1986

Barriers to interorganizational relationships: a comparative analysis

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Barriers to interorganizational relationships: A comparative analysis

By

Thomas Jefferson Hoban IV

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

Department: Sociology and Anthropology
Major: Rural Sociology

Approved:

Signature was redacted for privacy.

In Charge of Major Work

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For the Major Department

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For the Graduate College

Iowa State University
Ames, Iowa
1986

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CHAPTER I. INTRODUCTION

Statement of the Problem

Soil erosion and related nonpoint source water pollution remain very serious problems in the United States despite 50 years of governmental programs costing around $20 billion (Office of Technology Assessment, 1982; Sampson, 1981; U.S. Department of Agriculture, 1982). Although many effective soil conservation practices are available, there has been only partial success in promoting their use where conservation needs are greatest (Korsching and Nowak, 1983). Many reasons for the failure to achieve wider adoption of soil conservation practices have been suggested, including:

1. Inadequate rewards or benefits for farmers who adopt conservation practices (Batie, 1983; Sampson, 1981).

2. Characteristics of individual farmers, such as risk aversion, traditionalism, or inadequate management skills (Korsching and Nowak, 1983, Office of Technology Assessment, 1982).


4. Farmers' lack of awareness or acceptance of erosion problems on their own farms (Bultena et al., 1984; Korsching et al., 1985).

5. Farmers' uncertainty over the types and sources of available conservation assistance (Bultena et al., 1984; Korsching, 1983).

These reasons for lack of conservation adoption are each valid to some extent, but they only tell part of the story. They focus primarily on individual farmers for failure to adopt conservation practices. Researchers and policy makers tend to blame victims for their own
problems. Rogers (1983:104) argues that the causes of a social problem often lie in the larger system, which may provide inadequate information or promote inappropriate innovations. Social policies that are limited to individual-level interventions will not be very effective in solving system-level problems.

When the larger system is considered, the above reasons also imply that government soil conservation efforts have not been as effective as they could be. Local programs of the organizations in this study are seen as the key to promoting further diffusion of soil and water conservation. Joint efforts of these organizations are needed to combine elements of successful adoption: education, motivation, technical assistance, and financial incentives (Korschning, 1984). Institutional support for farmers, provided through agency contact, has been found to be a more important determinant of conservation adoption than characteristics of individual farmers or their operations (Nowak and Korschning, 1983; Korschning, 1984).

The federal government has actively promoted soil conservation as a major policy goal since the Dust Bowl of the 1930s. Sampson (1981:256) sees that history as "replete with bureaucratic battles between agencies over control of different aspects of conservation programs, interspersed by periods of uneasy truce." He argues that understanding this system is the only path to understanding why the programs are, or are not, working today. That is the starting point where constructive improvements must begin.
Recent reports suggest that the interorganizational network may not function as effectively and efficiently as it could (General Accounting Office, 1977; Nielson, 1985; U.S. Department of Agriculture, 1982). The National Program for Soil and Water Conservation, developed under the Resources Conservation Act (U.S. Department of Agriculture, 1982) suggests that the limited effectiveness of past conservation efforts may be due, in part, to problems with the relationships among the USDA agencies.

Better coordination is needed among USDA agencies. Conservation efforts are hindered by incompatible policies, procedures, and assistance. Better coordination would result in more effective programs (22)... The public expects a cooperative partnership among land owners and users, local and state governments, and the federal government in tackling resource problems (29).

This research addresses this concern by examining relationships among organizations involved with conservation in 17 soil conservation districts in an area of southwestern Iowa targeted by the Soil Conservation Service (SCS). Four United States Department of Agriculture (USDA) organizations are involved with soil conservation at the local (county) level: the Soil Conservation Service (SCS), the Cooperative Extension Service (CES); the Agricultural Stabilization and Conservation Service (ASCS), and the Farmer's Home Administration (FmHA).

The major goal is to determine the extent to which certain barriers limit these organizations' willingness and ability to develop relationships with one another. Types of barriers include: perceptions of the environmental (external) context, individual beliefs about working with other organizations, perceived scarcity of resources (funding and
staff), perceived interpersonal conflict, and distance between offices.

Analysis of variance will compare organizations on perceptions of the barriers and reported frequency of interorganizational relationships (IOR). Multiple regression models are tested for each of the three types of IOR with each of the organizations. Each barrier is examined as an independent variable, after controlling for respondent's organization. Theoretical perspectives forming the basis for this research include: resource dependency, political economy, and conflict theories.

Nature of the Theoretical Problem

Relationships among organizations have long been recognized as a major determinant of effectiveness for individual organizations and organizational networks (Mulford, 1984). Researchers began studying interorganizational relationships (IOR) during the early 1960s (Levine and White, 1961; Litwak and Hylton, 1962). Turk (1985:487) points out that in less than a quarter century the label "IOR" has been institutionalized, involving an increasing amount of scholarly output.

Even with all this research certain gaps exist in our knowledge. Findings tend to be contradictory, especially about the factors that influence IOR (Halpert, 1982:71). Galaskiewicz (1985:281) argues that accumulated knowledge is highly fragmented and scholarship has been uneven. This research will try to overcome some important limitations of past IOR research.

Benson (1975:229-230) noted two general deficiencies in IOR theory and research. Problems of conceptual confusion and overlap stem from the
fact that IOR has proven to be a complex, multilevel phenomenon. Furthermore, IOR research and theory have been insufficiently concerned with issues of macrostructure.

Zeitz (1980:72) criticizes previous IOR research grounded in the positivist conception of science as overly simplistic. Interorganizational relationships are characterized by: tremendous variety; pervasive change and conflict; the presence of many confounding variables; and the propensity of organizations to socially construct their own environments. He stresses the need to consider the nature of the organizations and individuals involved, including the larger, historical context of the relationships.

A major limitation of IOR research is an overemphasis on positive factors that encourage organizations to work together. Whetten (1982:99) argues that most research is characterized by a pro-coordination orientation or bias, based on a desire to promote better coordination among organizations. Researchers, in fact, have tended to ignore barriers to coordination.

Another limitation of past research is inherent in its design. Differences among organizations such as factors that influence their interrelationships, have also been overlooked. Very different organizations often have been treated the same in analysis, with little consideration for differences in mission, structure, or resources. Mulford and Mulford (1977:569) argue that findings of most IOR research are limited because only a small number of organizations are studied. This may be one reason for contradictory results.
Most IOR studies have only examined a single network in one community. Research has, therefore, been mainly descriptive (Boje and Whetten, 1981:378). Molnar and Rogers (1979:421-422) found problems with the aggregation of relationships across diverse networks and organizations. They conclude that further research should focus on comparative properties of organizations as a means to explain and understand IOR.

A related limitation of previous IOR research involves the narrow range of organizations studied. Most IOR research has been done with health and human service organizations. Very little attention has been paid to other types of organizations, such as those working in agriculture or natural resources (Rogers, 1982:184).

Conceptual models of IOR lack specificity. Galaskiewicz (1985:281) argues that "we have a host of 'tentative findings' to sort through and synthesize." Contemporary interorganizational theories, for example, stress the role of the environment. Hall (1984:192) argues, however, that we have been unable to translate our conceptualizations into meanings relevant to organizations. He concludes that we have no real indication of the exact effect of certain environmental conditions on IOR. Rogers (1982:182) adds that little attention has been paid to the larger context that may inhibit IOR.

Even without these limitations, other serious problems based on the nature of the environment, could result from applying most past IOR research. Economic, social, and political conditions in the mid-1980s are dramatically different from those organizations faced during the
1960s, 1970s and early 1980s when the bulk of the research was done. Lorenz et al. (1985:1) explain that most theories have emphasized dynamic behavior under conditions of growth. Retrenchment in an era of declining resources represents a very different, but equally important strategy, that has received little attention.

Levine (1983:57) argues that we know very little about the decline of public organizations and the management of cutbacks. Most research and its implications for management are based on assumptions about continuing growth in public revenues. The future for many organizations, however, is increasingly uncertain. Continued resource scarcity and difficult program tradeoffs seem inevitable. Organizations' willingness and ability to participate in IOR may be reduced under these conditions.

Theoretical Contributions

Morrissey et al. (1982:1) define the study of IOR as a multidisciplinary research field occupying a position between studies of individual organizations and of whole communities. IOR research evolved from developments in organizational theory during the late 1950s. Most theorists have since moved from an exclusive concern with the internal structure and dynamics of organizations as essentially closed systems, to an increasing recognition of the interdependence between organizations and their environments. The essentially open system character of many organizations has now been accepted.

One important assumption of an open systems perspective is that no organization is an island; but depends upon its environment for various
types of resources (Hall, 1982; Scott, 1981). Other organizations represent the essential component of any organization's environment (Aldrich, 1979; Mulford, 1984; Pfeffer and Salancik, 1978). This research considers the organizational environment as relationships among organizations, including a larger socio-economic context. Effects of this external environment on IOR will be compared with effects of internal organization characteristics (i.e., individual beliefs.)

The organizational environment is conceptualized both as pool of needed resources and as information (Aldrich and Mindlin, 1978; Mulford, 1984). Mulford (1984:9) explains that when the environment is treated as resources, the key concepts are resource dependency, relative power, and control over sources of support. Resource scarcity is viewed as the primary concern of organizations. Uncertainty for decision makers is the basic concept when the environment is treated as information. Relationships between each of these conceptions of the environment and frequency of IOR will be compared.

Resource scarcity has generally been thought to have a positive influence on interorganizational relations (Aldrich, 1979; Levine and White, 1961; Mulford, 1984). This line of reasoning suggests that resource scarcity motivates organizations to seek exchange partners who can provide resources. Others, however, suggest that given a climate of increasingly scarce resources, organizations will adopt different strategies about their interactions with other organizations (Schermmerhorn, 1975; Levine, 1983).
The environment also affects organizations through increased uncertainty over conditions in the task environment that are most relevant to organizations (Thompson, 1967; Mulford, 1984; Galaskiewicz, 1985). Uncertainty is thought to encourage information seeking from other organizations. Like resource scarcity, environmental uncertainty has also been considered a positive influence on IOR (Duncan, 1972; Lawrence and Lorsch, 1967).

The relationship between environmental uncertainty and IOR may not be that simple, however. Argote (1982:420) argues that the sources of uncertainty for organizations are varied, indicating a need to consider differences in the degree to which different organizations experience a particular type of uncertainty. Theory linking uncertainty and IOR has been largely left unspecified.

This research examines whether environmental uncertainty and resource scarcity may discourage, instead of encourage, IOR under conditions of resource cutbacks and organizational retrenchment. Comparative analysis will determine the relative importance of different types of barriers to IOR. The comparative perspective will help find out if certain relationships depend on the specific organization under investigation.

Research Approach and Rationale

Researchers agree that not all organizations are equally willing or able to participate in IOR (Aldrich, 1979; Hall, 1982; Mulford, 1984; Pfeffer and Salancik, 1978). This research uses comparative analysis to
study the relationships among the organizations. Organizations are compared on the directors' perceptions of the barriers to working with other organizations, and their involvement with each of the other organizations in each type of IOR.

Comparative analysis has long been recognized as important for studying organizations. Blau (1964:323) defines this as the systematic comparison of a large number of organizations to establish relationships between important characteristics and stipulate conditions under which these relationships hold. Every theory must rest on comparisons of contrasting cases, both for early exploration and later refinement.

According to Etzioni (1975:xiv) the comparative study of organizations will:

1. Establish truly universal propositions of organizational theory.
2. Reduce overgeneralized propositions to middle range (i.e., specific) statements specifying the categories of organizations for which they hold.
3. Develop new middle range propositions so that knowledge of universals will be supplemented with statements about analytical types of organizations.

Etzioni (1975:xii) argues that it is crucial to study systematic differences between organizations. Comparative analysis will lead to a richer, and more precise, organizational theory. He points out, however, that such comparative analysis is much neglected (Etzioni, 1975:xi). In the area of IOR, researchers have not compared the similarities and differences between organizations (Rogers, 1982:182).
Downs and Mohr (1976:700) argue that the theoretical value of much organizational research is problematic. They suggest that the extreme variance and instability of findings in organizational research are due, in part, the lack of consideration and comparison of differences between organizations.

Organizational scholars warn against combining and confusing different types of organizations as has generally been done in past IOR research. Perrow (1967:203) argues that we cannot expect relationships found for one organization to be true for another because the work done by different organizations may be very different. Analysis of differences between organizations is a very powerful theoretical and methodological tool. Perrow (1967:205) calls for middle range theories that increase their predictive power by specifying the types of organizations to which they apply.

Comparative analysis will be used in several ways. Impacts of five types of barriers to IOR will be compared for three types of IOR (farmer referral, informal interaction, and formal meetings) with each of four organizations (SCS, CES, ASCS, and FmHA). Comparative analysis will also be used to control on the respondent's organization when examining the relationships between the independent and dependent variables.

Rosenberg (1968:24) argues that the necessary way to systematically examine relationships between two variables is to introduce a third variable, called a test factor, into the analysis. He distinguishes six types of test factors: extraneous variables, component variables, intervening variables, antecedent variables, suppressor variables, and
distorter variables. When controlling on the respondent's organization affects the relationship between the barriers and IOR, analysis will suggest which type of test factor is operating.

Research Objectives

The general goal is to understand the effects of certain internal and external barriers on the willingness and ability of different organizations to participate in IOR. This involves several specific objectives:

1. Develop and test a middle-range conceptual model of barriers that may limit organizations' willingness and ability to participate in IOR.

2. Compare and contrast the four organizations on: their reported frequency of IOR with the other organizations, perceived severity of selected barriers to IOR, and the relationships between the barriers and IOR.

3. Recommend program innovations and policy alternatives to overcome barriers to IOR and improve the supply of conservation assistance to farmers.

Overview of Dissertation

Chapter II sets the stage by defining the context within which the organizations interact. Individual organizations are described, as are some aspects of the historical relationships among the organizations. Key features of the interorganizational network and larger organizational environment are also discussed.
Chapter III presents the theoretical framework based on resource dependency, political economy, and conflict theories. The conceptual model and research hypotheses developed and tested are also presented. Chapter IV provides details on the research methods. Chapter V presents the research results based on three types of analysis: oneway analysis of variance, bivariate correlation, and multiple regression. Chapter VI discusses the implications of the findings for sociological theory, research, and practice, as well as conservation programs and policies.
CHAPTER II. ORGANIZATIONAL CONTEXT

This study focuses on four federal government organizations involved in soil conservation: the Soil Conservation Service (SCS); the Cooperative Extension Service (CES); the Agricultural Stabilization and Conservation Service (ASCS); and the Farmers’ Home Administration (FmHA). To understand the relationships among these organizations, it is important to consider the historical and present day context within which they operate. Galaskiewicz (1985:300) suggests the importance of learning as much as possible about the context of IOR, the motives of the actors, and the rules they are operating under. Arts (1984:354) points out that this network of organizations is complex and confusing to the general public, landowners, and even to the agencies themselves. He warns that this multiplicity of organizations represents great potential for duplication of programs, conflicting goals and implementation strategies, confusion to clients and inefficient administration. Muhm (1984) explains that people are confused about the various conservation agencies, particularly in an era when the word "conservation" is applied to everything from wildlife organizations to U.S. Department of Agriculture (USDA) agencies. He points out that this confusion can be traced to the fact that so many agencies and groups in Iowa either have responsibility or special interest in conservation. It is, therefore, important to understand the key organizations and their role in the local conservation network.
Conservation Network Compared to Past Research

Past research has mainly examined relationships among organizations involved with social services or education (Morrissey et al., 1982; Mulford, 1984; Galaskiewicz, 1985). Only two other published studies have looked at IOR among organizations involved with soil conservation (Rogers and Maas, 1977; Nielson, 1985). This set of organizations differs in several ways from most sets looked at in past research.

Past IOR research has tended to combine and confuse a wide variety of organizations. A typical approach is to sample all the organizations in one community involved in a particular activity (e.g., human services or education.) Organizations that differ greatly from one another in mission, structure, and/or member background are treated the same in analysis. Organizations in this study are similar in these respects. Compared to past research these organizations are taken from 17 distinct locations (i.e., networks.) This will permit the type of comparative analysis proposed in Chapter I.

This group of organizations is homogeneous, compared with the sets studied in past IOR research. They are all part of the United States Department of Agriculture (USDA). They serve a similar clientele (i.e., farmers) and have generally compatible missions (i.e., supplying various types of assistance to farmers). This has not been true of organizations in past research.

These organizations have a long history of IOR. The SCS, ASCS, and CES have worked together in the conservation arena for almost 50 years. The FmHA has had a minor role in conservation throughout this time, but
has been part of the USDA assistance network for a long time. Past research has generally been ahistorical, ignoring the context of the IOR under investigation (Zeitz, 1980; Galaskiewicz, 1985).

Rationale for Choosing Organizations

Many groups and organizations besides those examined in this study play some role in local soil conservation activities. These include: farm organizations, other local units of government, civic organizations, the mass media, individual farmers and opinion leaders. This study, however, is limited to four organizations (i.e., SCS, CES, ASCS, FmHA) for four main reasons.

First, these four organizations have legal mandates to plan and implement various assistance programs for farmers who want to adopt soil conservation practices. In fact, the SCS exists only because of its roles and responsibilities in soil and water conservation. The other three organizations (CES, ASCS, and FmHA) have broader missions dealing with agriculture generally.

Second, these organizations provide national support and direction for local soil conservation policies and programs. They represent the public welfare, including state and national interests, in promoting sound management of soil and water resources. These organizations combine larger social concerns with those of the local population. They provide the infrastructure and institutional framework for distributing technical, financial, and educational assistance supported by state and federal tax revenues.
Third, the SCS, ASCS, and the CES (in that order) are the organizations farmers recognize as their major sources of information and assistance, with peers and the mass media (Nowak 1983; Korsching, 1983; Korsching et al., 1985). Most farmers who practice conservation will have contact with one or more of these organizations.

Lastly, these organizations were chosen to minimize some variation among the organizations for analysis. They have compatible goals, common clientele and similar structures. They are all part of the U.S. Department of Agriculture (USDA). The CES, however, is also part of the Land Grant College system. It receives funding and direction from a local advisory committee, as well. The ASCS also receives direction from a county ASC committee.

Description of Individual Organizations

The four organizations in this study have coexisted for about 50 years. Each has a strong clientele and political support (Rasmussen, 1982:16). A division of labor has been formally established and informally worked out among these organizations. Each organization's programs are spelled out in detail through legislative mandate and memoranda of understanding. Each organization has a somewhat narrow set of goals required by law. Formal goals of the organizations tend to be complementary (Rogers and Maas, 1977:78). Questions still arise about whether they should continue to operate almost independently (Rasmussen, 1982:16).
Soil Conservation Service (SCS)

The SCS is primarily responsible for supplying farmers with on-site technical assistance and information for the selection, installation, and maintenance of soil and water conservation practices. They are also advocates who see their role as motivating farmers through interpersonal communication and public educational means. In Iowa, SCS programs are administered at the county level by a District Conservationist, who supervises one or more state and/or federal technicians. Through a unique working relationship, SCS programs are mainly implemented through local soil conservation districts.

Local SCS staff provide farmers and other landusers with various forms of technical assistance. They work with landusers to determine what types of conservation practices are practical and needed. At farmers’ request, they prepare customized and comprehensive conservation plans. The SCS has broad technical responsibility for the proper management of croplands, woodland, pastureland, wildlife habitat, and other land. They also provide technical assistance in choosing plant varieties, seeding methods, and cultural practices for establishing grasses and trees.

The SCS works to improve water quality through control of nonpoint source water pollution. The SCS helps plan and complete watershed management and flood protection projects in both small and large watersheds. With the cooperation of university researchers and other government agencies, the SCS conducts and publishes soil surveys which form the basis for planning and management of soil and water resources.
Government financial assistance provides an important incentive for farmers to adopt conservation, particularly for more costly structural practices (e.g., terraces). The SCS staff supervise and certify proper installation of those practices which are eligible for government cost-sharing. This involves close cooperation with the local conservation district commissioners and the ASCS who provide cost-sharing money, as well as the FmHA's conservation credit programs. The SCS also work closely with state and local land use planning agencies. The SCS has other responsibilities in Iowa, including: Resource Conservation and Development (RC&D) programs; land inventory and monitoring; and the Rural Abandoned Mine program.

Soil Conservation District (SCD)

The SCS administers its programs through local soil conservation districts (SCDs). Soil conservation districts were established to help insure that federal conservation programs would be responsive to local needs and conditions. They were also seen as important for building legitimation and support among farmers for the conservation movement (Parks, 1952; Sampson; 1985). The first county-wide soil conservation districts in Iowa were organized in 1940.

According to Parks (1952:11) the value of the district lies in the fact that it is a hybrid in government. In legal structure and authority, SCDs are local governmental subdivisions of the state, completely independent of the federal government. They came into existence, however, because of federal pressure on the states to adopt a standard enabling act and federal persuasion in the local areas to
organize districts. Today, they still rely on federal and state resources to complete their local programs.

The SCS and SCD have very strong ties with each other. A formal memorandum of understanding between each local SCD and the SCS-USDA specifies their relationship and the responsibilities of each organization. According to this memorandum the SCS will make available to the SCD the services of personnel qualified in carrying out resource planning, conservation, and development and will provide such facilities as its employees may need. The SCD will: (a) adopt a procedure for identification, inventory and analysis of resource problems, including the orderly development of conservation plans for farms, communities and watersheds; (b) determine priority areas of work and eligible recipient's of SCD services; (c) develop a method for followup work; and (d) develop an information and educational program to keep local citizens informed. In reality, however, these SCD responsibilities are generally delegated to the SCS in many instances.

As part of this study, data were collected from the chairman of each of the 17 soil conservation districts in the study area. For three main reasons, the decision was made not to include their responses in this analysis. First, the SCD commissioners differ from the respondents of the other four organizations. District commissioners are part-time, elected officials, who are generally full-time farmers. Respondents from the other four organizations, on the other hand, are full-time government employees, who generally have college education and considerable specialized training.
A second reason for not including the SCDs in this analysis is the significant differences in organization structure. The SCDs have a less centralized and formalized decision making structure than any of the other four organizations. They receive some guidance and support from the Iowa Department of Soil Conservation (DSC), but are not a line organization of the DSC. The other four organizations are part of the USDA to varying degrees.

The third reason for not including the SCD respondents stems from the widespread confusion over the SCD as a distinct entity from the SCS. Results of this survey show that many respondents from the other three organizations (CES, ASCS, and FmHA) did not understand the difference between the SCS and the SCD (Hoban et al., 1986). This suggests potential problems of reliability if the SCD were included. In many respects, the SCS represents the SCD in relationships with the other organizations.

**Cooperative Extension Service (CES)**

Education is an important component of soil conservation efforts. The Cooperative Extension Service is part of the Land Grant College system. As part of this system, the CES is considered the educational arm of the USDA. The CES has always viewed itself as the primary channel for agricultural education and service to farmers (Childs and Headley, 1982:201). It has statutory authority to provide leadership in conservation education and information in Iowa. The CES also provides educational leadership in other program areas (e.g., 4-H and youth, community resource development, and home economics). They have local
(i.e., county) offices and staff in all Iowa counties. Local programs are administered by a County Extension Director.

From the beginning of the conservation movement, the CES have had a strategic role in developing conservation programs at the state and local levels (Parks, 1952:200). Through its administrative authority for USDA education programs, the CES could either help or obstruct district conservation programs. Parks (1952:201) explains that county CES staff are often strategic figures in their counties. They have considerable control over any agricultural programs as a result of their strong relationships with local farm leaders.

The Cooperative Extension Service in each county has a memorandum of understanding with the soil conservation district recognizing that successful conservation efforts "can only be obtained through mutual helpfulness and cooperation, working together to a common end." According to this memorandum, the CES will provide assistance to the SCD when requested, by:

1. Supplying information and assistance needed for the development, review, or necessary revision of the SCD program and work plan.

