotional, ego (or nonrational) factors not reflected in their organization's performance indexes.

The use of influence strategies therefore is likely to result in an increase in the purchasing professional's perceptions of role conflict. The following hypotheses are therefore proposed with regard to the re-

lationship between influence strategy used and buyers' perceptions of role conflict:

> H3: Purchasing professionals' perceptions that the influence strategy/s used by salespeople is/are appropriate, will be positively related to their perceptions of role conflict.

The relationship between role ambiguity and influence strategy used can be explained by considering how the performance measurement indexes of an organization influences purchasing behavior. According to Corey (1983):

> The influence of procurement measurement indexes on industrial buying behavior is clear as well as conflicting. On the one hand, the measurement indexes tends to motivate buyers to continue purchasing from suppliers whose service, delivery, and product quality have consistently satisfied locations since supplier failures to perform rebound on the buyer and affect his/her performance measures. On the other hand, purchasing norms weigh strongly on the side of using multiple sources, so buyers are under constant pressure to find alternative suppliers and to locate new vendors to meet supply requirements (p. 58).

Therefore, a buyer who is able to perform well on some indexes is under constant pressure to perform well on the others. In such circumstances, the buyer can face role ambiguity due to any of the following reasons: there may be uncertainty regarding: (1) the specific level of performance that can be expected from each alternative; and (2) the evaluation of the buying decision.

Since organizational buyers are motivated by a strong need to reduce uncertainty (Webster and Wind 1972), they may be susceptible to the influence strategy used by the salesperson. For example, Hutt and Speh (1981), suggest that a buyer can reduce uncertainty by favoring

suppliers with the best reputation. Therefore, salespeople who use a organization reputation influence strategy may be successful in persuading buyers to buy from them. Even then, buyers may perceive role ambiguity because they may not be certain as to how other organizational members will evaluate selection of the alternate supplier. This is because different individuals involved in a purchasing decision are evaluated on the basis of substantially different criteria (Corey 1983).

Thus, what is suggested here is that as a means of reducing uncertainty, or because of the buyer's susceptabilty to non-rational, human or ego factors, influence attempts may be used advantageously by vendor salespeople. However, the buyer may not be clear as to how such decisions will be evaluated because the measurement indexes only captures a part of a buyer's total performance (Anderson and Chambers 1985). On the basis of the above discussion the following hypothesis relating to the relation between buyers' perceptions of role ambiguity and salespeoples' use of influence attempts are offered:

> H4: Purchasing professionals' perceptions that the influence strategy/s used by salespeople is/are appropriate, will be positively related to their perceptions of role ambiguity.

This study is interested in testing buyers' perceptions of the appropriateness, of influence strategy attempts by vendor salespeople. Appropriateness (or lack of it), however, can be gauged only with reference to situational characteristics of the sales call.

Situational Characteristics

Situational factors have been shown to play a prominent part in evaluations of influence use outside of the selling context (Frey and Adams 1972; Graen 1976; and, Miles and Perreault 1978). In a sales context, role requirements and the boundary spanning nature of the salesperson's and the purchasing professional's jobs have been shown to affect the character of the sales-interaction process (Churchill, Ford, and Walker 1974; Donnelley and Ivancevich 1975).

This study followed Arch (1979) in the selection of situational characteristics. Arch (1979) used three situational characteristics: (1) the personal relationship of the buyer and seller; (2) the information requirements of the buyer in the buyer-seller interaction, and (3) the amount of risk in the purchase situation.

These situational characteristics were selected because the marketing literature has indicated that they are important. The personal relationship between the buyer and seller has been researched by Gadel (1964), Woodside and Davenport (1974), Evans (1963), and Tosi (1966), and shown to be an important factor contributing to making a successful sales call. Information requirements were researched by Olshavsky (1973), and Robinson, Faris, and Wind (1967), and were shown to be critical inputs in the ability to conclude a sale.

Risk is a major motivating factor in industrial buying and arouses a strong desire in buyers to reduce the level of risk (Hutt and Speh 1981). For example, Levitt (1965) found that buyers favor well-known

companies in a high-risk decision situation. Similarly, Cardozo and Cagley (1971) suggest that buyers rely on familiar suppliers in order to reduce the level of risk.

In terms of the three situational characteristics proposed, no hypotheses are offered. These situational characteristics were included because they may help explain variations in purchasing professionals' ratings of the appropriateness (or lack of) of influence strategies. A similar approach was followed by Arch (1979). Based on the data, some (normative) conclusions will be drawn with regard to use of influence strategies in different situations.

Measurement Issues

Purchasing professionals' perceptions of the appropriateness (or lack of) of a vendor salespeoples' use of influence strategies were measured by the Influence Strategy Scale. The individual scale items are listed in Table 7. The scale items were developed from the definitions of the five influence strategies provided in Spiro and Perreault (1979), and Arch (1979).

Responses were solicited to the scale items on a 5-point Likert-type scale with anchors labelled, "Very Inappropriate" (1) and "Very Appropriate" (5). Respondents were asked to respond to the influence strategy item on the above 1 to 5 continuum after answering "Yes/No" to a question that asked whether the influence strategy occurred. This choice was provided since the intention was to determine appropriate-

TABLE 7

Influence Strategy/s scale items*

With respect to yourself and the vendor salesperson you met MOST RECENTLY with, please indicate by placing a check mark in the 'YES' or 'NO' columns whether the actions suggested by the statements OCCURRED. Then, indicate how APPROPRIATE/INAPPROPRIATE the occurrence of the action (or lack of it), was to that buying situation, by circling any number between 1 and 5.

1	2	3	4	5
Very Inappropriate	Inappropriate	Neither Appropriate Nor Inappropriate	Appropriate	Very Appropriate

	Occurred? Yes	No					
The salesperson focuses on the common activities both of you are interested in.	[ ]	[ ]	1	2	3	4	5
During a sales call the salesperson states that both of you share the same opinions on most issues.	[ ]	[ ]	1	2	3	4	5
In talking business with you, the salesperson claims to have superior skills that you may or may not have but does not offer any evidence to back-up the claim.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call, the the salesperson stresses the common interests both of you share.	[ ]	[ ]	1	2	3	4	5
A salesperson during business discussions with you claims to possess superior knowledge but is not able to support his/her claim.	[ ]	[ ]	1	2	3	4	5
During a sales call, the salesperson makes flattering comments about you.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call the salesperson gives you a gift or offers to entertain you.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call, the salesperson stresses the prestige of his/her organization's name but makes me no reference to his/her own skills.	[ ]	[ ]	1	2	3	4	5

Continues on next page.

*Scale items are numbered ISS79 to ISS95.

TABLE 7 (continued)

Influence Strategy/s scale items

1	2	3	4	5
Very Inappropriate	Inappropriate	Neither Appropriate Nor Inappropriate	Appropriate	Very Appropriate

	Occurred? Yes	No					
In your discussions, the salesperson consistently agrees with your comments or opinions.	[ ]	[ ]	1	2	3	4	5
A salesperson claims that he/she makes an all out effort to please customers.	[ ]	[ ]	1	2	3	4	5
During a sales call, a salesperson tries to convince you that he/she has substantial authority in his/her organization.	[ ]	[ ]	1	2	3	4	5
A salesperson during a sales call attempts to impress you about his/her skills as they relate to selling.	[ ]	[ ]	1	2	3	4	5
During a sales call a salesperson makes attempts to impress you about his/her abilities as they pertain to selling.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call, a salesperson tries to impress you about his/her knowledge of selling.	[ ]	[ ]	1	2	3	4	5
During a sales call, the salesperson stresses that his/her organization is well known but makes no reference to his/her own skills.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call, the salesperson stresses your personal relationship with him/her.	[ ]	[ ]	1	2	3	4	5
In the course of a sales call the salesperson stresses the market standing of his/her organization but makes no reference to his/her skills or background.	[ ]	[ ]	1	2	3	4	5

End.

ness of influence strategy/s that were perceived by the purchasing professional as having occurred. Therefore, after the respondent answered "yes" or "no" to the occurred question, he/she was supposed to answer that particular item on the scale.

Arch (1979) used 7 point Likert type scales with anchors labelled, "Very likely to use" and "Very unlikely to use", whereas Spiro and Perreault (1979) used a 5 point Likert type scale with end-points "strongly disagree" (1) and "strongly agree" (5), to measure a salesperson's perceptions of influence strategies. However, Spiro and Perreault (1979), and Arch (1979), were interested in determining the situational characteristics under which salespeople used the various influence strategies. Since the scale suggested in Table 7 seeks to determine a buyer's perceptions of the appropriateness of influence strategy/s used by the salesperson, the anchors were suitably modified.

The three situational characteristics in this study (relationship, information need, and risk), were operationalized on a 5-point scale with anchors "Strongly Disagree" (1), and "Strongly Agree" (5). The format of the three situational characteristics is provided in Table 8. Each of the situational characteristics was measured by three indicators. Buyers were asked to answer the Situational Characteristics scale as it pertained to their <u>most recent</u> buying situation. A similar approach was followed by Spiro and Perreault (1979) in their study. These authors asked salespeople to respond to the questionnaire with a recent sales call as their reference point. This may have been done to enhance accuracy of recall.

TABLE 8

Situational Characteristics scale items

PLEASE ANSWER THE QUESTIONS ON THE REMAINING PAGES WITH YOUR MOST RECENT BUYING SITUATION, WHERE YOU MET OR COMMUNICATED WITH A VENDOR SALESPERSON, AS A REFERENCE POINT.

With reference to the most recent buying situation in which you met or communicated with a salesperson, please choose any number between 1 and 5 for each statement that follows.

1	2	3	4	5
Very Low	Low	Neither High nor Low	High	Very High

Personal relationship	1	2	3	4	5
Amiability during meeting	1	2	3	4	5
Help needed (by you) in defining product needs	1	2	3	4	5
Availability of product	1	2	3	4	5
Previous purchases of product	1	2	3	4	5
Number of questions you asked regarding the product	1	2	3	4	5
Criticality of product to your organization	1	2	3	4	5
Serviceability of product	1	2	3	4	5
Professional relationship	1	2	3	4	5

How typical is this purchase of your other purchases ? (choose one)

Not At All Typical	Somewhat Typical	Typical

After responding to the Situational Characteristics scale, respondents were asked to respond to the Influence Strategy Scale (Table 7). A similar procedure was followed by Arch (1979). It is anticipated that allowing buyers to describe the situational characteristics of their most recent buying situation may help explain variance in their perceptions of the appropriateness of influence strategy use by the salesperson. Acronym for this scale will be "IIS".

Role ambiguity and role conflict were operationalized in Tables 4 and 5 respectively. Two other hypothesized antecedents of role conflict and role ambiguity are the perceptions of conflict and/or uncertainty regarding the reward/measurement indexes of an organization. The following section will therefore focus on the perceptions regarding reward/measurement indexes and their relationship to perceptions of role stress.

Conflict/Uncertainty regarding performance indexes

As suggested earlier, the performance indexes on the basis of which purchasing performance is evaluated constitute part of the buyer's role expectations. It was also suggested that in any organization there will be some indexes on the basis of which performance is evaluated. In fact, all of the hypotheses proposed so far make explicit or implicit references to the organization's reward/measurement indexes. However, research on role stress has not considered the influence of buyers' perceptions regarding the reward/measurement indexes on their perceptions of role conflict and role ambiguity.

As Corey (1983) suggests, the purchasing performance measurement indexes can at the same time appear to be clear as well as conflicting. A buyer who is performing well on one index will very likely be pressured by management to peform well on other indexes also. For example, a buyer who has developed a good working relationship with a vendor and is able to get reliable supplies from him/her at a competitive market price, may nevertheless be asked by management to find alternative sources of supply (if an index of performance evaluation is finding alternative sources of supply). Therefore, when buyers perceive that the reward/ measurement indexes conflict with one another, their perceptions of role conflict will increase. Thus, the hypothesis pertaining to the relationship between organizations' reward/measurement indexes and buyers' perceptions of role conflict is:

H5: Purchasing professionals' perceptions that their organization's reward/measurement indexes conflict with one another, will be positively related to their perceptions of role conflict.

Anderson and Chambers (1985), suggest that performance is a multi-dimensional construct and performance indexes tap only a part of it. Therefore, a buyer will be clear as to how some aspects of performance will be evaluated, and unclear as to how other aspects of performance will be evaluated. For example, Heinritz and Farrell (1981), suggest that at least part of the importance being accorded of late to purchasing, derives from innovative problem solving actions required from buyers. It was suggested earlier that performance measurement indexes do not provide for evaluation of innovative problem solving actions on the

part of the purchasing professional. Thus, there are aspects of purchasing performance that performance indexes cannot evaluate. In fact, Ammer (1974) based on a study of 750 corporate managers reported that most companies could not distinguish between 'good' and 'bad' purchasing performance.

It was also suggested that performance indexes can only measure a part of purchasing performance. Thus, at any point buyers will be unsure about how certain actions taken by them will be evaluated. In such circumstances, buyers will perceive increased role ambiguity. Therefore the hypothesis pertaining to the relation between perceptions regarding an organization's reward/measurement indexes, and buyers' perceptions of role ambiguity is:

H6 : Purchasing professionals' perceptions of uncertainty regarding the their organization's reward/measurement indexes will be positively related to their perceptions of role ambiguity.

Measurement Issues

The central assertion of this research has been that part of the organizational role expectations are sent to the focal person in the form of the reward/measurement indexes. Thus, whatever the indexes an organization uses to measure performance (which represent some role expectations), the focal person will try to achieve satisfactory ratings on them (satisfy these role expectations).

Perceptions of organizationally sent role expectations (i.e., the reward measurement indexes) will be operationalized using performance

indexes suggested in the literature. For example, Corey (1983), on the basis of an in-depth study of the purchasing function at General Motors suggests that on a day-to-basis, purchasing is evaluated in terms of the extent to which it:

1. facilitates the missions of the user locations by assuring on-time deliveries of purchase parts and materials of the required quality;
2. negotiates acceptable prices;
3. conforms to purchasing norms and expectations;
4. handles the resources pertinent to managing sources, such as consigning tooling and materials in vendor locations;
5. manages purchasing overhead expenses.
6. conforms to corporate policies in such areas as doing business with minority-owned enterprises and equal-employment-opportunity employers (p. 52).

Based on the suggestions of Corey (1978a, b; 1983), and Monczka (1979), the following list of performance indexes was prepared: maintaining continuity of operations; integrity; business ethics; paying market price; types of sources developed; control of sources; negotiating skills; meeting of schedules; how decisions have worked out; how trouble is handled; ability to appraise situations; finding alternative sources of supply without interruption to production; cultivate new sources to overcome limited product capacity; cost savings; running an orderly office; slip ups; establish competent sources to meet production schedules; maintain good follow-up; handle problems in a timely manner; possess sense of urgency; rapport with engineering, quality, control, other departments and vendors; preparation for meetings; thoroughness

of summaries on bases for award decisions; checking on suppliers management capabilities, financial status, capacity, technical know-how, equipment load, and workload.

Admittedly, this list is long (23 criteria were identified). However, given the difficulty in measuring purchasing performance it was anticipated that such an exhaustive listing would tap an organization's reward/measurement indexes. Further, different organizations may use few or several of the indexes identified.

In terms of operationalization, the above mentioned indexes were repeated in two scales. The first scale sought to determine whether the respondent perceived uncertainty regarding the indexes, and the second sought to determine if the respondent perceived the indexes to be conflicting. Though the scale items were the same, the frame of reference provided to the buyer was different for the two scales. The acronym for the first scale was "PURPI" (Perceptions of Uncertainty Regarding Performance Indexes), and for the second, "PCRPI" (Perceptions of Conflict Regarding Performance Indexes). The scale for the perceptions of uncertainty regarding performance indexes was a 5-point Likert type scale with anchors "Certain all the time' (1) to "Uncertain all the time" (5). The "PURPI" scale items are listed in Table 9.

The scale for the perceptions of conflict regarding performance indexes was a 5-point Likert type scale with anchors "Conflicts all the time" (1) to "Never Conflicts" (5). The scale is presented in Table 10.

TABLE 9

Uncertainity regarding performance indexes scale items.*

In your job, you may know on what criteria your performance is evaluated. However, you may not know what you should do to satisfy those criteria. On the scales below several criteria are listed. Circle HOW OFTEN YOU FEEL CERTAIN / UNCERTAIN as to what you should do to satisfy these criteria, by choosing any number between 1 and 5.

1	2	3	4	5
Certain All The Time	Certain Most of The Time	Sometimes Certain Sometimes Uncertain	Uncertain Most of the Time	Uncertain All The Time

Maintaining continuity of operations	1	2	3	4	5
Acting with integrity	1	2	3	4	5
Demonstrating business ethics	1	2	3	4	5
Paying market price	1	2	3	4	5
Control of sources	1	2	3	4	5
Negotiating skills	1	2	3	4	5
Meeting schedules	1	2	3	4	5
How decisions have worked out	1	2	3	4	5
Handling of problems	1	2	3	4	5
Ability to appraise situations	1	2	3	4	5
Finding alternative sources of supply	1	2	3	4	5
Acheiving cost savings	1	2	3	4	5
Running an orderly office	1	2	3	4	5
Establishing competent sources to meet production schedules	1	2	3	4	5
Maintaining good follow-up	1	2	3	4	5
Handling problems in a timely manner	1	2	3	4	5
Rapport with other departments	1	2	3	4	5
Rapport with vendors	1	2	3	4	5
Preparation for meetings	1	2	3	4	5
Thoroughness of summaries on bases for award decisions	1	2	3	4	5
Checking on suppliers management capability, financial status, capacity, technical know-how, equipment load, and work-load	1	2	3	4	5

End.

*Scale items are numbered PURPI1 to PURPI21.

TABLE 10

Conflict regarding performance indexes scale items*

In your job, you may know on what criteria your performance is evaluated. However, in trying to satisfy those criteria you may feel that you are being asked to do two or more things that do not agree with one another, i.e., the criteria may conflict with one another. On the scales below, several criteria are listed. Circle HOW OFTEN YOU FEEL that the criteria you are reading CONFLICTS WITH ANOTHER by choosing any number between 1 and 5.

1	2	3	4	5
Conflicts all the time	Conflicts most of the time	Sometimes conflicts sometimes does not conflict	Does not conflict most of the time	Never conflicts

Maintaining continuity of operations	1	2	3	4	5
Acting with integrity	1	2	3	4	5
Demonstrating business ethics	1	2	3	4	5
Paying market price	1	2	3	4	5
Control of sources	1	2	3	4	5
Negotiating skills	1	2	3	4	5
Meeting schedules	1	2	3	4	5
How decisions have worked out	1	2	3	4	5
Handling of problems	1	2	3	4	5
Ability to appraise situations	1	2	3	4	5
Finding alternative sources of supply	1	2	3	4	5
Achieving cost savings	1	2	3	4	5
Running an orderly office	1	2	3	4	5
Establishing competent sources to meet production schedules	1	2	3	4	5
Maintaining good follow-up	1	2	3	4	5
Handling problems in a timely manner	1	2	3	4	5
Rapport with other departments	1	2	3	4	5
Rapport with vendors	1	2	3	4	5
Preparation for meetings	1	2	3	4	5
Thoroughness of summaries on bases for award decisions	1	2	3	4	5
Checking on suppliers management capability, financial status, capacity, technical know-how, equipment load, and work-load	1	2	3	4	5

End.

*Scale items are numbered PCRPI35 to PCRPI55.

Perceptions of uncertainty regarding performance indexes and perceptions of conflict regarding performance indexes were composites of scores on the individual items for each scale. Role ambiguity and role conflict were operationalized in Tables 4 and 5 respectively.

The hypothesized consequences of role conflict and role ambiguity are Satisfaction with Salespeople, and Satisfaction with Organizational Policies. These will be discussed now.

HYPOTHESIZED CONSEQUENCES OF ROLE CONFLICT/AMBIGUITY

Satisfaction with the Salesperson/Organizational Policies

Job satisfaction is an important consequence of role stress because it can affect organizational commitment and propensity to leave. Early research on role conflict and role ambiguity focused on satisfaction as a unidimensional variable. However, after the publication of the Job Descriptive Index (Smith, Kendall, and Hulin 1969), satisfaction is being measured along different dimensions. The Job Descriptive Index measures five dimensions of job satisfaction: satisfaction with the job itself; with co-workers; with supervision; with pay; and with opportunity for promotion. Researchers in marketing have added a sixth dimension (satisfaction with customers), and a seventh (satisfaction with organization policies).

Researchers is marketing who have used satisfaction with customers as a consequence of role conflict and/or role ambiguity are: Teas (1983); Churchill, Ford, and Walker (1974; 1976); Ford, Walker, and

Churchill (1976); and, Behrman and Perreault (1984). Except for Teas (1983) all the other authors used the same scales. In the case of satisfaction with organization policies, the researchers who used this seventh dimension of satisfaction are: Churchill, Ford, and Walker (1976); Ford, Walker, and Churchill (1976); and, Behrman and Perreault (1984).

Churchill, Ford, and Walker (1976) report that there is a negative relationship between role ambiguity and satisfaction with company policies, and customers. Similar findings were reported by Ford, Walker and Churchill (1976). Role conflict was also reported to be negatively related to satisfaction with customers and satisfaction with organization policies by these authors. Teas (1983), and Behrman and Perreault (1984), did not report individual relationships between role conflict, role ambiguity, and the various dimensions of job satisfaction.

However, it may be useful for management of vendor organizations to know if role conflict and/or role ambiguity that can be related to conflicting expectations being sent to the buyer, from the organization's reward/measurement indexes and vendor salespeople, resulted in buyer's lack of satisfaction with sellers. Based on the research cited above the following hypotheses are proposed with regard to the relationship between role conflict, role ambiguity, satisfaction with salespeople, and, satisfaction with organization policies:

H7: Purchasing professionals' perceptions of role conflict will be negatively related to their satisfaction with salespeople.

H8: Purchasing professionals' perceptions of role ambiguity will be negatively related to their satisfaction with salespeople.

H9: Purchasing professionals' perceptions of role conflict will be negatively related to their satisfaction with organization policies.

H10: Purchasing professionals' perceptions of role ambiguity will be negatively related to their satisfaction with organization policies.

Measurement Issues

Satisfaction with Salespeople, and Satisfaction with Organizational Policies were measured on 5-point Likert type scales with anchors "Strongly disagree" (1), and "Strongly agree" (5). The scale items for satisfaction with salespeople were developed by reviewing pertinent literature (Teas 1983; Churchill, Ford, and Walker 1974; and Bush and Busch 1979). The 5-point Likert type scale is the same one used by Churchill, Ford, and Walker (1974). All of the authors cited above used the scales to measure the satisfaction of salespeople. Since the present scale seeks to measure satisfaction of purchasing professionals, suitable modifications were made. The acronym for this scale was "SWS". The scale is shown in Table 11.

The format of the satisfaction with organization policy scale is the same as the format for the satisfaction with salespeople scale. Individual scale items were constructed for satisfaction with organization policies scale based on sample scale items provided in Churchill, Ford, and Walker (1974). The acronym for this scale is "SWOP". The scale is presented in Table 12.

TABLE 11

Satisfaction with Salesperson scale items *

Below you will find statements that describe various impressions you may have regarding the vendor salesperson you met with MOST RECENTLY. On the scale provided below, indicate whether you AGREE/DISAGREE with each statement by CIRCLING any number between 1 and 5.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

The salesperson I met respects my judgement.	1	2	3	4	5
The salesperson I met is intelligent.	1	2	3	4	5
The salesperson I met was interested in what I had to say.	1	2	3	4	5
This salesperson lives upto his/her promises after getting my order.	1	2	3	4	5
This salesperson is trustworthy.	1	2	3	4	5
This saleperson is fair.	1	2	3	4	5
This salesperson expects too much from me.(R)	1	2	3	4	5
I can't reach or find this salesperson when an emergency arises. (R)	1	2	3	4	5
This salesperson is well organized.	1	2	3	4	5
This salesperson blames me for problems that I have no control over. (R)	1	2	3	4	5
I find this salesperson to be unreasonable.(R)	1	2	3	4	5
This salesperson is friendly.	1	2	3	4	5
This salesperson is understanding of my problems.	1	2	3	4	5

End.

*Scale items are numbered SWS22 to SWS34.
NB: (R) indicates a reverse scored item.

TABLE 12

Satisfaction with Organizational Policies scale items *

Below you will find statements that describe various impressions you may have regarding your (organization's) management policies. On the scale provided below, indicate whether you AGREE/DISAGREE with each statement by CIRCLING, for each statement, any number between 1 and 5.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

Management is progressive.	1	2	3	4	5
My organization's training program is not carried out in a well-planned manner. (R)	1	2	3	4	5
Employee benefits in my organization, when compared with other organizations, are good.	1	2	3	4	5
Management does not inform me about things I ought to know. (R)	1	2	3	4	5
Management really knows what its doing.	1	2	3	4	5
My organization operates smoothly and efficiently.	1	2	3	4	5
Sometimes I wonder if management really understands the purchasing function. (R)	1	2	3	4	5
Management is weak. (R)	1	2	3	4	5
Management is fair and honest.	1	2	3	4	5
Management is interested in the welfare of employees.	1	2	3	4	5
Management is very interested in helping me do a good job.	1	2	3	4	5
Management sees to it that there is cooperation between departments involved in the purchasing decision.	1	2	3	4	5
Management ignores my suggestions and complaints. (R)	1	2	3	4	5
Management fails to give clear-cut orders and instructions. (R)	1	2	3	4	5

End.

*Scale items are numbered SWOP56 to SWOP69.

NB: (R) indicates a reverse scored item.

Both scales have some reverse scored items. These are indicated by an "(R)" next to the scale item. SWS and SWCP were composites of scores on the individual items comprising each scale. Role ambiguity and role conflict were operationalized in Tables 4 and 5 respectively.

Experience

The relationship between purchasing professionals' perceptions of role conflict and their satisfaction with salespeople, and with organization policies, may be moderated by their experience. This is because experience on the job influences satisfaction with customers and with organization policies.

As purchasing professionals gain experience, they may learn to overcome or cope more effectively with (some of) the disconcerting aspects of the work environment. Thus, experienced purchasing professionals are likely to have a more thorough understanding of their jobs, their organization's policies, and the salespeople they meet. They are also likely to perceive less ambiguity in dealing with the problems or challenges they are faced with since they can draw on their experience. They are thus more likely to understand organization policies, and know how to respond to influence attempts by salespeople. It would seem that the experienced purchasing professional is less likely to suffer from the uncertainties and anxieties that can cause dissatisfaction among those purchasing professionals with less experience.

Therefore, the following hypotheses are proposed with regard to the relationship between role conflict, role ambiguity, satisfaction with salespeople, and with organization policies:

H11: Purchasing professionals' experience will be negatively related to their perceptions of role conflict.

H12: Purchasing professionals' experience will be negatively related to their perceptions of role ambiguity.

H13: Purchasing professionals' experience will be positively related to their satisfaction with salespeople.

H14: Purchasing professionals' experience will be positively related to their satisfaction with organization policies.

Measurement Issues

Experience was defined as the average of the total number of years of purchasing experience, experience in public purchasing, and tenure in the present position. Respondents were asked to write in the number of years of purchasing experience they have had. The acronym for this variable is "EXP".

Chapter IV

PRETEST PROCEDURES AND RESULTS

OVERVIEW

The present chapter will address the issue of pretesting the scales developed in the previous chapter and will focus on: 1) pilot interviews that were conducted with purchasing professionals; 2) pretest administration and analyses; and 3) conclusions drawn from the pretest and subsequent changes that were made in the questionnaire.

IMPORTANCE OF PRETESTING

Guiding the pretest effort was the perception that pretesting is extremely important to the process of developing better measures of marketing constructs, yet either is ignored or conducted on a perfunctory basis. The usefulness and importance of the pretest is succintly stressed by Backstrom and Hursch (1963) who state that, "no amount of intellectual excercise can substitute for testing an instrument designed to communicate with ordinary people" (p. 235). Churchill (1979a) suggests that pretesting and revising the questionnaire is the final stage in the questionnaire development process. Nonetheless, pretesting is usually given 'short shrift' in marketing research and is often done in a hurried, non-systematic fashion (Hunt, Sparkman, and Wilcox 1982). In a similar vein Lehman (1979) states that the pretesting stage in the research process is one "most likely to be squeezed out due to cost/ time pressures".

Consequently, a deliberate effort was made to be as thorough and complete as possible in developing and pretesting the questionnaire. The framework within which this was done is based on the suggestions made by Churchill (1979b). Churchill (1979b) suggests an eight step procedure for developing better measures of marketing constructs; these steps are: 1) specify domain of construct; 2) generate sample of items; 3) collect data; 4) purify measure; 5) collect data; 6) assess reliability; 7) assess validity; and 8) develop norms. The discussion that follows will attempt to show how these eight steps were adhered to.

Procedure followed in Scale Development

Though some of the scales used in this study: the Role Conflict scale, the Role Ambiguity scale, the Customer Orientation of Vendor Salesperson scale, and the Satisfaction with Organizational Policies scale, were used in earlier studies they were not used on an 'as is' basis in this study. Thus, it was recognized that the entire procedure suggested by Churchill (1979b) had to be gone through in order to come up with 'quality' measures. Towards this end, scales that were used in earlier studies constituted the starting point for scale refinement. These scales were modified in order to make their items purchasing specific.

Scales that were constructed specifically for this study: the Perceptions of Uncertainty regarding Performance Indexes scale, the Perceptions of Conflict regarding Performance Indexes scale, the Influence

Strategy scale, and the Satisfaction with Salesperson scale, were developed by surveying the literature pertaining to these constructs, and then generating a sample of items. The intention here was to add to the construct validity and content validity of scale items. Such a course of action is supported by Peter and Churchill (1986). These authors suggest that it is necessary to consider such qualitative factors as construct validity and content validity in evaluating a scale, and caution against using only quantitative measures such as reliability to evaluate a scale.

In developing the scales it was also ensured that all constructs were measured by multi-item rather than single-item measures because with such measures, reliability tends to increase and measurement error decrease. Further, almost half of the items in each of the scales were negatively worded to reduce "yea' or "nay" saying tendencies. In order to make the scales cognitively as easy as possible, they were all constructed as either five or seven point scales. The intent here was to reduce the learning required of respondents. The first stage of the pretest: pilot interviews, were conducted at this point.

PILOT INTERVIEWS

This section will discuss literature on pilot interviews and then provide details of the pilot interview procedures and results.

Literature on Pilot Interviews

In conducting the pretest, the method by which it is administered is important. Boyd, Westfall, and Stasch (1977) suggest that the first series of pretests should be conducted by personal interview even if the questionnaire will ultimately be administered by mail. Therefore, in this study the pilot interviews were conducted on a person to person basis. Another issue in pretesting is the nature of respondents to be used; Tull and Hawkins (1976) recommend that the pretest should use respondents who are as close as possible to the target respondents. Similarly, Zaltman and Burger (1975) suggest that pretest subjects should be 'typical' or 'representative'. It was therefore decided that only purchasing professionals should be used in both the pilot interviews and the actual pretest. The next section will discuss details pertaining to the pilot interviews.

Pilot Interviews -- Procedures

The objectives in conducting the pilot interviews were: 1) to determine the relevance to purchasing professionals, of the variables to be tested in this study; 2) to ascertain whether wording of scale items was appropriate to the construct they represented (construct validity), and also whether the items were consistent with one another (homogeneity of content). Each of these interviews was approximately one hour in length. Interviewees were asked to read each item aloud and then mark their response on the questionnaire. It was emphasized to interviewees

that were not to hesitate in bringing up any questions or concerns that they may have regarding the questionnaire. Interviewees were unanimous in stating that the variables of interest to this study were relevant to their daily work routines.

Pilot Interviews -- Results

The interviews enabled identification of items that were perceived by interviewees to be 'red flag' items (for instance, an item in the Influence Strategy scale dealt with bribe attempts made by vendor salespeople). Such items were either reworded and when rewording was not possible, eliminated. Table 13 provides details of the date on which the interview was conducted, the purchasing professional who was interviewed, and the organizational affiliation of that person.

Other factors that were identified by interviewees in these pilot interviewees were as follows: 1) the questionnaire was lengthy and an attempt should be made to make it look short and easy to complete; 2) the incentive of sending a summary to those who wanted one was not a particularly strong one; 3) propensity to respond could be high if the cover letter was individually addressed; 4) respondents should be informed that the survey is of a purely academic nature since buyers usually receive several surveys from sales organizations which they do not respond to; and 5) respondents should be assured that their responses would be used only for academic research, and also be assured of complete anonymity.

TABLE 13

Details of Pilot Interviews

Date	Interviewee	Position	Organization
August 15, 1985	Sid Brewbaker	Buyer	Virginia Tech
August 19, 1985	Paul Smiley	Buyer	Virginia Tech
August 19, 1985	Jim Dunlap	Buyer	Virginia Tech
August 23, 1985	Betty Hillis	Buyer	Virginia Tech
August 23, 1985	Marie Bland	Buyer	Virginia Tech
August 26, 1985	Ralph Reed	Buyer	Montgomery Co.
August 28, 1985	John Cultice	Buyer	Federal Moghul
August 29, 1985	Russell Stone	Buyer	Blacksburg Town
August 29, 1985	Jim Reid	Buyer	Poly Scientific
August 29, 1985	Bob Schenk	Buyer	Poly Scientific
August 30, 1985	Dave Goldsmith	Buyer	Virginia Tech

The responses of the interviewees were tabulated and then visually inspected to ascertain whether there were any scale restrictions; none were observed. The questionnaire was modified in light of the suggestions made by the interviewees. In order to give the questionnaire the appearance of being short, it was typed onto 11' by 17' mats, then reduced to a 8.5' by 11' size, and finally copied onto both sides of a page. The resultant questionnaire was only four (double-sided) pages in length. However, its appearance was very unprofessional; consequently this attempt was abandoned. Finally the questionnaire was printed on the 6670 Lazer printer. Its length was seven (double sided) pages, and it was judged by interviewees to be very professional. At this stage the actual pretest was administered. The following section will focus on the administration of the pretest, methods used to determine unidimensionalty of scales, and provide reliabilities of the scales.

PRETEST PROCEDURES

Pretest Administration

Questionnaires were mailed to 203 randomly selected members of the Virginia Association of Governmental Purchasing on December 13, 1985. The Virginia Association of Governmental Purchasing is comprised of employees of the Commonwealth of Virginia whose primary job responsiblities involves purchasing on behalf of the state. Members of this association are also members of the National Institute of Governmental Purchasing to whom the final questionnaire was mailed.

The questionnaires were mailed along with individually addressed cover letters printed on Virginia Tech stationary. Suggestions made by Erdos (1970) on the conduct of professional mail surveys were utilized liberally in writing this letter. The cover letter emphasized the academic nature of the survey; it stressed the fact that responses would be used only for academic research purposes and assured respondents of complete anonymity. A letter signed by the President of the Virginia Association of Governmental Purchasing requesting participation in the study was also enclosed, as was a postage paid, self-addressed return envelope.

Of the 203 that were mailed, 2 were returned because they were not deliverable. A total of 98 responses were received between December 13, 1985 and February 13, 1986 for a response rate of 48.27 percent. Considering the fact that the questionnaire was mailed before the Christmas holiday season, the response rate is surprisingly high and may be due to the fact that the cover letter was personalized. This response rate of 48.27 percent compares very favorably with the response rate of other studies involving purchasing professionals. For instance, Michaels' (1983) study of purchasing professionals had a response rate of 30.25 percent.

With a view to speeding up the analysis stage, analysis was commenced as soon as the response rate was in this range; i.e., analysis was commenced after 79 responses were received (38.9 percent response rate). No reminder letter was sent because the response rate exceeded the target of 30 percent even without recourse to its use.

Each returned questionnaire was inspected to ensure its completeness. Questionnaires that were less than 90 percent complete were not included in the analyses leading to the deletion of one response. One other response was deleted because the buyer noted that s/he was a specifications writer and did not actually make buying decisions. Thus, 77 responses were included in the analyses. Analyses of the responses was carried out at this time and the next section will discuss details of the analyses.

Analysis of Unidimensionalty and Reliability

Since the variables of interest to this study are all measured by multiple indicators, unidimensionalty (of items tapping a construct) needs to be established before they can be used in theory testing.

In this study, unidimensionalty of constructs was ensured by three criteria which have been identified as useful for creating, testing, and evaluating a set of unidimensional indicators of a construct (Danes and Mann 1984). These criteria are:

1. Internal consistency;
2. External consistency (Parallelism); and,
3. Homogeneity of content

Internal Consistency

The internal consistency criterion stipulates that the correlations of the indicators meet a "product rule." If X_i and X_j are two items mea-

suring the same (unidimensional) construct, and T is the cluster true score, then the correlation between the items should satisfy the following product rule (Hunter and Gerbing 1982):

$$\alpha_{x_i x_j} = \alpha_{x_i T} \, \alpha_{x_j T} \qquad (4.1)$$

In words, the above equation stipulates that the correlation between the (two) indicators should be the product of their correlations with the underlying trait.

External Consistency

The external consistency (parallelism) criterion specifies how items within a cluster should correlate with variables <u>outside</u> the cluster (Hunter and Gerbing 1982). The external consistency criterion requires that items in a cluster have similar correlations with items outside the cluster (within sampling error of the correlation coefficients).

Homogeneity of Content

Unlike the criteria of internal consistency and external consistency which are quantitative in nature, the criterion of homogeneity of content requires that the latent meaning of all items in a multiple indicator construct be (semantically) the same (Danes and Mann 1984). Thus, all the indicators of a trait should measure that trait itself and no other. Hunter (1977) states that the criterion of homogeneity of content is the most important condition for unidimensionalty. In a similar vein, Peter and Churchill (1986) argue that it is not sufficient to emphasize only

such quantitative aspects as reliability in assessing a multiple indicator construct; they suggest that such qualitative aspects as homogeneity of content should also be considered. In this study, unidimensional measures of constructs were developed through use of the PACKAGE 1980 program (Hunter, et al., 1980). The following section will highlight various aspects of PACKAGE 1980.

PACKAGE (1980)

PACKAGE (1980) is a system of several computer routines for correlational data. The analysis starts with an *a priori* partitioning of variables into clusters on the basis of homogeneity of content.

One of the routines in PACKAGE 1980 is called MGRP. The MGRP routine performs oblique multiple groups factor analysis and can estimate the parameters of the measurement model using centroid factoring methods. An output of MGRP is a matrix labelled "Factor Intercorrelations and Loading Matrix." This matrix provides the following information:

1. correlations between all the items in the data set;
2. communalities or reliabilities of items as measures of the factor (or construct) underlying each cluster;
3. the centroid factor loadings of each item on each factor; and,
4. the correlations of each factor with every other factor.
5. a matrix of similarity coefficients for the items in each cluster.

These outputs of MGRP were used to ensure unidimensionalty in the following manner.

Internal Consistency

As discussed earlier, indicators of a construct are internally consistent only if they meet the product rule for internal consistency. Their inter-item correlations, part of the Factor Inter-Correlations and Loading Matrix, should be the result of their loading on the same underlying factor. Therefore, if the loading of an item on its underlying factor is low, this should be indicated in the form of low inter-item correlations with the other items in the same cluster. If the criterion of internal consistency is met, the matrix of inter-item correlations should have the same pattern of gradation as the factor loadings. Deviations from such a pattern of similarity indicates the presence of correlated measurement errors. Deviations (beyond the range of the sampling error of the correlation coefficients) indicate that the items in the cluster are not internally consistent.

Items in a cluster can also be assessed for internal consistency through an examination of the residual inter-item correlations after the latent or true score is partialed out. If the items in a cluster are internally consistent, their inter-item correlations should be zero or close to zero (after taking into account the sampling error of the correlation coefficient), when their trait true score is partialed out.

In order to ensure that items in a cluster were internally consistent, the factor intercorrelations and loading matrix was examined to check whether loadings of each item, belonging to the same underlying construct, satisfied the product rule. The residual inter-item correlations were also examined to determine whether correlated errors existed between items in a cluster.

External Consistency

The external consistency of items in a cluster can be evaluated through an examination of the similarity coefficient. According to Anderson and Gerbing (1982), the similarity coefficient is an index of the "similarity" of two indicators in terms of the extent to which they serve as alternate indicators of the same factor. Thus, similarity coefficients are descriptors of the external consistency criterion for unidimensional measurement. The similarity coefficients between items in a cluster should be 1 or close to 1.

In this study, the matrix of similarity coefficients was used to determine whether items in a cluster met the requirement of external consistency. In view of the care taken in developing the items measuring each construct, only a few (10 of 140 items) used to measure the variables of interest were identified as candidates for deletion. These items will be identified later (in the section dealing with Convergent/Discriminant validity).

After these items were identified as candidates for deletion, they were dropped by reassigning them to a cluster labelled 'JUNK'. The PACKAGE 1980 output was then evaluated for unidimensionalty. Coefficient alpha was the statistic used to evaluate the reliability of a multiple indicator construct.

Reliability Assessment

Reliability of the scales was computed using the 'PACKAGE' program. Nunnally (1978) suggests a coefficient alpha of at least .80 when the research is of an applied nature. Although the value of coefficient alpha is affected by the number of items in a scale, its method of examining the internal consistency among scale items makes this measure of reliability a theoretically sound procedure (Lord and Novick 1968). The reliability of the scales is presented in Table 14.

As can be seen from the table, except for the Situation Factors scale reliability, all the other reliabilities are above .80. Though Nunnally (1978) suggests that attempts to increase reliablity above .80 are not worthwhile, items that were identified as candidates for deletion were deleted to determine the affect of deletion on reliability. If the earlier conclusion that these items are not contributing to unidimensionalty is correct, then one would expect the scale reliability to increase when these items are deleted. In almost all cases this did occur; in a few cases there was no change in the reliability of the scale. Consequently these items were deleted. The intent in deleting these items was not to

TABLE 14

Pretest Scale Reliabilities

Scale	Original Reliability	Reliability after deletion
PURPI	.89	.89
PCRPI	.95	.95
SWC	.92	.93
SFC	.67	---
ISS	.89	.91
SWS	.84	.85
RAS	.81	.85
RCS	.86	.87
SOCOVS	.89	.90

increase reliability of scales above .80 but to reduce the length of the questionnaire.

The focus of the present section has been on ensuring the internal consistency and external consistency of items measuring the same construct. Another criterion of unidimensionalty is homogeneity of content. The section that follows will focus on this issue under the rubric of validity.

Analysis of Validity

According to Carmines and Zeller (1979), validity refers to the extent to which a measuring instrument measures what it is supposed to measure. There are three aspects of validity that need to be considered: content validity, construct validity, and finally, nomological validity. This section will discuss the steps taken to ensure these validities.

Content Validity

In this research content validity was ensured by thoroughly surveying relevant literature while developing scale items. In deleting scale items, the intent was not only to ensure unidimensionalty, but also to ensure content validity of scale items.

Construct Validity

It is not possible to construct validate a scale without the existence of a theoretical network surrounding the concept (Carmines and Zeller 1979). Three dimensions of construct validity: convergent validity, discriminant validity, and nomological validity, can therefore be studied only when the construct to be studied exists within a theoretical framework that specifies the relationships between constructs.

In this study, convergent and discriminant validity of scale items were evaluated by examining the Spearman factor loadings output by the MGRP routine in PACKAGE 1980. If items measuring a construct loaded more highly on its own factor than on other factors, the items were evaluated as possessing convergent validity. The lower loadings on factors other than the 'parent' construct were construed as evidence of discriminant validity. Tables 15 to 23 provide information on the Spearman factor loadings of each item on its 'parent' as well as all other constructs. The order of presentation is is follows : Table 15 -- Perceptions of Uncertainty regarding Performance Indexes scale (PURPI); Table 16 -- Satisfaction with Salesperson scale (SWS); Table 17 -- Perceptions of Conflict regarding Performance Indexes scale (PCRPI); Table 18 -- Satisfaction with Organizational Policies scale (SWOP); Table 19 -- Influence Strategy scale (ISS); Table 20 -- Role Ambiguity scale (RAS); Table 21 -- Role Conflict scale (RCS); and Table 22 -- Customer Orientation of Vendor Salesperson scale (COVS). [Only four constructs could be used at any one time since PACKAGE cannot pro-

cess data when the number of constructs plus the number of variables exceeds 145. In the present instance, the number of variables is 141; therefore, only 4 constructs can be used at any one time.]

As can be seen in the tables, in all cases items load more on their 'parent' construct than on another construct. However, items with (relative to other items in the same scale) low factor loadings, were dropped. Such items are indicated in the scales.

Convergent validity and discriminant validity were also assessed by examing the matrix of similarity coefficients from PACKAGE 1980. High similarity coefficients between indicators of the same construct was considered as evidence of convergent validity. Lower similarity coefficients between indicators measuring different constructs were considered as evidence supporting discriminant validity.

Another issue pertained to ensuring discriminant validity for four of the scales: Perceptions of Uncertainty regarding Performance Indexes and Role Ambiguity; and Perceptions of Conflict regarding Performance Indexes and Role Conflict. This was accomplished by calculating the square root of coefficient alpha; this is the correlation of the scale with its errorless true score. If the two scales (for instance Perceptions of Uncertainty regarding Performance Indexes and Role Ambiguity) are tapping the same construct, then the correlation between them should fall between the true scores of the two scales; if it does not, then it can be concluded that the two scales are tapping different constructs.

TABLE 15

Convergent/Discriminant Validity -- PURPI Scale

Item	501	502	503	504
PURPI1	41	-2	29	-34
PURPI2	39	-20	22	-13
PURPI3	32	-18	12	-14
PURPI4	28	-19	17	-39
PURPI5	62	-25	30	-20
PURPI6	50	-10	19	2
PURPI7	47	-14	16	-29
PURPI8	54	-12	36	-13
PURPI9	62	-31	24	-14
PURPI10	58	-11	24	-14
PURPI11	60	-16	16	-4
PURPI12	71	-20	18	-7
PURPI13	51	-17	45	-21
PURPI14	57	-17	28	-17
PURPI15	66	-19	26	-12
PURPI16	65	-22	29	-17
PURPI17	45	-13	23	-15
PURPI18	51	-16	14	-2
PURPI19	50	-24	43	-19
PURPI20	58	-17	24	-1
PURPI21	43	-22	15	-10

NB: PURPI factor is 501. 502 to 504 are other factors.
PURPI3 and PURPI4 were dropped.

LEGEND

501 -- Perceptions of Uncertainty regarding Performance Indexes
502 -- Satisfaction with Salesperson
503 -- Perceptions of Conflict regarding Performance Indexes
504 -- Satisfaction with Organizational Policies.

TABLE 16

Convergent/Discriminant Validity -- SWS Scale

Item	501	502	503	504
SWS22	-3	61	7	-3
SWS23	1	50	17	-13
SWS24	-11	36	-17	-7
SWS25	-32	62	18	-13
SWS26	-18	74	27	-5
SWS27	-26	68	32	7
SWS28	-1	41	13	-1
SWS29	-15	31	5	-27
SWS30	-38	60	36	11
SWS31	-39	65	19	10
SWS32	-43	67	23	9
SWS33	3	42	21	7
SWS34	-13	48	44	6

NB: SWS factor is 502. 501, 503, and 504 are other factors.
SWS29 was dropped.

LEGEND

501 -- Perceptions of Uncertainty regarding Performance Indexes
502 -- Satisfaction with Salesperson
503 -- Perceptions of Conflict regarding Performance Indexes
504 -- Satisfaction with Organizational Policies.

TABLE 17

Convergent/Discriminant Validity -- PCRPI Scale

Item	501	502	503	504
PCRPI35	29	28	67	19
PCRPI36	17	25	73	10
PCRPI37	20	18	71	15
PCRPI38	30	30	61	21
PCRPI39	32	29	57	25
PCRPI40	30	29	51	7
PCRPI41	32	23	77	10
PCRPI42	32	15	60	31
PCRPI43	38	12	76	35
PCRPI44	45	16	72	20
PCRPI45	26	53	67	9
PCRPI46	13	22	68	12
PCRPI47	27	19	65	23
PCRPI48	42	24	74	21
PCRPI49	41	25	73	9
PCRPI50	33	14	79	13
PCRPI51	35	21	74	24
PCRPI52	42	28	73	12
PCRPI53	30	22	66	1
PCRPI54	27	18	65	1
PCRPI55	37	20	44	15

NB: PCRPI factor is 503. 501, 502, and 504 are other factors. PCRPI37 and PCRPI38 were dropped.

LEGEND

501 -- Perceptions of Uncertainty regarding Performance Indexes
502 -- Satisfaction with Salesperson
503 -- Perceptions of Conflict regarding Performance Indexes
504 -- Satisfaction with Organizational Policies.

TABLE 18

Convergent/Discriminant Validity -- SWOP Scale

Item	501	502	503	504
SWOP56	-36	19	35	65
SWOP57	-3	-27	-8	45
SWOP58	-18	10	-2	17
SWOP59	4	-6	3	70
SWOP60	-21	-5	26	77
SWOP61	-20	0	36	66
SWOP62	-19	-12	-9	54
SWOP63	-23	-7	19	77
SWOP64	-23	6	26	79
SWOP65	-11	10	42	73
SWOP66	-21	-6	22	78
SWOP67	-35	-2	19	70
SWOP68	-17	4	5	76
SWOP69	-18	-7	7	79

NB: SWOP factor is 504. 501 to 503 are other factors.

LEGEND

501 -- Perceptions of Uncertainty regarding Performance Indexes
502 -- Satisfaction with Salesperson
503 -- Perceptions of Conflict regarding Performance Indexes
504 -- Satisfaction with Organizational Policies.

