

AN ABSTRACT OF THE THESIS OF

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CHARACTERISTICS FOR UNION COUNTY, OREGON

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Rural areas tied to natural resource-based economic activity are encountering difficulties in preparing for economic growth and development. An important problem facing local officials of such an area, Union County, Oregon, is the identification of county characteristics that may induce the expansion of local businesses and location of new plants. What are Union County's most important locational advantages and disadvantages? This thesis attempts to answer these and related questions through the use of a survey of Union County businessmen.

During the summer months of 1975, interviews with 30 percent of all Union County businesses were conducted. The primary locational determinants for firms in all business sectors were found to be personal and market factors. With few exceptions all firms assigned the same importance to these and other location factors, regardless of type of firm, geographic location in Union County, respondent's role in the location decision, year the firm was founded, or future expansion plans. The industry types that would be expected to expand or locate in Union County are lumber and wood products, light industry (small manufacturing), general agriculture, tourism, and wholesale-retail trade.

The policies and incentives available to Union County officials are limited due to the role of factors, such as personal preference and market demand, over which the county has little control. Maintenance and improvement of the existing county infrastructure and reevaluation of land use regulations as they affect business location, operation, and expansion offer the most potential for influencing firms to locate in an area that offers both pleasant surroundings and the opportunity to sustain economic growth.

An Economic Analysis of Industrial
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Union County, Oregon

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TABLE OF CONTENTS

Chapter		Page
I	Introduction.....	1
	Problem Statement.....	1
	Background of the Union County Study.....	2
	Objectives of the Study.....	3
	The Setting.....	4
	Overview of the Study.....	9
II	Location Theory and Prior Applications.....	10
	Major Approaches to Location Theory.....	10
	Some Empirical Applications.....	12
	Plant Location Surveys.....	13
	National Polls.....	17
	Survey Methods.....	18
	Regression Models.....	21
	Policy Implications.....	23
	Summary.....	25
III	Union County Survey Design and Method.....	26
	The Survey Questionnaire Design.....	26
	Organization and Implementation of the Survey.....	29
	Pre-tests of the Survey Questionnaire.....	29
	The Interviewers and Interview Technique.....	30
	Limitations of the Study.....	30
	The Sample.....	31
	General Business Characteristics.....	32

TABLE OF CONTENTS (continued)

Chapter		Page
IV	Analysis of Results.....	34
	Approach Taken in the Analysis.....	34
	Positive and Negative Features of the Union County Business Environment.....	35
	Factors Affecting Operational Decisions.....	39
	Factors Affecting Location Decisions.....	45
	Analysis of Structured List of Location Factors.....	48
	Analysis of Location Factors by Industry.....	56
	All Industries.....	57
	The Contract Construction Industry.....	58
	The General Service Sector.....	60
	The Wholesale-Retail Trade Industry.....	61
	Utilities and Communications, Transport, and All Manufacturing Industries.....	63
	The Utilities and Communications Industry.....	64
	The Transportation Industry.....	64
	The Food and Kindred Products Industry.....	65
	The Lumber and Wood Products Industry...	66
	The Printing, Publishing, and Allied Industry.....	68
	Chemical and Mineral Industries.....	69
	Other Manufacturing Industries.....	71
	The Professional and Financial Services Industry.....	73
	The Agricultural Sector.....	74
	Tests of Significance in Response Frequencies Among Location Factors.....	75
	Negative Factors.....	86
	Opportunities for Future Growth in Commercial Activity.....	87

TABLE OF CONTENTS (continued)

Chapter		Page
	Potential Growth Industries.....	89
	Barriers to Expansion or to the Attraction of New Industry.....	89
	Summary.....	92
V	Conclusions and Recommendations.....	94
	Summary and Qualifications.....	94
	Recommended Policies and Strategies.....	96
	Policies Addressing Personal and Market Factors.....	96
	Policies Addressing Other Factors.....	97
	Future Growth Sectors.....	98
	Postscript.....	100
	Bibliography.....	101
	Appendix I: Determinants of Industrial Location & Expansion Decisions: Union County Survey Questionnaire.....	103
	Appendix II: Determinants of Industrial Location & Expansion Decisions: Selected Union County Survey Results.....	115

LIST OF TABLES

Table	Page
1 Union County Business Survey Sectors and Sampling Frequencies.....	33
2 Factors Noted as Disadvantageous to Business Operations in Union County, Oregon.....	37
3 Factors Noted as Advantageous to Business Operations in Union County, Oregon.....	38
4 Availability of External Financing to Meet Business Needs in Union County, Oregon.....	40
5 Costs or Cost-Related Regulations that Union County Businessmen Felt Were Unjustified.....	41
6 Future Plans by Business Sector in Union County, Oregon.....	42
7 Anticipated Time Frame for Future Expansion, by Business Sector, in Union County, Oregon.....	43
8 Anticipated Expansion Problems, by Business Sector, in Union County, Oregon.....	44
9 Factors Influencing the Decision to Locate Firms in Union County, Oregon.....	46
10 Perceived Advantages of Union County Over Alternative Business Locations.....	47
11 Preferences for Alternative Locations Expressed by Respondents in Union County Business Sectors.....	49
12 Location Factors That Would be Considered if Firms in Union County Business Sectors Were to Relocate.....	50
13 Ranking of Favorable Location Factor Categories in Union County, Oregon.....	52
14 Direct Ranking of Favorable Factor Categories by Union County Business Sectors.....	53
15 Leading Factors Exerting a Favorable Influence on the Conduct of Business in Union County, Oregon.....	54
16 Market Locations and Sources of Inputs and Raw Materials for Union County Firms.....	58

LIST OF TABLES (continued)

Table		Page
17	Market Locations and Sources of Inputs and Raw Materials for the Union County Contract Construction Industry.....	59
18	Market Locations and Sources of Inputs and Raw Materials for the Union County General Service Industry.....	60
19	Market Locations and Sources of Inputs and Raw Materials for the Union County Wholesale-Retail Trade Industries.....	61
20	Market Locations and Sources of Inputs and Raw Materials in the Union County Utilities and Communications Industry.....	64
21	Market Locations and Sources of Inputs and Raw Materials in the Union County Transportation Industry.....	65
22	Market Location and Sources of Inputs and Raw Materials for the Union County Food and Kindred Products Industry.....	66
23	Market Location and Sources of Inputs and Raw Materials for the Union County Lumber and Wood Products Industry.....	67
24	Market Location and Sources of Inputs and Raw Materials for the Union County Printing, Publishing, and Allied Industries.....	68
25	Market Location and Sources of Inputs and Raw Materials for the Union County Chemical and Mineral Industries.....	69
26	Market Location and Sources of Inputs and Raw Materials for the Union County Other Manufacturing Industries.....	71
27	Market Location and Sources of Inputs and Raw Materials for the Union County Professional and Financial Services Industry.....	73
28	Market Location and Sources of Inputs and Raw Materials for the Union County Agricultural Sector.....	74
29	Tests of Significance in Response Frequencies for Positive Location Factors Among Union County Business Sectors.....	77
30	Tests of Significance in Response Frequencies for Positive Location Factors by Business Address in Union County.....	79
31	Tests of Significance in Response Frequencies for Positive Location Factors by Time Interval During Which Business Located in Union County, Oregon.....	80

LIST OF TABLES (continued)

Table		Page
32	Tests of Significance in Response Frequencies for Positive Location Factors by Union County Respondent's Role in Business Location Decision.....	81
33	Tests of Significance in Response Frequencies for Positive Location Factors by Type of Plant in Union County, Oregon.....	82
34	Tests of Significance in Response Frequencies for Positive Location Factors by Future Plans of Union County Businessmen..	83
35	Tests of Significance in Response Frequencies for Positive Location Factors by Business Relocation Preference with Respect to Union County.....	84
36	Rankings of Unfavorable Location Factor Categories in Union County, Oregon.....	88
37	Leading Factors Exerting an Unfavorable Influence on the Conduct of Business in Union County, Oregon.....	87
38	Leading Potential Growth Industries Identified by Local Union County, Oregon, Businessmen.....	90
39	Leading Barriers to Potential Growth Industries as Identified by Union County, Oregon, Businessmen.....	91
40	Address of Sampled Union County Businesses by Sector.....	117
41	Respondents Position in Firm, Union County Business Survey....	118
42	Business District Location of Firms in the Union County Business Survey.....	119
43	Type of Ownership of Sampled Union County Businesses.....	120
44	Time Interval During Which Sampled Union County Businesses Were Established by Sector.....	121
45	Type of Union County Business Plant by Sector.....	122
46	Factors Unfavorably Affecting Business Operations in Union County, Oregon, and Frequency of Mention by Businessmen Sampled.....	125
47	Factors Favorably Influencing the Conduct of Business in Union County, Oregon, and Frequency of Mention by Businessmen Sampled.....	126
48	Positive Location Factors Cited by Businessmen in the Union County, Oregon, Survey and in Other Studies.....	127

LIST OF FIGURES

Figure		Page
1	Location of Union County, Oregon.....	5
2	Census County Divisions, Union County, Oregon.....	6
3	Union County Design and Information Flows.....	28

AN ECONOMIC ANALYSIS OF INDUSTRIAL LOCATION
CHARACTERISTICS FOR UNION COUNTY, OREGON

CHAPTER I

INTRODUCTION

Problem

Many rural American counties tied to natural resource-based economic activity are encountering difficulties in providing sufficient jobs for their populace. Agriculture, timber, and mineral-related employment have decreased due to technological innovations, fluctuations in market demand, and depletion of natural resources. Until recently, the decline in employment opportunities has caused people to look for jobs in urban area leading to out-migration. The resulting loss in local earnings has had both short and long-term impacts on businesses that provide goods and services to county inhabitants. Local governments have been unable to acquire sufficient revenues to finance public services. However, recent population migration figures have shown that trends toward urban areas are beginning to reverse, creating an added burden on rural public services such as health, welfare, and education.

Local government and private agencies in rural areas, as elsewhere, have attempted to resolve these problems by undertaking industrial promotion activities to attract new commercial enterprises. What activities and policies can local agencies implement to attract new industries and create new jobs? In order to answer this question, it is necessary to first determine those factors that influence firms to locate where they

do. If a community is to develop a successful program to induce industry to locate in its area, those responsible for the program must understand and be able to exploit the situations under which management decides to build new facilities (Fernstrom, 1973).

The impetus for this thesis was the assumption that a representative rural community located in Eastern Oregon--La Grande, Union County--has the characteristics of what is referred to as a growth center. Population growth rate, economic structure, and potential for economic expansion and development are some of the attributes that distinguish La Grande from many other Eastern Oregon communities.

A growth center is a community that is characterized by a population base sufficient to provide labor for an expanding economy and by rapid growth in at least one economic sector. Growth sector(s) include a firm that by nature of its size and high degree of linkage with other firms has a dominant influence on the local economy. The history and industrial development policy implications of the growth center concept are discussed by Smith who states that: "At the very least, the recent interest in growth points [centers] has widened the perspective of public policy by emphasizing that some places have greater development potential than others." Furthermore ". . . the right industries for a growth point [center] can be selected on the basis of their 'propulsive' character, as indicated by such features as size, growth rates, and linkages with other sectors" (Smith, 1971, p. 457).

Background of the Union County Study

Any attempt to evaluate growth potentials in an expanding rural economy requires knowledge of those attributes of the socioeconomic system which

tend to stimulate or inhibit the development process. While first-hand knowledge of a local economic system may not be prerequisite to the identification and measurement of growth factors, the degree to which those factors influence patterns of economic activity is best revealed by actual participants in the local development process. To the extent that various commercial sectors may participate in, and perhaps lead, economic growth at the local level, it follows that community businessmen responsible for the establishment and operation of firms represent an invaluable source of information to the investigator seeking to discover alternative growth opportunities.

The research results reported here were obtained upon the request and with the cooperation of the Union County government, local civic organizations, and various state and federal agencies. All cooperating institutions have expressed concern about the potential of Union County and similar rural economies for growth and development.

It is the ultimate task of this thesis to present and interpret the findings of a business survey conducted in Union County during the summer of 1975. Information was sought about the importance of county physical, economic, and political characteristics as they have affected industrial and commercial location decisions.

Objectives

The principal objective of this analysis is to identify industries whose locational and operational needs are/or can be met by locations in the study area. A second objective is to evaluate the relative importance of social, economic, and political characteristics of Union County as positive or negative influences on the location, operation, and expansion

of existing Union County firms. By identifying and evaluating, (1) specific industrial growth requirements, and (2) the problems and potentials facing firms located in the area, light may be shed on alternatives for economic development in Union County and similar rural growth centers.

Setting

Union County is located in the northeast corner of the State of Oregon (Figure 1). The character of the area is one of rugged terrain, climatic extremes, relatively low population density, and a predominantly rural economy with scattered pockets of concentrated economic activity.

Virtually all of the 21,000 inhabitants of Union County reside in communities and on farms, that, collectively, occupy approximately 14 percent of the county's land area (Figure 2). A geographically more uniform distribution of population is unlikely to prevail in the foreseeable future. County population has steadily increased over the past 25 years and is expected to increase at an accelerating pace during the next decade. Between 1970 and 1973, Union County experienced immigration of some 1,200 individuals, contributing to an overall population growth rate of 7.9 percent. However, even if a rate of population growth of seven to ten percent per annum were to be sustained, not for another 40 to 50 years would the population density of Union County reach the current average state population density of 23.9 persons per square mile.

La Grande, the county seat, is the largest town within 50 miles of the geographic center of Union County (Figure 2). Its population of 10,400 comprises fifty percent of the county total. Scattered pockets of economic activity are found in the smaller communities of Island City, Elgin,

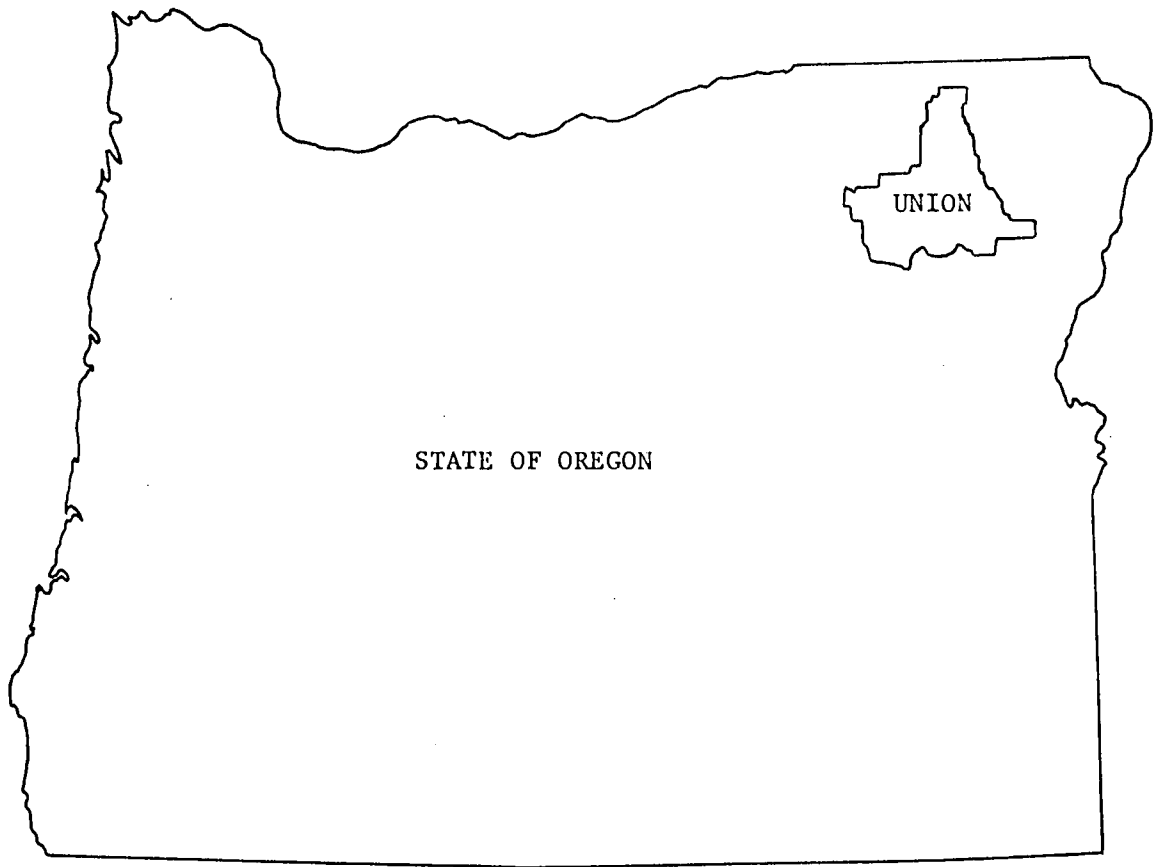


Figure 1. Location of Union County, Oregon

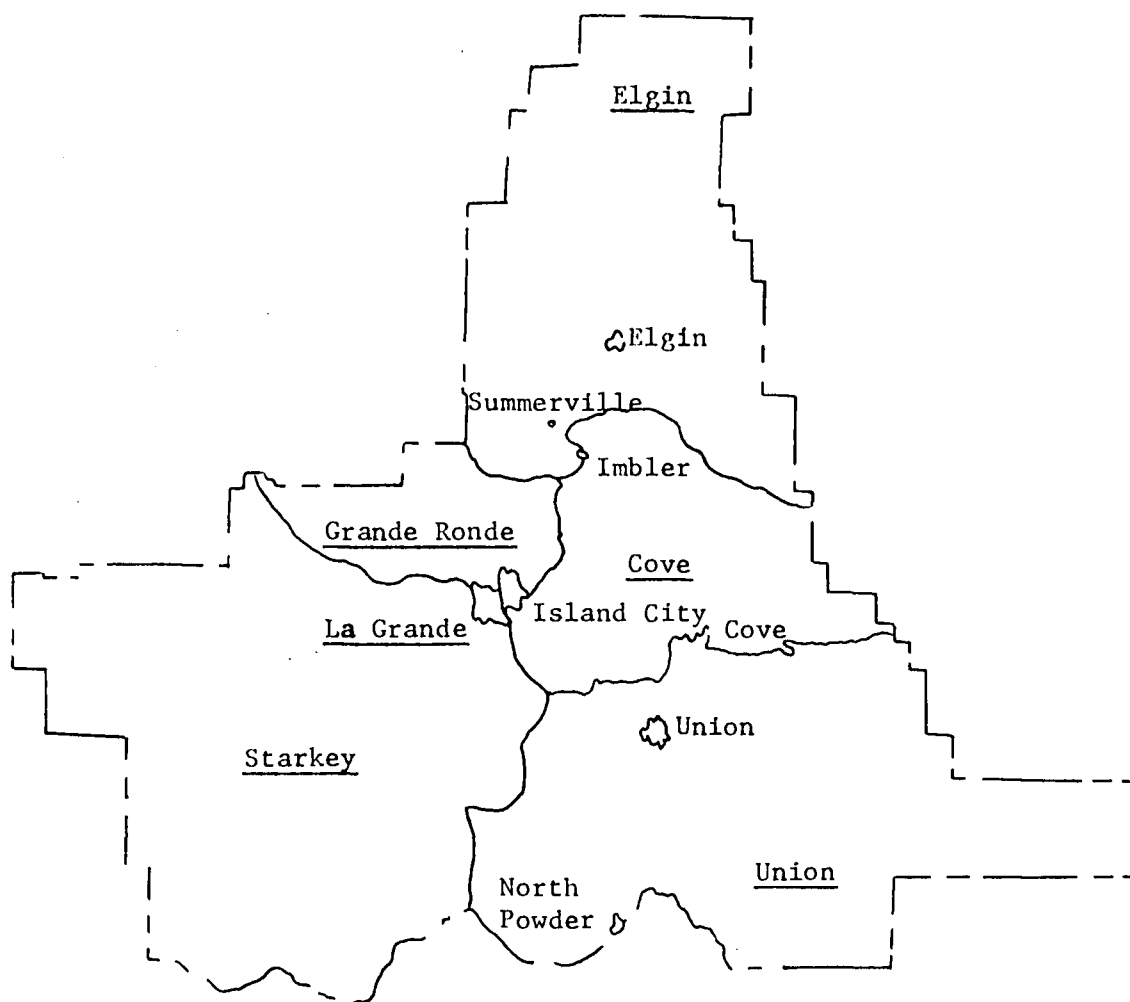


Figure 2. Census County Divisions (underlined), Union County, Oregon

SOURCE: Oregon State University Extension Service, Income and Poverty Data for Racial Groups, Special Report 367, September, 1972, p. 115.

Union, North Powder, Cove, and others; however, La Grande is the center of commercial activity in Union County. Traditionally, the smaller communities have served as distributional and service centers for the county's rural population; but increasingly, these rural service functions are being displaced by La Grande due to the latter's central location and the existing configuration of county road networks.