2. Training personnel and local leaders in subject matter information and in educational methods.

3. Supplying assistance to the SCD commissioners in developing and carrying out and effective conservation program.

4. Assisting in making effective use of demonstrations and in coordinating the efforts of agencies and organizations carrying on soil conservation activities in the district.
This memorandum tries to explain the roles and responsibilities of both the CES and the SCD regarding conservation education. Roles and responsibilities, however, are least clear in the general area of public information and education (Korsching et al., 1985; Bultena et al., 1984). For the most part, CES staff wish to play an active role in conservation education. The involvement of local CES staff in conservation seems to vary greatly depending on their general workload and expertise in conservation (Hoban et al., 1986).

**Agricultural Stabilization and Conservation Service (ASCS)**

The Agricultural Stabilization and Conservation Service (ASCS) has had two other names in its earlier years. It began as the Agricultural Adjustment Administration (AAA) in 1936. In 1945, the AAA's functions were consolidated within the new Production and Marketing Administration (PMA). The ASCS works through federally chartered, farmer-elected county committees. Day-to-day county office operations are supervised by a County Executive Director (CED). The ASCS administers a variety of USDA programs, including: price supports, acreage set-aside, production control, and disaster relief.

Most federal financial assistance for conservation is supplied through the Agricultural Conservation Program (ACP) administered by the ASCS. Through this cost-sharing program, the USDA pays some of farmers' costs of applying certain approved conservation practices. Administration of the ACP is delegated to state and county Agricultural Stabilization and Conservation (ASC) committees. Although conservation programs are only a small part of ASCS' responsibility, the ACP is
closely guarded and prized because it provides money to about 250,000 farmers per year, helping insure political support for ASCS (Leman, 1982:52). This program also keeps ASC committees and employees busy during periods when the more volatile commodity programs are down (Leman, 1982:52).

The local ACP committees determine which practices are eligible for what level of cost-sharing. Technical responsibility for ACP-funded practices has been delegated to the SCS. Parks (1952:198) explains that SCS initially resisted this policy because it calls for them to provide technical assistance to ACP participants, whether or not they are soil conservation district cooperators. In return for this assistance, ASCS transfers five percent of its ACP funds to SCS. Only when conservation practices are designed and completed satisfactorily (according to SCS specifications) will the ASC committee issue cost-share payments to farmers. Considerable interaction between ASCS and SCS, including farmer referrals for ACP cost-sharing, can be expected.

Farmers' Home Administration (FmHA)

Of the organizations in this study, the Farmers' Home Administration has the smallest role in soil conservation arena. The FmHA administers more than 30 loan and grant programs, most of which are not conservation-related. It provides financial and management assistance to individuals and groups living in rural America who meet certain eligibility requirements. Their programs are aimed at four target groups: farmers; rural homeowners; communities; and business and industry.
The FmHA provides financial assistance to farmers who cannot get financing at reasonable rates elsewhere. The FmHA mainly provides money for farm operating expenses. They also arrange low-interest conservation loans for eligible farmers. The SCS works with FmHA on technical phases of loan applications. The FmHA refers farmers to SCS for development of conservation plans.

The FmHA and SCS have a memorandum of understanding to clarify their responsibilities. They agree that effective cooperation can aid significantly in advancing the missions of both agencies. The memo states that SCS and FmHA will cooperate on various activities, including: conservation planning for FmHA borrowers' farms; planning FmHA financed water supply and waste disposal facilities; identifying soil limitations and erosion hazards on FmHA financed building sites; and developing Environmental Impact Statements on projects supported by FmHA funding.

**Iowa state organizations**

The organizational context also includes two state conservation organizations: the Iowa State Soil Conservation Committee (ISSCC) and the Iowa Department of Soil Conservation (IDSC). The ISSCC, which first met in 1939, is responsible for setting state soil conservation policy (Muhm, 1984:109). The committee has eight voting members appointed by the governor. Six must be actively involved in farming. One additional member represents Iowa's cities and towns; and the other represents the state's mining industry. Five state agencies (including the CES) are represented as ex-officio members. Two advisors represent the U.S. Secretary of Agriculture and the Iowa County Engineers Association.
The IDSC is the state agency, formally created in 1970, to carry out many of the functions previously performed by the SSSC. The IDSC is responsible for making rules and regulations, implementing policy, and helping SCDs plan and implement their local programs. It also allocates state funds and assigns technical and clerical employees to the SCDs.

**Relationships Among Conservation Organizations**

To fully understand present relationships among the organizations, it will be helpful to consider the historical context of their interrelationships. These organizations have worked together in the soil conservation arena since the mid-1930s. The situation is complex because no single organization was given the majority of responsibility for conservation programs. Neil Sampson (1985:15) describes what was created as a "multi-agency, multi-objective set of soil conservation programs within USDA where competition and strife were virtually assured."

Over the past 50 years, several periods of intense rivalry and conflict among the SCS, CES, and ASCS can be identified. The Soil Conservation District (SCD) has been closely connected to the SCS and experienced many of the same relationships. The FmHA has only been marginally involved with the other organizations in the conservation arena. Because this study focuses on soil conservation, those relationships involving the SCS (with CES, ASCS, and FmHA) will be emphasized in the following discussion.

It is important to point out that the relationships have not been characterized only by conflict. A recent history of Iowa conservation
concludes that the relationships have been harmonious at the state and local level in Iowa (Muhm, 1984). Iowa is, and has been, a leader in the soil conservation movement with a string of program and policy innovations. This would not have been possible without close cooperation of the organizations involved. From a national perspective, however, relationships have been less than harmonious during several periods of conflict. Because this study is concerned with barriers to IOR, the following review will stress the conflicts between the organizations. Past conflict and disputes among the organizations may influence present IOR.

The early years: late 1930s

The first major soil conservation project in Iowa was in 1931 in Page County, one of the 16 included in this study (Muhm, 1984:67). This project was a cooperative venture between the USDA and the Iowa Agriculture Experiment Station of Iowa State College. This was before the establishment of the ASCS, SCS, or FmHA. Passage of the Soil Conservation Act of 1935 (Public Law 46) set the stage for tension and conflict among the newly created SCS and PMA (i.e., ASCS) and the already established CES (Childs and Headley, 1982).

Sampson (1985:13) explains that the mission of the newly created SCS crossed many established lines in the USDA. The CES, particularly, resented SCS because they saw conservation work as primarily educational and therefore, in their exclusive domain. They also considered soil conservation to be only one part of sound farm management, which was their main responsibility. They argued that any conservation programs
should be channeled through the Land Grant Colleges and the Extension system instead of an independent organization within USDA. Many state Extension systems saw the programs of the SCS as duplication and infringement upon their mission (Childs and Headley, 1982; Parks, 1952; Sampson, 1985). This argument is valid to some extent and persists in some places today.

The CES argued that the creation and rapid growth of both SCS and AAA programs posed a serious threat to the tenuous balance of federal-state relations, which had favored the states since the passage of the Hatch Act in 1914. Parks (1952:203) explains that the continuing power and visibility of CES were threatened because these federal action agencies (SCS and AAA) were dealing directly with farmers, pouring financial subsidies and free government services (e.g., technical assistance and machinery) into local communities. The Land Grant Colleges lacked the political power to prevent the federal government from taking a more active role (Sampson, 1985:15). Because county SCS or AAA (ASCs) staff often outnumbered CES workers in a county, the threat of CES losing their farmer support increased (Parks, 1952:204).

Problems were not only due to CES opposition to SCS programs. Parks (1952:205) concluded that the friction between SCS and CES intensified because of SCS attitudes. He reports that some SCS staff did not even try to work well with CES staff. In some areas, SCS tried to dominate CES educational work in conservation. SCS and CES were also in conflict over technical practice specification (Childs and Headley, 1982:203). Parks (1952:205) concludes, however, that the system probably brought
about a sounder and better proportioned approach to conservation than if
either SCS or CES made all the decisions alone.

Sampson (1985:14) explains how the situation was further complicated
in 1936 when soil conservation became a major function of the
Agricultural Adjustment Administration (ultimately to be named the ASCS).
They became responsible for a new cost-sharing program to partly
reimburse farmers for the cost of installing certain conservation
practices on their land. The SCS objected to the money not being
channeled through the soil conservation districts.

Since their founding, SCS and ASCS have had a tense relationship
that has sometimes broken out into open warfare (Leman, 1982:51). This
also centered around concerns over duplication and conflict in programs
(Parks, 1952:187). The SCS saw the AAA (ASCS) conservation programs as a
rival conservation program within USDA, setting out to do the same job
with different methods. The goals of cost-sharing went beyond the
publicly supported reason (i.e., conservation) to include reduction of
the acreage of surplus crops and a way to shifting public funds to
farmers to help prop them up financially (Sampson, 1985:15).

The middle years: 1946-1953

During the decade from 1936 through 1946 the relationships showed
less outright conflict, although there was not much cooperation (Morgan,
1965:114). The post-war years, however, saw renewal of many of the old
rivalries. Concern over real and potential duplication of services and
responsibilities was at the heart of many of the turf battles among the
organizations. The SCS was responsible for developing and prescribing
technical standards for conservation practices. The SCS and PMA (ASCS) could not agree on proper standards and specifications for conservation practices (Morgan, 1965:149). The PMA (ASCS) did not develop its own staff of agronomists, engineers and other specialists, but tended to rely on the agricultural colleges (i.e., CES) for practice recommendations and specifications instead of the SCS (Morgan, 1965:115).

The SCS was at a distinct disadvantage in competition with the PMA (ASCS) which had a powerful farmer committee in every county. Soil conservation districts, on the other hand, had not yet become firmly established. Several legislators and USDA administrators called for a consolidation of SCS and PMA (ASCS) during the late 1940's (Morgan, 1965:119). In 1948 and 1949, the PMA (ASCS) made several procedural changes to its Agricultural Conservation Program (ACP) to limit the role of the SCS and the conservation districts in supplying conservation assistance to farmers (Morgan, 1965:143). The PMA (i.e., ASCS) wanted to become the only USDA conservation organization and were, therefore, arguing publicly that SCS technical assistance was unnecessary, costly and inefficient (Morgan, 1965:146).

The CES and its allies in the Farm Bureau were set against any proposed consolidation of SCS and PMA (ASCS). The SCS had waged an aggressive campaign to expand its own activities and promote districts since 1944. This reached a peak in 1948 (Morgan, 1965:120). Conflict between CES and SCS seemed to reach a peak during presidential election years. Concerns over duplication and lack of cooperation erupted in some states. The CES, in some states, demanded that the Land Grant Colleges
be allowed to take over most of the work of the SCS. They asked for "decentralization" of SCS because its complete farm plans challenged the complete farm plans of the CES. Sometimes, recommendations from the two agencies differed greatly (Morgan, 1965: 123-124).

Relationships between SCS and CES varied from one state to another based on the positions of the state CES leaders and the state farm bureaus. Variation was also found between counties, within a state (Morgan, 1965:128). Local politics in rural America were extremely complex and often seemed to focus on conservation issues (Morgan, 1965:139)

Interorganizational problems reached a peak in the early 1950's. Morgan (1965:151) reports that special federal investigators found USDA conservation programs to be "permeated with duplication, overlap, conflict, and lack of coordination, and what has been aptly described as a state of 'civil war' in many areas, involving not only PMA (ASCS), SCS and Extension, but also the Farmers' Home Administration." When the evidence became public knowledge, then USDA Secretary Brannan was forced into action.

Ultimately, a two-step settlement was imposed on PMA (ASCS) and SCS in such a fashion that neither one "swallowed" the other. The CES and its supporters lost all hope of "decentralizing" the SCS program to the Land Grant Colleges (Morgan, 1965:141). On February 15, 1951, USDA Secretary Brannan issued Memorandum 1278 which proved to be "the single most important action taken to solve the organizational problem which had plagued the Department since the beginning of the federal soil
conservation programs" (Morgan, 1965:152). This order gave each organization a share of responsibility for conservation, while allowing each to retain its historic identity. The settlement did not completely satisfy any of the organizations (Morgan, 1965:169). It was, however, the only type of settlement that would not seriously disturb the balance of power in agriculture. Radical reorganization of USDA conservation programs did not and probably will not happen.

All three organizations (SCS, CES, and ASCS) were directed to plan programs jointly at all levels (federal, state, and local.) The memo directed better local coordination of SCS and ASCS functions (Sampson, 1985:118). The PMA (ASCS) county committees and the local SCS staff were directed to jointly develop their local programs within state guidelines. The CES county agency and FmHA supervisor were to be invited to participate (Morgan, 1965:154). The PMA (ASCS) retained control over cost-share money, but lost the authority to build technical staff. The SCS was recognized as the technical experts, but was now mandated to provide assistance to ASCS clientele. The role of Extension was left purposely vague to allow more latitude for individual states. Most major issues were settled and the arrangement is mostly the same today.

The recent years: 1977-present

Little written commentary on the organizations or their interrelationships exists for over two decades (1953-1977). Conflict was generally less overt than in previous years (Sampson, 1985). In recent years conflict has arisen over the relative emphasis each organization gives to agricultural production versus conservation (Sampson, 1981).
Although these objectives need not be in conflict, the agencies and farmers have often seen them as contradictory. The ASCS commodity programs and SCS conservation programs, particularly, have been in conflict more often than not (Nielson, 1986b:72). Some in SCS have also charged CES with being too production oriented (Nielson, 1986a:44).

The decade of environmentalism also reawoke some old conflicts. According to Sampson (1985:222-223) fighting in USDA broke out in 1978 over the Rural Clean Water Program (RCWP). The ASCS saw it as competition for its ACP program. They felt it could tip the balance of power between ASCS and SCS. ASCS ultimately won control over RCWP administration. Sampson (1985:223) concluded after the RCWP folded that it became another casualty of the historic battle for "turf" in the nation's conservation programs.

The recently introduced program of targeting USDA conservation assistance to areas with the greatest erosion problems has led to both renewed conflict and increased cooperation among SCS, ASCS, and CES. The counties included in this study were among the first to be targeted in the country. Targeting fanned long-standing tensions because SCS seemed to dominate the effort and had the most to gain. The ASCS, on the other hand, was much less involved initially and had the most to lose (Allee, 1982:94).

Nielson (1985:51) explains that targeting increased interaction between ASCS and SCS to handle farmer referrals for cost-sharing funds. Such interaction presented the possibility for closer working relationships or potential problems. On the negative side, Nielson
(1985:52) found that SCS and ASCS largely planned and implemented targeting independently of each other, at all levels. The net effect of targeting, however, was that SCS and ASCS reinforced each other. Targeting often led to improved cooperation between SCS and ASCS and was instrumental in causing closer working relationships (Nielson, 1985:52).

Nielson (1985:52) found that CES involvement in and support of targeting varied greatly among counties and states. In some counties, the CES supplied effective support for targeting. In other cases, the CES was only minimally involved. Nielson (1985:52) concluded that relationships between CES and SCS improved because of the targeting program. Targeting, however, only provided more staff for ASCS and SCS. No additional resources were supplied to CES to expand their program to accommodate targeting. This, unfortunately, limited CES involvement in targeting.

Interorganizational relationships today

Overall, relationships among the organizations appear better now than in earlier periods. Rogers and Maas (1977:84), in a study of the same organizations found disputes and conflicting responsibilities to be low. They concluded that the basis for most contacts was voluntary, growing out of specific needs or problems.

Many of the problems between SCS and CES may largely be history. Childs and Headley (1982:203) point out that even in Missouri, where conflicts were very long-standing, open, and heated, the SCS and CES now cooperate in the conservation effort. Leaders of both organizations now actively encourage their staff to work closely together. Relationships
between SCS and CES in Iowa have been generally better than in Missouri. Muhm (1984:152-153) reported that CES has made important contributions to Iowa SCDs. County Extension directors traditionally served as secretary for local conservation efforts. Local CES personnel played a major role in district formation. Many were responsible for making initial contacts and organizing local farmers.

Nielson (1986a:44) observed two basic problems between CES and SCS that continue in recent years. One involves lack of agreement over who should take the lead in conservation information and education programs. Everyone agrees that conservation information and education activities are proper activities for CES. Often, however, local CES offices may not be adequately staffed. Some may not give conservation education a high priority compared to other important parts of their programs. He concludes there is considerable variation in the division of labor between CES and SCS depending on staff size, capabilities and interests.

Nielson (1986a:44) argues that in some states, the CES and the conservation agencies also disagreed in their approach to conservation tillage. About 10 years earlier, the SCS had begun aggressively promoting conservation tillage. Although the CES had been interested in conservation tillage even before that time, it was more cautious about promoting it because of pest, yield, and other problems. Many of these problems have since been overcome and the CES now also encourages farmers to try conservation tillage. The SCS, in fact, credit the CES with being especially helpful in educating farmers on crop varieties and use of herbicides.
Nielson (1985:46) concludes that although SCS may take the lead in most conservation efforts, such as targeting, effective multiagency programs call for early and in-depth involvement of ASCS, CES, conservation districts, and other organizations. Coordinated efforts will contribute to the success of conservation programs. Specifically, he argues that farmers will more readily accept conservation practices if they see a unified effort by all organizations and general agreement on practice recommendations.

Effective working relationships will become increasingly important as conservation programs become more complex. Recently enacted federal legislation includes new programs and policies that will call for even closer cooperation between the organizations. These include: a conservation reserve program, "sodbuster" and "swampbuster" provisions, and cross-compliance. These represent significant departures from the traditional type of conservation programs, based on purely voluntary farmer participation and no penalty for nonparticipation.

Peter Tidd (1986:135-136), SCS director of program development and appraisal, recently concluded that progress in improving coordination among organizations has been made in recent years. He argues, however, that coordination and cooperation must be further improved both within and outside USDA. Because the soil and water conservation challenge is beyond one organization's scope, they must work to a common goal.
Sociological Features of the Conservation Network

As just discussed, the network of relationships among the organizations has existed at the local level for almost five decades. It is, therefore, possible to analyze some key structural features of the network of relationships among these organizations.

**Division of labor and complementary services**

Relationships among the various agencies have been specified through program directives, memoranda of understanding, and common practice. A clear division of labor among the organizations has been established to provide complementary services, avoid duplication, and decentralize power and decision making. As discussed earlier, Memorandum 1278 issued in 1951, clarified the division of labor among the SCS, CES, and ASCS. The major provisions still apply today.

The SCS are technical experts regarding the installation, use, and maintenance of conservation practices. The ASCS and FmHA (with the SCD) are the financial arms of the network. The CES is designated as the lead educational organization within the USDA. The local SCD is a locally elected group of five citizens (usually farmers) responsible for developing program priorities, determining the needs of farmers and assuring that USDA programs respond to these needs at the local level.

Each organization has responsibilities and legal mandates to plan and implement soil conservation assistance programs for farmers. Farmers mainly recognize the role of SCS and ASCS (Korsching et al., 1985). They are much less likely to recognize the important roles of the CES and SCD (Bultena et al., 1984). The FmHA has little direct responsibility for
soil conservation and farmers are unlikely to mention them as sources of information or assistance.

The actual division of labor and responsibilities are not very clear for public education and information functions. The CES has traditionally been considered the lead educational organization in the USDA. Two other organizations (SCD and SCS) also have clearly mandated responsibilities for public education and information.

**Legitimate domain and organizational mission**

Before examining the extent to which an organization takes part in soil conservation related activities, the extent of each organization’s legitimate role in soil conservation must be considered. The breadth of each organization’s mission determines whether it is only responsible for conservation or for other program areas, as well.

Only one organization (SCS) in this study has soil conservation as its primary mission. The SCS plays the largest and most legitimate role in the conservation arena. The other three organizations (CES, FmHA and ASCS) have broader, more general missions. They also have a smaller legitimate domain in soil conservation.

The SCS is, therefore, more specialized than are the other three organizations. The ASCS and FmHA are specialized to the extent that they focus primarily on financial matters. The ASCS has a broader range of program responsibilities than does the FmHA, however. The CES is an educational organization with a broad range of substantive program responsibilities.
Decentralization of Decision Making

According to Nielson (1985:54) USDA conservation programs have historically been decentralized. The organizations vary, however, on how decentralized they are in developing their own programs within broad guidelines. Local offices of each organization, therefore, have limited autonomy in developing their own priorities and implementing their own programs within state and national frameworks.

The SCS is centralized. Local SCS staff receive considerable direction from the centralized area, state, and federal levels as far as technical standards and administrative procedures. They are also responsible to the Soil Conservation District commissioners for local leadership and direction. The SCD commissioners, on the other hand, are the most decentralized and autonomous in their strategic planning and program implementation. County CES and ASCS staff also work closely with their local committees and with their area, state, and federal offices. These three organizations are less line organizations than the SCS. The FmHA is more centralized than either CES or ASCS. It is more centralized than the SCS, which is closely tied to decentralized SCDs.

Local program directors of each organization, therefore, have varying discretion in the specific program activities. They all receive support from and are controlled by mandates from higher levels of their own organizations. Nielson (1985:55) argues that these organizations face a serious problem of maintaining some autonomy, in the face of an increasing trend to centralization of planning, coordinating, and decisionmaking in the USDA. For example, he found that decisions,
priorities, and criteria regarding targeting, specifically, were made largely at the national level.

**Prescribed versus emergent IOR**

One aim of this research is to compare the actual IOR with the mandated relationships set out in legislation and memoranda of understanding between the organizations. Certain types of IOR, such as client referral and formal meetings, may be prescribed by higher organizational levels. Other types of IOR, such as informal interaction, are emergent and are left more to the discretion of individual staff. Knowing how much organizations are mandated to interact will help understand the actual, emergent network of IOR.

Tichy (1981:227) describes prescribed networks as those reflected in written programs, charts and job descriptions. "Metaphorically, a prescribed organizational network provides pegs from which emergent networks hang. Variations in prescribed networks, therefore, change emergent networks." Prescribed relationships can be viewed as formal, while emergent are often more informal. As will be explained in the next chapter, prescribed networks involve political economic considerations (Benson, 1982). A political economic perspective addresses how much organizations are required to work together (Benson, 1975; Benson, 1982). Certain program requirements, organization policies, and administrative arrangements make it more likely that IOR will happen between certain organizations than between others.

The SCS and ASCS, for example, are mandated to interact through the provisions of the ACP cost-sharing program. Farmers who want cost-
sharing from ASCS, are referred to SCS for technical assistance. Also, five percent of the county ASCS funding goes to the local SCS office for this technical assistance. For the other dyadic relationships (SCS and CES, CES and ASCS, CES and FmHA and ASCS and FmHA), there is less mandate that IOR should happen. Analysis of the emergent network of IOR, therefore, must consider the legal, prescribed context within which these relationships develop.

Key features of the organizational environment

To fully understand the research context, selected aspects of the organizational environment during the study should be considered. The "objective" nature of the environment is important for understanding the perceptions of organizational decision makers about that environment (Pfeffer and Salancik, 1978). The environment for these organizations, during this study, tended to be uncertain and hostile.

American agriculture was in the midst of a very serious financial crisis, which had considerable effect on many farmers and organizations, including media visibility. Threats of large funding cutbacks for the organizations, particularly the SCS, were a widely publicized concern. Debate over the 1985 five-year national farm bill proposed some radical changes in conservation programs and policies. The organizational environment was characterized by considerable uncertainty and threats of increasingly scarce resources.

The same objective environment can have very different effects on different organizations. The SCS and FmHA, which rely most heavily on federal funding and direction, each faced serious problems of decreasing
resources and increasing workloads. The FmHA had taken on a very negative public image partly due to mass media coverage. The ASCS and CES, with more decentralized decision making and control, appeared to face less uncertainty and instability in their environment. However, environmental circumstances change quickly because one year later (1986) federal funding for the CES was threatened with elimination.
CHAPTER III. THEORETICAL FRAMEWORK

During the past 25 years, many researchers have studied interorganizational relationships (IOR). Most writers have not, however, clearly stated their theoretical foundations. Past research has been primarily within the functional or exchange theoretical traditions. These stress benefits of and positive influences on IOR. Theoretical perspectives suitable for examining barriers to IOR need different assumptions and concepts. In fact, Galaskiewicz (1985:298) argues there is "no one theory of IOR." No single theory could, therefore, be expected to adequately explain all types of barriers.