TABLE 19

Convergent/Discriminant Validity -- ISS Scale

Item	505	506	507	508
ISS79	31	-11	-5	22
ISS80	71	-6	-13	4
ISS81	65	4	5	-1
ISS82	66	5	6	1
ISS83	79	6	12	8
ISS84	68	14	2	15
ISS85	62	12	-5	-1
ISS86	64	24	16	4
ISS87	42	19	17	-7
ISS88	0	-11	-2	19
ISS89	55	14	9	8
ISS90	76	-15	-5	14
ISS91	81	-12	-2	17
ISS92	76	-6	5	16
ISS93	34	25	6	2
ISS94	86	0	-6	14
ISS95	41	30	21	-13

NB: ISS factor is 505. 506 to 508 are other factors.
ISS88 was dropped.

LEGEND

505 -- Influence Strategy/s used
506 -- Role Ambiguity scale
507 -- Role Conflict scale
508 -- Customer Orientation of vendor salesperson

TABLE 20

Convergent/Discriminant Validity -- RAS Scale

Item	505	506	507	508
RAS96	5	50	23	2
RAS97	7	43	34	-8
RAS98	-4	36	20	-5
RAS99	2	71	51	-6
RAS100	11	87	53	-7
RAS101	1	75	44	-1
RAS102	9	65	40	-7
RAS103	9	22	14	-12
RAS104	9	67	52	-14

NB: RAS factor is 506. 505, 507, and 508 are other factors.
RAS98 and RAS103 were dropped.

LEGEND

505 -- Influence Strategy/s used
506 -- Role Ambiguity scale
507 -- Role Conflict scale
508 -- Customer Orientation of vendor salesperson

TABLE 21

Convergent/Discriminant Validity -- RCS Scale

Item	505	506	507	508
RCS105	-4	21	28	-2
RCS106	-22	10	50	-32
RCS107	1	24	28	-2
RCS108	-22	10	50	-32
RCS109	12	32	50	-21
RCS110	-3	33	78	-43
RCS111	-5	61	70	-25
RCS112	7	57	87	-35
RCS113	3	48	83	-40
RCS114	20	43	54	-36
RCS115	12	47	65	-23
RCS116	11	47	67	-29
RCS117	1	19	25	-33

NB: RCS factor is 507. 505, 506, and 508 are other factors.
RCS107 and RCS117 were dropped.

LEGEND

505 -- Influence Strategy/s used
506 -- Role Ambiguity scale
507 -- Role Conflict scale
508 -- Customer Orientation of vendor salesperson

TABLE 22

Convergent/Discriminant Validity -- COVS Scale

Item	505	506	507	508
COVS118	7	4	-2	15
COVS119	13	-7	-36	54
COVS120	8	2	-10	46
COVS121	-1	-1	-19	69
COVS122	13	-2	-10	46
COVS123	-1	14	5	35
COVS124	4	-20	-33	54
COVS125	1	-17	-33	63
COVS126	-8	-9	-33	71
COVS127	4	3	-13	38
COVS128	14	-9	-31	72
COVS129	12	-7	-59	64
COVS130	-3	-23	-43	57
COVS131	8	15	-9	50
COVS132	16	29	22	20
COVS133	20	-12	-34	49
COVS134	19	-10	-31	51
COVS135	-9	-1	-8	47
COVS136	-10	-13	-36	44
COVS137	-4	-15	-22	62
COVS138	16	-7	-36	65
COVS139	14	-22	-26	55
COVS140	12	-26	-48	62

NB: COVS factor is 508. 505, 506, and 507 are other factors.
COVS118 and COVS132 were dropped.

LEGEND

505 -- Influence Strategy/s used
506 -- Role Ambiguity scale
507 -- Role Conflict scale
508 -- Customer Orientation of vendor salesperson

In the above example, the reliability of the Role Ambiguity scale is .81 and its square root .90. For the Perceptions of Uncertainty regarding Performance Indexes scale the reliability is .89; square root of the reliability is .94. If the two scales are tapping the same construct, then the correlation between the two scales should fall between .90 and .94. However, the correlation between the two scales (from PACKAGE) was observed to be .51. It was therefore concluded that these scales are tapping different constructs. A similar conclusion was drawn for the Perceptions of Conflict regarding Performance Indexes scale and the Role Conflict scale. There was also a clear separation of factor loadings for these scales; this further strengthened the conclusions of discriminant validity made with regard to the above four scales.

Nomological Validity

Nomological validity of constructs was evaluated through an examination of the factor to factor loadings output by PACKAGE 1980. If the direction of the factor to factor loadings supported the research hypothesis, this was recognized as support for the nomological validity of constructs. In all cases, the direction of the factor to factor loadings were in the hypothesized direction. It was therefore concluded that there was satisfactory nomological validity.

So far the focus of discussion has been on pretest administration and analysis of pretest data for undimensionality and reliability. In terms of the eight step procedure suggested by Churchill (1979b), the

procedures followed thus far can be matched as follows: specify domain of construct and generate sample of items -- survey of literature; collect data and purify measure -- pilot interviews; collect data, assess reliability, and validity -- pretest. The last step suggested by Churchill (1979b) -- develop norms, can be done on the basis of the test of hypotheses. The next section, however, will focus on the conclusions drawn from the pretest.

Pretest Conclusions

Since the coefficient alpha of all scales (except for the Situational Factors scale) was above the .80 suggested as acceptable by Nunnally (1978), there was no necessity to reconstruct them. However, the Situational Factors scale had (relative to other scales), low inter-item correlations, factor loadings, and reliability. Consequently, this scale was reconstructed with the objective of properly anchoring scale items and also making their wording more precise; it was felt that these were the factors that were contributing to the problems associated with this scale.

Minor changes were made in the other scales so as to make them less 'wordy' and colloquially more acceptable. Three items were added to the Satisfaction with Salesperson scale. These items seek to tap behavioral intentions of the buyer with respect to the salesperson s/he met or communicated with, in the most recent buying situation. Addition of these items provided a behavioral intent dimension to this particular scale.

The instructions to all the scales were shortened and simplified. The format of the classification part of the questionnaire was changed so as to make responding to it easier. The deletion of items along with changes made in the instructions reduced the length of the questionnaire by a page. The scales to be used in the final data collection stage (after modifications based on the pretest) are presented in the following tables: Table 24 -- Perceptions of Uncertainty regarding Performance Indexes; Table 25 -- Perceptions of Conflict regarding Performance indexes; Table 26 -- Satisfaction with Organizational Policies; Table 27 -- Situational Factors scale; Table 28 -- Influence Strategy Scale; Table 29 -- Satisfaction with the Salesperson; Table 30 -- Role mbiguity; Table 31 -- Role Conflict; and Table 32 -- Customer orientation of Vendor Salesperson.

This modified questionnaire was mailed to members of the National Institute of Government Purchasing. However, members of the Virginia chapter of this organization were not included in this mailing since they were the sample for this pretest.

TABLE 23

Uncertainity regarding performance indexes scale items *

In your job, you may know on what criteria your performance is evaluated. However, you may not know what you should do to satisfy those criteria. On the scales below several criteria are listed. CIRCLE HOW OFTEN YOU FEEL CERTAIN / UNCERTAIN as to what you should do to satisfy these criteria, by CIRCLING the appropriate number between 1 and 5.

1	2	3	4	5
Certain All The Time	Certain Most of The Time	Sometimes Certain Sometimes Uncertain	Uncertain Most of the Time	Uncertain All The Time

Maintaining continuity of operations	1	2	3	4	5
Acting with integrity	1	2	3	4	5
Control of sources	1	2	3	4	5
Negotiating skills	1	2	3	4	5
Meeting schedules	1	2	3	4	5
How decisions have worked out	1	2	3	4	5
Handling of problems	1	2	3	4	5
Ability to appraise situations	1	2	3	4	5
Finding alternative sources of supply	1	2	3	4	5
Acheiving cost savings	1	2	3	4	5
Running an orderly office	1	2	3	4	5
Establishing competent sources to meet production schedules	1	2	3	4	5
Maintaining good follow-up	1	2	3	4	5
Handling problems in a timely manner	1	2	3	4	5
Rapport with other departments	1	2	3	4	5
Rapport with vendors	1	2	3	4	5
Preparation for meetings	1	2	3	4	5
Thoroughness of summaries on bases for award decisions	1	2	3	4	5
Checking on suppliers' management capability, financial status, capacity, technical know-how, equipment load, work-load, etc.	1	2	3	4	5

End.

* Scale items are numbered PURPI1 to PURPI19

TABLE 24

Conflict regarding performance indexes scale items*

In your job, you may know on what criteria your performance is evaluated. However, in trying to satisfy those criteria you may feel that you are being asked to do two or more things that do not agree with one another, i.e., the criteria may conflict with one another. On the scales below, several criteria are listed. CIRCLE HOW OFTEN YOU FEEL that the criteria CONFLICT WITH ONE ANOTHER by CIRCLING the appropriate number between 1 and 5.

1	2	3	4	5
Never conflicts	Does not conflict most of the time	Sometimes conflicts sometimes does not conflict	Conflicts most of the time	Conflicts all the time

Maintaining continuity of operations	1	2	3	4	5
Acting with integrity	1	2	3	4	5
Control of sources	1	2	3	4	5
Negotiating skills	1	2	3	4	5
Meeting schedules	1	2	3	4	5
How decisions have worked out	1	2	3	4	5
Handling of problems	1	2	3	4	5
Ability to appraise situations	1	2	3	4	5
Finding alternative sources of supply	1	2	3	4	5
Achieving cost savings	1	2	3	4	5
Running an orderly office	1	2	3	4	5
Establishing competent sources to meet production schedules	1	2	3	4	5
Maintaining good follow-up	1	2	3	4	5
Handling problems in a timely manner	1	2	3	4	5
Rapport with other departments	1	2	3	4	5
Rapport with vendors	1	2	3	4	5
Preparation for meetings	1	2	3	4	5
Thoroughness of summaries on bases for award decisions	1	2	3	4	5
Checking on suppliers management capability, financial status, capacity, technical know-how, equipment load, work-load, etc.	1	2	3	4	5

End.

*Scale items are numbered PCRPI35 to PCRPI53.

TABLE 25

Satisfaction with Organizational Policies scale items*

Below you will find statements that describe various impressions you may have regarding your organization's management policies. On the scale provided below, indicate whether you AGREE/DISAGREE with each statement by CIRCLING, for each statement, the appropriate number between 1 and 5.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

Management is progressive.	1	2	3	4	5
My organization's training program is not carried out in a well-planned manner.(R)	1	2	3	4	5
Management does not inform me about things that I ought to know. (R)	1	2	3	4	5
Management really knows what it is doing.	1	2	3	4	5
My organization operates smoothly and efficiently.	1	2	3	4	5
Sometimes I wonder if management really understands the purchasing function. (R)	1	2	3	4	5
Management is weak. (R)	1	2	3	4	5
Management is fair and honest.	1	2	3	4	5
Management is interested in the welfare of employees.	1	2	3	4	5
Management is very interested in helping me do a good job.	1	2	3	4	5
Management sees to it that there is cooperation between departments involved in the purchasing decision.	1	2	3	4	5
Management ignores my suggestions and complaints.(R)	1	2	3	4	5
Management fails to give clear-cut orders and instructions.(R)	1	2	3	4	5

End.

*Scale items are numbered SWOP54 to SWOP66.

NB: (R) indicates a reverse scored item.

TABLE 26

Situational Factors scale items *

PLEASE ANSWER THE QUESTIONS ON THE REMAINING PAGES WITH REFERENCE TO YOUR MOST RECENT BUYING SITUATION, WHERE YOU MET OR COMMUNICATED WITH A VENDOR SALESPERSON.

With reference to the most recent buying situation in which you met or communicated with a salesperson, please indicate your AGREEMENT/DISAGREEMENT with the statements that follow. Please CIRCLE the appropriate number between 1 and 5 for this purpose.

1 Strongly Disagree	2 Disagree	3 Neither Agree Nor Disagree	4 Agree	5 Strongly Agree

I needed some help in defining my product/service purchase needs.	1	2	3	4	5
The cost of the product/service was high (relative to my other purchases).	1	2	3	4	5
I have known this salesperson for a long time.	1	2	3	4	5
I asked a lot of questions about the product/service.	1	2	3	4	5
This salesperson represents an important supplier to my organization.	1	2	3	4	5
I have purchased this product/service before. (R)	1	2	3	4	5
I felt the salesperson was friendly and good natured during our meeting.	1	2	3	4	5
I had to plan and be prepared for this meeting.	1	2	3	4	5
I have purchased products/services from this salesperson before and have no complaints.	1	2	3	4	5
This purchase is typical of the kinds of purchases I make in the course of a year.	1	2	3	4	5

End.

*Scale items are numbered SFC67 to SFC76.

NB: (R) indicates a reverse scored item.

TABLE 27

Influence Strategy/s scale items *

With respect to yourself and the vendor salesperson you met or communicated with MOST RECENTLY, please indicate how APPROPRIATE/INAPPROPRIATE the occurrence of the following actions were to that buying situation. CIRCLE the correct number between 1 and 5 for this purpose.

1	2	3	4	5
Very Inappropriate	Inappropriate	Neither Appropriate Nor Inappropriate	Appropriate	Very Appropriate

During the sales call, the salesperson attempted to impress me with his/her selling abilities.	1	2	3	4	5	Can't say [ ]
During the sales call, the salesperson implied that we did not share the same opinions on some issues. (R)	1	2	3	4	5	Can't say [ ]
In talking business with me, the salesperson inferred that he/she had skills (that I may or may not have).	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson did not stress the common interests that both of us shared. (R)	1	2	3	4	5	Can't say [ ]
The salesperson during business discussions with me inferred that he/she knew a lot about the product that we were talking about.	1	2	3	4	5	Can't say [ ]
During the sales call, the salesperson made comments (about me) that made me feel good.	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson gave me a token gift (e.g., calendar, diary, pen, etc.).	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson did not stress the prestige of his/her organization. (R)	1	2	3	4	5	Can't say [ ]

Continues on next page.

*Scale items are numbered ISS77 to ISS93.
NB: (R) indicates a reverse scored item.

TABLE 27 (continued)

Influence Strategy/s scale items

1	2	3	4	5
Very Inappropriate	Inappropriate	Neither Appropriate Nor Inappropriate	Appropriate	Very Appropriate

In our discussions, the salesperson sometimes did not agree with my comments or opinions. (R)	1	2	3	4	5	Can't say [ ]
During the sales call, the salesperson tried to convince me that he/she had substantial authority in his/her organization.	1	2	3	4	5	Can't say [ ]
During the sales call the salesperson attempted to impress me with his/her selling skills.	1	2	3	4	5	Can't say [ ]
The salesperson did not focus on the common activities that both of us are interested in. (R)	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson tried to impress me with his/her knowledge of my job.	1	2	3	4	5	Can't say [ ]
During the sales call, the salesperson stressed that his/her organization is well known.	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson did not stress my personal relationship with him/her. (R)	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson offered to entertain me (e.g., lunch, dinner, etc.).	1	2	3	4	5	Can't say [ ]
In the course of the sales call, the salesperson did not stress the market standing of his/her organization. (R)	1	2	3	4	5	Can't say [ ]

End.

TABLE 28

Satisfaction with Salesperson scale items*

Below you will find statements that describe various impressions you may have regarding the vendor salesperson you met or communicated with MOST RECENTLY. On the scale provided below, indicate whether you AGREE/DISAGREE with each statement by CIRCLING the appropriate number between 1 and 5.

1 Strongly Disagree	2 Disagree	3 Neither Agree Nor Disagree	4 Agree	5 Strongly Agree

This salesperson respects my judgement.	1	2	3	4	5
This salesperson is intelligent.	1	2	3	4	5
I will continue to buy products from this salesperson in the future. (BI)	1	2	3	4	5
This salesperson was interested in what I had to say.	1	2	3	4	5
This salesperson delivers on his/her promises after receiving my order.	1	2	3	4	5
This salesperson is trustworthy.	1	2	3	4	5
This saleperson is fair.	1	2	3	4	5
This salesperson expects too much from me. (R)	1	2	3	4	5
I will not recommend this salesperson to my friends and colleagues. (R) (BI)	1	2	3	4	5
This salesperson is well organized.	1	2	3	4	5
This salesperson blames me for problems that I have no control over. (R)	1	2	3	4	5
I find this salesperson to be unreasonable. (R)	1	2	3	4	5
I look forward to my next meeting with this salesperson. (BI)	1	2	3	4	5
This salesperson is friendly.	1	2	3	4	5
This salesperson is understanding of my problems.	1	2	3	4	5

End.

*Scale items are numbered SWS22 to SWS34.

NB: (R) indicates a reverse scored item. (BI) indicates a behavioral intentions measure.

TABLE 29

Role Ambiguity Scale Items *

In addition to the vendor salesperson you met or communicated with in the MOST RECENT buying situation, you also may have to deal with others (superiors, representatives of other departments) in YOUR organization. With respect to yourself, and the others you deal with (including salespeople), please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by circling the appropriate number between 1 and 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Clear, planned goals and objectives (as they relate to my dealings with salespeople) exist for my job.	1	2	3	4	5	6	7
Sometimes I do not know if I utilize my time properly when dealing with salespeople.	1	2	3	4	5	6	7
There is a lack of policies and guidelines to help me in my dealings with salespeople.	1	2	3	4	5	6	7
Sometimes I have to work under vague directions or orders as they pertain to my dealings with salespeople.	1	2	3	4	5	6	7
Others' explanations of what I have to do when dealing with salespeople are clear.	1	2	3	4	5	6	7
Sometimes I do not know if my performance is acceptable to my immediate supervisor.	1	2	3	4	5	6	7
Sometimes I do not know exactly what is expected of me in my dealings with salespeople.	1	2	3	4	5	6	7

End

* Scale items are numbered RAS94 to RAS100
NB: (R) indicates a reverse scored item.

TABLE 30

Role Conflict Scale Items *

In addition to the vendor salesperson you met or communicated with in the MOST RECENT buying situation, you also may have to deal with others (superiors, representatives of other departments) in YOUR organization. With respect to yourself, and the others you deal with (including salespeople), please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by circling the appropriate number between 1 and 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Sometimes I have to evade rules or policies in order to carry out assignments relating to my sales contacts.	1	2	3	4	5	6	7
My purchasing workload (as it relates to my dealings with salespeople) seems to be at about the right level. (R)	1	2	3	4	5	6	7
I receive incompatible requests from salespeople and from other departments in my organization.	1	2	3	4	5	6	7
I do things that are apt to be accepted by one person and not by others (e.g., salesperson, or others within my organization).	1	2	3	4	5	6	7
I have to interact with salespeople without adequate resources and materials to deal with them.	1	2	3	4	5	6	7
Sometimes I have to do things (pertaining to my dealings with salespeople) that should be done differently.	1	2	3	4	5	6	7
Sometimes I am required to work on unnecessary things in dealing with salespeople.	1	2	3	4	5	6	7

Continues on next page.

TABLE 30 (continued)

Role Conflict Scale Items

1 Strongly Disagree	2 Moderately Disagree	3 Slightly Disagree	4 Neither Agree nor Disagree	5 Slightly Agree	6 Moderately Agree	7 Strongly Agree

Sometimes I receive assignments (pertaining to my dealings with salespeople) without the proper manpower to complete them.	1	2	3	4	5	6	7
I work under incompatible policies and and guidelines (as they pertain to my dealings with salespeople).	1	2	3	4	5	6	7
Sometimes I have to do things in my dealings with vendor salespeople that are against my better judgment.	1	2	3	4	5	6	7
I frequently have much more to do (in my dealings with salespeople) than I can handle during the time available at work.	1	2	3	4	5	6	7

End.

* Scale items are numbered RCS101 to RCS111.

NB: (R) indicates a reverse scored item.

TABLE 31

Customer Orientation of salesperson scale items*

The statements below describe various ways the MOST RECENT vendor salesperson you met or communicated with, might have acted toward you. For each statement please indicate your AGREEMENT or DISAGREEMENT with each statement listed below by CIRCLING the appropriate number between 1 and 7.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

This salesperson treated me as an opponent. (R)	1	2	3	4	5	6	7
This salesperson tried to provide for my organization's satisfaction.	1	2	3	4	5	6	7
This salesperson had my best interest as a customer in mind.	1	2	3	4	5	6	7
This salesperson was always looking for ways to apply pressure to make me buy. (R)	1	2	3	4	5	6	7
This salesperson tried to get me to discuss my product needs.	1	2	3	4	5	6	7
This salesperson talked first and listened to my needs later. (R)	1	2	3	4	5	6	7
This salesperson recommended the product best suited to solve my problems.	1	2	3	4	5	6	7
This salesperson spent more time trying to persuade than he/she did trying to discover my product needs. (R)	1	2	3	4	5	6	7
This salesperson tried to influence me through useful information rather than through pressure.	1	2	3	4	5	6	7
This salesperson tried to find out which products would be most helpful to me as a customer.	1	2	3	4	5	6	7
This salesperson applied selling pressure even though he/she knew the product was not right for my organization. (R)	1	2	3	4	5	6	7

Continues on next page.

*Scale items are numbered COVS112 to COVS134.
NB: (R) indicates a reverse scored item.

TABLE 31 (continued)

Customer Orientation of salesperson scale items

1 Strongly Disagree	2 Moderately Disagree	3 Slightly Disagree	4 Neither Agree nor Disagree	5 Slightly Agree	6 Moderately Agree	7 Strongly Agree

This salesperson took a problem-solving approach in selling to me.	1	2	3	4	5	6	7
This salesperson implied that things were beyond his/her control when they really were not. (R)	1	2	3	4	5	6	7
This salesperson stretched the truth in his/her product representations.(R)	1	2	3	4	5	6	7
This salesperson tried to figure out what my needs were.	1	2	3	4	5	6	7
This salesperson painted rosy pictures of his/her products to make them sound as good as possible. (R)	1	2	3	4	5	6	7
This salesperson gave accurate representations of what his/her product will do for me and my organization.	1	2	3	4	5	6	7
This salesperson made recommendations based on what he/she thought could be sold, and not on the basis of my organization's long-term satisfaction. (R)	1	2	3	4	5	6	7
This salesperson was customer-oriented.	1	2	3	4	5	6	7
This salesperson tried to convince me to buy more than I needed. (R)	1	2	3	4	5	6	7
This salesperson answered my questions about his/her products as honestly as possible.	1	2	3	4	5	6	7

End.

Chapter V

DATA COLLECTION, ANALYSES, AND RESULTS

OVERVIEW

This chapter describes the data collection process, the analytic procedures, and the findings of this study. Data collection procedures will be described and a profile of respondents offered. Following this, results of tests to check for differences between early and late respondents and for nonresponse bias will be presented. The subsequent section will focus attention on the analysis of measures for unidimensionality and reliability. Criteria used to assess LISREL models and evaluate parameter estimates will then be described. Finally, the five LISREL VI models that were used will be identified and support for the selected model offered. Based on the parameter estimates provided by this model, hypotheses will be tested.

DATA COLLECTION

Questionnaires were mailed on February 24, 1986, to a random sample (N = 691) members of the National Institute of Government Purchasing (NIGP). Members of this association are purchasing professionals who purchase for the government and its affiliated agencies. This group was chosen because public purchasing professionals are directly responsible for purchasing approximately 500 billion dollars worth of products a year (Page 1980). Of this, 300 billion dollars is at the state

and local government levels, and 200 billion dollars is at the federal level. To date, no study has been conducted on the role perceptions of this group.

In terms of coverage, every state in the country was represented in the questionnaire mailing. The questionnaires were mailed on the 24th of February, 1986, and an a priori decision made to include in data analyses only those questionnaires received on or before March 31, 1986. Each questionnaire was accompanied by a personalized cover letter printed on the research advisor's stationary. A copy of this cover letter is presented in Table 32. A reminder letter was mailed on March 15, 1986 requesting respondents to complete and return the questionnaire by March 31, 1986.

Of the 691 questionnaires that were mailed, 4 were returned because the addressees were deceased and 9 were returned because the addressee had moved without leaving a forwarding address. A total of 354 responses (51.2%) were received before March 31, 1986. Of these 354, 9 were returned with less than 90% of the questionnaire answered. Therefore, only 345 (49.92%) responses were used in the data analyses. Of these 345, 258 were received before the reminder letter was mailed, and 87 received after the reminder letter was mailed. Both the actual response rate (51.2%), and the usable response rate (49.92%) are extremely high when compared to the response rates of other studies involving purchasing professionals.

TABLE 32
Cover Letter

HARVARD UNIVERSITY

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

FOUNDATION

Visiting Associate Professor of Business Administration

BOSTON, MASSACHUSETTS 02163

February 13, 1986

Purchasing Agent II
Pur. Agnt/Dept. of Revenue
State of Pennsylvania

Dear

The purpose of this letter is to request your help in the completion of a purchasing related doctoral dissertation that Raghu Tadepalli, a doctoral student at Virginia Polytechnic Institute, has undertaken under my direction. For many years the Harvard Business School and Virginia Polytechnic Institute have recognized the dearth of literature in the increasingly important fields of public purchasing and materials management; it is my opinion that this dissertation will contribute to the knowledge base in these areas.

The enclosed questionnaire will give you an opportunity to express your opinions and attitudes concerning a few purchasing related issues. It has been prepared after extensive discussions with people such as you. Purchasing Professionals who answered the questionnaire have told Raghu that they found it to be very interesting and relevant to their purchasing responsibilities.

I would greatly appreciate it if you take the time to complete and return the questionnaire (in the enclosed postage paid envelope), at your earliest convenience. Your prompt response would be very helpful in assuring the accuracy and success of this dissertation research, and will contribute to the rather limited knowledge we have of the public purchasing function. You may be assured that all of your responses will be anonymous and will only be used in combination with the information provided by other purchasing professionals participating in this survey. Thank you for your cooperation.

Respectfully,

Paul F. Anderson, Ph.D.

P.S. If you would like to receive a summary of the findings, please provide your name and address in the space indicated on the last page of the questionnaire. A summary of the findings will be mailed to you just as soon as it is available.

The personalized nature of the cover letter, and the prestige of the research advisor's institution may have contributed to the very high response rate. 57% of the respondents (194 out of 345) wanted a summary of the findings of the study and several wrote personal letters expressing their appreciation of the questionnaire. Therefore, another possible reason contributing to the high response rate may be the relevance of the questionnaire to respondents' jobs.

Respondent Profile

In order to be able to provide a profile of respondents, information was collected on individual difference variables. Table 34 presents a profile of respondents with regard to the number of respondents who possess certification in purchasing, the number of respondents who took courses in purchasing, respondents' level of education, the number of their weekly interactions with salespeople, and the size of their departments.

As Table 33 shows, over 40% of respondents possess certification in purchasing (either Certificate in Purchasing Management from the National Association of Purchasing Management, or Certified Public Purchasing Officer from the National Institute of Government Purchasing). Of those who do not have certification (206 in number), a vast majority (180) indicated that they intended to work toward being certified. One reason for this interest in certification could be due to the fact that all levels of government have designated the CPPO from the National Institute of Government Purchasing as qualification for promotion.

TABLE 33

Profile of Respondents

	Frequency	Percent
Certified in Purchasing	139	40.29
Took courses in Purchasing	103	29.95
Level of education		
Some High School	1	.29
High School Diploma	19	5.51
Some College	93	26.95
2 Year College Degree	35	10.14
4 Year College Degree	78	22.61
Some Graduate Work	62	17.97
Graduate Degree	57	16.52
Weekly Interactions with Salespeople		
1-5	135	39.14
6-10	137	39.7
11-15	48	13.92
16-20	19	5.5
21-	6	1.74
Size of Purchasing Department		
1-5	177	51.3
6-10	75	21.74
11-15	43	12.46
16-20	16	4.638
21-	34	9.9
Respondents' Employer		
School	31	8.99
College or University	34	9.85
Town	14	4.05
City	160	46.38
County	71	20.58
State	13	3.77
Federal	10	2.9
Hospitals, etc.,	3	.87
Other	9	2.61

Almost 30% of respondents took courses in purchasing while in college. A large percentage (23%) possess a four year college degree; another 18% have taken graduate level course work and 16.5% have earned graduate degrees. A vast majority of respondents (almost 80%) interacted with one to ten salespeople in a week. More than half the respondents (51%) work in departments with fewer than five employees. Further, a vast majority (almost 67%) work for either a city or a county. State and federal government employees are also represented in the survey.

Table 34 provides details of the regional affiliation of respondents. As can be seen from the table, a large percentage of respondents (26%) work in the southern part of the country. The region with the the least number of respondents is Region X. The table also provides information on the states in each region. Individual states were grouped into regions based on the National Institute of Government Purchasing classification; such grouping was done to allow for easier reporting.

Table 35 presents details regarding respondents' experience. This information is provided for three facets of experience: total purchasing experience, public purchasing experience, and present position experience. As the table shows, the largest percentage of respondents (27.2%) have a total of ten to fifteen years experience.

However, with regard to experience in public purchasing and experience in the present position, the largest percentage of respondents (28.4% and 26.37% respectively) have between six and nine years experience.

Table 34

Respondents' Regional Affiliation

Region	States in Region	Frequency	Percent
I	Connecticut,Maine, Massachussets,Vermont New Hampshire,Rhode Island	14	4.06
II	New Jersey,New York Puerto Rico,Virgin Islands	24	6.95
III	Dis. of Columbia,Delaware Maryland,Pennsylvania Virginia,West Virginia	32	9.28
IV	Alabama,Florida,Georgia Kentucky,Mississipi,North Carolina,South Carolina Tennessee	90	26.08
V	Illinois,Indiana,Michigan Minnessota,Ohio,Wisconsin	65	18.84
VI	Iowa,Kansas,Missouri Nebraska	15	4.35
VII	Arkansas,Louisiana,Texas New Mexico,Oklahoma	44	12.75
VIII	Colorado,Montana North Dakota,South Dakota Utah,Wyoming	16	4.64
IX	Arizona,California Guam,Hawaii,Nevada	34	9.85
X	Alaska,Idaho,Oregon, Washington	11	3.19

Table 35

Respondents' Experience

Years	Total Purchasing Experience		Public Purchasing Experience		Present Position Experience	
	Number	%	Number	%	Number	%
0-3	13	3.77	46	13.33	75	21.74
3-5	26	7.54	65	18.84	89	25.8
6-9	65	18.84	98	28.40	91	26.37
10-15	94	27.24	74	21.45	56	16.23
16-20	62	17.97	34	9.85	20	5.8
21-25	35	10.14	13	3.68	6	1.74
26-	50	14.5	15	4.35	8	2.32

Early Versus Late Respondents

Of the 345 usable responses, 258 were received before the reminder letter was mailed, and 87 were received after the reminder letter was mailed. Though all of these respondents are from the same population (NIGP membership), it is necessary to determine whether the early and late respondents are similar enough to be grouped together. For this purpose, it needs to be determined whether statistically significant differences exist between the means, of the variables of interest, for the two groups. The univariate statistics for all the variables of interest for the early group of responses are presented in Table 36; for the late group in Table 37.

The t' (approximate t) test was used to test for the difference between means. The t' (approximate t) rather than the t test was used because, when the sample sizes of the two groups are drastically different (1.5 to 1 or worse), the use of the t test is inappropriate; for such cases, t' should be used (Ott 1984). In this instance, the ratio of the early group to the late group is almost 3:1. Table 38 presents details of the computed t' for each of the variables of interest along with the degrees of freedom.

The null hypothesis for all these tests is that there is no difference between the two means. Therefore, in order to show that early and late respondents are (statistically) the same on the variables of interest, we would prefer not to reject the null hypothesis. As can be seen from Table 38, the null hypothesis of no differences in group means

TABLE 36

Early Group -- Univariate Statistics

Variable	N	Mean	Standard Deviation	Std. Error of Mean
PURPI	258	1.94899174	.39339152	.02449149
SWS	258	3.79367919	.49017840	.03051717
PCRPI	258	2.14476418	.40931058	.02548256
SWOP	258	3.17312661	.77678517	.04836053
ISS	258	2.67948608	.43721087	.02721956
RAS	258	3.38132152	1.11594955	.06947598
RCS	258	3.44929528	1.08089719	.06729372
COVS	258	5.17515688	1.06373433	.06622521

Legend

PURPI -- Perceptions of Uncertainity regarding performance indexes; SWS -- Satisfaction with the salesperson; PCRPI -- Perceptions of conflict regarding performance indexes; SWOP -- Satisfaction with Organizational Policies; ISS -- Influence Strategy/s; RAS -- Role Ambiguity; RCS -- Role Conflict; COVS -- Customer Orientation of vendor salesperson

TABLE 37

Late Group -- Univariate Statistics

Variable	N	Mean	Standard Deviation	Standard error of mean
PURPI	87	2.06553741	.41047659	.04400771
SWS	87	3.81379310	.47632724	.05106764
PCRPI	87	2.21002218	.40090412	.04298143
SWOP	87	3.14681296	.73769749	.07908947
ISS	87	2.74593870	.41521684	.04451592
RAS	87	3.57662835	1.21527019	.13029064
RCS	87	3.56948798	.99416516	.10658569
COVS	87	5.23998358	.97971470	.10503644

Legend

PURPI -- Perceptions of Uncertainity regarding performance indexes; SWS -- Satisfaction with the salesperson; PCRPI -- Perceptions of conflict regarding performance indexes; SWOP -- Satisfaction with Organizational Policies; ISS -- Influence Strategy/s; RAS -- Role Ambiguity; RCS -- Role Conflict; COVS -- Customer Orientation of Vendor salesperson

TABLE 38

Early versus Late Respondents

Variable	Mean		Variance		t'	df	Result (alpha=.01)
	Late	Early	Late	Early			
	N=87	n=258					
Perceptions of Uncertainity regarding Performance indexes	2.065	1.9489	.1685	.1547	2.3053	145	Cannot reject Ho
Satisfaction with Salesperson	3.8138	3.7936	.2269	.2403	.3395	154	Cannot reject Ho
Perceptions of Conflict regarding performance indexes	2.21	2.1447	.1607	.1675	1.307	152	Cannot reject Ho
Satisfaction with Organizational Policies	3.1468	3.1731	.5442	.6034	.284	157	Cannot reject Ho
Influence Strategies Used	2.746	2.68	.1724	.1911	1.265	157	Cannot reject Ho
Role Ambiguity	3.5766	3.3813	1.4769	1.2453	1.322	140	Cannot reject Ho
Role Conflict	3.57	3.45	.9883	1.1683	.952	162	Cannot reject Ho
Customer Orientation of Vendor Salesperson	5.24	5.1751	.9598	1.3153	.5109	174	Cannot reject Ho

cannot be rejected (at alpha = .01) for any of the variables of interest. Therefore, it can be concluded that no statistically significant differences exist on the variables of interest between early and late respondents. The univariate statistics for the entire sample (345 respondents) are provided in Table 39.

Generalizability and Nonresponse Bias

Mail surveys have long been criticized for their low response rates; a consequence of such a low response rate is the fact that non-respondents may have responded differently and thereby altered the results of the survey. Therefore, when the percentage of nonrespondents is high relative to the percentage of respondents, the generalizability of the findings, to the population of interest, is limited.

Given the fact that a majority (51.2%) of respondents who received the questionnaire returned it, criticisms pertaining to nonresponse bias may not be applicable here. However, a substantial minority (48.8%) did not respond to the questionnaire; it is possible that these nonrespondents differ from respondents.

Armstrong and Overton (1977) suggest three methods of estimating nonresponse bias: a) comparisons are made with known values for the population of interest; b) subjective estimates are made of socio-economic differences; and c) extrapolation is made over successive waves of responses or over time. In this study nonresponse bias and generalizability were ensured by comparisons made with known values of the population of interest.

TABLE 39

Univariate Statistics -- Entire Sample

Variable	N	Mean	Standard Deviation	Standard error of mean
PURPI	345	1.97838152	.40038668	.02155609
SWS	345	3.79875139	.48611326	.02617146
PCRPI	345	2.16122054	.40761600	.02194531
SWOP	345	3.16649100	.76614143	.04124767
ISS	345	2.69624370	.43214092	.02326568
RAS	345	3.43057281	1.14316320	.06154584
RCS	345	3.47960474	1.05956644	.05704514
COVS	345	5.19150449	1.04216782	.05610843

Legend

PURPI -- Perceptions of Uncertainity regarding performance indexes; SWS -- Satisfaction with the salesperson; PCRPI -- Perceptions of conflict regarding performance indexes; SWOP -- Satisfaction with Organizational Policies; ISS -- Influence Strategy/s; RAS -- Role Ambiguity; RCS -- Role Conflict; COVS -- Customer Orientation of vendor salesperson

Though the sample for this study is drawn from the government sector, the population of interest is all purchasing professionals (government and private) who are members of the National Institute of Government Purchasing (NIGP) and/or the National Association of Purchasing Management (NAPM). Generalizability to such purchasing professionals however, is possible only when both public and private purchasing responsibilities are the same. Such a view is expressed by Page (1980) who states that, "the principles and many of the techniques of purchasing and materials management employed in the public and private sectors are basically the same. Both are concerned with making available the right goods or services, at the right price, at the right time" (p. 1).

This study checked for differences between respondents and the population of interest along two dimensions: total experience in purchasing, and level of education. Information pertaining to demographic variables such as age and sex was not collected and hence cannot be used for comparison.

Since the intended generalizability of this study is to purchasing professionals who are members of NIGP and/or NAPM, comparison to establish representativeness should be made against values for such an all encompassing population. The National Association of Purchasing Management (NAPM) membership profile was used for this purpose. Unlike the NIGP membership which consists only of purchasing professionals working for the government, the NAPM membership is comprised of

purchasing professionals from both government and private sectors. This profile is presented in Table 40, along with a profile of survey respondents for the same categories. A profile of public purchasing professionals' experience in public purchasing is also presented in Table 40.

The statistical test used to test for nonresponse bias and generalizability was the single sample chi-square goodness-of-fit test. This test was used to determine whether statistically significant differences existed between the observed number of responses (from survey) and the expected number of responses (from Table 40). The null hypothesis stated that the percentage of objects occurring in each category was equal. The null hypothesis was tested using the following test statistic:

$$x^2 = \sum_{i=1}^{k} (n_i - E_i)^2/E_i \qquad (5.1)$$

where n_i = observed number of cases in the ith category

E_i = expected number of cases in the ith category

k = the number of categories.

In order to show that there is generalizability, one would hope that the null hypothesis cannot be rejected. Table 41 presents details of chi-square tests used to determine if the sample used in this study differed from the population of purchasing professionals along dimensions of total experience in purchasing, and level of education.

TABLE 40

Comparitive Profiles

Total Experience in Purchasing	NAPM membership* Profile (%)	Survey Profile (%)
Less than 3	7.2	3.768
3 to 5	15.2	7.536
6 to 9	21.4	18.84
10 to 15	20.9	27.246
16 to 20	11.8	17.97
21 to 25	9.0	10.145
26 +	14.5	14.493
Level of Education		
High School Graduate	7.6	5.797
Some College	25.5	26.957
2-Year College degree	11.3	10.145
4-Year College degree	28.4	22.609
Some Graduate work	16.6	17.971
Graduate degree	10.5	16.5
Experience in Public Purchasing	Page (1980)**	Survey
Less than 5	33.18	32.17
6 to 10	24.5	33.0
11 to 15	16.0	16.812
16 to 20	14.2	9.855
21 to 25	7.0	3.768
26 to 30	3.8	2.899
31 +	.7	1.449

* Source : Michaels, R. E. (1983), An Empirical Study of Role Stress Perceptions and Behaviors of Purchasing Professionals, Unpublished Doctoral Dissertation, Indiana University.

** Source : Page, H. R. (1980), Public Purchasing and Materials Management, Lexington, MA: D. C. Heath and Company.

TABLE 41

Tests for Nonresponse Bias

Variable	Chi-square	df	Result (alpha=.01)
Total Purchasing Experience	11.10515962	6	Cannot reject Ho
Level of education	5.209428237	5	Cannot reject Ho
Experience in Public Purchasing	6.857195092	6	Cannot reject Ho

As shown in the table, the null hypothesis of no difference between the sample and the population of interest cannot be rejected at the α=.01 level. Though differences may well exist between this sample and the population of interest for such factors as age and sex, the relevance of these variables to the ability to make purchasing decisions is questionable. It can therefore be concluded, that with regard to total purchasing experience and level of education, respondents in this study do not differ from purchasing professionals who are members of the National Association of Purchasing Management (NAPM).

Information on the experience of purchasing professionals in public purchasing was used to determine whether the sample used in this study differed from the population of public purchasing professionals (only for the experience variable). Again, the null hypothesis of no difference in the public purchasing experience between this sample and the population of public purchasing professionals could not be rejected at the alpha = .01 level. Therefore, it can be concluded that the sample used in this study does not differ from the population of public purchasing professionals with regard to experience in public purchasing. Results of this test are also provided in Table 41. Information on the level of education of public purchasing professionals was not available.

This section has established that no statistically significant differences exist between early and late respondents. Generalizability of the study sample to the membership of the NAPM was established along dimensions of total experience in purchasing and level of education.

Further, lack of nonresponse bias was established for the sample used in this study and the population of public purchasing professionals for experience in public purchasing.

ANALYSIS OF UNIDIMENSIONALTY AND RELIABILITY

This section details the steps taken to ensure unidimensionality of constructs. Following this discussion, reliabilities of the different scales will be provided.

Internal Consistency

As discussed in the previous chapter, indicators of a construct are internally consistent only if they meet the product rule for internal consistency. Thus, their inter-item correlations, part of the Factor Inter-Correlations and Loading Matrix, should be the result of their loading on the same underlying factor. If the loading of an item on its underlying factor is low, this should be indicated in the form of low inter-item correlations with the other items in the same cluster. Further, the matrix of inter-item correlations should have the same pattern of pattern as the factor loadings. Deviations from such a pattern of similarity indicates the presence of correlated measurement errors. Deviations beyond the range of the sampling error of the correlation coefficients, indicate that the items in the cluster are not internally consistent. Thus, if the items in a cluster are internally consistent, their inter-item correlations should be zero or close to zero (after taking into

account the sampling error of the correlation coefficient), when their trait true score is partialed out.

In order to ensure that items in a cluster were internally consistent, the factor intercorrelations and loading matrix was examined to check whether loadings of each item, belonging to the same underlying construct, satisfied the product rule. The residual inter-item correlations were also examined to determine whether correlated errors existed between items in a cluster. Such items are indicated by a circle in Appendix A.

External Consistency

The external consistency of items in a cluster can be evaluated through an examination of the similarity coefficient. Similarity coefficients are descriptors of the external consistency criterion for unidimensional measurement. The similarity coefficients between items in a cluster should be 1 or close to 1.

In this study, the matrix of similarity coefficients was used to determine whether items in a cluster met the requirement of external consistency. In view of the care taken in developing the items measuring each construct, only a few (12 of 132 items) used to measure the variables of interest were identified as candidates for deletion. These items are indicated by a circle in Appendix 1.

After these items were identified as candidates for deletion, they were dropped by reassigning them to a cluster labelled 'JUNK'. The

PACKAGE 1980 output was then evaluated for unidimensionality. Coefficient alpha was the statistic used to evaluate the reliability of a multiple indicator construct.

Scale Reliabilities

The reliabilities of the scales are presented in Table 42. As can be seen, except for the Role Ambiguity scale which has a coefficient alpha of .75, all other scales have reliabilities in excess of .80. The Perceived Customer Orientations of Vendor Salesperson Scale had the highest coefficient alpha (.94).

Though the reliability of the Role Ambiguity Scale is marginally lower than .80, the scale is unidimensional, and individual items content valid. The (relative to other scales) smaller number ofitems in this scale may have contributed to lowering the reliability; coefficient alpha is sensitive to the number of items in a scale.

Analysis of Validity

There are three aspects of validity that need to be considered: content validity, construct validity, and finally, nomological validity. This section will discuss the steps taken to ensure these validities.

Content Validity

In this research content validity was ensured by a process of extensive pilot interviews and pretesting of scale items. In deleting scale items,

Table 42

Scale Reliabilities

Scale	Reliability
Perceived Uncertainity regarding performance indexes of organization	.88
Satisfaction with Salesperson	.91
Perceptions of Conflict regarding performance indexes of organization	.89
Satisfaction with Organizational Policies	.92
Influence Strategies Used	.81
Role Ambiguity	.75
Role Conflict	.83
Perceived Customer Orientation of salesperson	.94
Experience	.84

the intent was not only to ensure unidimensionality, but also to ensure content validity of scale items.

Construct Validity

Three dimensions of construct validity: convergent validity, discriminant validity, and nomological validity, can be studied only when the construct to be studied exists within a theoretical framework that specifies the relationships between constructs.

Convergent and discriminant validity of scale items were evaluated by examining the Spearman factor loadings output by the MGRP routine in PACKAGE 1980. If items measuring a construct loaded more highly on its own factor than on other factors, the items were evaluated as possessing convergent validity. The lower loadings on factors other than the 'parent' construct were construed as evidence of discriminant validity. Details of the Spearman factor loadings of all scale items on all factors, 'parent' as well as all other constructs, are presented in the following tables: Table 43 -- Perceptions of Uncertainty regarding Performance Indexes scale (PURPI); Table 44 -- Satisfaction with Salesperson scale (SWS); Table 45 -- Perceptions of Conflict regarding Performance Indexes scale (PCRPI); Table 46 -- Satisfaction with Organizational Policies scale (SWOP); Table 47 -- Influence Strategy scale (ISS); Table 48 -- Role Ambiguity scale (RAS); Table 49 -- Role Conflict scale (RCS); Table 50 -- Customer Orientation of Vendor Salesperson scale (COVS); and Table 51 -- Experience scale (EXP).

