RESIDENT ATTITUDES TOWARD RURAL INDUSTRIALIZATION:
A SOUTHEASTERN OHIO REGIONAL STUDY

DISSERTATION

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* * * * *

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INTRODUCTION

The major objective of this dissertation is the assessment of attitudes toward rural industrialization among residents of a lesser developed region of Ohio. Rural industrial development has become a very important research topic since many rural areas have recently attempted to enhance their socioeconomic situations through industrial development. It is often assumed that industrial expansion in rural areas will reverse the trends of population and economic decline which have plagued many rural communities for long periods of time. While industrial development has helped to change conditions of decline in some cases, in other areas industrialization has been associated with many problems which were not expected.

Industrial development has often been advocated as the solution to many rural problems related to socioeconomic decline. Proponents of rural industrialization have claimed that industry will generate new income sources within the local economy, create new jobs for local people, and provide opportunities for young adults to remain in their home communities rather than migrate to other areas for work. With such claims attached to rural industrial development, it is not surprising that many local groups perceive industrial development as a major solution to a multitude of their problems. Community groups which hold a strongly positive perspective toward industrialization
often mount all-out efforts to attract industry.

Often overlooked with regard to rural industrial development, however, are the potential negative consequences of rapid industrialization upon a region and local communities. Industrial growth in rural regions has at times contributed to such problems as pollution of the environment, increases in the cost of living, increased costs of public and private services, higher educational costs, and even increased unemployment rates. Efforts to attract an industry at all costs can contribute to the emergence of more problems than the increased economic activity can resolve. For example, a local government which offers large tax exemptions to an industry in essence forfeits a major source of revenue needed to pay for any expanded public services necessary to operate the new plant.

Despite this diverse range of possible impacts from industry, the literature indicates that rural residents generally remain quite favorable toward industrialization in their regions. Such favorability has been found both in areas which are anticipating industrial development and in areas in which a plant is already operating. However, explanatory factors of attitudes toward rural industrialization have seldom been explored. Questions still exist concerning what characteristics and factors relating to rural residents are associated with particular attitudes toward industrialization. One objective of this research is to examine possible reasons for the existence of certain attitudes toward industrial development which are held by rural residents.

Information relative to industrial attitudes held by rural residents can add much to the overall picture of rural industrialization.
The trend of increasing industrial development in rural areas has often been documented. Some studies have shown how rural residents perceive industry in their region, which is for the most part very favorably. The reasons for residents' perceptions have been much less often examined. It is unclear whether favorable attitudes are related to individual benefits, benefits to the region, indirect effects upon the residents, or other factors. On the other hand, unfavorable attitudes could exist as a result of negative impacts to individuals, to the region, or to the environment, or because industry is perceived as a threat to the existing social and economic structures. The point is that explanatory factors of residents' attitudes could add important information concerning rural industry, its impacts upon the residents of a rural region, and how the residents perceive these impacts.

The theoretical perspective developed for this study is based upon social exchange theory. The basic thesis of social exchange is that persons are willing to assume certain costs in order to gain rewards, and persons will seek to participate in activities which yield higher profits or demand fewer costs. With regard to industrialization, it may be hypothesized that persons will engage in industrialization-related activities if desirable rewards result from their involvement. It was assumed that industrial development could produce rewards for local people, and that both economic and social costs would be associated with industrial development. Therefore, social exchange theory was selected as appropriate for the analysis. A theoretical explanation of industrial development attitudes was developed from the basic tenets of the exchange perspective and subjected to analysis.
The underlying objective of the research is to provide information which could be utilized in industrial development planning efforts. From the perspective that development should be responsive to the desires and needs of the client population, one of the first stages in a development planning effort is to accurately assess the desires and needs of the affected community and regional population. One method of obtaining such information is to interview a sample of the population relative to their perceptions, attitudes, and desires concerning industrial development. Among the relevant data is an evaluation of the desires and perceived needs of the population concerning the economic situation of the region and possible industry in the region. This type of information could then be included as a part of the local situational assessment. Within a developmental framework, attitudes of local people toward new industry are an important part of the input needed in the initial steps of the industrial development planning process. The aim of these initial steps is to gain the most comprehensive picture of the local situation possible in order to best serve the desires and needs of the client population.

The study, therefore, was designed to evaluate attitudes toward industrialization of residents of a rural region and examine some possible explanatory factors of these attitudes. To accomplish this objective, a sample was chosen from a multi-county region in which industrial development may be accomplished but has not occurred to date. Attitude scales were developed to measure perceptions of various aspects of rural industrial development. The utility of the research findings lies in the possible implications for industrial development research.
and planning within the study region. An identification of variables which affect the attitudes toward industrialization would give evidence of how different segments of the population view various aspects of industrial development. As discussed above, such information can indicate the extent to which rewards from industry are anticipated by the local population, and can be included in the assessment of the existing social situation of the region.
CHAPTER I

LITERATURE REVIEW

The Trend of Increasing Rural Industrialization

The trend of increasing industrialization of rural areas has had great impacts upon the structure of rural communities, community planning, and rural residents, as well as upon industry itself. Summers, et al., (1976:xv) feel that nonmetropolitan industrial development is important for research because it is closely related to social change at the local community or regional level, as opposed to the national or international level. Summers, et al., note that the three major industrial location trends in the United States are: 1) a shift from the northeastern U.S. to the South and West; 2) the suburbanization of industries within metropolitan areas; and 3) the industrial development of nonmetropolitan communities and rural areas. The explanations of the first two shifts have been well researched; however, there has been much less research which attempts to isolate explanatory variables of nonmetropolitan industrialization. This lack of research is partly due to the fact that rural industrialization has been a relatively recent phenomenon (Summers, et al., 1976:7-11).

Rural industrialization has serious consequences, both nationally and locally, for employment and economic structures. Employment statistics are evidence of the increasing importance of industry in
nonmetropolitan areas. From 1960 to 1970, manufacturing employment has been estimated to have increased by 4 to 12 percent in metropolitan areas, and by 22 to 31 percent in nonmetropolitan areas (Summers, et al., 1976:1; Tweeten 1974:92). While manufacturing employment has increased in nonmetropolitan areas, other more traditionally rural-oriented occupations, such as farming and mining, have decreased (Haren 1974).

More than one-third of the new manufacturing jobs in the United States from 1962 to 1969 were outside of metropolitan areas (Haren 1970:432). While the southeastern section of the United States accounted for a great deal of this increase, it is also quite important in all other parts of the country. Much of the nonmetropolitan increase throughout the country, however, has occurred in the larger, less isolated communities, rather than in smaller, more economically depressed communities (Haren 1974; Haren and Cheplo 1973:15,22).

The dynamics of the rural economic system are becoming increasingly complex. Doeksen, et al., (1974:32) have delineated five factors involved in the increasing complexity of the rural economic system: 1) changes in agricultural technology have reduced the number of people of farms and increased the per capita income of those remaining in agriculture; 2) highway improvements have reduced transportation costs and permitted spatial growth of market areas; 3) urban shopping centers are drawing much of the market away from local establishments; 4) business establishments must realize increasing revenues from larger market areas in order to survive; and 5) there is an emerging preference for living in or near small metropolitan areas. As a result of these factors, rural areas are losing population, and remaining rural residents
frequently travel to urban areas to shop, both of which decrease economic activity in the rural area. Industrialization is one of the possibilities for rural areas to step up local economic activity by increasing the population and the local cash flow of the rural community.

It is becoming quite common, therefore, for local community groups and development agencies, both public and private, to advocate rural industrial development as the panacea of the economic problems of the area. Rural industrialization has been proclaimed as a solution not only to rural problems of population and economic decline, but also to urban problems such as overcrowding. Rural industrialization would supposedly prevent much of the migration of rural residents to already overcrowded urban areas.

The President's National Advisory Commission on Rural Poverty, in its 1967 report, provides one of the most authoritative and publicized studies which advocates rural industrialization. The Commission proposed the use of many measures by both local and federal governments to encourage industrial location in rural areas. Some of the proposed measures are tax incentives, land securement and construction grants to the firm, low interest loans, and the construction of industrial sites (Hansen 1970:222-228).

Many possible reasons have been offered to explain the existing trend of industrial decentralization. Among the reasons offered are: 1) federal dispersion policies which aid the flow of capital into lagging economic regions, such as the Appalachian Regional Development Act and the Public Works and Economic Development Act; 2) the desire
of nonmetropolitan communities to obtain industry; 3) willingness of industry to locate in nonmetropolitan areas due to lower land and water costs, tax exemptions, inability to attract skilled personnel to the central city, and the belief of industrial leaders that there is more of a work ethic in small towns and rural communities; 4) the surplus labor pool in nonmetropolitan areas; and 5) transportation advances, such as the interstate highway system (Summers, et al., 1976:12-13). Federal influence is a large factor in industry's selection of rural areas for location; federal legislation such as the two acts mentioned above have had a sizable impact on industrial location. These acts provide financial assistance both to industries which locate in rural areas, and to rural areas preparing to attract an industry. Federal legislation will discussed in greater detail below with regard to planning for industrial location and decentralization.

Industrial location theory provides some insight into the location of industry in rural areas. Tweeten (1974:92-94) has stated that the location of new industry and the expansion of existing firms are influenced by the principal factors of availability of inputs (materials, labor, etc.), markets, and transportation. Secondary factors such as community characteristics, availability of building and development sites, as well as state and local tax rates also become important considerations. Rural communities have historically been at a disadvantage in terms of both primary and secondary factors when competing for industry with larger cities. Urban areas have been able to supply more highly trained labor, more services, and easier access to a larger
market, because of the larger population, government (service), and economic bases.

Smith (1971:32-94) gives a similar listing of the variables of industrial location, which include: major industrial inputs, such as land, capital, materials and power, labor, state and local taxes, and management and policy-making; the marketing factor; transportation; agglomeration and external economies; public policy and planning; and personal preference or historical factors. As mentioned above, rural areas have often been unable to compete with metropolitan areas with respect to these variables. Smith points out, however, that the relative importance of these variables has shifted. For example, the improved interstate highway systems have led to a decrease in the importance of transportation considerations, such as the shipping of materials. Increasing technology has increased the importance of the available labor supply and labor skills, and the emphasis upon consumer goods has increased the importance of the market. In some cases, considering the decrease in importance of transportation or industries with low-skill labor requirements, these factors have contributed to the decentralization of industry. While the advantages of larger size and services of urban areas to industry have generally explained the concentration of industry in metropolitan areas, some of these factors are being provided in rural areas. Advances in communications and computer technology, for example, can allow rural areas access to information which is equal to that of urban areas. Rural industrial parks can often offer services to industry which are comparable to services in urban
areas. Smith states that "the increasing spatial mobility of some of the critical inputs appear to be widening the choice of location in many industries, and hence expanding the possibility of location decisions being made on grounds other than those of economics" (Smith 1971:94).

**Advantages and Disadvantages of Rural Areas For Industry**

There are several advantages offered to industry by rural areas as compared to urban areas. There is a large available labor force (Hansen 1970:232; Smith 1971:444; Cavender and Schmitt 1971:62; Summers, et al., 1976:124-125), including unemployed female labor and underemployed male labor, which has the ability to learn new skills and possesses the traditional puritan work ethic (Scott 1973:3). In addition to this stable, cheap, and plentiful labor source, rural areas have relatively cheap land, easy access to work and recreation areas, and low tax rates (Hansen 1970:232). There is also the noneconomic advantage that people often prefer to live in rural areas or smaller towns and cities (Hansen 1973:11).

Rural areas are not without disadvantages for industry. These generally are associated with labor skills, the available services, and the isolation of rural areas from many urban advantages. Available labor is for the most part less trained and less skilled than urban labor, having lower than average education and less experience in both assembly line and management skills (Scott 1973:3; Hansen 1970:232; Tweeten 1974:94). This is partly a result of considerable out-migration from rural areas of higher skilled workers (Wadsworth 1974). Services and facilities in rural areas, such as utilities, educational and
cultural, housing, and other public services, are less available, less adequate, and more difficult to obtain (Scott 1973:4; Wadsworth 1974; Haren and Cheplo 1973:26). Location in a rural area also leads to higher transportation costs and more time in transit, relatively few business contacts, a less favorable local market, and fewer agglomeration economies (Hansen 1970:232; Tweeten 1974:94).

It is evident that nonmetropolitan areas with more of the advantages and fewer of the disadvantages discussed above will be more suitable to industry as a plant location. Industries which might be less affected by rural disadvantages are also more likely to locate in rural areas. Rural areas which are most likely to attract industry are those which include a larger town, have better services, adequate labor and leadership, and are within 50 miles of a metropolitan area (Roepke 1973:48-50). A more complete list of characteristics considered desirable by industrial leaders is: 1) good highway transportation systems, preferably interstate; 2) strong community leadership which is well informed on available industrial development programs from different levels of government; 3) a community which is not dominated by a single large industry; 4) evidence of labor availability in quantities necessary to staff new facilities; 5) a community close enough to a large city to permit easy access to facilities and services (usually within 50 miles); and 6) terrain which permits easy development of suitable industrial sites at moderate costs (Fulton 1974). An area with these characteristics can offer the advantages of rural location, and yet be close enough to the city for industry to benefit from many urban advantages. A strong argument
could be made that areas possessing characteristics conducive to industrial location are the communities which have less need for economic development. If rural industrialization is to become an effective development mechanism, then communities which have been suffering from long term economic and population decline must be made more attractive to industry.

Some industries are more suitable than others for rural location. Industries which can best take advantage of rural location: 1) require less skilled labor at the outset of operation; 2) are willing to train a large portion of the work force; 3) are more oriented to assembly than fabrication of parts; 4) desire to keep labor costs down because of low profit margins; 5) utilize easily accessible raw materials; 6) can take advantage of existing highway transportation systems of the area; 7) do not have unusual energy requirements; and 8) need fewer professional workers at manufacturing facilities (Fulton 1974). Such firms are geared toward hiring low skilled labor, and pay relatively low wages (Roepke 1973:46). A more blunt interpretation is that industries which leave metropolitan areas for nonmetropolitan communities tend to be in stagnation or decline, often seeking cheap, nonunion labor in areas with surplus agricultural populations. Expanding industries tend to locate in metropolitan areas because of the external economies of agglomeration (Hansen 1973:16). In other words, the industry which is best suited for rural location may not be the expanding, healthy industry that is desired by the rural community.
Impacts of Industry on the Community

The existing rural industrialization research literature demonstrates that industry has at least four major types of impacts upon rural areas: 1) the impact upon the population of the region and the community, including commuting patterns; 2) impact upon the occupational and wage structure of the area; 3) impact upon local services and facilities; and 4) indirect impacts, such as the effects upon other local businesses, the environment, and the social structure.

Population

The resident population of rural areas which have experienced recent industrialization quite often increases, even in areas which have been characterized by population decline for decades. Studies conducted in Illinois (Summers 1973:6-8) and Ohio (Andrews and Bauder 1967:7-11) show a turnaround in the population trends after many years of decline as a direct result of rural industrial expansion. Summers, et al., (1976:21-24) have summarized industrial impact studies in many different areas, and have noted many changes resulting from industrial growth. Of 58 studies which documented population change after industrialization, 86 percent of the towns and 52 percent of the counties experienced population increases after the industries arrived. Summers, et al., note that eighteen of the studies were conducted in areas which were experiencing population decline prior to plant location. Of these eighteen areas, the rate of decline was slowed in one-sixth, stopped in one-sixth, and reversed in two-thirds of the areas. The major factor associated with population increases was immigration. Out-migration is sometimes slowed when industry arrives, but often
maintains previous levels. Younger adults often continue to leave the county even after the arrival of industry (Summers, et al., 1976:2; Summers 1973:8; Andrews and Bauder 1967:18-19).

The degree of urbanization and residents' level of education have been studied with relation to industrialization, but weak or insignificant relationships have been observed (Summers, et al., 1976:30; Summers 1973:8; Andrews and Bauder 1967:15-16). Weak correlations have also been observed between type of industry and population growth, and between the work force size of the new industry and population growth (Summers, et al., 1976:23-24).

Commuting Patterns

Commuting to a rural plant is an important phenomenon among the population of an industrialized rural area. Workers often commute relatively long distances to a rural plant. Lonsdale (1966) conducted an extensive study of commuting patterns to two nonmetropolitan plants in North Carolina. Wage rate was the major factor determining the "labor-shed" of the industries. The research suggests that an industry with higher wages than other prevailing rates in an area can expect a relatively large labor-shed. It is not unusual for workers of a plant paying higher than regional average wages to commute up to 45 miles or 60 minutes one way.