A conceptual model of barriers to IOR is developed and tested (Figure 1). Before describing this model, it will be helpful to consider the three higher level theories forming the basis for this model: resource dependency, political economic and conflict theories. They are compatible, yet focus on different units of analysis: individuals, organizations, or organizational environments. Resource dependency provides support for barriers involving individual perceptions of IOR, perceived scarcity of resources, and distance between organizational offices. Resource dependency and political economic theories together help understand the environmental context as a barrier to IOR. Conflict theory helps understand barriers related to perceived interpersonal conflict.
PERCEPTIONS OF THE ENVIRONMENTAL CONTEXT
1. Conditions in the economy
2. Changing guidelines from above
3. Uncertainty of future funding

PERCEPTIONS OF INTERORGANIZATIONAL RELATIONSHIPS (IOR)
1. Lack of own time
2. Fear of lost autonomy
3. Fear of lost credit or visibility

FREQUENCY OF INTERACTION WITH OTHER ORGANIZATIONS
1. Clientele Referral
2. Informal Interaction
3. Formal meetings

PERCEIVED SCARCITY OF RESOURCES
1. Inadequate operating funds
2. Limitations in staff size

PERCEIVED INTERPERSONAL CONFLICT
1. Differences in personalities
2. Others' unwillingness to cooperate
3. Past problems working with others

DISTANCE BETWEEN ORGANIZATIONAL OFFICES

Figure 1. Barriers to interorganizational relationships (IOR) and reported IOR examined in this research
Resource Dependency Theory

Exchange theory was the major theoretical perspective on IOR throughout the 1960s and most of the 1970s. Developed in the early 1960s, this theory portrays organizations as rationally calculating benefits and costs of relationships with other organizations (Levine and White, 1961; Blau 1964). Resource dependency theory seems to have replaced exchange theory as the dominant IOR theory. Resource dependency theory questions the existence of rational decision-making, perfect knowledge, and enlightened self-interest which are basic assumptions of social exchange theory (Cook, 1977; Pfeffer and Salancik, 1978; Mulford, 1984).

According to resource dependency theory, organizations are faced with a serious dilemma. Organizations prefer to remain autonomous, but often become dependent on other organizations for resources, support, and information (Aldrich, 1979; Mulford, 1984). Reluctant organizations strive to maintain independence from others, while knowing they must engage in IOR to get needed resources (Galaskiewicz, 1985:282). Dependencies develop because resources and information are often concentrated in the hands of one or a few organizations (Mulford, 1984:47). Organizations prefer, therefore, to avoid becoming dependent on others, while seeking to make others dependent on them.

The organizational environment plays a central role in resource dependency theory. Organizations are closely tied to environmental conditions (Pfeffer and Salancik, 1978:1). They survive to the extent they are able to effectively manage environmental demands.
Interorganizational relationships are often a response to environmental demands (Rogers, 1982:177).

Many important factors affecting organizations are beyond their control (Pfeffer and Salancik, 1978:10). The key to organizational effectiveness and survival is the ability to obtain resources from the environment (Pfeffer and Salancik, 1978:2). Organizational behavior and outcomes are constrained by environmental contingencies. Actions of individual organizations generally have little effect on the environment (Pfeffer and Salancik, 1978:16). Organizations are not, however, viewed as passive and powerless in an all powerful environment, as they are in the population ecology perspective (Hannon and Freeman, 1977).

Organizations have many possibilities for action even in the face of severe environmental constraints (Pfeffer and Salancik, 1978:18). They can adjust their organization's response and alter the social context through selection of interorganizational relationships (Pfeffer and Salancik, 1978:20). Environments are not taken as given. Organizations shape, even create, their response to their environments through a process of attention and interpretation (Pfeffer and Salancik, 1978:13).

Managers often must cope with changing and conflicting demands from within their organizations and the environment. (Pfeffer and Salancik, 1978:36). Difficulties increase by inaccurate perceptions of external demands and interdependencies with other organizations. Variations in the environment affect the options open to organizations (Galaskiewicz, 1985:286). Furthermore, organizations vary in their perceptions of and response to their environments. Organizational and individual behavior,
including IOR, is constrained by: physical realities; social influence; information; cognitive capacity; personal beliefs; and individual preferences.

Problems arise not only because organizations are dependent on their environment, but because this environment is unpredictable and uncertain (Pfeffer and Salancik, 1978:3). Environmental uncertainty itself is not necessarily problematic. Uncertainty becomes important only when it involves important environmental elements, such as scarce resources, strategic information or legitimacy (Aldrich, 1979; Mulford, 1984). For the most part, organizations try to reduce the uncertainty of their environment.

**Political Economic Theory**

This theory is closely related to resource dependency theory (Hall, 1982:317). It also gives high priority to issues involving the environment and the pursuit of scarce resources. Mulford (1984:137) explains that one key difference is the greater emphasis political economy places on the effect of the institutional environment (e.g., funding sources, regulatory agencies, and legal mandates.) This theory focuses on the interaction between political and economic forces both within and outside organizations. Hasenfeld (1980:51) explains that "political" refers to the way organizations gain and use power and legitimation. "Economic" refers to organizations acquisition, distribution and use of resources.
Emergent interaction patterns among organizations are primarily task-oriented and dependent on resources from outside the local system. An adequate flow of resources to a local system depends on developments in this larger environment (Benson, 1975:230). Two basic types of resources are central in the political economy of interorganizational networks: money and authority. Resource adequacy determines, within rather restrictive limits, the nature of interaction among organizations.

The interorganizational network is seen as the basic unit of analysis in the study of advanced industrial society (Benson, 1975:229). Local organizations are linked to a larger environment of authorities, legislative bodies, and interested publics. Organizations get power from their position in the local network and their linkages outside the local network (Benson, 1975:232).

According to this perspective (Benson, 1975:232-233), organizational directors have four basic action orientations:

1. They are reluctant to undertake tasks that interfere with the fulfillment of their present programs.

2. They seek to maintain a clear-cut, uncluttered domain of high social importance, which has the following attributes: exclusiveness, autonomy, and dominance.

3. They seek to maintain a reliable flow of resources and a dependable support network.

4. They are committed to defending their own paradigm (e.g., definition of problems and methods of intervention.)

Organizational directors who believe their own resources are limited may be reluctant to invest their time and other scarce resources in IOR that may interfere with their own programs. They will also avoid IOR if
it might lead to loss of domain or compromise of key components of their paradigm. Organizations are being asked continually to do more with less. Simultaneously, they must show greater accountability to external demands (Levine, 1983; Mulford, 1984). Many could be expected to avoid IOR if they think it takes up their valuable time, threatens their autonomy, or reduces recognition for their own programs.

Galaskiewicz (1985:286) points out that a considerable amount of IOR is mandated by law. Cooperation among organizations is often explained by these mandates. Lower level organizations are bound together to varying degrees by externally developed and mandated policies and programs. Directives from higher levels set the context within which interaction among local organizations must occur. In most cases, therefore, IOR is partly based on factors beyond the control of individual staff.

**Conflict Theory**

Conflict theory is compatible with the two theories just discussed. It has not been used as often, however, because IOR scholars have ignored conflict (Mulford and Mulford, 1977:569). Zey-Ferrell (1979:296) explains that conflict generally happens where individuals or organizations are dependent on shared resources (e.g., funding, staff, clientele, or information). Conflict increases if interdependent activities are coupled with incompatible goals. Social conflict involves social interaction in which actors oppose one another in some manner (Olsen 1978:308). Almost all social relationships involve some conflict
at one time or another. As used here, conflict, is broad enough to include: competition for resources; disputed tensions; significant differences; and incompatible goals (Mulford and Mulford, 1977:573).

Conflict between organizations includes both interpersonal conflict between the organizational directors, and interorganizational conflict. Interorganizational conflict often occurs over scarce resources, power, or clientele (Zey-Ferrell, 1979:301). Interorganizational conflict arises when two or more organizations are functionally interdependent, have competing interests or value the same scarce resources. Differences in real or perceived interests are often a source of interorganizational conflict (Zeitz, 1980:82).

To a large extent, IOR is built upon interaction among individual organizational members. This represents a different level of analysis than relationships among organizations. Interpersonal conflict tends to be behavioral and social psychological. It varies in intensity and often involves manifest discontent toward another person (Zey-Ferrell, 1979:299). Interpersonal conflict often stems from attitudes of annoyance or distrust (Zey-Ferrell, 1979:301). Problems in relationships among representatives of different organizations could present serious barriers to organizations' willingness and ability to participate in IOR activities.

In line with the other two theories discussed earlier, conflicts often arise from conditions in the organizational environment (Aldrich, 1971:281). Conflicts may result from multiple and competing demands from key components of the environment. One method organizations have for
coping with externally-induced conflict is to tighten the boundaries between the organization and its environment (Aldrich, 1971:287). Increased conflict could, therefore, result in less IOR.

Molnar and Rogers (1979:405) suggest that conflict between organizations is a function of their comparative properties and extent of interdependence. They describe two types of interorganizational conflict: structural and operating. Structural conflict stems from rules that govern relationships among organizations and may often involve disputes over basic organizational identities. Operating conflict, on the other hand, involves interpretation and application of these rules. Operating conflicts may result in chronic and protracted disagreements between organizations. This study will mainly consider the organizational directors' perceptions of operating conflict.

Overview of Interorganizational Relationships

At the heart of understanding IOR is the premise that no organization is completely self-sufficient (Thompson, 1967; Pfeffer and Salancik, 1978). Organizations are interdependent to varying degrees. Organizational directors often must interact with other organizations to reach individual and collective goals. Interaction calls for transactions, involving resources, information, help, and social legitimacy.

Interorganizational relationships are usually initiated and maintained by individual persons. Such interaction is distinct from interpersonal relationships because it involves group or organizational
identities. Information received influences subjective perceptions of organizational members, which may have as much influence on IOR as objective conditions (Houghland and Sutton, 1978:650).

Information exchange is one important type of IOR (Galaskiewicz, 1979). Organizations need information to make strategic decisions and implement their programs. Information exchange also serves as a basis for trust among actors in the network. Trust is essential for establishment of higher-level, ongoing IOR.

Motivations for Interorganizational Relationships

Most IOR theorists assume organizations benefit from their relationships with other organizations (Mulford and Klonglan, 1982). Rossi et al. (1982:12-13) summarize five main benefits of IOR: improved staff effectiveness, improved public image, improved accessibility for clientele, reduced fragmentation of services, and greater efficiency. Organizations working together are often able to accomplish things they could not do as effectively or efficiently alone. Following this argument, IOR might become more important as funding, staff, and other resources become increasingly scarce.

Successful IOR provides benefits for the larger system, as well. Clientele receive better service when organizations coordinate their programs. A public fiscal benefit from IOR is increased efficiency by avoiding possible duplication of programs. Other positive influences on IOR include a common clientele and compatible missions. Formal division of responsibility, based on complementary expertise, often develop.
Organizations may even be under legal mandates to work together.

An important question, therefore, becomes: "With so many positive factors encouraging IOR, what barriers limit the extent of IOR?" If barriers are found to limit IOR another question is: "How can the barriers to IOR be overcome?" This research will try to answer these questions.

**Conceptual Model: Barriers to IOR**

Organizational members generally recognize the importance of working with other organizations. Most know they are expected to work together. They may even recognize some benefits of IOR (Mulford and Klonglan, 1982:4). Some may not, however, consider it a high priority. Good intentions are not fully translated into effective interaction with other organizations because barriers limit IOR. Aiken et al. (1975:4) point out that many barriers and problems confront those who want to assure that the right service is delivered to the right client in the right sequence.

Few organizations can be expected to coordinate willingly if the costs are too great or not clear (Mulford and Klonglan, 1982:10). Relationships with other organizations may reduce certain problems but they may also create additional dependency and uncertainty. Van de Ven and Walker (1984:601) state that organizations often resist working with other organizations because they lose some freedom to act independently. Organizations are also reluctant because they must invest scarce resources and energy (i.e., time) to develop and maintain IOR. They
conclude that most organizations prefer to avoid IOR if possible.

Reasons for not starting or continuing an IOR venture have rarely been studied. This research examines five main types of barriers: perceptions of the environmental context, individual beliefs about IOR, perceived resource scarcity, perceived interpersonal conflict and distance between offices. Each barrier could have a powerful influence alone. In combination, they could result in resistance to change and a business-as-usual approach to delivering programs (Rossi et al., 1982:38).

Perceptions of the environmental context

Most IOR scholars agree that the organizational environment is an important determinant of organizations’ ability and willingness to work together (Hall, 1982; Mulford, 1984; Pfeffer and Salancik, 1978; Scott, 1981). Researchers, however, have often treated the environment as a residual category for everything that is not part of the organization. This research does not consider the environment in the abstract sense, but its effect on the organization (i.e., whether it makes it more difficult for organizations to plan and carry out their programs.)

Components of the environment that affect organizations are themselves interrelated. Environments are changing rapidly, becoming increasingly turbulent (Emery and Trist, 1965; Terreberry, 1968). Organizations are becoming less autonomous as other organizations grow increasingly interdependent. Increasingly dynamic and complex environments increase the difficulties many organizations face. Hall (1982:236) states that organizations vary in their vulnerability to
environmental pressures. The more dependent an organization is on its environment, the more vulnerable it is. Some organizations are mainly controlled by their environment, while others are able to control their environment to varying degrees.

**Conditions in the economy** Economic conditions set important constraints on IOR (Rogers, 1982:180). The state of the general economy can be a source of considerable uncertainty and a severe constraint on internal and interorganizational activities (Hall, 1982:229). Organizations often respond to negative economic conditions by cutting back activities they feel are less important (e.g., relationships with other organizations).

**Changing guidelines from upper organizational levels** Conditions at the upper levels of an organization, such as the state or national level influence relationships among organizations at lower (i.e., local) levels (Benson, 1975). Administrators generally believe they must follow the dictates of central offices (Boje and Whetten, 1981:384). Rogers and Maas (1977:78) found that nearly all organization directors were encouraged by higher units to work with other organizations. The majority, however, also indicated that regulations imposed by higher levels limited what they could actually do with other organizations. Uncertainty, instability or incompatibility among organizations at upper levels may result in changing or inconsistent guidelines. This could discourage local involvement in IOR (Gans and Horton, 1975:87). Similarly, local organizations may want to work together but authority or encouragement is not given by the state or national offices. Boje and
Whetten (1981:380) conclude that an organization’s position in a local network is significantly affected by funding and policy decisions originating outside that network.

**Uncertainty over future funding** The most troublesome situation for organizations involves uncertainty over important resources (Aldrich, 1979; Mulford, 1984; Pfeffer and Salancik, 1978). Resource scarcity problems are heightened by uncertainty produced by rapid environmental changes (Aldrich, 1976:421). Organizational vulnerability derives from the possibility that resources may be no longer available because of changes in the environment (Pfeffer and Salancik, 1978). Because uncertainty of an important resource threatens the continued existence of an organization, it makes an organization’s participation in IOR doubtful.

**Perceptions of interorganizational relationships (IOR)**

Barriers to IOR could involve attitudes and beliefs of organizational directors. Pfeffer and Salancik (1978:89) explain that organizational actions are determined by an enacted environment. Organization members respond to what they perceive and believe about the world. Although these perceptions may not match reality, perceptions probably have more influence over IOR than do actual conditions.

**Lack of own time** In times of scarce resources for more staff, organizational directors may find they have too much to do, in too little time. Organizations must first respond to their own immediate operating problems and procedures (Gans and Horton, 1975:84). Participation in IOR involves direct expenditures of time, including travel (Schermerhorn,
1975:850). Considering an already full workload, many organizations place a low priority on relationships with other organizations. They give higher priority to and spend more time on their own organization’s goals, often to the exclusion of time for IOR (Gans and Horton, 1975:84).

Fear of lost autonomy  Aiken et al. (1975:18-19) found the most serious barriers to IOR was organizations’ wish to maintain their autonomy and minimize loss of independence. Schermerhorn (1975:849) also concluded that organizations fear that IOR leads to loss of decision-making autonomy and strategic position, which can, in turn be considered a cost of IOR. Because IOR almost always involves some loss of autonomy (Mulford and Klonglan 1982:9), these concerns are valid.

Fear of lost visibility or credit  Organizations are increasingly concerned with accountability, as resources grow scarcer. Most see the need to document the effects of their own programs (Levine, 1983; Mulford, 1984). Organizational directors try to fulfill their own program requirements to justify their organization’s claim to a supply of funds and legitimacy. This requires actions with visible consequences (Aldrich, 1976:424). Another barrier, therefore, is loss of program visibility or organizational identity (Halpert, 1982:63-64). This becomes problematic when credit for programs are shared among several organizations. On a related point, Schermerhorn (1975:849) adds that IOR may involve unfavorable ramifications for organizational image or identity.
Perceived resource scarcity

Resource scarcity may have conflicting effects on organizations’ ability and willingness to work together. On the one hand, most previous research has assumed that inadequate resources (e.g., funding, staff, equipment, information) motivate directors to coordinate with others who have resources their organization needs (Levine and White, 1961; Van de Ven and Walker, 1984).

On the other hand, resource scarcity may discourage IOR if an organization does not have slack resources (Mulford and Klonglan, 1982:10). Inadequate resources could generate an inferior exchange position and result in a loss of strategic position (Pfeffer and Salancik, 1978). Competition with other organizations for scarce resources may also be perceived as a threat to an organization’s effectiveness and survival. A related fear for organizations with scarce resources is possible dependence on organizations who control scarce resources (Aldrich, 1979; Mulford, 1984).

Limitations in staff size Organizations that provide assistance directly to clientele rely on qualified staff to carry out their missions. Staff size is, therefore, an important determinant of effectiveness for such labor-intensive organizations. Staff size also directly affects organizations’ ability to engage in IOR (Boje and Whetten, 1981:384). Smaller organizations cannot maintain as many organizational ties or offer as wide a range of services as organizations with larger staffs.
Inadequate operating funds

Funding is often considered an organization's essential resource. Operating funds are needed for purchases of equipment (e.g., vehicles, printing equipment and audiovisual aids), travel, and informational materials. Inadequate operating funds may make it more difficult for an organization to carry out its own programs. This, in turn, could limit its involvement in IOR. Directors could find IOR too costly if their own organizations are weak in resources (Schermerhorn, 1975; Guetzkow, 1966). Rossi et al. (1982:38-39) argue that shrinking budgets, cutbacks in staff, and new community needs make "keeping their heads above water the number one priority of local administrators." Such crisis operation contributes to an unwillingness to consider alternative approaches, including IOR.

Perceived interpersonal conflict

Barriers to IOR may arise out of interpersonal relationships among organization members. Poor relations between organizational directors may inhibit any attempt to think about, plan, or implement joint activities. If one organization sees another as a threat (whether it be founded or unfounded) attempts at IOR will generally fail (Schmidt and Kochan, 1977). Problems might also arise if organizations do not understand the resources or expertise other organizations are willing and able to commit to IOR activities.

Differences in personalities

Differences in organizational members' personalities could represent a barrier that may be very difficult to overcome. Incompatible personal and professional backgrounds and orientations also represent barriers (Mulford and
Klonglan, 1982:9). Lincoln and McBride (1985:4) describe homophily as the tendency for individuals with similar values, preferences, backgrounds, and personalities to interact. Those who differ significantly are often repelled. They found a clear relationship between homophily and extent of IOR. This implies a negative relationship between interpersonal differences and IOR.

**Others' unwillingness to cooperate** Some organization members may simply be unwilling to cooperate with other organizations. Aiken et al. (1975:4) reported barriers involving different professional ideologies, conflicts over resources, and incompatible ways of working with clients. Rossi et al. (1982:39) suggest inflexibility is an important barrier, because IOR calls for a willingness to adapt to others' procedures. Such flexibility may be difficult for some organizations. A closely related barrier is turf protection which can be seen as a form of competition and unwillingness to cooperate (Rossi et al. 1982:39).

**Past problems working with others** Past problems encountered while working with other organizations may affect organizational members' perceptions about IOR (Schermerhorn, 1975:852). Historical relationships determine the success of later IOR (Zeitz, 1980). Conflicting views of client interest and incompatible professional ideologies have been found to cause operational conflict between organizations (Aiken et al., 1975). Response to the past demands of one organization often constrain an organization in its future actions, including relationships with other organizations (Pfeffer and Salancik, 1978). Organizations face a particular problem if the demands from different organizations conflict.
Distances between organizational offices

The spatial distribution of organizations has received little attention in the literature on IOR (Hannan and Freeman, 1977). It is probably more difficult to establish or maintain relationships across greater distances (Morrisey et al., 1982:43). This variable incorporates the physical opportunity for IOR, including some potential costs in time and effort (Schermерhorn, 1975:852). Closer proximity promotes familiarity, recognition of similarities in orientation, and mutual acquisition of scarce resources (Morrisey et al., 1982:43). Greater distances hinder communication between organizations, decrease the chance of informal interaction, and increase the referral costs borne by clientele (Boje and Whetten, 1981:384). Rogers and Maas (1979) found a greater number of joint programs where offices were located closer together.

Conceptual Model: Frequency of IOR

The dependent variables refer to the frequency of local organizations' participation in interorganizational relationships (IOR). Frequency of interaction is generally related to the importance of the relationship (Morrisey et al., 1982:80). Hall et al. (1977) found that frequent interaction was related to high levels of both coordination and conflict. Intensity of IOR, examined in this study, includes client referral, informal interaction and formal meetings.

Less intense linkages, such as informal interaction, usually must precede resource exchanges and joint programs which are more costly and
require greater commitment (Mulford, 1984). Various types of IOR represent varying levels of commitment of time and resources to the relationships with the other organization(s). One can expect different barriers to have differential effects on different types of IOR. Relationships between different pairs of organizations can also be expected to differ. Mulford (1984:143) points out that patterns of relationships will vary depending on the specific linkage(s) being analyzed (e.g., information exchange patterns may be different from the patterns of client referral.)

**Clientele referral**

Boje and Whetten (1981:382) argued that clientele referral is a very important type of exchange for public service organizations. Clients are important to organizations in three different ways. They can be viewed as: a generalized resource, used to get other resources (e.g., funding); a liability calling for greater investment of resources (e.g., funds or personnel); or as an idealized purpose, valued by organization members because of their socialization into a professional commitment to clientele service. One can, therefore, expect clientele referral to take on added importance, beyond its role in program implementation.

**Informal interaction**

While many forms of IOR consist of formally structured arrangements for coordination, an even larger amount of IOR happens as short-term, ad-hoc efforts at coordination (Van de Ven and Walker, 1984:602-603). Most interorganizational contacts are generally associated with interpersonal contacts (Houghland and Sutton, 1978:667). More intimacy of
interpersonal ties is linked to higher levels of IOR (Morrissey et al., 1982:57). Halpert (1982:61) concludes that the seeds for IOR are sown through informal contacts between organizations. Informal interaction is important because it facilitates work-related communication, as well as builds trust and rapport (Zeitz, 1980:79).

**Formal meetings**

If organizations do not communicate, they will have very little ground upon which to build any type of IOR (Mulford and Klonglan, 1982). One obvious type of IOR involves formal meetings among organizational directors. These tend to be planned in advance with a specific agenda. Compared to the other types of IOR just discussed, formal meetings involve more structured interaction. They often are called because of specific problems or issues. Many formal meetings may also happen because of mandates from higher levels of the organizations.

**Conceptual Model: Application to Conservation Network**

The conceptual model just presented is one level of abstraction above the conservation network being studied. The past and present organizational context, described in Chapter II, will be used to apply the conceptual model to the conservation network. Specific characteristics of the organizations and their IOR network will be discussed in relation to the components of the model.

**Perceptions of the environmental context**

Organizations perceive and respond to environmental conditions differently based on many factors, including their mission, structure,
and available resources. The environment for organizations in this study had grown more uncertain and hostile during recent years.

**Conditions in the economy** Farmers are the primary clientele for these organizations. Because farmers were in economic trouble, during this study the organizations also experienced increased difficulty and uncertainty. Conditions in the farm economy affected the CES, ASCS and FmHA by increasing the number of farmers seeking help with farm financial management problems. Bad economic conditions had the opposite effect on SCS by reducing the number of farmers who were willing and able to install certain conservation practices (e.g., terraces).