In Union County the Grande Ronde Valley, an ancient lake basin located at relatively high elevations in the Blue Mountains, occupies some 389 square miles or 184,960 acres. The valley has been continuously farmed since early settlers arrived in the mid-1880's. Today, 35 percent of the county's total land area is farmed, and nearly all cropland is located in the Grande Ronde Valley. Significantly, the towns of La Grande, Island City, Union, and Cove are all found in this elevated basin.

Union County's economy is closely tied to its natural resources. Although employment in agriculture has declined over the years, farming still contributes to the economy of the area. In 1974, Union County was fifteenth out of 36 Oregon counties in total agricultural sales, generated from the production of crops such as small grains, hay, and seed; tree fruits (primarily cherry); and cattle and dairy products. In 1940, farming activities accounted for 27 percent of the jobs held by the county labor force, but since that time agricultural employment has been declining in both absolute and relative terms. By 1970 only 8.5 percent of total county employment could be directly related to the farm sector.

The wood products industry employs more county residents than any other industry except government. In 1972, wood products accounted for over 18 percent of all civilian labor force employment. Characteristically, the sector has experienced cyclical periods of economic boom and bust over

the past 30 years, and has been greatly affected by regional trends in the economy, availability of credit, the creation of building substitutes, and forest policy. In terms of employment the wood products industry steadily declined throughout the period 1940-1960, but during the following decade employment figures nearly doubled. In 1974, Union County ranked sixteenth among Oregon counties in total board feet of commercial lumber produced.

Another local industry, recreation, thrives on the primitive wilderness that is still found in the rugged, steep terrain of Union County. Recreation industries are growing. The Army Corp of Engineers has proposed construction of a dam on Catherine Creek eight miles from the city of Union. The lake formed would attract vacationers during the warm summer months. Reaction of local residents is mixed, but proponents contend the dam will increase tourist revenue, provide flood control, increase water supply for crop irrigation, and boost commercial fishing in the area. Even in the absence of further water development, however, recreation industries contribute substantially to the Union County economy.

Another important industry to the county, and especially to the town of La Grande, is education. Eastern Oregon State College, the only four-year institution east of the Oregon Cascades, represents a total investment of \$15,276,000 and, during the 1973-74 school year, generated a payroll of \$2,650,000, disbursed to approximately 100 faculty and 130 classified staff employees.

In short, Union County, Oregon, may be characterized as a rural growth center that, while still closely tied to its natural resource base, is experiencing continued expansion in other forms of commercial and service activity. What potentials for further development exist, and how can local residents, officials, and businessmen be better prepared to respond

to the challenges of economic change? And particularly, what factors have a crucial impact on the decision of new businesses to locate in Union County? These and related issues can be answered, in part, from information obtained through a survey of the Union County business community.

Overview of the Thesis

Chapter II contains a review of location theory and recent applications to empirical plant location studies. In Chapter III a survey method is developed for identifying location factors affecting the establishment and/or expansion of business firms in a growing rural economy. The actual organization and data-gathering procedures followed in implementing the survey are also discussed. In Chapter IV the results obtained in the survey questionnaire are compared with the results of location studies conducted in other parts of the country. In the final chapter an attempt is made to relate the findings in terms of policy recommendations to possible growth strategies in Union County.

CHAPTER II

LOCATION THEORY AND PRIOR APPLICATIONS

Major Approaches to Location Theory

The location of economic activity has long been a subject of scientific inquiry. As early as 1826 Johann Heinrich Von Thünen, known as the father of location theory, analyzed the economic forces affecting the location of different types of agricultural production with respect to central market places. Over the years others, such as Weber, Lösch, and Hoover, have made contributions to the theory of the determinants of location decisions.

Three general approaches to the study of plant location theory have been identified. Briefly, the first approach is based on a purely competitive framework; the second is couched in terms of monopolistic and imperfect competition theory; and the third has drawn to varying degrees on the first and second, and has introduced new elements as well, in empirical applications.

The competitive approach assumes a fixed price at which each firm can sell all of its output. Costs, however, vary with a firm's location. Weber (1929) theorized that firms seek the least-cost location site. Transportation, labor, fuel, and raw materials costs are classified as general factors, varying from region to region, that the locating firm attempts to minimize. The effect of firms locating near similar firms (agglomeration), is included as a general location factor under the assumption that agglomeration reduces costs. The possibility of market advantage is not considered, because price is assumed to be fixed. The problem with this approach is that in the real world consumers are geographically dispersed and price is not constant for every point in the market area.

The second approach interprets the location of firms as an endeavor to control the largest possible market area. Where the purely competitive framework ignores the variability of demand and attempts to explain how firms minimize costs among alternative locations, the imperfectly competitive approach emphasizes the importance of the firm's attempt to maximize revenues. Lösch (1954) treats demand as a variable dependent upon freight rates, delivery contracts, and the location of other producers. The imperfect competition analysis assumes that buyers are scattered over an area rather than confined to a given consuming point. Procurement and processing costs are assumed to be the same everywhere. Each seller charges the same price at the plant, but must vary final product price with the distance to consumers. The proximity of competitors may tend to reduce costs; however, the major effect of agglomeration is on pricing as a result of competition for consumers in a given area. Firms gain control over buyers situated near their plant. Thus, demand for the output of a firm is accepted as a variable factor governed by the location of competitors.

The first major attempt to integrate the least-cost and locational-interdependence theories was made by Greenhut (1956). He assumed that the purpose of location theory is to explain why a particular causal factor is important to one industry and not to another. The following determinants, based on a priori reasoning, and supported by the findings of empirical research, are suggested to be of greatest importance:

1. Cost factors of location (transportation, labor, and processing costs);
2. Demand factors of location (locational interdependence of firms, or attempts to monopolize certain market segments);
3. Cost-reducing factors;
4. Revenue-increasing factors;
5. Personal cost-reducing factors;
6. Personal revenue-increasing factors;
7. Purely personal considerations.

Greenhut achieves his avowed intention of integrating the least-cost and locational-interdependence approaches by taking maximization of revenue as the criterion of optimum location. The core of his theory is summarized as follows:

"...each firm entering the competitive scene will seek that site from which its sales to given number of buyers (whose purchases are required for the greatest possible profits) can be served at the lowest total cost.... In time, the successful attempts of competitors to locate at the profit-maximizing site will so shrink the relative demand as to cut profits, thereby leading eventually to the state of locational equilibrium. Such equilibrium would find (1) marginal revenues equated with marginal costs, (2) average revenue . . . tangent to average costs, and (3) concentrations and scattering of plants in such order that relocation of any one plant would occasion losses" (Greenhut, 1956, p. 285).

The comprehensive nature of Greenhut's theory makes it one of the most useful general statements on industrial location yet to be offered. If any major reservation has to be made, it is that the analytical sections ". . . are almost entirely confined to the demand factor, and that the integration of existing theory is achieved rather from the locational-interdependence side" (Smith, 1971, p. 147).

Some Empirical Applications

Despite Greenhut's emphasis on demand, most empirical inquiry has remained preoccupied with cost considerations. As the third approach to the study of plant location, purely empirical inquiries suffer from major deficiencies. For example, in an evaluation by Carrier and Schriver (1969) of past empirical studies, it is noted that these investigations ". . . attempt to learn the reasons for site selection . . . [but] . . . failure to approach the investigation from a rigorous theoretical framework and to conduct it under the rigors normally associated with most academic studies has limited the value of these studies in refining the theory of plant

location" (Carrier and Schriver, 1969, p. 18). Questionnaires used in empirical works have been particularly suspect in that many have failed to incorporate theoretical content in survey design. Specific criticisms include:

1. Locational factors should be mutually exclusive.
2. Individuals must be highly knowledgeable of or involved in the plant location project.
3. Factors should be ranked interally rather than ordinally so that the differences in importance assigned to factors can be interpreted.
4. The actual geographic relationship of the plant to its markets and sources of raw materials should be determined so as to provide a test of perceived versus actual reasons for location selections.
5. Choice and presentation of locational factors should be based on theoretical design.
6. General regional factors should be distinguished from site specific factors (Carrier and Schriver, 1969, pp. 18-21).

Plant Location Surveys

The above suggestions indicate conditions to be met without stating how they may be best accomplished. However, insight may be gleaned from an actual survey of 308 manufacturing firms in Tennessee conducted by Carrier and Schriver. Their approach to points three and four above is of particular interest. A respondent was first asked to consider a list of thirty-seven potential location factors and to check the six that he felt contributed to the success of the firm. The respondent was then requested to distribute a total of 100 points among the important factors he had checked. This enabled the reviewer to see the ranking of the factors and also allowed him to analyze the differences among factors. It becomes clear that a factor receiving a value of 60 points is considerably more important than one receiving 15 points. The significance of observed differences can be statistically compared among questionnaires.

Carrier and Schriver accounted for the fourth deficiency by having the respondent indicate on a map those areas representing the sources of

raw materials or inputs and those that were major product markets.

Responses to the perceived importance of raw materials and market factors were compared with the "in-lineness" or "out-of-lineness" of the plant's location with respect to its actual input and product market sources.

In theory, "in-line" firms are located at or on a line between sources of raw materials and/or markets. "Out-of-line" firms are not located on a line between sources of raw materials and/or markets. Carrier and Schriver hypothesized that there would be a difference in the sensitivity of the in-line and out-of-line firms to various categories of location determinants. On a priori grounds, the out-of-line firms would be likely to consist of those having high and variable processing costs relative to total costs (Carrier and Schriver, 1968, p. 459).

The results of the sensitivity test supported the hypothesis. In-line firms did in fact assign a higher mean number of points to procurement-cost, distributional-cost, and location-demand (market access) categories; while the out-of-line firms assigned a higher mean number of points to processing-cost factors. Out-of-line firms may have recognized that their location could lead to increased procurement or distribution costs; yet such firms must have expected that other factors, such as processing-cost, would provide compensation at their site (Carrier and Schriver, 1969, p. 460).

Carrier and Schriver's analysis provides a factor by factor comparison among industry sectors and an industry by industry ranking of selected factors. The former comparison reveals the relative importance of various determinants among industries. The following is a summary of results for cross-industry comparisons:

Category 1: Personal Factors. The industries highest in sensitivity to personal factors were characterized by a proportionately greater number of "home-owned" firms. This relationship could be partially explained by the fact that less technology and capital may be required by a firm entering the industries that are highly sensitive to personal factors than by those low in sensitivity.

Category 2: Procurement Cost Factors. The Food and Kindred Products, Stone, Clay, and Glass Products, and Lumber and Wood Products Industries were highest in sensitivity to procurement cost factors. The former industries were characterized by firms that purchased perishable raw materials or low unit-value raw materials or used weight-losing processes.

Category 3: Processing Cost Factors. The Electrical Machinery, Apparel and Related Products, and Textile Mill Products Industries were highest in sensitivity to processing cost factors. Firms in the industries assigned great importance to low labor costs, low electricity costs, and low cost and availability of existing buildings.

Category 4: Distribution Cost Factors. The Food and Kindred Products, Miscellaneous Manufacturing, and Paper and Allied Products Industries were highest in sensitivity to distribution costs. The industries contained firms shipping perishable products (frozen vegetables and ice cream) and bulky, low-unit-value products (paper containers).

Category 5: Location Demand Factors. The Paper and Allied Products, Printing and Publishing, and Primary Metal Industries were highest in sensitivity to increased demand due to better service to the consumer by virtue of the location of the seller proximal to the buyer.

Category 6: Certainty Factors that Bear on Both Cost and Revenue Expectations. The Printing and Publishing, Leather and Leather Products, and Transportation Equipment Industries were highest in sensitivity to certainty factors. The response to the certainty factors did not appear to be related to the other variables measured (Carrier and Schriver, 1969, p. 113).

Factors could also be ranked according to their relative importance to a given industry. Both types of comparisons could be used to determine specific characteristics or factors that have influenced business location in the past, their profitable operation now, and the probability of expansion or new plant establishment in the future.

In addition to the Carrier and Schriver study, several location studies are valuable references in establishing theoretical design, methodology, and modes of data interpretation for location analysis. Some of the more important of these are summarized below.

Mueller and Morgan (1962) analyzed factors which govern location decisions in the manufacturing sector of Michigan's economy. Data were obtained through a survey of top executives from 239 manufacturing plants. The industrial sectors represented were: transportation equipment; machinery (including electrical); fabricated metals; rubber, plastics, petroleum and chemical products; food, textiles and furniture; and lumber, paper, and primary metals. All manufacturers were asked to select from a list of 21 factors the five most important location determinants. Labor costs (low wages, high productivity) were selected most often with proximity to markets (including transportation costs) a close second.

The authors hypothesized that there would be a difference in the way decisions are reached, and in the importance assigned to alternative factors, depending on whether the location decision involved (1) a new firm, (2) or existing firm considering relocation, or (3) the decision to expand existing facilities. The results appeared to support the hypothesis. Below is a brief comparison of the relative importance of factors identified in the three types of location decisions.

LOCATION OF NEW FIRMS	DECISION TO RELOCATE	DECISION TO EXPAND
1. labor costs	1. labor costs	1. proximity to market
2. proximity to markets	2. taxes	2. marketing facilities
3. availability of labor	3. proximity to markets	3. labor costs
4. industrial climate	4. availability of plant site	4. availability of plant site

An apparent contradiction emerged when respondents were asked why their particular site within the state was selected for construction of a new plant. Historical and personal reasons appeared to be most important in final site selection. Three conclusions may be drawn from the above differences in responses. First, the factors considered in the location decision process vary with the type of decision to be made. Second, if the decision-making sequence is (1) regional selection, (2) state selection, and (3) area or site selection, then different factors may be relatively more or less important at each stage in the sequence. Third, the identification of noneconomic factors as important variables in the location decision process and sequence adds a new dimension to the traditional cost minimizing - revenue maximizing analysis of location determinants. In short, the process of industrial location is clarified if differences are recognized in types of decisions, stages in the location process, and the existence of other preferences in addition to the desire for maximum profits.

National Polls

In 1972, Experience, Incorporated, held personal conferences with 200 top management executives in order to study what motivates metropolitan firms to establish branch plants in rural areas, and what communities have done to successfully attract these new plants. Electrical, shoe, and garment companies that located branch plants between 1967 and 1971 were queried.

Both general or regional and site selection decisions had been made by the executives. The local banker at the potential site was mentioned by one-fourth of the respondents as a key individual to interview in collecting information for selection of a site. Attitudes of other community leaders were cited as having a definite influence on the final

selection of a community. In contrast, impersonal information provided by communities in the form of brochures and profile leaflets had little influence on a company's decision.

The three major factors identified as general location determinants were (1) presence of raw materials, (2) presence of major customer or product market, and (3) location in relation to company headquarters or other branches. It was found that some manufacturers, particularly those producing garments and shoes, tended to establish branch plants in communities where similar operations were or had been located.

In a recent poll by News Front (1974) of 750 large United States corporations, the following factors were revealed as major objectives in planning a new location: (1) to improve labor cost/productivity; (2) ability to better serve new and/or expanded markets; (3) closer proximity to customers and/or distributors; and (4) improvement in transportation efficiency or economy. Closer proximity to other firms in the same or related industries, and closer proximity to the company's other plants, also were cited as influential variables.

Both the Experience, Incorporated, and News Front surveys found that there was a preference among manufacturers for locating plants in industrial parks. When an industrial park existed in a community, the firm usually located its branch on that site.

Survey Methodology

Albert and Kellow (1969) considered the factors affecting the decision by firms to expand, relocate, or start up. Their review of earlier location studies concluded that, regardless of the type of plant, firms' decisions to locate are made by top management, based on the desire to maximize profits.

The article's main concern was with the methodology of data collection, analyses, and interpretation of location studies. They asked: "Is it possible to obtain reliable responses by asking a decision-maker to rank or weight those factors that were most important in his firm's location decision?" (Albert and Kellow, 1969, p. 377).

The use of interviews appeared to be a much better method of collecting data than the use of a mail-out questionnaire. An interview permits clarification of questions and probing into the respondent's answers as a check on the "whys" of his responses.

Selecting a sample from firms interviewed in the Carrier and Schriver study (1969), the authors attempted to compare the short-run versus the long-run importance of the factor "low cost of labor". For all three types of plants, new, branch, and relocated, the firm's reason for ranking labor costs highest was to minimize start-up costs. Relocating plants were able to realize 38.2 percent savings in labor costs in comparison with former locations (Albert and Kellow, 1969, p. 379). The savings was only temporary, however, with wage rates tending to increase substantially over time.

The implication that may be drawn from Albert and Kellow's results is that, unless care is taken in designing a study questionnaire and provision is made for probing responses in an interview, the reliability of responses may be diminished in proportion to the time that has passed since the firm was established, expanded, or relocated.

Nishioka and Krumme (1973) considered some of the methodological problems in selected Japanese and American locational surveys. The central issue of the investigation was the uncertainty over whether a factor that is weighted as being important by manufacturers actually

represents the primary reason for location. The question partly arises because of the importance assigned to access to markets factors by American manufacturers versus its secondary rating by Japanese respondents. The authors proposed that industries which neither purchase from nor supply a global homogeneous market are to varying degrees "market-oriented". They are oriented toward their "relevant region" within which the firms location would be determined on the basis of intra-regional accessibility and other location conditions (Nishioka and Krumme, 1973, p. 202). A wood products firm may be quite "footloose" within a forest endowed state while the original selection of the state over other states was due to the raw materials orientation of the firm. For the same reason, using this example, it is unlikely a wood products firm would consider the desert southwest of the United States as being within its relevant region.

Nishioka and Krumme also evaluated the differences among general "conditions" and location factors. Conditions influence the perception of factor importance. Labor costs, for example, represent a condition of production which translate into various attributes of the labor input. These various attributes are weighted differently according to both the type of firm and the particular labor location. A respondent may weigh the factor "labor availability" quite low in explaining his reason for a particular site location, when in fact all the sites considered met the labor requirement as a condition for selection as alternatives.

Recognition of the differences in regional classification and the definition of general conditions versus location factors led Nishioka and Krumme to identify time as an element in the decision-making process. The process follows a sequence which to a greater or lesser degree involves intermediate decisions. Identification of locational conditions and

factors should be qualified in terms of the stage at which a particular decision was made. "The number and characteristics of these stages and the range of markets may vary with the differences among industries, organizations, and sizes of plants and firms" (Niskioka and Krumme, 1973, p. 205). The identification of stages in decision-making may provide a more accurate context within which location factors can be interpreted.

Regression Models

Data collected in a survey conducted by the Division of State Economic Development, Wisconsin, have been analyzed by Logan (1970). A questionnaire was sent to Wisconsin entrepreneurs in the manufacturing sector. Responses were obtained from 271 (61 percent) of those sampled. Location factor categories considered most important were access to consumer and industrial markets, cited by 34.0 percent of firms; personal attributes of the home area, 18.0 percent; and labor, 17.5 percent.

A regression model was used to determine differences in location patterns for new, branch, and relocated firms. Six dependent variables were developed based on measures of number of firms, and number of workers added by firms, for each of the three firm types. The independent variables related directly to the reasons given for location by entrepreneurs or to surrogates for the reasons.

Correlations among dependent and independent variables were high, and suggested significant differences in the location patterns for new, branch, and relocated firms. High levels of positive correlation among the two measures of relocation and net migration (an independent variable) implied that firms relocate into growing areas. The low correlation observed among all the dependent variables and the "personal-home area" factor variables raised doubt about the relevance of these factors as location determinants.

The multiple regression model explained a high level of variation in the dependent variables for relocated firms. This suggested that, over time, firms reevaluate the importance of cost saving and/or revenue increasing factors. Results also indicated that the model least explained the location of branch plants. Logan suggested that explaining branch plant location may be dependent on the type of operations performed by the firm and its reliance on the parent firm.

Klaasen (1974) recommended the addition of a natural resources variable to models that have tried to predict regional industry concentrations in the United States. The variable, called the coefficient of resource dependency, is defined as the ratio of value added to value of shipments for each industry. The purpose of this paper was to offer more concrete evidence as to why traditional models have failed to explain south non-south relative industry concentration in the United States. Rank correlation tests and regression analysis showed a highly significant relationship between regional industry concentration and the coefficient of resource dependency for the South. The degree of dependency on outside manufacturing of inputs in and of itself is not relevant, but the location of these inputs is important. Klaasen concluded that the need for natural resource inputs will have a bearing on industry location.

Lever (1973) has noted that ". . . studies making both inter-area and inter-industry comparisons . . . appear to assume that industrial location factors remain relatively unchanged over time. Changes in the availability of factors of production (land, labor, and capital) as a result of business cycles suggest that ". . . studies . . . should pay more attention, both to business conditions at the time of the establishment of the manufacturing plant and to business conditions at the time when the survey is undertaken" (Lever, 1973, p. 221).