Other factors, beside wage rates, which may influence commuting are population growth, urbanization, intensity of agricultural and manufacturing employment, per capita income, levels of unemployment, availability of paved roads, levels of education, land tenure, and farm abandonment, while sex is not an explanatory factor (Lonsdale 1966:126-138).
Areas which are experiencing population growth, have a higher degree of urbanization, or are experiencing abandonment of farms have more workers available, and therefore have more workers who might commute to obtain work. Areas of lower intensity agricultural or manufacturing employment, or higher levels of unemployment also have more workers who are willing to commute for employment. Per capita income and education levels of an area are important, when compared to plant labor requirements, in determining the industry's labor-shed. Areas with more available roads provide easier access for longer distance commuting. People who have lived at one place for longer periods of time are less likely to move, and are therefore more willing to commute longer distances.

It has been discovered that longer distance commuters often eventually move closer to the plant, perhaps after becoming more secure in their jobs (Summers, et al., 1976:2,34; Lonsdale 1966:130). Commuting remains a common occurrence among nearly all social groups in rural areas. Variables which have been found predictive of metropolitan commuting patterns, such as socioeconomic status, length of residence, and age, explain virtually none of the variance in nonmetropolitan commuting patterns (Clemente and Summers 1975).

Occupation and Wage Structures

Among the most direct impacts of industry upon a rural area are impacts upon the occupational structure and income level. In Monroe County, Ohio, industrialization had no effect upon labor force participation rates, but a significant shift in occupational activity was observed (Andrews and Bauder 1967:23-33). The shift basically consisted of a decrease in the proportion of farm occupations and an increase in
nonfarm occupations. Most of the county gains were in blue-collar occupa-
pations. The impact of the plant was not as great as was perhaps
expected because over half of the new jobs were held by people living
outside the county. Even though not all of the plant payroll went to
county residents, Monroe County residents still had a substantial
increase in aggregate income (Andrews and Bauder 1967:23-41).

A study of a new factory in rural Louisiana yielded several
results relative to employment and wages. Industrial employers in rural
areas are more likely to give preference to persons with nonfarm work
experience because they require less training and adjustment to a manu-
facturing setting. The plant hired relatively low skilled workers. As
a result, younger age groups, women as well as men, and blacks as well
as whites were likely to be employed, since these generally had lower
occupational skill. Incomes and levels of living rose for workers,
particularly black workers, while little change resulted in farming
activities (Bertrand and Osborne 1959, 1960).

In Putnam County, Illinois, the location of a new plant resulted
in only a small increase in the number of jobs in the county since the
majority of new jobs were filled by persons living outside Putnam
County. Manufacturing employment, however, became the dominant occu-
pation in the area. The trend of the declining number of farms con-
 tinued, but the proportion of part-time farmers increased as small
farmers took other jobs while continuing to farm. The overall income
level increased faster in the industrialized area than in the selected
control area. Small, family farmers who had, previous to the plant
arrival, been underemployed experienced a significant increase in
income levels. Although some immigration did occur, total employment did not increase as much as expected in the area as a result of commuting and previous unemployment (Summers 1973:10-26; Scott 1973:7-10).

In general, the overall impact of rural industry upon local employment is not as great as is anticipated. The reasons include commuting nonresidents, underemployment, and the reluctance to hire the unemployed or disadvantaged individuals who might not have necessary job skills (Scott and Summers 1972:17; Summers, et al., 1976:48). It is not unusual for industrialization to increase unemployment rates. Research suggests that unemployment sometimes increases where a plant primarily hires women. A family with an employed female often prefers to maintain the certainty of the woman's job while the male remains unemployed (Scott and Summers 1972:14; Summers, et al., 1976:60).

Local income levels nearly always increase with industrialization, but often the increase is less than was expected. Brinkman (1973:72) notes several causes of how additional community income generated by new industry is reduced: 1) commuters, who spend their salaries in their home communities; 2) local residents who quit outside jobs for local industry jobs, thus ceasing to bring in money from outside the area; 3) local job holders who take new industry jobs and their vacated positions are not filled; 4) purchases by residents made outside the community; 5) savings accounts, which forego other purchases; 6) restricted local circulation of money by financial institutions; and 7) the retirement of old debts faster than new debts are assumed.

Newly industrialized rural areas experience increases in jobs and personal and community incomes, but the increases are usually less than
anticipated. This in itself is not sufficient reason for rural areas to stop seeking to industrialize, but is perhaps indicative of the need for more extensive and more careful planning to minimize negative impacts. The planning of rural industrialization will be discussed further in a following section.

Services

New industry has a definite impact upon rural community services, such as utilities, government services, and education. The greatest effect of industry upon these services comes from any population increases which might accompany industrialization. An increase in population can cause an increase in demand for services, and may require expansion of community services. The effect upon services can begin during the construction phase. A classic example is that of Sweet Home, Oregon (population 4000) which experienced a population growth of around 1300 construction workers and their families. These workers were employed in a dam construction project which town residents felt would lead to industrialization and other types of development. The hopeful citizens expanded educational facilities and other public services such as water, sanitation, fire protection, and street maintenance. When the construction was completed, however, the workers left the community, and the expected expansion did not occur. The residents were left with greatly expanded services, and increased tax burdens which were necessary to pay for the new facilities and services. While this may be an extreme case, it is an example of what can happen to a community which does not anticipate any negative consequences of economic development.
(Smith, et al., 1971).

New industry and any population additions make certain demands upon the community's service structure. The plant itself, for example, often requires additional storm sewers and drainage systems because the area under roof or parking lot increases water runoff, and waste disposal systems to handle increased industrial and human wastes generated at the plant (Scott 1973:6). An increase in population can increase both the demand and costs of housing and services, which in turn can raise the community's cost of living (Scott and Summers 1974). Among the services affected by increased demand and costs are police and fire protection, water and sewage, street and road maintenance, other utilities, and educational facilities (Summers, et al., 1976:97-101; Brinkman 1973:75). The financial burden of expanded services results in problems for local government when tax exemptions are used as location incentives for industry. Giving tax exemptions to industry takes away the additional source of government revenue which could be used to pay for the expanded service (Brinkman 1973:75-76). Thus, new industry often results in financial losses for the public sector of the community.

Research conducted in five rural Kentucky towns which have experienced industrialization corroborates this possibility of financial loss to government. There was often a negative impact from industry upon schools and other government services. The major conclusions drawn from this study were: 1) new manufacturing plants frequently cost rural communities more than they return in tax revenues; and 2) the fiscal impact of a new plant is not necessarily uniform among the various units
of government affected (Garrison 1970). On the other hand, net fiscal gains to local government can take place when local subsidy is not offered to industry, or the plant work force is hired locally. While commuters may take plant incomes out of the local community, commuting can also save the local government much of the costs of increased services by reducing local population growth (Summers, et al., 1976:4).

Other Indirect Impacts

Numerous other indirect impacts of new industry can be identified within directly affected communities. Perhaps the most noticeable indirect impact is increased economic activity among the other businesses in the area. This activity is often discussed in economic literature as the "multiplier effect." * Theoretically, it has been estimated in one study that each permanent job brought in by a new industry is worth $38,000 to the community over time (Scott and Summers 1972:3); another estimate is over $15,000 if the plant operates for five years and over $27,000 if the plant operates for ten years (Tweeten 1974:95). It is hypothesized that a community can afford to invest this amount, per job, in a new industry. All of these benefits, however, are not likely to accrue to the industry's actual area of location (Appalachian Regional Commission 1969:11) since there are many sources of leakage of community benefit. All of the sources of income leakage (cited on page 18) also contribute to the lowering of the multiplier effect. Other factors relating to the multiplier effects within local

* A multiplier of 1.0 is defined as no net effect; above 1.0 is a positive net effect; below 1.0 is a negative net effect (Summers, et al., 1976:55).
communities include; the amount of interdependence with other local businesses (higher interdependence produces higher multipliers) (Brinkman 1973:72); and the "export base," which is the extent to which the industry sells its products outside the area, thereby generating a net flow of money into the area (Summers, et al., 1976:73-74). The literature shows, however, a history of relatively low multipliers, often below 1.2 (Summers, et al., 1976:55). Most of the multiplier benefits are received by the private sector, while the municipal sector and schools often experience negative effects (Tweeten 1974:96; Brinkman 1973:76).

Nash (1973:67-68) suggests that greater positive impacts on the community from industry result when: 1) construction is by local contractors, employing local labor and equipment; 2) the plant uses local repair, maintenance, and insurance services; 3) local raw materials are utilized; 4) the firm hires local labor; and 5) local transportation service is used.

One of the research areas which is very important but does not receive much research attention is the environmental effects of industry. Rural areas which are selected as industrial sites may face problems of air, water, and noise pollution (Summers, et al., 1976:102). In Putnam County, Illinois, new industry was related to the reduction of open space, increased demand on water, energy, and means for waste disposal (pollution), and the increase in natural water runoff (Scott 1973:11).

Many other indirect impacts have been demonstrated in research. In Monroe County, Ohio, new industry led to increases in retail sales, the appraised value of taxable properties, and tax collections on tangible
personal property (Andrews and Bauder 1967:44-53). In Putnam County, Illinois, it was found that the plant did not reverse the trend of economic decline in the smaller towns of the area, but rather increased the dominance of larger communities. The tax support base was evidently strengthened with the arrival of industry. There was not much evidence that manufacturing growth stimulated comparable growth in other sectors of the economy, and the impact of the plant upon retail trade was localized to towns within ten miles of the plant site (Summers 1973: 23-29). In view of local costs and possible leakages of benefits from the Illinois plant, one study concluded that local communities which finance industrial development on their own are likely to become benefactors to surrounding regions. It was suggested that negative impacts of a new plant can be minimized by multi-county or regional planning (Scott and Summers 1973:19-20).

Several studies have been conducted which examined the changes in the community status and power hierarchy resulting from the establishment of new industry. The general finding of the research is that with the arrival of industry, the prestige and power structure of the community becomes more closely related to the occupational structure of the new industry (Faunce and Smucker 1966; Bonjean 1966; Faunce and Clelland 1967).

When the effect of rural industry upon social participation has been examined, little difference has been found in participation patterns between plant workers and other country residents (Summers, et al., 1976:109). In Louisiana, little change occurred in social participation patterns after industrialization (Bertrand and Osborne 1960:391).
In Ohio, organizational activities decreased, but participation rates, both formal and informal, increased after the industry arrived (Andrews and Bauder 1967:102-116).

Industrialization produces definite effects upon the rural area. Communities frequently experience population growth following the plant establishment. The local economic impact of the plant is quickly felt, but is often not as great as anticipated. Physical and social changes in the community usually follow rather than precede the establishment of the plant. Among the problems caused by industry are pollution, added public utilities, and a shortage of adequate housing (Pratt 1973:114).

Effects Upon Individual Residents

It has been found in several rural industrialized areas that all residents do not benefit equally from the arrival and operation of a new industry. In Illinois, weak labor competitors (persons over 65, persons with less than high school education, women, and persons not active in the labor force) did not benefit as much as the community as a whole. In fact, the income gap between strong competitors and weak competitors increased, which suggests that industrialization did not stop or lessen the income disparity between strong and weak competitors. The two major explanatory factors of income inequality were sex and status as a labor force competitor (Summers 1973:21-22). In Louisiana, it was also noted that older persons did not benefit from rural industry, since rural employers recruited the younger workers (Bertrand and Osborne 1959:1129-1130). The greater demand upon housing and services accompanying industrialization frequently causes an increase in the cost
of living, which adversely affects older persons and persons on fixed incomes (Scott and Summers 1974).

In an overview of rural industrialization research, Summers, et al., (1976:3, 60), found several generalizations concerning the effects upon various groups in the industrialized communities: 1) nonwhites are underrepresented in rural industrial labor, and where they are hired, it is in unskilled and semi-skilled jobs; 2) new jobs often do not go to local unemployed, underemployed, minorities, and marginally employable persons near or below the poverty level; 3) high-skill, high-wage industries are the least likely to hire local disadvantaged; 4) low-skill, low-wage industries are more likely to employ the disadvantaged; 5) most areas experienced declines in unemployment rates, but the declines were small. (8.8 percent was the largest decline.) The reasons the disadvantaged are not hired include: 1) new employment is often taken by workers from outside the area, commuters, and immigrants, with more education, better skills, or the "right" race; 2) jobs are often taken by new entrants into the labor force from within the community, primarily women (Summers, et al., 1976:53-54).

Attitudes Toward Rural Industrialization

The overall attitudes of rural residents toward the industrialization of their areas have been shown to be quite favorable. Positive attitudes toward industry exist before plant operations begin. However, attitudes are somewhat less favorable after the plant has been established. In the Ohio study, most respondents felt the plant was beneficial to the community, both before and after operations began. A much
lower percentage felt that they had personally benefitted from the plant operations than had anticipated benefits during plant construction. In general, however, residents remained quite favorable to industry (Andrews, et al., 1960:29; Andrews and Bauder 1967:85-95).

Many other studies have noted favorable attitudes toward industry in rural areas. Most rural residents perceive fewer benefits to themselves and to the community after the industry is established than they had anticipated before the industry arrived. Hough and Clark (1969:1, 15-17) found that perceived personal benefit is an important intervening variable explaining the relationship between basic status and demographic variables and the evaluation of industry. Those who perceived themselves to have personally benefitted from the industry had more favorable attitudes toward the industry.

Industry appears to have little effect upon attitudes toward other aspects of the community. In Ohio, residents felt that schools, churches, neighborliness, friendliness between town and country residents, and chances of getting ahead for the individual had changed very little as a result of new industry. The only improvement perceived was in road conditions (Andrews and Bauder 1967:95). Louisiana residents felt that, after the arrival of industry, schools and churches had improved, and there was a very slight improvement in neighborliness and community pride (Bertrand and Osborne 1959:1133). Summers, et al., provide an excellent summary of rural residents' attitudes toward industry:

"In general, people believed their community had benefitted from industrial development, although plant workers were more likely to hold this opinion than open-country residents. They see the plant as helping to
stabilize population, providing jobs, and giving rise to economic diversification. Several studies report little difference between plant employees and open-country residents, natives, and immigrants in opinions about local schools and churches. Most thought there had been little change in neighborliness over the industrial invasion period. Overall, plant employees were satisfied with their jobs, although not all thought that their chance to get ahead had improved. Plant representatives praised rural workers' reliability but lamented their lack of skills. In sum, industrial invasion was generally beneficial to rural communities." (Summers, et al., 1976:125)

Planning

Planning for the industrialization of rural areas is treated in the literature at several different levels. Planning at the community level is frequently discussed, particularly in terms of preparations of the local community to attract an industry. Multi-county or regional level planning is often offered as the most viable and practical level for industrial planning, since a rural industry has a broader effect than just upon the particular community of the plant site, and because of the leakage of benefits to the larger area surrounding the plant (Brinkman 1973:72; Appalachian Regional Commission 1969:11). Finally, federal level planning is often considered in relation to the existing federal programs which are designed to promote the economic development of lagging (which are, more often than not, rural) regions. At any level, however, there is a consensus that little planning has been done to date, and that more extensive and more effective planning is needed to gain the greatest possible advantage from rural industrialization.

Several conditions must be taken into account by a local community desiring to attract an industry. The most successful local efforts have involved upgrading local services and utilities, and development of
plant sites or an industrial park prior to actively seeking an industry. Also useful to the local community is strong local leadership, and perhaps even an industrial development organization (Vieg 1973:10-11; Roepke 1973:50-52; Tweeten 1974:91; Cavender and Schmitt 1971:63). The local community must first determine local labor capabilities, local utility and service capacities, and how much public revenue is needed (to determine the affordability of tax incentives). The more closely an industry fits these community characteristics and needs, the more local benefits will ensue (Summers, et al., 1976:5-6).

There are several factors related to the impact of an industrial park upon employment and income of a community. The age, acreage, railroad access, and number of control methods* of the park all have been shown to have positive effects upon industrial park impact. The positive relationship of age of the industrial park with the park impact, however, suggests that communities must be both psychologically and financially prepared to wait for a length of time for a return on their industrial park investments (Hitzhusen and Gray 1976:11-12).

