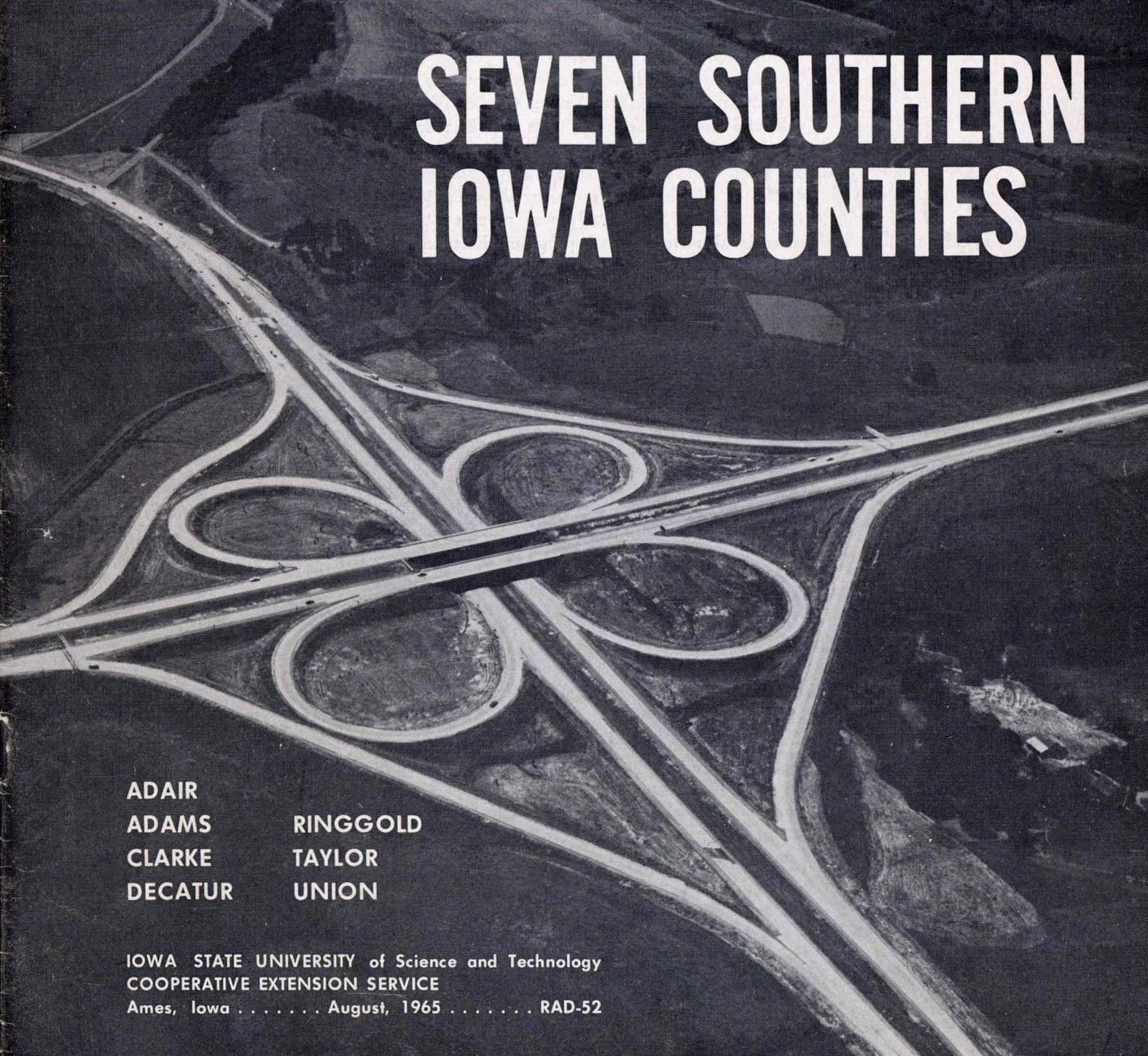


UA
Cooperative Extension
Pam RAD-52

the economic base of

SEVEN SOUTHERN IOWA COUNTIES



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IOWA STATE UNIVERSITY of Science and Technology
COOPERATIVE EXTENSION SERVICE
Ames, Iowa August, 1965 RAD-52

PREFACE

This is the third economic base study published by the Iowa State University Cooperative Extension Service about different areas of the state. The first two were "The Economic Base of TENCO," RAD-31, April 1964 and "The Economic Base of NIAD," RAD-37, May 1964. The TENCO study concerns 10 counties in southern Iowa. The NIAD study was done in a nine-county area in northern Iowa.

The present study includes seven counties in southern Iowa: Adair, Adams, Union, Clarke, Taylor, Ringgold and Decatur (see map, page 4). The Cooperative Extension Service in the seven counties planned a coordinated and intensive educational program on economic and social development for the area, initiated in 1965. The following study was prepared to provide educational materials and program direction for this educational effort.*

Data presented in this report were collected with the assistance of extension personnel in the seven southern Iowa counties.