Unemployment rates for regions and subregions over time, in conjunction with analogous national rates, were used to identify regional boom and slump periods. A comparison was then made of the importance assigned to various factors for the peak employment, post-peak, and other years periods. The weighting of location factors was found to be statistically different between boom and slump years of the business cycle.

Studies with Policy Implications

Weber and Bryson (1975), in attempting to identify the probable effects of alternative state development policy tools in Wisconsin, used a telephone survey to determine the three most important variables to each of a select group of industries in their location decisions. Although their sample was small (29), and the response rate was low for some industries, results indicated that market access was more important than pure cost considerations. The factors mentioned most often by manufacturers of paper products, machinery, and transport equipment were (1) proximity to market center, (2) availability of skilled labor, (3) availability of highways, shipping facilities, and transportation support services, and (4) business climate. The authors concluded that cost variables alone were not determinant of firm location decisions. The implication for state policy measures is that manipulation of strictly cost factors probably would not be very effective in influencing location decisions (Weber and Bryson, 1975, Appendix C-2).

Based on the results of surveys in which the importance of alternative characteristics were ranked, McMillan (1965) determined that the reasons why a plant official chose a region may be vastly different from the motives which determined his selection of a particular site or com-

munity. Raw materials, labor market conditions, and markets were seen as "prerequisites" to operation, not determinants of location. In sequential determination of a new location, the official first identifies general geographic regions which provide the basic prerequisites. The plant locator has no choice other than placing the plant in an appropriate region, which may be as small as a single county with alternative locations or as large as several states. He does have a choice as to where he places the plant within this region. Within the zone of effective choice, taxes, business and political climate, low priced land, room for expansion, and other variables may be the final determinants of site selection.

Some results in terms of factor ranking in site selection and a recommendation proposed by McMillan were:

1. In practically every case, taxes were given close attention. Companies with a large amount of personal property tend to show the greatest amount of interest in property taxes.
2. The highly developed site such as is found in planned industrial districts is generally too expensive for firms with large site requirements.
3. Primary among the area of initial investigations by firms is government finance and taxation.
4. The best policy of a community to follow is not speculation on excessive services or facilities, but rather a continuous and sound program of financial control, orderly and continuous planning, and the maintenance of a good business climate (McMillan, 1965, p. 242).

Helgeson and Zink (1973) drew similar conclusions in their "Case Study of Rural Industrialization in Jamestown, North Dakota." They found that there is a general movement away from traditional industrial sites due to (1) increasing economic and social costs as metropolitan growth becomes excessive, and (2) decreasing importance of industry location at a specific point as the industry output is marketed over broader geographic areas. The second point was found to be the case for specialized food processing, aerospace, and transport industries. Given that an early decision had

been made to locate in a major geographic region, such factors as availability of subsidies and incentives, and community attitudes, become paramount considerations.

Summary

The studies cited above have illustrated some of the problems, methods, and implications of conducting an analysis of the industrial location decision. Both cost-reducing and revenue-increasing factors play important roles in the plant location process. Furthermore, recent studies have identified personal noneconomic factors as influential. The degree of importance of personal factors within the general theory of location has yet to be conclusively demonstrated. Future analysis should, however, recognize that personal factors may be very relevant at some stage in the decision-making process.

Theory dictates and the weight of evidence supports the conclusion that decision-makers will attempt to select the location that will yield the greatest net utility in the long run. Profit, in this context, is a major but perhaps not decisive component of utility. Success in selecting the "right," if not perfect, location will depend on the availability of information, entrepreneurial skills, and the certainty that favorable location conditions will persist into the future. A direct interview with businessmen in which open as well as structured questions are used to probe the firm's decision to locate can be used to identify, and subsequently test, the importance of both economic and noneconomic determinants of business locations for selected industry types and for different geographic locations within the study area.

CHAPTER III

UNION COUNTY SURVEY AND METHODS

The Survey Questionnaire Design

Theoretical determinants of business location and operational decisions, identified in existing literature, were taken into consideration in designing a questionnaire used to interview approximately 200 Union County businessmen. Major groupings to which the sampled businesses were assigned included contract construction, manufacturing, wholesale and retail trade, utilities and communication, transportation, service industries (lodging, food and entertainment, recreation), professional and financial services, and agriculture. For more detailed analysis, the manufacturing sector was further subdivided into five subsectors representing combinations of the nineteen two-digit manufacturing Standard Industrial Classifications (SIC): (1) food and agricultural processing, textiles, and apparels; (2) lumber and wood products; (3) printing, paper, and publishing; (4) chemical, petroleum, plastics, rubber, and stone; (5) metal, electrical, and transportation, equipment and fabrication, and miscellaneous industry. Hence, the survey of the Union County business community distinguished among a total of twelve different economic sectors.

The final design of the survey instrument reflected a thorough review of location theory literature. A theoretically sound approach to the explanation of industrial location and operational decisions was sought.^{1/}

^{1/} The actual questionnaire used in the Union County business survey appears in Appendix I. In preparing the survey questionnaire, the content of other questionnaires used in analyzing business location decisions were reviewed. Common components were noted, and incorporated in the Union County business survey. The structure of the final questionnaire was designed to yield five general categories of information: (1) identification of the respondent and his role in the original location and/or expansion decision of the firm; (2) classification of the firm, based on principal product or service, by economic sector; (3) description of the firm's operational requirements; (4) relative importance of various factors theoretically influencing firm location, expansion, or contraction; and (5) location of the firm with respect to product and factor markets.

Rather than attempting to rigorously categorize requirements by type of firm, the instrument delineated groups of determinants theoretically affecting the entire spectrum of business activity in a rural economy. Differences in perceived relative importance among groups of determinants by type of firm could then be evaluated.

Basic methodological steps followed in establishing the survey design and interpreting results are as illustrated in Figure 3. All Union County business firms were identified and assigned, on the basis of primary product or service, to one of twelve economic sectors.^{2/} Random sampling within each sector was then conducted, stratifying firms according to level of employment and location within the county. Respondents within the sample were separated into two groups: Decision-makers and non decision-makers with respect to the original location decision. Various survey questions related to perceived problems and advantages associated with doing business in Union County, including both factors affecting present business operations and future expansion plans as well as determinants of location and relocation decisions. Tabulated responses were used in analyzing positive and negative forces influencing business decisions.

Data from the interview questionnaires were punched on cards and independently verified. Computer subprograms from the Statistical Package for the Social Sciences (Nie, Norman H., et. al., 1975) were used to compile and analyze the data. The principal statistical technique used was cross-tabulation. Contingency tables were used to calculate joint fre-

^{2/} The La Grande-Union County Chamber of Commerce provided an inclusive list of all commercial businesses in Union County, including location, scale of employment, addresses, telephone numbers, and identity of individuals to be contacted. Sources of information included Chamber membership lists, telephone directories, and local officials.

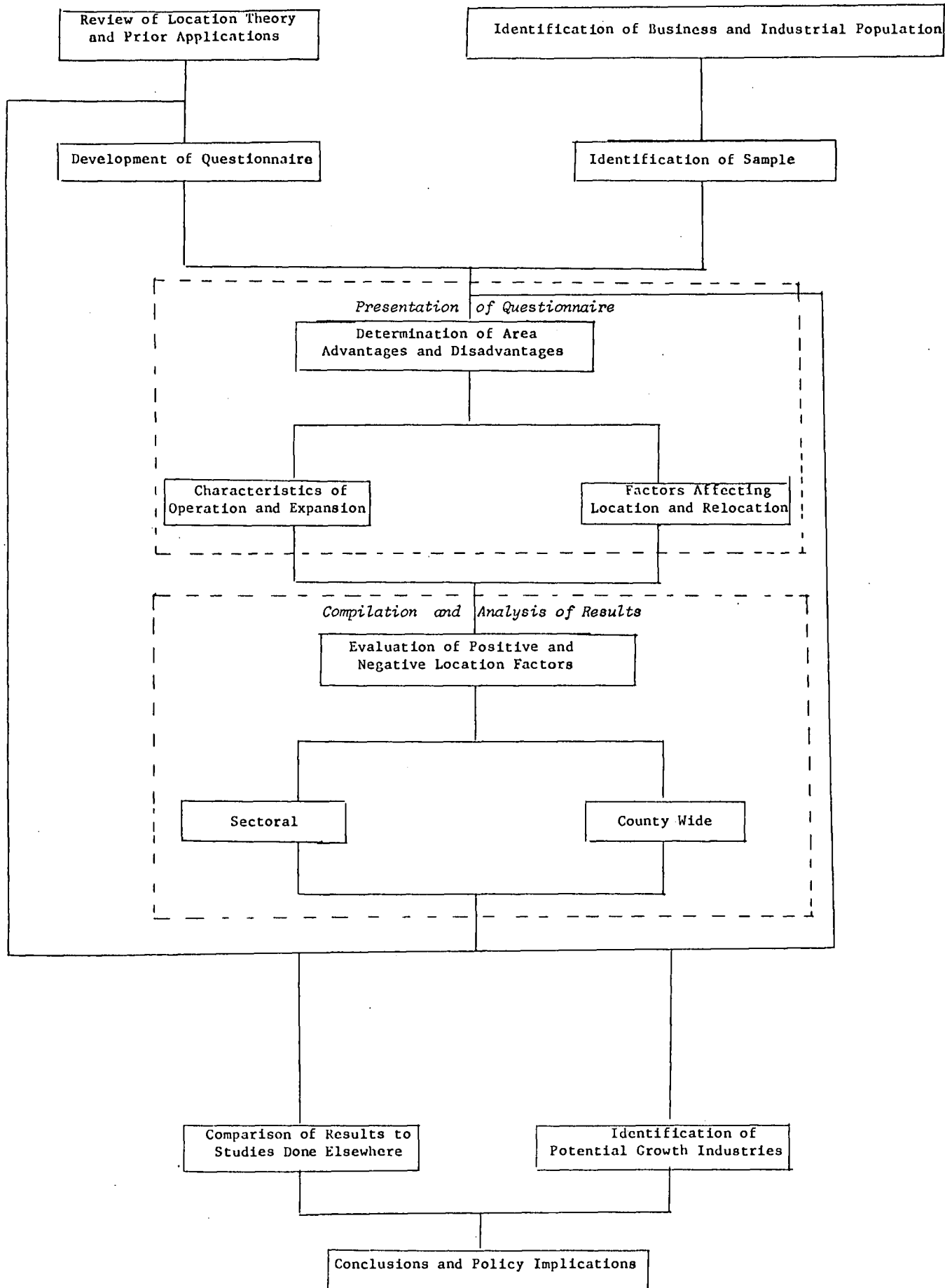


Figure 3. Union County design and information flows.

quency distributions. In addition to standard statistics, measures of association among variables, such as chi-square and contingency coefficients, were estimated.

Organization and Implementation of the Survey

The actual procedures followed in conducting the business survey are noteworthy in the active, coordinated involvement of a number of different interest groups. Interviews were conducted by six Eastern Oregon State College students under the direct supervision of a college staff member. A student-secretary, housed in a communications center office at the College, coordinated work schedules, verified interview dates and times, and kept detailed records of daily progress. A second set of log books were maintained by the La Grande-Union County Chamber of Commerce, under whose auspices a general introductory letter seeking cooperation of the business community was mailed to all firms in the county in advance of the actual interview period.^{3/}

Pre-tests of the Survey Questionnaire

Oregon State University and Eastern Oregon State College project team members interviewed firms from each of the economic sectors, less agriculture. Pretest results were used to modify the form, and to a lesser degree the content, of the initial questionnaire. By deleting re-

^{3/} Records kept at Eastern Oregon State College and the Chamber of Commerce were used to construct master interview scheduling sheets, which were updated at weekly intervals. Contained in the master sheets was information defining the individual status of each potential interview, including date and source of initial contact, follow-up verification, pre-arranged interview date and time, and identity of interviewer.

dundant phraseology, combining related questions, and clarifying instructions to interviewers on means of recording responses, average interview time was reduced from over one hour to less than forty-five minutes.

The Interviewers and Interview Technique

The modified questionnaire was used as a basis for training students in appropriate interview techniques. Emphasis in training was placed on correctness and clarity in presenting questions, and methods of probing to rectify incomplete or unclear responses. Initially, student interviewers were combined into two-man teams, each of which was accompanied by a staff member of the project team. Local businessmen who agreed to act in a liaison and supporting capacity for the project survey (Local Project Liaison Committee) were interviewed by each team, and the experiences of student interviewers in these practice sessions were used in on-going training exercises to resolve observed and anticipated problems in conducting interviews.

Once Local Project Liaison Committee businessmen were interviewed, each was given a list of randomly selected businesses and asked to obtain permission for interviews, and to arrange convenient times for interviews to be conducted. As consent was obtained and times arranged, the information was added to the master scheduling sheet. Student interviewers, guided by the master scheduling sheet, then called to verify appointments and, subsequently, individually conducted the various interviews.

Limitations of the Study

Before considering results from the study and the conclusions presented certain limitations should be recognized. The possibility of

misinterpretation of questions is always present in a survey of this type. Interviewers were instructed to probe respondents when in doubt concerning the interpretation of responses. Both structured and unstructured questions were included in the interview to provide a check on consistency in respondents' answers. In this manner any apparent contradictions in responses could be detected during the interview. When contradictions did occur, respondents were asked to elaborate. Details were noted under appropriate open question items by interviewers.

Although the total population of firms in all sectors, excluding agriculture was fairly large (approximately 550), the number of firms represented in some of the individual sectors was quite small. This was generally the case for the manufacturing categories. To preserve the confidentiality of responses by individual firms, manufacturing firms were aggregated by product. Generally such an aggregation means a loss in information, and consequently, the conclusions drawn from the results apply less to individual types of industries than would be desired. The approach used to compensate for the small numbers limitation was comparison of results from this study with the findings in two state-wide studies that sampled manufacturing firms at the two-digit SIC level.

The Sample

During the four-week survey period (July 7 through August 8, 1975), 212 Union County businessmen were interviewed representing, collectively, over one-third of all non-agricultural county enterprises. In addition, twenty-six county farmers and ranchers were interviewed, drawn from dryland crop production, irrigated crop production, and livestock subsectors.^{4/}

^{4/} A directory of all county farmers, type of farm, enterprise in each case, maps, and locations were provided by the Union County Office, Oregon State University Extension Office.

The total number of business firms in Union County during the survey period, and sampling frequencies by business sector, are shown in Table 1.

General Business Characteristics

Over 80 percent of all nonagricultural business firms sampled were located in La Grande, a ratio consistent with the observed distribution of businesses throughout the county.^{5/} Most were either sole proprietor or corporate in ownership structure, and were located in or near central business districts. Respondents typically were owners or co-owners, and less frequently were managers of sampled firms who had served in that capacity for one to five years. In a consistent vein, 86 percent expressed responsibility for decisions affecting present and future operations of the firm. However, over half of those interviewed were not involved in the original decision to locate the business in Union County, although most the same percentage physically resided in the county when the original location decision was made. Virtually none of the sampled firms were observed to have altered principal product or service lines since the date the business was founded.

^{5/} Responses, by question, are summarized in Appendix II.

Table 1. Union County Business Survey Sectors and Sampling Frequencies

Sector (SIC)	Total	Sampled	%	Interviewed	%	Useable	%
Contract Construction	44	19	43	14	32	12	27
General Services ^{a/}	156	35	22	32	21	24	15
Wholesale-Retail Trade	234	112	48	101	43	77	33
Utilities and Communications	9	5	56	5	56	5	56
Transportation	9	6	67	3	33	3	33
Food and Kindred (20, 22, 23)	7	6	86	3	43	3	43
Lumber and Wood Products (24, 25, 26)	10	5	50	3	30	3	30
Printings (27)	6	6	100	5	83	4	67
Chemical ^{b/} and Mineral ^{b/} (28, 30, 31, 32)	7	5	71	5	71	4	57
Other Manufacturing ^{c/} (33 - 39)	13	8	62	6	46	6	46
Professional and Financial Services ^{d/}	77	38	49	35	45	28	36
SUBTOTAL	572	245	43%	212	37%	169	30%
Agriculture ^{e/}	600	40	7	26	4	21	4
TOTAL	1172	285	24%	238	20%	190	16%

^{a/} Lodging, food service, barbers, beauticians, etc.

^{b/} Chemical, petroleum, plastics, rubber, and stone.

^{c/} Metal, electrical, and transportation equipment and fabrication, and miscellaneous industries.

^{d/} Insurance, financial and credit, professional services.

^{e/} Includes irrigated crop production, dryland crop production, and livestock.

CHAPTER IV

ANALYSIS OF RESULTS

Approach Taken in the Analysis

The Union County sample provided information about (1) the location of businesses within the county, (2) respondent's decision-making role in the firm, (3) type of firm, (4) operational requirements, and (5) how respondents view Union County's location and environmental characteristics as they affect the location, and present and future operations of their business. Specific industry types were identified as potential growth and/or new industries likely to locate in Union County. Barriers to expansion or new location of businesses were also cited.

Three analytic techniques were used to present and interpret results. First, tabulations of firm and respondent characteristics were summarized as relative frequencies (percentages). Frequencies were based on the total number of businesses in the sample, on the number of firms in each of the twelve Union County business sectors, or on numbers of firms in combinations of sectors. Responses to open-ended, as well as structured, questions were also presented in this manner. The use of percentages permitted comparisons of results among sectors containing large differences in the number of firms represented in the sample.

Second, Union County location determinants were compared with findings from two prior industrial location studies. The first was the study conducted in the State of Florida by Greenhut and Colberg (1962) and the second was that of Carrier and Schriver for Tennessee (1969). Both were discussed in Chapter II. Each relates to an entire state whereas the present study pertains only to a rural Oregon county. Nevertheless, they were the only references available which contained sectoral detail and break-

down of location factors comparable to that used in the current analysis. For similar determinants and industries, results were expressed as percentages of total responses.^{6/} Thus, frequencies for a given location factor or a particular industry could be compared among all three studies.

Third, cross tabulation (contingency table) analysis was applied to test for significant sectoral differences in the absolute number of respondents that checked a given positive location factor as relevant. Each location factor was considered separately in the analysis, because respondents were allowed to check more than one of the fifty-six factors in the structured list of possible determinants presented to the interviewee.

In summary, the analysis attempted to describe Union County's operational and locational characteristics, compare for consistency the results from this study with findings obtained elsewhere, and test for bias in responses to possible locational factors. In the following sections, results bearing on each of these three issues are addressed.

An Overview of Positive and Negative Features of the Union County Business Environment

All businessmen interviewed were asked to respond to two sets of related questions, both of which dealt with the general environment within which the businessman operates in Union County. The first set of questions attempted to isolate economic, administrative, and social problems encountered in conducting business operations; the second focused on the perceived advantages and benefits accruing to the businessman in the same

^{6/} The possibility exists that results assigned to some factors in the studies by Carrier and Schriver (1969) and Greenhut and Colberg (1962) were incorrectly equated with the table of locational factors prepared to compare results. An attempt was made to match as closely as possible location factors from the former two studies with those presented to businessmen in Union County.

setting. While virtually all respondents could cite positive factors, only half indicated the existence of any problems faced in conducting business operations in Union County.

Of those who did note disadvantages, a general misunderstanding of or lack of community interest in the problems facing management (community cooperation) was mentioned slightly more often than zoning and planning regulations and high freight rates. Ranking below regulations and freight costs in importance were local taxes, limited population size, excessive competition, slow delivery of inputs, and high factor prices. Presented in Table 2 is the ranking of factors cited as disadvantageous for all firms and by economic sector.

At least two of the features seen by some as disadvantageous--the extent of competition and population size (or market demand)--were stated by other businessmen to be positive attributes of the Union County business environment. Moreover, the incidence with which each was cited as advantageous was more than twice as great as with the opposing view. Neither competition nor demand, however, was found to be of such positive importance to interviewed businessmen as personal preference characteristics (community size and atmosphere), or population and demographic qualities. These and other essentially non-market forces that were also viewed as advantages associated with doing business in Union County appear in Table 3. Advantages cited by respondents, including the relative frequency with which each positive influence was mentioned, are shown. These data consistently reflect the dominance of personal factors, followed by market characteristics, in the broad spectrum of positive features of the Union County business environment.

Table 2. Factors Noted as Disadvantageous to Business Operations In Union County, Oregon

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Community Cooperation	5		8	4	4	11	
2. Zoning and Planning Regulations	4	8	4	1		7	11
3. High Freight Rates	4			6	4		11
4. Local Taxes	3			3	4	4	11
5. Size of Population	3			6	7		
6. Too Much Competition	3		4	4	4		
7. Prompt Delivery of Inputs and Components	3		4	1	4		11
8. High Priced Inputs & Components	3		4	3			11
9. Other	22	36	30	13	37	26	29
NONE	50	58	46	63	36	52	16

^{a/} Column percentages sum to 100 percent.