In a study of industrial location which has implications for industrial planning, three stages were listed as comprising an industry's location decision process: 1) determination of a major geographical region; 2) comparison of specific areas within the general region; and 3) selection of specific sites within the area. Local community efforts have no effect in influencing industry's decision at either stage 1 or

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* Methods to control the industrial park include purchase agreements, lease conditions, individual deed restrictions, and zoning ordinances.
stage 2. By the time local incentives are effective, stage 3, the area of location has already been selected by the industry (Ruttan and Wallace 1962:974–975). This finding suggests that planning efforts are more appropriate at the regional or areal level than at the community level.

Industrial planning at the multi-county or regional level has been frequently advocated because the impact of industry is diffused over a larger area than the community in which the plant is located (Summers 1973:34; Summers, et al., 1976:5; Bird 1973; Maki 1973). Smith (1971:449–452) has noted two types of industrial planning efforts. The first is general areal or regional rehabilitation, which involves improvement of the infrastructure of the region, new roads, communication systems, the educational system, and public utilities and services. The second type is specific industrial location incentives, such as low interest loans, tax arrangements, or the actual building of a factory. While the latter may be helpful in the short run, the first type is more beneficial in the long run.

Roepke (1973:50–52) has listed several criteria of a beneficial rural industrial development program. He states that such a program should: 1) benefit the whole state or area; 2) meet the needs and desires of rural communities and be effective in attracting industry; 3) produce economic benefit; and 4) be competitive with the impact of similar programs in other areas. A successful rural industrial development program must provide: 1) a trained, professional developmental staff for the development area; 2) information about the area; 3) a suitable industrial site; 4) long term programs, such as industrial
bonds; 5) adequate transportation; 6) the training of skilled labor; and 7) relocation programs (Roepke 1973:46).

An alternative to industrial location planning on the regional level has occasionally been mentioned but not well developed. The alternative is a worker relocation program, moving workers to jobs in an area which is economically sound, rather than moving industries to areas which are experiencing economic decline (Hansen 1970:231, 238; Harris and McGuire 1969:487-488). This approach implies a growth center policy, the development of moderate size communities within the region which are economically viable.

Economic planning at the national level, including industrial location planning, is not yet developed but has often been advocated. It is argued that national planning efforts would help direct existing location programs, and coordinate the efforts and resources of private and public sectors of all levels (Rauner 1973; Lago 1973; Tweeten 1974).

The beginnings of a serious national planning strategy for depressed regions are the Appalachian Regional Development Act, and the Public Works and Economic Development Act. The Appalachian Regional Development Act primarily focuses upon investing in areas within the Appalachian region which have the greatest potential for growth, a type of growth-point strategy. The Public Works and Economic Development Act provides financial assistance to those areas which, under the act, are designated as in need of economic development (Smith 1971:470-471). In an Appalachian Regional Commission Report (1969:24-70), the priorities for improving the competitive position of Appalachia for industry are as
follows: 1) manpower development; 2) transportation; 3) industrial site planning; 4) industrial water development; 5) sewage treatment and effluent disposal; 6) federal, state, and local incentives to industry in terms of taxes and services; and 7) the community environment. Such programs are only the beginning of a comprehensive national development plan, which is becoming a more popular idea among many researchers in the area of industrial development of rural areas.

While industrialization may be useful for the resolution of some problems within specific rural areas, it is evident that industrialization is certainly no cure-all for all aspects of rural decline. Rural areas should consider efforts to attract industry as an aid to problems of decline, but only after careful evaluation of the needs of the community, and all possible positive and negative consequences. The literature suggests that regional planning is the most effective approach for rural areas to maximize their benefits from industry.

**Implications For Further Research**

In the discussion of previous research, it has been demonstrated that the effects of rural industry are differentially distributed among various individuals, groups, public and private sectors, and communities within the industrialized region. Industrialization can result in as wide a range of negative impacts as positive impacts. Yet rural residents remain basically favorable toward industry in their region. Residents of rural areas which have no industry are overwhelmingly in favor of industry locating in their area. Whether this is a result of a belief that industry is the cure for rural problems or simply a lack of awareness concerning negative effects is not clear. Not all rural
residents are in favor of industrialization, however, and differences in attitudes toward industry do exist.

An accurate assessment of the perceptions of local residents would be quite useful for effective industrial planning in a rural area (including the possibility of deciding that industrialization is not advisable). Such an assessment would aid in obtaining a clearer picture of local needs and wants in terms of industry, and of expectations of industry which are held by the residents. This would indicate to planners what types of additional information are needed by decision-makers and the general public in their decision as to the desirability of industry (such as more information about negative impacts). It would also allow a comparison of groups who most want industry in relation to groups who most need industry. Making residents aware of possible negative impacts of industry, and preparing the residents to deal with such impacts would be a major step for planners to help insure that the process of industrialization occurs more smoothly, with a maximum of benefits and a minimum of negative impacts.

Based on this need for accurate attitude evaluation, this study was designed as a baseline study of residents' attitudes toward industry in an area which is anticipating industrialization. The overall focus was to determine general attitudes toward industry, anticipated benefits of industry, and which people or groups are more (less) favorable toward or expect more (less) benefits from rural industry. The regional area is appropriate because of the diffuse effects of an industry over the region, as discussed in the literature, and because of the frequent
advocacy of regional level developmental planning. The theoretical orientation section examines some possible reasons for the existence of favorable or unfavorable attitudes toward industry, as well as differences in these attitudes among various groups.
CHAPTER II
THEORETICAL ORIENTATION

The theoretical perspective used in this research is the application of social exchange theory to local perceptions of rural industrialization. The basic notion of the social exchange model is that people must assume certain costs to obtain rewards, and people will choose to participate in activities which are associated with higher profits or less costs than other activities (Simpson 1972:2).

Rewards of exchange activities provide the basis for participation in an exchange situation. Rewards from exchange relationships often involve the allocation of scarce resources, and are not always equally distributed throughout the population. Rewards must be compared to the costs of the exchange, to determine the relative advantage of a particular activity compared to other activities. "Investments" which persons bring into an exchange activity are also related to the rewards and costs within an exchange, depending upon how they are evaluated by others in the exchange situation. With respect to exchanges involving rural industrialization, there are particular rewards, costs, and investments which become important to persons involved in or affected by industrial development. People's perceptions of these factors influence their participation in exchange relationships. Within this general exchange framework, the rewards and costs of rural industrialization and how they
are perceived by the individuals involved may be examined.

**Historical Background of Exchange Theory**

Exchange theory, as developed in sociology, has its origins in several other disciplines, including economics, anthropology, and psychology. Exchange theory in sociology became important as an alternative to structural-functionalist theory, which was the dominant paradigm during the time that many of the early sociological exchange research studies were produced.

Social exchange theory is primarily analogous to economic transactions (Simpson 1972:1). The social exchange model has its genesis in classical economic theory, including the writings of Smith (1761), Ricardo (1817), Mill (1848), and Bentham (1789), and includes the use of utilitarian thought (Turner 1974:211). Much of the terminology of exchange is closely aligned to economic concepts such as costs, investments, profits, and so forth. Among the economic-utilitarian assumptions drawn upon by exchange theory are: 1) people seek to make some profit from their interactions, both economic and social; 2) in a given situation, an assessment is made of the costs and benefits of alternative situations, and decisions made from these evaluations; and 3) the commodities of exchange can be either material or nonmaterial (Turner 1974: 211-213).

Several concepts and assumptions of the exchange perspective are drawn from behavioral psychology. Skinner (1953) and Thibaut and Kelley (1959) are psychologists whose works have been utilized in social exchange. Theories of individual behavior ("learning" theories) have proposed that: 1) individuals will repeat behavior which has led to
desired rewards in the past; 2) persons will try to avoid unpleasant effects (costs) of behavior, but will endure certain negative effects in order to obtain desired rewards; 3) behavior will be repeated only as long as rewards are forthcoming; and 4) eventually a person will become satiated with any reward if it is received in large quantities, no matter how much it is valued by the receiver (Simpson 1972).

Anthropology was probably the first social science discipline to utilize an exchange theoretical orientation to explain social behavior. Among the earliest of these studies are Frazer's (1919) study of cross-cousin marriages and Malinowski's (1922) study of the Kula exchange among individuals in Pacific island communities. Both of these studies revealed that important exchange relationships can be noneconomic and symbolic, and that most types of exchange have some underlying social importance. The concept of indirect exchange was also introduced in these early anthropological studies. Indirect exchange is a group activity, as opposed to face-to-face interaction or exchange between two persons. Indirect exchange is different from direct exchange between two persons in that the recipient of a reward in the group context may have never contributed directly to the person from whom he or she received the reward. Schematically, direct exchange is in the form of $A \leftrightarrow B \leftrightarrow C \leftrightarrow D \leftrightarrow A$, while indirect exchange may be represented as $A \rightarrow B \rightarrow C \rightarrow D \rightarrow A$ (Ekeh 1974:50). Mauss (1925) and Levi-Strauss (1969) reexamined these earlier studies, and elaborated and modified the exchange perspective. The elaborated theory placed much more attention upon the importance of the exchange process for the entire social structure, rather than upon the individuals engaged in the exchange.
activity. Significant attention was given to the societal norms governing the exchange, and the relation of exchange to social integration and organization (Ekeh 1974:20-78; Turner 1974:213-221).

Social exchange theory, particularly as it was used by Homans (1950), provided an alternative to structural-functionalist theory. The unit of analysis for the two theoretical positions was quite different. Exchange theory emphasized small group situations while functionalism was much more concerned with complex social structures. The smaller unit of analysis was a reaction to the relative lack of concern for smaller groups in functionalist explanations. As first treated by Homans, exchange theory studied face-to-face interaction to determine basic (often psychological) principles, such as frequency of interaction, sentiments, and social ranking within small groups (Mulkay 1971:122-145).

While it may appear that functionalism and exchange theory are significantly different, exchange theory complements functionalism in some respects. This is a result of exchange theorists' reaction to the weaknesses of functional theory. For example, while functionalism focuses upon complex social structures, exchange theory treats these complex structures as given and concentrates on interactions within small groups. Exchange theory also considers the emergence of complex structures as a product of interaction among individuals, while functionalism treats individual behavior as resulting from the existing social structure. These two perspectives, therefore, are not mutually exclusive, since they deal with the same phenomena at different levels of analysis. Exchange is also similar to functionalism in its treatment of the "functions" of exchange for society. For example, indirect
exchange performs the function of integrating individuals within a large social community (Mulkay 1971:145, 195-212). In later works by Homans (1961), and in the efforts of later exchange theorists such as Blau (1964) and Ekeh (1974), social exchange theory has been elaborated upon to include larger groups, interaction between individuals and organizations, and indirect exchange relationships.

A General Exchange Orientation

To understand the basic theoretical principles of exchange theory one must establish the definitional underpinnings of the model and specify the theoretical concepts which are the basis for hypothesis formation. The major concepts used in exchange activity are defined below.

Activity. Behavior aimed at deriving rewards.

Rewards. Anything a person receives, or any activity directed toward the person, which is defined by the person as valuable.

Value. The degree of reinforcement or capacity to meet individual needs which an activity has for a person, whether it is his own activity or activity directed to him, such as the amount of social approval (to the individual), or monetary value.

Norms. Statements by group members (a type of activity) that people should or should not engage in given activities in given circumstances.

Cost. A punishing activity or an alternative reward forgone in order to get another reward.

Investments. A person's relevant past activities (such as skill, education, and expertise) and social characteristics (such as sex, age, and ethnic group) which are brought to a situation and evaluated by the person and by those with whom he may be interacting.
**Profit.** Rewards, minus costs and investments, for engaging in a certain activity.

**Distributive justice.** Activities involving the evaluation of whether rewards are proportional to the costs, and profits proportional to the investments of the individual in an exchange situation (Turner 1974:235-236; Simpson 1972:4).

The major emphasis of exchange theory has been on the social interaction of two or more individuals within an exchange activity. If one accepts the assumption that there are psychological and social rewards as well as costs associated with interaction with others, and that people wish to derive some return for their investment of scarce resources, then the basic thesis of social exchange theory has validity. The principle thesis of social exchange theory is that people will attempt to obtain profitable outcomes from interactions, and will seek out and/or continue to interact with those individuals who help him or her gain desired ends.

Among the basic propositions of exchange theory are the following:

a) If a particular activity has been rewarded in the past, then individuals will tend to repeat the same action in similar situations or exhibit some similar activity.

b) The more rewarding an action is for an individual, the more likely the person is to take that action again.

c) The more valuable an individual perceives the rewards of an activity to be, the more likely that individual is to engage in the same or similar activity.
d) When confronted with a range of alternative actions, a person will choose the activity he/she believes will be most successful in obtaining rewards.

e) The more rewards an individual receives from a particular activity, the less valuable any further unit of that activity becomes to him (satisfaction).

f) Repetition of activities will occur only as long as the actions continue to produce valued rewards.

g) People are more likely to select an activity if they perceive a particular alternative to have greater probability of producing desired rewards than other possible choices (Turner 1974:222-268; Mulkay 1971:154; Ekeh 1974:122-213).

In short, persons will engage in activities which have produced rewards for them in the past, or from which rewards are anticipated in the future. It should be stressed that the main focus of exchange theory has been upon interaction between two or more individuals, and upon the social rewards gained from the activity. However, as can be seen in the basic propositions of the exchange model, activity is not necessarily limited to face-to-face interaction. Rewards are also not limited to psychological reinforcement of action. By definition, activity can be any behavior designed to secure rewards, whether other individuals are directly involved or not. Rewards can be anything valued by an individual, which includes but is not exclusive of activity directed toward the individual by others. This means that people could receive sufficient rewards from interpersonal interaction to be motivated to assume significant social and economic costs in exchange situations. For
example, a person may be willing to aid a friend even though it may be quite costly from an economic perspective with no expectation of economic compensation (reward). The very act of helping a friend is a reward itself. It is also possible in an exchange situation to sacrifice (a cost) social interaction for the reward to be alone, such as a solitary wilderness experience.

Exchange activity which is not direct interaction has been examined in terms of indirect exchange (Blau 1964:255-263; Ekeh 1974:176-179). Exchange theorists have used the term indirect exchange, and nearly all have defined it in somewhat different ways. All of the definitions, however, treat indirect exchange situations as different from a two-person exchange situation. Circular exchange (Malinowski 1922) and generalized exchange (Levi-Strauss 1969) are types of indirect exchange. These two types of indirect exchange are concerned with the individual actors and the specific interactions among the individuals in indirect exchange (Ekeh 1974:178-179). Blau's conception of indirect exchange involves the substitution of social norms for direct interaction between individuals:

"The members of the group receive social approval in exchange for conformity and the contribution to the group their conformity to social expectation makes. Conformity to normative standards often requires that group members refrain from engaging in certain direct exchange transactions with outsiders or among themselves. . . . Conformity frequently entails sacrificing rewards that could be attained through direct exchange, but it brings other rewards indirectly.

"Exchange transactions between the collectivity and its individual members replace some of the transactions between individuals as the result of conformity to normative obligations." (Blau 1964:259)

An example of indirect exchange given by Blau involves an individual
in an occupational setting within a formal organization. The individual performs activities, not for the rewards received from co-workers, but because the activities are the obligations of his job. In return for performing these obligations the individual receives financial rewards from the company (Blau 1964:260). The individual contributed to the efforts of his co-workers and did not receive his rewards from them directly, but indirectly from the collective entity. The point is that the propositions of exchange theory can be applied to groups larger than two persons, including interaction between groups, and interaction between an individual and a collectivity (Ekeh 1974:177).

The medium of exchange involved in an exchange relationship may be tangible or intangible, material or nonmaterial. Money is perhaps the prime example of a medium of exchange, primarily economic exchange. A medium such as money allows the operation of a large network of indirect exchange "because it permits the easy transfer of obligations and credit, and because it is a highly liquid asset that can be readily converted into any other economic valuable" (Blau 1964:268).

Operating similarly to money as a medium of exchange are universalistic values of achievement and social approval which permit indirect social exchange. In complex exchange systems, universalistic values are the media of exchange and differentiation. Universalistic values provide the function of standardizing the value of an activity, measurement of a person's contributions to group activity, and determines the magnitude and type of rewards they deserve in return. Based on these values, the network of "fair" distribution of rewards is established. As a result of the universalistic values, ranking and stratification systems

The role of the medium of exchange is not the only similarity between economic and social exchange. Ekeh (1974:174-175) has pointed out that economic exchange and social exchange involve generally the same processes, and cannot be meaningfully separated. Economic exchanges involve contractual obligations while social exchanges involve moral obligations. Even the economic, contractual obligations, however, are based upon underlying societal obligations (norms). Thus, both types of obligations have the same basis and serve a similar function which results in economic and social exchange structures operating in a similar manner. The definitions and propositions of exchange theory, therefore, can apply to both economic and social types of exchange.