**Changing guidelines from above** Changing guidelines from above would affect the organizations differently depending on their relative degree of centralization. The ASCS and CES are less centralized. Changing guidelines from above would be expected to have less effect on them than on the more centralized SCS and FmHA. Changes from above often result in increased workloads and responsibilities. These should have more effect on SCS and FmHA.

**Uncertainty of future funding** This barrier reflects the potential for funding changes in the near future. Future funding for agricultural programs was uncertain at the time of this study. The presidential budget for the following fiscal year had, in fact, threatened to eliminate the SCS. Because of a severe farm financial crisis, additional money was needed to provide assistance directly to farmers through ASCS and FmHA. This money was not allocated. Given a shrinking budget, increases in direct farm payments could only come at
the expense of other programs (e.g., conservation or education). Funding uncertainty may be less serious for less centralized organizations (i.e., the CES) who do not rely solely on federal money for their programs. Funding for the CES had not been threatened dramatically by the time of the study; even though it would face large federal cutbacks the following year.

Perceptions of interorganizational relationships (IOR)

These organizations have a long history of interaction in conservation and other agricultural programs. In all districts, individuals from the different organizations had interacted to some degree. All respondents, therefore, would be expected to have formed some perceptions of IOR.

Lack of own time The problem of lack of time may be directly related to the number of responsibilities an organization has. The SCS tends to have a narrower set of responsibilities and work under less time pressure than the other organizations. The CES, on the other hand, has broader educational responsibilities. Time may be more of an issue to the CES, as noted by the fact CES respondents claimed they need to schedule activities further in advance and work under tighter time constraints. The ASCS and FmHA both experience seasonal peaks in their workload. The FmHA, specifically, was in the midst of its busiest time of year during the interviewing. Because of the farm crisis, their time was particularly scarce.

Fear of lost autonomy These organizations have always expressed concern over lost autonomy, as shown by the early turf battles. Each
resisted early attempts at consolidation out of fear of lost autonomy. The SCS had the most to lose in past battles over turf and threats of consolidation. They were almost consolidated with CES or ASCS at various times.

These organizations have different amounts of autonomy to potentially lose. The less centralized CES and ASCS work more independently of state and federal offices. Local CES and ASCS directors are more accountable to their local committees and may have less concern for lost autonomy from IOR than the more centralized USDA organizations. The local SCS and FmHA directors, on the other hand, are more directly responsible to superiors at the area and state level.

Fear of lost visibility or credit All organizations have recently faced greater public scrutiny. They feel pressure to prove their accountability and demonstrate increased effectiveness. The SCS and ASCS are more visible to farmers in providing direct one-on-one contact and assistance. The CES often provides educational and organizational support for others’ programs. It may have come to expect loss of credit or visibility for their own programs because of their history of behind-the-scenes support for other organizations.

Perceived scarcity of resources

Inadequate operating funds This barrier reflects the organizations’ current operating budgets. During the 1980s, the federal and Iowa state governments were fighting mounting budget deficits. Because of their shrinking political support base, agricultural programs had become easy targets for urban legislators looking for ways to cut
these budget deficits. The technical assistance programs of the SCS had their budgets reduced in recent years. The federal financial assistance programs, administered by ASCS and FmHA, had also faced budget cuts. Coupled with inflation, this could lead to a belief that funding was inadequate. The CES receives funding from the local, state, and federal government. It would probably experience fewer problems from inadequate operating funding because of this broader support base.

**Limitations in staff size**

Organizations in this study provide services to their clientele (i.e., farmers). Such services are generally require well educated and experienced personnel. Their programs involve considerable one-on-one contact with clientele, which tends to be very time-consuming. Limitations in staff size would mean inadequate service to farmers. Funding cuts mentioned earlier translate into loss of staff for organizations, such as SCS and CES, that provide educational or technical assistance. Inadequate staff would reduce program effectiveness. This problem may be seen as less severe by the SCS and ASCS which had received additional staff as a result of targeting.

**Perceived interpersonal conflict**

**Differences in personalities**

Perceived differences in personalities may reflect other differences between staff from different organizations. Personality differences may be related to differences in personal or professional backgrounds, including education and work styles. For example, SCS staff have technical training in agronomy, biology, and engineering. They usually work one-on-one with farmers in the field. FmHA and ASCS staff tend to have financial or agribusiness
backgrounds and administer financial programs out of an office. The CES staff have more varied backgrounds, ranging from adult education to agronomy. They tend to stress people-skills and specialize in organizational and educational work. Within the general USDA mission, these different backgrounds complement each other. At the local level, however, such differences may seem like differences in personalities and could lead to interpersonal conflicts.

**Others’ unwillingness to cooperate**

Perceptions of others’ unwillingness to cooperate may reflect inherent differences in organizational mission, structure, or philosophy. For example, each organization has a particular philosophy about the role of conservation in agriculture. The ASCS and CES have traditionally emphasized agricultural production more than SCS. The SCS, on the other hand, has sometimes appeared overly concerned with conservation, despite its effects on yields and profits. Each organization has formalized policies and procedures it must follow. The SCS, for example, has developed national technical standards staff must follow, even if crop production is reduced. Likewise, the ASCS only approves cost-sharing for particular practices. The two organizations may disagree on what practices are best for a particular farm operation. From each organization’s own perspective, the other may seem unwilling to cooperate.

**Past Problems working with others**

Historical relationships among these organizations may lead to present day problems. During the first 20 years of federal conservation efforts, turf battles and distrust characterized the relationships among SCS, CES, and ASCS. The CES
thought the SCS conservation program was a duplication of their own educational responsibilities. Problems also occurred more recently between ASCS and SCS over specific programs, such as the Payment-in-kind (PIK) and Rural Clean Water programs. These past problems may affect present relationships.

**Distance between offices**

Spatial proximity may be an important determinant of IOR. Nielson (1985:53) found the strongest relationship between SCS and ASCS where they were housed together. During the 1960s and 1970s the USDA moved to collocate organization offices into local agricultural service centers (Sampson, 1985:225). The colocation movement faded into the background, however, in 1977. The CES had traditionally been housed with Farm Bureau and was less likely to colocate with SCS, ASCS, and FmHA. The CES was most involved in the conservation targeting effort where it was in the same building as the SCS and ASCS.

**Frequency of IOR**

The relationships expected among these conservation-related organizations involve both voluntary and mandatory IOR. Some relationships between ASCS and SCS tend to be mandated, while IOR in the other dyads is mainly voluntary.

**Clientele referral** One important motivation for IOR is that the organizations serve a common clientele (i.e., farmers). Because of the division of labor, no single organization can provide all the services farmers need. Client referrals, therefore, become a routine part of each organization's activities. Cross-referrals are mandated between ASCS and...
SCS because of provisions of the ACP cost sharing program.

**Informal interaction**  Informal interaction includes those conversations and meetings which occur spontaneously between two or more organizations. Considerable informal interaction can be expected between SCS and ASCS because of their joint responsibilities in the ACP cost-sharing program. Informal interaction should also be increased by colocation in the same building.

**Formal meetings**  Formal meetings are also an important part of IOR for these organizations. These meetings are often mandated to deal with a particular problem (e.g., farm crisis, natural disaster) or to implement a particular program (e.g., Iowa Soil 2000, Payment-in-kind).

**Research Hypotheses**

Considering all the independent variables and types of IOR with each organization, 144 specific research hypotheses could be formally derived. To be concise the dependent variables will be referred to collectively as "interaction with each other organization" instead of specifying each individual dependent variable (e.g., formal meetings with the SCS or farmer referral to FmHA). Overall, 12 dependent variables will be analyzed and compared (three types of IOR with four organizations).

**Perceptions of the environmental context**

H1: The greater the extent to which conditions in the farm economy are perceived to make it more difficult to plan or carry out programs, the less frequent the interaction with each other organization.
H2: The greater the extent to which changing guidelines from state or federal agencies are perceived to make it more difficult to plan or carry out programs, the less frequent the interaction with each other organization.

H3: The greater the extent to which uncertainty over future funding is perceived to make it more difficult to plan or carry out programs, the less frequent the interaction with each other organization.

Perceptions of interorganizational relationships

H4: The greater the extent to which lack of own time is perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.

H5: The greater the extent to which fear of lost autonomy is perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.

H6: The greater the extent to which fear of lost credit or visibility is perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.

Perceived resource scarcity

H7: The greater the extent to which inadequate operating funds are perceived to make it more difficult to plan or carry out programs, the less frequent the interaction with each other organization.

H8: The greater the extent to which limitations in staff size are perceived to make it more difficult to plan or carry out programs, the less frequent the interaction with each other organization.

Perceived interpersonal conflict

H9: The greater the extent to which differences in personalities are perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.
H10: The greater the extent to which others' unwillingness to cooperate is perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.

H11: The greater the extent to which past problems working with other organizations are perceived to be a barrier to work with any of the other organizations, the less frequent the interaction with each other organization.

Distance between offices

H12: The greater the distance between organizational offices, the less frequent the interaction with each other organization.
CHAPTER IV. RESEARCH METHODS

To test the conceptual model, data were collected from 17 different interorganizational networks or organization sets, as they are formally known (Aldrich and Whetten, 1981; Evan, 1966). The 16 southwestern Iowa counties in this study were not randomly selected, but were part of a larger soil conservation education and research project (Korsching et al., 1985). These 16 contiguous counties were targeted in 1982 by the Soil Conservation Service (SCS) for special attention because of their severe soil erosion problems. The 16 counties consist of 17 Soil Conservation Districts (SCDs) because one county (Pottawattamie) has two SCDs each with its own set of organizations.

Data are based on a telephone survey of individual organizational directors in each SCD. Because of the research design and 100 percent response to the survey, it is possible to work at one or more levels of analysis: the individual, organizational, dyadic and/or network levels. This analysis focuses on the individual and organizational units of analysis. The conceptual model is developed from the standpoint of 17 respondents from four individual focal organizations (N = 68). Comparative analysis treats the organization as the unit of analysis (i.e. four organizations with 17 cases in each.)

Research Design Rationale

The data in this study were collected by telephone survey research. Because survey research is comparative in orientation, its strength lies
in more generalizable results. It is also more efficient in time and money. The major limit of survey research, however, is that it does not generate as detailed information, as does ethnographic research (Whetten, 1982:103).

This research design, therefore, involved tradeoffs between indepth analysis of a limited number of interorganizational networks (i.e., case studies) versus less detailed, but comparative, analysis of a greater number of networks. The decision was to have more cases and use comparative analysis to test the conceptual model, at the expense of more detailed information.

The issue of depth versus breadth also entered the decision to include only four governmental organizations, as opposed to examining many more individuals and organizations in one or two networks. Again, to test the conceptual model it seemed best to obtain as many cases from each organization as possible, even at the expense of omitting other actors in the local networks. The governmental organizations picked are the ones that have the major responsibilities for planning and implementing programs to aid and encourage farmers in the adoption of soil conservation practices. Data were also collected from another important local conservation organization, the Soil Conservation District (SCD). Reasons for not including the SCD respondents in this study can be found in Chapter 2.

Whetten (1982:114-115) discusses two critical sampling problems in choosing organizations to include in an IOR study. The first is to choose the relevant set of linkages. The main approach is to identify a
bounded network of organizations and select specific types of IOR. This research includes the essential types of IOR based on theory and the advice of leaders from the state level of each organization. Several types of IOR studied in past research (e.g., having formal memos of understanding, director acquaintance, and exchange of written communication) were normal operating procedure in all cases and therefore, constant across networks for this set of organizations.

A second, somewhat more complex, sampling problem involves choosing respondents from each organization. The principal goal is to choose respondents with firsthand knowledge on the referents to the survey questions. This indicated selection of the local organization director. The respondent from each organization was the one most likely to have regular contact with the other organizations. He or she also made most of the strategic and day-to-day decisions for the organization at the local level. Organization offices, in each county, were generally small, most with fewer than five staff members. This meant only one respondent would be needed from each local organization.

Data Collection Methods

No previous IOR research had used a telephone survey (personal communication, Charles Mulford, Department of Sociology and Anthropology, Iowa State University). This meant little direct guidance in the design of specific questions. Concepts were derived from the literature as explained in Chapter 3. The survey was designed with the review and suggestions of members of each organization at the state level. They
supplied insight into the selection of appropriate concepts, question
wording, and prescribed relationships among the organizations. The
survey was pretested and refined.

Data were collected through telephone interviews with the following
local program directors: the SCS district conservationist; the ASCS
county executive director, the CES county extension director, and the
FmHA county supervisor for a total of 68 local organizations. Actually,
64 individuals were interviewed because one organization (the FmHA) has
four individuals who covered two districts each. These FmHA supervisors
were asked to report twice on the frequency of their IOR (once for each
district). Questions involving their attitudes, beliefs, and personal
characteristics were only asked once.

Telephone interviews, lasting between 15 and 30 minutes, were
conducted during April and May of 1985, using a standardized survey
instrument (see Appendix A). Respondents received letters from state
directors of their organization several weeks before the first phone call
(see Appendix B). These letters were important in establishing the
survey’s legitimacy and attaining 100 percent response. Interviews
scheduled at convenient times for the respondents also helped insure
completion of all interviews.

Telephone surveys have advantages and drawbacks that are relevant
for this research (Dillman, 1978). On the positive side, telephone
surveys allow for more efficient collection of information, reduce social
desirability bias and are easy to schedule at the respondent’s
convenience. They are especially desirable when limited resources
preclude in-person interviews. They are superior to mail questionnaires in their ability to attain a higher response rate (here 100 percent).

Telephone surveys also have drawbacks. One problem stemmed from state staff concern over length. Most argued that 15 minutes should be the maximum. This not only limited the number of concepts that could be examined, but also discouraged open-ended questions. A related drawback of all telephone surveys is the need to limit the number of responses for individual items. Most independent variables in this research were measured on three-point scales. Several five-point scale questions that were included on the survey, seemed awkward and tended to cluster near the high end. The type of issues covered must also be less complex on a telephone survey.

Characteristics of Respondents

Experience may have an important effect on IOR. This survey measured experience with four indicators: age, years working for the present organization, years in the present position within the organization, and years lived in the present county. Table 1 presents information on experience of the respondents from the 17 districts. The average age of all respondents was 41.3 years. Respondents from ASCS tended to be older. The FmHA staff is much younger than respondents from the other organizations.

The SCS respondents had worked for SCS an average of 15.4 years. On average, they had been district conservationists for 11.5 years. They had been with SCS over twice as long as the average time they had been in
Table 1  Personal and job-related characteristics for directors of organizations in 17 southwestern Iowa Soil Conservation Districts

<table>
<thead>
<tr>
<th>Organization</th>
<th>Age</th>
<th>Years In County</th>
<th>Years With Organization</th>
<th>Years In Present Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCS</td>
<td>40.1</td>
<td>7.7</td>
<td>15.4</td>
<td>11.5</td>
</tr>
<tr>
<td>ASCS</td>
<td>49.5</td>
<td>25.8</td>
<td>18.8</td>
<td>13.2</td>
</tr>
<tr>
<td>CES</td>
<td>43.6</td>
<td>13.0</td>
<td>16.4</td>
<td>12.2</td>
</tr>
<tr>
<td>FmHA</td>
<td>31.9</td>
<td>5.5</td>
<td>7.6</td>
<td>4.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>41.3</td>
<td>13.0</td>
<td>14.5</td>
<td>10.4</td>
</tr>
</tbody>
</table>
their present counties (7.7 years). SCS staff seems to have greater geographic mobility than the directors of the other agencies.

CES directors also have had long affiliations with their organization (16.4 years). On average, they had been county Extension directors for most of that time (12.2 years). They tended to live in their present county for most of the time as CED (13.0 years), showing little geographic mobility after becoming a CED.

Experience of the ASCS respondents seems different from the SCS. ASCS respondents had been with their organization for 18.8 years, on average. This is, however, much shorter than the average time they had lived in their counties (25.8 years). ASCS county executive officers had been in their present position an average of 13.2 years. This is only about one-half as long as they had been with their organization. They have much less geographical mobility than SCS, and somewhat longer tenure with their organization before reaching county leadership status.

FmHA staff had been with the organizations the shortest time (7.6 years) as expected from their younger average age (31.9 years). They had been supervisors for much of their FmHA career (4.9 years), and had worked in the same county most of that time (5.5 years).

Measurement of Independent Variables

Five different types of barriers are examined: perceptions of the environmental context, perceptions about interorganizational relationships (IOR), perceived resource scarcity, perceived interpersonal conflict, and distances between offices.
Perceptions of the environmental context

Certain conditions in the organizational environment can make it more difficult for local staff to plan and carry out their programs. Respondents were asked about the following aspects of their environmental context:

1. Conditions in the overall farm economy
2. Changing guidelines from any state or federal agencies
3. Uncertainty over future funding for their own organization

For each of these perceived impacts of the organizational environment, respondents were asked a question of the form: "Do conditions in the overall farm economy make it more difficult to plan or implement your programs: to a large extent (3), to some extent (2), or not at all (1)?"

Perceptions of interorganizational relationships

Individual's perceptions about IOR may affect the frequency of their interaction with others. Perceptions included in this study were:

1. Lack of own time
2. Potential loss of independence (i.e., autonomy) in decision making
3. Loss of visibility or credit for individual organization's programs

For each of these barriers respondents were asked a question of the form: "Is lack of your own organization's time: a serious barrier (3), somewhat of barrier (2), or no barrier (1) to your work with any of the other organizations?" Respondents were not asked to specify with which other organization(s) a particular barrier existed.
Perceived resource scarcity

Internal organizational problems often involve scarcity of resources (i.e., staff and funding). Those examined in this study include:

1. Inadequate administrative or operating funds (not including cost-sharing for conservation practices)

2. Limitations in the size of their agency’s local staff

For each of these types of resource scarcity, respondents were asked a question of the form: "Do limitations in the size of your agency’s local staff make it more difficult to plan or implement your programs: to a large extent (3), to some extent (2), or not at all (1)?"

Perceived interpersonal conflict

Respondents were asked their perceptions on interpersonal conflict among the organizations. The three indicators of conflict were:

1. Differences in personalities

2. Unwillingness of other organizations to cooperate

3. Past problems in working with the other organizations

For each of these barriers respondents were asked a question of the form: "Is the unwillingness of others to cooperate: a serious barrier (3), somewhat of barrier (2), or no barrier (1) to your work with any of the other organizations?"

Distance between organizational offices

Distance between organizational offices is measured on the following five point scale:

1 = Same building or office complex

2 = Different buildings within 1 or 2 blocks

3 = Same community 3 or more blocks apart
Measurement of Dependent Variables

Each respondent was asked to answer the same questions about his or her relationships with each of the other three organizations. Where a (Blank) appears in a question, the name of each of the other three organizations was inserted. Numbers in parentheses are the scores given to each specific response.

Farmer referral

To determine how often respondents referred clientele to each other organization they were asked: "Have you ever referred farmers to ______ for soil conservation information or assistance during the past 12 months?" If the respondents answered "yes", they were then asked "How often during the past 12 months have you referred farmers to ______? Would you say: at least once a week (5), several times a month (4), once a month (3), several times a year (2), or once during the past year (1)?" Those who never referred farmers to a particular organization were assigned a score of "0."

Formal meetings

To determine how often respondents met formally with each of the other organizations, they were asked: "Do you attend any formal meetings
with the person in charge of _______. Formal meetings would include those that are planned with a specific agenda." If the respondents answered "yes", they were asked, "About how many times during the past 12 months have you met with the person in charge of _______? Would you say: at least once a week (5); several times a month (4); once a month (3); several times a year (2); or once during the past year (1)?" Those who never met formally with a particular organization were assigned a score of "0."

Informal interaction

To determine how often respondents interacted informally with the director of each other organization they were asked: "People also get together informally to discuss problems or for coffee. Do you meet or talk informally with the person in charge of _______?" If the respondents answered "yes", they were then asked "About how many times during the past 12 months did you meet informally with the person in charge of _______? Would you say: at least once a week (5), several times a month (4), once a month (3), several times a year (2), or once during the past year (1)?" Those who never interacted informally with a particular organization were assigned a score of "0."
CHAPTER V. RESEARCH RESULTS

Results of the study are presented in three parts. First, differences between the organizations on the independent variables (i.e., barriers) and dependent variables (i.e., frequency of IOR) are examined using analysis of variance. Second, multiple regression models are developed to examine the effect of each independent variable on each of the 12 dependent variables, while controlling on the respondent’s organization. Finally, these regression models are compared with results obtained using zero-order correlation. This will help evaluate the effect of controlling on differences in respondents’ organizations.

The organization referred to in the questions will be called the "focal organization" (Aldrich and Whetten, 1981; Evan, 1966). For example, when analyzing frequency of farmer referral to SCS, the SCS will be called the focal organization. The other three organizations (CES, ASCS, and FmHA) will be referred to collectively as members of SCS’ organization set or individually as the respondent’s organization. Comparative analysis is conducted from both the standpoint of the "focal" organization and that of the respondent’s organization.

Overview of Comparative Analysis

Comparative analysis is used to study the effects of different barriers on the relationships among the four organizations. This research is comparative in four ways. First, the differences among barriers (e.g., perceptions of the environmental context versus perceived resource scarcity) will be examined. Organizational differences on the
independent variables will be considered using analysis of variance.

The second type of comparison looks at differences between respondents' organizations in their reported relationships with each focal organization. Analysis of variance will be used to determine if certain organizations differ significantly in frequency of each type of IOR with each focal organization.

The third type of comparison involves determining which barriers are important for the same type of IOR reported with different organizations. Those barriers, for example, that are significantly related to formal meetings with SCS will be compared with those that are significantly related to formal meetings with the other three organizations (ASCS, CES, FmHA). Organizational differences are reflected in the dependent variables. Multiple regression will be used in this analysis to control on differences between respondents' organizations. A related comparison will involve examining different types of IOR with the same focal organization.

The final comparison is from a methodological rather than a theoretical standpoint. Relationships between the independent variables (i.e., barriers) and dependent variables (i.e., frequency of IOR) found using multiple regression (controlling on respondent's organization) will be compared to the strength and direction of the relationships found using zero-order correlation. Comparing zero-order correlation and standardized regression coefficients should illustrate the types of problems encountered when different organizations are combined in analysis.
Analysis of Variance: Rationale for Contrasts

In keeping with the comparative nature of this research differences between the organizations in terms of the barriers and extent of IOR will be examined. One way analysis of variance will compare the organizational means for each independent and dependent variable, based on a priori contrasts.

One major premise of this research is that members of different organizations may differ significantly in both their perceptions and their relationships with other organizations. To test this premise the following orthogonal contrasts were set up, a priori, to evaluate the statistical significance of the observed differences between the organizations:

1. The Soil Conservation Service (SCS) is significantly different from the Cooperative Extension Service (CES), the Agricultural Stabilization and Conservation Service (ASCS), and the Farmers’ Home Administration (FmHA).

2. The Cooperative Extension Service (CES) is significantly different from the Agricultural Stabilization and Conservation Service (ASCS) and the Farmers’ Home Administration (FmHA).

3. The Agricultural Stabilization and Conservation Service (ASCS) is significantly different from the Farmers’ Home Administration (FmHA).

These contrasts are based on inherent differences between the organizations in their missions, extent of involvement in conservation education, and their importance in local conservation activities. Chapter II contains a detailed explanation of these differences. Only key points will be summarized here.
A division of labor exists among these USDA organizations in local conservation activities. In many respects, the SCS is the lead agency in the conservation arena. It provides technical assistance to farmers and communities through local conservation districts. Local SCS staff have expertise and responsibility for conservation education activities. In Iowa, SCS is responsible for managing the offices and staff of the soil conservation districts (SCDs). The SCS district conservationist generally represents the SCD in relationships with the other USDA agencies.

The CES has traditionally been the educational leader within the USDA. As an organization, the CES is interested and involved in soil conservation education activities. At the local level, however, CES involvement in conservation education varies between counties (Hoban et al., 1986). The potential importance of CES in local conservation programs is great. The CES, however, has many other educational responsibilities in addition to soil conservation.