TABLE 43
Convergent/Discriminant Validity -- PURPI scale

Item	501	502	503	504	505	506	507	508	509	510
PURPI1	43	-7	38	-19	9	27	20	-8	-15	35
PURPI2	40	-4	24	-6	9	14	17	-2	-13	16
PURPI3	52	-6	36	-13	8	25	17	-5	-14	33
PURPI4	55	6	44	-9	-1	25	15	1	-2	15
PURPI5	53	-4	36	-9	5	25	19	-8	1	17
PURPI6	49	-8	46	-38	5	43	29	-3	-10	27
PURPI7	57	1	41	-25	2	32	21	0	-15	18
PURPI8	60	-3	49	-16	-2	28	18	-1	-9	0
PURPI9	53	-6	36	-4	4	20	8	-8	-3	17
PURPI10	50	-8	32	-7	5	23	13	-8	-3	26
PURPI11	58	-2	48	-14	8	25	15	-7	-8	20
PURPI12	56	-7	39	-9	9	20	18	-7	-9	16
PURPI13	63	-7	46	-7	6	16	8	-7	-2	5
PURPI14	66	0	50	-15	7	23	18	-3	-5	18
PURPI15	48	-9	33	-18	16	21	21	-12	-4	36
PURPI16	54	-8	41	-7	12	20	16	-8	-12	23
PURPI17	60	-1	50	-17	3	22	16	-6	-6	11
PURPI18	54	-6	33	-8	2	18	11	0	-16	24
PURPI19	45	0	39	-10	-4	22	14	-2	-13	11

NB : PURPI construct is 501. 502 to 509 are other constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 44
Convergent/Discriminant Validity -- SWS scale

Item	501	502	503	504	505	506	507	508	509	510
SWS20	1	61	-4	8	-20	-8	-1	47	13	-25
SWS21	0	64	0	14	-19	-7	-10	46	13	-25
SWS22	-4	61	-5	9	-20	-7	-8	44	15	-12
SWS23	-5	64	-6	12	-16	-8	-12	47	15	-22
SWS24	-13	56	-12	7	-17	-13	-16	41	14	-14
SWS25	-4	73	-8	6	-19	-8	-16	52	21	-12
SWS26	-4	74	-8	11	-20	-13	-16	49	21	-13
SWS27	-11	60	-5	17	-22	-14	-16	51	5	-22
SWS28	-10	59	-7	13	-24	-13	-11	47	0	-19
SWS29	-5	57	-4	16	-14	-15	-12	49	1	-18
SWS30	-12	62	-9	15	-28	-21	-24	49	12	-31
SWS31	-8	72	-11	10	-31	-13	-19	59	7	-20
SWS32	-2	67	-11	16	-13	-17	-13	55	10	-13
SWS33	0	61	-4	3	-21	-7	-6	43	6	-22
SWS34	2	71	-1	15	-25	-9	-9	63	14	-23

NB : 502 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 45
Convergent/Discriminant Validity -- PCRPI scale

Item	501	502	503	504	505	506	507	508	509	510
PCRPI35	44	-6	54	-34	2	23	37	-15	-16	20
PCRPI36	33	-6	44	-23	7	22	28	-4	-16	24
PCRPI37	44	-4	52	-10	11	17	19	-3	-17	28
PCRPI38	48	3	58	-10	1	17	23	-2	-6	11
PCRPI39	39	-4	59	-15	3	16	21	-9	-9	28
PCRPI40	35	-2	52	-24	9	17	22	-4	-7	11
PCRPI41	45	-8	62	-28	2	29	22	-10	-10	20
PCRPI42	46	-10	60	-13	-9	21	15	-7	-11	0
PCRPI43	36	-6	50	2	4	11	11	-7	-9	21
PCRPI44	44	-13	57	-11	9	21	26	-10	-11	24
PCRPI45	41	-13	59	-21	0	22	11	-11	-13	13
PCRPI46	36	-13	56	-9	11	14	16	-14	-12	6
PCRPI47	49	-8	58	-13	5	13	14	-10	2	8
PCRPI48	47	3	62	-15	0	19	19	2	-8	17
PCRPI49	37	-10	51	-24	15	17	28	-13	-12	30
PCRPI50	37	-5	53	-2	15	18	21	-11	-16	24
PCRPI51	42	3	59	-6	8	10	10	-7	-2	8
PCRPI52	48	2	60	-12	7	22	17	0	-8	14
PCRPI53	31	-6	38	4	-1	6	8	-3	-15	5

NB : 503 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 46
Convergent/Discriminant Validity -- SWOP scale

Item	501	502	503	504	505	506	507	508	509	510
SWO54	-13	17	-15	74	-3	-39	-30	9	8	-35
SWO55	-24	8	-24	58	-4	-42	-37	6	13	-23
SWO56	-23	10	-20	70	2	-47	-37	8	9	-25
SWO57	-15	15	-17	79	1	-43	-31	11	2	-27
SWO58	-24	11	-25	65	3	-42	-31	7	8	-24
SWO59	-22	4	-24	56	5	-37	-40	5	4	-25
SWO60	-24	13	-17	72	-3	-40	-35	9	-3	-32
SWO61	-8	13	-11	68	7	-31	-23	10	2	-14
SWO62	-8	14	-13	71	8	-31	-29	12	5	-21
SWO63	-12	15	-16	80	8	-39	-27	10	-1	-28
SWO64	-14	11	-18	69	9	-41	-39	10	14	-28
SWO65	-16	19	-17	76	2	-47	-34	18	-1	-28
SWO66	-20	10	-13	68	4	-48	-39	9	1	-25

NB : 504 is item loading on factor. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 47
Convergent/Discriminant Validity -- ISS scale

Item	501	502	503	504	505	506	507	508	509	510
ISS77	13	-20	13	-2	62	10	11	-22	-8	23
ISS78	7	-29	10	-2	63	11	20	-30	6	40
ISS79	1	-27	1	-3	58	17	15	-21	-8	47
ISS85	10	-4	4	12	38	8	15	-15	2	28
ISS86	4	-18	3	10	64	12	9	-24	-7	31
ISS87	5	-19	7	3	73	14	7	-22	1	23
ISS89	1	-21	3	-2	64	7	7	-21	0	32
ISS90	7	-12	2	5	49	3	3	-16	-2	26
ISS80	5	-30	5	-3	27	4	-3	-18	-5	45
ISS81	1	-4	-1	-2	19	8	5	-6	-15	11
ISS82	4	16	15	6	24	-4	7	2	-9	17
ISS83	-3	-3	3	-9	7	5	-1	-3	0	23
ISS84	6	0	10	-9	5	7	5	3	3	28
ISS88	0	-24	6	4	20	5	5	-20	-12	37
ISS91	4	-3	-7	-8	6	7	1	-2	-7	17
ISS92	8	-1	-1	6	12	4	5	-1	-9	21
ISS93	2	-1	-3	-7	5	-1	-5	2	-3	16

NB : 505 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.
ISS80, ISS81, ISS82, ISS83, ISS84, ISS88, ISS91, ISS92, ISS93 were dropped.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 48
Convergent/Discriminant Validity -- RAS scale

Item	501	502	503	504	505	506	507	508	509	510
RAS96	24	-11	15	-30	5	61	41	-12	-7	40
RAS97	32	-2	22	-38	14	71	50	-7	-19	34
RAS99	26	-9	20	-45	8	50	42	-13	-2	27
RAS100	33	-24	27	-39	18	80	47	-26	-20	44
RAS94	26	-19	20	-37	6	38	20	-14	-14	24
RAS95	31	-3	22	-15	17	44	28	-8	-8	17
RAS98	15	-11	14	-27	-4	34	24	-17	-14	16

NB : 506 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.
RAS94, RAS95, RAS98 were dropped.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 49
Convergent/Discriminant Validity -- RCS scale

Item	501	502	503	504	505	506	507	508	509	510
RCS101	15	-5	18	-21	6	35	48	-10	-3	9
RCS102	18	-4	19	-24	11	43	51	-13	-10	5
RCS103	15	-9	15	-17	9	39	46	-16	-5	24
RCS104	11	-11	12	-21	0	22	26	-15	-10	7
RCS105	8	-17	19	-24	12	31	63	-21	-13	13
RCS106	15	-14	20	-18	9	31	49	-19	-13	16
RCS107	21	-17	14	-28	12	41	56	-17	-11	19
RCS108	22	-5	21	-22	10	33	64	-9	-16	28
RCS109	22	-8	26	-31	12	40	73	-15	-18	32
RCS110	15	-9	23	-38	16	40	67	-19	-6	19
RCS111	25	-19	27	-46	13	61	63	-25	-13	31

NB : 507 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 50
Convergent/Discriminant Validity -- COVS scale

Item	501	502	503	504	505	506	507	508	509	510
COVS112	-9	42	-5	5	-32	-17	-20	52	-4	-11
COVS113	-8	50	-8	11	-12	-10	-13	65	5	-17
COVS114	-11	57	-17	12	-22	-16	-17	70	14	-24
COVS115	-7	55	-10	2	-47	-16	-29	69	5	-21
COVS116	-5	13	-4	7	22	-8	-2	23	-11	3
COVS117	-7	38	-6	11	-22	-21	-17	50	0	-18
COVS118	-6	51	-11	12	-9	-8	-11	62	10	-18
COVS119	-8	60	-12	10	-36	-17	-24	81	1	-19
COVS120	-16	59	-16	11	-17	-17	-23	71	11	-20
COVS121	-14	67	-14	10	-22	-15	-21	85	9	-28
COVS122	-4	59	-9	6	-33	-13	-26	75	3	-17
COVS123	-4	62	-9	14	-17	-15	-16	75	11	-25
COVS124	-4	45	-8	10	-25	-23	-28	64	6	-14
COVS125	-10	58	-17	15	-37	-21	-30	78	8	-29
COVS126	-2	56	-6	10	-22	-13	-17	73	-6	-22
COVS127	-2	34	-6	10	-39	-12	-22	50	3	-24
COVS128	-6	56	-11	7	-28	-15	-23	76	0	-23
COVS129	1	47	-3	5	-30	-13	-23	68	-3	-11
COVS130	-4	67	-1	10	-22	-19	-19	76	0	-27
COVS131	3	51	-5	5	-39	-8	-18	70	-1	-27
COVS132	-5	56	-5	10	-20	-18	-16	71	8	-27

NB: 508 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

TABLE 51
Convergent/Discriminant Validity -- EXP scale

Item	501	502	503	504	505	506	507	508	509	510
EXP133	-18	10	-20	7	-6	-24	-18	3	66	-32
EXP134	-8	18	-11	4	-1	-8	-17	5	89	-23
EXP135	-10	14	-13	5	-2	-11	-12	4	83	-27

NB : 509 is item loading on construct. 501 to 509 are constructs. 510 is JUNK cluster.

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

As the tables show, in most cases items load more on their 'parent' construct than on another construct. Items that did not satisfy this and other criteria of unidimensionality were dropped at this point. Such items are identified in the tables.

Convergent validity and discriminant validity were also assessed by examining the matrix of similarity coefficients from PACKAGE 1980. High similarity coefficients between indicators of the same construct was accepted as evidence of convergent validity; lower similarity coefficients between indicators measuring different constructs were considered as evidence supporting discriminant validity.

The matrix of similarity coefficients and the Spearman factor loadings from PACKAGE 1980 were used earlier in the analysis of unidimensionality. Their use now to also establish convergent and discriminant validity is supported by Kenny (1979). Kenny (1979) argues that the same tests can be used to ensure unidimensionality and construct validity (especially discriminant validity) when all the measures were obtained by the same method. In this study, all measures were obtained by the same method, i.e., a paper and pencil technique; therefore the use of the same tests to check for unidimensionality and construct validity is justified.

Nomological Validity

Nomological validity of constructs was evaluated through an examination of the factor to factor loadings provided by PACKAGE 1980. If

the direction of the factor to factor loadings supported the research hypothesis, this was recognized as support for the nomological validity of constructs. The factor to factor loadings are presented in Table 52. All factor to factor loadings were in the hypothesized direction. It can therefore be concluded that there is satisfactory nomological validity. Of course, a more acceptable test of nomological validity will be support for the hypotheses.

The focus of this section has been on unidimensionality and reliability assessment and on the evaluation of the construct validity of the scales. It was demonstrated that the scales used to measure the variables of interest were unidimensional and all reliabilities (except for the Role Ambiguity Scale) were above .80. Though the reliability of the Role Ambiguity Scale is .75, the scale is unidimensional, and scale items are content valid and meet the tests for convergent validity, discriminant validity and nomological validity. Support was established for all scales with regard to content validity, construct validity, and nomological validity. The next section will provide a brief introduction to LISREL VI (Joreskog and Sorbom 1984). The subsequent section will specify criteria used to evaluate LISREL models, and parameter estimates provided by these models. Following this, different models' fit to the data will be identified. Finally, results of the tests of hypotheses will be presented.

TABLE 52
Nomological Validity -- Factor to Factor loadings matrix

Factors	501	502	503	504	505	506	507	508	509
	100	-8	75	-25	10	44	31	-9	-15
	-8	100	-10	18	-32	-18	-20	77	17
	75	-10	100	-25	9	32	35	-13	-19
	25	18	-25	100	4	-58	-48	14	7
	10	-32	9	4	100	17	18	-36	-4
	44	-18	32	-58	17	100	69	-22	-18
	31	-20	35	-48	18	69	100	-30	-20
	-9	77	-13	14	-36	-22	-30	100	5
	-15	17	-19	7	-4	-18	-20	5	100

LEGEND
501 -- Uncertainity regarding performance indexes
502 -- Satisfaction with salesperson
503 -- Conflict regarding performance indexes
504 -- Satisfaction with Organizational Policies
505 -- Influence Strategy/s used
506 -- Role Ambiguity
507 -- Role Conflict
508 -- Customer orientation of Vendor Salesperson
509 -- Experience

LISREL VI : A BRIEF REVIEW

The hypotheses proposed in Chapter III were tested using LISREL VI (Joreskog and Sorbom 1984). LISREL is a general computer program for estimating the unknown coefficients in a set of linear structural equations. Variables in the system of equations can be either directly observed variables or unmeasured latent variables (hypothetical construct variables) which are not observed variables. The LISREL program is based on a general model which is particularly designed to handle models with latent variables, measurement errors, and reciprocal causation. In its most general form the model assumes that there is a causal structure among a set of latent variables. The latent variables appear as underlying causes of the observed variables.

The LISREL model consists of two parts: the measurement model and the structural equation model. The measurement model specifies how the latent variables are measured in terms of the observed variables and is used to describe the measurement properties (validities and reliabilities) of the observed variables. The focus of the preceding section was on the measurement model.

The Structural equation model specifies the causal relationships among the latent variables and is used to describe the causal effects and the amount of unexplained variance. Since each equation in the model represents a causal link rather than a mere empirical association, the structural parameters do not, in general, coincide with coefficients of regressions among observed variables. The structural parameters

represent relatively unmixed, invariant and autonomous features of the mechanism that generates the observable variables.

Estimation of Parameters

LISREL parameters can be established by any or all of three methods. These methods are:

1. Initial estimates (IE)
2. Unweighted Least Squares Estimates (ULS)
3. Maximum likelihood estimates (ML)

If all three methods give consistent estimates of parameters, this means that these parameter estimates are close to the true parameter values in large samples (provided the specified model is correct). The Initial Estimates are based on an ad hoc procedure that is non-iterative and therefore very fast. The Unweighted Least Squares and Maximum Likelihood estimates are obtained by means of an iterative procedure which minimizes a definite fitting function by successively improving the parameter estimated starting with the initial estimates. There can be times when there are several local minima of the fitting function; this can be avoided by building a model which is appropriate for the data, and testing the model on data from a large random sample.

In this study the Maximum Likelihood method was used to estimate parameter values. The Maximum Likelihood method is based on a full information approach; i.e., all of the available information is used for parameter estimation. The fitting function for the Maximum Likelihood

method is derived from the maximum likelihood principle based on the assumption the observed variables have a multinormal distribution. Under this assumption the maximum likelihood estimates are optimal in the sense of being most precise in large samples.

Of the three methods of estimating parameters identified earlier, only the maximum likelihood method provides standard errors for the parameter estimates. However before estimates of individual parameters can be accepted, the models have to be assessed for their fit to the data. The following section will identify some of the techniques to assess the fit of the model to the data.

Assessment of Models and Parameters

In assessing the fit of the model to the data the following quantities are recommended for consideration by Joreskog and Sorbom (1984):

1. parameter estimates;
2. standard errors;
3. squared multiple correlations;
4. coefficients of determination; and,
5. correlations of parameter estimates

If any of the above quantities has unreasonable values (e.g. negative variances for parameter estimates, correlations which are larger than one in magnitude, and covariance or correlation matrices which are not positive definite) this indicates incorrect model specification. Other indications of a bad model are squared multiple correlations or coeffi-

cients of determination which are negative. Extremely large standard errors also indicate a misspecified model.

The squared multiple correlation is a measure of the strength of the relationship and the coefficient of determination is a measure of the strength of several relationships jointly.

The second part of model evaluation pertains to the assessment of the overall fit of the model to the data. The quantities that should be considered here are the Goodness of Fit Index and the Adjusted Goodness of Fit Index. The Goodness of Fit index is a measure of the relative amount of variance and covariances jointly accounted for by the model. The Root Mean square residual is a measure of the average of the residual variances and covariances.

The Root Mean Square residual can be used to compare the fit of two different models to the same data, as can the Goodness of Fit Index. Both of these measures should be between zero and one, though it is theoretically possible for them to become negative.

Another indicator of the overall fit of the model is the overall chi-square measure along with its associated degrees of freedom and probability level. The assumptions underlying the chi-square statistic are as follows:

1. all of the observed variables have a multivariate normal distribution,
2. the analysis is based on the sample covariance matrix, and,
3. the sample size is fairly large.

Since these criteria are seldom fulfilled in practice, the use of the chi-square as a test statistic is not recommended by Joreskog and Sorbom (1984). They recommended that the chi-square value be treated as a goodness (or badness) of fit measure. In this sense, large chi-square values indicate a bad fit, and small chi-square values indicate a good fit. The degrees of freedom serves as a standard by which to judge whether the chi-square value is large or small.

Joreskog and Sorbom (1984) suggest a way to use the chi-square measure in comparative model fitting. They suggest that a drop in the chi-square across one model to another should be compared to the change in the degrees of freedom. A drop is chi-square that is larger than the degrees of freedom indicates that the changes made in the model represent a real improvement. On the other hand, a drop in chi-square close to the difference in the number of degrees of freedom is an indication that the improvement in fit has been obtained by 'capitalizing on chance'.

A more detailed assessment of fit can be obtained by an inspection of the normalized residuals and the modification indices. Residuals which are larger than two in magnitude indicate specification error, and the modification indices usually give a hint as to where the error is. Modification indices are measures associated with the derivatives of the fitting function with respect to the fixed and constrained parameters. This modification index equals the expected decrease in chi-square if a single constraint is relaxed and all estimated parameters are held fixed

at their estimated value. The improvement in fit, as measured by a reduction in the chi-square, is guaranteed to be at least as large as the modification index. It should be noted however that parameters should be relaxed only when such a step is defensible from a substantive point of view.

An effective summary of the fit, as judged by all the normalized residuals jointly is given by a Q-plot of the normalized residuals. The Q-plot can be examined visually by fitting a straight line to the plotted points. If the slope of this line is larger than one, as compared with the 45-degree line, this indicates a good fit. Slopes which are close to one correspond to moderate fits, and slopes which are smaller than one, to poor fits. Nonlinearities in the plotted points indicate specification errors in the model, or departures from normality.

The focus of the present section has been to lay the groundwork for the tests of hypotheses and the assessment of the overall fit of the model. LISREL quantities were identified and discussed. Criteria recommended for use in evaluating parameter estimates and the fit of models were highlighted. The following section will focus on the different LISREL models used to fit the data. Following this discussion, models will be compared on the basis of the specified criteria, and the model that best fits the data identified. The parameter estimates (maximum likelihood), standard errors, and t-values, from this model will then be used to test directional and statistical support for individual hypotheses. A similar procedure was used by Graham (1985).

MODEL FITTING AND EVALUATION

Before individual parameter estimates can be considered, the fit of the model to the data needs to be examined. In the preceding section the criteria for evaluating the models were described. Prior to model evaluation, the differences between the models need to be highlighted; this will be attempted now.

Model 1

A diagram of Model 1 appears in Figure 3. In this model several elements of the ϕ matrix (the matrix of correlations between the exogenous variables) were fixed at 0. The only elements that were estimated were, ϕ_{21} (the correlation between Perceived Customer Orientation of Vendor Salesperson and Influence Strategy/s used), and ϕ_{35} (the correlation between Perceptions of Uncertainty Regarding Performance Indexes, and Perceptions of Conflict Regarding Performance Indexes). These relationships were estimated because both customer oriented selling, and the use of influence strategies have the same source, i.e., the vendor salesperson. The negative correlation between these variables suggests that a vendor salesperson who is customer oriented is less likely to use influence strategies in selling to the purchasing professional.

Similarly, the correlation between Perceptions of Uncertainty regarding Performance Indexes and Perceptions of Conflict Regarding Performance Indexes suggests that a purchasing professional who per-

ceives uncertainty regarding performance indexes is very likely to perceive conflict with regard to them. The model is presented in Figure 1.

Model 2

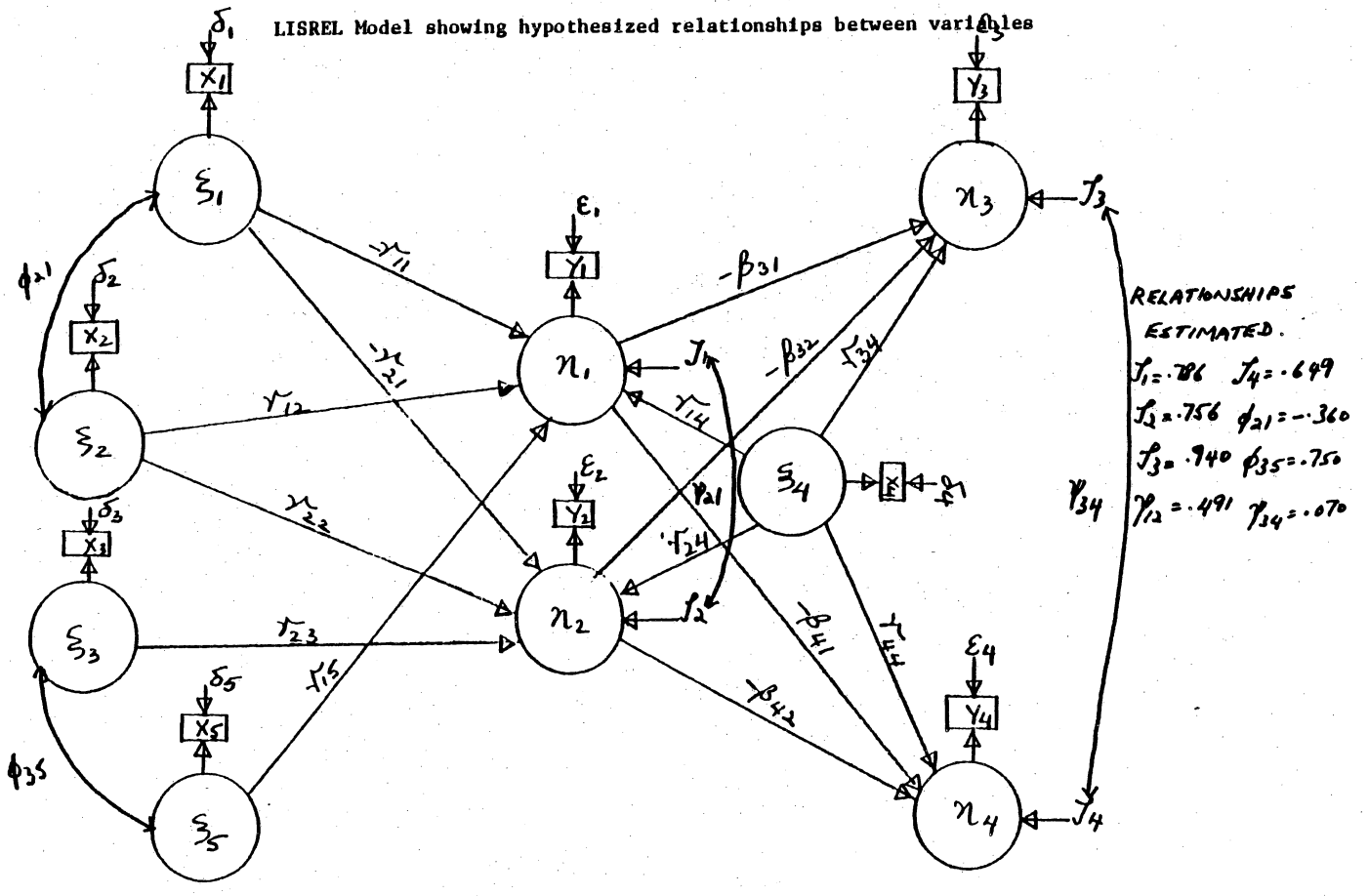
A diagram of Model 2 appears in Figure 4. A relationship that is not of interest to this study is the one between Perceived Customer Orientation of the Vendor Salesperson and the purchasing professional's Satisfaction with the Salesperson. This relationship was nonetheless estimated because the modification index for this relationship was extremely high (200.88).

The positive relationship is logically intuitive and implies that when purchasing professionals perceive a vendor salesperson to be customer oriented, they are very likely to be satisfied with the salesperson (or vice versa).

Though the relationship between these variables is not of interest to this study, constraining it to 0 was not defensible from a theoretical perspective.

Consequently, the relationship between these variables was estimated. In addition the ζ's (the errors associated with endogenous variables) for Satisfaction with Organizational Policies and Satisfaction with the Salesperson were also correlated. This was done because both Satisfaction with Organizational Policies and Satisfaction with the salesperson are facets of Job Satisfaction. Constraining their relationship to 0

LISREL Model showing hypothesized relationships between variables



LEGEND: ξ_1 = Customer Orientation of Vendor Salesperson; ξ_2 = Influence Strategy/s used; ξ_3 = Perceptions of Uncertainty regarding Performance Indexes; ξ_4 = Experience; ξ_5 = Perceptions of Conflict regarding Performance Indexes; η_1 = Role Conflict; η_2 = Role Ambiguity; η_3 = Satisfaction with the Salesperson; η_4 = Satisfaction with Organizational Policies.

FIGURE 3

Model 1

could not be defended from a theoretical stance. The model is presented in Figure 2, and the relationships estimated in this model highlighted.

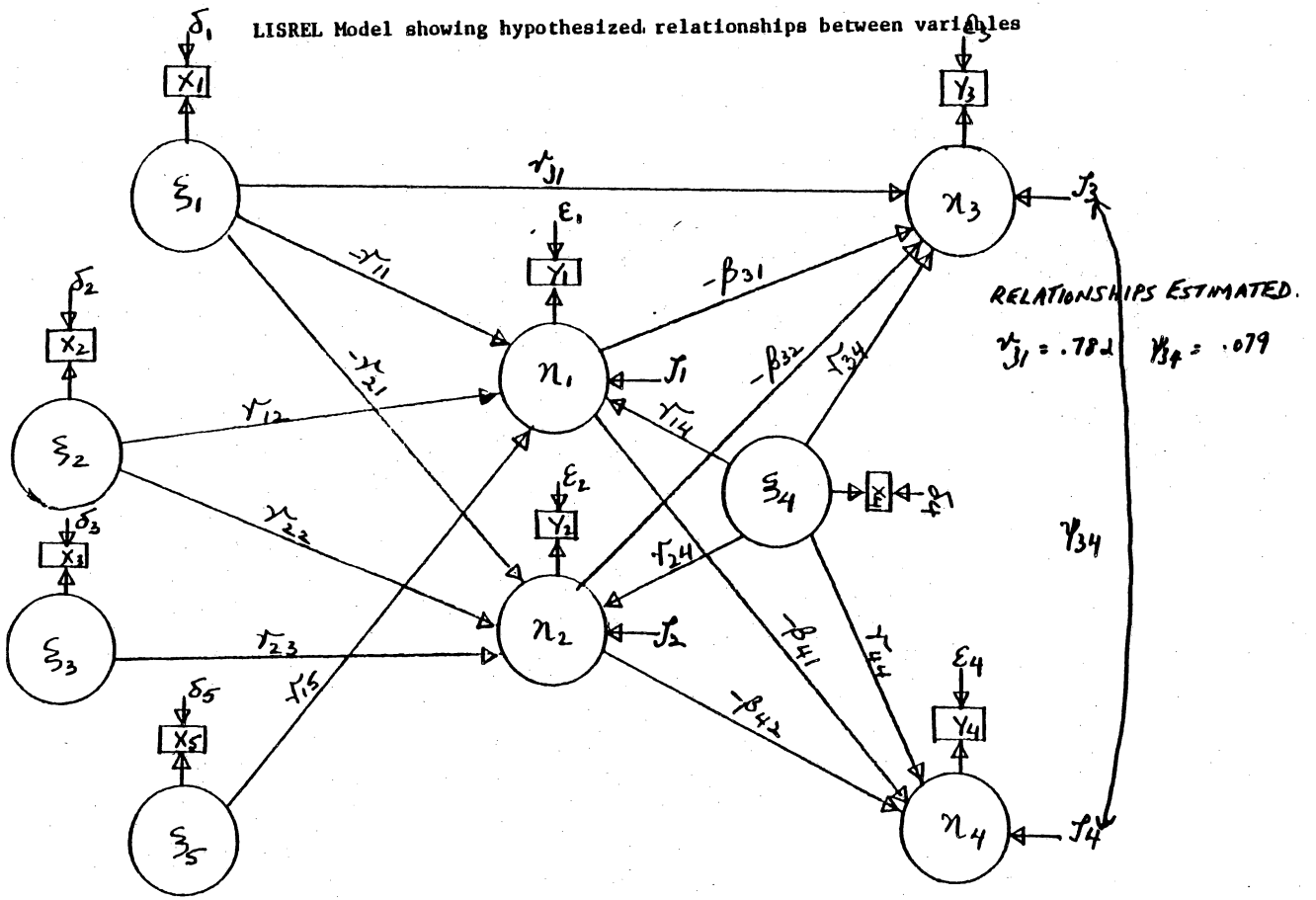
Model 3

In Model 3 (presented in Figure 5) another relationship that is not of interest to the present study was estimated; it pertains to the vendor salesperson's use of Influence Strategies, and the purchasing professional's Satisfaction with Organizational Policies. This relationship was estimated because of the statistically significant modification index of 5.11 for this relationship.

The relationship between these variables can be explained within the framework of the organizational reward/measurement system. It was emphasized in Chapter 3, that organization's attempt to evaluate purchasing performance on the basis of certain 'rational' criteria. Therefore, when salespeople use influence strategies, the existence of organizational policies indicating a certain preferred behavior will enable the purchasing professional to respond suitably to influence strategy use by the salesperson. In such circumstances, the purchasing professional is likely to perceive satisfaction with regard to the policies of the organization.

For instance, if a vendor salesperson offers to take the purchasing professional out to lunch, but organizational policies prohibit buyers from accepting such invitations, then the buyer will refuse the invita-

LISREL Model showing hypothesized relationships between variables



LEGEND: ξ_1 = Customer Orientation of Vendor Salesperson; ξ_2 = Influence Strategy/s used;
ξ_3 = Perceptions of Uncertainty regarding Performance Indexes;
ξ_4 = Experience; ξ_5 = Perceptions of Conflict regarding Performance Indexes;
η_1 = Role Conflict; η_2 = Role Ambiguity; η_3 = Satisfaction with the Salesperson;
η_4 = Satisfaction with Organizational Policies.

FIGURE 4

Model 2

tion. The existence of clear policies is therefore likely to result in the purchasing professionals satisfaction with organizational policies. Conversely lack of clear policies is likely to result in the purchasing professional perceiving dissatisfaction with the policies of the organization.

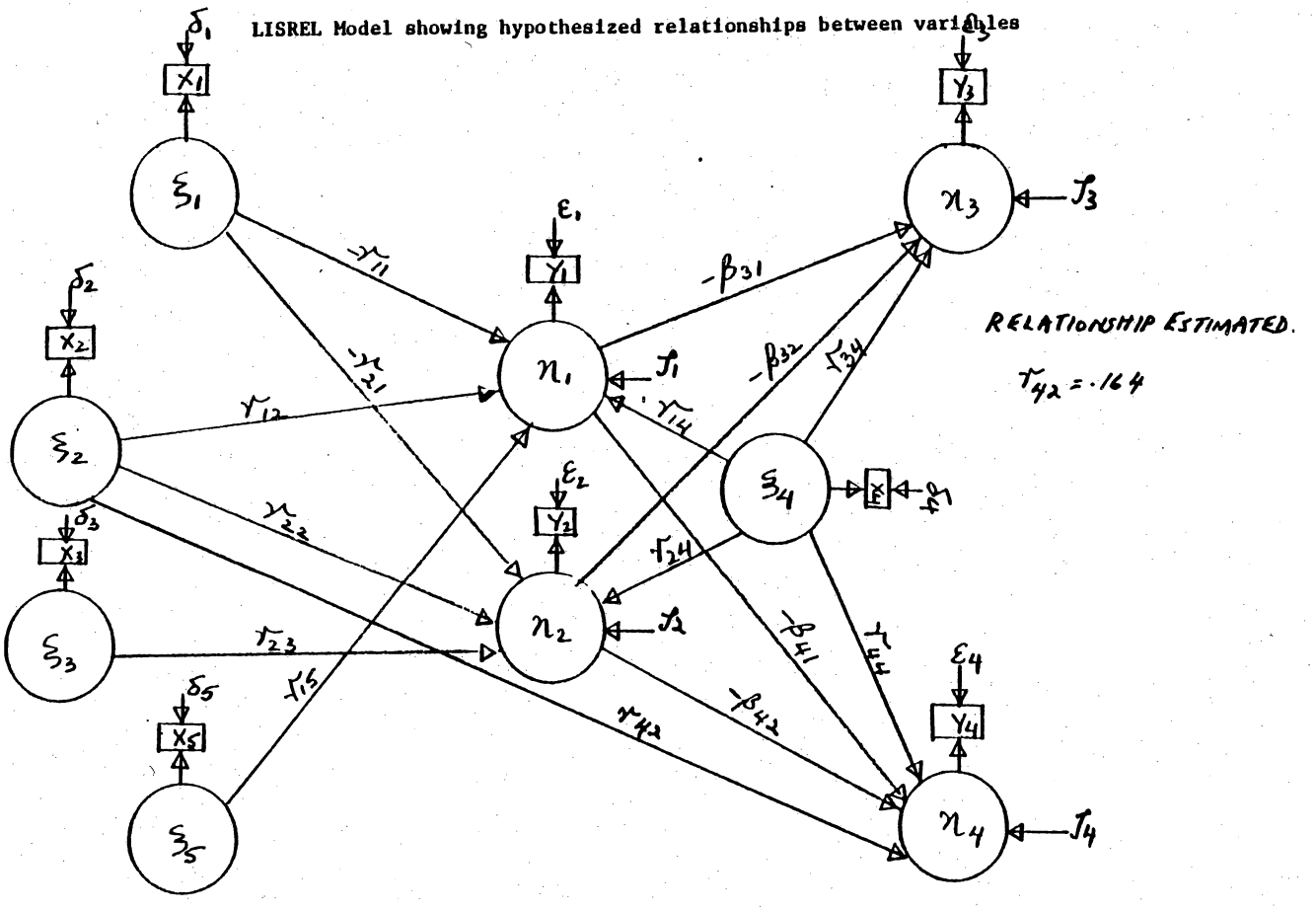
Since estimating the parameter relating these two variables was theoretically defensible, the parameter was freed. The model is presented in Figure 5, and the estimated parameter highlighted.

Model 4

The models discussed so far have estimated the parameters with only two elements of the ϕ matrix (the matrix of correlations between exogenous variables) free; the remaining ϕ's were fixed at 0. However, several factors argue against fixing the ϕ's at 0 (i.e., assuming that the exogenous variables are independent of each other). These are: 1) all of the variables in this study are perceptual in nature without there being independent measures of corroboration; 2) the data was collected by a paper and pencil technique; and 3) all information was provided by the respondent.

Therefore, assuming that the exogenous variables are independent of each other was not deemed justifiable. Consequently, in this model the correlations between the exogenous variables were estimated. The model is presented in Figure 6. As can be seen, the correlations between the exogenous variables are very low.

LISREL Model showing hypothesized relationships between variables

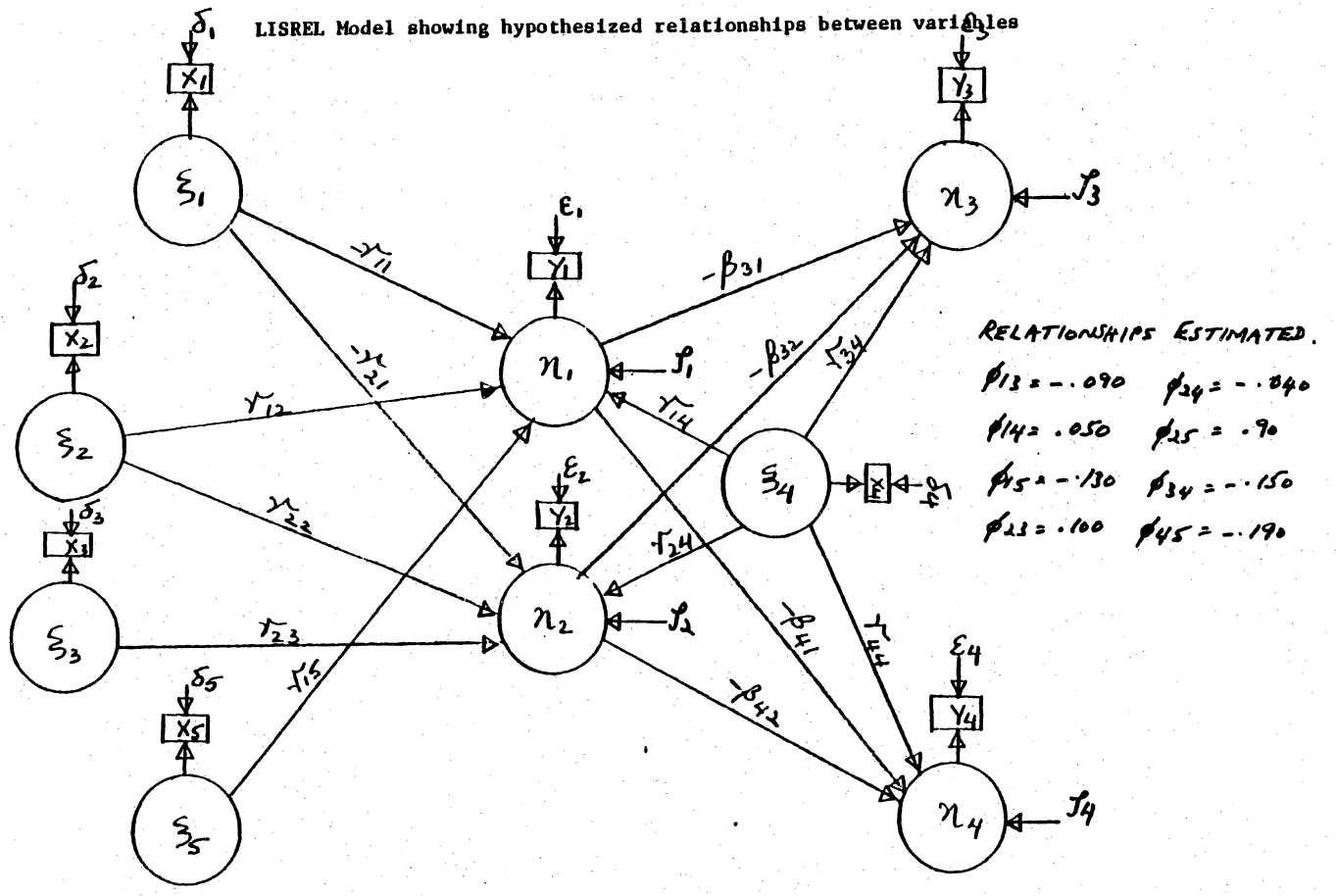


LEGEND: ξ_1 = Customer Orientation of Vendor Salesperson; ξ_2 = Influence Strategy/s used;
ξ_3 = Perceptions of Uncertainty regarding Performance Indexes;
ξ_4 = Experience; ξ_5 = Perceptions of Conflict regarding Performance Indexes;
η_1 = Role Conflict; η_2 = Role Ambiguity; η_3 = Satisfaction with the Salesperson;
η_4 = Satisfaction with Organizational Policies.

FIGURE 5

Model 3

LISREL Model showing hypothesized relationships between variables



LEGEND: ξ_1 = Customer Orientation of Vendor Salesperson; ξ_2 = Influence Strategy/s used;
ξ_3 = Perceptions of Uncertainty regarding Performance Indexes;
ξ_4 = Experience; ξ_5 = Perceptions of Conflict regarding Performance Indexes;
η_1 = Role Conflict; η_2 = Role Ambiguity; η_3 = Satisfaction with the Salesperson;
η_4 = Satisfaction with Organizational Policies.

FIGURE 6

Model 4

Model 5

In this model, the ζ's (the errors associated with the endogenous variables) were freed. The implication of freeing the ζ's and estimating the correlations between them is that there are common causes (other than those being tested in the model) for these variables. In Models 1 and 2, the values of two ψ's were estimated; these are ψ_{12} (between Role Conflict and Role Ambiguity) and ψ_{34} (Satisfaction with Organizational Policies and Satisfaction with the Salesperson). In this model, the remaining ψ's were estimated. The model is presented in Figure 7. As can be seen, the estimated ψ's are very small in magnitude.

Comparison of Models

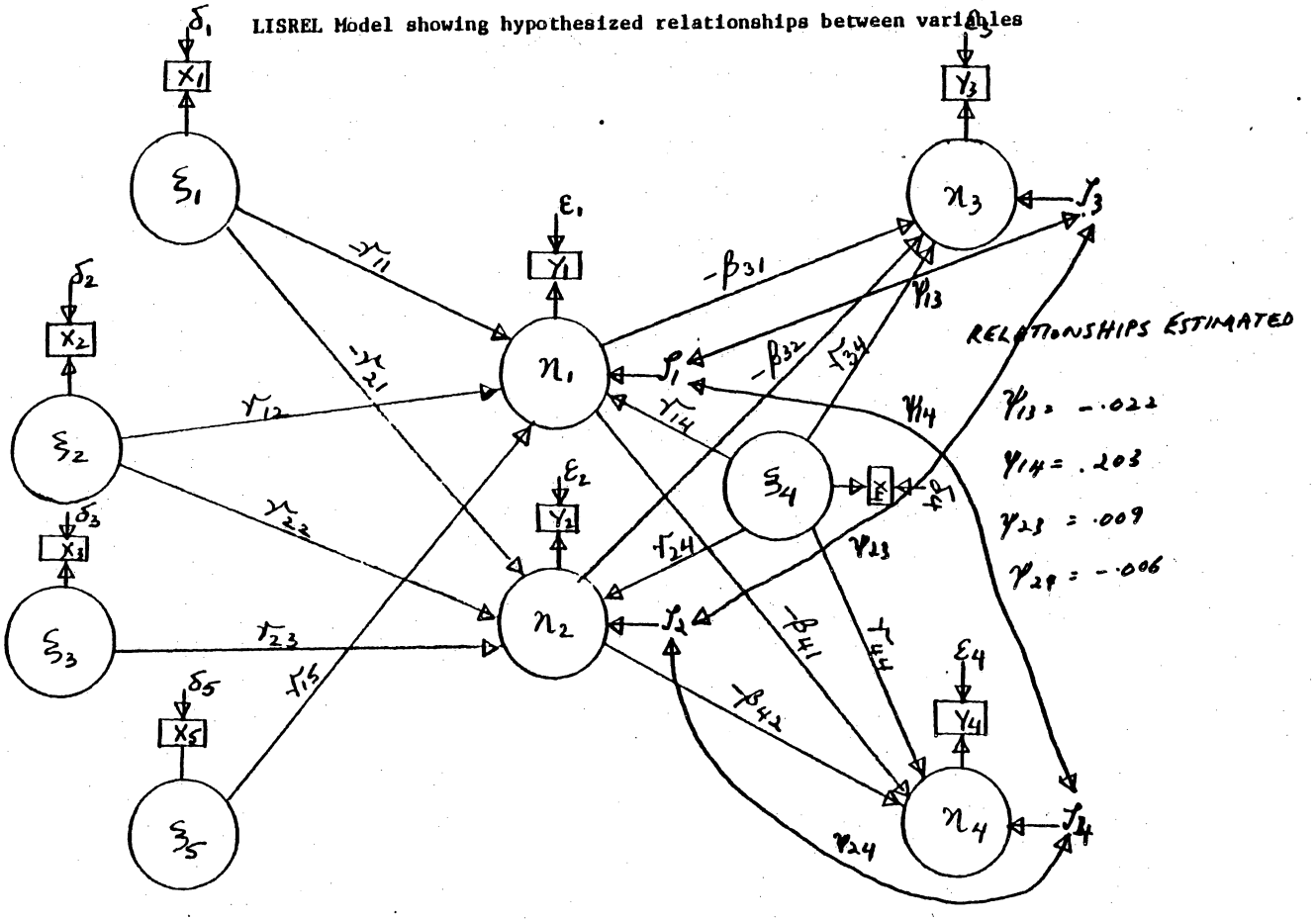
The LISREL models used to fit the data, and the statistical significance of individual parameters, were assessed on the basis of the following criteria.

LISREL estimates (Maximum Likelihood Method)

The size of each parameter estimate and its direction were assessed. The standardized LISREL parameter estimate indicates the number of standard deviations by which the dependent variable will change if the independent variable is changed by one standard deviation.

The direction of a LISREL parameter estimate indicates the direction of the relationship which it represents. The direction of each parameter was compared against the direction hypothesized in the proposed model (and in the statement of each hypothesis).

LISREL Model showing hypothesized relationships between variables



LEGEND: ξ_1 = Customer Orientation of Vendor Salesperson; ξ_2 = Influence Strategy/s used;
ξ_3 = Perceptions of Uncertainty regarding Performance Indexes;
ξ_4 = Experience; ξ_5 = Perceptions of Conflict regarding Performance Indexes;
η_1 = Role Conflict; η_2 = Role Ambiguity; η_3 = Satisfaction with the Salesperson;
η_4 = Satisfaction with Organizational Policies.

FIGURE 7

Model 5

Standard Errors of the Parameter Estimates and t-Values

The standard errors and t-values of the LISREL (Maximum Likelihood) parameter estimates were examined in order to determine how good the specification of the model was. The t-value of a parameter is defined as the parameter estimate divided by its standard error. This t-value was compared with the critical t-value with df=335, for alpha=.01. The null hypothesis for testing each parameter was that the coefficient could be zero in the population. If the t-value from LISREL was greater than the critical t-value, the null hypothesis was rejected.

If the direction of the parameter estimate was in the hypothesized direction, but the null hypothesis could not be rejected at the alpha = .01 level, this was taken as evidence of partial support for the hypothesis. In such cases the highest alpha level at which the null hypothesis could be rejected were noted. Alpha levels above .10 were not used.

The magnitude of the standard error was also considered. Large standard errors indicate unstable parameter estimates. Large fluctuations in the magnitude of the parameter estimate and standard error, and changes in the direction are all indicators of unstable parameters. Such unstable parameters are biased and reflect a misspecified model.

Normalized residuals

The normalized residuals were examined to judge the fit of the model. Normalized residuals that are larger than two in magnitude indicate specification error. When comparing models, the one with the better fit is the one with the smallest normalized residuals.

Modification Indices

The magnitude of the largest modification index was observed. If this was larger than five, the corresponding parameter was then freed for estimation in the next model (provided substantive support was available for doing so).

Q-Plot of Normalized residuals

The Q-plots across models were compared. Q-plots with slopes greater than 1 were taken as an indication of the model fitting the data well.

In addition to the above criteria, the following quantities were considered in comparing models: squared multiple correlations, total coefficient of determination, goodness of fit index, adjusted goodness of fit index, and root mean square residual.

A summary of comparisons across all models for all the identified criteria is presented in Table 53.

Selection of Model

TABLE 53

Comparison of LISREL Models

Model	I	II	III	IV	V
Comparison Criteria					
1. Coefficient of Determination	.312	.665	.736	.745	.748
2. Squared Multiple Correlations of Structural equations					
RCS	.182	.182	.182	.214	.214
RAS	.221	.221	.221	.244	.244
SWS	.056	.613	.609	.612	.614
SWO	.345	.345	.374	.375	.292
3. Chi-square	354.87	42.03	27.80	7.02	2.04
4. Degrees of freedom for chi-square	21	20	19	11	7
5. Probability level	0.0	.003	.087	.798	.957
6. Goodness of fit Index	.865	.974	.982	.996	.999
7. Adjusted Goodness of fit index	.711	.941	.957	.982	.992
8. Root Mean Square Residual	.131	.064	.062	.013	.007
9. Maximum Modification Index	200.88	13.69	5.11	4.80	1.88
10. Change in chi-square significant at alpha=.01?		Yes	Yes	Yes	No
11. Magnitude of largest normalized residual	13.468	-2.411	-2.411	.972	-.734
12. Slope of Q-plot greater than 1 ?	No	No	No	Yes	Yes

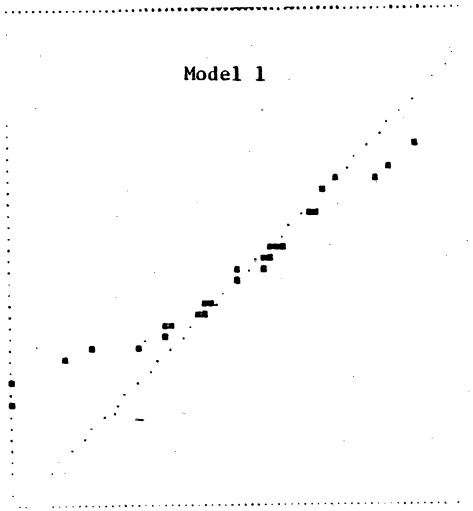
In deciding whether a later model was better than the former model, comparisons on the specified criteria were made. The final decision on whether a model represented a statistically significant difference from the previous model was made on the basis of the differential chi-square tests.

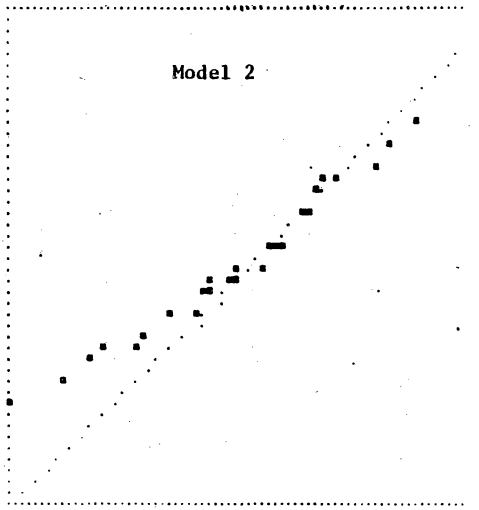
If the change in the chi-square (and its associated degrees of freedom) was greater than the critical chi-square value (α = .01), then the change in the chi-square was deemed statistically significant. As can be seen from Table 53, the differential chi-square test shows a statistically significant (α = .01) change from Model 1 to Model 4. The change in the chi-square was not significant between Models 4 and 5. Therefore, changes in the various LISREL quantities from Model 4 to Model 5 could be due to 'capitalizing on chance'. Further, comparisons of the Coefficient of determination, Squared Multiple Correlations of Structural equations, Goodness of Fit Index, and Root Mean Square Residual, showed that the change from Model 4 to Model 5 was only marginal. A visual inspection of the Q-plots indicates that the slope of the plot of normalized residuals is greater than 1 for Models 4 and 5, and less than 1 for the remaining models. The Q-plots of the models are presented in Table 54.