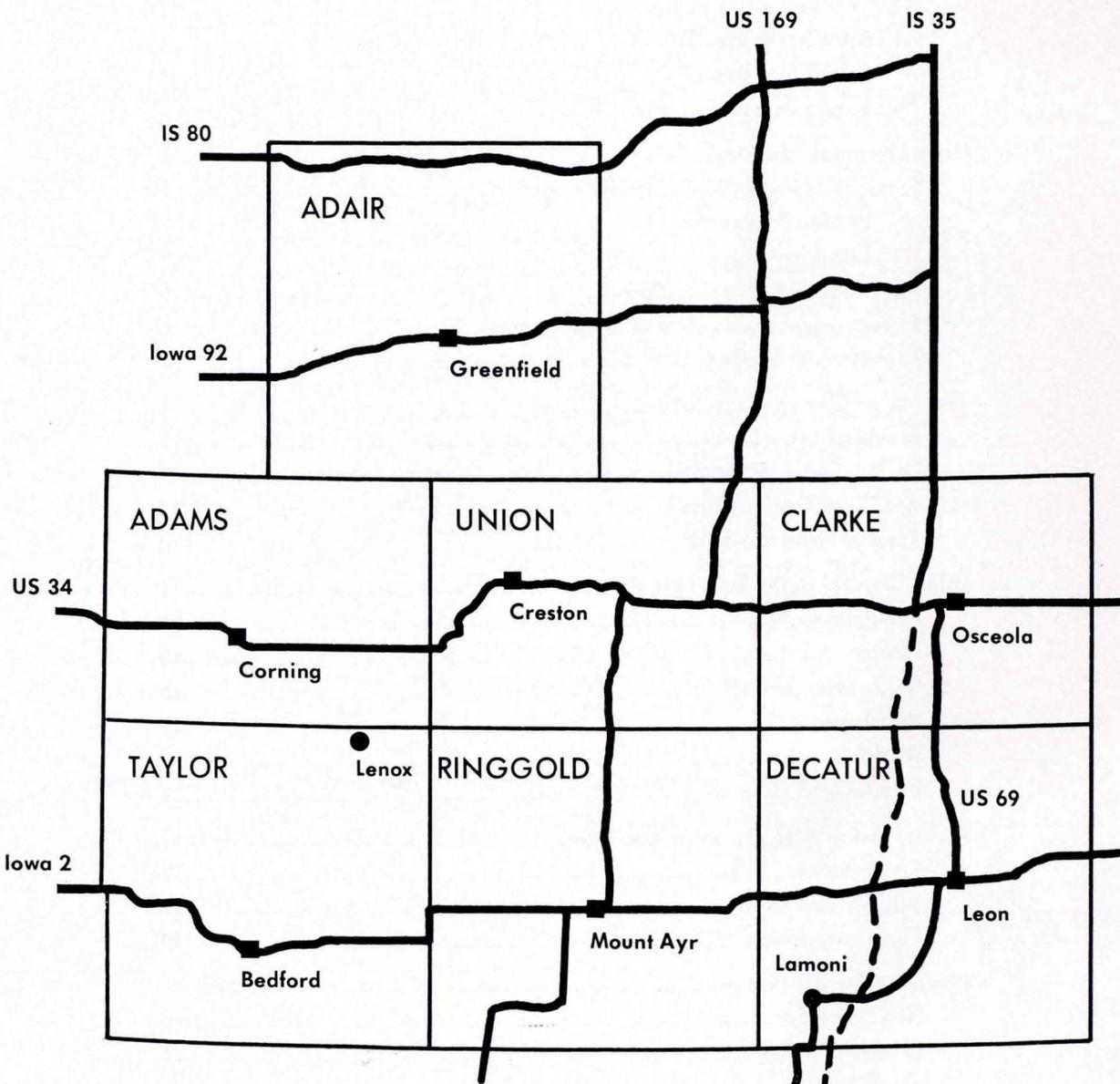
Special thanks are given to the chamber of commerce organizations in the seven-county area and local business and industry managers for their excellent cooperation.

*See "The Seminar Six Program," RAD-48, May 1965, for details. Madison County was added to the "Seminar Six Program" after most of this economic base was completed, so much of the data applies to the seven counties, excluding Madison.

Cover photo: Interstate Highway 35 interchange near Des Moines. Other photos in this publication are scenes in the seven southern Iowa counties.

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Map of seven-county southern Iowa area showing principal through highways and communities of 1,000 population and over. Squares indicate county seats.

The Economic Base of Seven Southern Iowa Counties

by Eber Eldridge and Marvin Julius
Extension Economists

Rapid changes are taking place in southern Iowa. Technological progress has stimulated farm consolidation. This rapid farm consolidation has permitted the farmer to become more fully employed, but it also has reduced the number of farms and farm population. The speed at which consolidation has developed and is progressing in southern Iowa has an impact on Main Street, on school size and location, on training needs and educational demands, and on church size and church services. Consolidation also has implications for government functions and government districts and for people's attitudes and abilities.

The Iowa State University Cooperative Extension Service wishes to help residents in the area achieve a better understanding of the causes of the changes and the possible courses of action in dealing with the changes. People in the area *are* concerned. These concerns are sometimes called *problems*; at other times they are called *progress*. Whether they are problems or consequences of progress, the Cooperative Extension Service feels confident that residents of the area can deal with the changing situation if they have sufficient information.

This economic base study attempts to provide information about the forces of change in the southern Iowa area. It is hoped that this report will assist the residents of the area in achieving their desired objectives.

The Economic Base

The *economic base* of an area consists of those activities which provide the basic employment and income on which the rest of the local economy depends.

Export employment is *basic employment*. The goods and services which the area sells to people or firms located outside its boundaries are *exports* (not to be confused with exports as meaning sales to foreign countries) and are *basic*.

An *economic base study* identifies the basic sources of employment and income and provides an understanding of the source and level of all employment and income within the study area.