Table 3. Factors Noted as Advantageous to Business Operations in Union County, Oregon

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Size of City, including Personal Preference	29	8	44	30	11	37	29
2. Characteristics of Population (friendly, stable)	22	25	17	25	22	15	18
3. Good Business Opportunities	9	8	4	14	7	7	
4. Lack of Competition	8	8		10	15	11	
5. Greater Market Demand	8	8	4	7	22	4	
6. Climate (as it affects cost of operation)	6		4	1	4		47
7. Market Growth Potential	5	8	9	6		4	
8. Other	10	35	18	4	19	15	
NONE	3			3		7	6

^{a/} Column percentages sum to 100 percent.

Factors Affecting Operational Decisions

Based on total sample responses, operational features of Union County businesses could be called characteristics of a growing, but not booming, commercial economy. More than half of the cooperating firms viewed present plant size as more than sufficient to meet current demand, although the observed scale of business operations was depicted as at or slightly above normal levels. Financing capital investment and inventory adjustments was not viewed as a past or present problem, as indicated by the findings summarized in Table 4.

Fewer than 50 percent of the respondents expressed dissatisfaction with imposed expenditures, costs, or governmental restrictions (Table 5). Of those who did feel obligated to bear unjustified expenditures or costs, general and property taxes were most frequently mentioned, followed by Occupational Safety and Health Act regulations and site-specific regulations (building, zoning and planning).

A certain degree of optimism with respect to future business operations was reflected in the fact that 44 percent of those polled planned to expand their business operations, 51 percent intended to maintain present levels, and only five percent envisioned cutting back or going out of business. The sole motive given for the last intention was retirement. Responses related to future expansion and/or contraction plans are enumerated in Table 6. For those firms planning to expand, the anticipated time frame for expansion by sector is given in Table 7.

Reasons for expansion plans centered on anticipated increases in demand for the firm's principal products or services. However, a significant number of respondents felt that problems would be encountered in the expansion process (Table 8). Financing was the factor most often mentioned,

Table 4. Availability of External Financing to Meet Business Needs in Union County, Oregon

RESPONSES	SECTOR & PERCENTAGE OF RESPONDENTS ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
Financing Available	76	75	61	78	76	84	80
Financing Unavailable	11	8	26	9	19	4	7
External Financing Not Re-quired	13	17	13	14	5	12	13

^{a/} Column percentages sum to 100 percent.

Table 5. Costs or Cost-Related Regulations that Union County Businessmen Felt Were Unjustified

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Taxes ^{b/}	7	8	13	4	12	4	5
2. Occupational Safety and Health Act Regulations	6	8		4	4		29
3. Zoning and Planning Regulations	4	25	8		4	8	
4. Employment Tax and Workmen's Compensation	4			6	4		10
5. Inventory Tax	4			6	8	4	
6. DEQ Regulations ^{c/}	3	8			4	4	14
7. Other	26	43		18	40	11	23
NONE	47	8	46	62	24	69	19

^{a/} Column percentages sum to 100 percent.

^{b/} Included general and property taxes.

^{c/} Oregon Department of Environmental Quality.

Table 6. Future Plans by Business Sector in Union County, Oregon

SECTOR	TYPE OF PLANT & PERCENTAGE OF RESPONSES ^{a/}			
	Expand	Cut Back	Go Out of Business	No Action
All Sectors	44	2	2	51
Contract Construction	42	17		42
General Services	46			54
Wholesale & Retail Trade	40	1	4	55
Utilities and Communications	40			60
Transportation	33			67
Food & Kindred	33			67
Lumber and Wood Products	67			33
Printing	50			50
Chemical and Mineral	33			67
Other Manufacturing	67			33
Professional Services	54	4	4	39
Agriculture				

^{a/} Row percentages sum to 100 percent.

Table 7. Anticipated Time Frame for Future Expansion, by Business Sector, in Union County, Oregon

RESPONSES	SECTOR & PERCENTAGE OF RESPONSES ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
Within Six Months	24		27	16	33	39	17
Six Months to One Year	18	60	18	20	17		17
One Year to Five Years	19		18	20	25	31	
Other Factors Will Determine	39	40	36	44	25	31	67

^{a/} Percents are based on number of firms in each sector that are planning to expand and sum to 100 percent for each sector.

Table 8. Anticipated Expansion Problems, by Business Sector, in Union County, Oregon

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Availability of Financing	13		13	11	24	13	17
2. Adequate Space, Land	12	8		10	16	13	28
3. Building Laws, Codes, or Permits	9	17	17	13	4		
4. Finding a Good Location	8			16	4	4	6
5. Adequate, Dependable, Skilled Labor	8	8	4	4	8	21	11
6. Zoning and Planning Regulations	3	8		3	4		6
7. High Cost of Land	3			3	4	4	6
8. Other	19	17	24	17	16	24	15
NONE	25	42	42	23	20	21	11

^{a/} Column percentages sum to 100 percent.

suggesting that while capital availability had not been a major problem in the past, county businessmen viewed internal and external sources of investment funds as a limiting constraint to future economic growth. The utilities industry has special financing problems. Other leading constraints to future expansion included inadequate space and land, business laws, codes, and permits. Similarities were found to exist among barriers to expansion and perceived disadvantages in conducting present commercial operations in Union County.

Factors Affecting Location Decisions

Those respondents (approximately 48 percent) who had participated in or had direct knowledge of the original decision to locate the business in Union County were asked to elaborate on the motives underlying the original decision, and present intentions and reasons for relocation plans. Almost none of the firms sampled were found to have initially relocated in Union County from other areas in or outside of Oregon. Consequently, it may be inferred that the bulk of these respondents were individuals responsible for the original founding of a business in the county rather than owners or managers that elected to shift the base of operations for existing businesses from elsewhere. The responses and relative frequencies for those factors influencing the firms' final decisions to locate in Union County are presented in Table 9. Wholesale-Retail Trade, Professional and Financial Services, and Agriculture were the sectors primarily responsible for the dominance of the hometown factor. For the remaining sectors, market demand had the most influence on the location decision.

Respondents who had actively considered alternative locations indicated that their final decision in favor of Union County was guided, in large part, by personal preferences, including climate (Table 10).

Table 9. Factors Influencing the Decision to Locate Firms in Union County, Oregon

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Hometown	23	10	6	18	17	44	40
2. Available Business or Land	20	10	17	34	8	8	7
3. Good Market Demand	18	50	22	13	33	20	
4. Personal (including climate)	15	10	17	21	8	12	
5. Good Market Potential	9		22		17	4	40
6. Chance to be Self-Employed	5	20		8			
7. No Competition	4			3	8	12	
8. Other	6		16	3	9		13

^{a/} Column percentages sum to 100 percent.

Table 10. Perceived Advantages of Union County Over Alternative Business Locations

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Personal (including climate)	23		25	30	9	25	25
2. Available Business or Land	14		38	15	9	8	
3. Hometown	9			15		17	
4. Good Market Potential	9		13	5	9	17	
5. No Competition	7			10	9	8	
6. Good Market Demand	5		13		9	8	
7. Other	32	100	13	25	55	17	75
8. Alternative Locations Weren't Considered	71	92	67	74	33 ^{b/}	57	74

^{a/} Results for responses 1 through 7 were calculated as percentages of the number of respondents that considered alternative locations when the decision was made to locate in Union County, Oregon.

^{b/} All firms sampled in the Food and Kindred Products, Lumber and Wood Products, Printing, and Other Manufacturing industries had considered alternative locations.

In this respect answers were entirely consistent with perceived advantages in conducting present business operations in the area. Of lesser importance, but frequently mentioned, were market opportunities, particularly demand for the firm's principal product or service and the absence of competitors in satisfying that demand. Mentioned even more frequently than market opportunities, although less often than personal preferences, was the chance to purchase an existing business, building, or parcel of land. Hometown ties were also found to be influential.

Almost as many as responded that alternative locations had been initially considered (29 versus 36 percent) indicated that, were the firm to relocate today, criteria other than those responsible for the original location decision would be considered. Only one in four voiced a clear preference for a different location (Table 11).

Factors that would guide future decisions to relocate related, predominantly, to market inadequacies. Leading the list of responses presented in Table 12 were a desire for better access to buyers, a larger population, and greater market potential.

Analysis of Structured List of Location Factors

The responses described above were obtained using open-ended questions. To assist in the verification of open responses, businessmen were asked to rank the importance of six factor categories as they affected the decision to locate in Union County. Within each category, more specific examples of possible factor determinants were provided. Rank scores were computed by letting a first place vote equal six, a second place vote equal five, etc. The scores were then summed for each factor category. Results of the ranking of categories over all business sectors are presented in

Table 11. Preferences for Alternative Locations Expressed by Respondents in Union County Business Sectors

RESPONSES	SECTOR & PERCENTAGE OF RESPONDENTS ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
New Location Preferred	26	27	16	30	25	26	26
Would Not Prefer a New Location	74	73	84	70	75	74	74

^{a/} Column percentages sum to 100 percent.

Table 12. Location Factors That Would be Considered if Firms in Union County Business Sectors Were to Relocate

FACTOR	SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{a/}						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Ability to Service Buyers, Traffic	29	20	20	37	43	38	
2. Larger Population	23		40	23	14	50	10
3. Greater Market Potential	14	60		10		13	20
4. Climate (as it affects cost of operation)	8						50
5. Less Competition	5			7	14		
6. Recreation, Climate	5			10			
7. Other	17	20	40	13	29		20
No Other Factors Would Be Considered ^{b/}	64	58	79	61	75	71	52

^{a/} Column percentages sum to 100 percent.

^{b/} Results for responses 1 through 7 were calculated as percentages of the number of respondents that would consider location factors different from those identified as influential in determining their present location in Union County, Oregon.

Table 13 including, in parentheses, weighted average rankings by factor category. Rankings for each business sector are given in Table 14. Again, numbers in parentheses refer to weighted average rankings.

In addition to ranking factor categories, respondents were requested to indicate those individual factors in each ranked category that they felt represented important location determinants.^{7/} The twelve factors checked most often are summarized in Table 15.^{8/}

Two conclusions may be drawn from a comparison of these results with the responses to the open questions, earlier discussed, concerning operational and locational advantages of Union County. First, personal preferences and market characteristics had the strongest influence on businessmen's decisions to locate in Union County. Second, responses to the structured questions were highly consistent with the businessmen's open responses. The following discussions focus on the responses given to the structured set of questions. Business sectors that exhibited the highest and lowest response frequencies for the factors selected as important by all sectors are highlighted.

Personal factors were cited most often by all businesses in Union County as being important in the location decision. The most frequently identified factor was friendship with customers, suppliers, bankers, etc. Many respondents, particularly in the Wholesale-Retail Trade, Contract Construction, and Other Manufacturing sectors, stated that the decision

^{7/} The results for all respondents who identified special location factors as influential determinants are presented in Appendix II, Table 47.

^{8/} Location factor frequencies for all respondents and by business sector are detailed in Appendix II, Table 48. Comparable results obtained by Greenhut and Colberg (1962) and Carrier and Schriver (1969) are, where applicable, also noted. For individual sectors, however, responses are noted only in those cases when at least 20 percent of the respondents cited an individual factor as instrumental in their decision to locate.

Table 13. Ranking^{a/} of Favorable Location Factor Categories in Union County, Oregon^{b/}

FACTOR CATEGORY	RANK ASSIGNED ^{b/}						
	1st	2nd	3rd	4th	5th	6th	Not Ranked
Personal	114(3.8)	25(0.7)	8(0.2)	1(0.0)	2(0.0)	-----	31
Procurement	3(0.1)	2(0.1)	10(0.2)	6(0.1)	2(0.0)	3(0.0)	155
Distribution	6(0.2)	13(0.4)	11(0.2)	7(0.1)	5(0.1)	4(0.0)	135
Market	35(1.2)	55(1.5)	9(0.2)	6(0.1)	2(0.0)	-----	74
Processing	4(0.1)	18(0.5)	21(0.5)	9(0.1)	4(0.0)	1(0.0)	124
Other	3(0.1)	19(0.5)	28(0.6)	6(0.1)	3(0.0)	3(0.0)	119

^{a/} Scores are based on responses provided by 181 businessmen representing all twelve business sectors.

^{b/} Figures in parentheses are weighted ranks. See text for explanation of procedure followed in calculating rank.

Table 14. Direct Ranking of Favorable Factor Categories by Union County Business Sectors

<u>Factor Category</u>	<u>Code</u>
Personal	A
Procurement	B
Distribution	C
Market Demand	D
Processing	E
Other Considerations	F

SECTOR	RANK ^{a/}					
	1	2	3	4	5	6
1. Contract Construction	A (4.8)	D (3.5)	F (2.5)	E (1.9)	C (1.3)	B (1.1)
2. General Services	A (5.2)	D (3.6)	E (1.2)	F (1.2)	B (0.6)	C (0.6)
3. Wholesale-Retail	A (5.1)	D (3.0)	F (1.4)	E (1.3)	C (1.0)	B (0.3)
4. Utilities & Communications	D (3.0)	F (3.0)	A (2.5)			
5. Transportation	E (5.5)	A (4.0)	D (3.0)	F (2.5)		
6. Food & Kindred	F (6.0)	A (5.0)	B (4.0)	E (3.0)	D (2.0)	C (1.0)
7. Lumber & Wood	A (6.0)	D (4.0)	D (4.0)	E (2.5)		
8. Printing	A (6.0)	D (3.8)	C (1.3)	E (1.0)		
9. Chemical	A (4.0)	D (3.0)	C (2.3)	F (1.7)	E (1.3)	B (0.3)
10. Other Manufacturing	D (4.4)	c (3.8)	A (3.6)	E (2.8)	B (2.0)	F (1.6)
11. Professional & Financial Services	A (3.8)	D (3.5)	F (1.1)	C (0.8)	B (0.7)	E (0.6)
12. Agriculture	A (4.0)	E (2.1)	F (1.2)	D (0.9)	C (0.8)	B (0.2)
13. Sectors 6 through 10	A (3.7)	D (2.9)	C (2.1)	E (1.1)	F (1.0)	B (0.8)

^{a/} Figures in parentheses are weighted average ranks based on the number of respondents in each sector. Values are comparable across sectors.

Table 15. Leading Factors Exerting a Favorable Influence on the Conduct of Business in Union County, Oregon

FACTOR & RANK	CATEGORY	PERCENTAGE OF RESPONDENTS ^{a/}
1. Friendship with customers, etc.	Personal	77
2. Size of city, good place to live, etc.	Personal	76
3. Recreational characteristics, etc.	Personal	66
4. Characteristics of population, etc.	Personal	46
5. Potential for greater demand	Market	45
6. Community facilities	Other	39
7. Extent of competition	Market	39
8. Ability to service buyers	Market	39
9. Hometown, family ties	Personal	37
10. Greater demand for product	Market	32
11. Local supporting services	Other	31
12. Highway access	Distribution	30

^{a/} Sums to more than 100 percent because respondents were permitted to check more than one factor.

to live in Union County had been made before or concurrent with the decision to establish or purchase a business in the area. Transport, and Chemical and Mineral industries assigned least importance to personal factors.

Market or location demand factors received the next highest ranking. Forty-five percent of the respondents said potential for greater demand in the area influenced the decision to locate. Other Manufacturing, Printing, Utilities and Communications, Wholesale-Retail Trade, and General Services assigned the highest level of importance to the potential market demand factor. Of somewhat less importance to respondents was the strength of existing market demand in the Union County area. Thirty-two percent of all respondents indicated that present market demand was an important locational determinant. Utilities and Communications, Lumber and Wood Products, Professional Services, and General Services were most sensitive to present market demand. Least affected were Transport, Food and Kindred, and Agriculture.

The distribution factor, highway access, noted by 30 percent of the respondents, was the only remaining factor selected as important by a significant number of businessmen. Other Manufacturing, Lumber and Wood, Agriculture, and Professional and Financial Services sectors contributed frequencies of 80, 50, 38, and 29 percent, respectively, to highway access. Access to markets was checked by fourteen percent of all firms. Lumber and Wood, Chemical, and Other Manufacturing indicated by 50, 33, and 40 percent of their firms, respectively, the importance of this factor as a cost-saving feature.

Procurement factors received relatively few votes. Proximity to sources of raw materials and supplies was identified most often by firms

in Lumber and Wood (50 percent); Agriculture (24 percent); and Other Manufacturing (20 percent). All other sectors had response rates of less than twenty percent for proximity to raw materials.

A processing factor, climate as it affects cost of operation, was checked most often by Agriculture (33 percent); Other Manufacturing (20 percent); and Wholesale-Retail Trade (20 percent) industries. Across all sectors, 18 percent said climate was important. Favorable labor-management relations received only 13 percent of all firms' votes, but was cited by 67 percent of Lumber and Wood firms and by 40 percent of Other Manufacturing. Insurance coverage and availability of capital were noted as influential by 16 and 15 percent of all respondents. Only one sector, Agriculture, cited these latter two factors with appreciable frequency (33 percent).

Other factors, including community facilities (schools, medical, etc.) and local supporting services (police, fire, etc.) displayed frequencies of 39 and 31 percent, respectively. The sectors most concerned with these attributes were Lumber and Wood, Professional and Financial Services, Transport, and Agriculture. Community leaders' cooperation was most important to Transport (50 percent); Lumber and Wood (67 percent); and Other Manufacturing (40 percent). Data provided by Chamber of Commerce, community, etc. was important to Other Manufacturing (60 percent); Transport (50 percent); and Professional and Financial Services (25 percent).

Analysis of Location Factors by Industry

Having reviewed the relative importance of selected factors across sectors, the focus of analysis now turns to the consideration of the location factors of importance to each sector. By looking at how businesses in a particular sector responded to all factors, additional

information may be gained as to the relative importance among different location factors for a given sector.

In addition to the detailed results presented in Appendix II, Table 47, locations of major input and product markets were identified and are presented below for each sector. Factor responses were interpreted based on the actual location of the firm with respect to its primary sources of materials and components, and location of product markets. The data on sources of inputs and markets were collected from Section F, questions 1 and 2, in the interview questionnaire (see Appendix I). The sources of inputs data for sampled firms were classified as follows:

(1) Local sources included all firms that reported purchasing 51 percent or more of their raw materials and components within Union County; (2) State included all firms purchasing 51 percent or more of their raw materials outside Union County, but within the State of Oregon; and (3) Out-of-State included all firms purchasing 51 percent or more of their raw materials and components from states other than Oregon. The same basic criteria was used to categorize information with respect to location of the primary market for a firm's products or services.

All Industries. To provide a basis for comparison among individual sectors, the relative frequencies of location of primary product and input markets for all sectors combined are given in Table 16. The major product market for over three-fourths of the firms was Union County. Only two percent of all firms had as their major market locations outside of the State of Oregon. The most common source of raw materials was the State of Oregon indicating that Union County firms tend to procure their inputs outside the county but not outside the State. These results suggest the strong local orientation of Union County firms; and are con-

sistent with the revealed importance of personal and marketing factors as earlier discussed.

Table 16. Market Locations and Sources of Inputs and Raw Materials for Union County Firms

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	76%	21%
State	22	57
Out-of-State	2	22

Each of the industrial sectors was evaluated on the basis of (1) the actual geographic relationship of the firm's plants to their markets and sources of raw materials, (2) the location factors considered important, and (3) responses to these or similar factors by industries in the Tennessee and Florida studies.^{9/}

The Contract Construction Industry. The Contract Construction sector's high dependence on the local product market, while relying somewhat less heavily on local sources for raw materials and components, is revealed in Table 17. A picture of an industry highly localized with respect to county and state markets emerges.

The location factors with highest observed frequencies were personal and market. Eighty-three percent of the contract Construction firms responded that friendship with customers, suppliers, bankers, etc. was influential in their decision to locate in the area. Second in importance

^{9/} The non-manufacturing sectors were not considered in the Tennessee survey. The Florida study included all of the sectors except Wholesale-Retail Trade, Utilities and Communications, Professional and Financial Services, and Agriculture.

was size of city, good place to raise a family, and recreational characteristics of Union County. The latter also received the highest number of first place votes (83 percent) by respondents in this sector in the Florida study.

Table 17. Market Locations and Sources of Inputs and Raw Materials for the Union County Contract Construction Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	92%	42%
State	8	58
Out-of-State	0 ^{a/}	0

^{a/} A value of 0 percent does not imply that firms had no sales or purchases to/from an out-of-state source. Rather, the proper interpretation is that no sampled firm was found to depend on out-of-state sources for more than half of its sales or purchases.