Application of Social Exchange Theory to Attitudes Toward Rural Industrialization

Exchange theory provides an explanation for the actions and/or attitudes of persons who are involved (or may at some time in the future be involved) with community development programs. There are costs to planned change efforts and benefits which may accrue to the group. Involvement in collective development goals is a partial function of perceived benefits, which is a major component of exchange theory.

* Universalistic values are distinguished from particularistic values, which are the media for integration and solidarity within the complex exchange structure. While social differentiation is based upon universalistic values, particularistic values provide the basis for integration and identification of a certain group, separating it from other collectivities (Turner 1974:280).
Since rural industrialization is one form of community development, it is argued that the exchange model will be an appropriate approach to understanding attitudes toward potential industrial expansion among residents who must assume the costs and derive the benefits from such development. Some of the benefits that will accrue to local people are jobs, increased tax bases, service expansion, facilities, status from a new occupation, and many others (Whiting 1974; Napier and Maurer 1977:3). These rewards, particularly rewards to individual residents, are not equally distributed, however, as has been demonstrated in previous research (Summers, et al., 1976:3, 60). The amount of rewards received by an individual, or expected to be received by an individual, depends upon several factors such as age, gender, education, and job skills. These factors may be considered investment variables in an exchange model. Investments are the social characteristics or past activities that people bring into exchange situations which partially determine what contributions the individual can make in the exchange activity. If people bring much needed skills or resources to the exchange situation, they would be said to have high investments. In essence, the more relevant an individual's characteristics are to a given exchange situation, the greater the contribution they can make, and the probability is higher that the individual will receive more rewards from the action taken.

In terms of industrial development, individuals who can make significant contributions to exchange situations involving industry, such as job skills, have higher investments which may be brought to the exchange situation. If one has higher investments relevant to
industrialization, he/she also has a greater probability of receiving more rewards from the subsequent industrial growth. The rewards may be direct, such as receiving a desired job with the industry, or indirect, such as regional growth. In other words, the factors which are relevant investments in an industrial exchange relationship will have an effect upon the rewards received from the development actions taken.

While there are rewards associated with rural industrialization, there are also numerous costs. Among the costs to the individual are: 1) forgone job alternatives in taking a new job with the industry; 2) indirect effects upon public and private services; 3) the cost of living may be rapidly increased; and 4) the costs of not receiving anticipated rewards (not getting the expected job, for example). In order for the individual to "profit" from the new industry, the rewards received must outweigh, from the individual's perspective, the costs involved in the situation. As is the case with rewards, costs of industrialization are not equally distributed among the population of an area. As shown in previous research, various segments of the population suffer more negative impacts from industrialization than others (Summers 1973: 21-22; Bertrand and Osborne 1959:1129-1130; Scott and Summers 1974). The costs to a particular individual also relate to the personal investments brought into the exchange situation. People with lower investments are subject to relatively higher costs and/or fewer rewards, resulting in lower or negative returns in terms of profit. For example, elderly persons on fixed incomes, who have personal investments which are not appropriate to industrial development, are often adversely affected by rises in the cost of living caused by industrial
development (Scott and Summers 1974).

If one applies the notion of rewards and costs to an industrial development situation, the social exchange propositions previously noted may be applied. For example, one could argue that people will engage in activities related to industrialization if they perceive that rewards will be received or are expected to be received (propositions b and c).

Activities which may produce rewards, or from which rewards may be anticipated, include both planning for the coming of industry, and participating in activities directly related to the industry such as seeking employment. People will participate in such activities when the activities are perceived to be the most viable alternative for producing desired rewards (propositions d and g). People will be willing to participate as long as desired rewards are received or anticipated; however, if no rewards are received or anticipated, participation will not occur (proposition f).

Rewards such as jobs, increased tax bases, service expansion, facilities, and job-related status are generally considered by most Americans as valuable outcomes of activities. Development activities associated with industrialization are often considered to be among the most successful in providing a means of achieving these rewards. The higher the value placed upon development outcomes such as those associated with industrialization, and the more successful industrialization is perceived as being instrumental in accomplishing these development goals, the more favorable will people be toward industrialization activities.
In summary, rural industrialization is often perceived as being able to provide rewards to individuals and to the community, particularly to those who are able to bring in greater "investments" to the situation. In turn, individuals who bring greater investments to industrial development situations will be able to command greater rewards due to their higher probability of being employed or profiting from secondary development associated with industrialization. Given that the people with higher investments will profit more from industrial development, they should perceive their favorable exchange position, and therefore will have favorable attitudes toward industrial development for the region. The major hypothesis of the study is that people with more relevant personal investments associated with rural industrialization will perceive that they will accrue greater benefits from industrial development, and will have more favorable attitudes toward industrialization than those with less relevant investments. The basic reasoning can be represented schematically as follows:

**Variables and Hypotheses**

Several variables were chosen to represent investments which may be applicable to rural industrialization situations. Among the investment variables included in this study and treated as independent variables are: age, gender, education, income, number of children living at home, and occupation. These variables are indicative of social characteristics
(age, gender, income, and number of children) and past activities (education and occupation) which persons bring into activities relating to rural industrial exchange situations. Since people with "higher investments"* have a higher probability of gaining more rewards from rural industry, they are likely to perceive that they will derive benefits from the industrialization for themselves. Those who perceive the possibility of receiving valuable rewards from industrial development should have more favorable attitudes toward industrialization, since persons seek to participate in those activities which they feel will bring them rewards. Those persons with more relevant investment characteristics and skills, therefore, will be more favorable toward rural industrialization as a means of gaining desired rewards, and will also perceive more possible rewards from the industrial development of the region.

Age

Age is an investment variable in terms of remaining work years and opportunity for industrial employment. It has often been discovered that younger persons are more likely to secure employment with a rural industry (Summers, et al., 1976:40). Younger persons also have more remaining years of employability to commit to industrial employment, so industry is able to invest considerably more finances in training. More costs are associated with industrialization for older persons, particularly the elderly, since they are more adjusted to the existing social

* A person with "higher investments" possesses more relevant characteristics or makes greater contributions to an exchange situation.
structures, and change will disrupt their established routines. Change might affect long-practiced behavior patterns, such as those involving local neighborhood organizations such as churches and other voluntary associations. The elderly are also more likely to be on fixed and/or lower incomes, thus are more affected by cost of living increases which often accompany rural industrialization. Because of these adverse effects (costs) of industry, older persons' attitudes toward industrial development should become less favorable. Age was, therefore, hypothesized to have a negative association with perceived benefits from industrial development, and favorability toward industry. The hypotheses are predicated on the fact that younger adults have more years available for career investment and thus have a higher probability of being employed, along with fewer costs associated with industrial development. Because they have more years to invest and fewer costs associated with change, it is posited that age will be inversely related to favorability toward rural industrial development.

Gender

Gender is a basic investment variable since it is an ascribed status which an individual brings into a social exchange situation. The more relevant the social characteristic is to the norms or activities of the exchange situation, the higher is the investment of the appropriate characteristic. While some rural industries hire primarily women employees (Summers, et al., 1976:53-54), the fact remains that most industrial-type work roles are filled by males. In terms of "traditional" rural values, men are responsible for the support of their families, which is both a norm and a valuable reward for employment activity
(Wilson 1971:300). Industry is one possibility for providing employment opportunities, and the rewards associated with employment. Industrial development, therefore, provides an opportunity for males to obtain the reward of employment as a means of support for themselves and their families. Since males have a higher probability of being employed by rural industry, they should perceive a greater possibility of obtaining rewards, and should have more favorable attitudes toward industry in general. It is hypothesized that males will have more favorable attitudes toward industrial development than females.

Income

Income is often used as an indicator of social status since people with large incomes tend to have high social status. Social status is another relevant characteristic which a person brings into an exchange activity relating to rural industrialization. Higher status—higher income individuals have more resources available to exploit industrial development for greater personal advantages, such as secondary economic opportunities* which may result from the arrival of a new industry. Lower income persons have been found in prior research to be much less involved in and receive fewer benefits from rural industrialization and industrial employment, primarily because they have less training, fewer skills, and fewer resources relevant to industry (Summers, 1973:21-22; Summers, et al., 1976:3). Income, therefore, becomes a relevant

* A secondary economic opportunity is any opportunity resulting indirectly from a new industry, such as increased retail sales for a local business resulting from population increases associated with industrial development.
indicator of the resources an individual has to invest relative to industrial development, in terms of both direct rewards, such as employment, and indirect rewards, such as secondary economic opportunities. Lower income people have fewer investment resources, and should perceive fewer possible rewards from a new rural industry. Higher income persons, who have more resources available for investment, should perceive greater possible rewards to be derived from industrial development and should be more favorable toward industrial development. It is hypothesized that income will be positively related to attitudes toward rural industrial development.

Number of children living at home

Persons with children living at home should have more favorable attitudes toward industrial development, since possible rewards are present in terms of increased employment opportunities for their children in the future (Napier and Maurer 1977:4). The number of children at home represents another social characteristic (family size) which is brought into an exchange situation by an individual. The more children one has, the greater the probability that a member of the individual's family will receive some rewards in the long run from rural industrialization, simply because there are more people to whom an opportunity for rewards may accrue. These long run rewards could be in terms of employment with the plant for the children, which may enable them to remain in the region, or in terms of any general improvement in the region, particularly economic. The more children that are present in the household,
the more of an investment, in the sense of a "vested interest"*, the individual has in the region in which he lives. More children in the household represent a greater vested interest in regional development since more possible rewards from such development exist for some member of the household. Children in the home will, then, increase the probability that one will consider industrial development as favorable. Because children are a vested interest (investment) in the region, larger households represent greater possibilities of rewards. It is, therefore, posited that number of children living at home will be positively related to attitudes toward rural industrial development.

Education

Education is an indicator of a person's formal training and skill level which is very important in an occupational setting. Persons with higher education are more likely to obtain higher skilled work roles, will receive higher salaries, and are less likely to face the problem of unemployment (Killingsworth 1964). People with more education generally have an advantage over persons with less education when competing for new jobs created by industrial expansion (Summers 1973:21-22). Education is an investment in an exchange activity since it represents a past activity which is relevant to activities associated with rural industry, particularly with respect to employment. The more years of education one has, the more past activity the person has invested in obtaining

* Vested interests refer to those characteristics or past activities which relate to an individual's possible future commitment of resources to obtain particular desired rewards.
relevant training for many exchange situations, including industrial employment. A person with more education also has training which may enable him or her to receive rewards resulting indirectly from the industry through the region, such as the expansion of the economic, governmental, or service structures of the region. It is reasoned that people with higher educational achievement levels will exhibit more favorable attitudes toward rural industrialization than those with lower levels of educational achievement.

Occupation

Occupation is used as an indicator for individual’s skills which are directly job-related. This is based on the assumption that one is usually employed in an occupation which is closely associated with job skill. Persons qualified for higher skilled or more professional occupations are generally more sought after by industries and are given the higher paying jobs (Miller 1968). Job skills represent past activity relevant to industry and industrial employment. Individuals with higher job skills will have a greater probability of receiving more rewards from rural industry, both directly and indirectly. The rewards may take the form of increased job opportunities, higher income, or more secure occupations. This situation applies to the secondary development, as well as the industrial jobs, such as other businesses or service agencies within the region. People who have previously held a higher skilled job can contribute (invest) more relevant skills to a new job opening, and therefore have the possibility of gaining greater rewards from the situation. Higher skilled workers should also have more
favorable attitudes toward industrial development because of their higher investment position compared to those with fewer job skills. Because of this advantage, particularly in terms of employment, persons with more professional or higher skilled occupations are hypothesized to possess more favorable attitudes toward industrialization than persons with less professional or less skilled occupations.

Perceived benefits to the individual

The perceived potential benefits of industrialization should also have an effect upon overall attitudes toward industry. These perceived benefits are the rewards which an individual anticipates receiving from rural industrialization in the region. Based upon the basic propositions of the exchange perspective, people participate in an exchange situation in order to receive desired rewards, and the more rewarding an activity is for an individual, the more likely he/she is to participate in that activity. It is assumed that rewards of industrialization to the individual (such as the individual or a member of his/her family obtaining employment with the industry) are perceived by people within the region as desirable. If this assumption is true, people would be more likely to commit themselves to industrial development when industrial expansion is perceived to be a means of producing these rewards. Since people are favorable toward activities which they feel will bring them desired rewards, it was reasoned that perceived personal benefits (rewards) from industry will be significantly related to attitudes toward industrial development.

Perceived personal benefits are hypothesized to be an intervening variable between the investment (independent) variables and the attitude
toward industrialization (dependent) factor. The investment variables are hypothesized to have direct effects upon perceived personal benefits of industry, since the greater one's available investments, the more likely the individual will gain rewards from activities relating to industrialization. The perceived benefits in turn should have an effect upon the favorability or unfavorability of industrial development, since people who perceive that they will receive more benefits from industry will have more favorable attitudes toward industrialization. The investment variables, therefore, will also have an indirect effect upon attitudes toward industrialization through perceived personal benefits. Individuals with more relevant investments should be more favorable toward rural industrial development because they will anticipate receiving more benefits of industrial expansion. Thus, the investment variables are hypothesized to have both direct and indirect effects upon attitudes toward rural industrialization, while the perceived benefits from industry factor is hypothesized to have only a direct effect upon the dependent variable.
CHAPTER III

RESEARCH METHODOLOGY

The Area of Study

The research area which was selected is a five-county region in southeastern Ohio. The study area, which includes Athens, Gallia, Jackson, Meigs, and Vinton Counties, is located in the heart of the Appalachian portion of Ohio. The region has historically been dominated by small-scale agriculture, timber, and coal mining industries. The decline of the relative importance of these industries has resulted in a lack of economic growth within the region. The area is now characterized by low family income and high unemployment rates. The area has also experienced outmigration of young adults, which has led to population declines and an increase in the area's median age.

As a result of the history of economic decline, considerable development efforts have been mounted to increase the socioeconomic viability of the area. Among the development groups concerned with the growth of the region are researchers and action agents of the Cooperative Extension Service and the College of Agriculture of The Ohio State University. These five counties were chosen for intensive research and development activities. This study composes one component part of the total research effort commissioned by the college and extension service.
Sample Selection

The sample was chosen using a systematic random method within the designated five-county region. The respondents were personally interviewed by trained interviewers in the summer and fall of 1975, using a structured questionnaire. Within a selected sampling area, the interviewer chose a residence at random for an interview. After the initial selection, every fifth occupied dwelling was sampled. (This method is discussed in Napier 1971, 1972, and 1975.) Only adults were chosen as respondents. The locations of the residences selected for inclusion in the study were monitored using detailed county maps to avoid clustering of the sample. The final sample was not clustered in either rural or urban areas, and approximated the population distribution according to townships. An estimated 95 percent of those selected by this sampling method agreed to participate in the study. The total number of respondents in the final sample was 1493 (Napier, et al., 1977).

A sample size of approximately 300 was selected from each of the counties in the study area. The populations of the counties vary widely, from 9420 in Vinton County to 54,889 in Athens County, so the more rural counties were somewhat overrepresented. The decision of equal county representation was made, however, because developmental decision making on the regional level is generally conducted with equal input from the counties involved (Pierce 1976:30-31).

The final sample provided an accurate representation of the five-county population. The respondents of the sample were generally middle-aged, with few children living at home. A slight majority of the sample were female. Average income was $9000-9999, and the average education was approximately high school level (Napier, et al., 1977). Unskilled
labor and skilled blue collar labor were the largest occupational
categories. (The summary of the sample data for selected variables used
in the analysis is given in Table 1, and of population data in Appendix B).

Compared to the rest of Ohio, the population of the five-county
region is older, less educated, and earning lower incomes. The average
household size of the five counties is generally less than the state as
whole. There is generally a smaller proportion of persons employed in
professional and managerial occupations and a greater proportion of
farmers and service workers in the five-county region. While the data
are not directly comparable, it was concluded that the sample provided
an accurate representation of the regional characteristics (Appendix B).