The primary *objective* of an economic base study is to develop information which will help the citizens of an area understand and solve local problems, make better decisions about matters which will enlarge economic opportunities, improve their welfare, and make it possible for them to increase their contributions to national growth.

One of the first requirements of an economic study is a defined area. The area can be the city limits of a town or its trade area, a county, or a multi-county unit. In this particular economic base study, the area selected is seven southern Iowa counties (see the detail map, page 4). There are 51 towns and 9,600 farms in the area. There were 69,032 people living in the area in 1960.

This area can be described as highly rural. It has no large central city, and it lies outside the primary trading areas of other large central cities. There has been a rapid decline in the number of agricultural workers. At the same time, the area lacks the kind of large industrial base which would create expansion of jobs for nonfarm workers.

WHAT THE ECONOMIC BASE STUDY SHOWS

After the area to be covered in the study is defined, the economic base study divides the local economy into three segments: (1) firms and individuals serving markets outside the area (export activity), (2) firms and individuals serving or supporting the area's export activity (support activity), and (3) firms and individuals serving consumer markets within the area (domestic activity).

Export employment is that employment which depends upon demands for goods and services originating outside the area. Farming is the principal export activity in the southern Iowa area, and nearly all farm products are exported.

Support employment is that employment which exists because of demands created by the export activity. Workers in such businesses as fertilizer and feed supply and livestock sales or treatment are support workers because they support an export activity, farming.

Domestic employment provides goods and services for consumption by local residents. Main street retailing is an example. Workers in secondary schools and similar activities carry out a domestic activity.

Sources of Demand

The differences between the sectors, export, support and domestic, stem primarily from the sources of demand. Demand for goods and services in the export market comes from outside the area. On the other hand, the demand for goods and services produced for support and domestic activity originates primarily within the area. However, the demand for the goods and services produced by the support sector stems

from the local export industries, whereas the demand for the goods and services in the domestic sector originates with local consumers.

Export markets are the prime mover of the local economy. If employment serving the export market rises or falls, employment serving the local market is presumed to move in the same direction.

Example: When the factory (export) closes, retail merchants (domestic) feel the impact in that laid-off factory workers have less to spend. Local (support) firms that sell products to the factory may also have to lay off workers, and retail merchants are again affected by these layoffs.

Because of this prime mover role, export employment is *basic*. Employment which serves the local market is considered adaptive. It is *nonbasic* and includes both support and domestic employment.

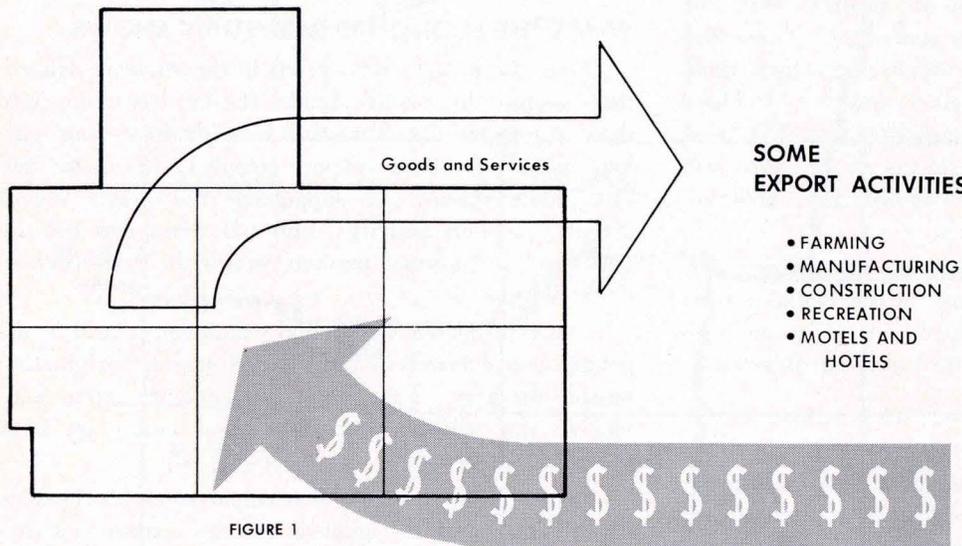
Figures 1 and 2 show the effects of export and nonbasic activities in an area.

Identifying Sectors

In economic base analysis, each firm in the area is placed in either the export, support or domestic category or divided among the three, according to the percentage of business performed in each sector.

If export employment is the prime mover, how much nonbasic employment will be created if export employment increases? The simplest assumption is that, in the long run, the proportion of basic and nonbasic jobs will remain about the same. Hence, an increase in the number of basic jobs will eventually produce a proportionate increase in nonbasic (support and domestic) jobs.

Example: In an area with a total employment of 10,000, suppose that export employment is 5,000 and nonbasic employment is 5,000. What happens to total employment if a new plant opens in the area and increases export employment by 50 jobs? In