The ASCS and FmHA are financial assistance agencies within the USDA. The ASCS is involved with soil conservation through its Agricultural Conservation Program (ACP) cost sharing program. Farmers recognize ASCS as important in the conservation arena (Korsching et al., 1985). The FmHA, on the other hand, is not very directly involved in soil conservation; but is mainly a lender for farmers who are unable to obtain credit from commercial banks. The FmHA is included in this study because it administers several conservation-related loan programs.
Based on these differences in mission and importance in the local conservation arena, the organizations are expected to have different perceptions about the external environment, IOR, resource scarcity, and even perceived interpersonal conflict. Their expected involvement in different types of IOR should vary, as well. To evaluate the significance of any observed differences three orthogonal contrasts were developed. The rationale behind these contrasts can be summarized as follows:

1. The technical conservation organization (SCS) will differ significantly from the educational organization (CES) and the financial organizations (ASCS and FmHA) due to the extent of involvement in conservation education activities.

2. The educational organization (CES) will differ significantly from the financial organizations (ASCS and FmHA) due to extent of involvement in conservation education activities.

3. The financial organizations will differ from one another based on their relative role in conservation activities (ASCS has a greater role than FmHA.)

Analysis of Variance: Independent Variables

Results of the oneway analysis of variance between the organizations, for the independent variables can be found in Table 2. Responses from directors of all four organizations (n=68) are included in this section. All three orthogonal contrasts just discussed are examined. Only significant differences will be presented in the text.

Perceptions of the environmental context

Conditions in the farm economy Of all the potential barriers, respondents were most concerned about the impact of conditions in the
Table 2. Oneway analysis of variance of the differences between the four organizations on the means of the independent variables

<table>
<thead>
<tr>
<th>Group Means</th>
<th>SCS</th>
<th>CES</th>
<th>ASCS</th>
<th>FmHA</th>
<th>Total</th>
<th>Contrast Results a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Conditions b</td>
<td>2.59</td>
<td>2.41</td>
<td>2.47</td>
<td>3.00</td>
<td>2.62</td>
<td>0.25</td>
</tr>
<tr>
<td>Changing Guidelines b</td>
<td>2.18</td>
<td>2.12</td>
<td>2.18</td>
<td>2.29</td>
<td>2.19</td>
<td>0.11</td>
</tr>
<tr>
<td>Funding Uncertainty b</td>
<td>2.41</td>
<td>1.59</td>
<td>2.41</td>
<td>2.59</td>
<td>2.25</td>
<td>1.24</td>
</tr>
<tr>
<td>Lack of Own Time c</td>
<td>1.76</td>
<td>2.12</td>
<td>1.65</td>
<td>2.35</td>
<td>1.97</td>
<td>1.73 *</td>
</tr>
<tr>
<td>Fear of Lost Autonomy c</td>
<td>1.41</td>
<td>1.12</td>
<td>1.59</td>
<td>1.41</td>
<td>1.38</td>
<td>0.28</td>
</tr>
<tr>
<td>Fear of Lost Credit c</td>
<td>1.53</td>
<td>1.41</td>
<td>1.53</td>
<td>1.24</td>
<td>1.43</td>
<td>0.81</td>
</tr>
<tr>
<td>Inadequate Funding b</td>
<td>1.76</td>
<td>1.87</td>
<td>2.06</td>
<td>2.41</td>
<td>2.03</td>
<td>1.70 **</td>
</tr>
<tr>
<td>Limited Staff Size b</td>
<td>1.88</td>
<td>2.12</td>
<td>2.12</td>
<td>2.71</td>
<td>2.21</td>
<td>2.22 **</td>
</tr>
<tr>
<td>Personality Difference c</td>
<td>1.65</td>
<td>1.59</td>
<td>1.24</td>
<td>1.06</td>
<td>1.38</td>
<td>2.15 **</td>
</tr>
<tr>
<td>Unwilling to Cooperate c</td>
<td>1.59</td>
<td>1.53</td>
<td>1.41</td>
<td>1.24</td>
<td>1.44</td>
<td>1.07</td>
</tr>
<tr>
<td>Past Problems c</td>
<td>1.29</td>
<td>1.41</td>
<td>1.12</td>
<td>1.29</td>
<td>1.28</td>
<td>0.14</td>
</tr>
</tbody>
</table>

a Contrasts tested are: C1 = SCS is different from CES, ASCS, and FmHA; C2 = CES is different from ASCS and FmHA; C3 = ASCS is different from FmHA. T-values have the following probabilities: * = p < .10; ** = p < .05; *** = p < .01.

b Whether this makes it more difficult to plan or implement programs: 3 = to a large extent; 2 = to some extent; or 1 = not at all.

c Whether this represents: 3 = a serious barrier; 2 = somewhat of a barrier; or 1 = no barrier to work with any of the other organizations.
farm economy on their ability to plan and implement their programs. The CES, however, was significantly less concerned than were the ASCS and FmHA. The ASCS was less concerned over conditions in the farm economy than the FmHA. The main difference appears to be between the FmHA and the other three organizations.

**Changing guidelines from above** There were no significant differences between organizations in perceptions of changing guidelines from state or federal agencies. Most respondents thought such changes made it somewhat more difficult to plan or carry out their programs.

**Uncertainty of future funding** The SCS and ASCS reported the same concern about uncertainty of future funding. The greatest difference was between the CES and FmHA respondents. The CES was least concerned about future funding. They receive funding from three levels of government (i.e., local, state, and federal) and may, therefore, have felt less pressure from federal budget problems.

**Perceptions of interorganizational relationships**

**Lack of own agency's time** The SCS reported lack of time as significantly less of a barrier to working with other organizations than did the respondents from the CES and FmHA. The ASCS reported lack of time as significantly less of a barrier than FmHA. Considering all the perceptions of IOR and perceived interpersonal conflict, this was the most serious reported barrier for all organizations.

**Fear of lost autonomy** Fear of lost autonomy was seen as most serious by the ASCS. The CES, in fact, saw this as significantly less of a barrier than did the ASCS and FmHA. The SCS and FmHA showed the same,
moderate concern over this barrier.

**Fear of lost credit or visibility** There were no significant differences among organizations in their perceptions of lost credit or visibility for their own programs as a barrier to IOR.

**Perceived resource scarcity**

**Inadequate operating funds** The SCS was least concerned about inadequate operating funds. This could be due to the fact that all these counties received increased funding, as part of targeting, in the three years prior to this study. The FmHA was most concerned over inadequate operating funds.

**Limitations in staff size** The SCS was also least concerned over limitations in staff size. This may also be due to the targeting programs which provided additional SCS personnel in each county. The FmHA were most concerned over limited staff size, partly due to their increased workload as a result of the farm crisis. On average, respondents from all organizations perceived limitations in staff to be a more serious problem than inadequate operating funds.

**Perceived interpersonal conflict**

**Differences in personalities** The SCS were most likely to believe differences in personalities were a barrier to their work with other organizations. The CES also perceived differences in personalities to be more serious than did the ASCS or FmHA.

**Others' unwillingness to cooperate** There were no significant differences between the organizations in their perceptions that others' unwillingness to cooperate pose a barrier to organizations working well
together. On average, this was perceived to be the most serious type of interpersonal conflict.

*Past problems working with other organizations* The organizations basically agreed that past problems working with other organizations were not barriers to organizations working well together.

**Analysis of Variance: Dependent Variables**

*Relationships reported with the SCS*

A major premise of this research is that organizations will differ significantly in frequency of reported interaction with each other. This analysis of variance examines the relationships that the three other organizations (CES, ASCS, and FmHA) reported with SCS. The following orthogonal contrasts were established, a priori, to compare the differences between the organizations in their reported IOR with SCS:

1. The Cooperative Extension Service (CES) is significantly different from the Agricultural Stabilization and Conservation Service (ASCS) and the Farmers’ Home Administration (FmHA) in its frequency of reported interaction with the SCS.

2. The Agricultural Stabilization and Conservation Service (ASCS) is significantly different from the Farmers’ Home Administration (FmHA) in its frequency of reported interaction with the SCS.

The rationale for these contrasts is the same as that for the independent variables. The main difference is that just two orthogonal contrasts are possible because only three organizations (CES, ASCS, and FmHA) are being compared. Results from these 51 respondents can be found in Table 3.
Table 3. Oneway analysis of variance of the differences between means on the frequency of interaction reported with the Soil Conservation Service (SCS) by the other three organizations

<table>
<thead>
<tr>
<th>Frequency of Interaction</th>
<th>Mean Frequency</th>
<th>Contrast Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CES</td>
<td>ASCS</td>
</tr>
<tr>
<td>Frequency of Farmer Referral to SCS</td>
<td>3.35</td>
<td>4.82</td>
</tr>
<tr>
<td>Frequency of Informal Interaction with SCS</td>
<td>3.64</td>
<td>3.88</td>
</tr>
<tr>
<td>Frequency of Formal Meetings with SCS</td>
<td>3.00</td>
<td>2.06</td>
</tr>
</tbody>
</table>

a Frequency of interaction is measured as: 0 = not at all; 1 = once during the year; 2 = several times a year; 3 = once a month; 4 = several times a month; 5 = at least once a week.

b Contrasts tested are: C1 = CES is different from ASCS and FmHA; C2 = ASCS is different from FmHA. T-values have the following probabilities: * = p < .10; ** = p < .05; *** = p < .01.
Farmer referral to SCS: The ASCS was much more likely to refer farmers to SCS than was either the CES or FmHA. On average, ASCS directors referred farmers to SCS at least once a week, compared to about one referral per month from CES and FmHA. This is due, in large part, to the fact that farmers who want ACP cost-sharing from ASCS must obtain SCS technical assistance in the design of the practices, as well as certification that the practices meet SCS specifications.

Informal interaction with SCS: The ASCS directors reported more frequent informal interaction (several times a month) with the SCS than did the FmHA (several times a year). This may also be due to mandated joint involvement of SCS and ASCS in the ACP cost-share program, the targeting program, and other activities. FmHA, on the other hand, has a relatively small role in the soil conservation arena.

Formal meetings with SCS: County Extension directors had met formally with the SCS once a month during the previous year. This was significantly more often than the ASCS or FmHA who, on average, reported meeting formally with SCS several times during the previous year.

Relationships reported with the CES

This section examines for the three other organizations (SCS, ASCS, and FmHA) reported with the CES. The following orthogonal contrasts were established, a priori, to compare the statistical significance of the differences between the organizations:

1. The Soil Conservation Service (SCS) is significantly different from the Agricultural Stabilization and Conservation Service (ASCS), and the Farmers' Home Administration (FmHA) in its frequency of reported interaction with the CES.
2. The Agricultural Stabilization and Conservation Service (ASCS) is significantly different from the Farmers' Home Administration (FmHA) in its frequency of reported interaction with the CES.

The rationale for these contrasts is the same as that discussed for the independent variables. Because just three organizations (SCS, ASCS, and FmHA) are compared, only two orthogonal contrasts are possible. Responses from these 51 respondents can be found in Table 4.

**Farmer referral to CES:** No significant differences were found in frequency of farmer referral to the CES.

**Informal interaction with CES:** The SCS reported more frequent informal interaction with CES than did the ASCS and FmHA. On average, SCS respondents interacted informally with CES more than once a month. The ASCS and FmHA, on the other hand, reported informal interaction with CES less than once a month.

**Formal meetings with CES:** No significant differences were found in frequency of formal meetings with the CES.

**Relationships reported with the ASCS**

Analysis in this section examines relationships that the three other organizations (SCS, CES, and FmHA) reported with the ASCS. The following orthogonal contrasts were established to evaluate differences between the organizations:

1. The Soil Conservation Service (SCS) is significantly different from the Cooperative Extension Service (CES) and the Farmers' Home Administration (FmHA) in its frequency of reported interaction with the ASCS.
Table 4. Oneway analysis of variance of the differences between means on the frequency of interaction reported with the Cooperative Extension Service (CES) by the other three organizations

<table>
<thead>
<tr>
<th>Frequency of Farmer Referral to CES</th>
<th>Mean Frequency</th>
<th>Contrast Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCS</td>
<td>ASCS</td>
<td>FmHA</td>
</tr>
<tr>
<td>3.41</td>
<td>2.94</td>
<td>2.82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of Informal Interaction with CES</th>
<th>Mean Frequency</th>
<th>Contrast Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCS</td>
<td>ASCS</td>
<td>FmHA</td>
</tr>
<tr>
<td>3.71</td>
<td>2.82</td>
<td>2.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of Formal Meetings with CES</th>
<th>Mean Frequency</th>
<th>Contrast Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCS</td>
<td>ASCS</td>
<td>FmHA</td>
</tr>
<tr>
<td>2.29</td>
<td>1.59</td>
<td>1.94</td>
</tr>
</tbody>
</table>

a Frequency of interaction is measured as: 0 = not at all; 1 = once during the year; 2 = several times a year; 3 = once a month; 4 = several times a month; 5 = at least once a week.

b Contrasts tested are: C1 = CES is different from ASCS and FmHA; C2 = ASCS is different from FmHA. T-values have the following probabilities: * = p < .10; ** = p < .05; *** = p < .01.
2. The Cooperative Extension Service (CES) is significantly different from the Farmers’ Home Administration (FmHA) in its frequency of reported interaction with the ASCS.

The rationale for these contrasts is the same as that discussed for the independent variables. Because only three organizations (SCS, CES, and FmHA) are compared, just two orthogonal contrasts are possible. Responses from these 51 respondents can be found in Table 5.

Farmer referral to ASCS: The SCS referred farmers to ASCS much more often than did CES or FmHA. As part of the ACP cost-sharing program, SCS refers farmers to ASCS weekly or at least several times a month. The CES and FmHA, however, reported farmer referrals to ASCS less than once a month.

Informal interaction with ASCS: The SCS reported more frequent informal interaction with ASCS than the CES and FmHA. The SCS reported interacting informally with ASCS several times a month or more. The CES reported the least frequent informal interaction with ASCS (several times a year on average). The FmHA reported informal interaction with ASCS about once a month, on average.

Formal meetings with ASCS: The SCS reported attending about one formal meeting a month with ASCS. This is significantly more often than the CES or FmHA, who had only met formally with ASCS several times during the previous year. Formal meetings with ASCS were more frequent for CES than for the FmHA.
Table 5. Oneway analysis of variance of the differences between means on the frequency of interaction reported with the Agricultural Stabilization and Conservation Service (ASCS) by the other three organizations

<table>
<thead>
<tr>
<th>Frequency of Farmer Referral to ASCS</th>
<th>Mean Frequency</th>
<th>Contrast Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Informal Interaction with ASCS</td>
<td>SCS 4.41, CES 2.29, FmHA 1.94, Total 2.88</td>
<td>C1 4.96*** C2 0.66</td>
</tr>
<tr>
<td>Frequency of Formal Meetings with ASCS</td>
<td>SCS 2.94, CES 2.65, FmHA 2.00, Total 2.53</td>
<td>C1 2.20** C2 2.00**</td>
</tr>
</tbody>
</table>

a Frequency of interaction is measured as: 0 = not at all; 1 = once during the year; 2 = several times a year; 3 = once a month; 4 = several times a month; 5 = at least once a week.

b Contrasts tested are: C1 = CES is different from ASCS and FmHA; C2 = ASCS is different from FmHA. T-values have the following probabilities: * = p < .10; ** = p < .05; *** = p < .01.
Relationships reported with the FmHA

Analysis in this section examines relationships with the FmHA reported by the other organizations (SCS, CES, and ASCS). Analysis of variance results can be found in Table 6. The following orthogonal contrasts were established:

1. The Soil Conservation Service (SCS) is significantly different from the Cooperative Extension Service (CES) and the Agricultural Stabilization and Conservation Service (ASCS) in its frequency of reported interaction with the FmHA.

2. The Cooperative Extension Service (CES) is significantly different from the Agricultural Stabilization and Conservation Service (ASCS) in its frequency of reported interaction with the FmHA.

Because three organizations (SCS, CES, and ASCS) are compared, two orthogonal contrasts are possible. Responses from these 51 respondents can be found in Table 6.

**Farmer referral to FmHA:** No significant differences were found in reported frequency of farmer referral to the FmHA.

**Informal interaction with FmHA:** The ASCS reported the most frequent informal interaction with the FmHA (about once a month.) This is significantly more often than that reported by the CES.

**Formal meetings with FmHA:** No significant differences were found in reported frequency of formal meetings with the FmHA.
Table 6. Oneway analysis of variance of the differences between means on the frequency of interaction reported with the Farmer' Home Administration (FmHA) by the other three organizations

<table>
<thead>
<tr>
<th></th>
<th>Mean Frequency a</th>
<th>Contrast Results b</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SCS</td>
<td>CES</td>
</tr>
<tr>
<td>Frequency of Farmer Referral to FmHA</td>
<td>1.18</td>
<td>1.35</td>
</tr>
<tr>
<td>Frequency of Informal Interaction with FmHA</td>
<td>2.53</td>
<td>2.00</td>
</tr>
<tr>
<td>Frequency of Formal Meetings with FmHA</td>
<td>1.53</td>
<td>1.88</td>
</tr>
</tbody>
</table>

a Frequency of interaction is measured as: 0 = not at all; 1 = once during the year; 2 = several times a year; 3 = once a month; 4 = several times a month; 5 = at least once a week.

b Contrasts tested are: C1 = CES is different from ASCS and FmHA; C2 = ASCS is different from FmHA. T-values have the following probabilities: *= p < .10; **= p < .05; *** = p < .01.
Multiple Regression

The research hypotheses presented in Chapter 3 will be tested using ordinary least squares multiple regression. Because significant differences between organizations were found on many independent and dependent variables, it will be important to control on these differences. For each of the 12 different forms of IOR, the type of organization is first entered as dummy codes corresponding to the contrasts used in the analysis of variance. The amount of variance in each dependent variable explained by the type of organization is evaluated. Each barrier is then individually entered into the regression equation. Because of the small sample size (n = 51), no attempt is made to enter two or more independent variables (i.e., barriers) in one equation.

Results are presented separately for each type of IOR reported with each focal organization. Responses from only the other three organizations in the focal organization's set are included (n = 51). Only those relationships where the standardized regression coefficient (shown in parentheses) is greater than or equal to .20 in magnitude will be considered important and discussed in the text. This value was chosen because it represents a four percent increase in the amount of variance explained. To facilitate comparison and highlight patterns in the results the regression analyses are summarized in Tables 7 and 8.

Relationships reported with the SCS

This section examines the IOR the other three organizations (CES, ASCS, and FmHA) reported with SCS (n = 51). The same two contrasts used
Table 7. Summary of regression analysis of frequency of IOR with SCS and CES on the individual barriers after controlling on type of organization

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>IOR with the SCS</th>
<th>IOR with the CES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Farmer Inform.</td>
<td>Formal Refer.</td>
</tr>
<tr>
<td></td>
<td>Inter. Meeting</td>
<td>Inform. Formal</td>
</tr>
<tr>
<td>Economic Conditions</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Changing Guidelines</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Funding Uncertainty</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lack of Own Time</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fear of Lost Autonomy</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fear of Lost Credit</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Inadequate Funding</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Limited Staff Size</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Personality Differences</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unwilling to Cooperate</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Past Problems</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Distance from Office</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*a = type of organization accounts for 4 percent or more of the variance in frequency of IOR; + = standardized regression coefficient is greater than or equal to .20; - = standardized regression coefficient is less than or equal to -.20 (as hypothesized).
Table 8. Summary of regression analysis of frequency of IOR with ASCS and FmHA on the individual barriers after controlling on type of organization

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>IOR with the ASCS</th>
<th>IOR with the FmHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Conditions</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Changing Guidelines</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Funding Uncertainty</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lack of Own Time</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fear of Lost Autonomy</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fear of Lost Credit</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Inadequate Funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited Staff Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality Differences</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unwilling to Cooperate</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Past Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance from Office</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* = type of organization accounts for 4 percent or more of the variance in frequency of IOR; + = standardized regression coefficient is greater than or equal to .20; - = standardized regression coefficient is less than or equal to -.20 (as hypothesized).
in the analysis of variance are included as the dummy codes for this regression analysis: the mean of CES is significantly different from the combined means of ASCS and FmHA; and the mean of ASCS is significantly different from the mean of FmHA.

**Farmer referral to SCS:** Difference in type of organization have a large effect (R-squared = .45) on frequency of farmer referral to SCS (Table 9). The ASCS refer farmers to SCS routinely for ACP cost-sharing certification (Table 3). After controlling on type of organization, differences in personalities are the only serious barrier to referral to SCS (-.29). Adverse conditions in the farm economy, however, encourage more frequent referral to SCS (.23).

**Informal interaction with SCS:** The type of organization has a moderate effect (R-square = .18) on frequency of informal-interaction with SCS (Table 10). The ASCS interacted informally with SCS more often than did FmHA (Table 3). Distance away from the SCS office presents the most serious barrier to frequent interaction with SCS (-.45). Differences in personalities discourage informal interaction, as well (-.37). Concern over lost credit for one's own programs also limits informal interaction (-.26). Perceptions that changing guidelines from above make it more difficult to implement one's own programs also represent a barrier to informal interaction with SCS (-.24). Perceived limitations in staff size, on the other hand, tends to encourage more frequent interaction with SCS (.24).