**Instrument Construction**

The questionnaire used in the data collection phase of the study
was a structured-type instrument. The questionnaire was designed to be
self-administered, with the interviewer present to answer questions,
explain directions, or orally present the questions to those incapable
of reading (sight problems, for example). The independent variables
used in this study were included in the demographic and social charac-
teristics section of the questionnaire. The attitude variables were
included in the main body of the questionnaire in the form of Likert-
type items (Edwards 1957). The content of the instrument items were
suggested by several previous sources and previously used methodologies.
The attitude variables, and the items composing the attitude scales,
were based upon variables used in previous research and adapted to fit
the phenomenon under study (industrial development) (Napier 1971, 1972,
Table 1: Sample Frequencies and Summary Statistics for the Independent Variables (N = 1493)

<table>
<thead>
<tr>
<th>GENDER</th>
<th>Male 669 (44.8%)</th>
<th>Female 820 (54.9%)</th>
<th>Not Reported 4 (0.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>$\bar{X} = 44.4$</td>
<td>Standard Deviation = 16.9</td>
<td></td>
</tr>
<tr>
<td>EDUCATION</td>
<td>$\bar{X} = 11.6$</td>
<td>Standard Deviation = 3.4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHILDREN LIVING AT HOME</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>635</td>
<td>42.5</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>1</td>
<td>314</td>
<td>21.0</td>
<td>6</td>
<td>1.0</td>
</tr>
<tr>
<td>2</td>
<td>281</td>
<td>18.8</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td>3</td>
<td>159</td>
<td>10.6</td>
<td>8</td>
<td>0.0</td>
</tr>
<tr>
<td>4</td>
<td>58</td>
<td>3.9</td>
<td>9+</td>
<td>0.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INCOME</th>
<th>$0-$999</th>
<th>n</th>
<th>%</th>
<th>$10,000-$19,999</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-$999</td>
<td>40</td>
<td>2.7</td>
<td>$10,000-$19,999</td>
<td>82</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>1000-$1999</td>
<td>37</td>
<td>2.5</td>
<td>12,000-$12,999</td>
<td>93</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>2000-$2999</td>
<td>72</td>
<td>4.8</td>
<td>13,000-$13,999</td>
<td>44</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>3000-$3999</td>
<td>81</td>
<td>5.4</td>
<td>14,000-$14,999</td>
<td>65</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>4000-$4999</td>
<td>82</td>
<td>5.5</td>
<td>15,000-$15,999</td>
<td>61</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>5000-$5999</td>
<td>84</td>
<td>5.6</td>
<td>16,000-$16,999</td>
<td>36</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>6000-$6999</td>
<td>74</td>
<td>5.0</td>
<td>17,000-$17,999</td>
<td>27</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>7000-$7999</td>
<td>93</td>
<td>6.2</td>
<td>18,000-$18,999</td>
<td>26</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>8000-$8999</td>
<td>93</td>
<td>6.2</td>
<td>19,000-$19,999</td>
<td>17</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>9000-$9999</td>
<td>77</td>
<td>5.5</td>
<td>20,000 and over</td>
<td>77</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>10,000-$10,999</td>
<td>145</td>
<td>9.7</td>
<td>No Response</td>
<td>87</td>
<td>5.8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unclassified</td>
<td>63</td>
<td>4.2</td>
</tr>
<tr>
<td>Service Worker</td>
<td>117</td>
<td>7.8</td>
</tr>
<tr>
<td>Farmer</td>
<td>121</td>
<td>8.1</td>
</tr>
<tr>
<td>Unskilled Laborer</td>
<td>403</td>
<td>27.0</td>
</tr>
<tr>
<td>Skilled Blue Collar</td>
<td>380</td>
<td>25.5</td>
</tr>
<tr>
<td>White Collar</td>
<td>182</td>
<td>12.2</td>
</tr>
<tr>
<td>Manager-Administrator</td>
<td>87</td>
<td>5.8</td>
</tr>
<tr>
<td>Professional</td>
<td>140</td>
<td>9.4</td>
</tr>
</tbody>
</table>

\[\text{Occupation Groups: } 20.1\% \text{ (Professional) + 27.4\% (Manager-Administrator)}\]
questionnaire was pretested and revised using two major respondent sources. One source was a pretest of the instrument using randomly selected people from an adjacent county. The second source was university developmental specialists and local leaders to review the measurement devices (Napier, et al., 1977:7; Pierce 1976:34-38).

The interviewers were drawn primarily from the five-county study area. They were trained in the use of the questionnaire, but were not given complete insight into the reasoning for the individual items to minimize interviewer biases. The interviewers were selected from the study area in an effort to enhance the rapport between the interviewer and the respondent. The interviewers did not, however, collect data from their home communities so that more sensitive questions did not have to be asked to someone with whom they were acquainted (Napier, et al., 1977:7-8).

**Operationalization of the Independent Variables**

The variables used as independent variables in this study include gender, age, education, number of children living at home, occupation, and income. These variables were selected on the basis of their representation of relevant investments to exchange situations involving rural industrialization, as discussed in the previous chapter. The independent variables cover a wide range of possible investments which rural residents could possess relative to the industrialization of their region. As discussed above, these investments include relevant social characteristics and relevant past activities which individuals bring into the exchange situations.

Gender of the respondent was measured as a dummy variable, with male equal to 1 and female equal to 0.
The respondent's age was measured in number of years.

Education of the respondent was also measured in number of years.

The number of children living at home was indicated by the actual number, from 0 through 9 and over.

Income was recorded as the total family income for the previous year. Income was operationalized into twenty-one categories, each covering a $1000 interval. Thus, the income categories ranged from $0 - 999 through $20,000 and over. The weights assigned to the categories were 0, for $0 - 999, through 20, for $20,000 and over.

Occupation was reported as the major occupation of the primary income earner. If the major income earner was retired or unemployed, the occupation was indicated as the last occupation before retirement. The questionnaire item asking for occupation was open-ended, and the responses were coded into eight categories based upon the census occupational classification. The occupational categories, from low to high values, were: unclassified, service worker, farmer, unskilled laborer, skilled blue collar laborer, white collar, manager-administrator, and professional. The categories were treated as nominal-level categories in subsequent analysis.

Operationalization of the Attitude Variables

The measurement technique used to gather data for the perceived benefit scale and the attitude toward industrialization scale was multiple Likert-type items. The scale items had been formulated and used in previous research (Napier 1971, 1972, 1975) and modified to be used to assess the attitudes toward industrialization. Care was taken to avoid any overlap between the two scales to insure that the two scales
did not measure the same attitude. While the scales were similar in that they were designed to measure attitudes toward certain aspects of rural industrialization, the aspects measured are quite different, and can be distinguished. The content areas of the scales were chosen on the basis of the social exchange perspective discussed in the theory chapter, and from scales constructed and used in previous research (Napier 1971, 1972, 1975; Hough and Clark 1969). The major distinction between the two scales is that the attitude toward industrialization scale measures a general evaluation of the specific object of the attitude, namely industrial development of the region. The perceived benefit scale deals with the instrumental value, for the individual, anticipated from the attitude object. This type of distinction has been defended by social psychologists and in attitudinal research (Rosenberg 1956, 1960; Peak 1955; Hough and Clark 1969).

The statements of the perceived benefit scale specifically entail anticipated benefits, both to the individual and to his/her family. In addition, one particular benefit was included, that of jobs, since jobs have often been among the most significant anticipated benefits of industrial development. Thus, this scale remained strictly within the realm of personal rewards (instrumental value) perceived from industrial development.

The attitude toward rural industrialization scale included more general evaluations of industrial development, such as those utilized in previous research (Hough and Clark 1969). Among these evaluations are the need, justification, overall goodness or badness, and other indirect effects of industrial development upon the region. In this way, the favorability or unfavorability of rural industrialization was
measured.

There were five possible responses to each of the scale item statements: strongly agree (SA), agree (A), undecided (U), disagree (D), or strongly disagree (SD). The responses were weighted from 1 to 5, depending upon whether the statement was positive or negative. Higher scale scores were defined as being positive toward the phenomenon being evaluated.

Two items composed the perceived possible benefit of rural industry scale. The items included possible benefit to the individual and his/her family. Based upon the social exchange perspective and upon previous research, it was assumed that personal benefit is considered a desirable reward, and therefore is a potential explanatory variable of general attitudes toward industrialization. The two perceived potential benefit items are presented below with the weighting values for each response.

<table>
<thead>
<tr>
<th>Item</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Industrial development in my region will benefit me or some member of my household.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Someone in my household would qualify for some of the new jobs formed by outdoor recreation or industrial development.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Eight items were chosen to comprise the attitude toward rural industrialization scale. These items measured general attitudes toward rural industrial development on a regional basis. Among the general aspects included in the scale are attitudes toward costs of industrial development, problems created by industrial development, and general perceptions of need for industrial development. Other concepts included in the scale are industrial siting and perceived impact of industry of industry upon the region as a place of residence. It is argued that
the resultant scale is measuring an aspect of activity within the ex-
change perspective, since the rewards and costs of the attitude object
(industrialization) are evaluated by the individual.

The scale items and response scores are presented below. Higher
scale scores represent more positive orientations toward the phenomenon
under study.

<table>
<thead>
<tr>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
</table>
| 1. The costs of industrial development in
  my region can be justified. | 5 | 4 | 3 | 2 | 1 |
| 2. Industrial development is not needed in
  my region. | 1 | 2 | 3 | 4 | 5 |
| 3. The disadvantages brought to my region by
  industrial development will offset the
  advantages. | 1 | 2 | 3 | 4 | 5 |
| 4. Industrial development in my region will
  create many problems for people living here. | 1 | 2 | 3 | 4 | 5 |
| 5. Industries should not be encouraged to
  locate in my region. | 1 | 2 | 3 | 4 | 5 |
| 6. Industrial development of my region will
  provide many jobs for local people. | 5 | 4 | 3 | 2 | 1 |
| 7. Industrial development will make my region
  a better place in which to live. | 5 | 4 | 3 | 2 | 1 |
| 8. Industrial development will benefit my
  region. | 5 | 4 | 3 | 2 | 1 |

**Item Analysis and Factor Analysis of the Scales**

To test the reliability of the attitudinal scales, a Kuder-Rich-
ardson item analysis was employed. The Kuder-Richardson method mea-
sures each item's reliability, and the total scale reliability of a
Likert-type scale. The method basically examines the internal consist-
tency of the scale by comparing the total scale scores to the individual
item scores. Both the item reliability and scale reliability are measured as a positive number between 0.0 and 1.0. The minimum acceptable value for both an item reliability and a scale reliability is 0.3. The value of the scale reliability is interpretable as the variance in the total scores which can be attributed to the internal consistency of the items included in the scale (Johnson and McCabe 1975; Kudder and Richardson 1937).

The reliability of each of the scales, and of all the items involved, were significantly higher than the 0.3 significance value. The test reliability of the perceived benefit was 0.527, and for the attitude toward industrialization scale was 0.846. (See Table 2.) Since the reliability coefficients were so high, it was concluded that the scale items were sufficiently intercorrelated to be combined into composite indices.

To test the independence of the two scale measures, a factor analysis of all the attitude items included in both scales was performed. Metric interval-level measurement of the attitude items was assumed, to permit factor analysis of the data set (Nie, et al., 1975:6). Factor analysis was used to ascertain whether or not the scale items which were used to form composite indices would be reproduced as separate factors. The pattern of factor loadings indicates how the variables are related to each other, geometrically, since variables which vary in a similar manner load into the same factor. Variables which load into a particular factor have characteristics in common which are not shared by the other factors in the analysis (Rummel 1967). As shown in Table 3, two significant factors were present among the attitude items. All of the attitude toward industrialization items loaded into factor 1, and both
Table 2: Item and Scale Reliabilities for the Perceived Benefit and Attitude Toward Rural Industrialization Scales

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean Response</th>
<th>Standard Deviation</th>
<th>K-R Test Reliability*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCEIVED BENEFIT SCALE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial development in my region will benefit me or some member of my household.</td>
<td>4.14</td>
<td>1.12</td>
<td>0.528</td>
</tr>
<tr>
<td>Someone in my household would qualify for some of the new jobs formed by outdoor recreation or industrial development.</td>
<td>3.54</td>
<td>1.25</td>
<td>0.528</td>
</tr>
<tr>
<td>Total Scale</td>
<td>7.68</td>
<td>2.07</td>
<td>0.527</td>
</tr>
<tr>
<td>ATTITUDE TOWARD RURAL INDUSTRIALIZATION SCALE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The costs of industrial development in my region can be justified.</td>
<td>3.90</td>
<td>0.88</td>
<td>0.582</td>
</tr>
<tr>
<td>Industrial development is not needed in my region.</td>
<td>4.28</td>
<td>0.94</td>
<td>0.668</td>
</tr>
<tr>
<td>The disadvantages brought to my region by industrial development will offset the advantages.</td>
<td>3.68</td>
<td>1.12</td>
<td>0.470</td>
</tr>
<tr>
<td>Industrial development in my region will create many problems for people living here.</td>
<td>3.73</td>
<td>1.06</td>
<td>0.568</td>
</tr>
<tr>
<td>Industries should not be encouraged to locate in my region.</td>
<td>4.19</td>
<td>0.98</td>
<td>0.622</td>
</tr>
<tr>
<td>Industrial development of my region will provide many jobs for local people.</td>
<td>4.37</td>
<td>0.81</td>
<td>0.610</td>
</tr>
<tr>
<td>Industrial development will make my region a better place in which to live.</td>
<td>4.08</td>
<td>0.95</td>
<td>0.716</td>
</tr>
<tr>
<td>Industrial development will benefit my region.</td>
<td>4.24</td>
<td>0.84</td>
<td>0.690</td>
</tr>
<tr>
<td>Total Scale</td>
<td>32.45</td>
<td>5.43</td>
<td>0.846</td>
</tr>
</tbody>
</table>

* A value of 0.3 for both an item and a scale is considered statistically significant.
Table 3: Factor Analysis of Attitude Items; Varimax Rotated Factor Matrix

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial development in my region will benefit me or some member of my household.</td>
<td>0.296</td>
<td>(0.784)</td>
<td>0.702</td>
</tr>
<tr>
<td>The costs of industrial development in my region can be justified.</td>
<td>(0.568)</td>
<td>0.409</td>
<td>0.489</td>
</tr>
<tr>
<td>Industrial development is not needed in my region.</td>
<td>(0.706)</td>
<td>0.293</td>
<td>0.583</td>
</tr>
<tr>
<td>The disadvantages brought to my region by industrial development will offset the advantages.</td>
<td>(0.674)</td>
<td>-0.082</td>
<td>0.462</td>
</tr>
<tr>
<td>Industrial development in my region will create many problems for people living here.</td>
<td>(0.707)</td>
<td>0.072</td>
<td>0.506</td>
</tr>
<tr>
<td>Industries should not be encouraged to locate in my region.</td>
<td>(0.702)</td>
<td>0.209</td>
<td>0.536</td>
</tr>
<tr>
<td>Industrial development of my region will provide many jobs for local people.</td>
<td>(0.594)</td>
<td>0.410</td>
<td>0.521</td>
</tr>
<tr>
<td>Industrial development will make my region a better place in which to live.</td>
<td>(0.710)</td>
<td>0.332</td>
<td>0.658</td>
</tr>
<tr>
<td>Someone in my household would qualify for some of the new jobs formed by outdoor recreation or industrial development.</td>
<td>0.023</td>
<td>(0.862)</td>
<td>0.744</td>
</tr>
<tr>
<td>Industrial development will benefit my region.</td>
<td>(0.709)</td>
<td>0.326</td>
<td>0.609</td>
</tr>
</tbody>
</table>

| Eigenvalue | 4.686 | 1.124 |
| Percent of Total Variance | 46.9 | 11.2 | Total 58.1 |
| Percent of Common Variance | 80.7 | 19.3 | 100.0 |
of the perceived benefit items loaded into factor 2. Based upon the assumption of factor analysis that different factors are statistically independent from each other, it was concluded that the two attitude scale variables are independent measures, as was anticipated from the social psychological and exchange theoretical bases upon which the scales were formulated.

**Analyses Used For Testing the Theoretical Model**

To analyze the relationships among the variables in the study, multiple correlation and regression analyses as well as analysis of variance statistics were utilized. To permit parametric analyses, the assumption was made that Likert scale scores (which were the sum of the individual item scores of the scale) meet the requirements of ordered metric measures. While such scale measurements are not strictly interval level, it has frequently been demonstrated that ordered metric scales can be meaningfully analyzed by the use of parametric statistics. An ordered metric measurement approximates very closely a metric interval level measurement. It has been argued that error which may result from the slightly lower level of measurement is compensated by the more powerful statistical analysis (Labovitz 1970; Nie, et al., 1975:6; Abelson and Tukey 1959).