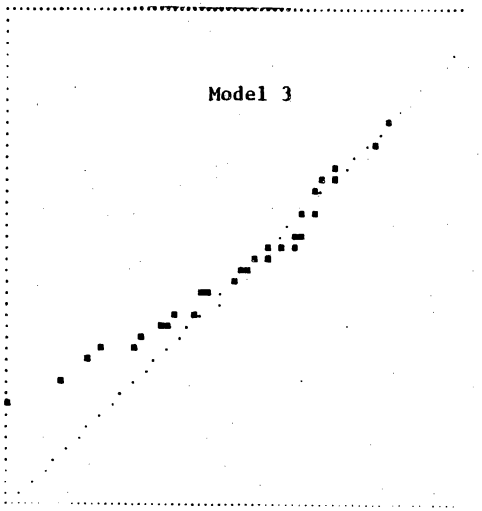
In view of the statistical non-significance of the differential χ^2 - test between Models 4 and 5, Model 4 was selected as the model that fit the data best. The parameter estimates from Model 4 were used to test individual hypotheses. In examining the parameter estimates, changes

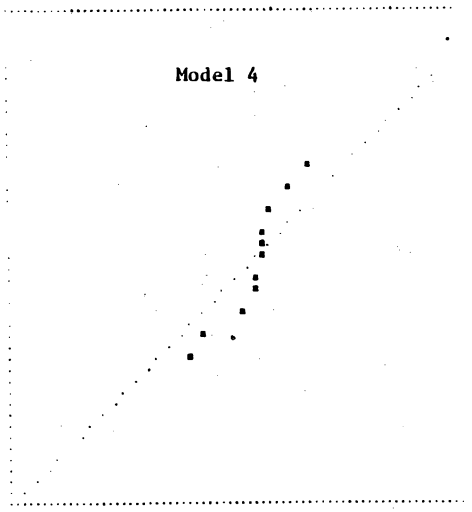
TABLE 54

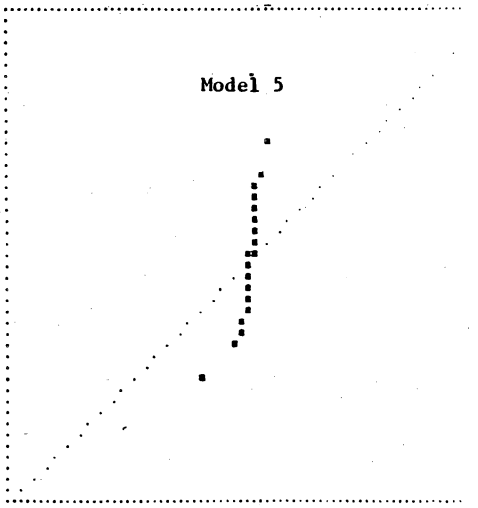
Q-Plots of LISREL models -- Comparison











in the sign or magnitude of the estimates, and fluctuations in the standard errors are indications that the estimates do not accurately reflect population values; such comparisons across all models were made in the section describing the tests of hypotheses. The next section will therefore focus on testing individual hypotheses based on parameter estimates from Model 4.

TESTS OF HYPOTHESES

Hypotheses were accepted (or rejected) on the basis of the direction of the LISREL coefficient, and the statistical significance of the t-value.

Hypothesis 1

Hypothesis 1 posited a negative relationship between perceived customer orientation of the vendor salesperson and role conflict.

The LISREL coefficient (from Model 4) was -.235 and its associated standard error was .052. The direction of the LISREL coefficient was in the hypothesized direction and the t-value of 4.553 was statistically significant at the $\alpha = .01$ level. Therefore, this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 55. As can be seen from the table, all quantities are stable across models.

TABLE 55

COVS and RC -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.235	-.235	-.235	-.235	-.232
2. Standard error of above coefficient	.051	.051	.051	.052	.050
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	4.582	4.582	4.582	4.553	4.601
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

Hypothesis 2

This hypothesis proposed a negative relationship between perceived customer orientation of the vendor salesperson and purchasing professionals' perceptions of role ambiguity.

The LISREL coefficient was -.157 with an associated standard error of .051 and t-value of 3.107. The direction of the LISREL coefficient was in the hypothesized direction and the t-value was statistically significant at the α = .01 level. Therefore, this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 56. As can be seen from the table, all quantities are stable across models.

Hypothesis 3

Hypothesis 3 predicted that purchasing professionals' perceptions that the influence strategy/s used by vendor salespeople are appropriate will be positively related to their perceptions of role conflict.

The LISREL coefficient for this relationship was .061 with an associated standard error of .051 and t-value of 1.183. The direction of the LISREL coefficient was in the hypothesized direction and the t-value was statistically significant at an α = .25 level. This hypothesis therefore was rejected.

TABLE 56

COVS and RA -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.157	-.157	-.157	-.157	-.157
2. Standard error of above coefficient	.050	.050	.050	.051	.051
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	3.131	3.131	3.131	3.112	3.107
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 57. As can be seen from the table, all quantities are stable across models.

Hypothesis 4

This hypothesis proposed that purchasing professional's perceptions that the influence strategy/s used by vendor salespeople are appropriate, will be positively related to their perceptions of role ambiguity.

The LISREL coefficient for this relationship was .070 with an associated standard error of .050 and a t-value of 1.40. The direction of the LISREL coefficient was in the hypothesized direction, and the t-value was statistically significant at an alpha level of .10. Therefore, this hypothesis has substantive support.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 58. As can be seen from the table, all quantities are stable across models.

Situational Factors

Information was collected on three types of situational factors : respondents' perception of their personal relationship with the salesperson, information requirements, and perception of risk involved in the purchase. No hypothesis were proposed between these factors and res-

TABLE 57

ISS and RC -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	.061	.061	.061	.061	.059
2. Standard error of above coefficient	.051	.051	.051	.051	.051
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	1.186	1.186	1.186	1.183	1.156
5. Statistical significance of t-value	NS	NS	NS	NS	NS
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	No	No	No	No	No

TABLE 58

ISS and RA -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	.070	.070	.070	.070	.071
2. Standard error of above coefficient	.050	.050	.050	.050	.050
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	1.40	1.40	1.40	1.40	1.405
5. Statistical significance of t-value	.10	.10	.10	.10	.10
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

pondents' perceptions of the appropriateness of salesperson's use of influence strategies. Since repetitive consistency will be low for these situational factors, reliablity was not calculated for this scale.

Pearson's correlation coefficients were calculated to determine the relationship between these situational factors and perceptions of influence strategies used. The correlation coefficients for the relationship between perceptions of influence strategies used and the situational factors are as follows: personal relationship -.1654 ($p = .0021$); informational requirements .1146 ($p = .033$); and perceptions of risk .1847 ($p = .0006$).

Information was also collected on the 'typicalty' of the most recent buyer-seller interaction. The mean value of typicalty (on a scale of 5) was 3.49.

Hypotheses 5

This hypothesis predicted that purchasing professional's perceptions that their organization's reward/measurement indexes conflict with one another, will be positively related to their perceptions of role conflict.

The LISREL coefficient for this relationship was .210 with an associated standard error of .073 and t-value of 2.876. The direction of the LISREL coefficient was in the hypothesized direction and t-value was statistically significant at an alpha level of .01. Therefore this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 59. As can be seen from the table, all quantities are stable across models.

Hypotheses 6

This hypothesis proposed that purchasing professional's perceptions of uncertainty regarding their organization's reward/measurement indexes, will be positively related to their perceptions of role ambiguity.

The LISREL coefficient for this relationship was .453 with a standard error of .071 and a t-value of 6.378. The direction of the LISREL coefficient was in the hypothesized direction and the t-value was statistically significant at an alpha level .01. Therefore, this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 60. As can be seen from the table, all quantities are stable across models.

Hypothesis 7

Hypothesis 7 predicted a negative relationship between role conflict and satisfaction with the salesperson. The LISREL coefficient (from Model 4) was .095, with an associated standard error of .048, and t-value of 2.000.

TABLE 59

PCRPI and RC -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	.210	.210	.210	.210	.214
2. Standard error of above coefficient	.072	.072	.072	.073	.072
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	2.904	2.904	2.904	2.876	2.971
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

TABLE 60

PURPI and RA -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	.453	.453	.453	.453	.453
2. Standard error of above coefficient	.071	.071	.071	.071	.071
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	6.389	6.389	6.389	6.378	6.376
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

The direction of the LISREL coefficient was not in the hypothesized direction; further it was statistically significant at the $\alpha = .05$ level. The hypothesis was therefore rejected.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 61. As can be seen from the table, all quantities are stable across models.

Hypothesis 8

This hypothesis proposed a negative relationship between role ambiguity and satisfaction with the salesperson.

The LISREL coefficient for this relationship was -.050 with an associated standard error of .046 and a t-value of 1.071. The direction of the LISREL coefficient was as hypothesized; the t-value was statistically significant at the $\alpha = .25$ level. This hypothesis therefore was rejected.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 62. As can be seen from the table, all quantities are stable across models.

TABLE 61

RC and SWS -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.126	.097	.095	.095	.154
2. Standard error of above coefficient	.073	.047	.047	.048	.198
3. Is coefficient in hypothesized direction ?	Yes	No	No	No	No
4. t-value	-1.723	2.045	2.001	2.000	.780
5. Statistical significance of t-value	.05	.05	.05	.05	NS
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	No	No	No	No
b) At statistically significant level	Yes	No	No	No	No

TABLE 62

RA and SWS -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.070	-.049	-.050	-.050	-.096
2. Standard error of above coefficient	.072	.046	.046	.046	.146
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	.961	1.066	1.070	1.071	.656
5. Statistical significance of t-value	NS	NS	NS	NS	NS
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	No	No	No	No	No

Hypothesis 9

Hypotheses 9 posited a negative relationship between role conflict and satisfaction with organizational policies. The LISREL coefficient was -.179 with an associated standard error of .060 and a t-value of 3.005. The direction of the LISREL coefficient was in the hypothesized direction and t-value was statistically significant at the α = .01 level. This hypothesis was therefore supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 63. As can be seen from the table, all quantities are stable across models.

Hypothesis 10

Hypothesis 10 proposed a negative relationship between role ambiguity and satisfaction with organizational policies.

The LISREL coefficient for this relationship was -.493 with a standard error of .059, and a t-value of 8.331. The direction of the LISREL coefficient was as hypothesized and the t-value was statistically significant at an α level of .01. This hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 64. As can be seen from the table, all quantities are stable across models.

TABLE 63

RC and SWOP -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.159	-.159	-.179	-.179	-.581
2. Standard error of above coefficient	.061	.061	.060	.060	.212
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	2.630	2.630	2.996	3.005	2.744
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

TABLE 64

RA and SWOP -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.479	-.479	-.493	-.493	-.219
2. Standard error of above coefficient	.060	.060	.059	.059	.187
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	7.957	7.957	8.336	8.331	1.166
5. Statistical significance of t-value	.01	.01	.01	.01	NS
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

Hypothesis 11

Hypothesis 11 predicted that purchasing professionals' experience will be negatively related to their perceptions of role conflict.

The LISREL coefficient for this relationship was -.130 with an associated standard error of .049 and t-value of 2.653. The direction of the LISREL coefficient was as hypothesized and the t-value was statistically significant at an α level of .01. This hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 65. As can be seen from the table, all quantities are stable across models.

Hypothesis 12

This hypothesis proposed a negative relationship between purchasing professionals' experience and role ambiguity.

The LISREL coefficient for this relationship was -.114 with an associated standard error of .048 and a t-value of 2.394. The direction of the LISREL coefficient was as hypothesized, and the t-value was statistically significant at an α level of .01. Therefore, this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 66. As can be seen from the table, all quantities are stable across models.

TABLE 65

EXP and RC -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.130	-.130	-.130	-.130	-.130
2. Standard error of above coefficient	.048	.048	.048	.049	.049
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	2.720	2.721	2.720	2.670	2.660
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

TABLE 66

EXP and RA -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.114	-.114	-.114	-.114	-.114
2. Standard error of above coefficient	.047	.047	.047	.048	.048
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	2.440	2.440	2.440	2.394	2.395
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

Hypothesis 13

Hypothesis 13 posited a positive relationship between purchasing professionals' experience and their satisfaction with the salesperson.

The magnitude of the LISREL coefficient estimating this relationship was .141 with a standard error of .034 and a t-value of 4.131. The direction of the LISREL coefficient was as hypothesized and the t-value was statistically significant at an α level of .01. Therefore, this hypothesis was supported.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 67. As can be seen from the table, all quantities are stable across models.

Hypothesis 14

This hypothesis proposed a positive relationship between purchasing professionals' experience and their satisfaction with organizational policies.

The LISREL coefficient for this relationship was -.048 with a standard error of .044 and a t-value of 1.099. The direction of the LISREL coefficient was not in the hypothesized direction. Therefore, this hypothesis was rejected.

Details of the parameter estimates, standard errors, t-values, directional support for hypothesis, and statistical significance of t-values, for this hypothesis across all models, are provided in Table 68. As can be seen from the table, all quantities are stable across models.

TABLE 67

EXP and SWS --LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	.132	.141	.141	.141	.144
2. Standard error of above coefficient	.053	.034	.034	.034	.040
3. Is coefficient in hypothesized direction ?	Yes	Yes	Yes	Yes	Yes
4. t-value	2.508	4.184	4.181	4.131	3.625
5. Statistical significance of t-value	.01	.01	.01	.01	.01
6. Hypothesis supported ?					
a) Direction of coefficient	Yes	Yes	Yes	Yes	Yes
b) At statistically significant level	Yes	Yes	Yes	Yes	Yes

TABLE 68

EXP and SWOP -- LISREL quantities across models

Model	1	2	3	4	5
LISREL Quantities					
1. LISREL (maximum likelihood) coefficient	-.048	-.048	-.048	-.048	-.078
2. Standard error of above coefficient	.044	.044	.043	.044	.051
3. Is coefficient in hypothesized direction ?	No	No	No	No	No
4. t-value	1.095	1.095	1.113	1.099	1.533
5. Statistical significance of t-value	NS	NS	NS	NS	NS
6. Hypothesis supported ?					
a) Direction of coefficient	No	No	No	No	No
b) At statistically significant level	No	No	No	No	No

The parameter estimates and their standard errors across models for all the relationships are stable. It can therefore be construed that the parameter estimates reflect parameters from the population.

Four of the fourteen hypothesis that were proposed were rejected. Of these, two (H3 and H8) were rejected because they were not supported at the preset alpha level of .01, and two (H7 and H14) were rejected because the results were opposite to what was hypothesized. Post-hoc explanations for the lack of support for the latter two hypotheses will be offered in the next chapter. Managerial as well as research implications of the findings of this study will be offered; also directions for future research will be suggested. Only hypothesis that were supported either at the alpha=.01 or .10 level will be used for these purposes.

Chapter VI

IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

OVERVIEW

Initially, this chapter provides an overview of the study and then highlights the conclusions that can be drawn. Next, the implications for marketing management and marketing thought are discussed. Then, suggestions for future research are made. Finally, the shortcomings of the study are identified.

STUDY OVERVIEW AND CONCLUSIONS

This section will briefly review the study and highlight its conclusions.

Study objectives and hypotheses

The theoretical framework for this study was based on the Role Episode Model (Kahn et al. 1964). The objectives of the study were to determine whether:

1) vendor organization controlled variables can be related to role conflict and role ambiguity for the purchasing professional;

2) role conflict and role ambiguity will have dysfunctional consequences for the salesperson, and for the purchasing professional's organization; and,

3) role conflict and role ambiguity can be related to perceptions of conflict and uncertainty regarding the (buying) organizations performance indexes.

In terms of the first objective, negative relationships were hypothesized between purchasing professionals' perceptions of role conflict and/or role ambiguity and the perceived customer orientation of the vendor salesperson. Further, a positive relationship was hypothesized between purchasing professionals' perceptions of role conflict and/or role ambiguity and vendor salespersons' use of influence strategies.

In order to achieve the second objective, a negative relationship was hypothesized between purchasing professionals' perceptions of role conflict and role ambiguity and their satisfaction with the salesperson, and with organizational policies.

For the third objective, a positive relationship was hypothesized between purchasing professionals' perceptions of uncertainty and conflict regarding (their) organization's performance indexes and their perceptions of role ambiguity and role conflict.

Additionally, an individual difference variable, experience, was hypothesized to be negatively related to both role conflict and role ambiguity, and positively related to satisfaction with the salesperson and with organizational policies.

Data Collection

The scales used to measure these constructs were developed on the basis of extensive pilot interviews followed by a pretest conducted on a random sample (N=77) of public purchasing professionals in the state of Virginia.

Data to test the specified relationships was collected from a randomly selected national sample (N=345) of public purchasing professionals. This sample was chosen for the following reasons: 1) purchases made by these purchasing professionals in the fiscal year 1979 amounted to 500 billion dollars, and represented 20% of this country's gross rational product for the fiscal year 1979 (Page 1980). Of this, 300 billion dollars was at the state and local levels and 200 billion dollars was at the federal level. Further, no academic research has been conducted on the role perceptions of this group; 2) all of the three levels of government subscribe to a 'buy local/buy American' policy; therefore marketers who manufacture products and services in this country may benefit from an understanding of the role perceptions of this group; 3) purchases made by these purchasing professionals range from a multi-billion dollar weapon system to a two dollar office supply item; and 4) purchasing professionals rather than buying centers are responsible for the buying decision.

The data was collected through a survey mailed on February 24, 1986. A reminder letter was mailed on March 15, 1986, and returned questionnaires were accepted till March 31, 1986. 354 questionnaires were returned, for a response rate of 51.2%; of these, 9 could not be used in data analysis since they were less than 90% complete. Therefore, 345 responses (49.92%) were used to test the proposed hypotheses. This response rate is extremely high for research in this domain. Representativeness of the sample used in this study was established for

level of education and total purchasing experience, with the population defined as all the purchasing professionals (public and private) who are members of the National Association of Purchasing Management. Non-response bias was established with regard to the sample used in this study and the population of public purchasing professionals, for experience in public purchasing.

Data Analyses

Data were analyzed by the use of LISREL VI. LISREL was preferred to regression analysis because it explicitly allows the use of latent variables. Another advantage of LISREL over standard regression techniques is that hypotheses can be tested in the context of other relationships (Sujan 1986). Therefore, parameter estimates are based on a full information approach.

Since this is the manner in which the purchasing professional would actually experience the variables in this study, use of LISREL is appropriate. In a similar vein, Miles and Perreault (1976), suggest that studies researching role conflict which do not test dependant variables simultaneously may overlook the dysfunctional consequences of this variable. Thus, the use of LISREL in this study is consistent with the suggestions of Miles and Perreault (1976).

Study Findings

In terms of the proposed relationships, support was established (as hypothesized) for the negative relationships between purchasing professionals' perceptions of role conflict and role ambiguity and the customer orientation of the vendor salesperson. Further, partial support was established for the hypothesized positive relationship between purchasing professionals' perceptions of role ambiguity and influence strategies used by the vendor salesperson. This relationship was in the hypothesized direction, and was statistically significant at an α-level of .10. The proposed relationship between role conflict and influence strategies used was in the hypothesized direction but was statistically significant at an alpha level of .25. Hence, this hypothesis was rejected.

In terms of the second objective, the hypotheses pertaining to the negative relationships between role conflict, role ambiguity, and satisfaction with organizational policies were supported. With regard to the hypothesized negative relationship between role ambiguity and satisfaction with the salesperson, the direction of the hypothesis was supported. However, the relationship was statistically significant at an α-level of .25 and hence the hypothesis was rejected. The relationship between satisfaction with the salesperson and role conflict was opposite to what was hypothesized and was therefore rejected.

With regard to the third objective, the hypothesized positive relationships between purchasing professionals' perceptions of role conflict, and role ambiguity, and their perceptions of conflict and uncertainty regarding their organization's performance indexes were supported.

The individual difference variable, experience, was hypothesized to be negatively related to role conflict and role ambiguity. These relationships were supported. Additionally, experience was hypothesized to be positively related to satisfaction with organizational policies and with the salesperson. The hypothesized relationship was supported between experience and satisfaction with the salesperson. However, the relationship between experience and satisfaction with organizational policies was opposite to what was hypothesized; hence this hypothesis was rejected.

Of the 14 hypotheses that were proposed, 10 were supported. Table 69 provides details of the hypothesized relationships between variables and the findings pertaining to these relationships.

Unanticipated Findings

The unanticipated findings in this study pertain to the rejection of the hypotheses pertaining to the relationships between: 1) perceptions of role conflict and satisfaction with the salesperson; and 2) experience and satisfaction with organizational policies.

One plausible reason for the rejection of the role conflict and satisfaction with the salesperson hypothesis could be the relationship between perceived customer orientation of the vendor salesperson and satisfaction with the salesperson estimated in Model 2. The very strong relationship between these variables suggests that when purchasing professionals perceive role conflict and at the same time perceive the

TABLE 69

Summary of Hypotheses Tests

Hypothesis Number	Variables	Direction of hypothesized relationship	LISREL (ML) coefficient	p-value
1.	COVS and RC	Negative	-.235	.01
2.	COVS and RA	Negative	-.157	.01
3.	ISS and RC	Positive	.061	.25*
4.	ISS and RA	Positive	.070	.10
5.	PCRPI and RC	Positive	.210	.01
6.	PURPI and RA	Positive	.453	.01
7.	RC and SWS	Negative	.095	.05**
8.	RA and SWS	Negative	-.050	.25*
9.	RC and SWOP	Negative	-.179	.01
10.	RA and SWOP	Negative	-.493	.01
11.	EXP and RC	Negative	-.130	.01
12.	EXP and RA	Negative	-.114	.01
13.	EXP and SWS	Positive	.141	.01
14.	EXP and SWOP	Positive	-.048	.10**

* were rejected because of low p-value
** were rejected since they were not in hypothesized direction

Legend: COVS -- Customer Orientation of vendor salesperson; RC -- Role Conflict; RA -- Role Ambiguity; ISS -- Influence Strategy/s used; PCRPI -- Perceptions of Conflict regaring performance indexes; PURPI -- Perceptions of Uncertainty regarding performance indexes; SWS -- Satisfaction with the salesperson; SWOP -- Satisfaction with Organizational Policies; EXP -- Experience

salesperson to be customer oriented, they may view the salesperson as the only member of the role set who understands their problems.

In fact, the theoretical justification provided for the hypothesized relationship between customer orientation of the salesperson and role conflict, stressed that customer oriented salespeople behave in a manner that would allow purchasing professionals to satisfy their organization's performance indexes. On the buyer's side, a recent study by Chambers, Anderson and Dunlap (1986) reported that in an experiment, buyers chose vendors who enabled them to earn maximum rewards, while at the same time satisfying their performance criteria.

Therefore, in this scenario, a customer oriented salesperson does not send conflicting expectations to the purchasing professional. In such circumstances, purchasing professional's role conflict will be positively related to satisfaction with the salesperson.

With regard to the relationship between experience and satisfaction with organizational policies, a possible reason for the rejection of the hypothesis could be the operationalization of experience. The operationalization of experience may have contributed to the unexpected result found in this study. Experience has not been operationalized with any uniformity in the literature. The literature review (presented in Chapter II) revealed that Walker, Churchill, and Ford (1975) defined experience as length of time in the present job; Teas (1983) as the total number of years of selling experience; and Behrman and Perreault (1984) as a composite measure based on time with the company, time with current product line, time in territory, and time in sales.

Following the lead of Behrman and Perreault (1984), experience was operationalized as a composite of total purchasing experience, experience in the present purchasing position, and tenure in the organization. Defining experience in this manner is justified since all three facets of experience are bound to have an influence on the purchasing professional.

The use of LISREL could be another reason for this relationship. All the studies cited here, have used regression analysis. The individual testing of dependant variables using regression, however, does not accurately represent their actual occurrence. Therefore, the relationship between these variables established in this study (using LISREL), may in fact be a more accurate estimation of their relationship.

The negative relationship estimated between experience and satisfaction with organizational policies suggests that the operationalization of experience as a quantitative variable (i.e., respondents simply writing in the number of years) may not be sufficient. Rather qualitative aspects of experience should be tapped. Some respondents may have a <u>positive</u> experience and some others, a <u>negative</u> experience. For instance, the experience of a respondent who perceives a lack of avenues for promotion is likely to be different from the experience of the respondent who has been promoted frequently.

Support for such a line of thinking can be found in the findings of Churchill, Ford, and Walker (1976). These authors found that as respondents' experience increased, their job satisfaction decreased. Respondents with less than two years experience were the most satisfied.

MANAGERIAL IMPLICATIONS

The managerial implications of this research will be applicable not only to sales management but also to purchasing management. Initially, implications for salespeople and sales management will be addressed.

Implications for Salespeople and Sales Management

Implications deriving from the findings pertaining to customer orientation, influence strategy/s, and situational factors are discussed here.

Customer Orientation

The negative relationship between perceived customer orientation of the vendor salesperson and role conflict/role ambiguity suggests that salespeople should strive to be customer oriented. Thus, they should first determine the buyer's needs and then attempt to show how their product or service can satisfy these needs. Sales management should ensure that training programs help salespeople develop such a customer orientation.

However, the customer orientation of the salesperson is also likely to be strongly influenced by the vendor organization's reward/measurement system. This occurs because part of a salesperson's role expectations are communicated to him/her in the form of performance criteria. For instance, when salespeople are compensated on a (largely) commission basis, they may focus energies on the selling approach rather than the customer-oriented approach. Therefore, it is not enough to train

salespeople to be customer oriented; rather, they should be evaluated and rewarded for being customer oriented. The implication is that it is not enough for the salesperson to be customer oriented; sales management should be perceived by salespeople to be customer oriented.

Another issue that needs to be addressed deals with who the salesperson should be customer oriented toward -- the purchasing professional or the buying organization? This issue becomes important because of the findings of Chambers, Anderson, and Dunlap (1986). These authors found that when the buyer's reward system and organizational purchasing policies were incogruent, buyer's tended to make buying decisions that maximized their rewards <u>even if such actions were contradicting organizational policies</u>.

Therefore, vendor salespeople not only need to determine how the purchasing professional is rewarded, but also determine the buying organization's purchasing policies. Pilot interviews that were conducted revealed that in most organizations such policies are communicated to salespeople in the form of brochures. Salespeople for their part, need to carefully read such material and decide if the buying organization's reward system is consistent with it's purchasing policies. If these are not in agreement, a customer oriented salesperson should try to focus on being so perceived from the buying organization's perspective, and not from the purchasing professional's perspective.

Further, the modified SOCO scale used in this research can be used in such other contexts as retail sales. The construction of the scale

used in this study is oriented toward an individual salesperson rather than salespeople. Therefore, retail organizations can use this modified questionnaire to survey customers on their perceptions regarding the salesperson they interacted with. Results of such a survey can then be be used as one criterion for evaluating a salesperson. Industrial sales organizations can also use the scale in the same manner.

Influence Strategy use

No attempt has been made until now to determine buyers' perceptions of appropriateness regarding influence strategy/s use by salespeople. Nevertheless, the use of influence strategies is widespread. For instance, a survey of purchasing professionals in 1978 reported that: 98% received offers of lunches; 96% received offers of souveniers; 86% received offers of theatre and sports tickets; 46% received offers of discounts on personal purchases; 26% received offers of vacation trips; and 2% received offers of automobiles. Reported rates of acceptance ranged from 87 percent for the lunches, to 0 percent for the automobile (Page 1980).

The finding that influence strategies used are positively related to role ambiguity also has implications for salespeople and sales management. The marginally significant statistical support (α = .10) for the role ambiguity hypothesis suggests that salespeople may be well advised to refrain from using influence strategies.

Concern about the use of such influence strategies as personal inducements has resulted in purchasing professionals being provided with their own entertainment budgets (Schurr and Calder 1986). Most buying organizations have also prepared guidelines to help purchasing professionals to respond to the use of such influence strategies by vendor salespeople. Purchasing professionals in such circumstances are likely to perceive satisfaction with organizational policies. In fact, this relationship was explained in discussing the different LISREL models in Chapter V.

The positive, statistically significant (α = .10) relationship between influence strategies used and role ambiguity has interesting implications. The findings suggest that when the buying organization does not have clear cut guidelines on purchasing professionals response to influence strategies used, they may be unsure of how to respond to their use. In these circumstances, purchasing professionals are likely to perceive less satisfaction with the organization (for not formulating clear guidelines), but not with the salesperson. Possibly purchasing professionals realize that the salesperson is using influence strategies but perceive their use as part of the salesperson's job. Consequently, they may not perceive any decrease in their satisfaction with the salesperson. On the other hand, they may perceive decreased satisfaction with the organization by attributing their predicament to inadequacies in the organization's policies.

Therefore, if the buying organization does not have clear cut guidelines on how purchasing professionals should respond to offers of lunch, etc., made by vendor salespeople, there is need for purchasing management to explicitly communicate such guidelines to their staff.

On the other side of the dyad, the salesperson would be well advised to enquire and determine whether the buying organization has policies regarding buyers' accepting lunch/golf invitations, souveniers etc. If policies explicitly prohibit buyers' from accepting such offers, the salesperson should refrain from making them.

On the other hand, when there are no explicit policies, the findings of this study suggest that salespeople nevertheless, may be well advised not to use influence strategies on the buyer. The lack of a statistically significant relationship between role ambiguity and satisfaction with the salesperson notwithstanding, this implication is important because there are other consequences of role ambiguity, (for example, trust), that may be adversely affected.

Since influence strategies as operationalized in this study, focus on non-product attributes, the findings of this study seem to indicate that it may be advisable for salespeople to focus on product attributes such as delivery, price, service, etc., rather than focus on non-product attributes. Focussing on such non-product attributes may give the purchasing professional the feeling that his/her objectivity is being compromised, and may even make the buyer suspicious of the salespersons' motives. A recent study on the psychological effects of restaurant

meeting on industrial buyers (Schurr and Calder 1986) also drew the same conclusions.

Situational Factors

The negative correlation of -.1654 between the personal relationship of buyer-seller and appropriateness of influence strategies suggests hitherto unavailable insights.

Salespeople stressing their personal relationship with buyers has been found to be an important factor contributing to making a successful sales call (Gadel 1964; Woodside and Davenport 1974; and Tosi 1966). However, the findings of this study suggest that as the personal relationship between buyer and seller increases, buyer's perceptions of appropriateness of influence strategy/s used by salespeople tends to decrease. Therefore, buyers who: 1) have known the salesperson for a long time; 2) have had successful business dealings with them in the past; and 3) perceive the salesperson to be friendly and good natured in the meeting, tend to negatively evaluate a salesperson's use of influence strategies.

The positive correlation of .1145 between information requirements of the purchasing professional and appropriateness of influence strategies, suggests that when the purchasing professional lacks information on the product/service being purchased, influence strategy use by the salesperson is likely to be deemed appropriate.

The positive correlation of .1847 between perceived risk and appropriateness of influence strategies suggests that when buyers perceive risk in the purchase, their evaluation of influence strategies tends to be positive. This may happen because when buyers perceive risk in a purchase they are likely to be receptive to influence attempts that reduce their perception of such risk. For instance, salespeople can stress their organization's reputation in order to reduce the purchasing professional's perceptions of risk. In such circumstances, buyers are likely to perceive use of the company reputation influence strategy as appropriate.

Implications for Purchasing Management

Implications that can be drawn from the findings pertaining to conflict/uncertainty regarding performance indexes, and satisfaction with organizational policies are discussed here.

Conflict/Uncertainty regarding performance indexes

The positive relationship established in this study between perceptions of conflict regarding performance indexes and role conflict, and perceptions of uncertainty regarding performance indexes and role ambiguity has implications for purchasing management. The findings of this study indicate that when researching conflict and ambiguity it may better to break down the job of the purchasing professional into specific tasks (or performance indexes) and then isolate those tasks (or per-

formance indexes) regarding which the purchasing professional perceives uncertainty and/or conflict.

Though on the surface it may appear that perceptions of conflict/uncertainty regarding performance indexes are parts of role conflict/ambiguity, this is not the case. Role conflict and role ambiguity pertain to <u>others'</u> expectations. Thus, an individual may perceive no ambiguity or conflict with respect to others' expectations of the tasks he/she should perform.

Yet, the same individual may perceive uncertainty as to the best way to perform these tasks. Or, the individual may face the necessity to perform several tasks at the same time. In a similar vein Jackson and Schuler (1985) state that:

> "Just as ambiguity and conflict have increased our understanding of roles in organizations, so they may do likewise for other constructs such as tasks and rewards. For example, while an individual may be receiving a clear understanding of what others expect of him/her, this individual may be unclear as to the best way to perform the tasks (i.e., faces task ambiguity) in his/her job (Shalit 1977). Or the individual may face the necessity to perform several tasks at the same time (i.e., face task conflict)" (p. 47).

The identification of those tasks regarding which conflict or uncertainty is perceived by purchasing professionals then becomes possible. Once such tasks are identified, purchasing management can take steps to enable purchasing professionals resolve the task ambiguity or task conflict they perceive. For instance, it is possible that purchasing professionals' experience is negatively related to perceptions of uncertainty/conflict regarding performance indexes. Purchasing management

can then encourage experienced purchasing professionals to counsel their less experienced colleagues and reward them for doing so.

Further, breaking down the total job into specific tasks (which in turn constitute the bases for evaluation), may enable identification of those tasks that are not congruent with organizational purchasing policies. For instance, the organization's policy could be to buy material of the highest quality, whereas one task of the buyer may be 'paying lowest possible price'. Since, buyers are evaluated on how they perform on this criterion, there is the potential for this task being perceived as being contradictory to the organization's policies.

Given the findings of Chambers, Anderson, and Dunlap (1986), buyers can be expected to prefer paying the lowest price than buying material of the highest quality. Therefore, focussing on tasks may enable a buying organization to determine sources of task-policy incongruence.

Satisfaction with Organizational Policies

The finding of this study that a negative relationship exists between purchasing professionals' perceptions of role conflict and role ambiguity on the one hand, and their satisfaction with organizational policies has implications for purchasing management.

With regard to role ambiguity the findings of this study suggest that management should communicate the organization's policies to purchasing professionals. For instance, the purchasing professional should

be made to feel that management cares for his/her opinions. The role ambiguity likely to be perceived by purchasing professionals when there are no policies to guide their responses to influence strategy use by salespeople, also underscores the need for clear guidelines covering all aspects of the purchasing job. This is especially important because the purchasing department is a staff unit which is generally viewed as more of a hinderance than a help.

With regard to role conflict and satisfaction with organizational policies, the findings suggest that purchasing management should help the purchasing professional cope with role conflict. The boundary spanning nature of the purchasing professionals job makes the elimination of role conflict very difficult. However, training programs can sensitize purchasing professionals to the conflicts inherent in the purchasing function.

The finding of a negative relationship between experience and satisfaction with organizational policies seems to indicate that experienced purchasing professionals perceive their organizations as not providing the support necessary to perform a difficult task. Indeed, several respondents wrote comments (on the questionnaire) expressing frustration that they were criticized more often than they were praised.

CONTRIBUTIONS TO MARKETING THOUGHT

The contributions to marketing thought deriving from this study are highlighted here. Both conceptual and methodological contributions are discussed.

Researching Public Purchasing Professionals

Research in marketing has typically focused on the role perceptions of salespeople because of an interest in improving their selling effectiveness. Yet the other side of the buyer-seller dyad, the purchasing professional, has not been the focus of much research.

One reason for such a lack of interest in the purchasing professional may be due to the conventional wisdom that the 'buying center' rather than the purchasing professional makes the buying decisions. However, in public purchasing it is the purchasing professional who is the sole decision maker with respect to a purchase. Therefore future research on purchasing related issues should consider the use of public purchasing professionals. The dollar volume of purchases made by this group and the lack of academic research using this group as a sample, underscores the need to focus on public purchasing. Therefore one contribution of this study to extant theory in role perceptions derives from the use of public purchasing professionals.

Customer Orientation of Vendor Salesperson

Researching the relationship between perceived customer orientation of the salesperson and role stress variables, and using a modified version of the 'SOCO' scale (Saxe and Weitz 1982) to measure the perceived customer orientation of the vendor salesperson, contribute to marketing thought. So far, no study has sought to establish a relationship between the customer orientation of the vendor salesperson and perceptions of role stress for the purchasing professional. The support established for the hypotheses pertaining to these variables can be included in literature on salesforce management and students interested in careers in sales, alerted to the usefulness of being perceived as being customer oriented.

Influence Strategy/s

Another contribution of this study pertains to the influence strategy variable. In spite of widespread use of such influence strategies no attempt has been made, prior to this study, to research these variables. The finding of a marginally positive relationship between the use of influence strategies and role ambiguity can be included in extant literature on personal selling. Students interested in careers in sales can be exposed to the implications (identified earlier) of using influence strategies in selling to purchasing professionals.

Conflict/Uncertainty regarding performance indexes

Another contribution of this study is the focus on perceptions of uncertainty/conflict regarding performance indexes. There have been over two hundred studies on role conflict and role ambiguity. These concepts (conflict and ambiguity) as they pertain to roles, have increased our understanding of organizational behavior. Nonetheless, the perceptions of uncertainty/conflict regarding performance indexes were included in this study because, there is a clear need for research on other aspects of conflict and ambiguity. Such a course of action is supported by Jackson and Schuler (1985) who state that: "Just as ambiguity and conflict have increased our understanding of roles in organizations, so they may do likewise for other constructs such as tasks and rewards" (p. 47).

These variables raise Task Conflict and Task Ambiguity issues. More importantly, they enable further research into the organizational factors that can affect a person's job conflict and job ambiguity.

SUGGESTIONS FOR FUTURE RESEARCH

This study opens up several avenues for future research; these avenues are identified now.

Personalized Cover Letters

The first suggestion for future mail surveys involving purchasing professionals pertains to the use of the personalized cover letter. Though, in the absence of a control group, it is not possible to make this suggestion with much authority, researchers should give serious thought to using personalized cover letters.

In this research, response rates in the 50's were achieved both at the pretest stage, and in the final collection stage. In the pretest stage, the personalized cover letter was printed on the VPI & SU stationary, and in the final data collection stage it was printed on Harvard University stationary. The former letter was signed by this researcher and the latter by the research advisor. Yet, both mailings had approximately equal response rates. Phone calls to a random sample (N=40) respondents revealed that a key factor which prompted thier response was the personalized letter. The prestige of using university stationary, phone interviewees claimed, prevented them from forgetting about the survey.

Since, mail surveys are often criticized for their low response rates, it may very well be worth using personalized letters in future research involving this group.

Influence Strategy/s

The second suggestion pertains to the use of the influence strategy variable in future research. Recently, Schurr and Calder (1986) studied the psychological effects of restaurant meetings of industrial buyers and found that as the restaurant got more fancy, buyers perceived their objectivity was being compromised. The findings of this study with respect to this variable, indicate that research on other dimensions of influence strategy is needed. Salespeople inviting purchasing professionals to lunch or dinner is one of the several influence strategies that can be used by salespeople. However, there are other types of influence strategies that need to be studied. For instance, seller emphasis on company reputation is often suggested in the literature. Yet, if the findings of this study are any indication, purchasing professionals perceive role stress due to the use of this and other influence strategies.

The widespread use of influence strategies seems to indicate their acceptance as a necessary part of business. Yet, the findings of this study, and the work of Schurr and Calder (1986), raise questions regarding their effectiveness in selling. Schurr and Calder (1986) concluded that when the restaurant got more fancy, the buyer tended to evaluate the supplier negatively and suspect his/her motives. Experimental studies that manipulate levels of buyer-seller similarity, or seller emphasizing company reputation, could provide more insights into the effectiveness (or ineffectiveness) of influence strategies in business settings.

Conflict/Uncertainty regarding performance indexes

The third suggestion deals with the perceptions of conflict/ambiguity regarding performance indexes variables. Clearly, other dimensions of conflict and ambiguity need to be researched. The positive relationship between these variables and role conflict and role ambiguity suggests that, for example, job conflict may be a combination (additive or multiplicative) of role conflict, task conflict and reward conflict. Based on the suggestions of Schuler and Jackson (1985), and the findings of this study, future research should look at other dimensions of conflict and ambiguity.

For instance, the relationship between task conflict (or conflict regading performance indexes) and task ambiguity (or ambiguity regarding performance indexes) and satisfaction with the salesperson/organizational policies can be studied. Also, the relationship between experience and task conflict/ambiguity can be studied.

Reward Conflict and Reward Ambiguity

Reward conflict and reward ambiguity can also be researched. For instance, objective characteristic of rewards can be identified (e.g., amount, specificity, frequency of occurrence) and conflict or ambiguity perceived with regard to such rewards linked to other variables in a causal chain.

The implications of Task and Reward Variables extend beyond researching purchasing professionals. Sales management research has

considered role conflict and role ambiguity but has not considered task conflict and task ambiguity of salespeople. Yet salespeople also have to perform tasks that conflict with one another.

For instance, salespeople have to maximize number of calls, frequency of calls, improve the quality of calls, and also maintain proper records of calls. Clearly, these tasks conflict with each other. Considering role conflict and role ambiguity alone may not be appropriate here since the salesperson can be clear as to <u>what</u> he/she should do, (i.e., perceive no role conflict or role ambiguity), but be unclear as to <u>how</u> she/he should go about doing it (perceive Task Ambiguity and/or Task Conflict). As in the case of purchasing professionals, several variables (already researched as antecedents and consequences of role conflict and role ambiguity) can be researched for task conflict, task ambiguity, reward conflict, and reward ambiguity.

For instance, sales contests are frequently suggested in the literature as an effective short term means to increase sales. Yet, the rewards salespeople may achieve from such a short term strategy may conflict with rewards from a long term strategy such as customer oriented selling. In fact, the perceived conflict between rewards that can be achieved in such circumstances may help explain why sales contests are not as popular as they are made out to be.

LIMITATIONS OF THE STUDY

Two kinds of limitations are addressed here; the first kind are methodological and the second kind are philosophical.

Methodological Limitations

The major methodological limitations of the study are: the P-P (perception- perception) correlation problem in research studies; the specification of the model; and problems associated with category scaling. These are discussed now.

Perception-Perception Correlation

This problem can occur when the researcher obtains perceptual data on the constructs of interest from each respondent. The contention is that in the absence of corroborative or independent measures, the proportion of variance accounted for by methods will increase. Since this study obtained perceptual data from each respondent, it may suffer from the Perception-Perception correlation problem.

Specification of the Model

Though the model was specified on the basis of relevant theory and previous empirical work, the statistical compatibility of the results with the hypothesized model cannot be overestimated. As is common with research in this domain, a number of other models can be statistically consistent with the observed data. Any conclusions drawn are there-

fore, at best, tentative. Further, given the correlational nature of this study no inferences of causality were made.

Critics of such correlational studies may argue that any two variables can be correlated. However, without antecedent knowledge of the causation or the absence of causation among a group of variables, the calculation of correlation coefficients, total or partial, will not advance the state of knowledge even minimally.

Problems associated with Category Scaling

Though category scaling is popular in research in this domain, there are three major problems associated with the use of such scaling techniques: 1) loss of information due to limited resolution of the categories; 2) category scales may represent, at best, ordinal level of measurement; 3) the researcher can inadvertently affect responses by (artificially) either limiting judgements or by providing too wide a range. Recently, Lodge (1984, p. 6) stated that "we cannot know whether our failure to find a closer correspondence between attitude and behavior results from weaknesses in our theoretical formulations or deficiencies in our measurements". A consequence of these criticisms is the suggestion that the use of statistical techniques which assume interval data is inappropriate.

The use of LISREL deflects some of these criticisms. The Measurement Model used to evaluate unidimensionality and validity, requires the use of multiple indicator constructs. One reason behind such a require-

ment is that multiple measures which are unidimensional, can tap a construct more completely than constructs without multiple measures. Further, PACKAGE (1980) is designed to remove measurement error from scaled responses. The implication here is that the only remaining source of error is random.

Limitations can also result from subtle artifacts due to sampling bias, at the organizational level or at the individual level. Methods variance, and errors of measurement are other potential sources of limitations. Such limitations were minimized by a using a random multi-organizational sample, careful development and evaluation of multiple item composite measures, and simultaneous testing of constructs (made possible through the use of LISREL).

Philosophical Limitations

There are two major philosophical issues that need to be mentioned. These are: assumptions made in using self report questionnaires, and issues in testing psychological constructs. These are discussed now.

Assumptions in using self report questionnaires

Several assumptions were (implicitly) made in using self report questionnaires. First, it was assumed that respondents had veridical access to their thoughts. Second, it was assumed that they were able to accurately and truthfully report such access. Unfortunately, it was not possible to verify whether these assumptions were satisfied.

Issues in testing psychological constructs

One major problem in testing psychological constructs is that one cannot prove, with any degree of certainty, their existence. Further, the 'true' meaning or implication of being satisfied with the salesperson or with the organization, is not known. Thus, though behavioral intention measures can be used to tap behavioral intentions, one cannot be sure if they translate to behavior.

Therefore, from a philosophical perspective it can be argued that variables whose existence could not be proved, were tested with consequent variables, the true meanings of which are unclear.

APPENDIX A

'PACKAGE' Output

1-19 are indicators of Perceptions of Uncertainty regarding performance indexes (PURPI)
20-34 are indicators of Satisfaction with the Salesperson (SWS)
35-53 are indicators of Perceptions of Conflict regarding performance indexes (PCRPI)
54-66 are indicators of Satisfaction with Organizational Policies (SWOP)
77-79,85-87, 89,90 are indicators of Influence Strategy/s used (ISS)
96-99,100 are indicators of Role Ambiguity (RAS)
101-111 are indicators of Role Conflict (RCS)
112-132 are indicators of Customer Orientation of Vendor Salesperson (COVS)
133-135 are indicators of Experience (EXP)
80-84,88,91-95,98 comprise the JUNK cluster (items that were dropped)

NB: Interpretation of PACKAGE output was discussed in Chapter 4 of text.

FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IN THE DIAGONAL

	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
1	18	31	32	19	21	27	29	27	10	7	33	21	23	25	26	9	27	26	22	1	-3	-6	-7	-7	-10	-5	-2	-6	3	-1
2	31	16	20	27	25	11	20	24	14	15	28	22	21	25	18	23	22	37	6	2	-2	-1	-1	-2	-3	-1	-8	-2	4	-7
3	32	20	27	44	27	31	30	28	36	32	25	34	26	22	19	18	24	32	19	-3	-4	-4	0	-8	-1	-3	-15	-5	-4	-9
4	19	27	44	30	32	24	33	36	30	32	31	30	26	25	15	26	27	35	39	1	5	8	4	-7	10	7	-6	2	-2	5
5	21	25	27	32	29	21	24	29	26	28	31	32	42	47	23	19	39	27	20	-1	-2	-4	1	-6	-1	0	-1	-5	-6	-4
6	27	11	31	24	21	24	51	42	22	14	25	16	27	35	24	22	28	29	23	6	-1	1	-10	-14	-4	-8	-8	-6	-11	-14
7	29	20	30	33	24	51	33	49	27	26	29	18	25	39	27	31	28	36	28	3	4	1	-4	-3	-1	0	0	-5	7	-6
8	27	24	28	36	29	42	49	36	26	20	37	31	33	42	26	27	35	36	23	-2	5	0	0	-6	-3	-8	-8	-5	2	-3
9	10	14	36	30	26	22	27	26	28	45	25	36	32	34	24	34	32	27	30	-5	-2	-5	3	-10	1	-2	-11	-6	-10	-9
10	7	15	32	32	28	14	26	20	45	25	35	41	35	27	20	33	26	21	26	2	-9	-5	-1	-8	-3	1	-12	-12	-8	-14
11	33	28	25	31	31	25	29	37	25	35	34	36	38	44	25	29	41	23	22	0	-3	-2	-2	1	6	6	-5	0	-1	-2
12	21	22	34	30	32	16	18	31	36	41	36	31	46	36	24	31	31	22	30	-4	-6	-4	-5	-7	-7	-7	-6	-4	-3	-5
13	23	21	26	26	42	27	25	33	32	35	38	46	40	57	31	37	41	27	33	4	3	-6	-4	-11	-6	-3	-5	-11	-2	-11
14	25	25	22	25	47	35	39	42	34	27	44	36	57	44	37	36	46	26	25	9	2	1	1	-7	-3	1	-3	-5	2	-2
15	26	18	19	15	23	24	27	26	24	20	25	24	31	37	23	58	32	22	14	-7	-3	-6	-8	-5	-3	-2	-4	-9	-5	-9
16	9	23	18	26	19	22	31	27	34	33	29	31	37	36	58	29	31	32	23	3	2	-4	-5	-7	-4	-4	-4	-11	-9	-15
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510	-17	-24	-21	3	-18	-18	-19	-20	-28	-17	-25	-14	-29	-22	-24	-23	-11	-27	-27	-27	-32	-23	-27	45	11	17	23	28	37	17

	92	93	94	95	98	501	502	503	504	505	506	507	508	509	510
1	9	6	25	23	5	43	-7	38	-19	9	27	20	-8	-15	35
2	8	-6	6	12	8	40	-4	24	-6	9	14	17	-2	-13	16
3	2	10	15	28	6	52	-6	36	-13	8	25	17	-5	-14	33
4	1	2	11	24	11	55	6	44	-9	-1	25	15	1	-2	15
5	6	-3	9	20	11	53	-4	36	-9	5	25	19	-8	1	17
6	-1	11	23	18	11	49	-8	46	-38	5	43	29	-3	-10	27
7	4	2	22	15	5	57	1	41	-25	2	32	21	0	-15	18
8	4	-9	14	13	7	60	-3	49	-16	-2	28	18	-1	-9	0
9	1	6	12	11	12	53	-6	36	-4	4	20	8	-8	-3	17
10	-3	7	11	10	3	50	-8	32	-7	5	23	13	-8	-3	26
11	7	0	13	15	8	58	-2	48	-14	8	25	15	-7	-8	20
12	2	-2	8	14	8	56	-7	39	-9	9	20	18	-7	-9	16
13	4	-3	6	14	8	63	-7	46	-7	6	16	8	-7	-2	5
14	10	2	15	17	7	66	0	50	-15	7	23	18	-3	-5	18
15	15	0	14	18	9	48	-9	33	-18	16	21	21	-12	-4	36
16	10	-4	11	10	6	54	-8	41	-7	12	20	16	-8	-12	23
17	1	2	15	14	5	60	-1	50	-17	3	22	16	-6	-6	11
18	4	-4	21	13	15	54	-6	33	-8	2	18	11	0	-16	24
19	-5	-2	16	20	6	45	0	39	-10	-4	22	14	-2	-13	11
20	-3	-2	-11	0	-10	1	61	-4	8	-20	-8	-1	47	13	-25
21	-1	-1	-12	-8	0	0	64	0	14	-19	-7	-10	46	13	-25
22	-3	4	-14	-2	-5	-4	61	-5	9	-20	-7	-8	44	15	-12
23	-7	4	-10	4	-3	-5	64	-6	12	-16	-8	-12	47	15	-22
24	4	-6	-10	-9	-5	-13	56	-12	7	-17	-13	-16	41	14	-14
25	1	-7	-8	-3	0	-4	73	-8	6	-19	-8	-16	52	21	-12
26	-1	-3	-11	-3	-1	-4	74	-8	11	-20	-13	-16	49	21	-13
27	-1	-4	-16	-4	-5	-11	60	-5	17	-22	-14	-16	51	5	-22
28	1	-7	-15	3	-11	-10	59	-7	13	-24	-13	-11	47	0	-19
29	0	0	-9	-8	-6	-5	57	-4	16	-14	-15	-12	49	1	-18
30	0	1	-17	3	-18	-12	62	-9	15	-28	-21	-24	49	12	-31
31	-6	5	-13	3	-11	-8	72	-11	10	-31	-13	-19	59	7	-20
32	6	5	-18	3	-15	-2	67	-11	16	-13	-17	-13	55	10	-13
33	1	-3	-9	-2	-6	0	61	-4	3	-21	-7	-6	43	6	-22
34	-4	3	-10	-5	-13	2	71	-1	15	-25	-9	-9	63	14	-23
35	1	-6	20	14	18	44	-6	54	-34	2	23	37	-15	-16	20
36	-1	-9	13	9	12	33	-6	44	-23	7	22	28	-4	-16	24
37	12	5	9	12	8	44	-4	52	-10	11	17	19	-3	-17	28
38	-3	-4	12	15	14	48	3	58	-10	1	17	23	-2	-6	11
39	6	-1	8	14	11	39	-4	59	-15	3	16	21	-9	-9	28
40	2	4	8	5	1	35	-2	52	-24	9	17	22	-4	-7	11
41	8	-9	11	12	9	45	-8	62	-28	2	29	22	-10	-10	20
42	-7	-10	9	15	9	46	-10	60	-13	-9	21	15	-7	-11	0
43	-1	0	9	15	9	36	-6	50	2	4	11	11	-7	-9	21
44	-2	1	16	11	4	44	-13	57	-11	9	21	26	-10	-11	24
45	1	-2	15	7	8	41	-13	59	-21	0	22	11	-11	-13	13
46	-10	0	16	10	1	36	-13	56	-9	11	14	16	-14	-12	6
47	-9	5	11	12	10	49	-8	58	-13	5	13	14	-10	2	8
48	2	3	10	17	5	47	3	62	-15	0	19	19	2	-8	17
49	0	3	12	11	14	37	-10	51	-24	15	17	28	-13	-12	30
50	6	-1	6	11	6	37	-5	53	-2	15	18	21	-11	-16	24
51	-9	-5	7	9	0	42	3	59	-6	8	10	10	-7	-2	8
52	-5	-6	14	18	7	48	2	60	-12	7	22	17	0	-8	14
53	-6	0	3	10	2	31	-6	38	4	-1	6	8	-3	-15	5
54	-1	-9	-23	-10	-14	-13	17	-15	74	-3	-39	-30	9	8	-35
55	4	-1	-23	-12	-17	-24	8	-24	58	-4	-42	-37	6	13	-23
56	5	-6	-28	-15	-22	-23	10	-20	70	2	-47	-37	8	9	-25
57	4	-6	-25	-11	-19	-15	15	-17	79	1	-43	-31	11	2	-27

58	3	-3	-25	-17	-21	-24	11	-25	65	3	-42	-31	7	8	-24
59	12	-1	-24	-13	-23	-22	4	-24	56	5	-37	-40	5	4	-25
60	3	-5	-25	-8	-16	-24	13	-17	72	-3	-40	-35	9	-3	-32
61	5	-1	-26	-8	-16	-8	13	-11	68	7	-31	-23	10	2	-14
62	2	-5	-23	-4	-15	-8	14	-13	71	8	-31	-29	12	5	-21
63	7	-11	-29	-6	-15	-12	15	-16	80	8	-39	-27	10	-1	-28
64	3	0	-28	-14	-23	-14	11	-18	69	9	-41	-39	10	14	-28
65	8	-9	-32	-9	-18	-16	19	-17	76	2	-47	-34	18	-1	-28
66	3	-8	-23	-9	-26	-20	10	-13	68	4	-48	-39	9	1	-25
77	7	2	2	13	-4	13	-20	13	-2	62	10	11	-22	-8	23
78	7	9	6	13	-6	7	-29	10	-2	63	11	20	-30	6	40
79	11	4	3	17	0	1	-27	1	-3	58	17	15	-21	-8	47
85	2	6	1	3	6	10	-4	4	12	38	8	15	-15	2	28
86	6	3	2	12	-1	4	-18	3	10	64	12	9	-24	-7	31
87	2	2	6	12	-2	5	-19	7	3	73	14	7	-22	1	23
89	12	3	7	3	-6	1	-21	3	-2	64	7	7	-21	0	32
90	7	-4	5	8	-6	7	-12	2	5	49	3	3	-16	-2	26
96	8	-1	34	33	25	24	-11	15	-30	5	61	41	-12	-7	40
97	4	4	20	35	22	32	-2	22	-38	14	71	50	-7	-19	34
99	-2	-6	21	20	16	26	-9	20	-45	8	50	42	-13	-2	27
100	0	0	25	28	25	33	-24	27	-39	18	80	47	-26	-20	44
101	11	-9	-6	9	5	15	-5	18	-21	6	35	48	-10	-3	9
102	1	-6	6	17	6	18	-4	19	-24	11	43	51	-13	-10	5
103	9	-3	8	20	9	15	-9	15	-17	9	39	46	-16	-5	24
104	2	-4	11	7	13	11	-11	12	-21	0	22	26	-15	-10	7
105	3	-3	11	9	17	8	-17	19	-24	12	31	63	-21	-13	13
106	7	6	7	12	3	15	-14	20	-18	9	31	49	-19	-13	16
107	-1	3	21	18	19	21	-17	14	-28	12	41	56	-17	-11	19
108	10	-9	10	17	14	22	-5	21	-22	10	33	64	-9	-16	28
109	-1	-4	18	20	14	22	-8	26	-31	12	40	73	-15	-18	32
110	-5	-5	8	18	22	15	-9	23	-38	16	40	67	-19	-6	19
111	-6	2	29	21	24	25	-19	27	-46	13	61	63	-25	-13	31
112	-1	-7	-4	-4	-4	-9	42	-5	5	-32	-17	-20	52	-4	-11
113	-3	-2	-8	-3	-16	-8	50	-8	11	-12	-10	-13	65	5	-17
114	-9	5	-12	-4	-10	-11	57	-17	12	-22	-16	-17	70	14	-24
115	-3	10	-5	-11	-7	-7	55	-10	2	-47	-16	-29	69	5	-21
116	15	-5	-9	0	-7	-5	13	-4	7	22	-8	-2	23	-11	3
117	-5	2	-9	-4	-5	-7	38	-6	11	-22	-21	-17	50	0	-18
118	2	-2	-8	-7	-14	-6	51	-11	12	-9	-8	-11	62	10	-18
119	0	3	-7	-2	-10	-8	60	-12	10	-36	-17	-24	81	1	-19
120	3	1	-14	-9	-15	-16	59	-16	11	-17	-17	-23	71	11	-20
121	4	-1	-12	-9	-17	-14	67	-14	10	-22	-15	-21	85	9	-28
122	1	3	-8	-1	-9	-4	59	-9	6	-33	-13	-26	75	3	-17
123	4	0	-19	-8	-20	-4	62	-9	14	-17	-15	-16	75	11	-25
124	-9	2	-3	-4	-4	-4	45	-8	10	-25	-23	-28	64	6	-14
125	-5	3	-10	-6	-12	-10	58	-17	15	-37	-21	-30	78	8	-29
126	3	3	-12	-7	-13	-2	56	-6	10	-22	-13	-17	73	-6	-22
127	-6	7	-7	-2	-7	-2	34	-6	10	-39	-12	-22	50	3	-24
128	0	-2	-9	-9	-15	-6	56	-11	7	-28	-15	-23	76	0	-23
129	2	9	-3	-6	-5	1	47	-3	5	-30	-13	-23	68	-3	-11
130	2	2	-16	-5	-15	-4	67	-1	10	-22	-19	-19	76	0	-27
131	-5	5	-12	-2	-12	3	51	-5	5	-39	-8	-18	70	-1	-27
132	1	-4	-13	-9	-17	-5	56	-5	10	-20	-18	-16	71	8	-27
133	-9	1	-13	-17	-8	-18	10	-20	7	-6	-24	-18	3	66	-32
134	-7	-4	-8	-2	-10	-8	18	-11	4	-1	-8	-17	5	89	-23
135	-5	-4	-13	0	-14	-10	14	-13	5	-2	-11	-12	4	83	-27
80	3	10	17	6	6	5	-30	5	-3	27	4	-3	-18	-5	45
81	5	-4	10	9	1	1	-4	-1	-2	19	8	5	-6	-15	11
82	11	5	-1	6	-2	4	16	15	6	24	-4	7	2	-9	17
83	35	-2	-4	0	-5	-3	-3	3	-9	7	5	-1	-3	0	23

84	2	29	1	4	1	6	0	10	-9	5	7	5	3	3	28
88	3	2	9	5	8	0	-24	6	4	20	5	5	-20	-12	37
91	6	6	1	-9	8	4	-3	-7	-8	6	7	1	-2	-7	17
92	4	-1	-11	5	-6	8	-1	-1	6	12	4	5	-1	-9	21
93	-1	3	-3	3	-5	2	-1	-3	-7	5	-1	-5	2	-3	16
94	-11	-3	6	12	30	26	-19	20	-37	6	38	20	-14	-14	24
95	5	3	12	3	4	31	-3	22	-15	17	44	28	-8	-8	17
98	-6	-5	30	4	3	15	-11	14	-27	-4	34	24	-17	-14	16
501	8	2	26	31	15	100	-8	75	-25	10	44	31	-9	-15	36
502	-1	-1	-19	-3	-11	-8	100	-10	18	-32	-18	-20	77	17	-30
503	-1	-3	20	22	14	75	-10	100	-25	9	32	35	-13	-19	30
504	6	-7	-37	-15	-27	-25	18	-25	100	4	-58	-48	14	7	-37
505	12	5	6	17	-4	10	-32	9	4	100	17	18	-36	-4	54
506	4	-1	38	44	34	44	-18	32	-58	17	100	69	-22	-18	55
507	5	-5	20	28	24	31	-20	35	-48	18	69	100	-30	-20	34
508	-1	2	-14	-8	-17	-9	77	-13	14	-36	-22	-30	100	5	-30
509	-9	-3	-14	-8	-14	-15	17	-19	7	-4	-18	-20	5	100	-34
510	21	16	24	17	16	36	-30	30	-37	54	55	34	-30	-34	100

SIMILIARITY 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	0.182	0.000	0.000	0.000	0.000	0.000	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	0.835	0.157	0.000	0.000	0.000	0.000	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	0.899	0.872	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	0.000
4	0.835	0.821	0.890	0.303	0.000	0.000	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	0.883	0.862	0.901	0.892	0.285	0.000	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	0.904	0.785	0.865	0.812	0.845	0.239	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	0.901	0.843	0.892	0.885	0.878	0.931	0.328	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.893	0.869	0.906	0.924	0.925	0.896	0.948	0.356	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.811	0.809	0.886	0.862	0.899	0.772	0.829	0.864	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.820	0.829	0.885	0.843	0.876	0.776	0.809	0.832	0.920	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.898	0.880	0.908	0.888	0.945	0.867	0.901	0.927	0.887	0.862	0.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.867	0.871	0.916	0.888	0.944	0.817	0.863	0.895	0.923	0.906	0.936	0.310	0.000	0.000	0.000	0.000	0.000	0.000
13	0.831	0.816	0.858	0.864	0.934	0.801	0.850	0.900	0.906	0.869	0.932	0.932	0.396	0.000	0.000	0.000	0.000	0.000
14	0.878	0.865	0.873	0.881	0.942	0.874	0.918	0.938	0.870	0.855	0.949	0.920	0.941	0.439	0.000	0.000	0.000	0.000
15	0.847	0.823	0.818	0.737	0.831	0.827	0.826	0.800	0.805	0.829	0.868	0.842	0.836	0.861	0.228	0.000	0.000	0.000
16	0.845	0.842	0.852	0.814	0.865	0.805	0.844	0.855	0.878	0.883	0.896	0.896	0.894	0.893	0.896	0.291	0.000	0.000
17	0.899	0.866	0.909	0.901	0.938	0.882	0.917	0.945	0.896	0.867	0.956	0.936	0.940	0.959	0.853	0.891	0.363	0.000
18	0.878	0.879	0.916	0.897	0.888	0.834	0.903	0.931	0.878	0.850	0.900	0.903	0.871	0.895	0.806	0.864	0.916	0.292
19	0.837	0.774	0.872	0.892	0.869	0.817	0.874	0.896	0.851	0.832	0.861	0.881	0.865	0.870	0.755	0.820	0.880	0.849
20	-0.251	-0.146	-0.171	0.053	-0.157	-0.160	-0.041	-0.055	-0.201	-0.220	-0.145	-0.210	-0.150	-0.059	-0.310	-0.218	-0.109	-0.112
21	-0.276	-0.170	-0.203	0.056	-0.173	-0.211	-0.070	-0.072	-0.202	-0.240	-0.161	-0.207	-0.153	-0.077	-0.344	-0.226	-0.121	-0.112
22	-0.309	-0.196	-0.220	0.020	-0.209	-0.216	-0.103	-0.111	-0.243	-0.265	-0.186	-0.256	-0.209	-0.122	-0.356	-0.259	-0.156	-0.155
23	-0.324	-0.212	-0.233	-0.000	-0.228	-0.248	-0.131	-0.140	-0.250	-0.261	-0.216	-0.263	-0.215	-0.138	-0.387	-0.281	-0.181	-0.175
24	-0.423	-0.315	-0.374	-0.148	-0.344	-0.355	-0.246	-0.264	-0.382	-0.400	-0.312	-0.393	-0.342	-0.254	-0.458	-0.394	-0.299	-0.300
25	-0.310	-0.200	-0.232	-0.007	-0.210	-0.230	-0.117	-0.133	-0.252	-0.270	-0.180	-0.262	-0.216	-0.125	-0.349	-0.273	-0.166	-0.169
26	-0.335	-0.219	-0.249	-0.016	-0.226	-0.264	-0.146	-0.156	-0.256	-0.279	-0.196	-0.272	-0.222	-0.143	-0.366	-0.282	-0.181	-0.193
27	-0.392	-0.286	-0.320	-0.089	-0.303	-0.325	-0.208	-0.205	-0.328	-0.366	-0.271	-0.333	-0.279	-0.204	-0.444	-0.344	-0.250	-0.245
28	-0.367	-0.266	-0.288	-0.075	-0.289	-0.309	-0.192	-0.193	-0.317	-0.348	-0.262	-0.322	-0.278	-0.205	-0.438	-0.342	-0.234	-0.224
29	-0.330	-0.206	-0.262	-0.032	-0.250	-0.285	-0.154	-0.152	-0.271	-0.295	-0.223	-0.271	-0.225	-0.153	-0.395	-0.281	-0.197	-0.170
30	-0.415	-0.316	-0.333	-0.105	-0.321	-0.355	-0.236	-0.228	-0.337	-0.383	-0.305	-0.352	-0.295	-0.238	-0.488	-0.389	-0.270	-0.264
31	-0.355	-0.266	-0.265	-0.039	-0.275	-0.276	-0.159	-0.171	-0.284	-0.320	-0.254	-0.298	-0.259	-0.187	-0.426	-0.333	-0.214	-0.203
32	-0.342	-0.211	-0.245	-0.025	-0.250	-0.280	-0.149	-0.162	-0.260	-0.275	-0.233	-0.272	-0.231	-0.153	-0.396	-0.282	-0.200	-0.179
33	-0.250	-0.160	-0.181	0.057	-0.165	-0.158	-0.036	-0.056	-0.200	-0.207	-0.150	-0.203	-0.153	-0.065	-0.307	-0.208	-0.107	-0.115
34	-0.262	-0.146	-0.171	0.074	-0.167	-0.184	-0.053	-0.057	-0.185	-0.201	-0.151	-0.191	-0.148	-0.070	-0.327	-0.209	-0.114	-0.093
35	0.907	0.798	0.848	0.792	0.851	0.917	0.875	0.873	0.746	0.752	0.879	0.835	0.799	0.847	0.819	0.787	0.882	0.803
36	0.899	0.809	0.847	0.796	0.815	0.887	0.865	0.850	0.754	0.775	0.868	0.828	0.776	0.839	0.842	0.836	0.859	0.823
37	0.890	0.859	0.899	0.886	0.875	0.841	0.865	0.892	0.868	0.858	0.913	0.910	0.878	0.886	0.818	0.876	0.913	0.879
38	0.849	0.814	0.879	0.921	0.888	0.826	0.867	0.915	0.841	0.818	0.897	0.892	0.867	0.877	0.751	0.830	0.908	0.872
39	0.883	0.788	0.837	0.840	0.886	0.842	0.856	0.887	0.807	0.792	0.907	0.876	0.865	0.886	0.786	0.818	0.905	0.827
40	0.864	0.747	0.824	0.813	0.839	0.902	0.891	0.887	0.760	0.760	0.872	0.820	0.817	0.874	0.787	0.803	0.886	0.804
41	0.896	0.785	0.844	0.821	0.860	0.926	0.908	0.909	0.787	0.789	0.895	0.842	0.836	0.883	0.833	0.833	0.896	0.830
42	0.864	0.788	0.853	0.874	0.875	0.864	0.884	0.928	0.823	0.797	0.892	0.866	0.874	0.877	0.764	0.826	0.912	0.874
43	0.793	0.778	0.848	0.828	0.837	0.731	0.773	0.836	0.855	0.841	0.845	0.871	0.838	0.817	0.731	0.821	0.850	0.836
44	0.881	0.825	0.883	0.823	0.865	0.842	0.854	0.868	0.866	0.868	0.900	0.893	0.860	0.865	0.849	0.887	0.888	0.853
45	0.875	0.781	0.829	0.786	0.844	0.869	0.849	0.875	0.807	0.798	0.901	0.853	0.859	0.878	0.847	0.856	0.909	0.816
46	0.841	0.736	0.819	0.783	0.842	0.810	0.795	0.850	0.818	0.780	0.861	0.855	0.859	0.836	0.775	0.814	0.871	0.802
47	0.860	0.783	0.837	0.836	0.904	0.828	0.840	0.888	0.843	0.823	0.915	0.897	0.918	0.917	0.813	0.862	0.928	0.830
48	0.847	0.801	0.822	0.845	0.870	0.854	0.877	0.902	0.801	0.784	0.917	0.851	0.887	0.925	0.810	0.849	0.928	0.833
49	0.830	0.769	0.772	0.697	0.773	0.839	0.807	0.780	0.739	0.771	0.838	0.803	0.780	0.824	0.885	0.872	0.829	0.745
50	0.807	0.785	0.788	0.759	0.789	0.749	0.777	0.790	0.806	0.812	0.844	0.837	0.812	0.827	0.862	0.897	0.836	0.794
51	0.819	0.800	0.830	0.849	0.876	0.786	0.821	0.886	0.829	0.783	0.904	0.864	0.873	0.883	0.745	0.818	0.914	0.846
52	0.876	0.855	0.883	0.889	0.886	0.855	0.898	0.930	0.845	0.809	0.915	0.878	0.866	0.905	0.792	0.852	0.926	0.895
53	0.729	0.683	0.751	0.794	0.775	0.660	0.730	0.791	0.771	0.734	0.768	0.810	0.808	0.763	0.618	0.728	0.780	0.774
54	-0.585	-0.378	-0.484	-0.335	-0.411	-0.722	-0.562	-0.453	-0.318	-0.362	-0.443	-0.386	-0.331	-0.424	-0.538	-0.383	-0.464	-0.384
55	-0.732	-0.560	-0.641	-0.546	-0.599	-0.841	-0.739	-0.642	-0.504	-0.554	-0.618	-0.577	-0.504	-0.611	-0.679	-0.569	-0.627	-0.564

56	-0.675	-0.495	-0.582	-0.481	-0.529	-0.796	-0.677	-0.575	-0.428	-0.478	-0.551	-0.496	-0.428	-0.533	-0.615	-0.483	-0.564	-0.504
57	-0.592	-0.388	-0.490	-0.358	-0.429	-0.730	-0.578	-0.469	-0.335	-0.381	-0.465	-0.398	-0.349	-0.442	-0.557	-0.400	-0.475	-0.390
58	-0.704	-0.521	-0.597	-0.491	-0.561	-0.827	-0.703	-0.615	-0.446	-0.483	-0.594	-0.519	-0.481	-0.589	-0.657	-0.519	-0.608	-0.529
59	-0.709	-0.548	-0.640	-0.560	-0.602	-0.826	-0.723	-0.634	-0.491	-0.536	-0.610	-0.561	-0.492	-0.594	-0.633	-0.522	-0.627	-0.555
60	-0.650	-0.474	-0.561	-0.439	-0.522	-0.780	-0.648	-0.543	-0.428	-0.474	-0.540	-0.485	-0.433	-0.533	-0.631	-0.482	-0.558	-0.472
61	-0.521	-0.316	-0.385	-0.253	-0.338	-0.651	-0.496	-0.389	-0.235	-0.264	-0.376	-0.299	-0.262	-0.362	-0.465	-0.299	-0.395	-0.306
62	-0.530	-0.329	-0.403	-0.268	-0.355	-0.656	-0.496	-0.394	-0.243	-0.285	-0.390	-0.320	-0.269	-0.367	-0.486	-0.315	-0.402	-0.316
63	-0.555	-0.335	-0.436	-0.308	-0.383	-0.692	-0.541	-0.433	-0.273	-0.313	-0.414	-0.342	-0.300	-0.400	-0.497	-0.325	-0.435	-0.344
64	-0.628	-0.408	-0.496	-0.382	-0.456	-0.750	-0.609	-0.503	-0.325	-0.365	-0.479	-0.407	-0.359	-0.470	-0.551	-0.398	-0.492	-0.417
65	-0.611	-0.412	-0.505	-0.365	-0.451	-0.735	-0.586	-0.484	-0.356	-0.404	-0.468	-0.403	-0.348	-0.441	-0.563	-0.404	-0.477	-0.410
66	-0.623	-0.448	-0.541	-0.431	-0.481	-0.749	-0.620	-0.514	-0.385	-0.440	-0.488	-0.438	-0.367	-0.472	-0.567	-0.416	-0.502	-0.438
77	0.470	0.425	0.409	0.221	0.394	0.365	0.301	0.295	0.379	0.411	0.396	0.419	0.358	0.349	0.503	0.454	0.341	0.348
78	0.391	0.332	0.309	0.103	0.316	0.297	0.195	0.170	0.312	0.367	0.311	0.346	0.282	0.262	0.495	0.401	0.258	0.224
79	0.291	0.249	0.241	0.019	0.196	0.190	0.093	0.055	0.222	0.295	0.188	0.252	0.155	0.124	0.390	0.306	0.129	0.139
85	0.302	0.350	0.271	0.173	0.316	0.161	0.159	0.162	0.291	0.357	0.297	0.332	0.282	0.257	0.406	0.380	0.223	0.222
86	0.248	0.238	0.183	0.004	0.193	0.118	0.054	0.048	0.202	0.262	0.194	0.235	0.185	0.148	0.365	0.308	0.126	0.128
87	0.306	0.276	0.231	0.058	0.227	0.200	0.135	0.120	0.232	0.256	0.236	0.246	0.205	0.188	0.370	0.309	0.171	0.176
89	0.254	0.189	0.165	-0.020	0.171	0.174	0.084	0.046	0.164	0.212	0.179	0.207	0.162	0.138	0.350	0.274	0.115	0.096
90	0.257	0.248	0.198	0.049	0.226	0.125	0.097	0.087	0.236	0.278	0.215	0.272	0.225	0.183	0.341	0.294	0.136	0.164
96	0.752	0.614	0.697	0.582	0.656	0.797	0.706	0.636	0.577	0.617	0.638	0.621	0.546	0.608	0.692	0.597	0.632	0.602
97	0.785	0.665	0.721	0.636	0.682	0.834	0.765	0.682	0.581	0.636	0.683	0.651	0.566	0.660	0.724	0.637	0.670	0.627
99	0.764	0.618	0.681	0.580	0.650	0.846	0.749	0.674	0.546	0.599	0.647	0.609	0.542	0.636	0.720	0.603	0.656	0.611
100	0.787	0.648	0.708	0.563	0.683	0.807	0.719	0.657	0.619	0.658	0.675	0.666	0.579	0.635	0.764	0.660	0.655	0.621
101	0.671	0.625	0.602	0.512	0.585	0.689	0.607	0.571	0.485	0.562	0.581	0.569	0.460	0.551	0.684	0.586	0.572	0.526
102	0.718	0.598	0.627	0.547	0.662	0.759	0.678	0.626	0.521	0.568	0.635	0.619	0.541	0.631	0.665	0.574	0.629	0.537
103	0.691	0.608	0.629	0.501	0.592	0.681	0.597	0.550	0.517	0.579	0.569	0.589	0.475	0.527	0.673	0.598	0.561	0.535
104	0.684	0.502	0.570	0.413	0.592	0.707	0.594	0.554	0.474	0.481	0.571	0.556	0.498	0.550	0.620	0.483	0.570	0.480
105	0.607	0.475	0.485	0.372	0.481	0.597	0.490	0.433	0.382	0.471	0.461	0.490	0.377	0.428	0.605	0.495	0.438	0.390
106	0.684	0.577	0.594	0.470	0.569	0.690	0.604	0.545	0.486	0.572	0.562	0.571	0.488	0.541	0.700	0.608	0.546	0.498
107	0.691	0.576	0.623	0.505	0.587	0.715	0.621	0.560	0.500	0.565	0.558	0.582	0.468	0.523	0.653	0.554	0.549	0.525
108	0.713	0.660	0.652	0.570	0.619	0.724	0.661	0.604	0.517	0.599	0.606	0.615	0.486	0.580	0.691	0.614	0.594	0.576
109	0.730	0.623	0.655	0.558	0.624	0.744	0.656	0.599	0.524	0.589	0.610	0.620	0.498	0.574	0.686	0.592	0.601	0.562
110	0.690	0.552	0.574	0.472	0.577	0.732	0.615	0.544	0.443	0.514	0.566	0.551	0.453	0.538	0.651	0.534	0.551	0.474
111	0.761	0.611	0.654	0.512	0.628	0.789	0.674	0.607	0.525	0.584	0.626	0.599	0.512	0.585	0.715	0.589	0.616	0.558
112	-0.364	-0.258	-0.288	-0.069	-0.304	-0.274	-0.160	-0.166	-0.321	-0.338	-0.284	-0.326	-0.280	-0.205	-0.449	-0.346	-0.245	-0.201
113	-0.352	-0.239	-0.285	-0.064	-0.274	-0.273	-0.156	-0.170	-0.308	-0.316	-0.266	-0.304	-0.257	-0.179	-0.416	-0.315	-0.236	-0.199
114	-0.406	-0.279	-0.323	-0.109	-0.322	-0.318	-0.205	-0.215	-0.340	-0.363	-0.316	-0.356	-0.311	-0.231	-0.476	-0.381	-0.284	-0.242
115	-0.346	-0.257	-0.250	-0.058	-0.284	-0.232	-0.131	-0.144	-0.280	-0.316	-0.256	-0.306	-0.255	-0.181	-0.422	-0.330	-0.206	-0.173
116	-0.275	-0.129	-0.260	-0.140	-0.275	-0.269	-0.165	-0.211	-0.299	-0.243	-0.240	-0.246	-0.233	-0.159	-0.250	-0.178	-0.248	-0.184
117	-0.379	-0.250	-0.279	-0.084	-0.306	-0.316	-0.209	-0.193	-0.304	-0.338	-0.273	-0.309	-0.266	-0.218	-0.442	-0.334	-0.243	-0.197
118	-0.354	-0.223	-0.284	-0.057	-0.275	-0.275	-0.154	-0.174	-0.306	-0.304	-0.258	-0.298	-0.260	-0.178	-0.412	-0.313	-0.239	-0.193
119	-0.350	-0.243	-0.262	-0.067	-0.289	-0.255	-0.151	-0.161	-0.293	-0.319	-0.262	-0.305	-0.253	-0.185	-0.418	-0.316	-0.221	-0.178
120	-0.430	-0.318	-0.364	-0.140	-0.356	-0.340	-0.237	-0.254	-0.378	-0.384	-0.336	-0.381	-0.326	-0.252	-0.472	-0.381	-0.309	-0.280
121	-0.378	-0.256	-0.305	-0.093	-0.314	-0.282	-0.178	-0.196	-0.340	-0.346	-0.286	-0.343	-0.289	-0.206	-0.433	-0.335	-0.258	-0.221
122	-0.312	-0.223	-0.226	-0.036	-0.262	-0.209	-0.108	-0.124	-0.260	-0.294	-0.227	-0.278	-0.220	-0.150	-0.383	-0.284	-0.181	-0.149
123	-0.327	-0.198	-0.246	-0.024	-0.251	-0.248	-0.131	-0.142	-0.273	-0.277	-0.227	-0.273	-0.227	-0.147	-0.392	-0.280	-0.204	-0.164
124	-0.358	-0.242	-0.266	-0.073	-0.287	-0.277	-0.163	-0.162	-0.277	-0.325	-0.260	-0.298	-0.246	-0.184	-0.428	-0.321	-0.213	-0.168
125	-0.407	-0.296	-0.306	-0.109	-0.333	-0.318	-0.210	-0.208	-0.323	-0.365	-0.312	-0.346	-0.292	-0.239	-0.478	-0.371	-0.268	-0.222
126	-0.288	-0.176	-0.212	0.000	-0.229	-0.203	-0.088	-0.102	-0.250	-0.258	-0.200	-0.250	-0.198	-0.119	-0.371	-0.254	-0.170	-0.126
127	-0.338	-0.232	-0.218	-0.025	-0.270	-0.250	-0.149	-0.129	-0.230	-0.280	-0.241	-0.278	-0.223	-0.188	-0.419	-0.305	-0.185	-0.133
128	-0.333	-0.232	-0.253	-0.047	-0.270	-0.235	-0.130	-0.145	-0.290	-0.306	-0.243	-0.293	-0.240	-0.163	-0.417	-0.311	-0.210	-0.171
129	-0.260	-0.159	-0.170	0.018	-0.207	-0.165	-0.064	-0.067	-0.207	-0.245	-0.170	-0.217	-0.164	-0.097	-0.335	-0.230	-0.122	-0.080
130	-0.278	-0.174	-0.206	0.018	-0.214	-0.194	-0.074	-0.087	-0.240	-0.257	-0.181	-0.234	-0.177	-0.098	-0.356	-0.245	-0.147	-0.124
131	-0.251	-0.148	-0.143	0.050	-0.183	-0.152	-0.045	-0.049	-0.183	-0.213	-0.161	-0.196	-0.152	-0.088	-0.333	-0.223	-0.113	-0.070
132	-0.320	-0.204	-0.239	-0.020	-0.250	-0.231	-0.113	-0.126	-0.268	-0.274	-0.222	-0.265	-0.216	-0.134	-0.381	-0.268	-0.190	-0.155
133	-0.680	-0.610	-0.628	-0.499	-0.509	-0.622	-0.610	-0.573	-0.517	-0.533	-0.572	-0.579	-0.486	-0.525	-0.578	-0.592	-0.546	-0.616
134	-0.440	-0.375	-0.364	-0.213	-0.251	-0.352	-0.348	-0.310	-0.267	-0.288	-0.310	-0.344	-0.254	-0.261	-0.348	-0.355	-0.278	-0.379
135	-0.483	-0.412	-0.417	-0.278	-0.296	-0.406	-0.402	-0.360	-0.314	-0.331	-0.379	-0.390	-0.304	-0.313	-0.384	-0.394	-0.333	-0.424
80	0.323	0.242	0.295	0.058	0.251	0.233	0.132	0.131	0.316	0.325	0.232	0.287	0.225	0.152	0.360	0.286	0.204	0.239
81	0.203	0.131	0.103	0.022	0.113	0.106	0.098	0.021	0.122	0.173	0.093	0.154	0.088	0.084	0.266	0.212	0.040	0.069

82	0.271	0.340	0.301	0.345	0.272	0.194	0.260	0.264	0.285	0.288	0.327	0.305	0.251	0.317	0.249	0.299	0.286	0.276
83	0.168	0.154	0.079	-0.031	0.044	0.164	0.084	0.033	-0.001	0.048	0.108	0.029	-0.001	0.063	0.256	0.159	0.052	0.035
84	0.427	0.375	0.491	0.419	0.354	0.500	0.409	0.359	0.375	0.399	0.414	0.385	0.345	0.384	0.444	0.394	0.415	0.366
88	0.264	0.225	0.215	0.002	0.194	0.158	0.082	0.077	0.221	0.251	0.186	0.225	0.167	0.112	0.331	0.268	0.134	0.144
91	0.122	0.079	0.036	-0.102	0.045	0.128	0.092	-0.033	0.021	0.103	0.058	0.026	-0.022	0.040	0.207	0.124	-0.008	0.006
92	0.176	0.266	0.138	0.070	0.141	0.057	0.094	0.089	0.115	0.189	0.172	0.163	0.139	0.158	0.273	0.284	0.093	0.149
93	0.045	-0.043	0.114	-0.027	-0.029	0.089	0.032	-0.042	0.029	0.056	-0.028	0.012	0.005	-0.014	0.057	0.021	-0.003	-0.010
94	0.779	0.631	0.717	0.557	0.661	0.827	0.727	0.668	0.606	0.625	0.667	0.642	0.588	0.620	0.730	0.623	0.672	0.639
95	0.855	0.767	0.829	0.753	0.808	0.840	0.806	0.786	0.753	0.763	0.791	0.797	0.717	0.765	0.786	0.748	0.794	0.766
98	0.712	0.557	0.632	0.483	0.591	0.732	0.635	0.576	0.527	0.563	0.596	0.569	0.498	0.537	0.677	0.561	0.587	0.541

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
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	0.204	0.000	0.000	0.000	0.000	0.000	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	-0.071	0.375	0.000	0.000	0.000	0.000	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	-0.064	0.958	0.415	0.000	0.000	0.000	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	-0.124	0.964	0.962	0.376	0.000	0.000	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	-0.135	0.968	0.967	0.965	0.408	0.000	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	-0.284	0.910	0.925	0.937	0.924	0.316	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	-0.155	0.938	0.946	0.965	0.945	0.963	0.540	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	-0.161	0.939	0.955	0.966	0.952	0.965	0.981	0.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	-0.194	0.936	0.950	0.950	0.941	0.942	0.945	0.954	0.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	-0.189	0.936	0.940	0.946	0.941	0.941	0.948	0.952	0.971	0.351	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	-0.142	0.942	0.965	0.950	0.952	0.931	0.937	0.942	0.956	0.947	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	-0.212	0.918	0.942	0.934	0.935	0.929	0.931	0.940	0.968	0.966	0.945	0.380	0.000	0.000	0.000	0.000	0.000	0.000
31	-0.149	0.943	0.948	0.955	0.951	0.928	0.944	0.947	0.967	0.972	0.946	0.967	0.511	0.000	0.000	0.000	0.000	0.000
32	-0.150	0.956	0.966	0.967	0.972	0.929	0.947	0.953	0.952	0.947	0.970	0.944	0.958	0.451	0.000	0.000	0.000	0.000
33	-0.047	0.962	0.959	0.960	0.957	0.907	0.934	0.935	0.923	0.919	0.941	0.911	0.934	0.956	0.373	0.000	0.000	0.000
34	-0.038	0.970	0.976	0.968	0.971	0.908	0.940	0.945	0.948	0.940	0.965	0.935	0.957	0.975	0.967	0.511	0.000	0.000
35	0.814	-0.258	-0.287	-0.304	-0.340	-0.421	-0.307	-0.336	-0.398	-0.369	-0.360	-0.425	-0.363	-0.377	-0.251	-0.281	0.287	0.000
36	0.777	-0.201	-0.242	-0.243	-0.275	-0.365	-0.255	-0.280	-0.333	-0.313	-0.289	-0.379	-0.310	-0.304	-0.195	-0.208	0.911	0.191
37	0.860	-0.148	-0.157	-0.192	-0.208	-0.336	-0.215	-0.227	-0.276	-0.262	-0.212	-0.306	-0.248	-0.220	-0.158	-0.134	0.876	0.882
38	0.912	-0.033	-0.022	-0.062	-0.091	-0.234	-0.094	-0.110	-0.157	-0.143	-0.102	-0.179	-0.125	-0.119	-0.021	-0.012	0.864	0.854
39	0.850	-0.191	-0.182	-0.226	-0.255	-0.345	-0.233	-0.252	-0.290	-0.286	-0.254	-0.325	-0.288	-0.279	-0.179	-0.185	0.914	0.878
40	0.822	-0.121	-0.153	-0.168	-0.205	-0.320	-0.201	-0.223	-0.271	-0.272	-0.229	-0.311	-0.251	-0.232	-0.120	-0.136	0.917	0.888
41	0.837	-0.215	-0.243	-0.265	-0.297	-0.398	-0.282	-0.307	-0.350	-0.343	-0.321	-0.388	-0.333	-0.334	-0.208	-0.228	0.939	0.909
42	0.873	-0.185	-0.184	-0.225	-0.255	-0.381	-0.257	-0.275	-0.304	-0.295	-0.269	-0.322	-0.278	-0.287	-0.178	-0.175	0.886	0.854
43	0.820	-0.191	-0.173	-0.229	-0.234	-0.363	-0.245	-0.247	-0.292	-0.276	-0.228	-0.307	-0.275	-0.244	-0.202	-0.166	0.774	0.777
44	0.832	-0.278	-0.304	-0.331	-0.341	-0.466	-0.353	-0.364	-0.411	-0.399	-0.360	-0.447	-0.390	-0.369	-0.291	-0.276	0.876	0.897
45	0.799	-0.285	-0.302	-0.319	-0.360	-0.427	-0.320	-0.343	-0.385	-0.374	-0.366	-0.422	-0.375	-0.389	-0.290	-0.297	0.910	0.890
46	0.838	-0.341	-0.330	-0.388	-0.402	-0.516	-0.411	-0.421	-0.428	-0.434	-0.393	-0.456	-0.427	-0.430	-0.341	-0.335	0.866	0.818
47	0.859	-0.209	-0.205	-0.258	-0.276	-0.380	-0.262	-0.274	-0.319	-0.323	-0.284	-0.344	-0.309	-0.307	-0.216	-0.211	0.874	0.835
48	0.834	0.001	-0.016	-0.043	-0.078	-0.179	-0.056	-0.071	-0.111	-0.111	-0.079	-0.154	-0.108	-0.103	-0.010	-0.004	0.862	0.868
49	0.736	-0.304	-0.334	-0.344	-0.377	-0.450	-0.352	-0.368	-0.422	-0.424	-0.386	-0.475	-0.422	-0.401	-0.298	-0.320	0.863	0.888
50	0.775	-0.243	-0.236	-0.277	-0.298	-0.403	-0.300	-0.307	-0.340	-0.344	-0.285	-0.393	-0.351	-0.302	-0.237	-0.234	0.790	0.840
51	0.810	-0.096	-0.080	-0.123	-0.152	-0.253	-0.137	-0.145	-0.198	-0.189	-0.153	-0.220	-0.194	-0.169	-0.108	-0.093	0.834	0.816
52	0.852	-0.036	-0.047	-0.080	-0.109	-0.221	-0.096	-0.117	-0.172	-0.151	-0.107	-0.197	-0.148	-0.131	-0.054	-0.038	0.866	0.875
53	0.811	-0.149	-0.109	-0.197	-0.194	-0.337	-0.235	-0.227	-0.216	-0.224	-0.162	-0.230	-0.204	-0.198	-0.132	-0.105	0.720	0.688
54	-0.390	0.315	0.408	0.349	0.390	0.391	0.329	0.383	0.440	0.406	0.450	0.459	0.368	0.425	0.297	0.369	-0.687	-0.635
55	-0.597	0.243	0.307	0.283	0.323	0.363	0.276	0.321	0.395	0.367	0.362	0.419	0.329	0.352	0.201	0.274	-0.810	-0.770

56	-0.517	0.244	0.308	0.278	0.321	0.338	0.257	0.311	0.395	0.362	0.364	0.407	0.318	0.357	0.205	0.284	-0.763	-0.706
57	-0.408	0.304	0.390	0.337	0.377	0.378	0.310	0.362	0.438	0.406	0.444	0.454	0.368	0.422	0.278	0.357	-0.691	-0.640
58	-0.528	0.251	0.337	0.290	0.335	0.360	0.274	0.327	0.395	0.367	0.389	0.423	0.335	0.378	0.230	0.299	-0.798	-0.751
59	-0.587	0.176	0.245	0.212	0.258	0.298	0.207	0.250	0.341	0.305	0.308	0.358	0.268	0.301	0.144	0.215	-0.808	-0.762
60	-0.480	0.281	0.363	0.318	0.360	0.370	0.292	0.345	0.433	0.402	0.420	0.452	0.363	0.396	0.255	0.331	-0.739	-0.698
61	-0.314	0.300	0.385	0.342	0.372	0.341	0.298	0.352	0.411	0.381	0.434	0.427	0.351	0.422	0.283	0.365	-0.634	-0.559
62	-0.334	0.317	0.404	0.354	0.387	0.364	0.318	0.371	0.426	0.399	0.446	0.445	0.371	0.437	0.298	0.376	-0.651	-0.582
63	-0.371	0.290	0.372	0.324	0.362	0.343	0.288	0.340	0.403	0.373	0.420	0.414	0.335	0.411	0.267	0.344	-0.664	-0.594
64	-0.443	0.268	0.351	0.312	0.353	0.358	0.293	0.341	0.392	0.360	0.404	0.420	0.333	0.401	0.245	0.325	-0.733	-0.668
65	-0.399	0.372	0.454	0.402	0.442	0.441	0.379	0.430	0.519	0.484	0.508	0.527	0.449	0.489	0.349	0.427	-0.701	-0.644
66	-0.457	0.252	0.329	0.286	0.323	0.337	0.263	0.312	0.404	0.366	0.385	0.419	0.325	0.369	0.221	0.297	-0.711	-0.657
77	0.246	-0.623	-0.619	-0.640	-0.624	-0.643	-0.623	-0.633	-0.685	-0.686	-0.614	-0.701	-0.711	-0.598	-0.630	-0.638	0.413	0.404
78	0.156	-0.733	-0.743	-0.733	-0.734	-0.734	-0.727	-0.729	-0.775	-0.781	-0.731	-0.796	-0.800	-0.708	-0.740	-0.748	0.345	0.343
79	0.076	-0.715	-0.719	-0.702	-0.692	-0.699	-0.699	-0.705	-0.737	-0.738	-0.689	-0.758	-0.752	-0.658	-0.711	-0.715	0.223	0.262
85	0.184	-0.429	-0.391	-0.414	-0.413	-0.443	-0.424	-0.396	-0.456	-0.479	-0.384	-0.495	-0.502	-0.378	-0.401	-0.421	0.213	0.240
86	0.057	-0.639	-0.617	-0.630	-0.617	-0.611	-0.616	-0.605	-0.641	-0.657	-0.599	-0.667	-0.687	-0.580	-0.642	-0.643	0.168	0.186
87	0.072	-0.579	-0.569	-0.586	-0.564	-0.556	-0.565	-0.568	-0.625	-0.637	-0.555	-0.640	-0.658	-0.543	-0.595	-0.599	0.232	0.236
89	0.034	-0.651	-0.643	-0.662	-0.639	-0.614	-0.626	-0.632	-0.673	-0.687	-0.630	-0.692	-0.710	-0.609	-0.648	-0.664	0.208	0.199
90	0.111	-0.540	-0.525	-0.568	-0.521	-0.530	-0.540	-0.535	-0.572	-0.586	-0.505	-0.575	-0.601	-0.495	-0.534	-0.539	0.175	0.155
96	0.611	-0.338	-0.404	-0.385	-0.405	-0.477	-0.382	-0.414	-0.488	-0.461	-0.476	-0.526	-0.434	-0.453	-0.337	-0.377	0.766	0.723
97	0.652	-0.195	-0.263	-0.243	-0.272	-0.347	-0.244	-0.278	-0.354	-0.321	-0.326	-0.404	-0.304	-0.309	-0.181	-0.232	0.795	0.781
99	0.590	-0.312	-0.380	-0.355	-0.392	-0.444	-0.354	-0.394	-0.487	-0.445	-0.455	-0.513	-0.426	-0.431	-0.299	-0.365	0.817	0.779
100	0.625	-0.520	-0.566	-0.561	-0.585	-0.641	-0.559	-0.590	-0.653	-0.626	-0.623	-0.683	-0.609	-0.617	-0.505	-0.551	0.800	0.767
101	0.496	-0.274	-0.339	-0.305	-0.347	-0.409	-0.332	-0.359	-0.429	-0.392	-0.387	-0.476	-0.404	-0.372	-0.279	-0.317	0.728	0.752
102	0.602	-0.287	-0.332	-0.343	-0.362	-0.421	-0.347	-0.374	-0.430	-0.401	-0.408	-0.471	-0.402	-0.403	-0.275	-0.334	0.791	0.724
103	0.508	-0.409	-0.465	-0.441	-0.467	-0.549	-0.480	-0.500	-0.571	-0.529	-0.522	-0.599	-0.539	-0.497	-0.406	-0.451	0.719	0.725
104	0.506	-0.477	-0.527	-0.532	-0.558	-0.581	-0.516	-0.548	-0.584	-0.556	-0.594	-0.615	-0.558	-0.600	-0.477	-0.540	0.762	0.654
105	0.463	-0.474	-0.519	-0.516	-0.537	-0.591	-0.548	-0.560	-0.600	-0.587	-0.556	-0.650	-0.587	-0.561	-0.443	-0.500	0.669	0.646
106	0.538	-0.464	-0.518	-0.507	-0.529	-0.617	-0.555	-0.566	-0.608	-0.591	-0.557	-0.654	-0.597	-0.557	-0.443	-0.493	0.731	0.723
107	0.566	-0.449	-0.495	-0.481	-0.507	-0.584	-0.514	-0.535	-0.597	-0.572	-0.549	-0.632	-0.552	-0.529	-0.421	-0.468	0.737	0.696
108	0.581	-0.255	-0.310	-0.283	-0.322	-0.405	-0.323	-0.345	-0.403	-0.370	-0.351	-0.457	-0.373	-0.338	-0.232	-0.276	0.755	0.779
109	0.590	-0.326	-0.381	-0.354	-0.397	-0.468	-0.386	-0.410	-0.474	-0.439	-0.428	-0.514	-0.435	-0.418	-0.306	-0.353	0.790	0.784
110	0.517	-0.360	-0.421	-0.400	-0.433	-0.480	-0.413	-0.439	-0.509	-0.483	-0.482	-0.557	-0.487	-0.471	-0.343	-0.409	0.782	0.737
111	0.560	-0.463	-0.521	-0.504	-0.534	-0.577	-0.503	-0.534	-0.604	-0.574	-0.582	-0.646	-0.569	-0.577	-0.456	-0.506	0.818	0.774
112	-0.167	0.894	0.901	0.896	0.904	0.888	0.889	0.885	0.931	0.921	0.921	0.924	0.941	0.914	0.896	0.926	-0.371	-0.297
113	-0.166	0.911	0.922	0.912	0.918	0.903	0.905	0.903	0.939	0.924	0.947	0.925	0.937	0.941	0.905	0.943	-0.389	-0.294
114	-0.222	0.918	0.926	0.928	0.931	0.923	0.920	0.918	0.942	0.931	0.947	0.939	0.950	0.947	0.906	0.942	-0.434	-0.359
115	-0.159	0.899	0.891	0.905	0.900	0.884	0.896	0.891	0.925	0.922	0.900	0.918	0.944	0.904	0.887	0.918	-0.354	-0.286
116	-0.174	0.587	0.614	0.578	0.608	0.604	0.570	0.568	0.618	0.592	0.676	0.576	0.576	0.672	0.608	0.629	-0.349	-0.220
117	-0.191	0.868	0.875	0.885	0.876	0.871	0.877	0.881	0.931	0.925	0.904	0.920	0.932	0.902	0.849	0.902	-0.404	-0.310
118	-0.170	0.921	0.930	0.926	0.928	0.914	0.916	0.912	0.934	0.917	0.950	0.911	0.926	0.954	0.918	0.951	-0.396	-0.304
119	-0.162	0.917	0.910	0.918	0.917	0.892	0.904	0.900	0.946	0.939	0.930	0.928	0.954	0.934	0.899	0.941	-0.380	-0.292
120	-0.248	0.921	0.926	0.930	0.932	0.929	0.922	0.921	0.948	0.931	0.946	0.930	0.941	0.951	0.914	0.945	-0.456	-0.371
121	-0.208	0.933	0.928	0.936	0.936	0.923	0.926	0.919	0.945	0.935	0.949	0.925	0.941	0.953	0.920	0.951	-0.401	-0.314
122	-0.133	0.917	0.907	0.915	0.912	0.884	0.904	0.898	0.939	0.938	0.919	0.925	0.955	0.925	0.896	0.936	-0.340	-0.263
123	-0.143	0.941	0.943	0.942	0.947	0.913	0.925	0.922	0.943	0.929	0.959	0.922	0.939	0.965	0.934	0.967	-0.363	-0.276
124	-0.176	0.879	0.889	0.886	0.887	0.883	0.891	0.887	0.932	0.927	0.912	0.925	0.940	0.909	0.866	0.912	-0.392	-0.317
125	-0.207	0.900	0.903	0.907	0.906	0.891	0.899	0.896	0.944	0.938	0.920	0.939	0.955	0.925	0.882	0.927	-0.435	-0.362
126	-0.102	0.933	0.927	0.924	0.930	0.893	0.905	0.901	0.935	0.927	0.944	0.913	0.936	0.947	0.921	0.956	-0.321	-0.240
127	-0.142	0.838	0.838	0.854	0.841	0.811	0.833	0.829	0.881	0.882	0.850	0.883	0.906	0.853	0.816	0.867	-0.362	-0.290
128	-0.149	0.921	0.917	0.924	0.921	0.904	0.914	0.905	0.940	0.932	0.934	0.922	0.946	0.942	0.912	0.946	-0.358	-0.284
129	-0.081	0.895	0.888	0.893	0.887	0.858	0.884	0.874	0.918	0.913	0.905	0.902	0.934	0.904	0.875	0.921	-0.294	-0.209
130	-0.092	0.948	0.952	0.946	0.946	0.910	0.929	0.925	0.952	0.938	0.958	0.933	0.951	0.960	0.941	0.970	-0.298	-0.224
131	-0.055	0.905	0.895	0.903	0.897	0.850	0.882	0.874	0.916	0.919	0.900	0.907	0.943	0.909	0.887	0.931	-0.281	-0.194
132	-0.128	0.940	0.938	0.939	0.939	0.907	0.917	0.914	0.943	0.929	0.952	0.922	0.941	0.956	0.931	0.966	-0.345	-0.253
133	-0.584	0.300	0.321	0.345	0.352	0.430	0.371	0.389	0.337	0.303	0.303	0.389	0.319	0.339	0.280	0.285	-0.640	-0.664
134	-0.354	0.382	0.380	0.416	0.416	0.453	0.452	0.458	0.364	0.343	0.322	0.411	0.364	0.380	0.341	0.352	-0.400	-0.425
135	-0.405	0.345	0.345	0.376	0.381	0.423	0.408	0.412	0.338	0.314	0.299	0.387	0.333	0.352	0.304	0.319	-0.449	-0.471
80	0.118	-0.829	-0.819	-0.805	-0.810	-0.793	-0.784	-0.791	-0.800	-0.796	-0.782	-0.801	-0.795	-0.778	-0.831	-0.808	0.260	0.259
81	0.154	-0.401	-0.374	-0.423	-0.395	-0.382	-0.388	-0.379	-0.371	-0.391	-0.338	-0.404	-0.398	-0.355	-0.339	-0.374	0.151	0.154