Half the respondents cited hometown, family ties and location, and number and degree of competition factors. Also noteworthy (42 percent each) were ability to service buyers and local supporting services.

A comparison of the detailed sectoral results presented in Appendix II, Table 47, with the data given in Tables 3 and 9, county advantages and locational determinants, respectively, indicates respondents in the Contract Construction sector were consistent in their responses concerning Union County locational determinants. Both personal preference and market factors were voiced as predominant. The fact that market advantages were most relevant to this sector is reflected in the firms' market orientation as illustrated in Table 17.

It appears that Contract Construction firms have located in Union County to serve the local market; and find sufficient primary sources of

materials and components locally or in the state to operate their business in an area where there are positive personal factors to attract and hold them. The leading responses describing operational and anticipated expansion problems were zoning and planning regulations, building laws, and adequate quantity and type of labor. In spite of the negative factors, 25 percent of the sampled firms planned to expand operations within one year (see Tables 6 and 7).

The General Service Sector. As would be expected, the General Services sector, which included a large variety of businesses from barber shops to motels, mainly serves the local market. Results summarized in Table 18 show that 96 percent of the firms had the bulk of their sales occur within Union County. The dominant source of inputs or components used in the General Service businesses was the state, with 66 percent falling in this category. The 13 percent in the out-of-state category indicate dependence by a minority of General Service firms on out-of-state suppliers.

Table 18. Market Locations and Sources of Inputs and Raw Materials for the Union County General Service Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	96%	21%
State	4	66
Out-of-State	0	13

With reference to the list of possible location factors, friendship with customers, suppliers, bankers, etc. were most frequently mentioned. Size of city and recreational characteristics were next in importance, enumerated by 75 and 63 percent of the respondents, respectively. One-

fifth to over half of the respondents said market factors were important with greater demand in area leading the list of specific market factors. Also cited in the list of location factors were highway access, community leaders' cooperation, and hometown, family ties (by 29 percent each).

Results from the structured list of locational determinants were in accord with the county advantages and location factors mentioned in the open-ended responses. Both Tables 18 and Appendix II, Table 47, indicate the dominant role played by market forces. The reliance on sources of supplies from outside the county may explain the need for highway access, although by assumption most firms in this sector deal with a service more extensively than with the transformation for sale of a product.

While no one factor was mentioned consistently as a negative Union County factor, building codes, taxes, and lack of financing for expansion were mentioned most often. Approximately 21 percent of the firms in this sector are planning to expand within one year.

The Wholesale-Retail Trade Industry. A strong local market orientation for the Wholesale-Retail Trade industry is confirmed in Table 19. The many types of products sold in the county must be brought in from other parts of the state and from other states. Ninety-one percent must rely on factor markets outside of the county for their inputs.

Table 19. Market Locations and Sources of Inputs and Raw Materials for the Union County Wholesale-Retail Trade Industries

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	84%	9%
State	15	56
Out-of-State	1	35

Characteristics cited as being important to location for this sector included personal factors, friendship, etc., size of city, and recreational characteristics, each of which had response rates of over 70 percent. The hometown factor had a frequency of 40 percent. Firms in this sector indicated optimism about future demand for their product by checking the potential for greater demand in area factor. Nearly half, 49 percent, felt that the location they chose offered a good opportunity to service customers. Community facilities and local supporting services were noted by 44 and 35 percent of the sector's respondents, respectively. In the Florida study, pools of trained workers and greater market demand in area were cited by 57 and 29 percent of the respondents as important location determinants.

The responses to given open-ended questions coincided with these results in terms of the importance of county, personal, and market attributes. The specific location of some businesses was less than optimal, as is indicated by the problem of finding a good location for expansion (see Table 8), and by an expressed preference to relocate on the part of 30 percent of the respondents (see Table 11). Further evidence of dissatisfaction with the firms' sites in Union County was evident in the discovery that over three-fourths of the firms preferring to relocate would do so within Union County. This may also reflect the influence of the hometown factor which was cited as a Union County advantage over alternative locations (see Table 10).

Thirty-six percent of the firms in the Wholesale-Retail Trade sector planned to expand their business within one year to meet growing demand. Anticipated expansion problems were related to meeting building codes, obtaining financing, and securing sufficient space (see Table 8).

Utilities and Communications, Transport, and All Manufacturing

Industries. Due to the small number of firms in each of the Utilities and Communications, Transport, and Manufacturing sectors, the responses to open-ended questions were aggregated under one heading. Computed frequencies were based on the number of all the respondents in these combined sectors. Aggregation was done mainly to protect the confidentiality of interviewees.

Summarized below are the most frequent responses related to Union County advantages and disadvantages as they affected the location, operations, and anticipated expansion of these firms. The comparison of findings with the results presented in the following seven sections is left to the reader.

The advantages and locational determinants mentioned most often by firms from the Utilities and Communications, Transport, and All Manufacturing sectors were market demand and greater market potential, stable population, personal preference (which included hometown influence), and opportunity to start or purchase a business in an area of little competition. For firms that had considered alternative locations when the business started, these same factors were cited equally but by only 9 percent of the firms (see Table 10).

The disadvantages associated with having a business in Union County were found to be the availability of financing for expansion, adequate amount of space or land, local taxes, and adequate amount and type of labor (see Tables 2, 5, and 7). However, forty-eight percent of the firms in these industries were planning to expand their operations. Expansion plans were concentrated in the Other Manufacturing and Lumber and Wood Products sector.

The Utilities and Communications Industry. Businesses in the Utilities and Communications industry were mainly of two types: electric power and radio-television communications. The local market orientation is reflected in Table 20. All inputs were supplied from outside of the county.

Table 20. Market Locations and Sources of Inputs and Raw Materials in the Union County Utilities and Communications Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	100%	0%
State	0	80
Out-of-State	0	20

Seven determinants were checked with equal frequency by the firms in this industry. Four of these were personal factors. Fifty percent of the Utilities and Communications respondents said greater market demand in area, potential for greater demand in area, and location, number and degree of competition by similar businesses were important determinants of their location decisions.

The only anticipated expansion problem, one identified by 80 percent of the firms in the Utilities and Communications Industry, was availability of financing. Such a response is easily understood since the large expenditures required for expansion of facilities and acquisition of equipment makes availability of credit a major problem for utility companies throughout the country.

The Transportation Industry. The Union County Transportation industry may be totally dependent on the local market for its sales

(see Table 21). Supplies and equipment normally used in this industry were obtained from other parts of the state. One-third of the respondents relied on out-of-state sources as their primary source of supply.

Table 21. Market Locations and Sources of Inputs and Raw Materials in the Union County Transportation Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	100%	0%
State	0	67
Out-of-State	0	33

Personal factors, size of city, and recreational characteristics of area were checked by all respondents in this sector. Other factors such as community facilities, community leaders' cooperation, local supporting services, data provided by the Chamber of Commerce and community, and the existence of a building or plant were indicated as being important by 50 percent of the firms.

In contrast, the three factors cited as most important by all transportation firms in the Florida Study were low freight cost, greater market demand in area, and potential for greater demand in area. Small sample size in both the Union County survey and Florida study may have accounted for the observed inconsistency in responses to location factors. The dominance of the local product market for transportation firms strongly suggests a localized market orientation by this Union County industry.

The Food and Kindred Products Industry. The Food and Kindred Products industry was oriented toward serving state and national markets.

Table 22 reveals that other parts of the State are primary markets for two-thirds of the Union County firms. One-third rely on out-of-state markets. Sources of raw materials were evenly distributed over the three possible input market locations.

Table 22. Market Location and Sources of Inputs and Raw Materials for the Union County Food and Kindred Products Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	0%	33%
State	67	33
Out-of-State	33	33

Few specific location determinants were checked by this sector. Only one firm responded to the structured list of location factors. Therefore, it is impossible to draw inferences from this question for the Food and Kindred Products industry. In the Carrier and Schriver study, 60 percent of the food industry respondents checked availability of existing building or plant as influential. Based on additional information obtained in their study it was found that low freight costs for raw materials and availability of low-cost raw materials were second and third in importance to this sector. Other significant factors were personal reasons with economic advantages, low freight cost on finished products, and low-cost electric power. Greenhut and Colberg found that the key factor for their sample was greater market demand, with low cost of transportation of raw materials and components in second place.

The Lumber and Wood Products Industry. The primary source of raw materials and other inputs cited by the Lumber and Wood Products in-

dustry was the State of Oregon rather than Union County. At the present time, most of the wood processed is coming from counties adjacent to Union County. Two-thirds of the firms interviewed, logging firms that supply local lumber mills, indicated the existence of a primary market for their product in Union County (Table 23). Nearly all of the wood products processed in Union County are shipped out-of-state.

Table 23. Market Location and Sources of Inputs and Raw Materials for the Union County Lumber and Wood Products Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	67%	0%
State	0	100
Out-of-State	33	0

All respondents in the Lumber and Wood Products industry indicated that friendship with customers, suppliers, and bankers; and location, number, and degree of competition by similar businesses were important location determinants. Favorable labor-management relations was checked by 67 percent in this survey and by 55 percent of the comparable industrial firms in the Tennessee study. Proximity to source of raw materials and supplies was cited twice as frequently in the present case as in the Tennessee survey of Lumber and Wood Products firms. In all three studies, interviewed businessmen indicated that greater market demand in the area was important. Greater market demand was the leading factor in the Florida study, although low cost and availability of labor received the largest frequency of responses among Tennessee Lumber and Wood Products firms.

The Lumber and Wood Products industry directly or indirectly serves a national market, and as described in Chapter I, has been affected by cyclical changes in the market. Future growth in the national market and availability of timber resources in Northeastern Oregon will undoubtedly have a great impact on future expansion by this industry.

The Printing, Publishing, and Allied Industry. The primary product market for Printing, Publishing and Allied industry was local. However, Table 24 also indicates all of the firms purchase their raw materials and components from other areas of the state.

Table 24. Market Location and Sources of Inputs and Raw Materials for the Union County Printing, Publishing, and Allied Industries

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	100%	0%
State	0	100
Out-of-State	0	0

All personal factors were checked by at least half of the respondents (see Appendix II, Table 47). The hometown and family ties factor had the second highest frequency of response (75 percent). Of the marketing factors, potential for greater demand; location, number, and degree of competition; and ability to service buyers had values of 50 percent each.

Carrier and Schriver found that the most important factors were community leaders' cooperation and favorable labor-management relations. Additional items of some importance were market and personnel with response frequencies of 20 percent each. In the Florida survey, with a

firm sample site considerably larger than in either this study or that of Carrier and Schriver, the most important location factors were market demand (74 percent), and favorable labor-management relations (18 percent).

Union County printing and publishing firms were small in terms of size and employment. Since smaller firms would need less assistance in establishing their businesses, and have fewer employees than larger firms, they would be less likely to be concerned with community leaders' co-operation and labor-management relations. The general feeling expressed by respondents was that they could locate their business almost anywhere, provided there was sufficient market demand.

Chemical and Mineral Industries. The firms in the Chemical and Mineral industries sectors were few in number and varied in actual type. The principal market for their products was the state. Raw materials and components came from other areas of the state or from out-of-state (Table 25).

Table 25. Market Location and Sources of Inputs and Raw Materials for the Union County Chemical and Mineral Industries

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	25%	0%
State	50	50
Out-of-State	25	50

The factor category rankings yielded the following results: personal factors, market factors, and distribution factors. Personal factors such as size of city and recreational characteristics were the

leading features checked by respondents. Greater market demand in the area was identified as important by roughly one-third of the respondents in the present survey as well as in the Tennessee and Florida studies. Low cost and availability of labor was favored by one-third of Union County firms and by half of the Tennessee firms in the sector. Over 20 percent of the chemical products firms in the Florida study indicated that low cost of transport of raw materials and finished product were of primary importance to their location decision.

For the Rubber and Plastic Products industry, data from the Tennessee and Florida studies were considered.^{10/} The most important factor in both studies was low cost and availability of labor. A second processing factor of importance to 64 percent of the Tennessee firms was low cost of electric power. Low cost of financing plants through revenue bonds, favorable labor-management relations, and community leaders' cooperation were also relevant to this sector's location decisions.

In the Tennessee study, the Leather Products industry was most concerned with processing cost factors. Low cost and availability of labor, low cost of financing plant through revenue bonds, and favorable labor-management relations were checked by 82, 63, and 55 percent of the respondents, respectively. The importance of the community's role was demonstrated by the fact that 73 percent of the firms assigned credit to confidence that community leaders would cooperate with local industry. Firms in the Florida study cited low freight cost on finished product.

^{10/} The following information is summarized from the Tennessee and Florida studies. Representative firms may have existed in Union County, but in order to protect the confidentiality of responses they were aggregated and reported under the Chemical and Mineral Industries sector in Appendix II, Table 48. The results obtained elsewhere are presented here to give greater detail about Chemical and Mineral related firms' locational requirements.

Second and third in importance to all firms was climate as it affected cost of operation and as an attraction to top management.

The Stone, Clay, and Glass Products industry in Florida was described as locating near its source of raw materials and converting them into high value products that could be shipped to distant markets. Within this sector the manufacturers of glass products assigned great importance to market demand potential in the area of location. It was suggested that this subsector was most concerned with supplying its markets. These types of glass and glassware firms may have accounted for the importance assigned by Florida firms in this sector to market factors, rather than proximity to and availability of raw materials.

Other Manufacturing Industries. Table 26 reveals that the firms in Other Manufacturing industries primarily served markets in the state other than Union County. Thirty-three percent of the firms served out-of-state markets. The major sources of raw materials and components were out-of-state.

Table 26. Market Location and Sources of Inputs and Raw Materials for the Union County Other Manufacturing Industries

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	17%	17%
State	50	33
Out-of-State	33	50

A comparison of results obtained in the three studies indicated that firms in the Other Manufacturing sector were most influenced by processing

and market factors.^{11/} The processing factors identified in Union County were low cost and availability of labor, favorable labor-management relations, and low cost of building and land.

Union County respondents also indicated that friendship with customers, suppliers, and bankers; data provided by the Chamber of Commerce; and community leaders' cooperation played a role in their location decision. Greater market demand in area was only checked by 20 percent of the respondents. Sixty percent of the firms indicated that potential for greater demand in area was an important location characteristic. This may indicate the anticipation by firms of an improved market in the future.

Most of the distribution factors were noted as important by two-fifths or more of the respondents. Highway access was selected by 80 percent of the firms. Apparently firms felt there were sufficient savings on distribution costs to enable them to serve non-local markets.

The results from the Tennessee study for the seven industry types that were aggregated in the Other Manufacturing sector were fairly consistent in terms of the specific factors selected. Personal, procurement, and distribution were found to be less significant than processing and market characteristics. The determinants that were checked by most industries were low cost and availability of labor, favorable labor-management relations, low-cost of electric power, and favorable community and state tax structure.

In the Florida study, 55 to 96 percent of the firms in the sector selected greater market demand in the area as the most important factor.

^{11/} The frequency of individual factor responses for this sector in the Union County study were recorded in the Miscellaneous column of Appendix II, Table 48.

Potential for greater market demand and the presence of a pool of skilled workers were also assigned importance.

The Professional and Financial Services Industry. Professional and Financial Services industries varied considerably in the type of service offered. Financial, insurance, real estate, and medical firms dominated the subsample. As is indicated in Table 27, firms located near their product market, although slightly over 20 percent served surrounding counties. Inputs and supplies used in the operation of professional and financial businesses largely came from outside the county.

Table 27. Market Location and Sources of Inputs and Raw Materials for the Union County Professional and Financial Services Industry

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	79%	25%
State	21	64
Out-of-State	0	11

The dominant location factor categories were personal and market. Local characteristics that appealed most to representatives from this sector were size of city and friendship with customers. Over half felt that community facilities were important. All market factors were checked by at least 39 percent of the respondents, with ability to service buyers receiving the highest response frequency.

The strength of market factors and the nature of these businesses suggest two things. All firms provide a service that requires direct contact with clients, causing businesses to be highly market-oriented.

Other measures or indicators of market strength such as area per capita income and employment rate may have been more specific types of location factors considered by this sector in the location decision.

The Agricultural Sector. The majority of farmers interviewed indicated their primary product market was the state. Two-thirds sell a majority of their product out of the county (Table 28). The inputs and supplies necessary for production were obtained in Union County.

Table 28. Market Location and Sources of Inputs and Raw Materials for the Union County Agricultural Sector

Location	TYPE OF MARKET & MARKET DEPENDENCE	
	Product	Inputs
Local	33%	67%
State	67	33
Out-of-State	0	0

Union County farmers ranked personal factors first, other considerations second, and processing factors third in influencing their location decisions. All of the personal factors were checked by more than 35 percent of the respondents. Factors mentioned most frequently were friendship with customers, size of city, and recreational characteristics. Community facilities was checked by 48 percent of the respondents. In the same category, local supporting services received 38 percent and community and county planning and zoning laws 24 percent of the respondents' votes. Favorable processing factors included climate (as it affects cost of operations), and insurance coverage. Some optimism concerning the local market was demonstrated by the 33 percent who indicated they felt there was potential for greater demand in the area.

Generally the farmers interviewed had been owners of their farms for a number of years. They originally settled in Union County because land was available and climatic conditions were such that they could grow preferred crops. Younger respondents either inherited farms from their fathers or married into one. The factors checked by respondents may well be indicative of those characteristics of the county that give farmers greatest personal satisfaction and/or favorably affect their day-to-day operations.

Tests of Significance in Response Frequencies Among Location Factors

A number of firm and respondent characteristics, aside from the type of industry to which the firm belongs, may have had a significant bearing on inferences drawn from the survey. Cross tabulation analysis was used to test for significant differences in the number of interviewees who noted specific positive location factors on the structured list. In each phase of the cross tabulation analysis it was assumed that respondents could give only one of two answers. For a given factor, a response was either yes or no, important or not important. The control variables used in testing for significant differences among sectoral responses included, in addition to the assigned sector, address of the firm, year the firm was located in Union County, the respondent's role in the location decision, type of plant, future plans, and relocation preferences. Responses given by businessmen, grouped on the basis of these variables, were compared with the aggregate frequency of response for each positive location factor to test the null hypothesis that there was no significant differences among groups in the number of checks assigned to a given factor.

The first set of contingency tables were generated for each of the sixty possible positive location factors versus all business sectors, where the manufacturing sectors were combined with Utilities and Communications and Transport firms into one sector (Table 29). Aggregation was necessary to insure a minimum expected frequency of five for each cell in the contingency table. From all possible factors a smaller list of 26 was selected for more intensive analysis. The 26 factors analyzed were those that had been selected by at least ten percent of all respondents, or those which were found to be significantly different in frequency of mention at the $\alpha = 0.1$ level among all twelve sectors.^{12/}

The distribution of checks among the six business sectors were significantly different at $\alpha = 0.05$ for seven of the 26 positive location factors. Only one time in twenty would the same differences in response frequencies occur due to chance. It may be concluded, then, that the importance of these factors differed significantly among the six sectoral categories.

The good warehousing and storage facilities factor was apparently more important to Agriculture than to any other sector. Farmers, particularly those producing grain crops, may have been referring to the presence of local elevators.

Location, number, and degree of competition was evidently of greatest influence to the Contract Construction and General Services sectors, while Agriculture appears to have been least affected by this factor.

The level of significance of differences in observed response frequencies among sectors was highest for the ability to service buyers.

Fifty-four percent of the Professional and Financial Services firms

^{12/} Response frequencies by the modified sector categories and their respective chi-square values for the reduced list of positive location factors are given in Table 29.

Table 29. Tests of Significance in Response Frequencies for Positive Location Factors Among Union County Business Sectors

FACTOR	SECTOR & OBSERVED FREQUENCY OF RESPONSE						X ² (5 df)
	Contract Construction	General Services	Wholesale- Retail Trade	Utilities & Comm., Trans- port, and All Manufacturing	Professional and Financial Services	Agriculture	
Friendship with customers, suppliers, bankers, etc.	83	79	88	58	68	67	12.1656**
Characteristics of population, cultural qualities	25	50	43	47	61	48	5.0497
Size of city, good place to raise a family	67	75	79	79	79	67	2.1487
Hometown, family ties	50	29	41	37	29	38	2.8236
Recreational characteristics, climate	67	63	71	58	61	67	1.9091
Proximity to sources of raw materials	17		13	11	11	24	4.2685
Access to markets	25	13	10	21	11	24	4.6774
Speed of delivery of final products			16	16			8.7089
Good warehousing and storage facilities			10	16			13.4142**
Highway access	25	29	30	26	29	38	0.9574
Greater demand for product	33	42	33	26	39	14	5.0379
Potential for greater demand in this area	33	54	52	32	43	33	5.5529
Location, number and degree of competition	50	50	43	37	43		15.9919**
Ability to service buyers	42	21	49	32	54		20.1731**
Low cost and availability of labor	17			16	18	19	4.3623
Climate (as it affects cost of operations)	17	17	20		11	33	6.6787
Favorable labor-management relations	17	17	10	16		19	2.5780
Low cost of satisfactory type and amount of water		13	12			33	12.2918**
Availability of existing building or plant		13	20			24	11.8060**
Existence of non-union labor	17	13	10			19	4.2072
Availability of capital	17	13	17		14	24	5.0222
Community facilities (schools, medical, etc.)	25	25	44	16	54	48	11.2565**
Community and county planning and zoning	17		12		11	24	7.6626
Community leaders' cooperation	17	29	13	21	18	19	3.5256
Data provided by Chamber of Commerce, community	17		21	21	25		5.3406
Local supporting services (police, fire protection, etc.)	42	17	35	16	32	38	6.1110

* Significant at $\alpha = 0.10$, X² critical value = 9.2364.** Significant at $\alpha = 0.05$, X² critical value = 11.0705.

checked this factor, while less than 10 percent of the Agricultural firms felt it was important.