Multiple correlation and regression techniques were chosen to analyze the relationships among the variables of age, education, number of children living at home, income, gender, the perceived benefit scale, and the attitude toward industrialization scale. The application of such parametric tests to the scale data was deemed appropriate following the above discussion. Regression analysis is appropriate for the
variables age, education, number of children living at home, and income because they meet the metric measurement assumption of fixed and equal intervals. Gender was included in the regression analysis as a two-category dummy variable. Linear relationships among the variables were assumed. All missing values in the data set were assigned the variable mean.

To analyze the relationships between occupation and the two attitudinal scales, one-way analysis of variance was applied to the data. Analysis of variance was considered appropriate since the measurement of the occupation categories is nominal level while the dependent variable is metric. Analysis of variance statistics are most meaningful when the independent variable categories are of equal frequencies. While the calculations do not demand equal group frequencies, the results are most meaningful if the group sizes are approximately the same. For this reason, the eight occupational categories were collapsed into four with each containing approximately one-fourth of the sample. The three lesser skilled occupations (unclassified, service worker, and farmer) were combined into one category containing 20.1 percent of the sample. Unskilled labor, with 27.0 percent of the sample, remained a separate category, as did skilled blue collar labor, which composed 25.5 percent of the sample. The three highest skilled occupations were combined. The resultant white collar-manager-administrator-professional category comprised 27.4 percent of the sample. The four categories used in the analysis were unclassified-service-farmer, unskilled labor, skilled blue collar labor, and white collar-manager-administrator-professional. With these four categories, the hypotheses concerning occupation may still be easily tested, and the analysis of variance
techniques become more meaningful. The results of all of the analyses are reported in the following chapter.
CHAPTER IV

RESEARCH FINDINGS

Responses to Attitude Items

Multiple correlation and stepwise regression as well as analysis of variance statistical techniques were employed to test the research hypotheses. Appropriate statistics were selected on the basis of assumptions which could be made relative to the data. Before the hypotheses were tested with multivariate statistics, the response frequencies of the attitude items were examined. The responses to the two items which were included in the perceived benefit scale showed that a large majority of the sample believed that they would benefit from industrialization. Fewer respondents felt that they or a member of their family would qualify for new jobs that could result in the region, but these respondents were also clearly in the majority. (See Table 4.)

Responses to the remaining eight attitude items, which composed the attitude toward rural industrialization scale revealed that the majority of the sample was extremely favorable toward industrial development. For each of the items, well over 50 percent of the respondents indicated favorability toward industrialization. As shown in Table 4, the respondents generally believed that industrial development is needed and will provide many indirect benefits to the region. Although the responses to the attitude items were for the most part positive
Table 4: Attitudinal Item Response Frequencies, N = 1493, Percentages in Parentheses (%)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>Mean*</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial development in my region will benefit me or some member of my household.</strong></td>
<td>728</td>
<td>495</td>
<td>78</td>
<td>128</td>
<td>64</td>
<td>4.1</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>(48.8)</td>
<td>(33.2)</td>
<td>(5.2)</td>
<td>(8.6)</td>
<td>(4.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Someone in my household would qualify for some of the new jobs formed by outdoor recreation or industrial development.</strong></td>
<td>398</td>
<td>511</td>
<td>175</td>
<td>321</td>
<td>88</td>
<td>3.5</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>(26.7)</td>
<td>(34.2)</td>
<td>(11.7)</td>
<td>(21.5)</td>
<td>(5.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The costs of industrial development in my region can be justified.</strong></td>
<td>381</td>
<td>686</td>
<td>337</td>
<td>70</td>
<td>19</td>
<td>3.9</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>(25.5)</td>
<td>(45.9)</td>
<td>(22.6)</td>
<td>(4.7)</td>
<td>(1.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Industrial development is not needed in my region.</strong></td>
<td>34</td>
<td>74</td>
<td>79</td>
<td>561</td>
<td>745</td>
<td>4.3</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>(2.3)</td>
<td>(5.0)</td>
<td>(5.3)</td>
<td>(37.6)</td>
<td>(49.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The disadvantages brought to my region by industrial development will offset the advantages.</strong></td>
<td>62</td>
<td>216</td>
<td>230</td>
<td>615</td>
<td>370</td>
<td>3.7</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>(4.2)</td>
<td>(14.5)</td>
<td>(15.4)</td>
<td>(41.2)</td>
<td>(24.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Industrial development in my region will create many problems for people living here.</strong></td>
<td>38</td>
<td>229</td>
<td>181</td>
<td>696</td>
<td>349</td>
<td>3.7</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>(2.5)</td>
<td>(15.3)</td>
<td>(12.1)</td>
<td>(46.6)</td>
<td>(23.4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Based on scoring values of responses as presented in Chapter III. (Continued on following page)
Table 4 (continued):

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>Mean*</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industries should not be encouraged</td>
<td>46</td>
<td>85</td>
<td>80</td>
<td>618</td>
<td>664</td>
<td>4.2</td>
<td>1.0</td>
</tr>
<tr>
<td>to locate in my region.</td>
<td>(3.1)</td>
<td>(5.7)</td>
<td>(5.4)</td>
<td>(41.4)</td>
<td>(44.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial development of my region</td>
<td>757</td>
<td>607</td>
<td>69</td>
<td>39</td>
<td>21</td>
<td>4.4</td>
<td>0.8</td>
</tr>
<tr>
<td>will provide many jobs for local</td>
<td>(50.7)</td>
<td>(40.7)</td>
<td>(4.6)</td>
<td>(2.6)</td>
<td>(1.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial development will make my</td>
<td>558</td>
<td>648</td>
<td>170</td>
<td>84</td>
<td>33</td>
<td>4.1</td>
<td>1.0</td>
</tr>
<tr>
<td>region a better place in which to</td>
<td>(37.4)</td>
<td>(43.4)</td>
<td>(11.4)</td>
<td>(5.6)</td>
<td>(2.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>live.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial development will benefit</td>
<td>622</td>
<td>700</td>
<td>96</td>
<td>50</td>
<td>25</td>
<td>4.2</td>
<td>0.8</td>
</tr>
<tr>
<td>my region.</td>
<td>(41.7)</td>
<td>(46.9)</td>
<td>(6.4)</td>
<td>(3.3)</td>
<td>(1.7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
toward both perceived benefit and attitude toward industrialization, there remains sufficient variance in the responses to warrant the study of possible differentiating, explanatory variables.

**Regression Analysis**

Several multiple regression analyses were performed to evaluate the merits of the hypotheses involving the perceived benefit scale and the attitude toward industrialization scale with age, education, gender, number of children living at home, and income. The stepwise regression technique was utilized for the analysis of all independent variables. The stepwise regression technique permits the entry of the most significant variables in the reduction of the unexplained variance in the dependent variables, in order of importance from most to least significant. The general linear regression equation using standardized regression coefficients is:

\[ Y = B_1X_1 + B_2X_2 + \ldots + B_kX_k + E \]

Where:
- \( Y \) = score of dependent variable
- \( B_i \) = standardized regression coefficient (beta)
- \( X_i \) = score of independent variable
- \( E \) = residual error.

The \( B \) (beta) coefficient is interpreted as the amount of standard deviation change in the dependent variable resulting from one standard deviation change of the independent variable. For example, a beta coefficient of 0.5 indicates that for every change in the independent variable's score of one standard deviation, the dependent variable's score will change by 0.5 standard deviation. The residual error term represents the variation of the dependent variable not explained by the regression model.
Additional statistics calculated during the regression analyses are the multiple correlation (R) coefficient, the coefficient of determination (R²), the F-ratio of the entering variable, and the F-ratio for the total model. Each of these statistics was calculated at each step of the regression procedure. The multiple correlation (R) coefficient is a measure of the strength of the regression model's correlation between the independent variables and the dependent variable. The coefficient of determination (R²) may be interpreted as the proportion of variance in the dependent variable explained by the independent variables in the model. The F-ratios are a measure of the significance of the entering variable of each regression step, and for the total regression model at each step in the analysis. The above techniques were applied to the data set, and the results are reported below.

The correlation matrix, indicating the strength of the relationships between all of the pairs of variables used in the regression analysis, is presented in Table 5. The dependent variable in the multiple regression was attitude toward industrialization, and the independent variables were age, gender, education, income, number of children living at home, and perceived benefit.* Since the

* Regression analyses were performed upon the attitude toward industrialization scale using age, gender, education, income, and number of children living at home as independent variables, and upon the perceived benefit scale using the same five independent variables. These two analyses were performed to test the direct effects of the investment variables upon each of the attitude variables, as hypothesized in the theoretical model. The results of these regression computations, which are presented in Appendix A, demonstrated weak to negligible relationships present with extremely high residuals. Since the effects of these five investment variables upon the attitude toward industrialization variable were very weak, the hypothesized model with perceived benefit as an intervening variable was basically repudiated.
### Table 5: Observed Correlation Matrix for Variables Used in the Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>$X_1$</th>
<th>$X_2$</th>
<th>$X_3$</th>
<th>$X_4$</th>
<th>$X_5$</th>
<th>$X_6$</th>
<th>$Y$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>$X_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
<td>0.128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>EDUCATION</td>
<td></td>
<td></td>
<td>0.165</td>
<td>-0.310</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO. OF CHILDREN</td>
<td></td>
<td></td>
<td></td>
<td>0.019*</td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>INCOME</td>
<td></td>
<td>0.015*</td>
<td>-0.189</td>
<td></td>
<td>0.237</td>
<td>0.145</td>
<td>1.000</td>
</tr>
<tr>
<td>PERCEIVED BENEFITS</td>
<td></td>
<td>-0.031*</td>
<td>-0.264</td>
<td>-0.051</td>
<td>0.255</td>
<td>0.067</td>
<td>1.000</td>
</tr>
<tr>
<td>ATTITUDES TOWARD INDUSTRIALIZATION</td>
<td></td>
<td></td>
<td></td>
<td>-0.002*</td>
<td>-0.049*</td>
<td>-0.067</td>
<td>0.115</td>
</tr>
</tbody>
</table>

* Not significant at the .05 level.
standardized regression coefficients are partial coefficients, the effect of each independent variable upon the dependent variable has been controlled for all other independent effects.

The null hypotheses, which were derived from the theory presented above and statistically tested, were that no significant relationships exist between: 1) gender and attitude toward industrialization; 2) age and attitude toward industrialization; 3) education and attitude toward industrialization; 4) number of children living at home and attitude toward industrialization; 5) income and attitude toward industrialization; and 6) perceived benefit and attitude toward industrialization. The results show that income, education, number of children living at home, and gender did not have significant direct effects upon attitude toward industrialization. The data do not support the rejection of the null hypotheses regarding these four investment variables. The null hypothesis concerning age and attitude toward industrialization is rejected, since the relationship between attitude toward industrialization and age is significant beyond the .05 level; however, the magnitude of the relationship is quite small. The relationship is also positive, which is contrary to the theoretical expectations. The perceived benefit variable is responsible for virtually all of the explained variance in the attitudes toward industrialization. The null hypothesis concerning perceived benefit and attitude toward industrialization is rejected. The best regression model for the variables tested is \( Y = .500 X_1 + .084 X_2 + .875 \) (\( X_1 \) = perceived benefit, \( X_2 \) = age). This evidence indicates that when the effects of all of these independent variables are controlled, the direct effect of the investment variables upon attitude toward industrialization is
virtually nonexistent, while perceived benefit becomes the major explanatory variable. (See Table 6.)

Analysis of Variance

Analysis of variance was used to test the relationships between occupation and the two attitudinal scale variables. Analysis of variance is appropriate because the categories of occupation (independent variable) do not meet the assumption of metric, interval level data. The analysis of variance technique basically makes a comparison of between group variance with within group variance. The significance of this comparison is testable as an F-ratio. The statistic termed eta-square is also calculated during the computations of the analysis of variance. Eta-square is interpreted as the proportion of variance in the dependent variable explained by the categories of the independent variable. (For computational formulas, see Nie, et al., 1975:400-407). The above techniques were applied to the data involving occupation and the two attitude variables, and the results are presented below.

The null hypotheses were derived to test the direct effect of occupation upon perceived benefit, and also upon attitude toward industrialization, as hypothesized by the theoretical model. The null hypotheses tested by analysis of variance are: 1) there is no significant relationship between occupation and perceived benefit of industrialization; and 2) there is no significant relationship between occupation and attitude toward industrialization.

The means of the perceived benefit scale scores for the occupational categories show that the white collar-manager-administrator-professional category had the lowest scores, although it was
Table 6: Summary Statistics of the Multiple Regression Analysis of the Attitude Toward Rural Industrialization Scale With Investment Variables and Perceived Benefit Scale.

<table>
<thead>
<tr>
<th>Step</th>
<th>PERCEIVED BENEFITS</th>
<th>Standardized Regression (Beta) Coefficients</th>
<th>Multiple R</th>
<th>Multiple R²</th>
<th>Entering Variable F-Ratio</th>
<th>Total Regression F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PERCEIVED BENEFITS</td>
<td>AGE</td>
<td>INCOME</td>
<td>EDUCATION</td>
<td>NO. OF CHILDREN</td>
<td>GENDER</td>
</tr>
<tr>
<td>1</td>
<td>0.478</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.500</td>
<td>0.084</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.500</td>
<td>0.090</td>
<td>0.033</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.496</td>
<td>0.082</td>
<td>0.037</td>
<td>-0.025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.494</td>
<td>0.086</td>
<td>0.036</td>
<td>-0.024</td>
<td>0.013</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.493</td>
<td>0.084</td>
<td>0.035</td>
<td>-0.026</td>
<td>0.014</td>
<td>0.008</td>
</tr>
</tbody>
</table>

* Not significant at the .05 level.
hypothesized to have the highest scores. The skilled blue collar
category had the highest category mean, followed by unskilled labor, and
the unclassified-service-farmer group. The analysis of variance of the
perceived benefit scale by the occupational categories indicated a
significant relationship, but the eta-square was extremely low.

With regard to attitude toward industrialization, the category
means of the scale scores indicate that the white collar-manager-
administrator-professional category, which was again hypothesized to
have the highest scores, had the second-lowest scores. The skilled
blue collar category had the highest category mean, followed by un-
skilled labor, with unclassified-service-farmer the lowest. Analysis
of variance showed that the relationship between occupation and atti-
tude toward industrialization was statistically significant, but the
eta-square was once again very low. Both null hypotheses involving
occupation were rejected; however, the eta-square values were so low
that the relationships are of little substantive meaning. (See Table
7.)

A Path Analysis of the Variables in the Model

A path analysis of the variables used in the regression analysis
was conducted as a final test of the model. The purpose of the path
analysis was to illustrate the hypothesized indirect effects of the
investment variables upon attitudes toward industrialization through
the perceived benefit variable. As discussed above, the residuals and
explained variance involving the investment variables indicated that
the relationships provided little substantive meaning. Path modeling
results in the exclusion of insignificant relationships among the
Table 7: Summary of Analysis of Variance of Perceived Benefit Scale By Occupation, and Attitude Toward Industrialization Scale By Occupation

PERCEIVED BENEFIT BY OCCUPATION  (Grand Mean = 7.68)

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>Category Mean</th>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig. Level</th>
<th>Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unclassified-Service-Farmer</td>
<td>7.49</td>
<td>EXPLAINED</td>
<td>141.3</td>
<td>3</td>
<td>47.1</td>
<td>11.19</td>
<td>0.001</td>
<td>0.02</td>
</tr>
<tr>
<td>Unskilled Labor</td>
<td>7.87</td>
<td>RESIDUAL</td>
<td>6267.6</td>
<td>1489</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled Blue Collar</td>
<td>8.05</td>
<td>TOTAL</td>
<td>6408.9</td>
<td>1492</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Collar-Manager-Administrator-Professional</td>
<td>7.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ATTITUDE TOWARD INDUSTRIALIZATION BY OCCUPATION  (Grand Mean = 32.45)

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>Category Mean</th>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig. Level</th>
<th>Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unclassified-Service-Farmer</td>
<td>31.11</td>
<td>EXPLAINED</td>
<td>1200.9</td>
<td>3</td>
<td>400.3</td>
<td>13.96</td>
<td>0.001</td>
<td>0.03</td>
</tr>
<tr>
<td>Unskilled Labor</td>
<td>32.55</td>
<td>RESIDUAL</td>
<td>42696.3</td>
<td>1489</td>
<td>28.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled Blue Collar</td>
<td>33.73</td>
<td>TOTAL</td>
<td>43897.2</td>
<td>1492</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Collar-Manager-Administrator-Professional</td>
<td>32.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
variables included in the data set. The final path model is composed of statistically significant relationships which can be used to accurately reproduce the correlation matrix of the observed data to test the mathematical model.