**Formal meetings with SCS:** Type of organization has some effect (R-square = .09) on frequency of formal meetings with SCS (Table 11).
Table 9. Multiple regression of frequency of farmer referral to the SCS on type of organization and individual barriers

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Regression</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstand.</td>
<td>Standard.</td>
<td>T-Value</td>
<td>R-Square</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.67</td>
<td>27.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CES vs. ASCS, FmHA</td>
<td>.21</td>
<td>.24</td>
<td>1.70</td>
<td></td>
</tr>
<tr>
<td>ASCS vs. FmHA</td>
<td>-.94</td>
<td>-.63</td>
<td>-5.78</td>
<td>.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers Entered Individually, Controlling on Type of Organization</th>
<th>Zero-Order Correlation</th>
<th>Standard. Regression</th>
<th>T-Value</th>
<th>Cumulative R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Conditions</td>
<td>-.02</td>
<td>.23</td>
<td>1.91</td>
<td>.49</td>
</tr>
<tr>
<td>Changing Guidelines</td>
<td>-.03</td>
<td>.01</td>
<td>0.08</td>
<td>.45</td>
</tr>
<tr>
<td>Funding Uncertainty</td>
<td>-.02</td>
<td>-.09</td>
<td>-0.66</td>
<td>.45</td>
</tr>
<tr>
<td>Lack of Own Time</td>
<td>-.28</td>
<td>.02</td>
<td>0.20</td>
<td>.45</td>
</tr>
<tr>
<td>Fear of Lost Autonomy</td>
<td>.20</td>
<td>.06</td>
<td>0.51</td>
<td>.45</td>
</tr>
<tr>
<td>Fear of Lost Credit</td>
<td>.08</td>
<td>-.02</td>
<td>-0.23</td>
<td>.45</td>
</tr>
<tr>
<td>Inadequate Funding</td>
<td>.04</td>
<td>.12</td>
<td>1.03</td>
<td>.46</td>
</tr>
<tr>
<td>Limited Staff Size</td>
<td>-.07</td>
<td>.18</td>
<td>1.52</td>
<td>.47</td>
</tr>
<tr>
<td>Personality Differences</td>
<td>-.26</td>
<td>-.29</td>
<td>-2.63</td>
<td>.52</td>
</tr>
<tr>
<td>Unwilling to Cooperate</td>
<td>-.10</td>
<td>-.13</td>
<td>-1.16</td>
<td>.46</td>
</tr>
<tr>
<td>Past Problems</td>
<td>-.15</td>
<td>-.00</td>
<td>-0.03</td>
<td>.45</td>
</tr>
<tr>
<td>Distance from SCS Office</td>
<td>-.22</td>
<td>.04</td>
<td>0.34</td>
<td>.45</td>
</tr>
</tbody>
</table>
Table 10. Multiple regression of frequency of informal interaction with the SCS on type of organization and individual barriers

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Regression</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstand.</td>
<td>Standard.</td>
<td>T-Value</td>
<td>R-Square</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.29</td>
<td>15.82</td>
<td>-</td>
<td>.18</td>
</tr>
<tr>
<td>CES vs. ASCS, FmHA</td>
<td>-.17</td>
<td>-.15</td>
<td>-1.14</td>
<td></td>
</tr>
<tr>
<td>ASCS vs. FmHA</td>
<td>-.76</td>
<td>-.40</td>
<td>-3.04</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers Entered Individually, Controlling on Type of Organization</th>
<th>Zero-Order Correlation</th>
<th>Standard. Regression</th>
<th>T-Value</th>
<th>Cumulative R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Conditions</td>
<td>-.09</td>
<td>.12</td>
<td>0.82</td>
<td>.19</td>
</tr>
<tr>
<td>Changing Guidelines</td>
<td>-.28</td>
<td>-.24</td>
<td>-1.83</td>
<td>.24</td>
</tr>
<tr>
<td>Funding Uncertainty</td>
<td>-.18</td>
<td>-.08</td>
<td>-0.47</td>
<td>.19</td>
</tr>
<tr>
<td>Lack of Own Time</td>
<td>-.22</td>
<td>-.07</td>
<td>-0.50</td>
<td>.19</td>
</tr>
<tr>
<td>Fear of Lost Autonomy</td>
<td>-.01</td>
<td>-.02</td>
<td>-0.11</td>
<td>.18</td>
</tr>
<tr>
<td>Fear of Lost Credit</td>
<td>-.17</td>
<td>-.26</td>
<td>-1.98</td>
<td>.25</td>
</tr>
<tr>
<td>Inadequate Funding</td>
<td>-.03</td>
<td>.09</td>
<td>0.64</td>
<td>.19</td>
</tr>
<tr>
<td>Limited Staff Size</td>
<td>.02</td>
<td>.24</td>
<td>1.74</td>
<td>.23</td>
</tr>
<tr>
<td>Personality Differences</td>
<td>-.21</td>
<td>-.37</td>
<td>-2.78</td>
<td>.30</td>
</tr>
<tr>
<td>Unwilling to Cooperate</td>
<td>-.12</td>
<td>-.19</td>
<td>-1.45</td>
<td>.22</td>
</tr>
<tr>
<td>Past Problems</td>
<td>-.07</td>
<td>-.05</td>
<td>-0.35</td>
<td>.18</td>
</tr>
<tr>
<td>Distance from SCS Office</td>
<td>-.52</td>
<td>-.45</td>
<td>-3.48</td>
<td>.35</td>
</tr>
</tbody>
</table>
Table 11. Multiple regression of frequency of formal meetings with the SCS on type of organization and individual barriers

<table>
<thead>
<tr>
<th>Regression</th>
<th>Unstand.</th>
<th>Standard.</th>
<th>T-Value</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>2.33</td>
<td></td>
<td>11.92</td>
<td></td>
</tr>
<tr>
<td>CES vs. ASCS, FmHA</td>
<td>-.30</td>
<td>-.30</td>
<td>-2.17</td>
<td></td>
</tr>
<tr>
<td>ASCS vs. FmHA</td>
<td>-.03</td>
<td>-.02</td>
<td>-0.12</td>
<td>.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zero-Order Correlation</th>
<th>Standard. Regression</th>
<th>T-Value</th>
<th>Cumulative R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers Entered Individually, Controlling on Type of Organization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic Conditions</td>
<td>.18</td>
<td>.36</td>
<td>2.41</td>
</tr>
<tr>
<td>Changing Guidelines</td>
<td>-.12</td>
<td>-.09</td>
<td>-0.66</td>
</tr>
<tr>
<td>Funding Uncertainty</td>
<td>-.24</td>
<td>-.05</td>
<td>-0.30</td>
</tr>
<tr>
<td>Lack of Own Time</td>
<td>.01</td>
<td>-.01</td>
<td>-0.09</td>
</tr>
<tr>
<td>Fear of Lost Autonomy</td>
<td>-.20</td>
<td>-.11</td>
<td>-0.72</td>
</tr>
<tr>
<td>Fear of Lost Credit</td>
<td>.09</td>
<td>.10</td>
<td>0.68</td>
</tr>
<tr>
<td>Inadequate Funding</td>
<td>.15</td>
<td>.24</td>
<td>1.68</td>
</tr>
<tr>
<td>Limited Staff Size</td>
<td>-.09</td>
<td>.00</td>
<td>0.01</td>
</tr>
<tr>
<td>Personality Differences</td>
<td>-.15</td>
<td>-.32</td>
<td>-2.15</td>
</tr>
<tr>
<td>Unwilling to Cooperate</td>
<td>-.16</td>
<td>-.21</td>
<td>-1.48</td>
</tr>
<tr>
<td>Past Problems</td>
<td>.03</td>
<td>-.02</td>
<td>-0.13</td>
</tr>
<tr>
<td>Distance from SCS Office</td>
<td>-.04</td>
<td>-.06</td>
<td>-0.41</td>
</tr>
</tbody>
</table>
The CES met formally with SCS more often than did the ASCS or FmHA (Table 3). Differences in personalities represent the most serious barrier to frequency of formal meetings with SCS (-.32). The unwillingness of others to cooperate also tends to reduce the frequency of formal meetings with SCS (-.21). Unfavorable conditions in the farm economy, on the other hand, increase the frequency of formal meetings with SCS (.36). Formal meetings are often mandated from above to deal with problems, such as the farm crisis. Perceptions of inadequate operating funds are also positively related to frequency of formal meetings with SCS (.24).

Relationships reported with the CES

This section examines the relationships that the three other organizations (SCS, ASCS, and FmHA) reported with the CES. The same two contrasts used in the analysis of variance are included as the dummy coding scheme for this regression analysis: the mean of SCS is significantly different from the combined means of ASCS and FmHA; and the mean of ASCS is significantly different from the mean of FmHA.

Farmer referral to CES: Type of organization has no effect (R-squared = .02) on frequency of referral to CES (Table 12). No significant differences were found between the organizations (Table 4). Concerns over lack of time (-.22) and fear of lost credit for one's own programs (-.22) represent two barriers to frequency of farmer referral to CES. Uncertainty over future funding also limits frequency of referral to CES (-.20). Those who believe others are unwilling to cooperate tend to refer farmers less frequently to CES (-.20). Bad conditions in the farm economy, however, encourage more frequent referral to CES (.32).
Table 12. Multiple regression of frequency of farmer referral to the CES on type of organization and individual barriers

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Regression</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstand.</td>
<td>Standard.</td>
<td>T-Value</td>
<td>R-Square</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.06</td>
<td>12.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCS vs. ASCS, FmHA</td>
<td>-.18</td>
<td>-.15</td>
<td>-1.04</td>
<td></td>
</tr>
<tr>
<td>ASCS vs. FmHA</td>
<td>-.06</td>
<td>-.03</td>
<td>-0.20</td>
<td>.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers Entered Individually, Controlling on Type of Organization</th>
<th>Zero-Order Correlation</th>
<th>Standard. Regression</th>
<th>T-Value</th>
<th>Cumulative R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Conditions</td>
<td>.24</td>
<td>.32</td>
<td>2.14</td>
<td>.11</td>
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<tr>
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Informal interaction with CES: Differences in the type of organization have a moderate effect \((R^2 = .15)\) on frequency of informal interaction with CES (Table 13). SCS respondents interact with SCS more frequently than do those from either ASCS or FmHA (Table 4). Greater distances from the CES office represent an important barrier to informal interaction with CES \((- .46)\). Concerns over lack of time \((- .20)\) and fear of lost credit for one's own programs \((- .20)\) pose some barrier to frequency of informal interaction with CES. Perceptions of limited staff size tend to encourage more frequent informal interaction with CES \((.23)\).

Formal meetings with CES: The type of organization has a small effect \((R^2 = .06)\) on the frequency of formal meetings with CES (Table 14). Differences in personalities represent the most serious barrier to frequency of formal meetings with CES \((- .36)\). Belief that others are unwilling to cooperate also limits the frequency of formal meetings with CES \((- .21)\). Greater distances from the CES office also discourages frequent formal meetings with CES \((- .22)\). Concerns over inadequate operating funds, however, tend to encourage more frequent formal meetings with CES \((.22)\).

Relationships reported with the ASCS

Relationships with the ASCS reported by the other three organizations (SCS, CES, and FmHA) are presented in this section. The same two contrasts used in the analysis of variance represent the dummy coding scheme for this regression analysis: the mean of SCS is significantly different from the combined means of CES and FmHA; and the
Table 13. Multiple regression of frequency of informal interaction with the CES on type of organization and individual barriers

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<th>T-Value</th>
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Table 14. Multiple regression of frequency of formal meetings with the CES on type of organization and individual barriers

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mean of CES is significantly different from the mean of FmHA.

**Farmer referral to ASCS:** The type of organization makes an important difference (R-squared = .34) in frequency of farmer referral to ASCS (Table 15). The SCS refer farmers to ASCS more frequently than do CES or FmHA (Table 5). Fear of lost credit or visibility for one's own programs is an important barrier to more frequent farmer referral to ASCS (-.34). Perceptions of others as unwilling to cooperate also tends to limit farmer referral to ASCS (-.20).

**Informal interaction with ASCS:** Differences in type of organization have a moderate influence (R-squared = .18) on frequency of informal interaction with the ASCS (Table 16). The SCS reported the most frequent informal interaction, while FmHA reported significantly more informal interaction than did the CES (Table 5). Lack of time is the only significant barrier to frequency of informal interaction with the ASCS (-.30).

**Formal meetings with ASCS:** The type of organization has a moderate influence (R-squared = .15) on frequency of informal interaction with the ASCS (Table 17). The SCS reported the most frequent formal meetings, while CES reported more frequent formal meetings with ASCS than did the FmHA (Table 5). Uncertainty over future funding limits the frequency of formal meetings with ASCS (-.24). Greater distance from the ASCS office also presents a barrier to formal meetings with ASCS (-.21).

**Relationships reported with the FmHA**

The last set of relationships are those the three other organizations (SCS, CES, and ASCS) reported with FmHA. The same two
Table 15. Multiple regression of frequency of farmer referral to the ASCS on type of organization and individual barriers

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<th>Cumulative R-Square</th>
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Table 17. Multiple regression of frequency of formal meetings with the ASCS on type of organization and individual barriers

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contrasts used in the analysis of variance are included as the dummy coding scheme for this regression analysis: the mean of SCS is significantly different from the combined means of ASCS and CES; and the mean of CES is significantly different from the mean of ASCS.

**Farmer referral to FmHA:** Differences in type of organization have a relatively small effect (R-squared = .07) on frequency of farmer referral to FmHA (Table 18). Personality differences (-.22) and others' unwillingness to cooperate (-.24) show that interpersonal conflict poses a barrier to farmer referral to FmHA. Uncertainty over future funding also represents a barrier to farmer referral to FmHA (-.22). Conditions in the farm economy, on the other hand, result in more frequent referral to FmHA (.24).

**Informal interaction with FmHA:** The type of organization makes little difference (R-squared = .05) in frequency of informal interaction with FmHA (Table 19). Distance from the FmHA office is an important barrier to informal interaction (-.51). Concern over changing guidelines from above limits frequency of informal interaction (-.35), as does fear of lost autonomy (-.29). Two types of interpersonal conflict represent barriers to informal interaction with FmHA (personality differences = -.28 and others' unwillingness to cooperate = -.27). Past problems with others may almost be considered a barrier (-.19).

**Formal meetings with FmHA:** The type of organization has little influence (R-squared = .03) on frequency of formal meetings with FmHA (Table 20). Perceptions of others as unwilling to cooperate reduces the frequency of formal meetings with FmHA (-.34), as do differences in
Table 18. Multiple regression of frequency of farmer referral to the FmHA on type of organization and individual barriers

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<th>T-Value</th>
<th>Cumulative R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers Entered Individually, Controlling on Type of Organization</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Economic Conditions</td>
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<td>.24</td>
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<td>Unwilling to Cooperate</td>
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<td>Distance from FmHA Office</td>
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<td>.06</td>
<td>0.42</td>
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Table 19. Multiple regression of frequency of informal interaction with the FmHA on type of organization and individual barriers

<table>
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<tr>
<th>Regression Unstand. Standard.</th>
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<th>R-Square</th>
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<td>.02</td>
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<td>-.21</td>
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<table>
<thead>
<tr>
<th>Zero-Order Correlation Standard. Regression T-Value</th>
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<tr>
<td>Barriers Entered Individually, Controlling on Type of Organization</td>
<td></td>
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<tr>
<td>Economic Conditions</td>
<td>.17</td>
</tr>
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<td>Changing Guidelines</td>
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<td>Funding Uncertainty</td>
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<tr>
<td>Lack of Own Time</td>
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<tr>
<td>Fear of Lost Autonomy</td>
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<td>Fear of Lost Credit</td>
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<td>Inadequate Funding</td>
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<td>Limited Staff Size</td>
<td>-.00</td>
</tr>
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<td>Personality Differences</td>
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</tr>
<tr>
<td>Unwilling to Cooperate</td>
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<tr>
<td>Past Problems</td>
<td>-.21</td>
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<td>Distance from FmHA office</td>
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Table 20. Multiple regression of frequency of formal meetings with the FmHA on type of organization and individual barriers

<table>
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<th></th>
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<tr>
<td></td>
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<td>Standard.</td>
<td>T-Value</td>
<td>R-Square</td>
</tr>
<tr>
<td>Type of Organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.57</td>
<td></td>
<td>7.93</td>
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<td>SCS vs. CES, ASCS</td>
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<tr>
<td>CES vs. ASCS</td>
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<tr>
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<tr>
<td>Personality Differences</td>
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<td>-1.56</td>
<td>.08</td>
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<tr>
<td>Unwilling to Cooperate</td>
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<td>Past Problems</td>
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<td>-.01</td>
<td>-0.08</td>
<td>.03</td>
<td></td>
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<tr>
<td>Distance from FmHA Office</td>
<td>-.18</td>
<td>-.21</td>
<td>-1.45</td>
<td>.07</td>
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</tr>
</tbody>
</table>
personalities (-.23). Greater distances from the FmHA office also tends to limit the frequency of formal meetings with FmHA (-.21).

**Zero-order Correlation Versus Multiple Regression**

The previous section examined the relationships between the independent variables (i.e., barriers to IOR) and the dependent variables (i.e., frequency of IOR). Multiple regression was used to control on differences between organizations. To more fully understand and appreciate why this procedure is superior to simple zero-order correlation, results from both methods will be compared. The main reasons for this comparison are methodological. The goal is to suggest the types of analytical problems that can arise when differences between organizations are ignored.

Rosenberg (1968) discusses several effects of introducing a third, control variable to the analysis of bivariate relationships. Three possible effects can be considered in this discussion. Sometimes, an observed relationship between the independent and dependent variable disappears or is greatly reduced when a test factor (e.g., differences in type of organizations) is introduced. Rosenberg (1968:56) calls this type of test factor an intervening variable. On the other hand, a relationship between an independent and dependent variable may appear after introducing a test factor (e.g., controlling on differences between organizations.) Rosenberg (1968:85) refers to this as a suppressor variable, because it tends to cancel out or reduce the relationship between two variables. The final situation involves cases where the
relationship between the independent and dependent variables changes direction, but neither the correlation nor regression coefficients are significant. In this case, the third variable is referred to as a suppressor variable, which means the direction of the relationship is the reverse of that suggested by the original data (Rosenberg, 1968:94).

The zero-order correlations between each barrier and each type of IOR will be compared to the corresponding standardized regression coefficients (Tables 9-20). As in the multiple regression analysis, zero-order correlations will be considered significant if their magnitude is .20 or greater. The criteria for including results in this discussion, therefore, is that the difference between the zero-order correlation and the standardized regression coefficient be about .20 or greater.

Relationships reported with the SCS

Four substantial changes happen in the relationships found between the barriers and frequency of farmer referral to SCS (Table 9). Conditions in the farm economy becomes significant after controlling on type of organization (change = .25). Here, the type of organization acts as a suppressor variable. Two variables are no longer significantly related to frequency of farmer referral, indicating that type of organization acts as an intervening variable. Lack of own time is no longer significant (change = .30). Also, distance from the SCS office is no longer significant (change = .26). Relationships involving limitations in staff size change direction, but neither the correlation nor regression coefficients are significant (change = .25).
The relationships between two barriers and frequency of informal interaction with SCS change significantly (Table 10). Observed relationships for conditions in the farm economy change direction, but neither the correlation nor regression coefficients are significant (change = .21). In the case of limitations in staff size, type of organization acts like a suppressor variable, because the regression coefficient is significant after controlling on organization (change = .22).

**Relationships reported with the CES**

The relationships of only two barriers to frequency of informal interaction change substantially after controlling on type of organization (Table 13). The type of organization acts as a suppressor variable for limitations in staff size which becomes significant after controlling on type of organization (change = .22). Differences in personalities changes direction, but neither the correlation nor regression coefficients are significant (change = .19).

**Relationships reported with the ASCS**

As shown in Table 15, relationships between three barriers and frequency of farmer referral to ASCS change after controlling on type of organization: lack of own time (change = .20); limitations in staff size (change = .22); and distance from ASCS office (change = .24). In all cases, significant zero-order correlations are no longer significant after controlling on the type of organization. The type of organization, therefore, acts as an intervening variable.
The relationship between uncertainty of future funding and frequency of informal interaction with ASCS changes direction, but neither the correlation nor regression coefficients are significant (Table 16; change = .19). The same is true for the relationship between limitations in staff size and frequency of formal meetings with ASCS (Table 17; change = .22).

Relationships reported with the FmHA

The only significant change in a relationship involving IOR with FmHA is between fear of lost autonomy and frequency of formal meetings (Table 20). Here, the relationship changes direction (change = .29), but neither the correlation nor regression coefficients are significant.
CHAPTER VI. DISCUSSION AND IMPLICATIONS

This chapter has several goals. The main findings will be summarized within a comparative perspective, drawing on ideas from the organizational context (Chapter II) and theoretical model (Chapter III). Implications for sociological theory and research on interorganizational relationships (IOR) will be discussed. Guidelines for improving conservation programs and policies, based on overcoming barriers to IOR, will be proposed. Lastly, some suggestions for future IOR research will be outlined.

Summary and Comparative Analysis

One goal of this study was to examine differences among organizations in members' perceptions and IOR behavior. Analysis of variance between organizations provides insight into these differences. Another goal was to examine the effects of selected barriers on different forms of IOR. Relationships between the various barriers and frequency of IOR will be summarized and compared.

Analysis of variance for independent variables

Considering the analysis of variance for all independent variables, some interesting patterns emerged (Table 2). The FmHA seemed most concerned over barriers related to their economic situation: conditions in the farm economy; uncertainty over future funding; staff limitations; and inadequate operating funds. Bureaucratic constraints also presented the most problems for the FmHA. The FmHA was most concerned over
changing guidelines from above. The FmHA respondents thought lack of
time was most serious as a barrier to working with other organizations.
Such a feeling often results from too many demands compared to personal
and organizational resources available.

The SCS respondents were second in their overall concern for
potential barriers to IOR. Fear of lost credit or visibility for their
own programs worried SCS the most. They were also most concerned about
two types of interpersonal conflict: differences in personalities and
others' unwillingness to cooperate.

The ASCS respondents were most concerned over two individual beliefs
about IOR: fear of lost autonomy and fear of lost visibility or credit
(tied for top with SCS.). The ASCS was second to FmHA in their concern
over economic factors (i.e., uncertainty over future funding and
perceived resource scarcity.) The fact that the ASCS was significantly
less concerned than FmHA over conditions in the farm economy suggests
that the FmHA's financial assistance programs were more seriously
affected by the economy than were those of ASCS.

The CES was as concerned over interpersonal conflict as the SCS.
Past problems with other organizations were a particular worry for CES.
The CES perceived lack of time as more serious than did the ASCS and SCS.
The CES respondents were least concerned over the external factors and
individual beliefs about IOR. It would be interesting to know whether
their relatively low concern over uncertainty of future funding would be
greater after federal CES funding was threatened with elimination early
in 1986 (one year after the survey was conducted.)
It is, therefore, possible to distinguish the financial from the non-financial organizations in their concern for different barriers. As expected, the financial organizations (ASCS and FmHA) were more concerned over economic factors. The non-financial (SCS and CES) were more concerned over interpersonal barriers.

**Analysis of variance for dependent variables**

The organizations differed significantly on all three types of IOR with SCS (Table 3). The ASCS reported the most frequent referral of farmers to SCS, due to their joint responsibilities for the ACP cost-sharing program. ASCS respondents also interacted informally more often with SCS than did the CES or FmHA. This is explained, in part, by greater colocation of SCS and ASCS offices. The CES, on the other hand, met formally with SCS more often than did ASCS or FmHA. This is related to greater participation of the CES in the formal monthly meetings of the soil conservation district (SCD), in which SCS is very much involved.

The organizations did not differ in frequency of farmer referral to or formal meetings with CES (Table 4). The SCS reported more frequent informal interaction with CES than did the ASCS or FmHA. The SCS seem to attach particular importance to their informal relationships with CES.

Significant differences were found for all types of IOR with ASCS (Table 5). The SCS reported more frequent farmer referral and informal interaction with ASCS. This is again due to their joint responsibilities for the ACP program and the greater colocation of their offices. The FmHA reported less frequent formal meetings with ASCS than did SCS or CES. This is surprising given their common involvement in financial
assistance. More frequent meetings between ASCS and FmHA would probably improve delivery of federal financial assistance.

Little difference was observed in IOR with FmHA (Table 5). The ASCS reported significantly more frequent informal interaction with FmHA than did the CES. This may compensate for the infrequent formal meetings between the two organizations.

It seems clear that these organizations differ in some important ways. Their perceptions of certain barriers differ, as does the frequency of IOR reported with SCS and ASCS. Such differences must be considered when examining possible effects of the barriers on IOR.

Relative effect of different barriers on IOR

The barriers to IOR, in this study, can be grouped according to their relative overall influence on all 12 types of IOR (four types of IOR with three organizations). The number of standardized regression coefficients (after controlling on type of organization) less than -.20 was set up as the criteria for importance in this study. This indicates that a barrier explains more than four percent of the variance in frequency of IOR, after controlling on differences in type of organization.

The relative influence of each barrier will now be assessed by counting the types of IOR for which each barrier meets this criteria. Out of 12 possible barriers, those barriers affecting six or more types of IOR will be considered to be important. Those that affect between two and five types of IOR will be considered somewhat important. If a barrier was not related to any type of IOR or was only related to one
type, it will be considered of low relative importance. Tables 7 and 8 provide the basis for the following discussion.

For many types of IOR the differences observed between the organizations had more influence on frequency of IOR than did the perceived barriers. Two types of interpersonal conflict seem to be important barriers. Differences in personalities and the belief that others are unwilling to cooperate each affect seven types of IOR. Considering strength of relationships, differences in personalities generally have a greater effect than the unwillingness of others to cooperate. Distance between offices also represents an important barrier for six types of IOR. It accounts for almost 25 percent of the variation in frequency of informal interaction with SCS, CES, and FmHA.

Four hypothesized barriers have a moderate affect on IOR. Fear of lost credit or visibility for one's own programs may increasingly discourage IOR, as the need to demonstrate accountability and effectiveness increases. Lack of time represents another moderately serious barrier. Such a belief is partly due to scarce resources, compared to the amount of work imposed. The problem seems most serious for informal interaction, which represents a more discretionary type of IOR than farmer referral and formal meetings which are often mandated. Uncertainty of future funding may also limit the frequency of IOR, particularly farmer referral. Local staff may see future funding tied to number of clients they service themselves. Changing guidelines from above tend to discourage informal interaction with SCS and FmHA.
Two barriers had little or no effect on IOR. Fear of lost autonomy was found to be a major barrier in past research. In this study, however, it is only a barrier to informal interaction with the FmHA. Past problems with other organizations do not appear to affect present IOR. Problems among these organizations were most serious during their first 20 years of coexistence (Sampson, 1985). Most respondents were young then and few were working for their organizations.