The majority of sectors indicated that low cost of satisfactory type and amount of water was relatively unimportant. However, one-third of the farmers responding to the survey cited water as an influential characteristic.

The lack of interest expressed by manufacturing industries as a group in the availability of existing building or plant is perplexing in light of the importance assigned to this factor by individual manufacturing sectors, as earlier discussed. The explanation may lie in the aggregation required to perform the cross tabulation analysis.

Community facilities (school, medical, etc.) were noted as important by over 25 percent of all sectors except Utilities and Communications, Transportation, and All Manufacturing. Facilities were mentioned most often, and significantly so, by Professional and Financial Services sector.

Significant differences in observed response frequencies for the friendship with customers and suppliers factor are not unexpected. Clearly, firms in wholesale and retail trade depend on the factor in conducting successful operations to a far greater extent than do, for example, manufacturers.

Tables 30-35 relate to differences in observed frequency distributions based on control variables other than business sector. Only those factors that received at least 20 percent of the checks from defined control categories, or those which produced a significant difference in the distribution of responses, are presented.

Responses to the 26 location factors were compared for businesses located in Union County's population center, La Grande, versus firms lo-

Table 30. Tests of Significance in Response Frequencies for Positive Location Factors by Business Address in Union County

FACTOR	ADDRESS & OBSERVED FREQUENCY OF RESPONSE		χ^2 (1 df)
	La Grande ^{a/}	Other ^{b/}	
Friendship with customers, suppliers, bankers, etc.	79	74	0.1021
Characteristics of population, cultural qualities	47	44	0.0335
Size of city, good place to raise a family	82	62	6.2809**
Hometown, family ties	41	28	1.5142
Recreational characteristics, climate	66	69	0.0269
Proximity to sources of raw materials	9	26	6.6343**
Access to markets	99	26	5.7592**
Speed of delivery of final products	8	21	3.9219**
Good warehousing and storage facilities	5	18	4.6890**
Highway access	26	41	2.5111
Greater demand for product	31	41	0.9991
Potential for greater demand in this area	47	46	0.0097
Location, number and degree of competition	46	23	5.6923**
Ability to service buyers	42	36	0.2794
Low cost and availability of labor	8	21	3.9219**
Community facilities (schools, medical, etc.)	52	36	0.0748
Community and county planning and zoning	7	23	6.6163**
Community leaders' cooperation	15	28	2.9210*
Data provided by Chamber of Commerce, community, etc.	28	46	3.8919**

^{a/} Frequencies are based on responses provided by 130 businessmen.

^{b/} Frequencies are based on responses provided by 39 businessmen.

* Significant at $\alpha = .10$, χ^2 critical value = 2.7055.

** Significant at $\alpha = .05$, χ^2 critical value = 3.8415.

Table 31. Tests of Significance in Response Frequencies for Positive Location Factors by Time Interval During Which Business Located in Union County, Oregon

FACTOR	LOCATION TIME INTERVAL & OBSERVED FREQUENCY OF RESPONSE		X ² (1 df)
	Before 1970 ^{a/}	1970-1975 ^{b/}	
Friendship with customers, suppliers, bankers, etc.	78	78	0.0145
Characteristics of population, cultural qualities	47	46	0.0014
Size of city, good place to raise a family	78	71	0.8025
Hometown, family ties	37	37	0.0229
Recreational characteristics, climate	67	64	0.0288
Proximity to sources of raw materials	16	7	2.0365
Highway access	30	31	0.0013
Greater demand for product	27	42	3.6135*
Potential for greater demand in this area	39	58	4.6521**
Location, number and degree of competition	34	49	3.4234*
Ability to service buyers	34	49	3.4234*
Climate (as it affects cost of operations)	16	20	0.1975
Favorable labor-management relations	16	5	3.6221*
Low cost of satisfactory type and amount of water	16	6	3.1742*
Community facilities (schools, medical, etc.)	43	31	2.2745
Local supporting services (police, fire protection, etc.)	31	31	0.0071

^{a/} Frequencies are based on responses provided by 121 businessmen.

^{b/} Frequencies are based on responses provided by 59 businessmen.

* Significant at $\alpha = .10$, X² critical value = 2.7055.

** Significant at $\alpha = .05$, X² critical value = 3.8415.

Table 32. Tests of Significance in Response Frequencies for Positive Location Factors by Union County Respondent's Role in Business Location Decision

FACTOR	RESPONDENT'S ROLE & OBSERVED FREQUENCY OF RESPONSE		X ² (1 df)
	Involved in Location Decision ^{a/}	Not Involved in Location Decision ^{b/}	
Friendship with customers, suppliers, bankers, etc.	82	76	.4916
Characteristics of population, cultural qualities	44	48	.1083
Size of city, good place to raise a family	77	76	.0019
Hometown, family ties	37	35	.0035
Recreational characteristics, climate	72	59	2.5908
Good warehousing and storage facilities	3	13	3.3556*
Highway access	25	33	.8827
Greater demand for product	34	33	.0030
Potential for greater demand in this area	48	46	.0221
Location, number and degree of competition	41	46	.2509
Ability to service buyers	46	40	.3792
Favorable labor-management relations	5	20	6.6046**
Community facilities (schools, medical, etc.)	43	35	.8784
Community and county planning and zoning	13	5	2.1713
Community leaders' cooperation	20	15	.4859
Data provided by Chamber of Commerce, community	21	17	.1009
Local supporting services (police, fire protection, etc.)	33	17	.3858

^{a/} Frequencies are based on responses provided by 121 businessmen.

^{b/} Frequencies are based on responses provided by 59 businessmen.

* Significant at $\alpha = .10$, X² critical value = 2.7055.

** Significant at $\alpha = .05$, X² critical value = 3.8415.

Table 33. Tests of Significance in Response Frequencies for Positive Location Factors by Type of Plant in Union County, Oregon

FACTOR	TYPE OF PLANT & OBSERVED FREQUENCY OF RESPONSE		X ² (1 df)
	Local ^{a/}	Branch ^{b/}	
Friendship with customers, suppliers, bankers, etc.	82	73	0.5664
Characteristics of population, cultural qualities	47	48	0.0296
Size of city, good place to raise a family	78	68	0.5991
Hometown, family ties	39	23	1.5330
Recreational characteristics, climate	67	64	0.0067
Access to markets	13	22	0.6464
Speed of delivery of final product	9	26	4.1360**
Highway access	27	39	0.8250
Greater demand for product	34	39	0.0396
Potential for greater demand in this area	50	48	0.0050
Location, number and degree of competition	46	39	0.1729
Ability to service buyers	43	57	0.9057
Community facilities (schools, medical, etc.)	42	30	0.5981
Data provided by Chamber of Commerce, community	20	22	0.0119
Local supporting services (police, fire protection, etc.)	26	32	0.1011

^{a/} Frequencies are based on responses provided by 125 businessmen.

^{b/} Frequencies are based on responses provided by 22 businessmen.

** Significant at $\alpha = 0.05$, X² critical value = 3.8415.

Table 34. Tests of Significance in Response Frequencies for Positive Location Factors by Future Plans of Union County Businessmen

FACTOR	FUTURE PLANS & OBSERVED FREQUENCY OF RESPONSE ^{a/}		X ² (1 df)
	Expand ^{b/}	Other or No Action ^{c/}	
Friendship with customers, suppliers, bankers, etc.	80	76	0.2001
Characteristics of population, cultural qualities	50	43	0.6398
Size of city, good place to raise a family	76	76	0.0294
Hometown, family ties	34	40	0.5298
Recreational characteristics, climate	74	61	2.7400*
Highway access	34	28	0.5344
Greater demand for product	31	31	0.0051
Potential for greater demand in this area	50	41	1.1531
Location, number and degree of competition	43	36	0.5924
Ability to service buyers	39	38	0.0004
Climate (as it affects cost of operations)	23	14	1.4969
Community facilities (schools, medical, etc.)	38	42	0.1883
Community leaders' cooperation	20	16	0.1925
Data provided by Chamber of Commerce, community	13	21	1.7614
Local supporting services (police, fire protection, etc.)	33	31	0.0116

^{a/} Agriculture sector not included.

^{b/} Frequencies are based on responses provided by 80 businessmen.

^{c/} Frequencies are based on responses provided by 96 businessmen.

* Significant at $\alpha = 0.1$, X² critical value = 2.7055.

Table 35. Tests of Significance in Response Frequencies for Positive Location Factors by Business Relocation Preference with Respect to Union County

FACTOR	RELOCATION PREFERENCE & OBSERVED FREQUENCY OF RESPONSE ^{a/}		X ² (1 df)
	Inside Union County ^{b/}	Other Location ^{c/}	
Friendship with customers, suppliers, bankers, etc.	83	44	3.2227*
Characteristics of population, cultural qualities	46	44	0.10312
Size of city, good place to raise a family	75	67	0.0016
Hometown, family ties	63	33	1.2235
Recreational characteristics, climate	71	78	0.00159
Access to markets	17	22	0.0191
Highway access	38	56	0.2908
Greater demand for product	29	11	0.3867
Potential for greater demand in this area	58	67	0.0013
Location, number and degree of competition	46	33	0.0633
Ability to service buyers	54	56	0.1031
Climate (as it affects cost of operations)	34	11	0.7018
Low cost of satisfactory type and amount of water	21	0	0.8864
Availability of existing building or plant	21	11	0.01910
Availability of capital	21	11	0.01910
Community facilities (schools, medical, etc.)	58	33	0.7899
Community and county planning and zoning	33	11	0.7018
Community leaders' cooperation	17	22	0.0191
Local supporting services (police, fire protection, etc.)	50	22	1.0868

^{a/} Frequencies are calculated only for firms that would prefer an alternative location.

^{b/} Frequencies are based on responses provided by 24 businessmen.

^{c/} Frequencies are based on responses provided by 9 businessmen.

* Significant at $\alpha = 0.1$, X² critical value = 2.7055.

cated elsewhere in the county (Table 30). La Grande businesses selected size of city, good place to raise a family, and location, number and degree of competition significantly more often than did other Union County businesses. Both proximity to sources of raw materials and access to markets were checked significantly more often by firms located in other parts of the county. Observed response rates of 23 versus seven percent indicated the relatively greater importance of community and county planning and zoning regulations to areas outside of La Grande. Community leaders' cooperation and data provided by Chamber of Commerce, community, etc., also appeared to exert a greater influence on firms located in other Union County communities.

Six factors were assigned significantly different numbers of checks by businesses classified according to when location in Union County took place (Table 31). Firms that located during the period 1970-1975 assigned more importance to all of the marketing variables than did firms that had located prior to 1970. In contrast, businesses established in the county prior to 1970 noted that good labor relations and low water costs had been significantly more important in the original location decision.

As is indicated in Table 32, generally there were no significant differences in the way that types of respondents, distinguished on the basis of role in the location decision process, differentiated among location factors. The two factors that displayed significantly different response frequencies--favorable labor-management relations and good storage facilities--were not among the top ten factors checked by all respondents. It may be relevant to note that labor management relations were cited more frequently by those not involved in the original location decision; while as noted above, labor-management relations were also cited more frequently by businessmen who had located firms in Union County prior to 1970.

Only one positive attribute, speed of delivery of final product, was characterized by differential response rates controlling for type of plant (local versus branch). Branch plant respondents mentioned speed of delivery significantly more often (Table 33). The result is easily explainable, since increased efficiency in the delivery of a product or service is normally a motivating factor in the establishment of branch plants.

For firms planning to expand or that would prefer to relocate versus those who anticipated doing neither, the dominant factors with significantly different response rates were personal in nature. The only location characteristics that were checked differently by these categories of respondents were, respectively, recreational characteristics and climate, and friendship with customers, suppliers, bankers, etc. (Tables 34 and 35).

In conclusion, the analysis of location factors has shown that few factors produced significant differences in the frequency of responses by selected variables. With the exception of differences among business sectors, the identification of Union County characteristics as important advantages or location determinants were relatively consistent among various control groups. This tends to lend greater credibility to the analysis presented in preceding parts of this chapter.

Negative Factors

A list of possible factors exerting negative influences on the conduct of business in Union County, or conditions that firms would like to see improved, was included in the survey questionnaire. Respondents were asked to rank those factor categories or headings which they felt did exert a negative influence in Union County or could stand improve-

ment. The frequencies of responses, weighted scores, and relative ranking of the nine categories are shown in Table 36.^{13/}

Respondents either felt there were few negative factors in Union County adversely affecting their business operations or were reluctant to cite specific characteristics. The response rates for ranking factor categories and for checking individual factors were quite low. Less than half (48 percent) ranked at least one factor category. The individual factors that were noted most often are shown below in Table 37.

Table 37. Leading Factors Exerting an Unfavorable Influence on the Conduct of Business in Union County, Oregon

Factor	Category	Percentage of Respondents ^{a/}
Availability of labor	Labor	32
Local taxes	Taxes	31
Electric service	Utilities	22
Distance from markets	Market	20
Local banks	Financing	19

^{a/} Sums to more than 100 percent because respondents could check more than one factor.

Opportunities for Future Growth in Commercial Activity

Interviewed businesses were asked to identify types of industry that, in their opinion, would expand scales of operation and/or locate in Union County in the foreseeable future. Further, they were requested to specify problems or barriers that might inhibit future economic growth and develop-

^{13/} The individual factors within the categories that were checked by respondents are presented in Appendix II, Table 46.

Table 36. Rankings of Unfavorable Location Factor Categories in Union County, Oregon^{a/}

FACTOR CATEGORY	Relative Importance	Ranked 1st through 6th		Weighted Score ^{b/}
		Number	Percent	
Transportation	1	56	36	274
Labor	2	50	32	249
Market	3	41	26	199
Utilities	4	41	26	190
Taxes	5	35	22	178
Purchased Inputs and Supplies	6	32	20	145
Financing	7	25	16	125
Relationships	8	24	15	113
Supporting Services	9	22	14	90

^{a/} Scores are based on responses provided by 157 businessmen who ranked at least one factor category.

^{b/} Factor categories ranked one through six were inversely weighted (i.e., 1st = 6, 2nd = 5, etc.) and summed for each category.

ment in the county. An evaluation of responses revealed, on the one hand, that local businessmen view future growth patterns as diverging little, if any, from historical norms. In addition, major barriers to future expansion and growth are precisely equivalent to those factors affecting current relocation considerations as well as to those problems perceived in conducting commercial activities in the present business environment.

Potential Growth Industries

Specifically, respondents singled out lumber and wood products firms and light industry, including small manufacturing, as leading county growth industries (Table 38). Next in potential were general agriculture, recreation, tourism and convention-oriented businesses, and wholesale and retail trade. Multipurpose dams and reservoirs were also viewed as likely developments. Sixteen of the twenty-one farmers in the agriculture sector expressed approval of construction of the Catherine Creek Dam. The most common reasons given were to provide the Grande Ronde Valley with flood control and more water for irrigation. Most of the remaining growth sectors identified could be interpreted as linkage industries, including food processing, restaurants, etc.

Barriers to Expansion or to the Attraction of New Industry

Problems facing identified growth industries closely parallel the disadvantages associated with county business operations (Table 39). Inhibiting future growth were factors such as community and county planning and zoning regulations (14 percent), community attitudes, acceptance, and conservatism (noted by 13 percent of all respondents), and inadequate local markets (12 percent). The availability of financing to sustain leading sector growth was not viewed as equal in importance to such

Table 38. Leading Potential Growth Industries Identified by Local Union County, Oregon, Businessmen

Rank	Type of Industry	Percentage of Total Respondents
1	Lumber and wood products	20
2	Light industry (including small manufacturing)	17
3	General agriculture	10
4	Recreation, tourism, convention center	7
5	Wholesale and retail trade	7
6	Dams	6
7	Food and agricultural processing	6
8	Irrigated agriculture	4
9	Restaurants	2
10	Transportation	2
	Other	8
	None ^{a/}	11

^{a/} Respondents failing to have identified any specific growth industries may have done so for at least one of two reasons. Some may have felt that future growth potentials did not exist or that they were not well enough informed to respond. Others may have misunderstood the question, or simply may have chosen not to respond to the question. Since there was no basis for allocating the eleven percent among these, and other possibilities, "none" has not been ranked as an optional growth industry.

Table 39. Leading Barriers to Potential Growth Industries as Identified by Union County, Oregon, Businessmen^{a/}

FACTOR	SECTOR OF RESPONDENT & PERCENTAGE CITING FACTOR						
	All Sectors	Contract Construction	General Services	Wholesale-Retail Trade	Utilities & Comm., Transport, and All Manufacturing	Professional and Financial Services	Agriculture
1. Community, County Planning and Zoning	14	20	17	10	9	22	20
2. Community Acceptance, Conservatism, Public Support	13	10	13	13	17	19	
3. Lack of Market Demand	12	20	9	17	9	7	
4. Adequate Space, Land	8		4	7	13		33
5. Sewage Facilities	6			4	13	15	
6. Distance from Major City	5		4	6	4	7	
7. Availability of Financing	4		4	3	13		
8. Lack of Water	3	10	4	4			
9. Availability of Labor	3			4	4		7
10. Taxes	3		4	3		7	
11. Building Codes	3			7			
Other	14	30	24	8	14	8	33
NONE	12	10	17	14	4	15	77

^{a/} Scores are based on responses provided by 170 businessmen representing all twelve business sectors.

obstacles as lack of adequate land, sewage facilities, and the distance of Union County from major product markets. Somewhat less frequently cited as growth constraints were lack of water, availability of labor, taxes, and building codes.

Summary

Three dominant themes consistently emerge when the surveyed business community is viewed as a whole. First, Union County businessmen are optimistic with respect to future economic growth potentials, although they do not expect emerging patterns of commercial activity to appreciably differ from the basic, traditional, resource-oriented focus of the county economy. Further, they do not believe that future growth will be untroubled; but rather, local businessmen expect the problems they currently face to also confront new businesses as they expand their base of operations in Union County.

Second, non-market phenomena such as personal preference characteristics are widely prevalent incentives for a variety of location and operational business decisions. Community size, qualities of the local populace, climate, recreational opportunities, and a host of related personal preference variables are commonly viewed by businessmen as the most favorable attributes of the Union County environment. Businessmen in this rural setting, in other words, respond as would residents be expected to respond to the positive features of their local environment.

Third, characteristics of local product and factor markets, regarded by many as second in positive influence to personal preferences, also represent a leading complaint of businessmen who may be contemplating exit from the local business sector. Substantial market con-

straints to future growth include inadequate market demand and distance from major markets. Market inadequacies, however, are not viewed as the major problem facing future Union County businessmen. Rather, acceptance by the broader local community of the problems facing management, and of attitudes in general toward business, represent the single most vexing problem to those businessmen currently conducting operations in the county, as well as a leading obstacle to the location of new firms in the area.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The principal objective of this thesis has been to identify potential growth industries in Union County, Oregon. Factors that were depicted by county businessmen, and others, as having an effect on the decisions made by existing firms to locate in the area, and barriers to expansion and/or location of new firms were identified and discussed.

Summary and Qualifications

In addition to an overview of the area and its "rural growth center" economy, the basic problem to which the thesis responded was stated in Chapter I. Rural areas wishing to provide more jobs and generate more tax revenues through industrial development have been unable to identify those locational conditions that would be most influential in encouraging existing businesses to expand while helping to attract branch, relocating, and/or new plants. Underlying the approach taken in the thesis was the assumption that required knowledge and information could be best revealed through a directed survey of the actual participants in the local economic development process--Union County businessmen.