A path coefficient is a measure of the direct effect of one variable in the model upon another. Path coefficients are calculated and interpreted as partial standardized regression (beta) coefficients. A path model summarizes all of the direct effects among the variables in the model by statistically eliminating indirect effects through other variables in the model and spurious effects with possible variables outside of the model. The path model, then, illustrates the significant interactions of the variables included in the model.

The ordering of the variables in the path model, based upon the theoretical perspective presented in chapter II, was generally chronological. Age and gender are characteristics of an individual determined at the time of birth. Educational achievement generally precedes and influences one's income and number of children living at home. Income was hypothesized to have an effect upon the number of children, rather than the reverse, because status variables generally have an effect upon such family characteristics (Miller 1968). As noted in the theory portion of the research, the investment variables were hypothesized to have an effect upon perceived benefits of industrialization, which in turn could have an effect upon the attitudes toward industrialization.
The model including all significant paths* is presented in Figure 1. The investment variables generally had some effect upon the perceived benefit variable, but the residual was very high. Perceived benefit accounted for nearly all of the explained variance in the attitude toward industrialization variable. Age was the only investment variable which had a significant direct relationship with the attitude toward industrialization, but the magnitude of the effect of age was extremely low. The path model generally supports the theoretical perspective presented. Perceived benefit was indeed an intervening factor between the investment variables and attitudes toward industrialization. It should be again emphasized, however, that the magnitude of the residual variance was quite high.

Synopsis of Findings

A brief synopsis of the research findings is presented below.

A) The frequencies of the responses to the individual attitude items indicate that the respondents generally perceived considerable personal benefit to be derived from industrialization, and were quite favorable toward rural industrial development.

B) Occupation had a significant relationship with the perceived benefit variable, as well as with the attitude toward industrialization variable. However, virtually none of the variance in either scale is explained by the relationship to occupation.

* A significant path coefficient had a significant F-value as it was entered in the computational formulas. In addition, all the paths of the model can be used to calculate a correlation (R) matrix in which all values are within .05 of the observed values.
Figure 1: Path Analysis Model of the Variables Used in the Regression Analysis
C) The degree of perceived benefit of industrialization has a relatively strong, positive effect upon the favorability toward industrialization. When the effects of the investment variables (age, gender, number of children living at home, education, and income) and perceived benefit upon attitude toward industrialization are controlled, perceived benefit is responsible for nearly all of the explained variance in the dependent variable. Income, number of children living at home, education, and gender do not have significant direct effects upon attitudes toward industrialization. Age has a very low but significant, positive relationship (the opposite direction of that predicted) with attitudes toward industrial development. Perceived benefit explains a moderate amount of the variance in attitude toward industrialization. A path model including these variables was constructed to illustrate the interrelationships among these variables. The path model generally supported the theoretical perspective offered, but the high residuals indicate that the model is of little substantive utility.

The summary, conclusions, and implications of this research are discussed in the following chapter.
CHAPTER V
SUMMARY AND CONCLUSIONS

This study was designed to evaluate the attitudes toward industrialization of people within a lesser developed region of Ohio. The study was intended to provide decision-makers with baseline information which could be taken into account for future development planning efforts. A social exchange perspective was developed to formulate hypotheses for testing. The theoretical model as it was constructed posited that persons with greater investments relevant to situations involving industry would tend to perceive greater personal benefit to be derived from industrial development and would, therefore, exhibit more favorable attitudes toward rural industrialization.

The variables chosen to represent investment factors were age, gender, education, income, number of children living at home, and occupation. The perceived benefit variable and the attitude toward industrialization variable were both operationalized as Likert-type attitudinal scales. A Kuder-Richardson item analysis and factor analysis were performed upon the items of the two attitudinal scales as evidence of the two scales' degree of reliability and independence. The statistical tests applied to the data set were multiple correlation, multiple regression, and analysis of variance techniques. Path analysis was also employed to illustrate the interrelationships of the variables based
upon the theoretical model.

The response frequencies of the attitude items indicate that the respondents were very favorable toward industrial development. A majority of the sample also perceived that they or members of their families would benefit from industrialization. The respondents perceived that industrial development would be beneficial, both to themselves and to the region. Industrial development is generally viewed as a desirable solution to existing problems of decline within the rural region. While the attitudes toward the various aspects of rural industrialization are generally of a positive nature, considerable variation exists within the response sets. The aim of the study was to examine some possible explanatory factors of this variation, based upon the social exchange perspective.

Support of the Findings for the Theoretical Model

The research findings provided partial support for the theoretical explanation developed in the study. The social exchange perspective was basically supported since the perceived benefit variable was the most significant factor in the explanation of attitudes toward industrial development. Persons who believed that they would derive personal benefit from industrial development tended to be more favorable to such development efforts than persons who did not strongly believe that they would personally benefit. The theoretical perspective relative to the investment variables tended to collapse under examination. The investment variables explained very little of the variance in industrial attitudes. The implications of the findings of the various tests which were performed are discussed below.
The correlation coefficients among the variables in the analysis provide partial support for the theoretical model as it was presented. Age and number of children living at home were significantly correlated with perceived benefit, as hypothesized. Perceived benefit and attitude toward industrialization have a moderately strong correlation. There are other significant correlations involving the hypothesized relationships of variables, but the magnitudes of the correlations are weak or negligible. The correlations support the hypothesized effect of perceived benefit upon attitude toward industrialization. The portion of the model involving the investment variables is basically repudiated by the correlations. It may be concluded from the correlation matrix that perceived benefit has the strongest effect upon attitude toward industrialization, while the various investment variables do not relate to industrial attitudes as hypothesized.

The regression analysis and the analysis of variance also provided only partial support of the model. The investment variables were found to have some significant effects upon the perceived benefit variable, but the magnitude of these effects is relatively weak. The hypothesized direct effect of the investment variables upon attitude toward industrialization is not supported by the findings. Since the investment variables have virtually no zero-order association with the attitude toward industrialization variable, the hypothesized role of perceived benefit as an intervening variable between the investment variables and attitude toward industrialization is repudiated. The direct effect of perceived benefit upon attitude toward industrialization is supported, and explains a moderate proportion (23%) of the variance in
the dependent variable. These results suggest that those who perceive personal benefit from industrial development tend to have more favorable attitudes toward rural industrialization. Once again, however, the model collapses relative to the effect of investment variables upon industrial attitudes.

The path analysis illustrated the interrelationships among the variables. The residuals of the path model, particularly the residual path of perceived benefit, were so high that the model is of little substantive meaning relative to explaining the variance of the attitude variables. There were virtually no direct effects of the investment variables upon attitude toward industrialization. The overall theoretical model is not upheld by the path analysis since the investment variables are not involved as hypothesized, especially with respect to the effects upon perceived benefit. However, the use of the social exchange perspective is generally supported, since the path model indicates the importance of the effect of perceived benefit upon attitude toward industrialization. The residual path coefficient of the attitude toward industrialization variable is somewhat lower than the other residuals (although is still relatively high), and the perceived benefit variable accounts for virtually all of the explained effect upon attitudes toward industrialization.

The total theoretical model is not supported by the analyses performed upon this data set. The relationships involving the investment variables indicate that they have very little explanatory power relative to either perceived benefit or attitude toward industrialization. There is generally random variance of the scores of the
perceived benefit scale and the attitude toward industrialization scale according to the values or categories of the investment variables. This indicates that little difference in such attitudes exists among those of differing investments. It appears that the various segments of the population are favorable toward industrial development and perceive benefits from industrialization in a random fashion.

The hypothesized effect of perceived benefit upon the attitude toward industrialization was supported by the research findings. This finding is consistent with the social exchange orientation as discussed in Chapter II. Perceived benefit represents the rewards anticipated by the individual from activities relating to industrialization. According to the exchange perspective, a person will seek to engage in those activities from which rewards may be derived. Favorability toward a certain activity is influenced by the degree to which the individual perceives rewards as resulting from participation in the activity. The research findings suggest that those persons who anticipate personal reward from the industrialization of their region are the ones who are most favorable toward industrial development. Conversely, those persons who perceive little or no personal benefit are less favorable toward activities relating to industrial development. This relationship indicates that the exchange orientation may have considerable utility for developmental research and planning, since rewards relating to the development activity are predictive of attitudes toward the development.

Based upon the social exchange perspective, persons with differing investments relevant to industrial development should also differ as to
their favorability toward industrialization. These data, however, show that this is not the case. The various segments of the sample, regardless of their relative industrial investments, appear to be randomly favorable toward industrialization in their region. Since the attitude toward industrialization scale included attitudes toward the indirect effects of the industry upon the region, the findings also indicate that persons of all levels of investment perceive that the effects of industry upon the region will indirectly beneficial to them.

This finding suggests that the view of industry as a wide-range problem solver which is beneficial to everyone permeates the entire population (in other words, all levels of investment). As presented in the literature and in previous research, residents feel that the overall viability of the region, especially the economic viability, will be enhanced by industrialization. It appears that all segments of the population of the study region also perceive that the total economic viability of the region can be improved by industry. The collapse of the segment of the model involving the investment variables can be explained in terms of this widespread attitude. While those of differing investments may realize that the benefits of industry will not be equally distributed to all residents, even those of lower investments anticipate that the indirect effects of industry upon the regional economic system will be beneficial. Any indirect benefits which may result from industry, regardless of the degree of benefit relative to individuals of other segments of the population, are perceived favorably by individuals of all levels of investments. Thus, any resulting increase in the overall economic viability of the region, even though
the benefits might be unequally distributed or indirectly received, is considered favorable by all segments of the regional population.

Implications for Local Development

The effect of perceived benefit suggests that for people to be favorable toward industrial development, they must perceive that the development will be beneficial to them. This has implications regarding public support; people will be more likely to support developmental activities which they consider rewarding. Such a consideration is important for the entire developmental process. A development program with goals not perceived as beneficial by the population might have a tendency to be viewed less favorably and receive less public support. To receive public favorability and support, long range goals must be perceivable by the population as rewarding.

The literature suggests, on the other hand, that the entire industrial development process, from initial planning to the beginning of plant operations, is usually a long term process, perhaps a matter of years. If the only rewards to the population are several years away, the population is less likely to perceive them as personally rewarding. The implication is that various smaller scale, but more tangible, rewards which may accrue to the population throughout the development process could greatly enhance public favorability toward the development effort.

To maintain public support throughout the developmental process, smaller scale benefits to the population at various stages of the development effort could prove to be quite instrumental. Residents
favorable toward the development effort may be more willing to commit personal resources or time to development activities. Since it has been found that the organization and mobilization of community groups within a development effort is influential in industrial location and development (Williams, et al., 1977), this implication takes on added importance for the developmental planning of rural industry. The indication to future industrial planning efforts is that the population may be favorable and willing to commit themselves to industrial planning as long as personal benefits are perceived from the development activity.

Within a developmental planning framework, this study is an example of how information about the resident population relative to development efforts can be collected and analyzed. It may be assumed that an accurate picture of residents' attitudes toward various aspects of rural industrialization has been obtained, based upon the methodology and instruments which were employed. An attempt has been made to illustrate how such a data set can have utility for development activity.

**Areas for Further Research**

Although the findings of the research have implications for rural industrial development, several suggestions for future research emerge. Considering the lack of support for the theoretical model provided by relationships involving the investment variables, it appears that such basic socioeconomic and demographic variables have little, if any, explanatory power relative to perceived benefits and attitudes toward rural industrialization. The research findings suggest that analysis
of these basic variables will not be sufficient for explaining the variance in either of the attitude variables, and that the use of other independent variables should be explored.

More specifically, explanatory variables for perceived benefit from industrial development have yet to be determined. Since perceived benefit has been found to have an effect upon the attitude toward industrialization, the discovery of variables which affect perceived benefit would add much to the understanding of the overall favorability or unfavorability of rural industrialization. This reiterates the point that basic socioeconomic and demographic variables, such as the investment variables in this analysis, have little utility in this area of research.

It was an underlying goal of this study to help provide information necessary to begin a comprehensive industrial development program within a rural regional context. It is hoped that the research findings, particularly the importance of residents perceiving rewards from activities relating to the development of rural industry, can be utilized for further planning, development, and research efforts.
APPENDIX A

SUMMARY STATISTICS OF THE MULTIPLE REGRESSION

ANALYSES OF THE PERCEIVED BENEFIT SCALE WITH
INVESTMENT VARIABLES, AND THE ATTITUDE TOWARD RURAL
INDUSTRIALIZATION SCALE WITH INVESTMENT VARIABLES
Table 8: Summary Statistics of the Multiple Regression Analysis of the Perceived Benefit Scale With Investment Variables.

<table>
<thead>
<tr>
<th>Step</th>
<th>Standardized Regression (Beta) Coefficients</th>
<th>Multiple R</th>
<th>Multiple $R^2$</th>
<th>Entering Variable F-Ratio</th>
<th>Total Regression F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AGE  NO. OF CHILDREN EDUCATION GENDER INCOME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-0.264</td>
<td>0.264</td>
<td>0.070</td>
<td>111.94</td>
<td>111.94</td>
</tr>
<tr>
<td>2</td>
<td>-0.202 0.188</td>
<td>0.318</td>
<td>0.101</td>
<td>51.77</td>
<td>83.76</td>
</tr>
<tr>
<td>3</td>
<td>-0.246 0.175 -0.131</td>
<td>0.341</td>
<td>0.116</td>
<td>25.92</td>
<td>65.41</td>
</tr>
<tr>
<td>4</td>
<td>-0.254 0.177 -0.141 0.044</td>
<td>0.344</td>
<td>0.118</td>
<td>3.08</td>
<td>49.90</td>
</tr>
<tr>
<td>5</td>
<td>-0.252 0.174 -0.147 0.044 0.028</td>
<td>0.345</td>
<td>0.119</td>
<td>1.24*</td>
<td>40.17</td>
</tr>
</tbody>
</table>

* Not significant at the .05 level.
Table 9: Summary Statistics of the Multiple Regression Analysis of the Attitude Toward Rural Industrialization Scale With Investment Variables

<table>
<thead>
<tr>
<th>Step</th>
<th>NO. OF CHILDREN</th>
<th>EDUCATION</th>
<th>INCOME</th>
<th>AGE</th>
<th>GENDER</th>
<th>Multiple R</th>
<th>Multiple R²</th>
<th>Entering Variable F-Ratio</th>
<th>Total Regression F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.115</td>
<td>0.013</td>
<td>19.99</td>
<td>19.99</td>
</tr>
<tr>
<td>2</td>
<td>0.116</td>
<td>-0.069</td>
<td></td>
<td></td>
<td></td>
<td>0.134</td>
<td>0.018</td>
<td>7.30</td>
<td>13.68</td>
</tr>
<tr>
<td>3</td>
<td>0.109</td>
<td>-0.082</td>
<td>0.053</td>
<td></td>
<td></td>
<td>0.144</td>
<td>0.021</td>
<td>3.90</td>
<td>10.44</td>
</tr>
<tr>
<td>4</td>
<td>0.098</td>
<td>-0.092</td>
<td>0.050</td>
<td>-0.035</td>
<td></td>
<td>0.147</td>
<td>0.022</td>
<td>1.45*</td>
<td>8.20</td>
</tr>
<tr>
<td>5</td>
<td>0.100</td>
<td>-0.098</td>
<td>0.050</td>
<td>-0.040</td>
<td>0.030</td>
<td>0.150</td>
<td>0.022</td>
<td>1.23*</td>
<td>6.80</td>
</tr>
</tbody>
</table>

* Not significant at the .05 level.
APPENDIX B

SUMMARY OF POPULATION CHARACTERISTICS

OF THE STUDY AREA
Table 10: Summary Statistics of Five-County Study Area for Independent Variables in the Analysis (Population 18 and over = 94,995)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER (18 and over)</td>
<td>48.7%</td>
<td>51.3%</td>
</tr>
<tr>
<td>AGE (18 and over)</td>
<td>Median = 43.1</td>
<td></td>
</tr>
<tr>
<td>EDUCATION (25 and over)</td>
<td>Median = 10.9</td>
<td></td>
</tr>
<tr>
<td>PERSONS PER HOUSEHOLD</td>
<td>Mean = 3.04</td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL FAMILY INCOME