82	0.260	0.301	0.313	0.290	0.299	0.228	0.277	0.290	0.234	0.239	0.318	0.200	0.209	0.321	0.300	0.304	0.211	0.278
83	-0.068	-0.220	-0.283	-0.207	-0.247	-0.143	-0.172	-0.187	-0.240	-0.214	-0.247	-0.263	-0.263	-0.226	-0.232	-0.252	0.176	0.249
84	0.340	0.007	-0.038	0.032	-0.004	-0.084	0.002	-0.014	-0.072	-0.045	-0.060	-0.097	-0.020	-0.014	-0.002	0.012	0.433	0.510
88	0.090	-0.823	-0.805	-0.787	-0.814	-0.762	-0.778	-0.775	-0.784	-0.786	-0.783	-0.805	-0.818	-0.782	-0.820	-0.804	0.238	0.241
91	-0.060	-0.224	-0.285	-0.249	-0.249	-0.158	-0.184	-0.196	-0.259	-0.264	-0.237	-0.299	-0.274	-0.221	-0.193	-0.253	0.092	0.119
92	0.060	-0.100	-0.113	-0.090	-0.096	-0.095	-0.101	-0.091	-0.104	-0.103	-0.064	-0.165	-0.158	-0.055	-0.101	-0.093	0.064	0.162
93	0.022	0.007	-0.056	-0.004	-0.018	-0.048	-0.008	-0.020	-0.026	-0.033	-0.028	-0.020	0.029	0.024	-0.013	0.003	0.013	0.050
94	0.617	-0.493	-0.535	-0.532	-0.562	-0.595	-0.510	-0.545	-0.608	-0.589	-0.588	-0.635	-0.556	-0.587	-0.471	-0.517	0.813	0.759
95	0.748	-0.261	-0.294	-0.300	-0.325	-0.432	-0.319	-0.338	-0.403	-0.375	-0.360	-0.432	-0.353	-0.351	-0.270	-0.275	0.827	0.817
98	0.557	-0.501	-0.540	-0.526	-0.568	-0.572	-0.502	-0.533	-0.610	-0.580	-0.599	-0.635	-0.563	-0.607	-0.469	-0.527	0.763	0.709

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	0.267	0.000	0.000	0.000	0.000	0.000	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	0.927	0.339	0.000	0.000	0.000	0.000	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	0.918	0.917	0.348	0.000	0.000	0.000	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	0.892	0.885	0.921	0.272	0.000	0.000	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	0.890	0.888	0.927	0.946	0.382	0.000	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	0.899	0.929	0.925	0.900	0.938	0.354	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	0.902	0.891	0.873	0.818	0.821	0.870	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.927	0.883	0.907	0.890	0.906	0.898	0.907	0.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.895	0.859	0.918	0.902	0.935	0.912	0.841	0.911	0.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	0.884	0.878	0.916	0.878	0.899	0.916	0.877	0.903	0.910	0.312	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.901	0.903	0.926	0.893	0.903	0.915	0.858	0.896	0.925	0.918	0.336	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	0.900	0.900	0.916	0.908	0.901	0.901	0.839	0.880	0.909	0.855	0.916	0.384	0.000	0.000	0.000	0.000	0.000	0.000
49	0.848	0.782	0.836	0.856	0.876	0.801	0.768	0.890	0.890	0.829	0.845	0.848	0.262	0.000	0.000	0.000	0.000	0.000
50	0.885	0.841	0.852	0.830	0.844	0.829	0.868	0.910	0.859	0.851	0.850	0.861	0.877	0.285	0.000	0.000	0.000	0.000
51	0.903	0.911	0.926	0.876	0.872	0.902	0.907	0.882	0.888	0.898	0.917	0.907	0.785	0.848	0.346	0.000	0.000	0.000
52	0.927	0.927	0.917	0.900	0.905	0.921	0.897	0.908	0.892	0.871	0.895	0.935	0.815	0.858	0.940	0.358	0.000	0.000
53	0.820	0.847	0.832	0.764	0.769	0.836	0.854	0.801	0.749	0.851	0.809	0.765	0.655	0.763	0.818	0.791	0.148	0.000
54	-0.430	-0.366	-0.460	-0.580	-0.609	-0.447	-0.228	-0.458	-0.553	-0.425	-0.427	-0.422	-0.581	-0.327	-0.314	-0.400	-0.167	0.542
55	-0.603	-0.573	-0.630	-0.733	-0.751	-0.612	-0.449	-0.635	-0.667	-0.565	-0.583	-0.597	-0.726	-0.528	-0.495	-0.587	-0.390	0.912

56	-0.519	-0.496	-0.554	-0.658	-0.684	-0.544	-0.352	-0.545	-0.604	-0.486	-0.512	-0.520	-0.652	-0.424	-0.405	-0.513	-0.288	0.937
57	-0.428	-0.382	-0.468	-0.584	-0.620	-0.458	-0.245	-0.468	-0.561	-0.419	-0.441	-0.436	-0.601	-0.338	-0.319	-0.405	-0.174	0.980
58	-0.559	-0.522	-0.603	-0.710	-0.737	-0.592	-0.378	-0.591	-0.680	-0.542	-0.570	-0.592	-0.701	-0.470	-0.468	-0.559	-0.310	0.951
59	-0.592	-0.583	-0.635	-0.727	-0.738	-0.607	-0.450	-0.615	-0.649	-0.544	-0.575	-0.594	-0.675	-0.489	-0.499	-0.596	-0.379	0.894
60	-0.499	-0.455	-0.538	-0.642	-0.672	-0.512	-0.319	-0.539	-0.606	-0.476	-0.506	-0.504	-0.655	-0.411	-0.399	-0.485	-0.236	0.964
61	-0.340	-0.292	-0.399	-0.501	-0.551	-0.389	-0.144	-0.373	-0.495	-0.358	-0.373	-0.361	-0.522	-0.245	-0.256	-0.331	-0.103	0.957
62	-0.359	-0.309	-0.415	-0.517	-0.559	-0.396	-0.165	-0.396	-0.507	-0.374	-0.376	-0.371	-0.545	-0.273	-0.261	-0.337	-0.122	0.965
63	-0.377	-0.341	-0.444	-0.551	-0.589	-0.426	-0.195	-0.416	-0.527	-0.395	-0.405	-0.405	-0.549	-0.275	-0.288	-0.376	-0.150	0.973
64	-0.446	-0.420	-0.513	-0.615	-0.655	-0.498	-0.266	-0.486	-0.577	-0.458	-0.464	-0.478	-0.609	-0.359	-0.347	-0.442	-0.234	0.961
65	-0.434	-0.387	-0.478	-0.591	-0.634	-0.480	-0.278	-0.491	-0.562	-0.438	-0.447	-0.421	-0.600	-0.353	-0.339	-0.425	-0.188	0.956
66	-0.461	-0.430	-0.492	-0.593	-0.626	-0.476	-0.284	-0.488	-0.540	-0.417	-0.441	-0.442	-0.589	-0.350	-0.336	-0.442	-0.222	0.943
77	0.433	0.291	0.402	0.400	0.393	0.315	0.415	0.473	0.396	0.484	0.382	0.268	0.492	0.511	0.388	0.345	0.301	-0.273
78	0.334	0.177	0.321	0.318	0.317	0.217	0.326	0.423	0.347	0.416	0.323	0.188	0.478	0.459	0.283	0.226	0.210	-0.295
79	0.253	0.075	0.193	0.192	0.196	0.093	0.225	0.319	0.212	0.284	0.177	0.051	0.378	0.359	0.132	0.105	0.111	-0.268
85	0.307	0.225	0.281	0.226	0.214	0.159	0.325	0.341	0.216	0.317	0.273	0.177	0.375	0.455	0.265	0.209	0.286	0.043
86	0.226	0.074	0.181	0.171	0.160	0.087	0.232	0.280	0.196	0.294	0.202	0.064	0.341	0.380	0.173	0.110	0.142	-0.062
87	0.265	0.122	0.227	0.243	0.224	0.131	0.255	0.306	0.232	0.323	0.231	0.111	0.353	0.374	0.235	0.185	0.149	-0.152
89	0.204	0.055	0.184	0.198	0.208	0.086	0.188	0.262	0.205	0.295	0.194	0.053	0.344	0.326	0.150	0.095	0.114	-0.221
90	0.236	0.090	0.203	0.177	0.171	0.090	0.234	0.270	0.167	0.297	0.200	0.080	0.295	0.330	0.180	0.129	0.206	-0.047
96	0.615	0.579	0.614	0.656	0.704	0.604	0.498	0.661	0.636	0.587	0.583	0.555	0.677	0.549	0.487	0.571	0.427	-0.767
97	0.663	0.634	0.652	0.714	0.740	0.622	0.517	0.691	0.658	0.582	0.602	0.628	0.729	0.602	0.521	0.632	0.436	-0.765
99	0.626	0.593	0.646	0.727	0.761	0.638	0.494	0.672	0.681	0.597	0.603	0.594	0.732	0.564	0.534	0.621	0.396	-0.855
100	0.653	0.590	0.670	0.698	0.759	0.654	0.558	0.723	0.705	0.674	0.631	0.574	0.759	0.647	0.540	0.609	0.476	-0.766
101	0.613	0.562	0.602	0.646	0.657	0.550	0.496	0.650	0.586	0.531	0.524	0.550	0.710	0.619	0.494	0.578	0.365	-0.650
102	0.610	0.596	0.676	0.701	0.709	0.608	0.498	0.659	0.628	0.612	0.602	0.598	0.695	0.584	0.525	0.581	0.470	-0.690
103	0.608	0.544	0.600	0.625	0.651	0.558	0.511	0.664	0.582	0.562	0.534	0.499	0.703	0.623	0.483	0.552	0.388	-0.643
104	0.524	0.487	0.609	0.621	0.671	0.568	0.438	0.590	0.641	0.612	0.578	0.507	0.640	0.485	0.464	0.496	0.397	-0.746
105	0.501	0.459	0.536	0.569	0.582	0.477	0.409	0.586	0.507	0.520	0.465	0.417	0.660	0.562	0.361	0.418	0.381	-0.623
106	0.590	0.544	0.615	0.661	0.688	0.579	0.509	0.684	0.613	0.602	0.563	0.524	0.738	0.651	0.466	0.530	0.453	-0.625
107	0.572	0.541	0.584	0.621	0.642	0.547	0.459	0.631	0.564	0.564	0.531	0.466	0.673	0.552	0.435	0.495	0.417	-0.708
108	0.645	0.616	0.635	0.679	0.681	0.587	0.528	0.681	0.591	0.556	0.543	0.567	0.725	0.643	0.508	0.594	0.449	-0.634
109	0.648	0.619	0.659	0.700	0.698	0.598	0.539	0.691	0.619	0.598	0.577	0.567	0.729	0.627	0.525	0.592	0.458	-0.696
110	0.567	0.541	0.632	0.680	0.685	0.551	0.444	0.630	0.602	0.566	0.551	0.530	0.711	0.559	0.470	0.535	0.377	-0.757
111	0.617	0.569	0.649	0.697	0.733	0.610	0.498	0.685	0.674	0.625	0.597	0.562	0.744	0.596	0.509	0.574	0.410	-0.816
112	-0.260	-0.154	-0.298	-0.256	-0.318	-0.263	-0.283	-0.391	-0.371	-0.425	-0.328	-0.122	-0.430	-0.375	-0.217	-0.156	-0.200	0.342
113	-0.248	-0.147	-0.289	-0.241	-0.334	-0.292	-0.272	-0.380	-0.395	-0.428	-0.318	-0.105	-0.410	-0.331	-0.208	-0.149	-0.195	0.385
114	-0.312	-0.199	-0.348	-0.303	-0.392	-0.339	-0.328	-0.439	-0.442	-0.488	-0.371	-0.171	-0.476	-0.411	-0.257	-0.200	-0.261	0.396
115	-0.251	-0.145	-0.296	-0.237	-0.306	-0.249	-0.285	-0.379	-0.333	-0.420	-0.302	-0.099	-0.415	-0.381	-0.210	-0.146	-0.230	0.287
116	-0.166	-0.165	-0.243	-0.196	-0.291	-0.315	-0.221	-0.272	-0.351	-0.332	-0.295	-0.126	-0.223	-0.134	-0.215	-0.153	-0.151	0.361
117	-0.255	-0.156	-0.315	-0.297	-0.377	-0.296	-0.276	-0.392	-0.373	-0.430	-0.324	-0.129	-0.436	-0.371	-0.212	-0.168	-0.225	0.396
118	-0.251	-0.148	-0.297	-0.246	-0.342	-0.301	-0.283	-0.382	-0.403	-0.445	-0.330	-0.123	-0.408	-0.334	-0.212	-0.157	-0.212	0.393
119	-0.245	-0.151	-0.306	-0.258	-0.332	-0.275	-0.287	-0.379	-0.359	-0.431	-0.317	-0.105	-0.414	-0.360	-0.220	-0.154	-0.226	0.337
120	-0.323	-0.229	-0.366	-0.310	-0.400	-0.369	-0.360	-0.455	-0.450	-0.503	-0.383	-0.184	-0.468	-0.409	-0.284	-0.237	-0.290	0.393
121	-0.271	-0.180	-0.326	-0.262	-0.352	-0.318	-0.322	-0.404	-0.398	-0.465	-0.347	-0.133	-0.422	-0.368	-0.239	-0.178	-0.262	0.351
122	-0.215	-0.121	-0.276	-0.216	-0.285	-0.239	-0.261	-0.346	-0.319	-0.398	-0.282	-0.065	-0.378	-0.332	-0.186	-0.112	-0.206	0.296
123	-0.209	-0.113	-0.272	-0.216	-0.309	-0.266	-0.254	-0.348	-0.364	-0.412	-0.293	-0.088	-0.386	-0.310	-0.181	-0.124	-0.188	0.380
124	-0.255	-0.156	-0.305	-0.270	-0.343	-0.277	-0.275	-0.386	-0.354	-0.420	-0.308	-0.110	-0.431	-0.370	-0.201	-0.148	-0.210	0.370
125	-0.302	-0.197	-0.356	-0.319	-0.391	-0.320	-0.327	-0.437	-0.412	-0.466	-0.359	-0.165	-0.485	-0.422	-0.258	-0.206	-0.254	0.385
126	-0.178	-0.088	-0.242	-0.182	-0.266	-0.225	-0.225	-0.316	-0.323	-0.375	-0.264	-0.050	-0.356	-0.290	-0.160	-0.088	-0.157	0.334
127	-0.219	-0.119	-0.290	-0.263	-0.324	-0.218	-0.241	-0.354	-0.318	-0.384	-0.288	-0.100	-0.426	-0.360	-0.184	-0.128	-0.194	0.343
128	-0.232	-0.134	-0.286	-0.224	-0.309	-0.265	-0.281	-0.369	-0.355	-0.422	-0.303	-0.095	-0.405	-0.357	-0.202	-0.145	-0.207	0.318
129	-0.154	-0.064	-0.222	-0.174	-0.246	-0.183	-0.207	-0.293	-0.261	-0.344	-0.224	-0.016	-0.336	-0.284	-0.129	-0.061	-0.153	0.280
130	-0.158	-0.056	-0.209	-0.154	-0.244	-0.200	-0.208	-0.306	-0.296	-0.353	-0.230	-0.018	-0.336	-0.267	-0.120	-0.069	-0.134	0.337
131	-0.146	-0.044	-0.215	-0.161	-0.233	-0.163	-0.188	-0.275	-0.260	-0.339	-0.216	-0.008	-0.335	-0.283	-0.122	-0.045	-0.138	0.272
132	-0.200	-0.099	-0.256	-0.192	-0.285	-0.238	-0.240	-0.331	-0.338	-0.397	-0.274	-0.062	-0.364	-0.295	-0.167	-0.105	-0.184	0.354
133	-0.637	-0.547	-0.580	-0.561	-0.613	-0.572	-0.560	-0.640	-0.598	-0.600	-0.499	-0.532	-0.615	-0.619	-0.483	-0.561	-0.559	0.438
134	-0.388	-0.289	-0.350	-0.322	-0.366	-0.347	-0.342	-0.405	-0.372	-0.394	-0.258	-0.272	-0.387	-0.405	-0.229	-0.296	-0.388	0.279
135	-0.434	-0.345	-0.393	-0.371	-0.415	-0.390	-0.384	-0.446	-0.432	-0.433	-0.309	-0.327	-0.428	-0.441	-0.282	-0.345	-0.426	0.306
80	0.262	0.115	0.244	0.207	0.250	0.215	0.308	0.349	0.319	0.371	0.255	0.088	0.343	0.308	0.209	0.159	0.177	-0.281
81	0.119	0.039	0.124	0.119	0.121	0.020	0.091	0.178	0.094	0.182	0.076	0.018	0.252	0.242	-0.002	0.031	0.191	-0.150

82	0.424	0.362	0.337	0.341	0.237	0.197	0.391	0.336	0.192	0.269	0.254	0.338	0.297	0.425	0.418	0.407	0.291	0.133
83	0.142	-0.007	0.100	0.153	0.187	0.026	0.041	0.163	0.202	0.033	0.047	0.098	0.285	0.190	0.067	0.091	-0.132	-0.368
84	0.509	0.420	0.395	0.458	0.405	0.345	0.352	0.435	0.426	0.343	0.397	0.440	0.485	0.409	0.376	0.420	0.231	-0.457
88	0.236	0.089	0.240	0.179	0.223	0.192	0.262	0.334	0.292	0.348	0.221	0.069	0.335	0.322	0.174	0.121	0.192	-0.201
91	-0.033	-0.159	-0.036	0.020	0.053	-0.132	-0.109	0.043	0.018	-0.101	-0.071	-0.029	0.179	0.048	-0.151	-0.083	-0.193	-0.349
92	0.185	0.052	0.096	0.063	0.096	0.023	0.111	0.178	0.076	0.081	0.070	0.096	0.233	0.254	0.087	0.115	0.052	0.080
93	0.034	-0.046	-0.062	0.032	-0.006	-0.083	-0.052	-0.003	0.004	-0.051	-0.029	-0.025	0.039	-0.061	-0.049	-0.047	-0.096	-0.247
94	0.639	0.583	0.663	0.700	0.762	0.668	0.535	0.697	0.726	0.667	0.646	0.587	0.734	0.581	0.544	0.608	0.476	-0.832
95	0.801	0.762	0.757	0.782	0.796	0.725	0.690	0.799	0.740	0.735	0.741	0.719	0.772	0.738	0.705	0.756	0.623	-0.599
98	0.564	0.525	0.608	0.614	0.671	0.588	0.467	0.628	0.656	0.591	0.566	0.506	0.667	0.526	0.469	0.524	0.400	-0.775

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	55	56	57	58	59	60	61	62	63	64	65	66	77	78	79	85	86	87
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
55	0.333	0.000	0.000	0.000	0.000	0.000	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	0.963	0.495	0.000	0.000	0.000	0.000	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	0.931	0.959	0.632	0.000	0.000	0.000	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	0.944	0.951	0.957	0.417	0.000	0.000	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	0.962	0.961	0.920	0.929	0.310	0.000	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	0.948	0.966	0.978	0.960	0.938	0.512	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	0.864	0.901	0.960	0.926	0.848	0.931	0.456	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62	0.873	0.913	0.967	0.933	0.861	0.944	0.973	0.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
63	0.899	0.936	0.980	0.943	0.896	0.958	0.974	0.974	0.647	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
64	0.930	0.952	0.968	0.957	0.927	0.951	0.946	0.955	0.966	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65	0.917	0.953	0.973	0.943	0.916	0.966	0.940	0.946	0.959	0.950	0.579	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	0.948	0.974	0.962	0.937	0.950	0.967	0.914	0.925	0.944	0.948	0.963	0.467	0.000	0.000	0.000	0.000	0.000	0.000
77	-0.325	-0.254	-0.248	-0.283	-0.231	-0.295	-0.213	-0.217	-0.199	-0.204	-0.311	-0.243	0.388	0.000	0.000	0.000	0.000	0.000
78	-0.314	-0.252	-0.278	-0.276	-0.235	-0.306	-0.222	-0.242	-0.222	-0.225	-0.331	-0.245	0.902	0.401	0.000	0.000	0.000	0.000
79	-0.272	-0.226	-0.244	-0.208	-0.188	-0.272	-0.176	-0.206	-0.179	-0.179	-0.294	-0.233	0.865	0.915	0.332	0.000	0.000	0.000
85	-0.111	-0.024	0.034	-0.009	-0.047	-0.027	0.121	0.094	0.099	0.043	-0.016	-0.005	0.733	0.770	0.747	0.141	0.000	0.000
86	-0.103	-0.035	-0.041	-0.045	-0.005	-0.076	0.001	-0.010	0.014	0.001	-0.093	-0.028	0.893	0.909	0.902	0.825	0.406	0.000
87	-0.184	-0.134	-0.132	-0.141	-0.100	-0.173	-0.096	-0.097	-0.083	-0.076	-0.201	-0.126	0.932	0.889	0.874	0.764	0.927	0.529
89	-0.217	-0.167	-0.202	-0.174	-0.114	-0.226	-0.178	-0.182	-0.156	-0.137	-0.247	-0.162	0.910	0.894	0.888	0.724	0.911	0.927
90	-0.110	-0.041	-0.035	-0.029	-0.019	-0.073	-0.001	-0.003	0.008	0.010	-0.078	-0.029	0.845	0.818	0.811	0.741	0.872	0.869
96	-0.843	-0.823	-0.781	-0.818	-0.831	-0.808	-0.713	-0.727	-0.733	-0.804	-0.798	-0.828	0.412	0.428	0.396	0.263	0.255	0.296
97	-0.889	-0.852	-0.787	-0.840	-0.868	-0.824	-0.701	-0.719	-0.734	-0.814	-0.790	-0.845	0.387	0.370	0.347	0.269	0.224	0.263
99	-0.929	-0.915	-0.871	-0.903	-0.913	-0.905	-0.808	-0.816	-0.836	-0.877	-0.898	-0.906	0.422	0.409	0.356	0.202	0.209	0.294
100	-0.855	-0.818	-0.777	-0.813	-0.813	-0.811	-0.704	-0.723	-0.731	-0.788	-0.817	-0.810	0.574	0.577	0.537	0.370	0.418	0.446
101	-0.769	-0.726	-0.666	-0.718	-0.756	-0.716	-0.600	-0.634	-0.616	-0.684	-0.702	-0.729	0.441	0.455	0.430	0.343	0.291	0.320
102	-0.822	-0.772	-0.706	-0.761	-0.805	-0.753	-0.642	-0.659	-0.664	-0.755	-0.717	-0.764	0.453	0.452	0.384	0.352	0.292	0.332
103	-0.740	-0.700	-0.647	-0.687	-0.730	-0.695	-0.573	-0.608	-0.589	-0.669	-0.704	-0.700	0.548	0.574	0.551	0.425	0.419	0.432
104	-0.784	-0.769	-0.756	-0.783	-0.768	-0.769	-0.732	-0.744	-0.734	-0.796	-0.770	-0.765	0.441	0.453	0.376	0.242	0.281	0.313
105	-0.743	-0.694	-0.645	-0.659	-0.710	-0.669	-0.571	-0.612	-0.594	-0.680	-0.674	-0.691	0.502	0.573	0.544	0.472	0.423	0.416
106	-0.757	-0.695	-0.645	-0.686	-0.719	-0.682	-0.564	-0.598	-0.589	-0.680	-0.684	-0.685	0.519	0.577	0.529	0.474	0.423	0.423
107	-0.821	-0.779	-0.727	-0.753	-0.794	-0.758	-0.646	-0.676	-0.670	-0.747	-0.759	-0.786	0.510	0.540	0.515	0.401	0.369	0.388
108	-0.787	-0.726	-0.645	-0.707	-0.775	-0.698	-0.557	-0.597	-0.583	-0.685	-0.673	-0.723	0.434	0.450	0.424	0.401	0.304	0.310
109	-0.833	-0.779	-0.706	-0.750	-0.828	-0.751	-0.617	-0.655	-0.652	-0.745	-0.739	-0.776	0.461	0.483	0.461	0.385	0.319	0.337
110	-0.855	-0.817	-0.776	-0.807	-0.842	-0.805	-0.710	-0.741	-0.735	-0.807	-0.795	-0.815	0.494	0.520	0.462	0.374	0.342	0.382
111	-0.882	-0.860	-0.831	-0.860	-0.867	-0.854	-0.777	-0.796	-0.796	-0.854	-0.863	-0.858	0.512	0.540	0.480	0.324	0.339	0.389
112	0.312	0.298	0.344	0.312	0.255	0.342	0.317	0.333	0.304	0.311	0.413	0.307	-0.736	-0.839	-0.762	-0.588	-0.737	-0.696
113	0.321	0.328	0.388	0.346	0.277	0.366	0.377	0.393	0.360	0.360	0.456	0.336	-0.607	-0.716	-0.643	-0.420	-0.591	-0.546
114	0.356	0.339	0.395	0.368	0.297	0.380	0.376	0.395	0.361	0.374	0.457	0.340	-0.667	-0.767	-0.702	-0.485	-0.655	-0.597
115	0.290	0.258	0.288	0.266	0.224	0.294	0.268	0.287	0.250	0.266	0.364	0.265	-0.778	-0.854	-0.800	-0.639	-0.783	-0.736
116	0.273	0.316	0.382	0.346	0.310	0.347	0.393	0.400	0.390	0.375	0.438	0.349	-0.146	-0.243	-0.135	0.037	-0.082	-0.064
117	0.388	0.373	0.407	0.380	0.329	0.409	0.391	0.404	0.374	0.379	0.495	0.385	-0.713	-0.785	-0.729	-0.529	-0.678	-0.669
118	0.323	0.327	0.391	0.352	0.280	0.366	0.387	0.401	0.372	0.371	0.456	0.333	-0.594	-0.694	-0.629	-0.386	-0.575	-0.527
119	0.324	0.309	0.345	0.313	0.270	0.343	0.329	0.345	0.316	0.317	0.431	0.320	-0.722	-0.804	-0.741	-0.559	-0.709	-0.678
120	0.365	0.352	0.393	0.370	0.321	0.382	0.376	0.395	0.369	0.382	0.470	0.360	-0.651	-0.739	-0.668	-0.459	-0.617	-0.576
121	0.320	0.306	0.351	0.320	0.273	0.340	0.335	0.353	0.330	0.336	0.429	0.315	-0.645	-0.743	-0.674	-0.475	-0.633	-0.581
122	0.286	0.268	0.305	0.271	0.232	0.303	0.289	0.309	0.273	0.276	0.392	0.283	-0.717	-0.804	-0.747	-0.573	-0.714	-0.675
123	0.321	0.319	0.377	0.334	0.275	0.356	0.371	0.387	0.363	0.359	0.451	0.329	-0.617	-0.722	-0.664	-0.422	-0.613	-0.561
124	0.361	0.347	0.382	0.347	0.307	0.378	0.356	0.380	0.343	0.357	0.467	0.361	-0.700	-0.792	-0.740	-0.545	-0.688	-0.648
125	0.386	0.365	0.394	0.372	0.330	0.396	0.369	0.391	0.360	0.372	0.478	0.371	-0.745	-0.827	-0.761	-0.585	-0.722	-0.689
126	0.281	0.278	0.339	0.289	0.237	0.322	0.332	0.348	0.320	0.311	0.417	0.297	-0.631	-0.745	-0.681	-0.468	-0.640	-0.589
127	0.353	0.325	0.353	0.326	0.286	0.359	0.330	0.347	0.320	0.330	0.427	0.336	-0.771	-0.836	-0.784	-0.637	-0.765	-0.745
128	0.290	0.278	0.323	0.290	0.242	0.314	0.311	0.331	0.299	0.303	0.407	0.290	-0.676	-0.778	-0.710	-0.519	-0.680	-0.628
129	0.266	0.254	0.290	0.247	0.213	0.288	0.279	0.293	0.262	0.264	0.380	0.272	-0.701	-0.790	-0.736	-0.564	-0.708	-0.674
130	0.275	0.275	0.337	0.284	0.229	0.320	0.331	0.346	0.318	0.309	0.414	0.297	-0.631	-0.749	-0.700	-0.464	-0.646	-0.590
131	0.244	0.229	0.279	0.235	0.183	0.272	0.280	0.290	0.254	0.250	0.362	0.246	-0.732	-0.813	-0.760	-0.580	-0.742	-0.707
132	0.297	0.299	0.356	0.308	0.254	0.339	0.352	0.369	0.338	0.334	0.434	0.315	-0.639	-0.741	-0.684	-0.458	-0.639	-0.588
133	0.549	0.473	0.406	0.498	0.480	0.419	0.361	0.382	0.370	0.475	0.401	0.424	-0.403	-0.310	-0.348	-0.222	-0.276	-0.247
134	0.363	0.298	0.246	0.299	0.289	0.228	0.210	0.239	0.217	0.324	0.242	0.247	-0.297	-0.254	-0.321	-0.199	-0.252	-0.180
135	0.395	0.334	0.283	0.334	0.327	0.261	0.237	0.261	0.248	0.352	0.271	0.276	-0.286	-0.233	-0.292	-0.196	-0.236	-0.172
80	-0.220	-0.198	-0.248	-0.210	-0.164	-0.256	-0.206	-0.224	-0.227	-0.195	-0.314	-0.202	0.675	0.764	0.754	0.475	0.690	0.645
81	-0.264	-0.191	-0.152	-0.149	-0.166	-0.166	-0.102	-0.117	-0.121	-0.159	-0.160	-0.174	0.533	0.553	0.610	0.566	0.603	0.543

82	-0.041	0.050	0.149	0.050	-0.029	0.078	0.219	0.204	0.193	0.142	0.159	0.100	0.323	0.201	0.198	0.424	0.293	0.325
83	-0.280	-0.282	-0.343	-0.313	-0.207	-0.324	-0.344	-0.349	-0.327	-0.300	-0.342	-0.290	0.291	0.307	0.340	0.133	0.238	0.253
84	-0.451	-0.435	-0.444	-0.460	-0.459	-0.460	-0.375	-0.397	-0.410	-0.388	-0.421	-0.438	0.147	0.195	0.185	0.069	0.056	0.081
88	-0.165	-0.136	-0.178	-0.163	-0.127	-0.175	-0.143	-0.170	-0.148	-0.150	-0.257	-0.149	0.670	0.765	0.750	0.574	0.720	0.643
91	-0.326	-0.326	-0.348	-0.302	-0.275	-0.371	-0.346	-0.353	-0.340	-0.303	-0.346	-0.342	0.277	0.289	0.347	0.214	0.248	0.264
92	0.025	0.065	0.105	0.033	0.085	0.050	0.122	0.111	0.137	0.105	0.096	0.098	0.368	0.350	0.392	0.422	0.419	0.355
93	-0.157	-0.162	-0.212	-0.168	-0.138	-0.201	-0.155	-0.181	-0.196	-0.163	-0.170	-0.174	0.027	0.098	0.125	-0.081	0.019	0.047
94	-0.873	-0.859	-0.847	-0.858	-0.850	-0.855	-0.785	-0.798	-0.811	-0.847	-0.858	-0.845	0.472	0.460	0.405	0.213	0.270	0.324
95	-0.750	-0.679	-0.598	-0.680	-0.718	-0.660	-0.506	-0.523	-0.550	-0.629	-0.617	-0.657	0.525	0.477	0.415	0.417	0.358	0.392
98	-0.826	-0.818	-0.802	-0.800	-0.818	-0.804	-0.747	-0.760	-0.763	-0.812	-0.825	-0.815	0.389	0.425	0.362	0.210	0.232	0.256

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	89	90	96	97	99	100	101	102	103	104	105	106	107	108	109	110	111	112
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.407	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.875	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.295	0.197	0.378	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.252	0.179	0.934	0.506	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.296	0.186	0.902	0.916	0.257	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.452	0.361	0.923	0.906	0.917	0.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.305	0.224	0.801	0.833	0.842	0.821	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.327	0.271	0.860	0.890	0.862	0.868	0.823	0.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.401	0.329	0.833	0.832	0.829	0.873	0.899	0.825	0.209	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.343	0.241	0.802	0.769	0.800	0.831	0.703	0.825	0.736	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	0.433	0.361	0.766	0.776	0.765	0.818	0.832	0.851	0.862	0.764	0.398	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	0.424	0.353	0.782	0.805	0.797	0.852	0.849	0.843	0.887	0.754	0.930	0.241	0.000	0.000	0.000	0.000	0.000	0.000
107	0.386	0.301	0.883	0.875	0.856	0.896	0.847	0.871	0.883	0.792	0.915	0.897	0.314	0.000	0.000	0.000	0.000	0.000
108	0.292	0.222	0.814	0.873	0.827	0.829	0.915	0.871	0.898	0.703	0.883	0.893	0.899	0.414	0.000	0.000	0.000	0.000
109	0.327	0.256	0.848	0.888	0.861	0.868	0.907	0.899	0.912	0.774	0.915	0.906	0.932	0.961	0.533	0.000	0.000	0.000
110	0.384	0.289	0.853	0.880	0.876	0.870	0.878	0.918	0.885	0.838	0.921	0.903	0.925	0.905	0.946	0.446	0.000	0.000
111	0.390	0.275	0.917	0.913	0.929	0.944	0.870	0.905	0.896	0.866	0.879	0.891	0.927	0.878	0.922	0.945	0.396	0.000
112	-0.726	-0.632	-0.462	-0.342	-0.431	-0.615	-0.422	-0.459	-0.567	-0.574	-0.603	-0.603	-0.571	-0.397	-0.462	-0.525	-0.583	0.269
113	-0.593	-0.497	-0.445	-0.300	-0.425	-0.596	-0.381	-0.395	-0.528	-0.594	-0.551	-0.567	-0.526	-0.347	-0.422	-0.477	-0.565	0.944
114	-0.654	-0.566	-0.469	-0.346	-0.452	-0.635	-0.422	-0.447	-0.564	-0.602	-0.604	-0.621	-0.565	-0.398	-0.469	-0.517	-0.599	0.952
115	-0.771	-0.707	-0.426	-0.317	-0.399	-0.603	-0.427	-0.456	-0.570	-0.549	-0.625	-0.620	-0.567	-0.411	-0.472	-0.522	-0.563	0.961
116	-0.082	-0.006	-0.376	-0.219	-0.364	-0.428	-0.223	-0.258	-0.343	-0.495	-0.286	-0.304	-0.342	-0.169	-0.266	-0.298	-0.426	0.595
117	-0.716	-0.627	-0.497	-0.380	-0.495	-0.662	-0.456	-0.498	-0.596	-0.605	-0.636	-0.645	-0.592	-0.431	-0.490	-0.556	-0.614	0.935
118	-0.583	-0.477	-0.430	-0.288	-0.423	-0.596	-0.376	-0.389	-0.511	-0.595	-0.535	-0.549	-0.506	-0.336	-0.414	-0.462	-0.561	0.926
119	-0.715	-0.635	-0.437	-0.314	-0.433	-0.615	-0.423	-0.450	-0.560	-0.572	-0.607	-0.606	-0.561	-0.392	-0.465	-0.519	-0.576	0.964
120	-0.612	-0.528	-0.493	-0.357	-0.470	-0.655	-0.442	-0.460	-0.582	-0.620	-0.599	-0.619	-0.584	-0.420	-0.492	-0.523	-0.615	0.944
121	-0.628	-0.546	-0.443	-0.306	-0.423	-0.618	-0.390	-0.425	-0.538	-0.588	-0.574	-0.584	-0.544	-0.373	-0.450	-0.487	-0.571	0.951
122	-0.717	-0.641	-0.409	-0.284	-0.392	-0.585	-0.408	-0.426	-0.544	-0.544	-0.603	-0.587	-0.548	-0.382	-0.448	-0.499	-0.550	0.958
123	-0.619	-0.512	-0.431	-0.290	-0.417	-0.604	-0.367	-0.401	-0.514	-0.589	-0.553	-0.556	-0.524	-0.340	-0.423	-0.470	-0.561	0.939
124	-0.691	-0.601	-0.488	-0.374	-0.470	-0.647	-0.484	-0.491	-0.620	-0.589	-0.666	-0.666	-0.620	-0.457	-0.518	-0.569	-0.619	0.951
125	-0.728	-0.643	-0.491	-0.386	-0.491	-0.668	-0.491	-0.506	-0.620	-0.611	-0.671	-0.675	-0.619	-0.469	-0.531	-0.582	-0.635	0.960
126	-0.641	-0.532	-0.400	-0.255	-0.386	-0.570	-0.359	-0.378	-0.504	-0.549	-0.542	-0.538	-0.503	-0.327	-0.405	-0.455	-0.533	0.949
127	-0.792	-0.719	-0.445	-0.357	-0.447	-0.617	-0.441	-0.499	-0.572	-0.574	-0.655	-0.637	-0.579	-0.436	-0.491	-0.566	-0.586	0.919
128	-0.670	-0.583	-0.423	-0.290	-0.408	-0.600	-0.405	-0.413	-0.548	-0.558	-0.581	-0.586	-0.537	-0.372	-0.440	-0.486	-0.558	0.958
129	-0.722	-0.644	-0.382	-0.260	-0.374	-0.559	-0.386	-0.416	-0.520	-0.527	-0.594	-0.580	-0.526	-0.361	-0.429	-0.490	-0.529	0.947
130	-0.646	-0.545	-0.411	-0.264	-0.384	-0.578	-0.363	-0.372	-0.504	-0.546	-0.542	-0.538	-0.515	-0.331	-0.398	-0.446	-0.536	0.951
131	-0.758	-0.680	-0.361	-0.236	-0.347	-0.541	-0.353	-0.385	-0.491	-0.509	-0.563	-0.547	-0.497	-0.322	-0.391	-0.461	-0.507	0.948
132	-0.642	-0.544	-0.434	-0.288	-0.407	-0.600	-0.370	-0.402	-0.518	-0.578	-0.547	-0.544	-0.524	-0.337	-0.416	-0.465	-0.555	0.951
133	-0.249	-0.238	-0.592	-0.634	-0.532	-0.657	-0.533	-0.558	-0.562	-0.537	-0.543	-0.583	-0.580	-0.617	-0.622	-0.534	-0.594	0.277
134	-0.205	-0.214	-0.354	-0.390	-0.312	-0.458	-0.335	-0.371	-0.371	-0.414	-0.467	-0.478	-0.437	-0.442	-0.454	-0.370	-0.412	0.280
135	-0.197	-0.203	-0.388	-0.425	-0.339	-0.477	-0.332	-0.376	-0.359	-0.420	-0.450	-0.468	-0.446	-0.444	-0.456	-0.375	-0.424	0.260
80	0.674	0.575	0.321	0.212	0.303	0.494	0.261	0.219	0.399	0.349	0.357	0.383	0.381	0.263	0.308	0.292	0.407	-0.751
81	0.581	0.638	0.298	0.324	0.230	0.397	0.261	0.354	0.321	0.284	0.460	0.410	0.391	0.330	0.353	0.364	0.329	-0.414

82	0.218	0.311	0.013	0.154	0.041	0.035	0.194	0.150	0.172	-0.062	0.102	0.131	0.043	0.259	0.204	0.135	0.032	0.137
83	0.338	0.231	0.209	0.231	0.281	0.271	0.349	0.132	0.295	0.157	0.216	0.264	0.165	0.248	0.217	0.234	0.276	-0.237
84	0.083	-0.013	0.384	0.454	0.420	0.362	0.440	0.302	0.390	0.236	0.269	0.332	0.368	0.420	0.427	0.359	0.393	-0.040
88	0.686	0.596	0.298	0.199	0.273	0.472	0.297	0.263	0.416	0.354	0.428	0.430	0.400	0.317	0.345	0.323	0.408	-0.777
91	0.349	0.288	0.234	0.281	0.280	0.308	0.237	0.206	0.218	0.245	0.273	0.264	0.231	0.223	0.221	0.279	0.299	-0.224
92	0.347	0.401	0.044	0.122	0.054	0.131	0.219	0.098	0.220	-0.038	0.116	0.177	0.077	0.193	0.129	0.077	0.086	-0.152
93	0.024	-0.032	0.100	0.069	0.092	0.043	-0.058	-0.089	-0.010	-0.002	-0.063	-0.067	0.026	-0.035	-0.003	-0.008	0.030	0.023
94	0.347	0.240	0.860	0.834	0.876	0.903	0.704	0.759	0.739	0.823	0.708	0.739	0.816	0.715	0.769	0.798	0.886	-0.534
95	0.350	0.325	0.844	0.871	0.810	0.856	0.775	0.812	0.790	0.694	0.688	0.748	0.796	0.807	0.817	0.764	0.820	-0.417
98	0.282	0.180	0.848	0.804	0.845	0.881	0.723	0.793	0.757	0.823	0.764	0.774	0.830	0.742	0.811	0.813	0.893	-0.560

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	0.000	0.000	0.000	0.000
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	0.000
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
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0.970	0.486	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.919	0.943	0.480	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	0.716	0.656	0.510	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117	0.915	0.930	0.950	0.572	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
118	0.975	0.969	0.907	0.742	0.906	0.386	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	0.951	0.962	0.978	0.613	0.964	0.944	0.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.974	0.976	0.932	0.700	0.923	0.976	0.961	0.511	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
121	0.976	0.974	0.944	0.696	0.928	0.979	0.972	0.989	0.723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	0.939	0.950	0.979	0.582	0.956	0.928	0.988	0.946	0.958	0.565	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	0.973	0.968	0.930	0.705	0.919	0.981	0.962	0.980	0.989	0.948	0.566	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124	0.940	0.952	0.963	0.591	0.958	0.925	0.975	0.942	0.949	0.973	0.938	0.412	0.000	0.000	0.000	0.000	0.000	0.000
125	0.942	0.961	0.978	0.578	0.969	0.933	0.988	0.954	0.960	0.981	0.949	0.980	0.607	0.000	0.000	0.000	0.000	0.000
126	0.966	0.958	0.937	0.694	0.923	0.970	0.968	0.971	0.983	0.958	0.985	0.944	0.950	0.529	0.000	0.000	0.000	0.000
127	0.867	0.896	0.958	0.447	0.944	0.851	0.950	0.875	0.890	0.950	0.880	0.943	0.961	0.888	0.254	0.000	0.000	0.000
128	0.966	0.966	0.958	0.657	0.937	0.964	0.977	0.977	0.986	0.969	0.980	0.961	0.970	0.984	0.910	0.580	0.000	0.000
129	0.925	0.931	0.973	0.559	0.956	0.914	0.982	0.927	0.947	0.982	0.938	0.968	0.973	0.951	0.951	0.960	0.458	0.000
130	0.967	0.961	0.943	0.677	0.925	0.970	0.967	0.972	0.981	0.960	0.985	0.945	0.951	0.985	0.889	0.981	0.951	0.578
131	0.921	0.934	0.975	0.539	0.950	0.910	0.979	0.921	0.940	0.979	0.935	0.957	0.971	0.947	0.958	0.958	0.979	0.947
132	0.970	0.965	0.940	0.689	0.924	0.974	0.966	0.978	0.985	0.958	0.989	0.945	0.952	0.984	0.890	0.982	0.946	0.986
133	0.291	0.367	0.310	0.082	0.297	0.319	0.281	0.370	0.326	0.265	0.302	0.305	0.343	0.227	0.283	0.277	0.217	0.252
134	0.317	0.388	0.333	0.032	0.296	0.345	0.299	0.383	0.352	0.306	0.344	0.322	0.350	0.264	0.307	0.308	0.261	0.299
135	0.305	0.372	0.301	0.045	0.268	0.325	0.273	0.364	0.328	0.275	0.318	0.297	0.326	0.235	0.282	0.280	0.229	0.271
80	-0.744	-0.758	-0.739	-0.441	-0.700	-0.755	-0.740	-0.770	-0.774	-0.741	-0.774	-0.708	-0.746	-0.767	-0.681	-0.772	-0.698	-0.787
81	-0.295	-0.389	-0.494	0.133	-0.448	-0.299	-0.428	-0.344	-0.362	-0.437	-0.359	-0.419	-0.457	-0.342	-0.534	-0.384	-0.446	-0.369

82	0.240	0.172	0.070	0.449	0.148	0.263	0.139	0.200	0.210	0.146	0.268	0.136	0.103	0.250	0.041	0.186	0.148	0.277
83	-0.240	-0.258	-0.235	0.000	-0.250	-0.226	-0.224	-0.200	-0.190	-0.221	-0.208	-0.261	-0.274	-0.206	-0.297	-0.216	-0.221	-0.220
84	-0.040	-0.062	0.032	-0.035	0.002	-0.034	0.011	-0.060	-0.013	0.042	-0.000	-0.027	-0.037	0.013	0.044	-0.007	0.071	0.019
88	-0.761	-0.778	-0.796	-0.393	-0.734	-0.765	-0.787	-0.776	-0.791	-0.793	-0.787	-0.777	-0.795	-0.791	-0.753	-0.794	-0.773	-0.801
91	-0.192	-0.221	-0.241	0.027	-0.281	-0.191	-0.224	-0.178	-0.184	-0.227	-0.206	-0.236	-0.267	-0.194	-0.320	-0.195	-0.240	-0.235
92	-0.078	-0.146	-0.214	0.252	-0.154	-0.057	-0.133	-0.090	-0.080	-0.150	-0.049	-0.141	-0.175	-0.048	-0.230	-0.107	-0.138	-0.086
93	0.009	0.022	0.092	-0.061	0.063	0.000	0.074	0.039	0.039	0.106	0.035	0.047	0.073	0.030	0.081	0.065	0.116	0.037
94	-0.558	-0.581	-0.496	-0.454	-0.569	-0.562	-0.530	-0.608	-0.561	-0.493	-0.557	-0.547	-0.579	-0.510	-0.505	-0.524	-0.458	-0.517
95	-0.355	-0.418	-0.394	-0.260	-0.420	-0.359	-0.387	-0.444	-0.394	-0.354	-0.351	-0.416	-0.445	-0.325	-0.391	-0.368	-0.315	-0.325
98	-0.597	-0.614	-0.526	-0.524	-0.579	-0.598	-0.569	-0.637	-0.598	-0.545	-0.597	-0.601	-0.610	-0.563	-0.538	-0.571	-0.512	-0.561

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	131	132	133	134	135	80	81	82	83	84	88	91	92	93	94	95	98
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	0.000	0.000	0.000
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
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
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
128	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
131	0.494	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132	0.947	0.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
133	0.226	0.292	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
134	0.273	0.326	0.872	0.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	0.242	0.304	0.879	0.971	0.694	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	-0.735	-0.775	-0.327	-0.341	-0.324	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
81	-0.469	-0.372	-0.394	-0.432	-0.414	0.354	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82	0.137	0.248	-0.255	-0.110	-0.134	-0.084	0.187	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