Literature related to location theory and plant location analysis was reviewed in Chapter II. The interdependence of both cost minimizing and revenue maximizing factors in the location decision process was highlighted. In spite of the existence of non-economic forces, either historical or personal, which have influenced the location of some firms, prior studies have tended to assume that firms locate to maximize profits. However, the review of literature documented a growing body of evidence to the effect that, once stages in the location decision pro-

cess are understood, nonmarket influences can be recognized as important determinants of location decisions.

The method used to obtain first-hand responses from businesses operating in Union County was outlined in Chapter III. Because of the relatively small size of the Union County business population, a large sample was taken. In any survey where opinions are sought, the potential for misinterpretation of questions and responses exists. Increasing the sample size provides one method of minimizing individual biases.

However, expanding the size of the total sample cannot alleviate problems resulting from the small number of firms found in any given sector. Future studies in this or other rural areas may encounter the problem of obtaining data for certain industrial sectors characterized by few representative firms. Aggregation, made necessary to increase the reliability of inferences drawn from available data, means a loss of information for specific types of firms. Increasing the sample size may provide additional validity for inferences drawn; however, the problems created by small numbers of firms in an existing sector cannot be completely eliminated. For this reason, responses from certain Union County manufacturing sectors were compared with those obtained from similar manufacturers in other states. Differences and commonalities were noted, but it cannot be assumed that conclusions reached in other studies are entirely applicable to those drawn from the present survey.

In Chapter IV, specific descriptive information was provided about types of Union County firms, their decision-makers, and location and operational requirements. In the analysis of advantageous factors related to county business operations, responses were found to be largely independent of sectoral differences, geographic location, type of re-

spondent, and/or other characteristics of Union County businesses. This finding led to the general conclusion that Union County characteristics contributing most to the location of businesses are commonly held by all businesses.

Recommended Policies and Strategies

Policies Addressing Personal and Market Factors

Union County respondents consistently identified personal and market factors as important considerations in their location decisions. Two implications for community-level "local inducement" strategies are suggested. First, positive action should be taken to preserve those attributes of the environment cited by respondents as favorable or advantageous to the conduct of business operations in Union County. Second, attempts by the county to alter basic market phenomena are probably not feasible.

Past research has failed to clearly define the role of personal factors in plant location. Difficulties in quantifying such characteristics as recreation attributes, climate, and friendship with customers may explain prior omissions. Given, however, the findings presented here, recommended strategies for rural communities interested in economic growth would focus on the provision of adequate levels of police and fire protection, health care, educational facilities, water and sewer treatment, and similar public services. Further, the community should promote its natural environment, climate, air quality, and access to lakes and mountains. In sum, the community should be aware of and take steps to preserve the quality of the numerous factors which are important to the people who participate in the location decision.

In contrast, county and city governments may have little direct control over the market demand for goods and services. Local purchases of goods will vary with population, per capita income, individual preferences, and the extent of competition from neighboring market centers. With reference to market characteristics, explicit "location inducement" policies a community can follow may be quite limited.

Policies Addressing Other Factors

A review of Union County characteristics related to cost saving features in the processing, distribution, and procurement factor categories suggests potential inducements that the county could implement in attempting to attract certain types of industries. Two specific recommendations are summarized below, both of which assume the establishment of industrial parks and sites.

Availability of land for industrial parks, sufficient power, water and sewage capacity, accessibility of plants to employees, and speculative buildings are factors that, considered separately, were not shown to be location factors of prime importance to existing Union County firms. Taken together, however, potential savings in initial investment and processing costs at well-designed sites could serve as a major attraction to new firms. A key element in the design and selection of an industrial site or park is the role of local building and zoning regulations. The importance of this factor as a county disadvantage was indicated repeatedly by Union County businessmen, suggesting that a relaxation of zoning restriction and/or revision of land use plans to meet local development needs may merit examination.

The distribution factor category was ranked third in influence by the combined Union County manufacturing sectors. Highway access (with-

in 30 minutes of a major highway interchange), was cited by 30 percent of all sampled firms as a Union County advantage. The Lumber and Wood Products industry and Other Manufacturing industries both ranked the distribution factor category as second in importance. Two-thirds and four-fifths of their respondents, respectively, cited highway access as advantageous. The same number of wood products firms and half of the miscellaneous manufacturing firms indicated that their location in Union County afforded good access to markets. Since the markets for these sectors are primarily non-local, it may be concluded that distributional advantages of Union County have a favorable influence on the location of firms that serve selected state and regional markets. It is recommended that any plans for development of industrial sites attempt to insure proximity and ease of access to the interstate highway and other transportation arteries.

Future Growth Sectors

Potential growth industries identified by Union County respondents closely paralleled leading sectors in the present economy. Lumber and Wood Products, General Agriculture, and Recreation industries were ranked first, third, and fourth, respectively, as future growth industries. Respondents clearly recognized the historical dominance of natural resources in shaping the economy of the county, and apparently assumed that the role and influence of natural resources in the economic growth of Union County would continue to be significant. If their perceptions are accurate, policies and practices aimed at resource conservation and development should be considered integral to any comprehensive growth program in the county.

Light industry or small manufacturing placed second as a potential industry. Specific types of firms often were not identified, although manufacturing linked to wood products or food processing was sometimes mentioned. Growth in either of these sectors could have backward linkage effects on some Union County sectors.^{14/}

Small manufacturing plants from chemical and allied products industries (Chemical and Mineral industries in this study) and equipment manufacturers (Other Manufacturing) appeared to represent potential Union County growth industries. Chemical firms that provide inputs to wood products industries and agriculture may be likely prospects. Miscellaneous industries that produce for the Northwest may also find that the area offers sufficient access to markets and savings in processing costs to induce them to locate in Union County.

The results presented here apply, in part, to types of industry not normally found in plant location studies. Service sectors were included in the study because many provide goods and service to consumers both within and outside of the county. In most analyses, the service sector is usually considered non-basic and is assumed to exist only to serve basic (exporting) industries. It is suggested that areas or regions as small as a county may have service sectors with characteristics of basic industries, in that services are exported to surrounding counties. For example, this appeared to be the case for fifteen percent of the firms in the Union County Wholesale-Retail Trade sector. It is hypothesized that as the region grows, so will the importance of Union County as a source of goods and services. Hence, the development of service industry may

^{14/} An input-output study by Oregon State University of the Union County economy will attempt to quantify the extent of interdependence among present and future Union County business sectors, and the effects of expansion or contraction in some sectors on the county economy.

be a legitimate component of a rural growth center's development.

Postscript

This thesis has not attempted to set goals for Union County. Nor has it identified specific agencies or levels of government that should act upon the findings presented here. Rather, the recommendations that are based of the findings of the Union County business survey suggest that local public and private agencies may wish to coordinate their efforts to attain specific objectives. The importance of community cooperation has been identified as being both a positive and negative influence on business. Cooperation and public support for economic development could be the most significant variable in planning and implementing a successful rural growth center program.

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APPENDIX I

Determinants of Industrial Location & Expansion Decisions

Union County Survey Questionnaire

_____ Sector	_____ Firm No.
_____ Interviewer	
_____ Date	_____ Time

UNION COUNTY GROWTH FUTURES PROJECT

Determinants of Industrial Location & Expansion Decisions

Union County Survey Questionnaire

INTRODUCTION:

Hello, I'm _____, and I'm conducting a business survey for Oregon State University. I would like to ask you a few questions about the location and operation of your business. The information you give is strictly confidential, and the results of this interview and others are tabulated for Union County as a whole - not for any one person or business.

A. Identification of Respondent

1. Name of firm _____
2. Address of firm _____
3. Name of respondent _____
4. Respondent's position in firm _____
 - a. Most recent position in firm _____ how long? _____
 - b. Previous position in firm, if any _____
 - c. Present position, if not in firm _____
 - d. Date initially associated with firm (date) _____
5. Do you make the final decision on questions of operation and/or expansion of the business? (yes or no) _____
 If no, who does? _____ How are decisions made? _____
6. Who made the final decision to locate this business in Union County? (name or identification) _____
7. Did you participate in the decision to locate the business here? (yes or no) _____ (If no, skip to question B 1)
8. How important was your role in the decision to locate the business? (Circle appropriate response) _____
 - a. He made final decision.
 - b. He was part of a group that made the final decision.
9. Where did you live when the decision to locate was made? (town or area, and state) _____

Sector Firm
Code No. _____

B. Identification of Business

1. Is your business located in what would be considered: (*read alternatives, then circle appropriate response*)
 - a. the center of the business district;
 - b. on the fringe of the business district;
 - c. in another urban location; or
 - d. in a rural location.
2. What is the type of ownership of the business? (*circle appropriate response*)
 - a. Sole proprietor
 - b. Partnership
 - c. Corporation
 - d. Public
 - e. Other (specify) _____
3. When was this business founded? (*date*) _____
4. What is the interval of ownership?
 - a. Current ownership (*years & months*) _____
 - b. Previous ownership (*years & months*) _____
 - c. Founder (*name or description*) _____
5. From among the following types of plant, how would you classify this business? (*circle appropriate response*)
 - a. Local business or original main plant
 - b. Branch plant (*and home office location*) _____
 - c. Relocation of out-of-state firm (*and previous location*) _____
 - d. Relocation of in-state firm (*and previous location*) _____
 - e. Replacement of earlier business (*or identity of previous business*) _____
6. Is your business franchised (or equivalent)? (*yes or no*) _____
7. What are the principle products or services of this business?
 - a. at present? (*describe*) _____ (*Skip b, if a and b same person*) _____
 - b. under previous owner? _____
 - c. at date of founding? _____

C. Operational Characteristics of Business

1. Physical Plant Characteristics
 - a. What is the total amount of land occupied by the business and its facilities at this site?
 _____ acres, _____ sq. ft., _____ sq. mi.
 - b. Do you need more, the same amount, or less land? (*circle appropriate response*)
 If more, how much? _____ acres _____ sq. ft. _____ sq. mi. _____
 If less, how much? _____ acres _____ sq. ft. _____ sq. mi. _____

Sector Firm
Code _____ No. _____

- c. Approximate size of occupiable floor space, under roof, of plant?
_____ sq. ft.
- d. Do you need more, the same amount, or less floor space? (*circle appropriate response*)
If more, how much? _____ sq. ft. If less, how much? _____ sq. ft.

2. Labor Characteristics

- a. How many local employees (live in Union County) do you presently have?
1. Total (number) _____
 2. Full-time _____
 - a. men _____
 - b. women _____
 3. Part-time _____
 - a. men _____
 - b. women _____
- b. Is the business operating above, at, or below normal? (*circle appropriate response*)
1. above normal levels
 2. at normal levels
 3. below normal levels
- c. At what percent of capacity are you working? _____
- d. How many employees do you normally have?
1. Total (number) _____
 2. Full-time _____
 - a. men _____
 - b. women _____
 3. Part-time _____
 - a. men _____
 - b. women _____
- e. Where do the people you employ live?
- In town _____ % Out-of-town (*specify*) _____ %

3. Capital Financing

- a. How was the business financed initially? What percent:
- | | |
|-------------------------------------|-----------------------------|
| Institutional _____ % | Private _____ % |
| (Check) Local _____ Non-local _____ | Local _____ Non-local _____ |
| (Specify) _____ | (Specify) _____ |
- b. Have you obtained adequate financing for operation and/or expansion of the business? (*yes or no*)

Sector _____ Firm _____
Code _____ No. _____

(If yes) How have you obtained financing: _____

What percent: Institutional ____% Private ____%
(Check) Local__ Non-local__ Local__ Non-local__
(Specify) _____ (Specify) _____

(If no) Why hasn't financing been adequate? _____

4. In operating your business, are you forced to make any expenditures or bear any costs that you feel are unjustified? ____ (yes or no)
(If yes) Which ones and how do they affect your business? _____

5. Are there any problems you presently encounter in doing business in Union County? _____

6. What advantages are there to having your business in Union County? _____

7. If you were to expand your business operations, what problems would you anticipate? _____

8. Do you plan to:

a. expand (yes or no) (If yes, skip c and c)
(If yes), When? _____
Why? _____

b. cut back (yes or no)
(If yes), When? _____
Why? _____

c. Go out of business (yes or no)
(If yes), When? _____

9. Present and Expected Problems at Location

We are interested in defining the present or expected problems associated with the location and operation of this business. (Hand respondent list 1 with instructions. Read instructions.)

a. How do these (interviewer pick the three most important headings respondent ranked) affect your business? _____

b. How might these (interviewer specify first three problems respondent ranked) alter the operation of your business in the future? _____

D. Location Determinants

(If not involved in location or expansion decisions, skip.)

1. What particular factors were most important in making the final decision to establish the business? _____

(If not involved in location or expansion decisions, skip.)

2. Were alternative locations considered ____yes ____no; if yes, what most influenced the decision to locate here? _____

Instructions Accompanying List 1 Handout

There is no perfect solution to the problem of where to locate a specific plant or business in consideration of all the unique locational factors involved. There is only the best possible solution to the many problems facing the person or persons charged with the responsibility of locating the business. Situations may change or unexpected problems may develop. With this thought in mind, we are interested in defining the present or expected problems associated with the operation of your business.

Place a "1" by the general heading where the greatest problem lies and specify with an "X" the specific nature of the problem and problems; a "2" by the general heading where the second greatest problem lies, etc., through "5" if necessary. Please place an "0" before the item where no significant problem exists.

List 1. Possible Problems Faced in Locating a Business or Plant in Union County, Oregon

TRANSPORTATION

- a. ___ rail in carload
- b. ___ rail in less than carload
- c. ___ motor freight in truck load
- d. ___ motor freight in less than truck load
- e. ___ commercial airline service
- f. ___ private aircraft facilities
- g. ___ other (specify) _____

LABOR

- a. ___ labor productivity
- b. ___ labor turnover, absenteeism, or accident rates
- c. ___ availability of skilled labor
- d. ___ availability of semi-skilled labor
- e. ___ availability of unskilled labor
- f. ___ other (specify) _____

SUPPORTING SERVICES

- a. ___ tool and die, machine, sheet metal, electrical services, etc.
- b. ___ insurance
- c. ___ medical
- d. ___ industrial supply service (private)
- e. ___ other (specify) _____

MARKET

- a. ___ distance from market
- b. ___ changes in location of market
- c. ___ new competition for market
- d. ___ other (specify) _____

RELATIONSHIP WITH COMMUNITY

- a. ___ police and fire protection
- b. ___ adequate roads and streets to plant
- c. ___ cooperation in labor disputes
- d. ___ understanding and interest in general problems facing the management of the plant
- e. ___ other (specify) _____

FINANCING

- a. ___ private sources
- b. ___ local banks
- c. ___ local financial institutions (other than banks)
- d. ___ nonlocal institutional sources
- e. ___ other (specify) _____

PURCHASED INPUTS AND SUPPLIES

- a. ___ quantity (specify) _____
- b. ___ quality (specify) _____
- c. ___ dependability (specify) _____
- d. ___ other (specify) _____

TAXES

- a. ___ local taxes (explain) _____
- b. ___ state taxes (explain) _____

UTILITIES

- a. ___ water service
- b. ___ sewage service
- c. ___ gas service
- d. ___ electric service
- e. ___ other (specify) _____

Sector Firm
Code _____ No. _____

(If not involved in location or expansion decisions, skip.)

3. If you were to relocate today, would you consider (other) location factors? Yes ___ No ___. If yes, why? _____

4. Positive Location Factors

Here are some general categories of factors influencing the decision to locate or expand a business.

(Hand respondent lists 2 and 3 with instructions. Read instructions.)

- a. Please rank the general headings as positive factor categories.
b. Please rank the factors within each of the three most important categories.

5. Would you prefer to locate your business somewhere else inside or outside the county? (yes or no)

(If yes), Where? _____

Why? _____

(If no), Why? _____

E. Growth Sectors

1. As you view the potential for economic growth in Union County, what existing or new business and industries are most likely to expand or locate here? _____
Why/where? _____
2. What are the major barriers to expansion or location of existing or new businesses in Union County? _____

F. Product and Factor Markets

1. What percent of this business' products or services are sold:

in-county _____% out-of-county _____% (specify) _____

(specify town) _____

out-of-state _____% (specify) _____

internationally _____% (specify) _____

2. What percent of this business' raw materials, supplies, or merchandise are purchased

in-county _____% out-of-county _____% (specify) _____

(specify town) _____

out-of-state _____% (specify) _____

internationally _____% (specify) _____

Instructions Accompanying List 2 Handout

In general, businessmen view the following as general categories of factors influencing their decision to locate. But their importance varies from business to business. Would you rank these factors according to their relative importance in determining the location of your own business. (Here is a card with the categories of factors described.) Please put a 1 next to the most important, and a 2 next to the second most important, etc.

List 2. Possible General Factors Influencing the Decision to Locate
a Business or Plant in Union County, Oregon

Factor	Importance
1. Personal preferences and considerations	
2. Costs of obtaining necessary services, supplies, and inputs for your business.	
3. Costs of processing your firm's products or services.	
4. Costs of distributing your products or services.	
5. Location and other advantages of market for your products or services.	
6. Considerations of risks and uncertainty.	

Instructions Accompanying List 3 Handout

The decision to locate at the present site probably involved attention to and a compromise among many factors, but particular attention was possibly assigned to a few factors that varied from one location to another and were felt to contribute to the anticipated success of the business. With this in mind, please indicate with an "X" those factors listed here or any you wish to add that were most important in the location of this plant.

List 3. Possible Specific Factors Influencing the Decision to Locate a Business or Plant in Union County, Oregon

PROCESSING COST FACTORS

- a. ___ Low cost and availability of labor.
- b. ___ Low cost of fuel (natural gas, LP, coal).
- c. ___ Low cost of electric power.
- d. ___ Climate (as it affects cost of operations).
- e. ___ Favorable labor-management relations.
- f. ___ Low cost of satisfactory type and amount of water.
- g. ___ Adequate waste and sewage disposal.
- h. ___ Low cost of building and land.
- i. ___ Low cost of financing plant through revenue bonds.
- j. ___ Favorable community and state tax structure.
- k. ___ Community concessions.
- l. ___ Available existing buildings or plant.
- m. ___ Particular characteristics of building site.
- n. ___ Existence of union labor.
- o. ___ Existence of non-union labor.
- p. ___ Accessibility of plant to employees.
- q. ___ Availability of capital.
- r. ___ Vocational training facilities.
- s. ___ Insurance coverage (fire, vandalism, etc.).
- t. ___ Pool of trained workers.
- u. ___ Pool of unskilled workers.
- v. ___ Air passenger service.

DISTRIBUTION FACTORS

- a. ___ Low freight cost, finished product.
- b. ___ Access to markets.
- c. ___ Transportation facilities (local).
- d. ___ Speed of delivery of final product.
- e. ___ Good warehousing and storage facilities.
- f. ___ Contract trucking.
- g. ___ Highway access (within 30 minutes of major highway interchange).

- h. ___ Scheduled rail service.

- i. ___ Piggy back facilities (rail).

PROCUREMENT COST FACTORS

- a. ___ Proximity to source of raw materials and supplies.
- b. ___ Better service from seller of raw materials and components.
- c. ___ Low cost on raw materials or components.
- d. ___ Low cost of transportation of raw materials.

MARKET ADVANTAGES

- a. ___ Greater demand for product in this area.
- b. ___ Potential for greater demand in this area.
- c. ___ Location, number and degree of competition by similar business.
- d. ___ Ability to service buyers.

PERSONAL FACTORS

- a. ___ Friendship with customers, suppliers, bankers, etc.
- b. ___ Characteristics of the population, cultural qualities.
- c. ___ Size of city, good place to raise a family, etc.
- d. ___ Hometown, family ties.
- e. ___ Recreational characteristics of area, climate, etc.

OTHER FACTORS

- a. ___ Nearness to metropolitan city.
- b. ___ Community facilities (schools, medical care, etc.).
- c. ___ Community and county planning and zoning laws.
- d. ___ Lenient industrial zoning.
- e. ___ Strict industrial zoning.
- f. ___ Community leader's cooperation.
- g. ___ Data provided by Chamber of Commerce, community, etc.
- h. ___ Information provided by local manufacturers.
- i. ___ Nearness to corporate headquarters.
- j. ___ Local supporting services (police, fire protection, etc.).
- k. ___ State administration neutral in labor-management relations.
- l. ___ Data provided by the state industrial development agency.