SOME EXPORT ACTIVITIES

- FARMING
- MANUFACTURING
- CONSTRUCTION
- RECREATION
- MOTELS AND HOTELS

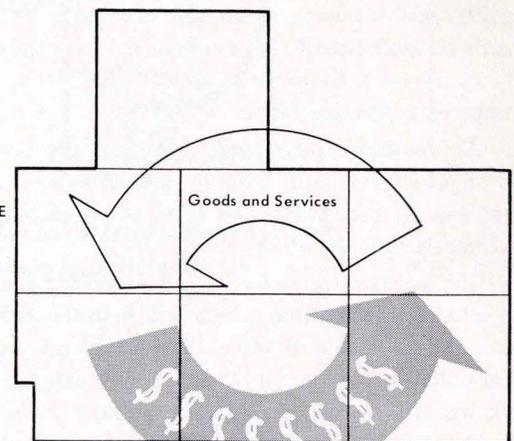
FIGURE 2
SOME NONBASIC ACTIVITIES

SUPPORT

- FARM SUPPLY SERVICES
- FEED, SEED, FERTILIZER, PETROLEUM)
- SOME CONSTRUCTION
- SOME OTHER SERVICES

DOMESTIC

- RETAIL AND WHOLESALE
- MEDICAL SERVICES
- SCHOOLS
- CHURCHES
- REPAIR SERVICES
- LOCAL GOVERNMENT



the long run, nonbasic employment will also rise by 50. If for every new export job, one new nonbasic job is created, total employment will rise by 100 — the 50 export jobs plus the additional 50 nonbasic jobs created to supply the increased demand resulting from the new export workers.

Now, suppose that the increase in export employment is all or mostly in a sector that has produced a higher-than-average support employment effect. Then we might estimate that the ratio of nonbasic to export employment would be greater than one to one. Perhaps 60 new nonbasic jobs would be created as a result of the 50 new export jobs. Of course, increased employment in a sector that generates a relatively small number of support jobs might produce only 20 or 30 nonbasic jobs as a result of an increase of 50 export jobs.

Forecasting

An important use of the base study is for forecasting. When the area's economic forces are understood, it is easier to project how these and other forces will affect the area in the future. First, the growth or decline of employment in export industries is forecast. Then, associated nonbasic employment growth or decline can be determined. These projections can help greatly in forecasting changes in population, income, land use and tax base. Forecasts of trends in these fields in turn can be used to meet a wide range of public and private needs of the area, such as planning and zoning, capital budgeting, taxation, public spending, housing, transportation, electricity and gas service, telephone and other utility services, as well as needs for other services.

The Appendix contains a section on benefits of the base study.



Export - Nonbasic Employment in the Southern Iowa Area

Export and total employment for this southern Iowa area are given in tables 1 through 4. Information from the Bureau of Census, supplemented by a survey of a large sample of business and manufacturing firms in the area, was used to compile the tables. The export employment estimates for 1980 for the major exporting sectors are based on the results of numerous research projects of the Iowa Agricultural and Home Economics Experiment Station. The projection of 1980 employment in other sectors was computed by using nonbasic export ratios for individual sectors with some adjustments of the ratios for changes over time.

The most significant economic information revealed in table 1 is the sharp decline in agricultural employment between 1950 and 1960. The decrease of 5,198

jobs, most of which were export, is the primary force which has affected the economy of the southern Iowa area in the recent past. From an export standpoint, the only counterbalancing force of any size has been an increase in the number of commuters to out-of-area jobs during the 1950-60 decade. Over all, export employment decreased by 3,526 jobs.

If only nonfarm export employment is considered, there was a slight increase between 1950 and 1960. This increase in export employment is related to the doubling of the number of commuters who live within the area and commute to employment locations outside of the area. The number of employees in manufacturing was essentially the same in 1960 as it was in 1950. This draws attention to the fact that the area does not have a strong industrial base.

There was a noticeable stepping-up of industrial activity in the area between 1960 and 1965. But, still, only 4 percent of the total employment relates to manufacturing. This relatively small industrial base places the area at a disadvantage in its attempts to offset the decline in farm employment through the increase in nonfarm export activity.

EXPORT EMPLOYMENT — THE PRIME MOVER

Comparison of employment and population data for the southern Iowa area for 1950 and 1960 shows a large decline in export employment, a decline in total employment and a substantial loss in total population (table 1). If export employment is considered to be the prime mover, then it would be expected that non-basic employment would follow the same trend shown by export employment, other things being equal.

This is essentially what has happened in the southern Iowa area. In 1950 there was a nonbasic employment of 13,202 people. By 1960, this had decreased to 11,933. The decrease in nonbasic employment in the area was less than the decrease in export employment, both in absolute numbers and proportionately.

If the decline in export employment was caused by a decrease in the demand for goods and services produced for export, total export income would be depressed, and there would be an associated decline in the demand for nonbasic goods and services.

However, there was not a decrease in the demand for the export goods and services from the area. On the contrary, there was an increase in sales of both manufactured and farm products between 1950 and 1965. Therefore, the export employment decline (primarily in farming) was due to advancing technology and increased capital per worker. This resulted in greatly increased productivity per worker. More goods and services were exported from the southern Iowa

area in 1965 than in 1950. There was an increase in total income from the export industries between 1950 and 1965.

Changes in Employment and Income

This area has experienced two major economic changes. The consequences of these changes appear in different ways.

The first change was a major decline in export employment. The second change was an increase in area total income.

The impacts of these two major changes will be discussed in more detail later in this report. However, one of the results of less export employment and more income is a changing ratio between export and non-basic workers. In 1950, 10 export workers provided sufficient demand for nearly eight nonbasic workers. In 1960, 10 export workers apparently created a demand for more than nine nonbasic workers.

Changing Ratios

How much of this change reflects a permanent ratio change will be determined over time. In the short run, there are some possible explanations for the changing ratio.

1. The per-worker productivity of the export worker increased more rapidly than did the per-worker productivity of the nonbasic worker. This would tend to cause a permanent ratio change.