83	-0.249	-0.203	-0.166	-0.087	-0.105	0.249	0.131	0.120	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0.071	0.002	-0.254	-0.058	-0.110	0.190	-0.064	0.239	0.278	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000
88	-0.787	-0.796	-0.345	-0.385	-0.360	0.802	0.406	-0.016	0.289	0.081	0.139	0.000	0.000	0.000	0.000	0.000	0.000
91	-0.264	-0.217	-0.208	-0.204	-0.205	0.252	0.375	-0.046	0.366	0.049	0.203	0.028	0.000	0.000	0.000	0.000	0.000
92	-0.157	-0.071	-0.283	-0.252	-0.230	0.155	0.276	0.336	0.306	0.134	0.234	0.260	0.042	0.000	0.000	0.000	0.000
93	0.109	0.041	-0.045	-0.001	-0.022	0.179	0.002	-0.039	0.083	0.286	0.039	0.134	-0.076	0.026	0.000	0.000	0.000
94	-0.448	-0.548	-0.615	-0.442	-0.475	0.471	0.286	-0.062	0.218	0.383	0.415	0.309	-0.006	0.155	0.059	0.000	0.000
95	-0.292	-0.351	-0.649	-0.378	-0.415	0.345	0.303	0.284	0.181	0.452	0.281	0.148	0.183	0.048	0.784	0.030	0.000
98	-0.496	-0.589	-0.569	-0.446	-0.463	0.423	0.276	-0.098	0.201	0.335	0.413	0.250	-0.050	0.040	0.874	0.735	0.026

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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.182	0.000	0.000	0.000	0.000	0.000	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	0.167	0.157	0.000	0.000	0.000	0.000	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	0.130	-0.011	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	0.000
4	-0.065	0.066	0.223	0.303	0.000	0.000	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	-0.027	0.048	-0.013	0.040	0.285	0.000	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	0.075	-0.109	0.077	-0.043	-0.062	0.239	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	0.065	-0.042	0.010	0.014	-0.094	0.319	0.328	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.020	0.004	-0.040	0.040	-0.044	0.178	0.219	0.356	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	-0.166	-0.094	0.119	0.016	-0.028	-0.056	-0.045	-0.081	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	-0.180	-0.064	0.083	0.060	0.014	-0.138	-0.041	-0.140	0.249	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.115	0.065	-0.078	-0.022	0.002	-0.047	-0.062	0.038	-0.082	0.085	0.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	-0.034	-0.007	0.074	-0.015	0.027	-0.157	-0.210	-0.026	0.088	0.176	0.047	0.310	0.000	0.000	0.000	0.000	0.000	0.000
13	-0.050	-0.053	-0.101	-0.134	0.126	-0.054	-0.174	-0.073	-0.020	0.059	0.024	0.163	0.396	0.000	0.000	0.000	0.000	0.000
14	-0.048	-0.013	-0.193	-0.180	0.182	0.048	0.017	0.039	-0.012	-0.089	0.094	-0.011	0.255	0.439	0.000	0.000	0.000	0.000
15	0.066	-0.013	-0.076	-0.157	-0.039	0.010	-0.004	-0.033	-0.022	-0.052	-0.040	-0.036	0.010	0.082	0.228	0.000	0.000	0.000
16	-0.178	0.023	-0.135	-0.053	-0.135	-0.055	0.004	-0.080	0.071	0.086	-0.040	0.015	0.049	0.002	0.429	0.291	0.000	0.000
17	0.018	-0.031	-0.106	-0.095	0.108	-0.015	-0.105	-0.022	0.009	-0.059	0.099	-0.032	0.051	0.099	0.039	-0.019	0.363	0.000
18	0.040	0.205	0.055	0.072	-0.021	0.035	0.075	0.061	-0.023	-0.084	-0.124	-0.122	-0.106	-0.161	-0.056	0.034	0.045	0.292
19	0.032	-0.144	-0.062	0.189	-0.048	0.015	0.030	-0.052	0.079	0.045	-0.063	0.063	0.059	-0.074	-0.094	-0.025	0.030	0.031
20	-0.353	-0.312	-0.511	-0.491	-0.507	-0.346	-0.489	-0.601	-0.551	-0.422	-0.555	-0.586	-0.563	-0.541	-0.519	-0.457	-0.579	-0.494
21	-0.442	-0.392	-0.576	-0.481	-0.560	-0.491	-0.521	-0.540	-0.559	-0.618	-0.651	-0.654	-0.638	-0.711	-0.500	-0.508	-0.598	-0.511
22	-0.444	-0.347	-0.527	-0.384	-0.543	-0.413	-0.530	-0.575	-0.562	-0.527	-0.589	-0.584	-0.730	-0.662	-0.507	-0.556	-0.541	-0.536
23	-0.496	-0.366	-0.495	-0.483	-0.503	-0.611	-0.636	-0.624	-0.472	-0.490	-0.626	-0.642	-0.733	-0.720	-0.575	-0.609	-0.685	-0.662
24	-0.417	-0.316	-0.521	-0.546	-0.520	-0.571	-0.521	-0.589	-0.567	-0.500	-0.478	-0.552	-0.718	-0.721	-0.437	-0.530	-0.607	-0.545
25	-0.682	-0.511	-0.669	-0.545	-0.709	-0.676	-0.770	-0.865	-0.658	-0.682	-0.674	-0.848	-0.990	-1.013	-0.639	-0.764	-0.767	-0.753
26	-0.600	-0.502	-0.724	-0.606	-0.705	-0.752	-0.775	-0.974	-0.726	-0.620	-0.682	-0.875	-0.959	-0.964	-0.643	-0.780	-0.930	-0.802
27	-0.387	-0.437	-0.667	-0.578	-0.484	-0.540	-0.518	-0.678	-0.628	-0.610	-0.616	-0.593	-0.681	-0.718	-0.462	-0.531	-0.658	-0.638
28	-0.429	-0.344	-0.511	-0.461	-0.534	-0.493	-0.587	-0.624	-0.540	-0.601	-0.533	-0.559	-0.764	-0.739	-0.531	-0.629	-0.577	-0.518
29	-0.289	-0.244	-0.471	-0.484	-0.525	-0.537	-0.368	-0.479	-0.565	-0.506	-0.501	-0.510	-0.589	-0.577	-0.445	-0.568	-0.533	-0.464
30	-0.386	-0.438	-0.602	-0.446	-0.553	-0.649	-0.647	-0.623	-0.626	-0.650	-0.598	-0.605	-0.807	-0.728	-0.558	-0.725	-0.588	-0.669
31	-0.642	-0.563	-0.606	-0.539	-0.720	-0.632	-0.763	-0.784	-0.632	-0.666	-0.873	-0.823	-0.990	-0.973	-0.755	-0.844	-0.831	-0.747
32	-0.511	-0.485	-0.577	-0.526	-0.644	-0.545	-0.607	-0.671	-0.529	-0.562	-0.655	-0.578	-0.834	-0.806	-0.566	-0.653	-0.615	-0.588
33	-0.487	-0.365	-0.547	-0.390	-0.488	-0.461	-0.444	-0.560	-0.515	-0.508	-0.564	-0.511	-0.653	-0.585	-0.460	-0.493	-0.526	-0.474
34	-0.525	-0.465	-0.607	-0.446	-0.626	-0.564	-0.591	-0.710	-0.671	-0.537	-0.783	-0.743	-0.859	-0.868	-0.671	-0.659	-0.728	-0.675
35	0.189	-0.131	-0.023	-0.059	-0.071	0.090	-0.048	0.011	-0.144	-0.286	0.041	-0.103	-0.208	-0.067	-0.125	-0.238	-0.057	-0.143
36	-0.095	0.191	-0.092	-0.049	-0.152	0.012	-0.104	-0.024	-0.187	-0.060	0.037	-0.122	-0.230	-0.095	-0.023	-0.125	-0.130	-0.179
37	0.012	-0.097	0.111	-0.038	-0.034	-0.009	-0.222	-0.074	-0.053	-0.071	-0.020	-0.014	-0.090	-0.195	-0.068	0.000	-0.151	-0.141
38	-0.072	-0.086	-0.007	0.347	-0.168	-0.065	-0.143	-0.017	-0.127	-0.146	-0.087	-0.040	-0.170	-0.257	-0.208	-0.090	-0.125	-0.072
39	-0.070	-0.105	-0.226	-0.118	0.040	-0.107	-0.271	-0.130	-0.210	-0.304	-0.104	-0.039	-0.231	-0.065	-0.276	-0.295	-0.120	-0.287
40	-0.067	-0.207	-0.183	-0.213	-0.129	0.198	-0.062	-0.091	-0.205	-0.131	-0.169	-0.184	-0.104	-0.063	-0.205	-0.175	-0.151	-0.229
41	-0.013	-0.255	-0.190	-0.059	-0.146	0.108	0.059	-0.009	-0.270	-0.264	-0.154	-0.359	-0.209	-0.116	-0.147	-0.101	-0.196	-0.236
42	-0.159	-0.126	-0.157	0.080	-0.139	0.032	-0.048	0.192	-0.213	-0.214	-0.157	-0.219	-0.181	-0.175	-0.213	-0.115	-0.100	-0.077
43	-0.037	-0.113	-0.055	-0.097	-0.144	-0.131	-0.126	-0.136	0.180	0.062	-0.108	-0.119	-0.175	-0.312	-0.241	-0.108	-0.149	-0.099
44	-0.007	-0.002	-0.064	-0.129	-0.153	-0.043	-0.172	-0.151	-0.014	0.184	-0.156	-0.149	-0.289	-0.291	-0.115	-0.051	-0.087	-0.182
45	-0.073	-0.186	-0.185	-0.242	-0.205	-0.011	-0.154	-0.200	-0.201	-0.234	0.205	-0.163	-0.148	-0.216	-0.088	-0.050	-0.067	-0.260
46	-0.059	-0.239	-0.214	-0.166	-0.220	-0.112	-0.101	-0.163	-0.188	-0.233	-0.204	-0.038	-0.099	-0.281	-0.258	-0.096	-0.057	-0.187
47	-0.074	-0.176	-0.137	-0.058	-0.049	0.046	-0.224	-0.130	-0.158	-0.193	-0.030	-0.096	0.329	-0.022	0.001	-0.147	0.035	-0.217
48	-0.094	-0.101	-0.216	-0.193	-0.091	-0.047	-0.123	-0.120	-0.255	-0.195	-0.085	-0.130	-0.063	0.121	0.005	-0.124	-0.055	-0.265
49	-0.016	-0.163	-0.198	-0.212	-0.236	-0.026	-0.199	-0.305	-0.101	-0.084	-0.153	-0.231	-0.148	-0.064	0.370	0.178	-0.070	-0.232
50	-0.104	-0.108	-0.227	-0.187	-0.323	-0.092	-0.117	-0.193	-0.079	-0.054	-0.142	-0.193	-0.227	-0.226	0.098	0.227	-0.147	-0.181
51	-0.026	-0.099	-0.131	-0.117	-0.096	-0.128	-0.203	-0.160	-0.149	-0.241	-0.108	-0.124	-0.235	-0.147	-0.257	-0.255	0.129	-0.047
52	-0.003	-0.012	-0.068	-0.103	-0.120	-0.018	-0.115	0.053	-0.185	-0.141	-0.093	-0.185	-0.216	-0.102	-0.136	-0.185	-0.016	0.123
53	0.063	-0.150	-0.078	0.017	-0.067	-0.067	-0.054	-0.041	-0.029	-0.041	-0.093	-0.031	-0.083	-0.108	-0.211	-0.190	-0.142	-0.153

54	-0.659	-0.408	-0.872	-0.748	-0.740	-1.139	-1.006	-0.949	-0.702	-0.613	-0.923	-0.844	-0.988	-1.122	-0.715	-0.725	-0.981	-0.826
55	-0.469	-0.354	-0.604	-0.658	-0.548	-0.742	-0.835	-0.722	-0.613	-0.607	-0.684	-0.681	-0.686	-0.849	-0.620	-0.592	-0.786	-0.605
56	-0.759	-0.490	-0.828	-0.871	-0.745	-0.973	-1.049	-1.057	-0.744	-0.609	-0.893	-0.788	-0.965	-1.093	-0.880	-0.775	-0.989	-0.767
57	-0.806	-0.605	-0.923	-0.947	-0.937	-1.226	-1.230	-1.087	-0.852	-0.968	-1.084	-0.935	-1.172	-1.365	-0.981	-0.966	-1.194	-0.905
58	-0.613	-0.519	-0.689	-0.678	-0.614	-1.018	-1.009	-0.901	-0.552	-0.570	-0.889	-0.733	-0.827	-1.079	-0.629	-0.651	-0.925	-0.624
59	-0.552	-0.351	-0.549	-0.598	-0.629	-0.722	-0.715	-0.673	-0.576	-0.588	-0.663	-0.580	-0.649	-0.774	-0.491	-0.446	-0.744	-0.565
60	-0.649	-0.600	-0.750	-0.844	-0.841	-1.075	-1.043	-0.962	-0.809	-0.813	-0.988	-0.887	-0.975	-1.242	-0.790	-0.884	-1.083	-0.751
61	-0.530	-0.404	-0.598	-0.605	-0.625	-0.822	-0.790	-0.796	-0.486	-0.449	-0.742	-0.616	-0.705	-0.968	-0.640	-0.622	-0.837	-0.677
62	-0.657	-0.516	-0.641	-0.617	-0.557	-0.851	-0.892	-0.808	-0.551	-0.572	-0.830	-0.707	-0.849	-1.039	-0.671	-0.699	-0.933	-0.652
63	-0.929	-0.631	-0.969	-0.911	-1.002	-1.233	-1.240	-1.130	-0.773	-0.773	-1.124	-0.977	-1.104	-1.342	-0.912	-0.894	-1.150	-0.937
64	-0.706	-0.474	-0.715	-0.650	-0.715	-0.971	-0.957	-0.966	-0.501	-0.444	-0.771	-0.648	-0.847	-0.941	-0.755	-0.603	-0.976	-0.649
65	-0.805	-0.581	-0.932	-0.942	-0.836	-1.176	-1.228	-1.132	-0.722	-0.800	-0.959	-0.766	-0.987	-1.193	-0.861	-0.822	-1.109	-0.860
66	-0.692	-0.475	-0.783	-0.821	-0.773	-0.908	-0.957	-0.903	-0.701	-0.685	-0.849	-0.799	-0.813	-0.948	-0.712	-0.714	-0.797	-0.726
77	-0.222	-0.133	-0.397	-0.439	-0.465	-0.329	-0.369	-0.437	-0.340	-0.410	-0.433	-0.407	-0.633	-0.561	-0.357	-0.393	-0.517	-0.374
78	-0.301	-0.316	-0.334	-0.636	-0.458	-0.393	-0.536	-0.637	-0.398	-0.405	-0.534	-0.485	-0.626	-0.590	-0.300	-0.481	-0.488	-0.493
79	-0.331	-0.276	-0.391	-0.534	-0.451	-0.427	-0.655	-0.613	-0.331	-0.274	-0.510	-0.415	-0.513	-0.675	-0.250	-0.353	-0.591	-0.470
85	-0.126	-0.118	-0.194	-0.139	-0.157	-0.241	-0.200	-0.314	-0.315	-0.179	-0.161	-0.147	-0.261	-0.250	-0.030	-0.128	-0.340	-0.211
86	-0.355	-0.308	-0.529	-0.614	-0.527	-0.373	-0.621	-0.706	-0.497	-0.531	-0.428	-0.552	-0.546	-0.655	-0.268	-0.340	-0.556	-0.577
87	-0.346	-0.317	-0.493	-0.745	-0.655	-0.400	-0.687	-0.823	-0.769	-0.609	-0.700	-0.644	-0.879	-0.837	-0.455	-0.591	-0.789	-0.618
89	-0.372	-0.348	-0.536	-0.644	-0.528	-0.437	-0.624	-0.608	-0.486	-0.440	-0.567	-0.536	-0.662	-0.719	-0.301	-0.438	-0.668	-0.581
90	-0.161	-0.203	-0.182	-0.325	-0.237	-0.355	-0.376	-0.485	-0.324	-0.268	-0.360	-0.242	-0.320	-0.446	-0.227	-0.295	-0.384	-0.383
96	-0.117	-0.255	-0.240	-0.276	-0.248	-0.094	-0.334	-0.286	-0.288	-0.199	-0.431	-0.371	-0.410	-0.531	-0.322	-0.415	-0.414	-0.385
97	-0.150	-0.268	-0.288	-0.330	-0.317	-0.161	-0.348	-0.474	-0.473	-0.245	-0.338	-0.473	-0.644	-0.595	-0.205	-0.363	-0.495	-0.455
99	-0.134	-0.140	-0.119	-0.223	-0.172	0.092	-0.074	-0.161	-0.183	-0.272	-0.177	-0.206	-0.410	-0.264	-0.165	-0.198	-0.232	-0.212
100	-0.240	-0.386	-0.526	-0.511	-0.531	-0.108	-0.403	-0.548	-0.469	-0.432	-0.575	-0.536	-0.766	-0.727	-0.415	-0.522	-0.617	-0.531
101	-0.159	-0.036	-0.259	-0.246	-0.248	-0.170	-0.262	-0.315	-0.318	-0.223	-0.317	-0.188	-0.366	-0.404	-0.159	-0.171	-0.335	-0.263
102	-0.214	-0.189	-0.373	-0.259	-0.109	-0.114	-0.196	-0.219	-0.213	-0.296	-0.240	-0.210	-0.302	-0.267	-0.246	-0.317	-0.315	-0.389
103	-0.132	-0.134	-0.181	-0.231	-0.197	-0.107	-0.277	-0.274	-0.208	-0.161	-0.330	-0.256	-0.394	-0.336	-0.121	-0.241	-0.244	-0.218
104	-0.039	-0.070	-0.140	-0.214	-0.045	0.068	-0.112	-0.091	-0.071	-0.214	-0.052	-0.174	-0.080	-0.078	-0.107	-0.110	-0.062	-0.147
105	-0.321	-0.230	-0.427	-0.513	-0.511	-0.303	-0.451	-0.627	-0.534	-0.402	-0.596	-0.406	-0.614	-0.655	-0.278	-0.361	-0.631	-0.518
106	-0.121	-0.145	-0.231	-0.279	-0.264	-0.103	-0.222	-0.280	-0.387	-0.209	-0.364	-0.227	-0.413	-0.348	-0.116	-0.204	-0.416	-0.302
107	-0.061	-0.142	-0.242	-0.180	-0.296	-0.164	-0.279	-0.361	-0.303	-0.261	-0.382	-0.345	-0.523	-0.490	-0.227	-0.310	-0.293	-0.320
108	-0.173	-0.191	-0.322	-0.318	-0.347	-0.226	-0.334	-0.409	-0.455	-0.308	-0.436	-0.388	-0.664	-0.529	-0.198	-0.372	-0.460	-0.403
109	-0.290	-0.314	-0.323	-0.492	-0.414	-0.302	-0.547	-0.587	-0.573	-0.386	-0.591	-0.467	-0.809	-0.821	-0.340	-0.497	-0.514	-0.537
110	-0.289	-0.263	-0.359	-0.554	-0.422	-0.242	-0.457	-0.515	-0.569	-0.448	-0.405	-0.472	-0.654	-0.575	-0.348	-0.521	-0.517	-0.461
111	-0.092	-0.178	-0.210	-0.351	-0.291	-0.102	-0.269	-0.318	-0.434	-0.349	-0.337	-0.350	-0.578	-0.486	-0.215	-0.344	-0.453	-0.348
112	-0.334	-0.294	-0.461	-0.419	-0.455	-0.434	-0.413	-0.450	-0.441	-0.443	-0.551	-0.475	-0.545	-0.653	-0.453	-0.567	-0.565	-0.410
113	-0.520	-0.359	-0.685	-0.562	-0.598	-0.549	-0.594	-0.665	-0.645	-0.526	-0.708	-0.646	-0.770	-0.684	-0.590	-0.679	-0.771	-0.576
114	-0.617	-0.426	-0.714	-0.581	-0.619	-0.658	-0.639	-0.750	-0.710	-0.656	-0.910	-0.798	-0.995	-0.908	-0.741	-0.877	-0.849	-0.666
115	-0.543	-0.513	-0.618	-0.617	-0.717	-0.509	-0.641	-0.680	-0.621	-0.654	-0.769	-0.804	-0.810	-0.931	-0.656	-0.711	-0.810	-0.706
116	-0.123	-0.100	-0.308	-0.242	-0.215	-0.194	-0.200	-0.240	-0.228	-0.237	-0.202	-0.175	-0.252	-0.234	-0.057	-0.054	-0.264	-0.082
117	-0.349	-0.177	-0.322	-0.394	-0.398	-0.435	-0.540	-0.490	-0.445	-0.431	-0.353	-0.352	-0.560	-0.620	-0.375	-0.421	-0.490	-0.380
118	-0.443	-0.304	-0.569	-0.508	-0.564	-0.548	-0.566	-0.557	-0.647	-0.499	-0.668	-0.623	-0.754	-0.665	-0.593	-0.556	-0.638	-0.514
119	-0.764	-0.640	-0.909	-0.939	-1.058	-0.864	-0.959	-1.062	-0.953	-0.986	-1.119	-1.047	-1.244	-1.304	-0.871	-0.981	-1.120	-0.961
120	-0.778	-0.492	-0.857	-0.736	-0.704	-0.693	-0.787	-0.917	-0.810	-0.744	-0.924	-0.908	-0.943	-0.881	-0.845	-0.762	-1.016	-0.842
121	-0.921	-0.715	-1.238	-1.133	-1.228	-1.032	-1.250	-1.326	-1.251	-1.170	-1.337	-1.343	-1.566	-1.453	-1.146	-1.216	-1.368	-1.160
122	-0.513	-0.558	-0.687	-0.805	-0.874	-0.504	-0.685	-0.892	-0.814	-0.792	-0.955	-0.925	-1.023	-1.030	-0.637	-0.783	-0.942	-0.705
123	-0.581	-0.471	-0.710	-0.633	-0.843	-0.728	-0.734	-0.850	-0.843	-0.683	-0.845	-0.861	-0.987	-1.059	-0.821	-0.758	-0.940	-0.745
124	-0.493	-0.391	-0.497	-0.603	-0.535	-0.452	-0.576	-0.559	-0.565	-0.613	-0.718	-0.561	-0.782	-0.765	-0.509	-0.633	-0.697	-0.405
125	-0.763	-0.696	-0.834	-0.818	-0.938	-0.767	-0.967	-0.934	-0.870	-0.849	-1.039	-0.881	-1.104	-1.261	-0.913	-1.004	-0.997	-0.809
126	-0.477	-0.466	-0.674	-0.609	-0.738	-0.556	-0.704	-0.763	-0.759	-0.635	-0.788	-0.823	-0.928	-0.895	-0.751	-0.780	-0.884	-0.584
127	-0.375	-0.210	-0.245	-0.353	-0.474	-0.365	-0.434	-0.437	-0.313	-0.430	-0.526	-0.316	-0.592	-0.617	-0.428	-0.392	-0.403	-0.269
128	-0.605	-0.633	-0.738	-0.704	-0.789	-0.609	-0.842	-0.946	-0.884	-0.716	-0.885	-0.849	-1.014	-1.106	-0.879	-0.888	-0.914	-0.766
129	-0.443	-0.366	-0.559	-0.566	-0.691	-0.519	-0.552	-0.647	-0.580	-0.577	-0.616	-0.727	-0.700	-0.765	-0.583	-0.605	-0.639	-0.447
130	-0.652	-0.602	-0.753	-0.629	-0.814	-0.581	-0.754	-0.824	-0.895	-0.800	-0.853	-0.870	-0.983	-0.983	-0.815	-0.814	-0.945	-0.810
131	-0.510	-0.440	-0.437	-0.547	-0.688	-0.504	-0.626	-0.643	-0.616	-0.555	-0.722	-0.618	-0.763	-0.835	-0.613	-0.686	-0.610	-0.567
132	-0.585	-0.419	-0.669	-0.581	-0.698	-0.539	-0.639	-0.634	-0.760	-0.617	-0.820	-0.742	-0.839	-0.969	-0.646	-0.657	-0.887	-0.637
133	-0.641	-0.575	-0.803	-0.717	-0.574	-0.709	-0.945	-0.821	-0.771	-0.579	-0.739	-0.748	-0.787	-0.960	-0.574	-0.751	-0.800	-0.821
134	-1.113	-1.042	-1.349	-1.181	-1.200	-1.235	-1.634	-1.574	-1.158	-1.075	-1.462	-1.457	-1.607	-1.775	-1.106	-1.475	-1.494	-1.575
135	-0.977	-0.831	-1.141	-1.013	-0.891	-0.958	-1.197	-1.265	-0.827	-0.992	-1.297	-1.164	-1.220	-1.365	-0.836	-1.138	-1.252	-1.167

80	-0.224	-0.142	-0.206	-0.387	-0.254	-0.209	-0.269	-0.375	-0.194	-0.225	-0.372	-0.318	-0.425	-0.418	-0.218	-0.247	-0.400	-0.246
81	0.001	-0.074	-0.065	-0.095	-0.091	-0.070	-0.056	-0.147	-0.091	0.018	-0.089	-0.044	-0.127	-0.116	0.004	-0.048	-0.127	-0.086
82	-0.034	-0.088	0.022	-0.132	-0.107	-0.079	-0.156	-0.171	-0.079	-0.004	-0.098	0.001	-0.095	-0.169	-0.122	-0.051	-0.088	-0.017
83	-0.038	-0.062	-0.136	-0.141	-0.201	-0.211	-0.205	-0.241	-0.263	-0.104	-0.143	-0.246	-0.321	-0.277	-0.014	-0.124	-0.218	-0.134
84	-0.048	-0.072	-0.110	-0.109	-0.165	-0.112	-0.267	-0.280	-0.193	-0.092	-0.222	-0.138	-0.219	-0.283	-0.063	-0.053	-0.177	-0.170
88	-0.181	-0.205	-0.242	-0.241	-0.177	-0.187	-0.311	-0.376	-0.295	-0.181	-0.172	-0.280	-0.351	-0.412	-0.178	-0.245	-0.322	-0.230
91	-0.070	0.006	-0.043	-0.242	-0.131	-0.036	-0.030	-0.205	-0.020	0.009	-0.104	-0.072	-0.200	-0.028	0.069	-0.080	-0.175	-0.143
92	0.001	0.000	-0.107	-0.124	-0.066	-0.135	-0.095	-0.105	-0.114	-0.162	-0.066	-0.111	-0.124	-0.051	0.056	-0.008	-0.151	-0.088
93	-0.008	-0.142	0.020	-0.087	-0.135	0.040	-0.087	-0.231	-0.027	-0.008	-0.114	-0.135	-0.174	-0.116	-0.093	-0.154	-0.102	-0.149
94	0.172	-0.037	0.027	-0.034	-0.052	0.137	0.101	-0.001	-0.005	-0.012	-0.016	-0.066	-0.119	-0.019	0.028	-0.026	0.001	0.101
95	0.179	0.055	0.228	0.178	0.130	0.105	0.064	0.038	0.025	0.014	0.061	0.056	0.038	0.080	0.108	0.008	0.046	0.043
98	-0.023	0.013	-0.033	0.025	0.030	0.040	-0.052	-0.035	0.043	-0.061	-0.019	-0.014	-0.032	-0.047	0.017	-0.035	-0.058	0.077

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.

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
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	0.204	0.000	0.000	0.000	0.000	0.000	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	-0.431	0.375	0.000	0.000	0.000	0.000	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	-0.334	0.102	0.415	0.000	0.000	0.000	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	-0.429	0.011	0.048	0.376	0.000	0.000	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	-0.483	0.281	-0.026	0.049	0.408	0.000	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	-0.523	-0.156	-0.009	0.005	-0.144	0.316	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	-0.637	-0.164	-0.089	0.020	-0.178	0.423	0.540	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	-0.614	-0.053	-0.188	0.025	-0.119	0.299	0.586	0.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	-0.410	-0.074	-0.001	-0.020	-0.014	0.065	-0.007	0.004	0.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	-0.399	-0.024	-0.044	0.067	-0.130	0.026	0.031	0.013	0.193	0.351	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	-0.334	-0.036	0.215	-0.125	-0.029	0.074	-0.101	-0.078	-0.037	-0.080	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	-0.383	-0.057	-0.085	-0.095	-0.059	-0.039	-0.099	-0.080	0.069	0.173	0.058	0.380	0.000	0.000	0.000	0.000	0.000	0.000
31	-0.427	-0.059	-0.038	-0.120	-0.043	-0.201	-0.074	-0.045	0.115	0.218	-0.044	0.482	0.511	0.000	0.000	0.000	0.000	0.000
32	-0.409	0.083	-0.020	0.084	0.032	-0.085	-0.090	-0.112	-0.125	-0.035	0.068	-0.012	-0.092	0.451	0.000	0.000	0.000	0.000
33	-0.281	0.015	0.100	0.056	0.182	-0.109	-0.080	-0.074	-0.128	-0.217	0.082	-0.148	-0.092	0.154	0.373	0.000	0.000	0.000
34	-0.408	0.134	-0.023	-0.003	0.182	-0.092	-0.141	-0.142	-0.046	-0.187	0.013	-0.099	-0.028	0.127	0.280	0.511	0.000	0.000
35	-0.023	-0.544	-0.568	-0.553	-0.617	-0.488	-0.754	-0.810	-0.483	-0.516	-0.476	-0.518	-0.767	-0.688	-0.568	-0.725	0.287	0.000
36	-0.045	-0.418	-0.570	-0.392	-0.447	-0.470	-0.545	-0.601	-0.517	-0.396	-0.353	-0.463	-0.518	-0.482	-0.437	-0.481	0.161	0.191
37	-0.029	-0.515	-0.480	-0.550	-0.442	-0.591	-0.668	-0.718	-0.498	-0.515	-0.435	-0.543	-0.691	-0.577	-0.512	-0.601	0.041	0.090
38	0.007	-0.555	-0.437	-0.483	-0.561	-0.614	-0.775	-0.731	-0.474	-0.556	-0.525	-0.541	-0.665	-0.648	-0.533	-0.561	0.019	-0.025
39	-0.054	-0.651	-0.577	-0.555	-0.714	-0.523	-0.860	-0.803	-0.494	-0.624	-0.491	-0.633	-0.901	-0.754	-0.573	-0.734	0.102	-0.094
40	-0.077	-0.398	-0.521	-0.458	-0.540	-0.496	-0.698	-0.738	-0.488	-0.523	-0.455	-0.545	-0.710	-0.529	-0.382	-0.557	-0.026	-0.038
41	-0.025	-0.524	-0.700	-0.667	-0.710	-0.682	-0.979	-0.999	-0.658	-0.673	-0.735	-0.769	-0.954	-0.878	-0.584	-0.823	0.044	-0.012
42	0.015	-0.601	-0.591	-0.542	-0.711	-0.674	-1.010	-1.114	-0.652	-0.658	-0.637	-0.752	-0.899	-0.892	-0.590	-0.723	-0.006	0.001
43	-0.109	-0.511	-0.488	-0.482	-0.510	-0.417	-0.717	-0.701	-0.500	-0.469	-0.374	-0.482	-0.686	-0.639	-0.563	-0.667	-0.092	-0.055
44	-0.129	-0.577	-0.797	-0.705	-0.649	-0.687	-0.978	-1.006	-0.641	-0.589	-0.605	-0.762	-0.933	-0.796	-0.627	-0.700	-0.075	0.072
45	-0.183	-0.727	-0.766	-0.653	-0.795	-0.633	-0.855	-0.884	-0.529	-0.601	-0.619	-0.735	-0.994	-0.873	-0.708	-0.990	0.037	0.006
46	0.003	-0.669	-0.522	-0.720	-0.723	-0.676	-0.994	-1.022	-0.597	-0.577	-0.595	-0.622	-0.777	-0.769	-0.607	-0.762	0.012	-0.168
47	-0.012	-0.623	-0.583	-0.594	-0.690	-0.601	-0.830	-0.810	-0.653	-0.638	-0.536	-0.626	-0.851	-0.852	-0.666	-0.795	0.025	-0.037
48	-0.199	-0.530	-0.638	-0.605	-0.617	-0.484	-0.773	-0.827	-0.527	-0.563	-0.489	-0.575	-0.759	-0.853	-0.596	-0.816	-0.023	0.072
49	-0.083	-0.544	-0.601	-0.542	-0.612	-0.508	-0.734	-0.740	-0.520	-0.558	-0.477	-0.648	-0.782	-0.631	-0.505	-0.701	-0.014	0.128
50	-0.043	-0.529	-0.478	-0.506	-0.607	-0.516	-0.810	-0.729	-0.539	-0.557	-0.386	-0.578	-0.766	-0.651	-0.513	-0.608	-0.160	0.036
51	-0.147	-0.545	-0.495	-0.483	-0.600	-0.462	-0.677	-0.822	-0.592	-0.503	-0.392	-0.572	-0.823	-0.632	-0.519	-0.720	-0.006	-0.097
52	-0.193	-0.494	-0.551	-0.605	-0.551	-0.520	-0.771	-0.790	-0.606	-0.485	-0.472	-0.586	-0.845	-0.709	-0.589	-0.714	-0.033	0.038
53	0.439	-0.413	-0.311	-0.481	-0.408	-0.396	-0.640	-0.553	-0.303	-0.379	-0.265	-0.338	-0.512	-0.486	-0.353	-0.342	-0.008	-0.079

54	-0.607	-0.657	-0.610	-0.690	-0.683	-0.496	-0.979	-0.870	-0.598	-0.652	-0.416	-0.624	-1.017	-0.743	-0.769	-0.851	-1.068	-0.744
55	-0.570	-0.456	-0.508	-0.453	-0.461	-0.371	-0.687	-0.623	-0.350	-0.353	-0.435	-0.470	-0.761	-0.560	-0.619	-0.638	-0.750	-0.593
56	-0.719	-0.597	-0.741	-0.743	-0.628	-0.638	-1.037	-1.017	-0.416	-0.583	-0.608	-0.622	-0.806	-0.749	-0.780	-0.835	-1.055	-0.750
57	-0.814	-0.888	-0.841	-0.927	-0.891	-0.765	-1.294	-1.252	-0.710	-0.724	-0.623	-0.652	-1.140	-0.872	-0.960	-0.971	-1.347	-0.978
58	-0.513	-0.561	-0.526	-0.607	-0.618	-0.566	-0.853	-0.760	-0.544	-0.369	-0.371	-0.494	-0.736	-0.558	-0.646	-0.674	-0.950	-0.765
59	-0.480	-0.504	-0.513	-0.492	-0.530	-0.403	-0.789	-0.769	-0.347	-0.412	-0.406	-0.401	-0.628	-0.582	-0.599	-0.655	-0.721	-0.515
60	-0.649	-0.745	-0.643	-0.723	-0.677	-0.584	-1.032	-0.975	-0.471	-0.555	-0.490	-0.531	-0.847	-0.765	-0.800	-0.880	-1.027	-0.739
61	-0.522	-0.616	-0.551	-0.533	-0.658	-0.608	-0.950	-0.854	-0.583	-0.584	-0.404	-0.531	-0.707	-0.534	-0.560	-0.721	-0.988	-0.661
62	-0.556	-0.654	-0.634	-0.545	-0.635	-0.616	-0.931	-0.940	-0.586	-0.625	-0.533	-0.553	-0.846	-0.667	-0.691	-0.769	-1.029	-0.791
63	-0.769	-0.897	-0.805	-0.778	-0.804	-0.822	-1.310	-1.304	-0.853	-0.859	-0.694	-0.898	-1.217	-0.916	-0.910	-1.050	-1.307	-0.937
64	-0.635	-0.718	-0.603	-0.662	-0.693	-0.570	-0.917	-0.876	-0.635	-0.634	-0.388	-0.644	-0.899	-0.568	-0.674	-0.778	-0.997	-0.640
65	-0.597	-0.796	-0.753	-0.767	-0.776	-0.703	-1.117	-1.053	-0.412	-0.549	-0.517	-0.585	-0.845	-0.725	-0.747	-0.856	-1.149	-0.840
66	-0.609	-0.634	-0.706	-0.630	-0.674	-0.613	-1.016	-0.935	-0.457	-0.481	-0.426	-0.626	-0.848	-0.681	-0.710	-0.804	-0.987	-0.664
77	-0.486	-0.792	-0.825	-0.774	-0.724	-0.656	-1.099	-1.140	-0.831	-0.897	-0.744	-0.884	-1.134	-0.861	-0.856	-1.142	-0.358	-0.327
78	-0.450	-0.981	-0.991	-0.867	-0.951	-0.841	-1.261	-1.284	-0.874	-0.903	-0.764	-1.025	-1.295	-0.895	-0.937	-1.333	-0.492	-0.344
79	-0.372	-0.850	-0.890	-0.782	-0.812	-0.687	-1.165	-1.160	-0.830	-0.751	-0.637	-0.909	-1.079	-0.863	-0.784	-1.047	-0.454	-0.287
85	-0.138	-0.402	-0.361	-0.325	-0.436	-0.287	-0.436	-0.421	-0.322	-0.387	-0.240	-0.411	-0.561	-0.373	-0.411	-0.398	-0.252	-0.115
86	-0.483	-0.814	-0.975	-0.812	-0.903	-0.738	-1.078	-1.108	-0.803	-0.763	-0.730	-0.868	-1.157	-0.880	-0.858	-1.109	-0.662	-0.330
87	-0.753	-0.981	-1.042	-1.023	-1.081	-0.909	-1.293	-1.384	-1.118	-1.117	-0.867	-1.101	-1.579	-1.076	-1.107	-1.471	-0.628	-0.484
89	-0.437	-0.888	-0.913	-0.844	-0.858	-0.645	-1.058	-1.149	-0.815	-0.884	-0.763	-1.009	-1.207	-1.026	-0.797	-1.131	-0.493	-0.373
90	-0.262	-0.480	-0.534	-0.724	-0.476	-0.528	-0.789	-0.781	-0.574	-0.495	-0.400	-0.602	-0.809	-0.550	-0.503	-0.708	-0.355	-0.235
96	-0.169	-0.682	-0.744	-0.711	-0.741	-0.591	-0.855	-0.947	-0.749	-0.733	-0.682	-0.893	-0.963	-0.879	-0.690	-0.847	-0.348	-0.274
97	-0.263	-0.733	-0.903	-0.793	-0.767	-0.734	-1.089	-1.145	-0.771	-0.750	-0.807	-0.940	-1.064	-1.028	-0.793	-1.026	-0.348	-0.223
99	-0.180	-0.460	-0.498	-0.426	-0.578	-0.512	-0.688	-0.820	-0.611	-0.522	-0.471	-0.614	-0.767	-0.700	-0.507	-0.700	-0.130	-0.095
100	-0.342	-1.374	-1.304	-1.281	-1.370	-1.247	-1.838	-1.872	-1.256	-1.276	-1.264	-1.375	-1.664	-1.586	-1.151	-1.674	-0.506	-0.295
101	-0.284	-0.431	-0.491	-0.476	-0.527	-0.338	-0.669	-0.712	-0.531	-0.381	-0.356	-0.520	-0.727	-0.539	-0.504	-0.625	-0.185	-0.019
102	-0.200	-0.426	-0.534	-0.455	-0.613	-0.499	-0.703	-0.723	-0.437	-0.405	-0.541	-0.549	-0.665	-0.620	-0.451	-0.670	-0.110	-0.185
103	-0.197	-0.339	-0.503	-0.446	-0.416	-0.510	-0.671	-0.726	-0.524	-0.469	-0.380	-0.590	-0.623	-0.481	-0.537	-0.577	-0.164	-0.109
104	-0.106	-0.179	-0.275	-0.391	-0.342	-0.245	-0.369	-0.395	-0.349	-0.225	-0.288	-0.303	-0.389	-0.410	-0.306	-0.417	0.155	-0.064
105	-0.240	-0.734	-0.763	-0.790	-0.853	-0.777	-1.213	-1.190	-0.772	-0.766	-0.624	-0.922	-1.189	-0.937	-0.651	-0.954	-0.196	-0.136
106	-0.181	-0.394	-0.588	-0.503	-0.578	-0.555	-0.884	-0.853	-0.612	-0.574	-0.555	-0.702	-0.818	-0.670	-0.406	-0.622	-0.166	-0.044
107	-0.091	-0.691	-0.680	-0.598	-0.710	-0.734	-0.978	-1.009	-0.690	-0.810	-0.565	-0.797	-0.913	-0.714	-0.538	-0.769	-0.170	-0.130
108	-0.284	-0.620	-0.835	-0.531	-0.760	-0.695	-1.036	-0.993	-0.690	-0.659	-0.713	-0.841	-0.962	-0.730	-0.659	-0.819	-0.234	-0.087
109	-0.398	-0.976	-0.951	-0.849	-0.991	-0.849	-1.311	-1.369	-0.962	-0.797	-0.825	-1.038	-1.192	-1.094	-0.794	-1.148	-0.165	-0.201
110	-0.353	-0.634	-0.830	-0.733	-0.826	-0.734	-1.066	-1.094	-0.806	-0.765	-0.715	-0.998	-1.130	-0.972	-0.698	-1.021	-0.153	-0.171
111	-0.326	-0.636	-0.911	-0.828	-0.826	-0.663	-1.104	-1.125	-0.773	-0.752	-0.741	-0.982	-1.168	-1.056	-0.852	-1.136	-0.114	-0.173
112	-0.353	-0.124	-0.131	-0.144	-0.065	-0.106	-0.230	-0.269	-0.093	-0.122	0.016	-0.012	-0.082	-0.119	-0.043	0.041	-0.480	-0.229
113	-0.445	-0.184	-0.207	-0.282	-0.228	-0.134	-0.297	-0.361	-0.037	-0.148	-0.064	0.027	-0.090	-0.097	-0.276	-0.104	-0.747	-0.473
114	-0.632	-0.181	-0.086	-0.265	-0.209	-0.035	-0.206	-0.321	-0.042	-0.191	0.015	-0.063	-0.221	-0.123	-0.293	-0.092	-0.854	-0.572
115	-0.565	-0.144	-0.229	-0.124	-0.215	-0.198	-0.230	-0.283	-0.041	-0.154	-0.076	-0.172	-0.129	-0.155	-0.199	-0.165	-0.778	-0.522
116	-0.120	-0.171	-0.098	-0.132	-0.126	-0.083	-0.125	-0.167	-0.024	-0.154	0.012	-0.086	-0.130	-0.036	0.005	0.025	-0.247	-0.103
117	-0.389	-0.179	-0.145	-0.160	-0.133	-0.118	-0.117	-0.181	-0.002	-0.038	-0.069	-0.097	-0.001	-0.183	-0.223	-0.125	-0.447	-0.236
118	-0.400	-0.215	-0.137	-0.136	-0.216	-0.083	-0.170	-0.195	-0.127	-0.210	0.043	-0.107	-0.198	0.023	-0.084	-0.005	-0.704	-0.454
119	-0.714	-0.262	-0.398	-0.321	-0.323	-0.304	-0.537	-0.678	-0.158	-0.143	-0.224	-0.348	-0.312	-0.208	-0.346	-0.171	-1.091	-0.692
120	-0.590	-0.146	-0.159	-0.136	-0.167	-0.125	-0.187	-0.274	-0.086	-0.119	-0.088	-0.195	-0.207	-0.120	-0.157	-0.162	-0.936	-0.647
121	-1.025	-0.244	-0.305	-0.237	-0.235	-0.178	-0.429	-0.581	-0.271	-0.307	-0.203	-0.407	-0.429	-0.169	-0.363	-0.150	-1.316	-0.837
122	-0.568	-0.036	-0.298	-0.227	-0.291	-0.320	-0.449	-0.403	0.002	-0.114	-0.140	-0.112	-0.090	-0.239	-0.259	-0.206	-0.918	-0.600
123	-0.521	-0.008	-0.169	-0.210	-0.101	-0.104	-0.298	-0.358	-0.161	-0.210	-0.047	-0.310	-0.331	-0.001	-0.235	0.022	-0.879	-0.584
124	-0.494	-0.277	-0.285	-0.280	-0.423	-0.139	-0.197	-0.389	-0.063	-0.083	-0.167	-0.066	-0.026	-0.251	-0.325	-0.203	-0.614	-0.442
125	-0.649	-0.324	-0.303	-0.346	-0.383	-0.262	-0.422	-0.513	-0.154	-0.156	-0.176	-0.185	-0.118	-0.252	-0.337	-0.180	-1.047	-0.774
126	-0.484	-0.014	-0.181	-0.241	-0.159	-0.237	-0.396	-0.481	-0.201	-0.136	-0.129	-0.262	-0.211	-0.168	-0.300	-0.055	-0.797	-0.583
127	-0.256	-0.225	-0.221	-0.110	-0.197	-0.182	-0.234	-0.299	-0.097	-0.032	-0.169	-0.123	-0.040	-0.123	-0.236	-0.132	-0.500	-0.253
128	-0.578	-0.192	-0.344	-0.209	-0.349	-0.239	-0.342	-0.436	-0.141	-0.186	-0.236	-0.210	-0.301	-0.287	-0.308	-0.222	-0.813	-0.737
129	-0.421	-0.222	-0.240	-0.265	-0.289	-0.286	-0.374	-0.383	-0.141	-0.134	-0.147	-0.220	-0.119	-0.203	-0.307	-0.167	-0.737	-0.403
130	-0.504	-0.091	-0.091	-0.119	-0.087	-0.055	-0.283	-0.369	-0.125	-0.101	0.113	-0.151	-0.200	-0.066	-0.144	-0.011	-0.782	-0.607
131	-0.518	-0.154	-0.408	-0.209	-0.214	-0.347	-0.432	-0.407	-0.177	-0.150	-0.143	-0.102	-0.108	-0.262	-0.224	-0.192	-0.803	-0.487
132	-0.560	-0.163	-0.270	-0.085	-0.055	-0.213	-0.350	-0.404	-0.110	-0.203	-0.031	-0.236	-0.265	-0.107	-0.072	-0.128	-0.795	-0.549
133	-0.693	-0.575	-0.594	-0.554	-0.641	-0.506	-0.725	-0.752	-0.660	-0.758	-0.547	-0.604	-0.906	-0.708	-0.540	-0.716	-0.797	-0.694
134	-1.120	-1.129	-1.287	-1.063	-1.183	-0.919	-1.388	-1.432	-1.316	-1.327	-1.323	-1.171	-1.675	-1.447	-1.370	-1.618	-1.527	-1.148
135	-0.935	-0.931	-1.033	-0.911	-0.913	-0.777	-1.194	-1.225	-0.970	-1.061	-1.085	-0.934	-1.372	-1.198	-1.122	-1.272	-1.209	-0.974

80	-0.263	-0.666	-0.721	-0.612	-0.704	-0.583	-0.899	-0.854	-0.624	-0.617	-0.579	-0.665	-0.799	-0.659	-0.730	-0.870	-0.402	-0.170
81	0.048	-0.161	-0.082	-0.156	-0.207	-0.074	-0.237	-0.202	-0.105	-0.080	-0.063	-0.086	-0.076	-0.183	-0.097	-0.156	-0.174	-0.129
82	-0.085	-0.002	-0.065	0.046	-0.003	0.010	0.014	-0.013	-0.074	0.004	0.018	-0.062	-0.062	0.164	-0.025	-0.007	0.026	0.024
83	-0.232	-0.258	-0.296	-0.154	-0.243	-0.098	-0.154	-0.222	-0.219	-0.133	-0.201	-0.246	-0.311	-0.301	-0.211	-0.311	-0.115	-0.013
84	-0.078	-0.194	-0.262	-0.124	-0.298	-0.251	-0.329	-0.336	-0.213	-0.280	-0.201	-0.232	-0.246	-0.255	-0.297	-0.184	-0.051	0.003
88	-0.274	-0.605	-0.608	-0.438	-0.613	-0.395	-0.588	-0.568	-0.443	-0.455	-0.460	-0.622	-0.704	-0.576	-0.541	-0.776	-0.255	-0.118
91	-0.130	-0.162	-0.217	-0.226	-0.167	-0.076	-0.129	-0.158	-0.139	-0.143	-0.145	-0.278	-0.249	-0.153	-0.121	-0.185	-0.146	-0.016
92	-0.167	-0.199	-0.191	-0.196	-0.273	-0.091	-0.210	-0.256	-0.165	-0.146	-0.140	-0.169	-0.307	-0.108	-0.143	-0.275	-0.120	-0.113
93	-0.105	-0.157	-0.150	-0.083	-0.082	-0.180	-0.282	-0.221	-0.177	-0.211	-0.116	-0.117	-0.089	-0.083	-0.170	-0.118	-0.176	-0.183
94	0.061	-0.332	-0.371	-0.373	-0.342	-0.290	-0.389	-0.442	-0.391	-0.370	-0.289	-0.419	-0.444	-0.477	-0.316	-0.397	0.091	0.023
95	0.141	-0.142	-0.249	-0.167	-0.095	-0.230	-0.242	-0.246	-0.189	-0.098	-0.221	-0.102	-0.144	-0.121	-0.157	-0.260	0.053	0.017
98	-0.014	-0.254	-0.143	-0.186	-0.176	-0.176	-0.181	-0.193	-0.190	-0.265	-0.182	-0.364	-0.321	-0.348	-0.200	-0.351	0.114	0.054