APPENDIX II

Determinants of Industrial Location & Expansion Decisions

Selected Union County Survey Results

UNION COUNTY GROWTH FUTURE PROJECT

Determinants of Industrial Location & Expansion Decisions:

Selected Union County Survey Results

A. Identification of Respondent

2. Address of firm (Table 40).

4. Respondent's position in firm (Table 41).

Years at present position

Less than 1 yr.	<u>11%</u>
1-5 yrs.	<u>48%</u>
6-10 yrs.	<u>17%</u>
More than 10 yrs.	<u>27%</u>

5. Does respondent make the final decision on questions of operation and/or expansion of the business?

Yes	<u>86%</u>
No	<u>14%</u>

6. Who made the final decision to locate this business in Union County?

a. Respondent	<u>37%</u>
b. Respondent & others	<u>11%</u>
c. Respondent not involved	<u>52%</u>

9. Where did respondent live when the decision to locate was made?

a. Union County	<u>56%</u>
b. Oregon (excluding Union Co.)	<u>30%</u>
c. Another State	<u>14%</u>

B. Identification of Business

1. Is the business located in what would be considered the city center, city fringe, or other area? (Table 42)

2. Is the type of ownership of the business what would be considered sole proprietorship, partnership, corporation, or other? (Table 43.)

3. When was this business founded? (Table 44)

5. From among the following types of plant--branch, relocated from out-of-state, or replacement of an existing business--how would you classify this business? (Table 45)

6. Is the business franchised (or equivalent)?

Yes	<u>14%</u>
No	<u>86%</u>

Table 40. Address of Sampled Union County Businesses by Sector

SECTOR	ADDRESS & PERCENTAGE OF RESPONDENTS ^{a/}							
	La Grande	Island City	Union	Elgin	Cove	Summerville	Imbler	Other
Contract Construction	66.7		8.3		8.3		8.3	8.3
General Services	83.3		4.2		4.2	4.2	4.2	
Wholesale and Retail Trade	81.8	7.8	5.2	3.9			1.3	
Utilities and Communications	100.0							
Transportation	100.0							
Food and Agricultural Processing	66.7	33.3						
Lumber and Wood Products	100.0							
Printing	100.0							
Chemical and Mineral	50.0	25.0				25.0		
Other Manufacturing	50.0	33.3						16.7
Professional and Financial Services	89.3	3.6	3.6	3.6				
Agriculture								
All Sectors	79	6	5	3	3	2	2	1

^{a/} Row percentages sum to 100 percent.

Table 41. Respondents Position in Firm, Union County Business Survey

SECTOR	POSITION & PERCENTAGE OF RESPONDENTS ^{a/}			
	Owner	Manager	President	Other
Contract Construction	58.3	0	25.0	16.7
General Services	87.5	12.5		
Wholesale and Retail Trade	70.1	16.9	7.8	5.2
Utilities and Communications	20.0	60.0		20.0
Transportation		66.7	33.3	
Food and Agricultural Processing	33.3	33.3	33.3	
Lumber and Wood Products		33.3	66.6	
Printing	50.0	25.0	25.0	
Chemical and Mineral	25.0	25.0	25.0	25.0
Other Manufacturing		50.0	50.0	
Professional and Financial Services	42.8	28.6	17.9	10.7
Agriculture				
All Sectors	59.0	21.0	13.0	7.0

^{a/} Row percentages sum to 100 percent.

Table 42. Business District Location of Firms in the Union County Business Survey

SECTOR	LOCATION & PERCENTAGE OF RESPONDENTS ^{a/}		
	Center	Fringe	Other Urban or Rural
Contract Construction	16.7	41.7	41.6
General Services	25.0	50.0	25.0
Wholesale and Retail Trade	39.5	51.3	9.2
Utilities and Communications	40.0	40.0	20.0
Transportation		66.7	33.3
Food and Kindred Products	33.3	33.3	33.3
Lumber and Products		66.7	33.3
Printing	50.0	25.0	25.0
Chemical and Mineral	25.0		75.0
Other Manufacturing	33.3		66.7
Professional Services	60.7	38.6	10.7
Agriculture			
All Sectors	38.0	43.0	20.0

^{a/} Row percentages sum to 100 percent.

Table 43. Type of Ownership of Sampled Union County Businesses

SECTOR	TYPE OF OWNERSHIP & PERCENTAGE OF RESPONDENTS ^{a/}			
	Sole Proprietorship	Partnership	Corporation	Other
Contract Construction	58.3	8.3	33.3	
General Services	70.8	16.7	12.5	
Wholesale and Retail Trade	46.8	22.1	29.9	1.3
Utilities and Communications			100.0	
Transportation			100.0	
Food and Kindred Products			100.0	
Lumber and Wood Products			100.0	
Printing	25.0		50.0	25.0
Chemical and Mineral	25.0		75.0	
Other Manufacturing		16.7	83.3	
Professional Services	32.1	14.3	46.4	7.1
Agriculture				
All Sectors	42.0	16.0	40.0	2.0

^{a/} Row percentages sum to 100 percent.

Table 44. Time Interval During Which Sampled Union County Businesses Were Established by Sector

SECTOR	ESTABLISHMENT PERIOD & PERCENTAGE OF RESPONDENTS ^{a/}	
	Before 1970	1970 - 1975
Contract Construction	66.7	33.3
General Services	54.2	45.8
Wholesale and Retail Trade	63.6	36.4
Utilities and Communications	80.0	20.0
Transportation	100.0	
Food and Kindred Products	100.0	
Lumber and Wood Products	66.7	33.3
Printing	75.0	25.0
Chemical and Mineral	25.0	75.0
Other Manufacturing	66.7	33.3
Professional Services	64.3	35.7
Agriculture		
All Sectors	64.0	36.0

^{a/} Row percentages sum to 100 percent.

Table 45. Type of Union County Business Plant by Sector

SECTOR	TYPE OF PLANT & PERCENTAGE OF RESPONDENTS ^{a/}			
	Local	Branch	Relocate from Out-of-State	Replacement of Existing Business
Contract Construction	100.0			
General Services	91.7	4.2		4.2
Wholesale and Retail Trade	80.5	11.7	1.3	6.5
Utilities and Communications	60.0	40.0		
Transportation		66.7		33.3
Food and Kindred Products	33.3	66.7		
Lumber and Wood Products	33.3			66.7
Printing	50.0	25.0	25.0	
Chemical and Mineral	50.0	50.0		
Other Manufacturing	50.0	50.0		
Professional Services	70.4	25.9		3.7
Agriculture				
All Sectors	76.0	17.0	1.0	6.0

^{a/} Row percentages sum to 100 percent.

7. Have the types of principle products or services of this business changed since the date the business was founded?

Yes	<u>8%</u>
No	<u>92%</u>

C. Operational Characteristics of Business

1. The business needs:

a.	more <u>43%</u> floor space.
b.	the same amount or less <u>57%</u>

2. The business is operating:

a.	above <u>26%</u> normal
b.	at <u>52%</u>
c.	below <u>22%</u>

3. Has the business obtained adequate external financing for operation and/or expansion?

Yes	<u>76%</u>
No	<u>11%</u>

External Financing hasn't been required 13%

4. In operating the business, are you forced to make any expenditures or bear any costs that you feel are unjustified? (see Table 5)

Yes	<u>53%</u>
No	<u>46%</u>

5. Are there any problems you presently encounter in doing business in Union County? (see Table 2)

Yes	<u>50%</u>
No	<u>50%</u>

6. What advantages are there to having your business in Union County? (see Table 3)

7. If you were to expand your business operations, what problems would you anticipate? (see Table 8)

8. Do you plant to:

	<u>Responded "Yes"</u>
a. Expand	43%
b. Cut back	2%
c. Go out of business	2%
d. Continue business as it is	51%

The sole reason for plans to cut back or go out of business was retirement.

Reasons given for plans to expand were:

	<u>Percent of Responses</u>
1. Higher demand, more business	57.4
2. Need more space	18.5
3. In order to provide better service	18.5
4. Needs storage and/or increase volume	5.6

9. What factors unfavorably influence the conduct of your business here in Union County? (Table 46)

D. Locational Determinants

1. What particular factors were most important in making the final decision to establish the business in Union County? (see Table 9)
2. When the business was located here had alternative locations been considered?

Yes	<u>29%</u>
No	<u>71%</u>

What most influenced the decision to locate here? (see Table 10)

3. If you were to relocate today, would you consider location factors other than those which helped determine the location of this business?

Yes	<u>36%</u>
No	<u>64%</u>

If yes, what location factors would you consider? (see Table 12)

4. What factors favorably influence the conduct of your business here in Union County? (Table 47) NOTE: Responses obtained from Union County businessmen are presented and compared with similar studies conducted elsewhere in Table 48.
5. Would you prefer to locate the business somewhere else inside or outside the county?

Yes	<u>26%</u>
No	<u>74%</u>

E. Growth Sectors

1. As you view the potential for economic growth in Union County, what existing or new business and industries are most likely to expand or locate here? (see Table 38)
2. What are the major barriers to expansion or location of existing or new businesses in Union County? (see Table 39)

Table 46. Factors Unfavorably Affecting Business Operations in Union County, Oregon, and Frequency of Mention by Businessmen Sampled^{a/}

TRANSPORTATION

- a. 6 rail in carload
- b. 9 rail in less than carload
- c. 13 motor freight in truck load
- d. 17 motor freight in less than truck load
- e. 13 commercial airline service
- f. 2 private aircraft facilities
- g. 13 other

LABOR

- a. 10 labor productivity
- b. 8 labor turnover, absenteeism, or accident rates
- c. 32 availability of skilled labor
- d. 10 availability of semi-skilled labor
- e. 3 availability of unskilled labor
- f. — other

SUPPORTING SERVICES

- a. 5 tool and die, machine, sheet metal, electrical services, etc.
- b. 4 insurance
- c. 6 medical
- d. 9 industrial supply service (private)
- e. 4 other

MARKET

- a. 20 distance from market
- b. 3 changes in location of market
- c. 13 new competition for market
- d. 3 other

RELATIONSHIP WITH COMMUNITY

- a. 6 police and fire protection
- b. 12 adequate roads and streets to plant
- c. 1 cooperation in labor disputes
- d. 6 understanding and interest in general problems facing the management of the plant
- e. 3 other

b.

FINANCING

- a. 8 private sources
- b. 19 local banks
- c. 6 local financial institutions (other than banks)
- d. 3 non-local institutional sources
- e. 1 other

PURCHASED INPUTS AND SUPPLIES

- a. 11 quantity
- b. 8 quality
- c. 14 dependability
- d. 6 other

TAXES

- a. 31 local taxes
- b. 13 state taxes

UTILITIES

- a. 5 water service
- b. 13 sewage service
- c. 8 gas service
- d. 22 electric service
- e. 7 other

^{a/} Frequencies given above are calculated as a percent of the total number of respondents.

Table 47. Factors Favorably Influencing the Conduct of Business in Union County, Oregon, and Frequency of Mention by Businessmen Sampled^{a/}

PROCESSING COST FACTORS

- a. 12 Low cost and availability of labor.
- b. 2 Low cost of fuel (natural gas, LP, coal)
- c. 2 Low cost of electric power.
- d. 18 Climate (as it affects cost of operations).
- e. 13 Favorable labor-management relations.
- f. 12 Low cost of satisfactory type and amount of water.
- g. 9 Adequate waste and sewage disposal.
- h. 9 Low cost of building and land.
- i. 0 Low cost of financing plant through revenue bonds.
- j. 6 Favorable community and state tax structure.
- k. 6 Community concessions.
- l. 13 Available existing buildings or plant.
- m. 9 Particular characteristics of building site.
- n. 2 Existence of union labor.
- o. 11 Existence of non-union labor.
- p. 9 Accessibility of plant to employees.
- q. 15 Availability of capital.
- r. 5 Vocational training facilities.
- s. 16 Insurance coverage (fire, vandalism, etc.)
- t. 2 Pool of trained workers.
- u. 3 Pool of unskilled workers.
- v. 7 Air passenger service.

DISTRIBUTION FACTORS

- a. 5 Low freight cost, finished product.
- b. 14 Access to markets.
- c. 7 Transportation facilities (local).
- d. 10 Speed of delivery of final product.
- e. 9 Good warehousing and storage facilities.
- f. 8 Contract trucking.
- g. 30 Highway access (within 30 minutes of major highway interchange).

- h. 8 Scheduled rail service.

- i. 3 Piggy back facilities (rail).

PROCUREMENT COST FACTORS

- a. 13 Proximity to source of raw materials and supplies
- b. 6 Better service from seller of raw materials and components.
- c. 3 Low cost of raw materials or components.
- d. 4 Low cost of transportation of raw materials.

MARKET ADVANTAGES

- a. 32 Greater demand for product in this area.
- b. 45 Potential for greater demand in this area.
- c. 39 Location, number and degree of competition by similar business.
- d. 39 Ability to service buyers.

PERSONAL FACTORS

- a. 77 Friendship with customers, suppliers, bankers, etc.
- b. 46 Characteristics of the population, cultural qualities.
- c. 76 Size of city, good place to raise a family, etc.
- d. 37 Hometown, family ties.
- e. 66 Recreational characteristics of area, climate, etc.

OTHER FACTORS

- a. 8 Nearness to metropolitan city.
- b. 39 Community facilities (schools, medical care, etc.)
- c. 11 Community and county planning and zoning laws.
- d. 5 Lenient industrial zoning.
- e. 2 Strict industrial zoning.
- f. 18 Community leader's cooperation.
- g. 18 Data provided by Chamber of Commerce, community, etc.
- h. 4 Information provided by local manufacturers.
- i. 4 Nearness to corporate headquarters.
- j. 31 Local supporting services (police, fire protection, etc.).
- k. 2 State administration neutral in labor-management relations.
- l. 1 Data provided by the state industrial development agency.

^{a/} Frequencies given above calculated as a percent of total number of respondents.

Table 48. Positive Location Factors Cited by Businessmen in the Union County, Oregon, Survey and in Other Studies

FACTOR & DESCRIPTION	STUDY ^{a/} SOURCE	BUSINESS SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{b/}																									
		All	CC	CS	WR	UC	TR	FK	TX	AP	LW	FU	PA	PR	CH	RP	LE	ST	PM	EM	M1	M2	TE	IN	MC	PF	AG
Friendship with customers, suppliers, bankers, etc.	U.C. C.&S. G.&C.	77 13	83	79	88	50	50		30	20		100		24	50										100 31	68	67
Characteristics of the population, cultural qualities	U.C. C.&S. G.&C.	46 2	25	50	43	50	50				67			50 20	33									50	60	61	48
Size of city, good place to raise a family	U.C. C.&S. G.&C.	76 10	67	75	79	50	100	100			67			100 20	67								26		80	79	67
Hometown, family ties	U.C. C.&S. G.&C.	37 8	50	29	40	50		100 20			67			75 20											20	29	38
Recreational characteristics of area, climate	U.C. C.&S. G.&C.	66 5	67	63	71		100	100			67			75	67									50	40	61	67
Proximity to source of raw materials and supplies	U.C. G.&S. G.&C.	13 9						30	30		67 36							40							20		24
Better service from seller of raw materials and components	U.C. C.&S.	6 7							20		36		20														
Low cost on raw materials and components	U.C. C.&S.	3 13													33			40							20		
Low cost of transportation of raw materials	U.C. C.&S. G.&C.	4 8							40 29				23	31		24											
Low freight cost, finished product	U.C. C.&S. G.&C.	5 18 11					100		30	23		29	29		25 28	29		30	38				21		20 23		
											29						100		20								

Table 48. Positive Location Factors Cited by Businessmen in the Union County, Oregon, Survey and in Other Studies (continued)

FACTOR & DESCRIPTION	STUDY ^{a/} SOURCE	BUSINESS SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{b/}																									
		ALL	CC	GS	WR	UC	TR	FK	TX	AP	LW	FU	PA	PR	CH	RP	LE	ST	PM	FM	MI	M2	TE	IN	MC	PF	AG
Access to markets	U.C.	14	25								67				33										40		24
Transportation facilities (local)	C.&S.	7																							20		
Speed of delivery of final product	U.C.	10													33										40		
Good warehousing and storage facilities	U.C.	9													33										40		24
Contract trucking	U.C.	8									67																
Community concessions	U.C. C.&S.	6 14							20	32													32				
Available existing building or plant	U.C. C.&S.	13 18			20		50		60	30	20		23					20		22					39		24
Particular characteristics of building site	U.C. C.&S.	9 3					50							20													
Existence of non-union labor	U.C.	11													33												
Accessibility of plant to employees	U.C.	9									67				33												
Availability of capital	U.C.	15																									24
Insurance coverage	U.C.	16																									33
Pool of trained workers	U.C. G.&C.	2 5			57						67																
Nearness to metropolitan city	U.C. C.&S.	8 7																			9		16	35			
Community facilities (schools, medical, etc.)	U.C. C.&S. G.&C.	39 9	25	25	44		50				67							20			25			50	20	54	48
					100																						

Table 48. Positive Location Factors Cited by Businessmen in the Union County, Oregon, Survey and in Other Studies (continued)

FACTOR & DESCRIPTION	STUDY ^{a/} SOURCE	BUSINESS SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{b/}																									
		ALL	CC	GS	WR	UC	TR	FK	TX	AP	LW	FU	PA	PR	CH	RP	LE	ST	PM	FM	M1	M2	TE	IN	MC	PF	AG
Community & county planning and zoning laws	U.C.	11																									24
Community leaders' cooperation	U.C. C.&S.	18 32		29			50		50 20		67 27	25	24	60		43	73		25	22	25	52	42			40	
Data provided by Chamber of Commerce, community	U.C. C.&S.	18 3			21		50																		60	25	
Nearness to cor- porate headquarters	U.C. C.&S.	4 5												20													
Local supporting services	U.C. C.&S. G.&S.	31 1 100	42		35		50				67				33												38
Data provided by state industrial development agency	U.C. C.&S.	1 2																					26		20		
Highway access (within 30 minutes of major highway interchange)	U.C.	30	25	29	23						67														80	29	38
Scheduled rail service	U.C.	8									67														40		
Greater market demand in area	U.C. C.&S. G.&C.	32 14 52	33	42	33	50					67 27 35			25 20 74	33 33 32					30 61					20	39	
Potential for greater demand in area	U.C. C.&S. G.&C.	45 14 52	33	54	52	50								50 20 43		25 21		40 76	38 46	30 12					60	43	33
Location, number and degree of com- petition by similar businesses ^c	U.C.	39	50	50	43	50					100			50											40	43	
Ability to ser- vice buyers	U.C.	39	42	21	49						67			50	33										40	54	

Table 48. Positive Location Factors Cited by Businessmen in the Union County, Oregon, Survey and in Other Studies (continued)

FACTOR & DESCRIPTION	STUDY ^{a/} SOURCE	BUSINESS SECTOR & PERCENTAGE OF RESPONDENTS CITING FACTOR ^{b/}																									
		All	CC	GS	WR	UC	TR	FK	TX	AP	LW	FU	PA	PR	CH	RP	LE	ST	PM	FM	MI	M2	TE	IN	MC	PF	AC
Low cost and avail- ability of labor	U.C.	12													33											40	
	C.&S.	66						40	40	87	64	49			50	71	82	50	63	63	50	96	74	100			
	G.&C.	3								46						100											
Low cost of fuel	U.C.	2																									
	C.&S.	7														21		40									
Low cost of electric power	U.C.	2																									
	C.&S.	36						30	30	32	27	26	35	20	58	64	36	40	63	33	42	39	47	50			
Climate (as it affects cost of operations)	U.C.	18			20																				20		33
	C.&S.	2												20													
	G.&C.	2			100													100									
Favorable labor- management re- lations	U.C.	13									67														40		
	C.&S.	36						20	30	35	55	34		60	25	36	55	20	75	33	42	48	32	100	23		
	G.&C.													18													
Low cost of satisfactory type and amount of water	U.C.	12																									33
	C.&S.	4						20							25												
Low cost of building and land	U.C.	9									67														40		
	C.&S.	20										29	24	20		29		25	37		26		100				
Low cost of financing plant through revenue bonds	U.C.	0																									
	C.&S.	17							20						33	36	63		25		22	26					
Favorable community and state tax	U.C.	1																									
	C.&S.	17						20	20		27						27	20		26	25	35	53	50			

^{a/} Study source codes are as follows: (1) UC = Union County survey; (2) C&S = Tennessee survey reported by Carrier and Schriver (1969); and (3) C&C = Florida survey reported by Greenhut and Colbert (1962).

^{b/} Business sectors codes are as follows: All - Total Sample Frequency; CC - Contract Construction; CS - General Services; WR - Wholesale/Retail Trade; UC - Utitiles & Communications; TR - Transportation; FK - Food & Kindred; TX - Textiles; AP - Apparel; LW - Lumber & Wood; FU - Furniture; PA - Paper; PR - Printing; CH - Chemical; RP - Rubber & Plastic; LE - Leather; ST - Stone; PM - Primary Metal; FM - Fabricated Metal; ML - Machinery (excluding electrical); M2 - Machinery (including electrical); TE - Transportation Equipment; IN - Instrument; MC - Miscellaneous; PF - Professional & Financial Services; AF - Agriculture.