2. The total income for the area increased by more than 10 percent between 1950 and 1960. The average income per family increased by approximately 24 percent in the same period of time on a constant-dollar basis. This increase represents an actual increase in purchasing power after the effects of inflation have been removed. With rising incomes, there has been an increased tendency to demand more of all other personal

TABLE 1. Area Employment Data, 1950-60.

Type employment ¹	Total employment			Export employment		
	1950	1960	Change	1950	1960	Change
Agriculture	15,216	10,018	-5,198	13,694	9,517	-4,177
Construction and mining	1,554	1,153	-401	233	173	-60
Manufacturing	866	881	+15	563	671	+108
Transportation, communication and public utilities	1,735	1,154	-581	347	262	-85
Wholesale and retail	4,379	4,610	+231	569	597	+28
Finance, insurance and real estate	470	532	+62	0	0	0
Services	4,986	5,479	+493	598	674	+76
Out-commuters	460	1,044	+584	460	1,044	+584
Area	29,666	24,871	-4,795	16,464	12,938	-3,526
	1950	1960		Percent change 1950-60		
Total population	80,614	69,032		-14		
Total employment	29,666	24,871		-16		
Total export employment	16,464	12,938		-21		
Total nonbasic employment	13,202	11,933		-10		
Nonbasic workers per 100 export workers	80	92		Increasing		
Nonworkers per 100 workers	172	178		Increasing		

¹See Appendix for definitions of these classifications.

and professional services, such as more medical and dental care, legal advice and nursing care for the aged. There are more professional and charitable organizations hiring full-time employees. There is a high "income elasticity"¹ for some professional services, including secondary and higher education; the increased quantity and quality of education offerings in secondary schools have caused an increase in professional service categories. The consequence of higher incomes is reflected in the growing demand for services, an increase of 493 jobs between 1950 and 1960.

3. When export employment changes, particularly in a downward direction, there can be a lag of several years before nonbasic employment follows. If the export employment decreases, the retailer dealing with products of low income elasticity might serve fewer customers and do less business. An increase in "underemployment" may follow rather than loss of jobs. The gradual increase in underemployment could continue for many years before some jobs are eliminated.

4. Associated with increased farm size is a tendency of farmers to increase purchases of inputs like gasoline, feeds, seeds and fertilizers, and services such as grinding and spraying. This leads to an increase in demand for nonfarm support jobs, even with fewer farms.

5. Throughout the nation, there has been a substantial increase in employment related to local, state and federal government. During the past years, the employment increase has been more in local and state government than in federal. This southern Iowa area showed an increase in government-related jobs between 1950 and 1960. The change in the number of jobs related to state, local and federal government could proceed either

up or down, independent of export employment in the area. The jobs connected with government activity are not considered export jobs in this study. It is assumed that the taxes contributed in support of these jobs are about equal to salary payments.

6. Because of changing incomes and changing tastes, the ratio between export employment and nonbasic employment could be changing over time, in spite of "adjustment lags." The ratio for 1950 indicates that the loss or gain of 10 basic export jobs would bring about a decrease or increase of 8 nonbasic jobs. In 1960, the ratio had changed to 9 nonbasic jobs for every 10 export jobs (note "nonbasic workers per 100 export workers" change in table 1). If the change continues through 1980, 10 workers in export economic activity will create a demand for approximately 10 workers in nonbasic activity.

Although the ratio between export and nonbasic employment is in fact changing, there is evidence that a relationship still exists. Total employment between 1950 and 1960 actually decreased by 4,795 jobs. The existence of a relationship between the number of jobs and the total population cannot be denied, since nearly every family, unless independently wealthy, must have an economic means of support. However, the percentage of people beyond 65 who are retired and dependent on a "nonworking" means of support has greatly increased. The percentage of children under 14 has increased proportionately. The number of nonworkers per 100 workers in the area has increased slightly in recent years (see table 1). Consequently, the percentage decrease in total population was not as great as the percentage decrease in employment.

THE ECONOMIC BASE IN 1980

Table 2 shows the population and employment projections for the southern Iowa area for 1980. All pro-

¹If much of an "income increase" is spent on some items or services, these items or services are said to have high income elasticity.

TABLE 2. Projected Area Employment and Population, 1980.

Type employment	Actual employment, 1960		Projected employment, 1980 ^a				Total employment change, 1960-80	
	Export	Total	Case I ¹		Case II ²		Case I	Case II
Agriculture	9,517	10,018	4,800	5,015	4,800	5,030	-5,003	-4,998
Construction and mining	173	1,153	170	866	170	939	-287	-214
Manufacturing	671	881	1,500	1,607	2,500	2,620	+726	+1,739
Transportation, communication and public utilities	262	1,154	250	977	250	1,173	-177	+19
Wholesale and retail	597	4,610	600	3,225	600	4,210	-885	-400
Finance, insurance and real estate	0	532	0	466	0	526	-66	-6
Services	674	5,479	675	4,470	675	5,052	-1,009	-427
Out-commuters	1,044	1,044	1,500	1,500	1,500	1,500	+456	+456
Area	12,938	24,871	9,495	18,626	10,495	21,050	-6,245	-3,821
		1960		1980		1980	Percent change 1960-1980	
Total population		69,032		48,428		54,730	-30	-21
Total employment		24,871		18,626		21,050	-25	-15
Total export employment		12,938		9,495		10,495	-27	-19
Nonbasic workers per 100 export workers		92		96		101		

¹Assumes manufacturing employment increases at a historical rate.

²Assumes manufacturing employment increases by 1,000 jobs more than historical rate.