Three hypothesized barriers actually seem to encourage more frequent IOR. Perceptions of conditions in the farm economy are positively related to farmer referral to three organizations (SCS, CES, FmHA) and formal meetings with SCS. In line with the prevailing argument in IOR theory, perceived resource scarcity was found to be positively related to frequency of IOR. Limited staff size was positively related to frequency of informal interaction with SCS and CES. These organizations provide technical and educational assistance, rather than financial services. Perceptions of inadequate funding also seem to promote more frequent formal meetings with SCS and CES.

Respondents' opinions about most serious barriers to IOR

As a second, more qualitative way of determining the relative severity of the barriers, respondents were asked to name the single most serious barrier to local organizations working well together (Table 21). Eleven respondents did not provide an answer to this open-ended question. Most of these stated there were no barriers to the relationships among the organizations. Three barriers came out as most important: lack of time, the relative location of offices and differences in personalities.
Table 21. Number and percentage of respondents from each organization who reported each barrier as the one most serious to organizations working together well

<table>
<thead>
<tr>
<th></th>
<th>SCS</th>
<th>CES</th>
<th>ASCS</th>
<th>FmHA</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Time</td>
<td>2 (12%)</td>
<td>3 (21%)</td>
<td>2 (14%)</td>
<td>8 (67%)</td>
<td>15 (26%)</td>
</tr>
<tr>
<td>Relative Location of Offices</td>
<td>4 (24%)</td>
<td>3 (21%)</td>
<td>6 (43%)</td>
<td>2 (17%)</td>
<td>15 (26%)</td>
</tr>
<tr>
<td>Differences in Personalities</td>
<td>3 (18%)</td>
<td>6 (43%)</td>
<td>4 (29%)</td>
<td>--</td>
<td>13 (23%)</td>
</tr>
<tr>
<td>Different Decision Making</td>
<td>2 (12%)</td>
<td>1 (7%)</td>
<td>--</td>
<td>1 (6%)</td>
<td>4 (7%)</td>
</tr>
<tr>
<td>Structures</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems with State or Federal Relationships</td>
<td>1 (7%)</td>
<td>--</td>
<td>1 (7%)</td>
<td>--</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Incompatible Programs or Polices</td>
<td>2 (12%)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Potential Loss of Autonomy or Independence</td>
<td>1 (6%)</td>
<td>1 (7%)</td>
<td>--</td>
<td>--</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Unwillingness of Others to Cooperate</td>
<td>1 (6%)</td>
<td>--</td>
<td>1 (7%)</td>
<td>--</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Past Problems with Other Organizations</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1 (8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Battles over Turf</td>
<td>1 (6%)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>17</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td>57</td>
</tr>
</tbody>
</table>
These accounted for three-quarters of the responses. Some interesting differences were found among the organizations.

Lack of time was the most serious barrier for one-fourth (24 percent) of the respondents who answered this question. This barrier was especially serious for the FmHA respondents, two-thirds (67 percent) of whom stated this was the most serious barrier. This could be because the FmHA was under tremendous workload pressure owing to the farm crisis.

Overall, respondents considered locations of the organizations’ offices as serious as lack of time (26 percent). The ASCS (43 percent) and the SCS (24 percent) who are most likely to be located together, were most concerned. Differences in personalities were seen as the third most serious barrier (23 percent). This was the most serious barrier for the CES (43 percent). The ASCS respondents were also quite concerned about office location (27 percent).

None of the other barriers were seen as most serious by more than six percent of the respondents. Two barriers involving the larger organizational context emerged. Four percent of the respondents said that problems with relationships among organizations at the state and federal level were the most serious barrier to local organizations working together effectively. Another four percent of the respondents (from SCS) stated that incompatible programs and policies were the most serious barrier. Potential loss of autonomy and past problems were each mentioned by two respondents. One respondent suggested that turf battles were the most serious barrier.
Conclusions about effects barriers on IOR

Several barriers are most serious according to the regression analysis and the open-ended responses. Increased distance between offices presents a serious barrier, especially for informal interaction. Differences in personalities also can be considered a serious barrier.

Several differences can be noted between the regression analysis and the respondents' statements. Respondents reported considerable concern over lack of time. This barrier, however, had only a moderate effect on informal interaction with CES and ASCS, and farmer referral to CES in the regression analysis. Perceptions that others were unwilling to cooperate, on the other hand, appears to be a serious barrier based on the regression analysis. Only two respondents, however, mentioned this to be the most serious barrier.

Lastly, it is important to note that perceived resource scarcity tends to promote more frequent IOR. This is contrary to the hypotheses of this study, but is consistent with past research and contemporary IOR theory. As resources grow increasingly scarce, IOR will become an increasingly important strategy for these organizations.

Implications for Sociological Theory and Research

This research suggests the importance of examining differences between organizations. For some relationships, multiple regression of individual barriers, controlling on type of organization, gave very different results from zero-order correlation. This suggests that analysis which does not identify and analyze differences between
organizations can be misleading. Almost all past research, unfortunately, has failed to take such a comparative perspective.

Comparative analysis will be necessary to advance IOR theory. Differences in organizations should be linked to differences in perceptions. These differences may well lead to differences in IOR behavior. This study revealed some significant differences between organizations both in perceptions of the environment and in frequency of IOR with different organizations. Organizations' missions appear to shape their perceptions of the environment and their relationships with other organizations.

Past research has often lumped together very different types of organizations for analysis. They are treated as a homogeneous group when their perceptions and IOR may be significantly different. This may have been done to achieve a sample of sufficient size to test statistical probability. Researchers should be aware of possible problems from conceptually and empirically combining very different types of organizations without sufficient consideration of major differences in such characteristics as structure, mission, resources, and involvement in a particular domain (e.g., conservation).

Researchers should choose similar organizations to control on major differences and hold some important confounding influences constant. Compared to organizations in past studies, organizations in this study are homogeneous in several important ways. All generally serve the same clientele (i.e., farmers). The directors generally have college educations and manage small offices. Only those USDA organizations that
have some role in soil conservation at the local level were included. Other researchers, for example, may wish to include only those state level organizations with a role in providing health care. Research that combines federal, state, and local public sector organizations with private organizations and businesses working in different areas may introduce so much variability that specific relationships cannot be determined or understood.

Research designs need to include "enough" of each specific organization to permit comparative analysis. Multiple networks or sets must, therefore, be studied. Because this study achieved 100 percent response from 17 organizational sets, it was possible to compare organizations as units of analysis.

This study also suggests that individual perceptions (e.g., about barriers) may not be the major determinant of behavior (e.g., IOR). The perceived barriers in this study did not explain as much of the variance in IOR, as did two structural variables (i.e., the type of organization and differences between offices). The type of organization, particularly, may serve as either an antecedent, intervening or suppressor variable.

This study suggests that the study of barriers to IOR represents fertile territory for IOR research. Interorganizational researchers should overcome the pro-coordination bias inherent in most past research. This will require theoretical perspectives that go beyond the usual exchange and functional theories. To include barriers in IOR models will require insights from resource dependency, political economy, and
conflict theories. No one theory will be adequate for explaining both positive and negative influences on IOR.

Lastly, the influence of the organizational environment on IOR must be reconsidered. Organizations are being asked continually to do more with fewer resources. Simultaneously, they must show greater accountability to external demands. Those organizational directors who believe environmental uncertainty makes it more difficult to plan and carry out their own programs may avoid IOR.

Organizational directors who believe IOR takes up their valuable time may resort to crisis management and retrenchment. Concern for lost credit or visibility for their own programs may discourage IOR. If interpersonal conflicts with members of other organizations become serious, IOR will diminish further. Comparative analysis of real and potential barriers to IOR will allow researchers and policymakers to develop and recommend new strategies for promoting IOR among organizations.

Implications for Conservation Policies and Programs

Effectively promoting soil conservation is a major challenge, especially when the agricultural economy is depressed. In such an adverse environment, local conservation efforts require the close cooperation of all conservation-related organizations. Relationships among these organizations in this study appear generally good. The long history of interaction and accommodation among the organizations and their programs have helped overcome some earlier, more serious problems.
Some barriers to IOR still exist, however. Overcoming these barriers could lead to more effective local conservation programs.

Some training needs, program innovations, and policy changes can be suggested to overcome these barriers to IOR. Local personnel need education on the benefits of IOR. They should perceive IOR as a way to stretch limited resources. Also, IOR should be recognized as an important way to gather information about the organizational environment. Local staff members could benefit from in-service training in areas relevant to IOR, such as: communication skills, meeting management, and time management. Education and incentives can lead to more positive attitudes, which in turn, can help overcome certain barriers to IOR. The paradox is that only IOR can build the trust and rapport needed to overcome these barriers.

Suggestions for overcoming barriers to IOR

Overcoming barriers to IOR should lead to improvements in the relationships among organizations. To approach this issue in a positive light, respondents were asked the following open-ended question: "How do you think that the relationships among the local organizations involved with soil conservation could be improved?" Each respondent was given credit for up to three responses. Almost 40 different suggestions were coded into eight main categories. Their responses will be analyzed in light of the results presented so far.

The main suggestion for improving IOR (with almost one-fourth of the responses) called for improved communication among the organizations (Table 22). This suggestion included the need for more regular formal
Table 22. Number and percentage of respondents from each organization who reported various suggestions for improving relationships among conservation organizations (up to three different suggestions were recorded for each respondent)

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>SCS</th>
<th>CES</th>
<th>ASCS</th>
<th>FmHA</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase or Improve Communication</td>
<td>7 (27%)</td>
<td>7 (26%)</td>
<td>4 (28%)</td>
<td>2 (13%)</td>
<td>20 (24%)</td>
</tr>
<tr>
<td>Locate Offices in Same Building</td>
<td>3 (12%)</td>
<td>1 (4%)</td>
<td>3 (21%)</td>
<td>2 (13%)</td>
<td>9 (11%)</td>
</tr>
<tr>
<td>More Time for or Better Scheduling of Meetings</td>
<td>1 (4%)</td>
<td>7 (26%)</td>
<td>1 (7%)</td>
<td>--</td>
<td>9 (11%)</td>
</tr>
<tr>
<td>Better Coordination at State and Federal Level</td>
<td>2 (8%)</td>
<td>3 (11%)</td>
<td>--</td>
<td>2 (13%)</td>
<td>7 (8%)</td>
</tr>
<tr>
<td>Reach Better Understanding of Other Organizations</td>
<td>2 (8%)</td>
<td>2 (7%)</td>
<td>--</td>
<td>2 (13%)</td>
<td>6 (7%)</td>
</tr>
<tr>
<td>Need for Changes in Other Individuals</td>
<td>3 (12%)</td>
<td>1 (4%)</td>
<td>--</td>
<td>2 (13%)</td>
<td>6 (7%)</td>
</tr>
<tr>
<td>Other Changes in Programs or Relationships</td>
<td>6 (23%)</td>
<td>5 (18%)</td>
<td>4 (28%)</td>
<td>3 (20%)</td>
<td>18 (22%)</td>
</tr>
<tr>
<td>Advice for What Others Should Do</td>
<td>2 (8%)</td>
<td>1 (4%)</td>
<td>2 (14%)</td>
<td>2 (13%)</td>
<td>7 (7%)</td>
</tr>
<tr>
<td>Number of Responses</td>
<td>26</td>
<td>27</td>
<td>14</td>
<td>15</td>
<td>82</td>
</tr>
</tbody>
</table>
meetings (13 percent), more informal interaction and discussion (6 percent) and improved communication, generally (5 percent). FmHA respondents were least likely to offer this suggestion, because of their already busy schedule and limited involvement with the others.

It will be important to overcome structural barriers that prevent organizations from working well together. One serious structural barrier was the distance between organizations' offices. Likewise, the second most frequent suggestion for improving IOR was to locate organization offices closer together, preferably in the same building. Eleven percent of the suggestions called for more colocation. This was mentioned most often by the ASCS and was more important for those districts where organizations were not colocated.

State offices should, therefore, colocate local offices where this is not presently the case. Proximity of offices promotes better coordination through increased frequency of informal interaction and client referral. USDA could save money through shared facilities, equipment, and staff because of colocation. Farmers will also receive better service if all organizations are located together.

A third suggestion related to the timing and planning of IOR. Eleven percent of all responses called for more time designated specifically for working with other organizations. More convenient and earlier scheduling of meetings was suggested as a way to avoid conflicts between IOR and their own responsibilities. Several CES respondents argued they must schedule their activities (e.g., meetings) further in advance than the other organizations.
Respondents argued that lack of time was a serious barrier to IOR. Local personnel should understand that although IOR, at first, takes more time than appears necessary, contacts with others will save time in the long-run through greater efficiency and effectiveness. Scheduling of meetings at times convenient for all organizations and improved time management could help overcome the perceived lack of time barrier. The main suggestion for improving relationships calls for more and better communication. Effective formal and informal communication, however, will require even more time than many of the directors feel they have or are willing to spend.

One barrier to IOR involved changing guidelines from state or federal agencies. Several respondents claimed they could only work more with others at the expense of existing responsibilities. Some stated that if their superiors placed higher priority on working with other organizations they would find the time. State and area supervisors, therefore, need to actively encourage IOR and assure local staff that they will evaluate favorably (i.e., reward) such activities. State and federal leaders should consider building IOR into program implementation. The most frequent IOR was observed between SCS and ASCS. Increased farmer referral and informal interaction were observed because of their shared responsibility and the mandated IOR of the ACP cost sharing program.

Seven percent of the responses called for improvements in relationships among organizations at the state and federal level. Organizations at the state and national levels need to set a good example
of cooperation and program coordination. Some respondents argued that IOR problems were primarily at the state and national levels. Others stated that incompatible policies and programs developed at these levels were the most serious barrier. State and national leaders of the organizations, however, claim to work well together. Perceptions of some local respondents, in this case, do not match those of state and national leaders and need to be changed.

Eleven percent of the suggestions involved advice to other specific organizations or individuals for improving local conservation activities. Several respondents suggested the ASCS and CES advisory committees should work more closely with the SCD commissioners. Others (primarily from SCS) argued that ASCS, FmHA, or CES personnel needed to give conservation more emphasis. Some respondents thought that FmHA should have full-time staff in their county.

Several respondents criticized individuals from other organizations personally, suggesting that the best way to improve IOR would be to replace these individuals. Six percent of the responses suggested changes individuals should make, such as having a more positive attitude about working together. Two barriers related to interpersonal conflict (i.e., differences in personalities and others' unwillingness to cooperate) could be overcome by these suggestions. Third party interventions, such as conflict resolution or teambuilding, may be needed in individual districts. All organizations, including members of advisory committees, should be encouraged to participate in such activities. Six percent stressed the need for better understanding of
each others' roles and responsibilities. This should help overcome perceptions of interpersonal conflict based on misperceptions.

Almost one-fifth (18 percent) of the responses involved suggestions that do not easily fit into one of the above categories. Some suggested the organizations needed more uniform programs and policies to avoid conflict or duplication. Several respondents thought the division of labor among the organizations should be spelled out more clearly. Several respondents argued for the need to centralize authority in one organization, while others thought the power was already too concentrated. The need for more staff and funding was also mentioned as a way to improve IOR.

**Clarifying organizational roles in conservation**

An important way to overcome barriers to IOR is to insure that all organizations understand and agree on each other’s roles and responsibilities. It may be informative to speculate on this issue given the results of this study. Comments in this section are also based upon questions from the organizational survey not included earlier in this study (Hoban et al., 1986). Relevant insights are also drawn from a related survey of three percent of the farmers in the same 17 districts (Korsching et al., 1985).

Roles and responsibilities are clearer for technical and financial assistance, than for conservation education. Comments in this section will, for the most part, focus on the conservation education arena. The Soil Conservation Service is, in many respects, the central actor in local conservation education activities. The other organizations believe
the SCS will play the greatest role in any new conservation education activities (Hoban et al., 1986). Organizational respondents agreed with the farmers surveyed earlier that SCS is the primary source of information and assistance about erosion problems and conservation practice selection and use (Korsching et al., 1985). Farmers gave SCS their highest evaluation as an information source on five attributes: most knowledgeable, most timely, most trustworthy, most convenient, and most locally relevant. Most farmers also picked the SCS as the organization that should take the lead in supplying farmers with soil conservation information (Korsching et al., 1985).

The CES is also important in the local conservation education network, but not in the highly visible role it has traditionally played in general agriculture education. Although they are very much involved in conservation education programs, their role is more one of providing logistical support (e.g., helping plan meetings, working with media) for more visible SCS and SCO activities. The CES has important educational, organizational, and group process expertise needed for an effective, integrated conservation education campaign. They also have a large network of connections with local opinion leaders, mass media, the schools, and local politicians. The CES should, therefore, be actively involved in most aspects of planning and implementing local conservation education activities, although they need not become technical conservation experts. This role is performed well by the SCS.

Historically, conservation programs have struggled against conflicts and inefficiency resulting from program overlap and duplication of
effort. Serious concerns have been expressed about SCS and CES duplication. Potential problems still exist in conservation education, but there is little outright competition or conflict. In most cases, the SCS and CES work well together. Their programs and expertise complement one another at all levels of government.

The ASCS is important in local conservation activities. They reported frequent interaction with the SCS and CES. The ASCS should continue to emphasize financial assistance programs, but can also play an important role in conservation education. The ASCS is particularly important because of their contact with and influence over most farmers. Farmers consistently report using ASCS as an important source of conservation information and assistance (Korschning et al., 1985; Bultena et al., 1984). The ASCS regularly refers farmers to SCS for conservation information and assistance, and this should be encouraged.

On the other hand, this IOR survey (Hoban et al., 1986) and the survey of farmers (Korschning et al., 1985) suggest that policymakers should consider eliminating the already small role of the FmHA in conservation. The FmHA play the smallest role in local conservation programs. Public fiscal benefits and better service to farmers could be achieved if the FmHA conservation activities were transferred to ASCS. Of all the organizations, the FmHA was most overwhelmed by the organizational environment, resource scarcity, and lack of time. This suggests that the FmHA may already have more responsibilities than it can effectively handle. As a result, it may give conservation a lower priority than ASCS.
Farmers would probably respond positively to a transfer of FmHA conservation functions to ASCS. Farmers do not recognize or positively evaluate FmHA as a source of conservation assistance (Korsching et al., 1985). Many farmers have traditionally held negative attitudes about the FmHA, calling it the "lender of last resort." With recent adverse economic conditions and negative media depictions (e.g., the film Country), the FmHA has attained an even lower acceptance level among farmers. As a result, some farmers may be less interested in and avoid participation in those conservation credit programs administered by FmHA. The role of FmHA in conservation should mainly involve referring farmers to SCS for conservation planning.

Limitations of Present Study

Characteristics of the sample may qualify the results and limit the ability to generalize these findings to other areas. First, the 17 districts (16 counties) in this research had been targeted as a critical soil erosion area. As a result, the SCS district offices in the area received increased staff and funds, compared to other districts. This may have led to their higher visibility and increased role in local activities. The ASCS also had more cost-share money under targeting which increased their interaction with SCS. This may have reduced both organizations' concern over resource scarcity, as well.

Second, the larger research project involved conservation teambuilding workshops in nine of the districts during the summer of 1983. Few significant differences in farmers' perceptions or behavior
were found between those districts which had meetings and those that did not (Korschning et al., 1985). T-tests of the differences between means for those districts with and those without meetings showed no significant differences between the two groups on any of the variables in this study. The meetings may, however, have had more subtle effects on IOR.

Several limitations arise from the research design and methods. Telephone surveys have the advantage of efficiency and cost-effectiveness. They also limit the quantity and quality of information that can be readily collected. The number of response categories were limited to three for the independent variables and five for the dependent variables. Also, concern from state organization staff over length of the interviews prevented the use of many open-ended questions.

Another limitation in the design involves problems inherent in using respondents’ perceptions (e.g., about barriers to IOR) to explain variation in behavior (e.g., frequency of IOR). There are many positive and negative influences on IOR behavior, other than perceptions. Distance between offices, in fact, had the greatest effect, explaining about one-fourth of the variance in several types of IOR, after controlling on respondent’s organization. The perceptual barriers reported in this study accounted for only between four and 14 percent of the variance in IOR, after controlling on respondent’s organization. For some types of IOR, differences between respondents’ organizations explained more variation than any of the barriers.

Another methodological problem involves the sample size. Only 51 cases (three organizations) were included in analysis of their
relationships with the fourth focal organization. This small sample size, for example, prevented the use of loglinear analysis, as an alternative to least squares regression, for several dichotomous dependent variables. It also made LISREL analysis impractical.

Lastly, it is important to recognize that specific findings from this study may not apply to networks of other types of organizations. A major conclusion of this study is that it is unwise to combine different organizations from different action domains in the same study. The relatively similar organizations in this study differed significantly on some of their perceptions and IOR behavior. The relationships between barriers and IOR also change after controlling on the type of respondent's organization. One would expect these differences to be even greater as more dissimilar organizations are included in analysis.

Suggestions for Additional Research

This study suggests some directions for future research. It is possible to propose additional analysis within this same study, as well as offer insights for the design of new IOR studies.

Additional analysis for this study

As can be noted from the survey instrument (Appendix A), more analysis is possible from this data set. Other potential influences on IOR could be examined. Respondents' age and experience may have an important influence on IOR. These could be analyzed through multiple regression, controlling on differences in type of organization. The extent of reliance on other organizations was also measured and its
influence on IOR could be examined. Domain consensus has been considered important in past research. This study measured perceptions of domain consensus for each organization’s role in conservation education.

Lack of public awareness of an organization or its programs represents another form of perceived environmental uncertainty that was measured. Perceived scarcity of other resources was also measured, including: lack of technical information about soil conservation and present legal authority. The perceived overall level of difficulty faced was also determined on a five-point scale. Respondents were also asked about other specific barriers, such as: differences in decision-making structures and relative location of offices. Regression analysis could examine the effects of these potential barriers.

Several other types of IOR were measured in this study: planning assistance, joint programs, and resource exchange. Preliminary correlation analysis suggested that some of the barriers have an important influence on these types of IOR. Problems arose, however, during multiple regression. Because these were measured as dichotomous variables, residual analysis suggested violations of the assumptions of regression. Other preliminary analysis appears promising, including correlation analysis for the responses of each organization individually. Other dependent variables could be constructed by reversing the asymmetric types of IOR (e.g., farmer referral from a particular organization or resources supplied by another organization).

Information on other variables could be collected from secondary sources and analyzed. One type of information involves the presence of
special programs in a district. It may be useful to examine whether or not participation in a multi-county Resource Conservation and Development (RC&D) program has any effect on IOR. Some of the districts in the study were in such a program, while others were not. Another type of special project involves small- or large-scale watershed projects for flood control and water quality. Several districts have been involved in these special projects, which generally call for increased interaction among the organizations.

Another set of variables focuses on the nature of each organization, as a formal organization. These characteristics vary between organizations, but not between districts for the same organization. One such variable considered in this study, from a general perspective, was the degree of specialization of the organization. A check list could be developed listing all possible government assistance programs that one or more organization is responsible for. With help from state staff and government documents, it would be possible to note whether each organization is involved in each program. Extent of specialization could then be determined along two dimensions: general program areas (i.e., conservation only, agriculture only, or more than agriculture) and type of assistance supplied (i.e., technical, financial, or educational).

Another group of structural variables could be analyzed based on the views of state leaders from each organization. One involves the relative centralization of decision making in the organization. Centralization of decision making varies from centralized line organizations (SCS and FMHA) to a combination of line organization and local committee control (ASCS
and CES). The latter two operate, in theory, by relatively autonomous local committees. Both, however, also receive direction and support from the state and federal level. With insights from organizational knowledgeables, the four organizations could be rank-ordered. The other side of centralization would be the extent of local orientation or control. A similar type of analysis could be tried for relative formalization (i.e., the extent to which local directors rely on written rules and procedures.)