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	0.267	0.000	0.000	0.000	0.000	0.000	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	0.160	0.339	0.000	0.000	0.000	0.000	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	0.021	0.084	0.348	0.000	0.000	0.000	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	-0.007	-0.061	0.057	0.272	0.000	0.000	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	-0.050	-0.080	0.009	0.237	0.382	0.000	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	-0.116	0.130	-0.080	0.109	0.179	0.354	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	0.090	-0.020	0.010	0.027	-0.052	-0.049	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.037	-0.082	-0.093	-0.033	0.039	-0.065	0.210	0.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	-0.070	-0.037	-0.052	-0.070	0.028	0.019	-0.083	0.078	0.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	0.014	0.048	0.079	0.015	0.004	0.068	-0.001	0.002	0.033	0.312	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.002	0.018	-0.061	-0.073	-0.118	0.043	-0.049	-0.126	0.020	0.149	0.336	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	-0.179	-0.129	-0.028	-0.036	-0.013	-0.095	-0.092	0.036	0.133	-0.062	0.260	0.384	0.000	0.000	0.000	0.000	0.000	0.000
49	-0.036	-0.116	-0.073	-0.034	-0.002	-0.160	-0.130	0.038	0.109	-0.175	0.045	0.204	0.262	0.000	0.000	0.000	0.000	0.000
50	0.014	-0.054	-0.098	-0.089	-0.099	-0.117	0.072	0.069	0.073	-0.014	-0.094	-0.008	0.491	0.285	0.000	0.000	0.000	0.000
51	-0.031	0.024	0.108	0.035	-0.129	0.063	0.015	-0.046	0.040	0.063	0.004	0.061	-0.101	-0.056	0.346	0.000	0.000	0.000
52	-0.014	-0.003	-0.037	0.010	-0.027	0.027	0.128	0.001	-0.075	-0.139	-0.076	-0.015	-0.044	0.029	0.146	0.358	0.000	0.000
53	0.007	0.110	0.132	-0.006	0.036	0.062	0.065	-0.073	-0.163	0.084	0.070	-0.076	-0.128	-0.023	-0.066	0.067	0.148	0.000

54	-0.813	-0.899	-0.900	-0.969	-1.214	-0.954	-0.575	-0.860	-1.090	-0.842	-0.931	-1.004	-0.955	-0.637	-0.877	-0.863	-0.271	0.542
55	-0.504	-0.714	-0.814	-0.744	-0.890	-0.673	-0.477	-0.686	-0.775	-0.672	-0.561	-0.788	-0.687	-0.653	-0.561	-0.736	-0.319	-0.049
56	-0.787	-0.906	-0.884	-0.790	-1.146	-0.901	-0.664	-0.828	-1.041	-0.710	-0.873	-0.912	-0.832	-0.705	-0.794	-0.997	-0.418	-0.118
57	-0.933	-1.076	-1.026	-1.105	-1.477	-1.143	-0.628	-1.115	-1.341	-1.001	-1.148	-1.247	-1.145	-0.832	-0.934	-1.102	-0.414	0.173
58	-0.645	-0.729	-0.858	-0.874	-1.053	-0.910	-0.423	-0.773	-0.959	-0.683	-0.832	-1.074	-0.859	-0.663	-0.768	-0.766	-0.239	0.145
59	-0.530	-0.696	-0.762	-0.699	-0.783	-0.669	-0.584	-0.717	-0.670	-0.553	-0.650	-0.737	-0.607	-0.424	-0.660	-0.761	-0.371	-0.101
60	-0.749	-0.848	-0.948	-0.906	-1.116	-0.933	-0.580	-0.871	-1.013	-0.772	-0.892	-0.997	-0.951	-0.719	-0.853	-0.807	-0.351	-0.001
61	-0.604	-0.663	-0.809	-0.731	-0.975	-0.720	-0.367	-0.624	-0.855	-0.739	-0.694	-0.850	-0.807	-0.549	-0.659	-0.780	-0.321	0.089
62	-0.721	-0.776	-0.922	-0.791	-1.068	-0.780	-0.373	-0.741	-0.958	-0.799	-0.874	-0.916	-0.869	-0.570	-0.770	-0.825	-0.367	0.106
63	-0.917	-1.017	-1.201	-1.205	-1.533	-1.170	-0.679	-0.973	-1.281	-1.026	-1.148	-1.243	-1.102	-0.831	-1.090	-1.183	-0.604	0.062
64	-0.643	-0.776	-0.930	-0.854	-1.140	-0.923	-0.475	-0.801	-0.960	-0.788	-0.885	-0.980	-0.818	-0.572	-0.706	-0.852	-0.396	-0.057
65	-0.809	-0.884	-0.943	-1.067	-1.411	-1.126	-0.685	-0.972	-1.140	-0.865	-0.964	-1.081	-0.973	-0.728	-0.936	-1.090	-0.369	-0.056
66	-0.729	-0.821	-0.779	-0.801	-1.054	-0.802	-0.604	-0.792	-0.774	-0.619	-0.763	-0.757	-0.713	-0.522	-0.687	-0.791	-0.352	-0.146
77	-0.298	-0.469	-0.431	-0.362	-0.478	-0.614	-0.365	-0.458	-0.531	-0.354	-0.551	-0.609	-0.331	-0.322	-0.358	-0.422	-0.300	-0.980
78	-0.392	-0.643	-0.462	-0.342	-0.636	-0.755	-0.421	-0.369	-0.501	-0.444	-0.492	-0.507	-0.187	-0.304	-0.406	-0.562	-0.410	-1.014
79	-0.310	-0.558	-0.574	-0.422	-0.638	-0.655	-0.330	-0.379	-0.552	-0.498	-0.504	-0.679	-0.314	-0.324	-0.503	-0.510	-0.309	-0.904
85	-0.231	-0.218	-0.222	-0.175	-0.351	-0.359	-0.243	-0.236	-0.327	-0.266	-0.220	-0.260	-0.173	-0.144	-0.292	-0.257	-0.191	-0.318
86	-0.375	-0.583	-0.657	-0.404	-0.660	-0.714	-0.431	-0.569	-0.626	-0.540	-0.536	-0.669	-0.347	-0.351	-0.543	-0.552	-0.338	-0.864
87	-0.490	-0.751	-0.794	-0.472	-0.816	-0.906	-0.474	-0.677	-0.798	-0.588	-0.743	-0.817	-0.470	-0.479	-0.666	-0.629	-0.506	-1.043
89	-0.460	-0.644	-0.597	-0.400	-0.583	-0.628	-0.602	-0.555	-0.568	-0.348	-0.572	-0.643	-0.389	-0.459	-0.607	-0.647	-0.335	-0.985
90	-0.306	-0.384	-0.453	-0.439	-0.378	-0.506	-0.316	-0.311	-0.471	-0.207	-0.306	-0.541	-0.333	-0.318	-0.372	-0.385	-0.172	-0.678
96	-0.276	-0.396	-0.441	-0.342	-0.469	-0.410	-0.334	-0.289	-0.471	-0.401	-0.344	-0.452	-0.374	-0.402	-0.560	-0.469	-0.335	-1.230
97	-0.437	-0.553	-0.582	-0.400	-0.396	-0.533	-0.494	-0.398	-0.462	-0.546	-0.596	-0.565	-0.377	-0.455	-0.577	-0.562	-0.355	-1.623
99	-0.254	-0.272	-0.286	-0.193	-0.147	-0.196	-0.274	-0.357	-0.186	-0.276	-0.364	-0.317	-0.241	-0.209	-0.316	-0.094	-0.255	-1.157
100	-0.525	-0.639	-0.622	-0.612	-0.532	-0.660	-0.548	-0.560	-0.595	-0.628	-0.723	-0.685	-0.428	-0.446	-0.784	-0.620	-0.313	-2.043
101	-0.123	-0.279	-0.269	-0.283	-0.315	-0.302	-0.208	-0.187	-0.327	-0.345	-0.298	-0.345	-0.078	-0.099	-0.270	-0.218	-0.273	-0.868
102	-0.329	-0.234	-0.161	-0.203	-0.218	-0.308	-0.282	-0.282	-0.306	-0.210	-0.256	-0.267	-0.267	-0.284	-0.300	-0.360	-0.177	-0.866
103	-0.083	-0.232	-0.336	-0.201	-0.328	-0.324	-0.175	-0.214	-0.341	-0.237	-0.312	-0.332	-0.164	-0.138	-0.246	-0.201	-0.252	-0.760
104	-0.081	-0.168	-0.063	-0.086	-0.114	-0.173	-0.141	-0.068	-0.099	-0.058	-0.028	-0.047	-0.126	-0.214	-0.120	-0.148	-0.089	-0.506
105	-0.396	-0.319	-0.390	-0.292	-0.463	-0.616	-0.343	-0.328	-0.545	-0.367	-0.428	-0.533	-0.183	-0.364	-0.652	-0.565	-0.178	-1.063
106	-0.260	-0.237	-0.310	-0.133	-0.193	-0.269	-0.265	-0.150	-0.346	-0.267	-0.332	-0.206	-0.016	-0.114	-0.468	-0.241	-0.151	-0.764
107	-0.257	-0.195	-0.400	-0.277	-0.451	-0.320	-0.365	-0.348	-0.440	-0.349	-0.425	-0.481	-0.276	-0.312	-0.500	-0.567	-0.181	-1.017
108	-0.352	-0.348	-0.384	-0.312	-0.412	-0.458	-0.412	-0.348	-0.555	-0.577	-0.565	-0.501	-0.184	-0.233	-0.507	-0.425	-0.290	-1.201
109	-0.360	-0.441	-0.529	-0.349	-0.628	-0.544	-0.419	-0.442	-0.712	-0.524	-0.571	-0.601	-0.331	-0.434	-0.570	-0.550	-0.328	-1.577
110	-0.400	-0.402	-0.455	-0.210	-0.459	-0.521	-0.421	-0.393	-0.561	-0.445	-0.494	-0.501	-0.264	-0.342	-0.507	-0.501	-0.244	-1.544
111	-0.315	-0.421	-0.264	-0.317	-0.298	-0.362	-0.366	-0.209	-0.301	-0.336	-0.388	-0.403	-0.183	-0.336	-0.439	-0.278	-0.296	-1.453
112	-0.390	-0.424	-0.461	-0.418	-0.499	-0.448	-0.366	-0.468	-0.591	-0.479	-0.486	-0.439	-0.485	-0.498	-0.571	-0.486	-0.248	-0.631
113	-0.567	-0.615	-0.756	-0.485	-0.752	-0.685	-0.579	-0.739	-0.811	-0.729	-0.640	-0.622	-0.590	-0.638	-0.695	-0.641	-0.297	-0.664
114	-0.721	-0.793	-0.835	-0.718	-0.984	-0.872	-0.627	-0.966	-1.036	-0.979	-0.875	-0.741	-0.807	-0.843	-0.757	-0.757	-0.425	-0.672
115	-0.651	-0.713	-0.814	-0.660	-0.811	-0.778	-0.596	-0.786	-0.727	-0.837	-0.885	-0.736	-0.777	-0.858	-0.801	-0.684	-0.460	-1.022
116	-0.121	-0.226	-0.200	-0.125	-0.221	-0.247	-0.164	-0.217	-0.285	-0.209	-0.243	-0.226	-0.096	-0.060	-0.194	-0.185	-0.072	-0.204
117	-0.233	-0.323	-0.422	-0.436	-0.595	-0.488	-0.403	-0.541	-0.417	-0.551	-0.498	-0.450	-0.461	-0.416	-0.462	-0.420	-0.268	-0.521
118	-0.542	-0.603	-0.629	-0.479	-0.763	-0.683	-0.523	-0.646	-0.787	-0.683	-0.680	-0.682	-0.675	-0.598	-0.671	-0.620	-0.323	-0.625
119	-0.954	-1.129	-1.178	-0.960	-1.235	-1.260	-0.977	-1.086	-1.198	-1.114	-1.220	-1.063	-1.011	-1.068	-1.225	-1.104	-0.654	-1.407
120	-0.722	-0.771	-0.841	-0.744	-1.057	-0.950	-0.761	-0.951	-0.939	-0.947	-0.889	-0.836	-0.727	-0.784	-0.887	-0.897	-0.502	-0.911
121	-1.059	-1.236	-1.432	-1.164	-1.507	-1.385	-1.084	-1.350	-1.476	-1.448	-1.330	-1.324	-1.136	-1.207	-1.318	-1.295	-0.913	-1.555
122	-0.795	-0.883	-1.009	-0.669	-1.010	-0.974	-0.728	-0.900	-0.914	-0.896	-0.969	-0.826	-0.766	-0.828	-0.973	-0.874	-0.506	-1.183
123	-0.654	-0.836	-0.899	-0.744	-1.015	-0.979	-0.738	-0.911	-1.021	-1.006	-0.962	-0.918	-0.855	-0.851	-0.872	-0.934	-0.487	-1.038
124	-0.626	-0.693	-0.631	-0.640	-0.815	-0.653	-0.516	-0.682	-0.772	-0.641	-0.763	-0.586	-0.635	-0.654	-0.595	-0.521	-0.433	-0.884
125	-0.855	-0.933	-1.119	-0.961	-1.265	-1.020	-0.906	-1.098	-1.105	-1.045	-1.110	-1.103	-1.048	-1.062	-1.098	-0.968	-0.593	-1.255
126	-0.602	-0.741	-0.841	-0.665	-0.887	-0.836	-0.698	-0.747	-0.894	-0.920	-0.823	-0.807	-0.764	-0.761	-0.840	-0.789	-0.418	-0.984
127	-0.403	-0.337	-0.587	-0.470	-0.600	-0.431	-0.337	-0.466	-0.439	-0.439	-0.491	-0.475	-0.484	-0.445	-0.378	-0.378	-0.267	-0.603
128	-0.783	-0.917	-0.963	-0.736	-1.051	-0.978	-0.804	-0.966	-0.935	-1.019	-0.932	-0.971	-0.935	-1.003	-0.974	-0.940	-0.573	-1.312
129	-0.499	-0.698	-0.790	-0.602	-0.803	-0.720	-0.586	-0.745	-0.723	-0.626	-0.648	-0.590	-0.630	-0.645	-0.710	-0.594	-0.410	-1.000
130	-0.656	-0.770	-0.865	-0.613	-1.004	-0.939	-0.714	-0.966	-0.958	-0.822	-0.784	-0.735	-0.753	-0.795	-0.863	-0.814	-0.485	-1.101
131	-0.559	-0.626	-0.899	-0.601	-0.863	-0.729	-0.558	-0.770	-0.783	-0.779	-0.788	-0.653	-0.748	-0.754	-0.748	-0.644	-0.463	-1.042
132	-0.603	-0.695	-0.833	-0.560	-0.859	-0.858	-0.611	-0.727	-0.816	-0.834	-0.792	-0.629	-0.683	-0.697	-0.805	-0.705	-0.410	-0.919
133	-0.827	-0.816	-0.774	-0.680	-0.878	-0.801	-0.680	-0.850	-0.824	-0.803	-0.656	-0.896	-0.738	-0.840	-0.804	-0.876	-0.553	-0.803
134	-1.395	-1.373	-1.579	-1.287	-1.676	-1.616	-1.312	-1.505	-1.635	-1.555	-1.289	-1.601	-1.351	-1.482	-1.354	-1.534	-1.088	-1.917
135	-1.172	-1.202	-1.291	-1.019	-1.389	-1.348	-0.930	-1.240	-1.378	-1.161	-1.011	-1.306	-1.082	-1.174	-1.044	-1.197	-0.836	-1.549

80	-0.172	-0.427	-0.264	-0.268	-0.426	-0.434	-0.159	-0.250	-0.369	-0.249	-0.354	-0.411	-0.342	-0.254	-0.219	-0.307	-0.151	-0.693
81	-0.109	-0.037	-0.062	-0.132	-0.079	-0.143	-0.010	-0.058	-0.181	-0.104	-0.089	-0.069	0.029	0.074	-0.147	-0.179	0.027	-0.136
82	0.027	-0.030	-0.021	0.070	-0.080	-0.101	0.109	-0.056	-0.063	-0.147	-0.106	-0.007	-0.039	0.029	-0.016	0.061	0.022	-0.198
83	-0.092	-0.234	-0.113	-0.192	-0.034	-0.162	-0.180	-0.054	-0.165	-0.178	-0.215	-0.132	-0.031	-0.106	-0.217	-0.097	-0.199	-0.354
84	-0.005	-0.066	-0.116	-0.118	-0.221	-0.204	-0.155	-0.109	-0.180	-0.194	-0.114	-0.197	-0.025	-0.126	-0.152	-0.207	-0.156	-0.537
88	-0.270	-0.291	-0.185	-0.181	-0.184	-0.261	-0.186	-0.301	-0.181	-0.159	-0.245	-0.348	-0.204	-0.216	-0.171	-0.388	-0.180	-0.450
91	-0.152	-0.325	-0.121	-0.199	-0.158	-0.313	-0.178	-0.045	-0.136	-0.243	-0.281	-0.196	-0.015	-0.144	-0.193	-0.164	-0.074	-0.253
92	0.015	-0.189	-0.075	-0.108	-0.062	-0.245	-0.132	-0.169	-0.146	-0.259	-0.267	-0.141	-0.125	-0.056	-0.262	-0.215	-0.159	-0.246
93	-0.037	-0.172	-0.135	-0.052	-0.248	-0.247	-0.093	-0.100	-0.141	-0.115	-0.052	-0.094	-0.059	-0.121	-0.187	-0.204	-0.070	-0.312
94	-0.041	-0.029	-0.085	-0.058	-0.055	-0.070	-0.036	0.023	0.009	0.026	-0.040	-0.068	-0.005	-0.081	-0.096	-0.011	-0.073	-0.627
95	0.031	0.066	0.042	-0.044	0.018	0.061	0.070	0.012	-0.042	0.004	0.018	0.079	0.027	0.023	-0.010	0.095	0.037	-0.339
98	-0.006	0.056	0.023	-0.090	-0.016	-0.009	0.013	-0.062	-0.020	-0.094	0.013	-0.070	0.070	-0.035	-0.116	-0.037	-0.051	-0.392

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.

	55	56	57	58	59	60	61	62	63	64	65	66	77	78	79	85	86	87
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
55	0.333	0.000	0.000	0.000	0.000	0.000	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	0.246	0.495	0.000	0.000	0.000	0.000	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	-0.080	0.035	0.632	0.000	0.000	0.000	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	0.070	-0.118	0.035	0.417	0.000	0.000	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	0.111	0.177	0.002	-0.070	0.310	0.000	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	0.045	0.046	-0.004	-0.003	0.101	0.512	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	-0.225	-0.191	-0.018	0.053	-0.188	0.057	0.456	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62	-0.138	-0.249	0.021	-0.011	-0.157	-0.044	0.433	0.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
63	-0.079	-0.131	-0.066	-0.021	-0.096	-0.134	0.140	0.294	0.647	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
64	-0.013	-0.037	-0.064	0.123	0.017	-0.101	0.108	-0.028	0.183	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65	0.016	0.084	-0.027	-0.102	0.058	-0.049	-0.071	-0.048	-0.007	-0.054	0.579	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	0.051	0.184	0.001	-0.102	0.121	0.034	-0.105	-0.093	-0.128	-0.080	0.240	0.467	0.000	0.000	0.000	0.000	0.000	0.000
77	-0.607	-0.794	-1.114	-0.756	-0.492	-0.841	-0.835	-0.876	-1.001	-0.657	-1.019	-0.729	0.388	0.000	0.000	0.000	0.000	0.000
78	-0.627	-0.773	-1.107	-0.797	-0.488	-1.029	-0.721	-0.816	-1.113	-0.819	-0.967	-0.745	0.012	0.401	0.000	0.000	0.000	0.000
79	-0.665	-0.835	-1.038	-0.570	-0.484	-0.827	-0.563	-0.660	-0.862	-0.560	-0.864	-0.736	-0.032	0.180	0.332	0.000	0.000	0.000
85	-0.329	-0.356	-0.452	-0.238	-0.268	-0.245	-0.049	-0.100	-0.340	-0.282	-0.257	-0.283	-0.086	0.162	-0.013	0.141	0.000	0.000
86	-0.472	-0.640	-0.932	-0.616	-0.465	-0.802	-0.567	-0.676	-0.880	-0.626	-0.907	-0.608	-0.109	-0.024	0.040	0.049	0.406	0.000
87	-0.804	-1.070	-1.321	-0.867	-0.673	-1.046	-0.967	-0.902	-1.294	-0.865	-1.331	-0.976	0.238	-0.086	-0.195	-0.061	0.069	0.529
89	-0.660	-0.821	-1.126	-0.664	-0.478	-0.974	-0.846	-0.864	-1.179	-0.719	-0.991	-0.814	0.016	-0.155	0.058	-0.163	0.033	0.091
90	-0.377	-0.502	-0.682	-0.334	-0.314	-0.623	-0.445	-0.470	-0.711	-0.453	-0.566	-0.458	0.005	-0.126	-0.052	0.093	-0.054	-0.027
96	-0.860	-1.144	-1.490	-1.110	-0.761	-1.135	-1.018	-1.112	-1.473	-1.194	-1.393	-1.104	-0.541	-0.579	-0.448	-0.339	-0.503	-0.754
97	-1.232	-1.620	-2.012	-1.325	-1.123	-1.547	-1.296	-1.440	-1.954	-1.520	-1.783	-1.671	-0.717	-0.649	-0.413	-0.238	-0.661	-0.888
99	-0.845	-1.248	-1.405	-0.908	-0.802	-1.178	-0.921	-0.970	-1.421	-1.013	-1.380	-1.055	-0.429	-0.426	-0.316	-0.207	-0.450	-0.446
100	-1.501	-1.976	-2.408	-1.734	-1.395	-1.935	-1.636	-1.760	-2.453	-1.784	-2.341	-2.030	-0.757	-0.813	-0.652	-0.384	-0.843	-1.041
101	-0.515	-0.778	-0.910	-0.654	-0.593	-0.929	-0.700	-0.813	-0.910	-0.724	-1.044	-0.817	-0.345	-0.364	-0.245	-0.246	-0.377	-0.513
102	-0.765	-0.920	-1.076	-0.788	-0.694	-0.946	-0.683	-0.794	-1.161	-0.939	-0.898	-0.844	-0.329	-0.334	-0.333	-0.119	-0.419	-0.590
103	-0.550	-0.712	-0.894	-0.636	-0.530	-0.770	-0.657	-0.668	-0.842	-0.682	-0.812	-0.644	-0.326	-0.252	-0.233	-0.156	-0.411	-0.463
104	-0.319	-0.536	-0.615	-0.364	-0.388	-0.531	-0.430	-0.428	-0.602	-0.542	-0.474	-0.446	-0.186	-0.199	-0.229	-0.187	-0.252	-0.227
105	-0.924	-1.213	-1.356	-0.895	-0.965	-1.176	-0.944	-1.099	-1.290	-1.158	-1.173	-1.124	-0.662	-0.449	-0.420	-0.124	-0.540	-0.818
106	-0.610	-0.851	-0.967	-0.701	-0.613	-0.732	-0.578	-0.666	-0.980	-0.892	-0.941	-0.686	-0.439	-0.258	-0.359	-0.071	-0.410	-0.579
107	-0.772	-1.088	-1.305	-0.861	-0.777	-1.058	-0.808	-0.982	-1.185	-0.980	-1.218	-1.060	-0.396	-0.280	-0.351	-0.138	-0.451	-0.618
108	-0.929	-1.097	-1.432	-0.962	-0.916	-1.177	-0.816	-1.037	-1.380	-1.087	-1.415	-1.159	-0.497	-0.522	-0.345	-0.224	-0.621	-0.933
109	-1.241	-1.629	-1.850	-1.256	-1.282	-1.537	-1.151	-1.416	-1.798	-1.455	-1.830	-1.688	-0.781	-0.675	-0.463	-0.286	-0.712	-1.056
110	-1.142	-1.340	-1.721	-1.234	-1.066	-1.331	-1.261	-1.420	-1.802	-1.422	-1.491	-1.348	-0.537	-0.485	-0.506	-0.096	-0.625	-0.725
111	-1.092	-1.346	-1.721	-1.161	-0.935	-1.374	-1.260	-1.489	-1.792	-1.414	-1.649	-1.413	-0.454	-0.428	-0.422	-0.183	-0.586	-0.797
112	-0.403	-0.547	-0.676	-0.465	-0.444	-0.465	-0.487	-0.526	-0.745	-0.557	-0.660	-0.542	-0.701	-1.012	-0.723	-0.468	-0.900	-0.962
113	-0.591	-0.742	-0.810	-0.621	-0.503	-0.720	-0.611	-0.650	-1.005	-0.628	-0.712	-0.716	-0.835	-0.957	-0.748	-0.415	-0.787	-0.999
114	-0.641	-0.881	-0.930	-0.676	-0.631	-0.902	-0.706	-0.723	-1.076	-0.667	-0.955	-0.870	-0.927	-1.132	-0.916	-0.571	-1.162	-1.200
115	-0.645	-0.956	-1.243	-0.733	-0.704	-0.935	-0.820	-0.974	-1.326	-0.912	-0.985	-0.851	-1.230	-1.374	-1.098	-0.769	-1.332	-1.628
116	-0.245	-0.195	-0.147	-0.235	-0.142	-0.138	-0.139	-0.136	-0.158	-0.149	-0.020	-0.157	-0.037	-0.085	-0.035	0.073	0.041	-0.101
117	-0.259	-0.392	-0.677	-0.364	-0.355	-0.429	-0.408	-0.499	-0.675	-0.447	-0.397	-0.411	-0.699	-0.726	-0.529	-0.243	-0.614	-0.886
118	-0.524	-0.740	-0.814	-0.548	-0.474	-0.700	-0.527	-0.626	-0.873	-0.515	-0.635	-0.605	-0.750	-0.807	-0.716	-0.265	-0.716	-0.897
119	-0.834	-1.175	-1.668	-1.021	-0.791	-1.235	-1.173	-1.197	-1.600	-1.314	-1.265	-1.040	-1.678	-1.663	-1.355	-0.798	-1.634	-2.114
120	-0.621	-0.907	-1.125	-0.655	-0.602	-0.942	-0.747	-0.836	-1.222	-0.830	-0.921	-0.885	-1.067	-1.137	-0.883	-0.485	-1.078	-1.270
121	-1.013	-1.476	-1.906	-1.184	-0.948	-1.573	-1.324	-1.387	-1.874	-1.292	-1.655	-1.372	-1.629	-1.816	-1.453	-0.849	-1.693	-1.976
122	-0.752	-0.974	-1.423	-0.894	-0.751	-1.132	-0.918	-1.009	-1.508	-1.085	-1.045	-0.926	-1.386	-1.418	-1.212	-0.749	-1.321	-1.571
123	-0.697	-0.970	-1.135	-0.835	-0.666	-0.981	-0.808	-0.926	-1.227	-0.817	-1.034	-0.906	-1.057	-1.272	-1.008	-0.555	-1.234	-1.411
124	-0.519	-0.732	-0.862	-0.594	-0.444	-0.818	-0.690	-0.634	-0.985	-0.639	-0.654	-0.633	-0.880	-1.023	-0.896	-0.546	-0.982	-1.198
125	-0.640	-1.051	-1.341	-0.829	-0.657	-0.982	-0.945	-1.097	-1.475	-0.960	-1.002	-0.897	-1.402	-1.610	-1.339	-0.794	-1.505	-1.866
126	-0.701	-0.921	-1.227	-0.757	-0.653	-0.954	-0.873	-0.862	-1.112	-0.890	-1.013	-0.934	-1.070	-1.241	-0.939	-0.557	-1.180	-1.451
127	-0.268	-0.452	-0.681	-0.402	-0.284	-0.462	-0.442	-0.520	-0.720	-0.391	-0.435	-0.455	-0.775	-0.861	-0.676	-0.535	-0.850	-0.986
128	-0.722	-1.087	-1.445	-1.028	-0.738	-1.106	-0.966	-1.037	-1.368	-0.932	-1.145	-1.034	-1.236	-1.375	-1.114	-0.719	-1.368	-1.661
129	-0.559	-0.832	-1.117	-0.768	-0.535	-0.861	-0.806	-0.863	-1.204	-0.908	-0.856	-0.764	-1.077	-1.034	-0.947	-0.522	-1.054	-1.421
130	-0.776	-1.100	-1.319	-0.970	-0.742	-1.000	-0.966	-0.911	-1.322	-1.004	-1.036	-0.947	-1.158	-1.433	-1.128	-0.585	-1.351	-1.396
131	-0.628	-0.902	-1.184	-0.769	-0.677	-0.955	-0.765	-0.809	-1.310	-0.923	-0.983	-0.913	-1.295	-1.272	-1.004	-0.662	-1.240	-1.611
132	-0.659	-0.913	-1.110	-0.807	-0.598	-0.834	-0.690	-0.828	-1.161	-0.757	-0.953	-0.749	-1.011	-1.109	-0.847	-0.459	-1.165	-1.349
133	-0.472	-0.832	-1.148	-0.585	-0.650	-0.917	-0.652	-0.680	-1.221	-0.697	-1.042	-0.802	-0.913	-0.702	-0.816	-0.252	-0.902	-0.990
134	-1.045	-1.602	-2.575	-1.491	-1.139	-2.168	-1.813	-1.957	-2.620	-1.501	-2.352	-1.853	-1.637	-1.386	-1.491	-0.843	-1.690	-1.926
135	-0.855	-1.276	-1.802	-1.156	-0.865	-1.558	-1.438	-1.496	-2.082	-1.120	-1.797	-1.360	-1.282	-1.137	-1.148	-0.630	-1.369	-1.600

80	-0.340	-0.432	-0.733	-0.424	-0.481	-0.567	-0.389	-0.477	-0.739	-0.516	-0.720	-0.447	-0.174	0.003	-0.017	0.010	-0.218	-0.378
81	-0.164	-0.154	-0.245	0.024	-0.120	-0.210	-0.079	-0.111	-0.242	-0.166	0.012	-0.103	-0.020	0.007	0.068	0.105	0.067	-0.040
82	-0.156	-0.125	-0.118	-0.112	-0.153	-0.110	-0.046	-0.052	-0.123	-0.075	-0.077	-0.038	0.110	0.011	0.047	0.010	0.044	0.073
83	-0.165	-0.311	-0.418	-0.316	-0.206	-0.371	-0.298	-0.392	-0.503	-0.296	-0.376	-0.246	-0.204	-0.067	-0.000	-0.039	-0.193	-0.272
84	-0.265	-0.416	-0.478	-0.353	-0.203	-0.479	-0.258	-0.423	-0,478	-0.331	-0.401	-0.383	-0.218	-0.220	-0.012	-0.083	-0.169	-0.247
88	-0.235	-0.246	-0.459	-0.208	-0.243	-0.417	-0.311	-0.358	-0.501	-0.360	-0.589	-0.299	-0.247	-0.131	-0.076	-0.055	-0.106	-0.271
91	-0.177	-0.186	-0.285	-0.233	-0.106	-0.312	-0.225	-0.280	-0.342	-0.239	-0.325	-0.332	-0.157	-0.048	-0.128	-0.051	-0.108	-0.186
92	-0.100	-0.140	-0.206	-0.133	0.010	-0.169	-0.117	-0.190	-0.158	-0.163	-0.124	-0.151	-0.073	-0.081	-0.005	-0.060	-0.101	-0.190
93	-0.125	-0.243	-0.321	-0.185	-0.117	-0.237	-0.162	-0.233	-0.403	-0.156	-0.328	-0.270	-0.111	-0.017	-0.063	-0.000	-0.093	-0.143
94	-0.466	-0.652	-0.757	-0.555	-0.463	-0.630	-0.598	-0.583	-0.848	-0.634	-0.804	-0.562	-0.179	-0.126	-0.144	-0.085	-0.179	-0.181
95	-0.278	-0.386	-0.414	-0.372	-0.279	-0.300	-0.266	-0.233	-0.347	-0.362	-0.349	-0.286	0.026	0.024	0.090	-0.035	0.008	-0.003
98	-0.326	-0.480	-0.527	-0.412	-0.390	-0.402	-0.368	-0.374	-0.477	-0.485	-0.474	-0.508	-0.177	-0.209	-0.115	0.004	-0.147	-0.210

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.

	89	90	96	97	99	100	101	102	103	104	105	106	107	108	109	110	111	112
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.407	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.141	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	-0.653	-0.489	0.378	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	-0.788	-0.532	0.183	0.506	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	-0.406	-0.298	-0.109	-0.075	0.257	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	-0.846	-0.624	-0.079	-0.135	0.202	0.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	-0.491	-0.339	-0.218	-0.167	-0.024	-0.143	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	-0.404	-0.282	-0.083	-0.047	-0.069	-0.157	-0.013	0.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	-0.342	-0.267	-0.062	-0.193	0.138	-0.230	0.258	-0.059	0.209	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	-0.182	-0.091	0.006	-0.077	0.019	-0.107	-0.122	0.273	-0.098	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	-0.600	-0.379	-0.372	-0.282	-0.190	-0.725	-0.053	-0.116	-0.068	-0.014	0.398	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	-0.424	-0.238	-0.214	-0.245	0.023	-0.365	-0.010	-0.083	0.026	-0.061	0.303	0.241	0.000	0.000	0.000	0.000	0.000	0.000
107	-0.517	-0.460	-0.034	-0.129	-0.171	-0.342	-0.108	0.015	0.028	-0.006	0.033	-0.017	0.314	0.000	0.000	0.000	0.000	0.000
108	-0.665	-0.477	-0.383	-0.406	-0.209	-0.514	0.134	-0.144	0.078	-0.169	-0.062	-0.007	0.093	0.414	0.000	0.000	0.000	0.000
109	-0.812	-0.627	-0.434	-0.398	-0.235	-0.703	0.042	-0.093	-0.067	0.036	-0.002	-0.036	0.025	0.183	0.533	0.000	0.000	0.000
110	-0.647	-0.480	-0.336	-0.284	-0.122	-0.625	-0.144	0.161	-0.157	0.115	0.059	-0.036	-0.086	-0.035	0.031	0.446	0.000	0.000
111	-0.550	-0.433	0.061	-0.027	0.020	-0.194	0.018	0.003	0.037	0.061	-0.086	-0.065	0.035	-0.027	-0.105	0.103	0.396	0.000
112	-0.684	-0.428	-0.653	-0.779	-0.498	-0.991	-0.365	-0.503	-0.449	-0.327	-0.728	-0.547	-0.630	-0.531	-0.745	-0.755	-0.806	0.269
113	-0.786	-0.497	-0.755	-0.881	-0.625	-1.338	-0.506	-0.542	-0.550	-0.337	-0.836	-0.614	-0.740	-0.702	-0.942	-0.925	-0.948	0.148
114	-1.035	-0.726	-1.005	-1.140	-0.627	-1.663	-0.587	-0.584	-0.651	-0.428	-1.069	-0.784	-0.800	-0.931	-1.249	-1.113	-0.993	0.147
115	-1.223	-0.959	-0.930	-1.103	-0.652	-1.715	-0.771	-0.851	-0.715	-0.426	-1.178	-0.754	-0.930	-1.048	-1.358	-1.242	-1.058	0.142
116	-0.055	0.094	-0.300	-0.266	-0.222	-0.337	-0.132	-0.220	-0.100	-0.166	-0.051	-0.113	-0.160	-0.161	-0.188	-0.246	-0.335	0.032
117	-0.730	-0.530	-0.631	-0.669	-0.550	-1.156	-0.388	-0.441	-0.436	-0.224	-0.639	-0.524	-0.558	-0.486	-0.747	-0.680	-0.687	-0.040
118	-0.775	-0.551	-0.659	-0.805	-0.544	-1.301	-0.459	-0.566	-0.571	-0.413	-0.710	-0.576	-0.551	-0.638	-1.015	-0.778	-0.779	-0.042
119	-1.656	-1.117	-1.189	-1.531	-1.037	-2.429	-0.882	-1.008	-0.928	-0.537	-1.557	-1.084	-1.270	-1.382	-1.859	-1.672	-1.561	0.102
120	-1.016	-0.642	-0.956	-1.187	-0.729	-1.789	-0.681	-0.658	-0.775	-0.469	-1.070	-0.768	-0.937	-1.071	-1.385	-1.170	-1.223	-0.032
121	-1.618	-1.102	-1.441	-1.720	-1.094	-2.807	-1.046	-1.132	-1.050	-0.687	-1.651	-1.201	-1.357	-1.597	-2.131	-1.766	-1.722	-0.132
122	-1.253	-0.931	-1.018	-1.202	-0.811	-1.881	-0.762	-0.908	-0.805	-0.400	-1.292	-0.946	-1.178	-1.136	-1.566	-1.347	-1.287	-0.012
123	-1.175	-0.740	-1.083	-1.146	-0.854	-1.982	-0.699	-0.844	-0.703	-0.500	-1.105	-0.811	-0.834	-1.066	-1.479	-1.198	-1.230	-0.056
124	-0.923	-0.558	-0.838	-1.040	-0.721	-1.566	-0.636	-0.638	-0.737	-0.269	-1.004	-0.740	-0.880	-0.926	-1.224	-1.080	-1.042	-0.004
125	-1.456	-1.030	-1.132	-1.535	-0.972	-2.141	-0.852	-0.939	-0.966	-0.422	-1.536	-1.095	-1.162	-1.313	-1.758	-1.555	-1.494	0.028
126	-1.115	-0.731	-0.920	-1.121	-0.772	-1.791	-0.687	-0.765	-0.608	-0.382	-1.097	-0.757	-0.958	-0.990	-1.369	-1.173	-1.117	-0.090
127	-0.790	-0.698	-0.545	-0.687	-0.385	-1.062	-0.470	-0.561	-0.413	-0.253	-0.706	-0.547	-0.482	-0.573	-0.808	-0.786	-0.711	-0.022
128	-1.315	-0.854	-1.065	-1.247	-0.812	-2.056	-0.854	-0.864	-0.889	-0.436	-1.280	-0.954	-0.980	-1.101	-1.476	-1.318	-1.403	-0.103
129	-1.080	-0.838	-0.751	-1.062	-0.733	-1.467	-0.609	-0.748	-0.620	-0.333	-1.158	-0.776	-0.834	-0.978	-1.257	-1.100	-0.905	-0.050
130	-1.221	-0.814	-1.167	-1.283	-0.848	-2.106	-0.758	-0.841	-0.820	-0.416	-1.200	-0.862	-0.942	-1.146	-1.475	-1.279	-1.352	0.028
131	-1.342	-0.836	-0.857	-0.924	-0.665	-1.596	-0.602	-0.786	-0.670	-0.443	-1.068	-0.661	-0.829	-0.945	-1.134	-1.204	-1.087	-0.031
132	-1.057	-0.711	-0.975	-1.120	-0.712	-1.808	-0.665	-0.694	-0.683	-0.490	-0.986	-0.661	-0.856	-0.904	-1.165	-1.009	-1.151	-0.048
133	-0.814	-0.565	-0.942	-1.321	-0.660	-1.630	-0.588	-0.719	-0.517	-0.381	-0.885	-0.613	-0.778	-1.048	-1.336	-0.939	-0.971	-0.614
134	-1.516	-1.133	-1.563	-2.307	-1.081	-2.856	-1.140	-1.356	-1.153	-0.644	-1.966	-1.372	-1.581	-1.971	-2.499	-1.914	-1.823	-1.286
135	-1.214	-0.842	-1.192	-1.834	-0.873	-2.402	-0.784	-1.000	-0.804	-0.549	-1.442	-1.102	-1.162	-1.501	-1.905	-1.386	-1.387	-0.923

80	-0.301	-0.159	-0.357	-0.605	-0.233	-0.481	-0.295	-0.378	-0.171	-0.108	-0.556	-0.375	-0.312	-0.404	-0.475	-0.567	-0.402	-0.400
81	0.140	0.139	-0.009	0.005	-0.080	0.015	-0.145	0.060	-0.126	-0.030	0.050	-0.002	-0.007	-0.004	-0.082	-0.074	-0.059	-0.102
82	0.067	0.098	-0.134	-0.254	-0.095	-0.312	-0.020	-0.104	0.038	-0.059	-0.148	-0.050	-0.133	-0.039	-0.015	-0.037	-0.142	-0.130
83	-0.128	-0.084	-0.209	-0.169	-0.053	-0.248	-0.011	-0.156	-0.015	-0.127	-0.291	-0.122	-0.329	-0.190	-0.264	-0.235	-0.165	-0.081
84	-0.212	-0.252	-0.128	-0.259	-0.102	-0.349	-0.091	-0.263	-0.078	-0.095	-0.208	-0.179	-0.218	-0.171	-0.135	-0.171	-0.173	-0.177
88	-0.110	-0.149	-0.335	-0.384	-0.204	-0.336	-0.196	-0.384	-0.146	-0.183	-0.278	-0.146	-0.240	-0.208	-0.220	-0.327	-0.268	-0.277
91	-0.089	0.090	-0.163	-0.123	-0.049	-0.022	-0.109	-0.048	-0.187	-0.006	-0.116	-0.077	-0.153	-0.092	-0.195	-0.096	-0.114	-0.099
92	-0.012	-0.037	-0.066	-0.151	-0.151	-0.264	0.013	-0.109	-0.009	-0.030	-0.129	-0.036	-0.150	-0.049	-0.241	-0.254	-0.251	-0.141
93	-0.091	-0.139	-0.147	-0.114	-0.162	-0.216	-0.200	-0.166	-0.123	-0.081	-0.176	-0.019	-0.072	-0.259	-0.236	-0.220	-0.104	-0.185
94	-0.119	-0.086	0.250	0.034	0.106	0.102	-0.206	-0.079	-0.035	0.051	-0.058	-0.055	0.094	-0.075	-0.001	-0.117	0.180	-0.200
95	-0.103	-0.010	0.284	0.322	0.130	0.242	0.007	0.092	0.137	0.024	-0.021	0.037	0.098	0.078	0.114	0.081	0.137	-0.153
98	-0.219	-0.161	0.198	0.158	0.089	0.198	-0.030	-0.025	0.024	0.089	0.086	-0.062	0.128	0.045	0.039	0.152	0.177	-0.152

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.

	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130
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	0.000	0.000	0.000	0.000	0.000	0.000	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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	0.000	0.000	0.000	0.000
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	0.000
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
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0.425	0.486	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	-0.114	0.099	0.480	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	0.195	-0.063	-0.250	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117	-0.033	-0.011	0.038	-0.035	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
118	0.205	0.100	-0.143	0.109	-0.097	0.386	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	-0.178	-0.162	0.157	-0.151	0.188	-0.139	0.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.068	0.015	-0.064	0.127	-0.127	0.175	-0.155	0.511	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
121	-0.014	0.031	-0.216	0.172	-0.089	0.271	-0.078	0.328	0.723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	-0.142	-0.151	0.306	-0.185	0.056	-0.206	0.190	-0.160	-0.208	0.565	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	-0.063	0.014	-0.208	0.133	-0.076	0.194	-0.058	0.208	0.242	-0.195	0.566	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124	-0.057	-0.048	0.002	0.054	0.159	-0.038	0.085	-0.112	-0.156	0.109	-0.188	0.412	0.000	0.000	0.000	0.000	0.000	0.000
125	-0.199	-0.093	0.145	-0.159	0.148	-0.139	0.138	-0.164	-0.300	0.246	-0.186	0.294	0.607	0.000	0.000	0.000	0.000	0.000
126	0.034	-0.082	-0.213	0.145	-0.168	0.036	-0.013	0.118	0.318	-0.083	0.246	-0.113	-0.108	0.529	0.000	0.000	0.000	0.000
127	-0.169	-0.031	0.255	-0.191	0.168	-0.137	0.139	-0.177	-0.105	0.177	-0.179	0.112	0.202	-0.190	0.254	0.000	0.000	0.000
128	0.005	-0.030	-0.087	0.042	-0.164	0.167	-0.168	0.089	0.086	-0.022	0.094	-0.012	-0.063	0.269	-0.056	0.580	0.000	0.000
129	-0.140	-0.111	0.080	0.001	0.158	-0.142	0.231	-0.153	-0.144	0.173	-0.094	0.034	0.232	-0.008	0.210	-0.192	0.458	0.000
130	0.002	0.042	-0.108	0.077	-0.140	-0.066	-0.107	0.146	0.132	-0.104	0.274	-0.187	-0.128	0.179	-0.128	0.111	-0.126	0.578
131	-0.122	-0.120	0.221	-0.157	0.136	-0.152	0.020	-0.187	-0.236	0.325	-0.135	0.101	0.126	-0.187	0.281	-0.049	0.188	-0.068
132	0.005	-0.047	-0.053	0.134	-0.100	0.099	-0.087	0.142	0.086	-0.100	0.118	-0.127	-0.119	0.080	-0.119	0.140	-0.190	0.256
133	-0.767	-0.712	-0.823	-0.318	-0.387	-0.540	-1.281	-0.792	-1.363	-1.032	-0.857	-0.655	-0.960	-1.058	-0.549	-1.071	-0.816	-1.097
134	-1.480	-1.570	-1.727	-0.745	-1.201	-1.322	-2.539	-1.652	-2.777	-2.013	-1.877	-1.548	-2.111	-2.133	-1.006	-2.249	-1.852	-2.178
135	-1.091	-1.079	-1.330	-0.436	-0.961	-1.045	-2.133	-1.285	-2.134	-1.675	-1.486	-1.125	-1.755	-1.760	-0.778	-1.787	-1.504	-1.796

80	-0.557	-0.643	-0.625	-0.158	-0.270	-0.616	-0.887	-0.735	-1.259	-0.762	-0.891	-0.561	-0.857	-0.877	-0.336	-0.880	-0.551	-0.964
81	0.000	-0.116	-0.333	0.094	-0.085	-0.012	-0.285	-0.081	-0.268	-0.200	-0.190	-0.119	-0.258	-0.126	-0.263	-0.157	-0.263	-0.222
82	-0.083	-0.161	-0.230	0.062	-0.115	-0.067	-0.231	-0.195	-0.250	-0.184	-0.100	-0.087	-0.246	-0.088	-0.194	-0.117	-0.163	-0.132
83	-0.263	-0.386	-0.276	-0.001	-0.259	-0.220	-0.457	-0.274	-0.311	-0.292	-0.279	-0.256	-0.413	-0.207	-0.193	-0.290	-0.186	-0.307
84	-0.294	-0.277	-0.220	-0.160	-0.129	-0.324	-0.354	-0.202	-0.508	-0.223	-0.290	-0.248	-0.252	-0.374	-0.115	-0.296	-0.153	-0.273
88	-0.432	-0.628	-0.511	-0.151	-0.356	-0.442	-0.773	-0.594	-0.984	-0.761	-0.706	-0.521	-0.857	-0.681	-0.355	-0.739	-0.544	-0.754
91	-0.174	-0.145	-0.191	0.018	-0.196	-0.094	-0.289	-0.145	-0.313	-0.234	-0.134	-0.062	-0.280	-0.176	-0.245	-0.203	-0.267	-0.232
92	-0.215	-0.328	-0.243	0.103	-0.185	-0.143	-0.295	-0.177	-0.258	-0.230	-0.177	-0.291	-0.342	-0.180	-0.193	-0.240	-0.171	-0.221
93	-0.169	-0.096	-0.020	-0.087	-0.071	-0.152	-0.183	-0.157	-0.284	-0.140	-0.187	-0.108	-0.154	-0.134	-0.015	-0.224	-0.021	-0.154
94	-0.323	-0.418	-0.312	-0.156	-0.249	-0.306	-0.473	-0.468	-0.648	-0.413	-0.582	-0.255	-0.472	-0.442	-0.235	-0.437	-0.278	-0.552
95	-0.187	-0.223	-0.323	-0.042	-0.152	-0.231	-0.286	-0.306	-0.466	-0.222	-0.324	-0.204	-0.315	-0.287	-0.124	-0.355	-0.242	-0.279
98	-0.355	-0.307	-0.261	-0.112	-0.149	-0.314	-0.395	-0.388	-0.593	-0.321	-0.489	-0.191	-0.400	-0.367	-0.179	-0.426	-0.215	-0.423

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.

	131	132	133	134	135	80	81	82	83	84	88	91	92	93	94	95	98
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.000	0.000	0.000	0.000	0.000
77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
89	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	0.000	0.000	0.000
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
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
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
128	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
131	0.494	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132	-0.022	0.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
133	-0.950	-0.847	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
134	-1.888	-1.682	-0.018	0.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	-1.467	-1.291	-0.051	0.070	0.694	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	-0.640	-0.842	-0.529	-1.103	-0.793	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

81	-0.250	-0.167	-0.247	-0.419	-0.462	-0.024	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82	-0.206	-0.053	-0.186	-0.526	-0.444	-0.034	0.034	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
83	-0.259	-0.224	-0.243	-0.474	-0.308	-0.069	-0.028	0.028	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	-0.192	-0.229	-0.349	-0.428	-0.290	-0.052	-0.108	0.020	0.062	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000
88	-0.715	-0.678	-0.469	-0.974	-0.857	0.275	-0.022	-0.108	-0.044	-0.016	0.139	0.000	0.000	0.000	0.000	0.000	0.000
91	-0.274	-0.176	-0.248	-0.432	-0.346	-0.065	0.030	0.020	0.030	-0.016	0.030	0.028	0.000	0.000	0.000	0.000	0.000
92	-0.283	-0.191	-0.320	-0.564	-0.412	-0.073	0.024	0.081	0.313	-0.046	-0.052	0.030	0.042	0.000	0.000	0.000	0.000
93	-0.095	-0.214	-0.140	-0.412	-0.321	0.030	-0.054	0.026	-0.055	0.254	-0.039	0.034	-0.044	0.026	0.000	0.000	0.000
94	-0.427	-0.435	-0.413	-0.673	-0.612	0.068	0.074	-0.055	-0.103	-0.063	-0.006	-0.031	-0.166	-0.070	0.059	0.000	0.000
95	-0.203	-0.308	-0.390	-0.380	-0.275	-0.024	0.073	0.028	-0.047	-0.006	-0.012	-0.124	0.015	-0.001	0.081	0.030	0.000
98	-0.338	-0.411	-0.263	-0.529	-0.505	-0.011	-0.004	-0.049	-0.094	-0.034	0.018	0.057	-0.093	-0.075	0.272	0.013	0.026

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