³See Appendix for method of making projections.

jections are based on a specific set of assumptions. Therefore, the accuracy of projections depends upon the degree to which the assumptions fit reality. In order to give a range rather than a definite figure, the projections in this study have been made with two separate sets of assumptions.

Case I in table 2 gives employment projections based largely upon historical trends, with other known factors considered. The southern Iowa area has not added much manufacturing employment in the past. Due to a low manufacturing base, a small increase of 829 manufacturing export jobs was projected from 1960 to 1980.

Case II recognizes an increase in manufacturing activity in the area within the last few years. If this increase in manufacturing employment is maintained between 1965 and 1980, Case I projections are too low. The only difference between Case I and Case II is the assumption of 1,000 more manufacturing export jobs by 1980 in Case II. Table 2 shows that the additional 1,000 manufacturing export jobs in Case II affect most of the other employment categories. Total employment is about 2,500 greater in Case II (21,050) than in Case I (18,626). This is because the 1,000 additional export jobs would create more support and domestic jobs.

Table 2 also indicates that the area will lose population even under the more optimistic Case II assumptions. A relatively higher rate of manufacturing expansion will not offset the declines in farm employment. There will still be a 20 percent decrease in population.

EXPORT, SUPPORT AND DOMESTIC EMPLOYMENT

Table 3 shows employment classifications for the area according to three divisions—export employment and the nonbasic divisions of support and domestic employment.

Table 3 indicates the predominance of agriculture as an export activity in the southern Iowa area. The second most important export activity is performed by the group of commuters who live within the area and work outside it. In one sense, these commuters are exporting a service. Much of the income they earn outside the area will be returned to the area and circulated.

The wholesale and retail activity is predominant in the support employment group. Many of the retail services, such as feed, seed, fertilizer and gasoline sales, provide inputs into farming. These services support the export activity. Construction ranks second as a support employment. This again reflects the demand for certain types of construction activity in terms of demands originated within the farming industry.

Services rank first in the domestic employment classification. School teachers, lawyers, doctors, dentists, local government workers and nurses are considered as providing domestic services to the local residents. Some of these services are classified as support employment because they support the major export activities. But most service jobs are not related to export employment. Employment in wholesale and retail services also provides a large number of domestic jobs.

EXPORT ACTIVITY EFFECTS

Table 4 classifies support and domestic employment in a different manner than in table 3. All the support and domestic employment in the area is listed with the export employment on which it depends. This table is compiled under the assumption that all employment can be tied to an export activity, either directly or indirectly. By reading across any one row, you can find the export employment of a sector, the support employment which is tied to the export activity, and the domestic employment which is associated with the combined total of export and support employment.

Example: The agricultural export activity employed 9,517 workers in 1960. A total of 3,242 additional employees were engaged in producing or selling services which were incorporated into agricultural exports — they were support employees to the agricultural export activity. Included are employees of farm implement firms, petroleum tank wagon salesmen, grain elevator and feed store employees, fertilizer dealers, some hardware store employees, and many others who make their living partially or completely by serving farmers. The 9,517 export employees plus the 3,242 support employees created a demand for the services of 6,049 domestic employees within the area.

TABLE 3. 1960 Area Employment, Classified by Export, Support and Domestic.

Type employment	Total	Export	Nonbasic	
			Support	Domestic
Agriculture	10,018	9,517	74	427
Construction and mining	1,153	173	754	226
Manufacturing	881	671	110	100
Transportation, communication and public utilities	1,154	262	539	353
Wholesale and retail	4,610	597	1,642	2,371
Finance, insurance and real estate	532	0	301	231
Services	5,479	674	514	4,291
Out-commuters	1,044	1,044	0	0
Area	24,871	12,938	3,934	7,999

TABLE 4. Area Export and Related Employment, 1960.

Type of activity	Export	Related nonbasic ¹		Export and related total	Nonbasic employment per 100 export workers		
		Support	Domestic		Support	Domestic	Total
Agricultural export	9,517	3,242	6,049	18,808	34	64	98
Construction and mining export	173	32	97	302	18	56	74
Manufacturing export	671	222	423	1,316	33	63	96
Transportation, communications, public utilities export	262	41	144	447	16	55	71
Wholesale and retail export	597	248	401	1,246	42	67	109
Services	674	111	372	1,157	16	55	71
Labor export by out-commuters	1,044	38	513	1,595	4	49	53
Area	12,938	3,934	7,999	24,871			

¹Includes all employment, whether in manufacturing, services or other categories, which provides either support or domestic goods and services to an export activity. **Example:** 3,242 support jobs and 6,049 domestic jobs exist in the area because of the demands of the 9,517 farm workers. Therefore, 18,808 jobs (9,517+3,242+6,049) exist because of the agricultural export activity in the area.

There were thus 18,808 employees depending upon agricultural export. *This was 75 percent of the entire labor force of the area in 1960.*

The next two columns of table 4 give the same information in a ratio form. For instance, there were 18 support workers and 56 domestic job-holders per 100 construction export workers in 1960. These ratios allow a more direct comparison of the nonbasic employment effects generated by the export activity in each sector.

The last column summarizes these effects into a nonbasic export ratio. This ratio can be used in making rough predictions about the predicted change in the total of support and domestic employees which will result from a change in export employment.

Example: If there should be an increase of 100 manufacturing employees in the export category, it would be expected that these 100 new employees would create demands for 96 new nonbasic workers (33 support and 63 domestic) in the area.