Additional analysis will also examine higher levels of analysis (i.e., dyadic and network analysis). Dyadic analysis could proceed along several lines. Each district has six unique dyads (SCS and CES, SCS and ASCS, SCS and FMHA, CES and ASCS, CES and FMHA, ASCS and FMHA) meaning 102 dyads in the whole sample. Dyadic variables can be constructed by either adding scores, subtracting scores, or averaging scores on the relevant variables (Mulford, 1984). It will be useful to consider, for example, the effect of differences in perceptions on the relative frequency of IOR for a particular dyad.

Network-level analysis could form the basis for another line of research into the role of IOR in local program effectiveness. The district network becomes the unit of analysis and 17 cases can be analyzed. This type of analysis represents a unique aspect of this research because no previous studies have attained 100 percent response from so many different matched networks. Network level variables, such as density (i.e., proportion of all possible linkages observed) or multiplexity (i.e., the extent of multiple linkages), could be
constructed and analyzed.

These network level variables could then be used to explain program effectiveness. One would expect that the more closely linked the organizations in a district network, the greater would be the effectiveness of that district’s programs. Program effectiveness could be measured with multiple criteria and indicators. Organizational respondents’ perceptions of effectiveness were collected for both their own organization’s ability to meet its goals and for the network’s ability to meet farmers’ conservation needs. More objective effectiveness information could be obtained from secondary data. The SCS keeps detailed records on such conservation-related indicators, as: number of acres protected by specific conservation practices, number of conservation plans developed, and number of new farmers enrolled as conservation district cooperators. Each district reports this information four times a year. It is part of the public record.

The most ambitious and potentially important type of analysis would involve merging this data set with a related set of data from farmers in the same 17 district area (Korschning et al., 1985). Several months before this IOR survey was conducted, a telephone survey of three percent of all farm operators in each county was conducted (n = 602). Information was collected on such issues as: perceptions of erosion causes and consequences; existence of erosion problems at various locations; use of various sources of information and assistance; and adoption of different conservation practices. Average responses of farmers in each district would serve as indicators of program
effectiveness in that district. Farmers were also asked how well they thought the organizations worked together and what role each should play in local conservation activities. The options for merging this farmer data with network-level measures are just beginning to be considered.

Suggestions for future IOR studies

This study also suggests some general guidelines for the design of future IOR research. Better understanding is needed of which barriers limit organizations' willingness and ability to participate in IOR. Several other barriers, not covered in this study, should be examined, including: past or present turf battles; historical relationships within a particular location (e.g., district); and perceived conflicts between organizations at the local, state, and federal levels. It will also be important to ask specifically which barriers are most serious for IOR with each other organization. Future research should also evaluate different types of conflict (i.e., structural and operating) with each other organization.

More information on the respondents and their organizations should also be collected. Relative years of education and curriculum could be important if they differ greatly. The sex of the respondent could also be easily noted. Although most respondents in this study were male, several CES and ASCS directors were female. Information about staff size and level of operating funds for each organization would also be useful.

An additional set of variables relates to the conditions in the natural environment. These could include: real and potential soil erosion problems; documented and publicized water quality problems; and
variability of natural conditions within a district. One could hypothesize that the more serious the ecological problems the greater the felt need for IOR. In this study, information was obtained about average county erosion potential. Relationships with IOR were insignificant. One reason could be that the erosion potential was uniformly high in this targeted area, compared to other parts of the state. Given greater variability between counties, more influence on IOR would be expected.

More research needs to compare the findings of this study with the same set of organizations in different locations. Comparative research should examine IOR in nontargeted counties within Iowa and other states. Telephone surveys could be an efficient means for gathering such information, but more in-depth information is needed which can only come through in-person interviews. The quality of IOR is another area that needs more valid, in-depth measurement. This study was only able to use frequency of interaction as an indicator of extent of IOR. Respondents should also be asked to evaluate how important and helpful their relationships are with other organizations.

Longitudinal research would be helpful to compare the same organizations at different times. Today's organizational environment may be more uncertain than during the 1960s and 1970s when most previous IOR research was conducted. This study could be replicated as environmental conditions change. This suggests the need for more objective measures of the organizational environment and levels of resource scarcity. Such information could be obtained from secondary data (e.g., media accounts, internal memos, budget appropriations).
Applied research is also needed to determine how overcoming barriers to IOR can be used to improve conservation education programs. General interventions are available for promoting coordination among organizations (Mulford and Klonglan, 1982; Rogers et al., 1982). These interventions should be tested and refined to be useful in the conservation arena.

As noted earlier, the actual relationship between extent of IOR and program effectiveness must be established. Most IOR authors postulate that increased IOR leads to increased program effectiveness, but this conclusion has not been sufficiently confirmed (Mulford, 1984). Any test of the relationship between effectiveness and IOR will require network-level analysis in more than one or two locations.

Conservation education programs have always been important in motivating farmers to practice soil and water conservation. After 50 years of modestly successful conservation efforts, the causes and effects of successful local conservation education programs are only now being examined. More research is needed to understand the workings of the local soil conservation network and this network's influence on local program effectiveness.
REFERENCES

Aiken, Michael and Jerald Hage

Aiken, M., R. Dewar, N. DiTomaso, J. Hage, and G. Zeitz

Aldrich, Howard

Aldrich, Howard and Sergio Mindlin

Aldrich, Howard and David A. Whetten

Allee, David J.

Argote, Linda

Arts, Jim
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</table>
Bultena, Gordon L., Eric O. Hoiberg, and Peter J. Nowak
1984 Source of Conservation Information and Participation in
Conservation Programs: An Interregional Analysis. Ames, IA:
Iowa State University, Department of Sociology Report 156.

Burt, Ronald S. and Michael J. Minor (eds.)

Childs, Michael K. and J.C. Headley
1982 "Soil conservation and Extension in Missouri: A study of
conflict." Journal of Soil and Water Conservation 37(4): 200-
203.

Cook, Karen S.
1977 "Exchange and power in networks of interorganizational

Dillman, Don A.
1978 Mail and Telephone Surveys: The Total Design Method. New York:
Wiley-Interscience.

Downs, George W. and Lawrence B. Mohr
1976 "Conceptual issues in the study of innovation." Administrative
Sciences Quarterly 21: 700-714.

Duncan, Robert B.
1972 "Characteristics of organizational environments and perceived
environmental uncertainty." Administrative Sciences Quarterly
17: 313-327.

Emery, Fred E. and Eric L. Trist
1965 "The causal texture of organizational environments." Human
Relations 18: 21-32.

Etzioni, Amitai
1975 A Comparative Analysis of Complex Organizations (Second

Evan, William M.
1966 "The interorganizational-set: toward a theory of
interorganizational relations." Pp. 173-191 in James D.
Thompson (ed.), Approaches to Organizational Design.
Pittsburgh, PA: University of Pittsburgh Press.

Galaskiewicz, Joseph
1979 Exchange Networks and Community Politics. Beverly Hills, CA:
Sage Publications.

1985 "Interorganizational relations." Pp. 281-304 in Annual Review
of Sociology Vol. 11. New York: Annual Reviews Inc.
Gans, S. P. and G. T. Horton

General Accounting Office

Guetzkow, H.

Hall, Richard H.

Hall, R.H., J.P. Clark, P. Giordano, P. Johnson, and M. Roekel

Halpert, Burton P.

Hannon, Michael T. and John Freeman

Hasenfeld, Yeheskel

Heft, Floyd E.

Hoban, Thomas J., Peter F.Korschning and Terry Huffman
Houghland, James G. and Willis A. Sutton  


Knoke, David and James H Kuklinski  

Korschning, Peter F.  

Korschning, Peter F. and Peter J. Nowak  

Korschning, Peter F., Thomas J. Hoban, and Jane Maestro-Scherer  

Laumann, E.O., J. Galaskiewicz, and P. Marsden  

Lawrence, Paul R. and Jay W. Lorsch  

Leiffer, Richard and George P. Huber  
Leman, Christopher

Levine, Charles H.

Levine, Sol and Paul E. White

Lincoln, James R.
1984 "Analyzing relations in dyads: problems, models and an application to interorganizational relationships." Sociological Methods and Research 13: 45-76.

Lincoln, James R. and Kerry McBride

Litwak, Eugene and Lydia F. Hylton

Lorenz, Frederick O., Charles L. Mulford and Betty L. Wells
1985 "Environmental uncertainty, changing agency structure and interagency relations." A paper presented at the Midwest Sociological Society Meetings, April 11, 1985, St. Louis MO.

Marrett, Cora B.

Miller, William L.

Molnar, Joseph J. and David L. Rogers
Morgan, Robert J.

Morrissey, Joseph P., Richard H. Hall, and Michael L. Lindsey

Muhm, Don

Mulford, Charles L.

Mulford, Charles L. and Gerald E. Klonglan

Mulford, Charles L. and Mary A. Mulford

Mulford, Charles L. and David L. Rogers

Nielson, James


1986b "Conservation targeting: Success or Failure." Journal of Soil and Water Conservation 41: 70-76.

Nowak, Peter J.
Office of Technology Assessment

Olsen, Marvin E.

Parks, W. Robert

Paulson, Stephen K.

Perrow, Charles

Pfeffer, Jeffrey and Gerald Salancik

Rasmussen, Wayne D.

Reve, T. and L. W. Stern
1979 "Interorganizational relations in marketing channels." Academy of Management Review 4: 405-416.

Rogers, David L.

Rogers, David L. and Meridean Maas
Rogers, David L. and Charles L. Mulford

Rogers, David L., David A. Whetten, and Associates

Rogers, Everett M.

Rogers, Everett M. and D. Lawrence Kincaid

Rosenberg, Morris

Rossi, Robert J., Kevin J. Gilmartin, and Charles W. Dayton

Sampson, R. Neil

Schermerhorn, John R.

Schmidt, Stuart M. and Thomas A. Kochan

Scott, W. Richard

Terreberry, Shirley

Thompson, James
Tichy, Noel W.

Tidd, Peter

Tosi, H., R. Aldag and R. Storey

Turk, Herman

United States Department of Agriculture

Van de Ven, Andrew H. and Diane L. Ferry

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Representatives from the various conservation organizations have supplied support and suggestions for this study. In particular, Eldon Weber and Judy Johnson, of the USDA Soil Conservation Service, helped throughout the design and implementation of this study. They deserve special commendation for recognizing the importance of social science. Other SCS staff at the state and national levels also contributed valuable suggestions. Representatives of other organizations (ASCS, CES, FmHA, DSC and IASCDC) at the state level provided useful suggestions. State leaders helped gain access to and the cooperation of their local staff. Of course, the study would not have been possible without the local organizational respondents from the 17 districts who willingly shared their valuable time and insights.

Lastly, I wish to recognize the support and love of my family. My wife, Cindy, has patiently listened to me and encouraged me throughout my extended graduate career. She has always provided a very pleasant and supportive environment for me and our children. My mother, Mary Ann Hoban, has been a continual source of many types of valuable support, encouragement, and advice. I also appreciate the encouragement of Frank and Liz Matoian. I dedicate this study and my future efforts to my wonderful children Thomas J. Hoban V and Elizabeth Ann Hoban, as well as to the memory of my father Dr. Thomas J. Hoban III.
APPENDIX A:
SURVEY INSTRUMENT
Hello, this is ____________ from Iowa State University. We are conducting a research project in southwestern Iowa sponsored by Iowa State University and the Soil Conservation Service. As part of this project we are interviewing local staff from several of the organizations involved with soil conservation. Did you receive a letter from Dr. John Johnson about this interview?

The purpose of this interview is to learn about the working relationship your agency has, at the local level, with the Agricultural Stabilization and Conservation Service, the Soil Conservation Service, the Farmers' Home Administration, and the Soil Conservation District. We are also interested in your opinions about local programs and related issues.

This interview should take between 20 minutes and a half hour. Is this a good time or would there be a better time to call you back? (IF REQUESTS A CALLBACK NOTE TIME ON RECORD BELOW)

I want to assure you that everything you say will be kept completely confidential. You will remain anonymous. The interview results will not be released for individual counties.

Your participation in this interview is voluntary and you are free to withdraw at any time. The success of our project depends on complete information from representatives of all the organizations involved with soil conservation at the local level. Do you have any questions before we begin?
First, I would like to ask you about your relationship, as a representative of
the Cooperative Extension Service, with each of the other organizations at
the local level. In particular, I will ask about your work with the
person in charge of each organization. This includes: the SCS district
conservationist, the ASCS county executive director, the FmHA supervisor,
and the chairman of the Soil Conservation District.

It is important that you consider the Soil Conservation Service and the Soil
Conservation District as separate organizations. By the Soil
Conservation Service we are referring to the USDA technical assistance
agency. The Soil Conservation District refers specifically to the five
locally elected district commissioners.

NOTE: THE FIRST SET OF QUESTIONS (1-8) WILL BE ASKED FOR EACH OF THE OTHER
ORGANIZATIONS. DO NOT ASK FOR THE ORGANIZATIONS WITH ___ IN THE BLANK.

1. Do you attend any formal meetings with the person in charge of _____?
(Formal meetings would include those that are planned with a specific
agenda.)
   0 = NO (GO TO QUESTION 2)
   1 = YES

   ***

   SCS     ASCS     EXTENSION     FmHA     DISTRICT

(IF YES TO QUESTION 1) (I am going to read five categories. Please
tell me) about how many times during the past 12 months did
you meet formally with the person in charge of _____? Would
you say:
   5 = At least once a week
   4 = Several times a month
   3 = Once a month
   2 = Several times a year, or
   1 = Once during the past year?

   ***

   SCS     ASCS     EXTENSION     FmHA     DISTRICT
2. (People also get together informally, to discuss problems or for coffee.)
   Do you meet or talk informally with the person in charge of _____?
   0 = NO  (GO TO QUESTION 3)
   1 = YES

   ***
   SCS       ASCS       EXTENSION       FmHA       DISTRICT

   (IF YES TO QUESTION 2) About how many times during the past 12 months did you meet informally with the person in charge of _____?
   Would you say:
   5 = At least once a week
   4 = Several times a month
   3 = Once a month
   2 = Several times a year, or
   1 = Once during the past year?

   ***
   SCS       ASCS       EXTENSION       FmHA       DISTRICT

3. Have you ever been involved in any formal long-range or annual planning activities of the _____?
   0 = NO
   1 = YES

   ***
   SCS       ASCS       EXTENSION       FmHA       DISTRICT
4. Has your agency worked with ___ in planning or conducting any joint programs during the past 12 months?
   0 = NO  (GO TO QUESTION 5)
   1 = YES

   SCS     ASCS    EXTENSION   FmHA    DISTRICT

   (IF YES TO QUESTION 4) What types of programs were these?

   SCS:

   ASCS:

   FmHA:

   DISTRICT

   (IF YES TO QUESTION 4) Do you feel these programs with ___ have been:
   4 = Very successful,
   3 = Somewhat successful,
   2 = Somewhat unsuccessful, or
   1 = Very unsuccessful?

   SCS     ASCS    EXTENSION   FmHA    DISTRICT
5. Has your agency provided any resources (such as meeting rooms, staff, publications, newsletters or equipment) to ___ at any time during the last 12 months?

0 = NO (GO TO QUESTION 6)
1 = YES

| SCS | ASCS | *** | FmHA | DISTRICT |

(IF YES TO QUESTION 5) What were these resources?

SCS:

ASCS:

FmHA:

DISTRICT
6. Have you referred farmers to _____ for soil conservation information or assistance during the past 12 months?
   0 = NO (GO TO QUESTION 7)
   1 = YES

   ***
   SCS    ASCS    EXTENSION    FmHA    DISTRICT

   (IF YES TO QUESTION 6) How often, during the last 12 months, have you referred farmers to _____? Would you say:
   5 = At least once a week
   4 = Several times a month
   3 = Once a month
   2 = Several times a year, or
   1 = Once during the past year?

   ***
   SCS    ASCS    EXTENSION    FmHA    DISTRICT

7. (On the local level) to what extent does your agency rely on _____ in order to carry out your soil conservation related activities? Would you say:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

   ***
   SCS    ASCS    EXTENSION    FmHA    DISTRICT
Next, I would like to ask about soil conservation information and education activities. These include conducting tours and meetings, as well as working with the mass media and other groups.

8. If soil conservation information and education activities were expanded in your county, to what extent do you feel that would become involved in any new activities? Would you say: (INCLUDE OWN AGENCY)
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

   SCS    ASCS    EXTENSION    FmHA    DISTRICT

9. Compared to all your other activities, how high a priority do you give to soil conservation education and information activities? In terms of your overall time and resource commitment would you say these activities receive:
   5 = Very high priority,
   4 = High priority,
   3 = Average priority,
   2 = Low priority, or
   1 = Very low priority?

Next, I will be interested in your opinions about the overall group of local organizations.

10. Which one organization do you think determines the priorities for soil conservation-related programs in your county? (MARK RESPONSE, DO NOT READ THESE)
    1 = THE SCS OR SOIL CONSERVATION SERVICE
    2 = THE SCD OR SOIL CONSERVATION DISTRICT
    3 = THE ASCS OR ASC
    4 = THE CES OR COOPERATIVE EXTENSION SERVICE
    5 = THE FmHA OR FARMERS' HOME ADMINISTRATION
    6 = OTHER (PLEASE SPECIFY)

11. Where do you think farmers in your county go to find out if they have a soil erosion problem on their farms? (MARK RESPONSE, DO NOT READ THESE)
    1 = THE SCS OR SOIL CONSERVATION SERVICE
    2 = THE SCD OR SOIL CONSERVATION DISTRICT
    3 = THE ASCS OR ASC
    4 = THE CES OR COOPERATIVE EXTENSION SERVICE
    5 = THE FmHA OR FARMERS' HOME ADMINISTRATION
    6 = OTHER (PLEASE SPECIFY)
12. Where do you think farmers go to find out what types of conservation practices might be needed on their farms? (MARK RESPONSE, DO NOT READ THESE)
   1 = THE SCS OR SOIL CONSERVATION SERVICE
   2 = THE SCD OR SOIL CONSERVATION DISTRICT
   3 = THE ASCS OR ASC
   4 = THE CES OR COOPERATIVE EXTENSION SERVICE
   5 = THE FmHA OR FARMERS' HOME ADMINISTRATION
   6 = OTHER (PLEASE SPECIFY)

13. Where do you think farmers go to find out how to use conservation practices? (MARK RESPONSE, DO NOT READ THESE)
   1 = THE SCS OR SOIL CONSERVATION SERVICE
   2 = THE SCD OR SOIL CONSERVATION DISTRICT
   3 = THE ASCS OR ASC
   4 = THE CES OR COOPERATIVE EXTENSION SERVICE
   5 = THE FmHA OR FARMERS' HOME ADMINISTRATION
   6 = OTHER (PLEASE SPECIFY)

14. Next, I would like to ask you about some possible influences on the planning and programming of your local Extension Service office. I want to know to what extent each one makes it more difficult for you to plan or implement your programs.

   a) Do conditions in the overall farm economy make it more difficult to plan or implement your programs:
      3 = To a large extent,
      2 = To some extent, or
      1 = Not at all?

   b) Do programs or policies of other local organizations make it more difficult to plan or implement your programs:
      3 = To a large extent,
      2 = To some extent, or
      1 = Not at all?

   c) Does lack of public awareness about your agency or its programs make it more difficult to plan or implement your programs:
      3 = To a large extent,
      2 = To some extent, or
      1 = Not at all?
d) Do changing guidelines from any state or federal agencies make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

e) Does uncertainty over future funding for your organization make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

f) Do limitations in the size of your agency's local staff make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

g) Do inadequate administrative or operating funds, not including cost-sharing make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

h) Does the lack of technical information about soil conservation make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

i) Does your present legal authority or program responsibility make it more difficult to plan or implement your programs:
   3 = To a large extent,
   2 = To some extent, or
   1 = Not at all?

15. On a scale of 1 to 5 where 1 equals "no difficulty" and 5 equals "a great amount of difficulty", how would you rate the overall amount of difficulty you face in planning and implementing your agency's programs?
Next, I would like your assessment of the effectiveness of your own agency and of the whole group of organizations.

16. At the local level, how effective do you feel your agency has been in meeting your goals during the past 12 months? Would you say you have been:
   4 = Very effective,
   3 = Quite effective,
   2 = Slightly effective, or
   1 = Not effective?

17. At the local level, how effective do you feel all of the organizations, working as a group, have been in serving the soil conservation needs of farmers during the past year? Would you say they have been:
   4 = Very effective,
   3 = Quite effective,
   2 = Slightly effective, or
   1 = Not effective?

18. Could you give me any specific suggestions for improving the soil conservation education and information programs in your county?
19. Certain factors may prevent organizations from working together effectively. I am going to ask you about some barriers that may limit how well local organizations work together in soil conservation matters.

a) Is lack of your own agency's time a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?

b) Is potential loss of independence in your own decision making a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?

c) Organizations have different decision-making structures, such as a line organization as compared to a local committee system. Are these differences a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?

d) Is the unwillingness of others to cooperate a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?

e) Are past problems with other organizations a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?

f) Are differences in personality a:
   2 = Serious barrier,
   1 = Somewhat of a barrier, or
   0 = No barrier to your work with any of the other organizations?
g) Is lost visibility or credit for your own programs a:  
2 = Serious barrier,  
1 =Somewhat of a barrier, or  
0 = No barrier to your work with any of the other organizations?  

h) Are the relative locations of the organizations' offices a:  
2 = Serious barrier,  
1 = Somewhat of a barrier, or  
0 = No barrier to your work with any of the other organizations?  

20. Of all these barriers, which one do you think is the most serious barrier to local organizations working well together?  

21. How do you think the relationships among the local organizations involved with soil conservation could be improved?  

22. Overall, in considering the benefits and problems of working with these other organizations, do you think that the:  
5 = Benefits definitely outweigh the problems,  
4 = Benefits somewhat outweigh the problems,  
3 = Benefits and problems balance out,  
2 = Problems somewhat outweigh the benefits, or  
1 = Problems definitely outweigh the benefits?
Finally, I would like to know a few things about you personally.

23. How many years have you lived in this county? _________

24. How many years have you been working for the Extension Service? _________

25. How many years have you been an extension director? _________

26. Are you presently involved with farming? _________

27. How old were you on your last birthday? _________

That completes the interview. Do you have any other comments you would like to make.

Would you like to receive a summary of the results of this survey?

0 = NO
1 = YES

I want to thank you very much for your time and cooperation. We will also be interviewing the people in charge of the other organizations. It will be very important that you do not discuss this interview with anyone from ASCS, SCS, FmHA, or the Soil Conservation District in your county until we interview them. Also, please don't talk with extension directors from other southwestern Iowa counties about this survey for a month or so. Thank you very much.
APPENDIX B:
SAMPLE LETTER FROM STATE AGENCY DIRECTOR
March 4, 1985

TO: Selected County Extension Directors

Adams County          Harrison County          East Pottawattamie County
Audubon County        Ida County             West Pottawattamie County
Carroll County        Mills County            Shelby County
Cass County           Monona County          Taylor County
Crawford County       Montgomery County       Woodbury County
Fremont County        Page County

FROM: O. John Johnson  
Assistant Dean and Director

Within the next few weeks someone from Iowa State University will be calling you as part of a project jointly sponsored by Iowa State University and the Soil Conservation Service. Some of you may already be familiar with this project which included several educational activities in some of the 16 counties in southwestern Iowa. Dr. Peter Korsching and his staff plan to conduct a telephone survey with you, as County Extension Director, about your involvement with other organizations in soil conservation work. They will also be talking with people in charge of SCS, ASCS, and FMRA in your county, as well as with the chair of the Soil Conservation District.

The survey should take about 30 minutes and can be scheduled at a convenient time for you. You will remain totally anonymous in this survey. Only summary results for all 16 counties will be available. Results for individual counties will not be released. The results of this survey will be meaningful and helpful to Iowa State and to the other organizations in conducting soil conservation work.

Iowa State Extension, state SCS office, and the Iowa Department of Soil Conservation assisted with the development of the survey. If you have any questions, please contact Tom Hoban of Iowa State University at (515) 294-8032 or Pete Korsching at (515) 294-8320.

cc: Bill Bogue  
Tom Hoban  
Roger Iverson  
Dr. Vivan Jennings  
Dr. Wayne Kobberdahl  
Dr. Peter Korsching  
Henrietta Van Maanen