<table>
<thead>
<tr>
<th>Income Range</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-$999</td>
<td>3.3</td>
</tr>
<tr>
<td>$1000-$1999</td>
<td>7.1</td>
</tr>
<tr>
<td>$2000-$2999</td>
<td>7.8</td>
</tr>
<tr>
<td>$3000-$3999</td>
<td>8.0</td>
</tr>
<tr>
<td>$4000-$4999</td>
<td>7.1</td>
</tr>
<tr>
<td>$5000-$5999</td>
<td>8.1</td>
</tr>
<tr>
<td>$6000-$6999</td>
<td>8.8</td>
</tr>
<tr>
<td>$7000-$7999</td>
<td>8.8</td>
</tr>
<tr>
<td>$8000-$8999</td>
<td>7.8</td>
</tr>
<tr>
<td>$9000-$9999</td>
<td>6.7</td>
</tr>
<tr>
<td>$10,000-$11,999</td>
<td>10.1</td>
</tr>
<tr>
<td>$12,000-$14,999</td>
<td>8.0</td>
</tr>
<tr>
<td>$15,000-$24,999</td>
<td>7.1</td>
</tr>
<tr>
<td>$25,000 and over</td>
<td>1.5</td>
</tr>
</tbody>
</table>

### OCCUPATION

<table>
<thead>
<tr>
<th>Occupation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Worker</td>
<td>17.2</td>
</tr>
<tr>
<td>Farmer</td>
<td>3.5</td>
</tr>
</tbody>
</table>

\[ 20.7\% \]

<table>
<thead>
<tr>
<th>Occupation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unskilled Laborer</td>
<td>23.1</td>
</tr>
<tr>
<td>Skilled Blue Collar</td>
<td>14.9</td>
</tr>
<tr>
<td>White Collar</td>
<td>19.0</td>
</tr>
<tr>
<td>Manager-Administrator</td>
<td>7.8</td>
</tr>
<tr>
<td>Professional</td>
<td>14.6</td>
</tr>
</tbody>
</table>

\[ 41.4\% \]

APPENDIX C

QUESTIONNAIRE USED IN THE STUDY
Office
Use
Only

Instructions:
The interviewer will give you several maps which show six (6) different areas. Choose the map which best describes the region to which you identify.

1. Map selected

Instructions:
Please read the list below. Which do you think are the three (3) most important development problems in your region? Place a one (1) by the most important problem. Place a two (2) by the second most important problem, and place a three (3) by the third most important problem. (Mark only three.)

2. New housing
3. Solid waste (garbage) pick-up
4. Jobs and industrial expansion
5. Planning and zoning
6. Drug abuse
7. Sewage improvements
8. Education
9. Water supply
10. Highway improvements
11. Recreational facilities
12. Crime, vandalism, trespassing
13. Other (Please note the problem)

Instructions:
Businesses and companies may move into your region. Which two companies do you think would have the greatest benefit to you? Mark one (1) for your first choice, a two (2) for your second choice. (Mark only two.)

14. Heavy manufacturing (Example: steel mill or tire plant)
15. Service industry (Example: dry cleaner or repair shop)
16. Resource industry (Example: coal mining, forestry, agriculture)
17. Construction (Example: pipeline contractors)
18. Handicraft industry (Example: weaving, woodcarving)
19. Light manufacturing (Example: textile mill or canning factory)

Instructions:
New outdoor recreation and park facilities may be built in your region. Which two types do you think would have the greatest benefit to your region? Mark one (1) for your first choice, a two (2) for your second choice. (Mark only two.)

20. Heavy-use recreation areas (Example: pools, recreation centers, Kings Island, Inc.)
21. General outdoor recreation areas (Example: multi-purpose camping, picnic, boating area)
22. Natural environment areas (Example: bird watching, wildlife area, forest preserve area)
23. Special natural areas (Example: Old Man's Cave, Yellowstone geysers)
24. Wild areas (Example: backpack tenting, removed from sights and sounds)
25. Historic and cultural sites (Example: canal and railroad restoration, museums)
Instructions:
The statements listed below refer to the regional map you have just selected. What are your feelings about your region? Please circle the letter which best describes your feelings about your region.

Example: Snow White is: Beautiful VS S M O M S VS Ugly

<table>
<thead>
<tr>
<th>Scale Meaning</th>
<th>Very Strong</th>
<th>Mild</th>
<th>No</th>
<th>Mild</th>
<th>Strong</th>
<th>Opinion</th>
<th>Strong</th>
</tr>
</thead>
</table>

26. My region is: Smooth VS S M O M S VS Rugged
27. My region is: Dirty VS S M O M S VS Clean
28. My region is: Worthless VS S M O M S VS Valuable
29. My region is: Hostile VS S M O M S VS Friendly
30. My region is: Ugly VS S M O M S VS Beautiful
31. My region is: Poor VS S M O M S VS Rich

Instructions:
These statements are about industrial development of your region. Industrial development means building new plants or companies in your region.

32. Industrial development is: Good VS S M O M S VS Bad
33. Industrial development is: Clean VS S M O M S VS Dirty
34. Industrial development is: Desirable VS S M O M S VS Undesirable
35. Industrial development is: Valuable VS S M O M S VS Worthless
36. Industrial development is: Welcome VS S M O M S VS Unwelcome
37. Industrial development is: Beautiful VS S M O M S VS Ugly
### Instructions:
These statements are about outdoor recreation and park development. Recreation development means building new outdoor recreation and park areas within your region.

| Number | Description         | VS | S | M | O | M | S | VS |
|--------|---------------------|----|---|---|---|---|---|----|---|
| 38     | Outdoor recreation development is: Undesirable | VS | S | M | O | M | S | VS | Desirable |
| 39     | Outdoor recreation development is: Worthless | VS | S | M | O | M | S | VS | Valuable |
| 40     | Outdoor recreation development is: Ugly | VS | S | M | O | M | S | VS | Beautiful |
| 41     | Outdoor recreation development is: Unnecessary | VS | S | M | O | M | S | VS | Necessary |
| 42     | Outdoor recreation development is: Crowded | VS | S | M | O | M | S | VS | Empty |
| 43     | Outdoor recreation development is: Dirty | VS | S | M | O | M | S | VS | Clean |
| 44     | Outdoor recreation development is: Bad | VS | S | M | O | M | S | VS | Good |

### Instructions:
These statements deal with your feelings about tourists who come to your region. By tourists we mean people who visit your area for recreation and vacation purposes.

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>VS</th>
<th>S</th>
<th>M</th>
<th>O</th>
<th>M</th>
<th>S</th>
<th>VS</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>Tourists are: Pleasant</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>46</td>
<td>Tourists are: Honest</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>47</td>
<td>Tourists are: Disruptive</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>48</td>
<td>Tourists are: Good</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>49</td>
<td>Tourists are: Clean</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>50</td>
<td>Tourists are: Valuable</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
<tr>
<td>51</td>
<td>Tourists are: Welcome</td>
<td>VS</td>
<td>S</td>
<td>M</td>
<td>O</td>
<td>M</td>
<td>S</td>
<td>VS</td>
</tr>
</tbody>
</table>
Instructions: After reading the sentences below, check if you agree or disagree with the statement. If you don't have any feelings about it, then check uncertain.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td>52. Income from tourist dollars in a region has a greater economic impact than most other business activities.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. Visitors to a regional recreation or tourist attraction generally spend the largest part of the trip's budget in the area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. Land values usually increase near recreational/tourist developments.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55. Wages or salaries paid by recreational businesses are among the lowest in the economy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. Outdoor recreation facilities are usually used by the public about three (3) or four (4) months a year.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57. Investment in outdoor recreation or tourism businesses is risky.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58. Sale of expensive, imported objects will usually provide more economic gain for an area than the sale of local handicrafts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59. Increased property taxes on recreation businesses will force some private operators out of business.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Instructions:
Listed below are several statements about development in your region. How do you feel about the following statements? There are no right or wrong answers.

If you completely agree with the statement, circle strongly agree (SA).
If you basically agree with the statement, circle agree (A). If you have no feelings about the statement or are uncertain, circle undecided (U). If you basically disagree with the statement, circle disagree (D). If you completely disagree, circle strongly disagree (SD).

(Scale Meaning)

Example: President Gerald Ford has done a good job in his first year in office. [SA] A U D SD

Strongly Agree Undecided Disagree Strongly Disagree

---------------------------------

Industrial development in my region will benefit me or some member of my household.

60. [SA] A U D SD

The costs of industrial development in my region can be justified.

61. [SA] A U D SD

Industrial development is not needed in my region.

62. [SA] A U D SD

The disadvantages brought to my region by industrial development will offset the advantages.

63. [SA] A U D SD

Industrial development in my region will create many problems for people living here.

64. [SA] A U D SD

Industries should not be encouraged to locate in my region.

65. [SA] A U D SD

Industrial development of my region will provide many jobs for local people.

66. [SA] A U D SD

Industrial development will make my region a better place in which to live.

67. [SA] A U D SD

New industries employing mostly women would be harmful to family life in my region.

68. [SA] A U D SD
<table>
<thead>
<tr>
<th>Office Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>69.</strong> My region needs industrial development more than it needs outdoor recreational development.</td>
</tr>
<tr>
<td><strong>70.</strong> Mobile home development should not be permitted in my region.</td>
</tr>
<tr>
<td><strong>71.</strong> New residents are usually welcome in my region.</td>
</tr>
<tr>
<td><strong>72.</strong> My community must change in order to progress.</td>
</tr>
<tr>
<td><strong>73.</strong> I am basically satisfied with my community.</td>
</tr>
<tr>
<td><strong>74.</strong> Someone in my household would qualify for some of the new jobs formed by outdoor recreation or industrial development.</td>
</tr>
<tr>
<td><strong>75.</strong> Planned industrial parks are very important for industrial development.</td>
</tr>
<tr>
<td><strong>76.</strong> I would support local increased tax levies to finance the development of industrial location sites.</td>
</tr>
<tr>
<td><strong>77.</strong> I would support local zoning regulations for development purposes.</td>
</tr>
<tr>
<td><strong>78.</strong> I would support local tax levies for local outdoor recreation projects.</td>
</tr>
<tr>
<td><strong>79.</strong> Existing recreation facilities in my region are adequate for my needs.</td>
</tr>
<tr>
<td><strong>80.</strong> Expansion of existing outdoor recreation and tourism attractions in my region will reduce my travel to other areas outside my region.</td>
</tr>
</tbody>
</table>
Outdoor recreation development of my region will provide many jobs for local people.

Outdoor recreation development will make my region a better place in which to live.

Outdoor recreation development is not needed in my region.

Development of outdoor recreation will benefit my region.

The costs of outdoor recreation development in my region can be justified.

The disadvantages brought to my region by outdoor recreation development will offset the advantages.

Outdoor recreation development in my region will create many problems for people living here.

I am willing to donate my time to work for outdoor recreational developments in my region.

It is more important to provide recreation facilities for local people than for tourists.

Outdoor recreation development is usually harmful to the environment.

New jobs are more important to me than the air or water pollution that new industries may cause.

Industrial development will benefit my region.
Most of my meetings with tourists to my region have been pleasant.

I am against new outdoor recreation facilities which will attract tourists to my region.

My region will not benefit much from new outdoor recreational development.

Instructions: Companies consider many things before locating a new plant. Circle the number after the statement which best shows how you feel about your region's ability to provide each of the things mentioned.

Available energy supplies:

Local vocational-technical training programs:

Local investors:

Available trained workers:

Good schools for worker's children:

Housing for plant workers:

Low local taxes:
Instructions:
Listed below are several things about which people often require information. Please check the most important source of information for each issue. (Check only one for each line.)

Example: If you need information on weather reports and you received the information by radio, you would check the "Radio" column. If you do not seek this type of information, check the "Do Not Seek" column.

<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Do Not Seek This Type of Information</th>
<th>Public Officials</th>
<th>Radio</th>
<th>County Extension Agent</th>
<th>TV</th>
<th>Newspapers</th>
<th>Family or Neighbors</th>
<th>Special Interest Magazines</th>
<th>Extension Bulletins</th>
</tr>
</thead>
<tbody>
<tr>
<td>General community problems</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Local news</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Information about your occupation</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>New development programs</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Recreation activities</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Taxing issues</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Local school issues</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<tr>
<td>Agricultural information</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
<td>___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___</td>
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</tbody>
</table>

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Instructions:

Do members of your household spend leisure time in outdoor recreational activities?

Yes_______ No_______ If no, skip to Question 115.

If yes, how does your family spend their leisure time in the out-of-doors in your region? Choose the four (4) most important activities that best describe how your family spends its leisure time. The recreation activity in which your family spends most of its time should be marked one (1). Place a two (2) beside the second most important activity; a three (3) beside the third most important and a four (4) by the fourth (least) important. (Mark only four.)

   —— camping               —— tennis
   —— hiking                —— boating—canoeing
   —— fishing               —— picnicking
   —— golf                  —— swimming
   —— horseback riding      —— local sightseeing
   —— bike riding           —— water skiing
   —— gardening             —— hunting

   ____________________________Other (please specify)

How well do the existing outdoor recreation facilities in the region satisfy your family’s recreational needs? Circle the number on the scale that best shows your feelings.

Completely Satisfied with
Facilities                               Completely Dissatisfied with
                                          Facilities
                                          1 2 3 4 5 6 7

How often do you have contact with tourists and vacationers? (Check one.)

116.____ Daily; ______Weekly; ______Monthly; ______Less than six (6) times a year; ______None

What is your sex?: Male________ Female_______

118.____ What is your age in years? ________ years

120.____ How many years of school have you completed? ________ years

122.____ How many years of school has your spouse completed? ________ years

124.____ How many of your children are presently living at home? ________
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Only

125. ________ Age of oldest child living at home? ________ years

127. ________ Age of youngest child living at home? ________ years

129. ________ Which of the following best accounts for where you spent the first 15 years of your life? (Check one.)

Rural farm ________ Small town (under 2,500) ________
Rural non-farm ________ City (over 10,000) ________

130. ________ How long have you lived in this region? ________ years

132. ________ Do you own your own home? Yes ________ No ________

133. ________ How many organizations do you presently belong? (Example: Rod-Gun Club, Parent Teachers Organization (P.T.O.), Church, Chamber of Commerce)

135. ________ Number of organizations ________

136. ________ In which of these organizations have you held an office since 1973?

137. ________ Has the major income earner in your family been unemployed at any time during the past year (August, 1974 -- August, 1975)?

Yes ________ No ________

138. ________ How long was the income earner unemployed? ________ months

140. ________ Are you presently engaged in farming? Yes ________ No ________

If no, skip to Question 146.

141. ________ If yes, how would you describe your farming activity?

______ Full time ________ Part-time (Part-time farming means more than 100 work days in non-farm occupation)

142. ________ If you are a farmer, would you continue farming if you could get a job with a new industry in your region?

Yes ________ No ________ Undecided

143. ________ How many acres are you now farming? ________ acres

146. ________ Is the major income earner retired? Yes ________ No ________
What is the major income earner's occupation? If retired, what was the occupation before retirement? (Please be specific.)

How far does the major income earner travel (commute) to work each day (one way)?

Other than travel to work, approximately how many days per week does the major income earner's job require travel out of the county of residence?

Check the space which best describes your total family income last year (1974-1975).

- $0 - 999
- $1000 - 1999
- $2000 - 2999
- $3000 - 3999
- $4000 - 4999
- $5000 - 5999
- $6000 - 6999
- $7000 - 7999
- $8000 - 8999
- $9000 - 9999
- $10,000 - 10,999
- Over $25,000

How far do you live from the nearest highway marked in red on the map provided to you by the interviewer?

__________________ miles

DO NOT WRITE BELOW THIS SPACE

County

Township

Interviewer's name,__________________________________________

Time of interview _______ a.m. _______ p.m.

Day of the Week __________________
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Appalachian Regional Commission

Bentham, Jeremy

Bertrand, Alvin L., and Osborne, Harold W.


Bird, Alan R.

Blau, Peter M.
PLEASE NOTE:

This page not included in material received from the Graduate School. Filmed as received.

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