This relationship should be used with caution, however, since the 100 manufacturing export employees must be new employees in the area. If the 100 manufacturing employees are part-time farmers already living within the area, the ratio for new domestic and support employees would not apply.

The support and domestic employment from any row in table 4 is *associated* with the export employment of that row, but is *not a part* of the export employment.

The Major Change in the Southern Iowa Area — Agriculture

In terms of both employment and value of product, farming is the largest export industry in the area. In 1960, farming provided about 40 percent of total employment and about 75 percent of export employment. The next most significant export employment was in commuting, which made up approximately 4 percent of total employment and close to 8 percent of export employment.

Of the total "value-added"² income earned in the area in 1960, 38 percent was earned in farming. Farming is exceeded only by the large grouping of employment included in "services" (table 12).

Consequently, farming is a very important activity in the area for two reasons. First, it contributes a large share of the economic activity of the total area, in terms of both employment and income. Second, farming is nearly 100 percent export activity for the area and is a prime mover of the economy.

There are many reasons for concluding that the changes taking place in farming have caused the most significant impacts on the area (particularly since World War II). It is necessary to look at these changes in detail in order to understand some of the population and employment changes in the area in the past decade, and in order to fully comprehend possible future changes and potential impacts.

A TYPICAL FARM

Many farms in southern Iowa are "hog-finishing, beef-raising farms." The data for a typical farm for this category are shown in table 5. The changes illustrated are not an average for all farms in southern Iowa, but do represent the changes taking place on the typical hog-beef farm. In addition, the changes shown for this type of farm are similar to the changes taking place throughout the farming industry. The only difference between the type of farm shown in table 5 and some other type of farm would be a matter of degree. The major directional changes would be the same.

In the 15-year period represented in table 5, farms increased in size by 37 percent and the livestock operation also was expanded. There was only a slight increase in the number of hours worked annually. While the number of hours worked per farm increased by 14 percent, there was a greater increase in the amount of

²Value-added income is computed by subtracting cost of materials purchased from other firms or farms from the sales of a firm or farm.

TABLE 5. Characteristics of a Typical Hog-Beef Farm in Southern Iowa.

	1947-49 average	1963	Percent change
Acres in farm	204	280	+ 37
Cropland harvested	86	132	+ 53
Livestock			
Cattle (head)	24	41	+ 71
Pigs raised	61	133	+118
Labor used (hours)	3,380	3,860	+ 14
Operator and family	2,940	3,600	+ 22
Hired	440	260	- 41
Total farm capital	\$26,050	\$58,920	+126
Total cash receipts	5,791	9,422	+ 63
Total cash expenditures	2,997	7,551	+152
Net farm income	3,370	4,130	+ 23
Purchasing power of income, 1947-49	3,370	3,385	no change
Production per farm (index)	100	259	+159
Production per hour of labor (index)	100	239	+139

Source: USDA Information Bulletin 230.

labor provided by the operator and his family, with a sharp 41 percent decrease in the amount of hired labor.

One of the striking changes taking place in southern Iowa agriculture is the increase in capital per farm. An average of nearly \$59,000 total capital was invested in land, livestock, equipment and machinery on the typical hog-beef farm in 1963. The rate of capital increase per farm, 126 percent in a 15-year period, is a remarkable change.

With increases in size of farm and livestock operation, cash receipts (unadjusted for inflation) increased by 63 percent. Cash expenditures increased 152 percent. These figures indicate the extent of the cost-price squeeze on agriculture in this period.

The net income per farm increased only slightly, in spite of the expanded operation. When adjusted for inflation (purchasing power equal to 1947-49), the actual purchasing power of this income was the same in 1963 as it was in the period 1947-49.

However, even though the expanded operations accomplished no purchasing power increase, the decreases in income would have been much greater without the changes toward larger farm operations.

The production per farm and the production per hour of labor more than doubled in the 15-year period. This change indicates clearly the great increase in the ability of one farmer to farm more land and produce a greater output.

The data in table 5 give a brief look at the kind and amount of change that has taken place in 15 years in southern Iowa agriculture. The changes in other types of farms in southern Iowa would be equally striking. Cash grain farming operations have changed much more than illustrated here. Dairy farms, however, have had less pronounced changes.

LARGER FARMS, FEWER FARMERS

There were rapid farm consolidation trends in the

TABLE 6. Commercial Farms in Area.

Counties	1949	1959	Change	Percent change
Adair	1,924	1,547	- 377	-20
Adams	1,406	1,028	- 378	-27
Clarke	1,281	919	- 362	-28
Decatur	1,507	1,031	- 476	-32
Ringgold	1,493	1,101	- 392	-26
Taylor	1,838	1,388	- 450	-24.5
Union	1,330	905	- 425	-32
Area	10,779	7,919	-2,860	-26.5

Source: Agriculture census.

seven-county area in the decade between 1949 and 1959. As farms were consolidated, farm numbers decreased. Farm employment decreased even more than farm numbers. As a farmer consolidated a neighboring farm with his own, he farmed additional land without extra labor. Consequently, with farm consolidation, farm families left agriculture. There was a decrease of nearly 2,900 farms in this southern Iowa area between 1949 and 1959. Adair County showed the lowest rate of consolidation, while Decatur and Union counties had the most rapid change (table 6).

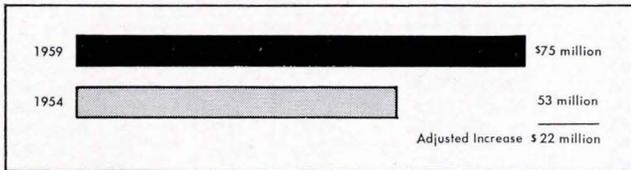
The change in farm numbers in the area is more rapid than in many other sections of the state. Almost 18 percent of the 26.5 percent decline in farm numbers from 1949 to 1959 came between 1954 and 1959. The Iowa decrease was 13.1 percent between 1954 and 1959.

The decrease in farm numbers has meant a corresponding increase in farm size, since the total farm acreage stayed about the same. The average size commercial farm in the area by county in 1959 was Adair, 219 acres; Adams, 245; Clarke, 258; Decatur, 286; Ringgold, 300; Taylor, 229 and Union, 264. The state average was 213 acres.

The change in farm numbers and farm employment has had an impact on the rural population. Although there has been an increase in the number of nonfarm workers living in rural areas, the rural population between 1950 and 1960 decreased by more than 23 percent, resulting in many vacant farmhouses and abandoned farmsteads.



FIGURE 3. VALUE* OF FARM PRODUCTS SOLD IN AREA



Source: Agriculture census

*Adjusted for changed index of farm prices received—1954=268, 1959=233

A \$75 MILLION INDUSTRY

Area agriculture is a \$75 million industry and growing steadily. Between 1954 and 1959, the value of farm products sold in the seven southern Iowa counties area increased 42 percent (fig. 3). When the value of farm products sold is adjusted for the change in the level of farm prices received, the area's agriculture experienced an increase in production of more than \$22 million between 1954 and 1959, on the basis of 1959 farm prices.

The rapid increase in gross sales, the increase in local expenditures and the increase in productivity per farm have resulted in improved farm living in the area (fig. 4). Farm operators in the area have had significant increases in the level of living during this period.

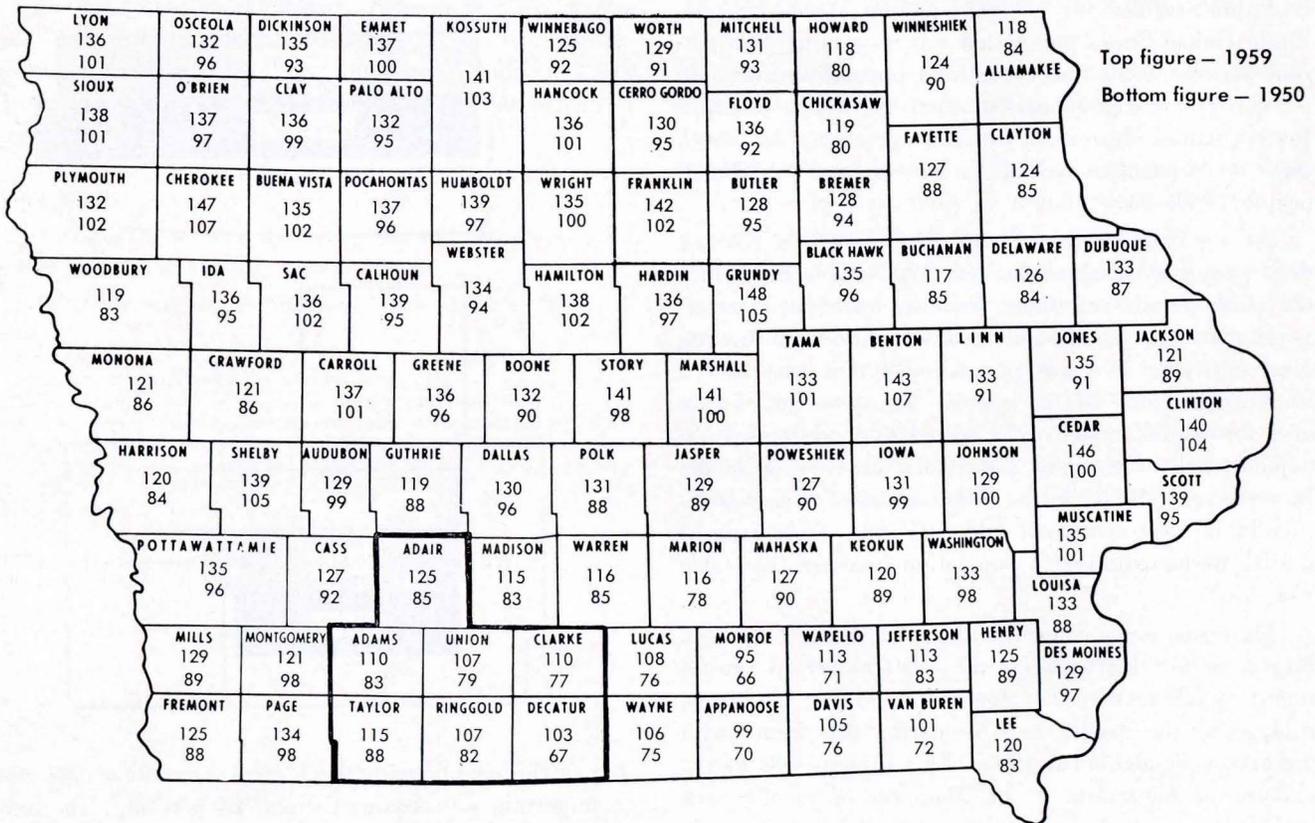
But they still continued to rank below the farm level of living index in most other sections of the state.

FAMILY FARMS THRIVING

The decrease in farm numbers is often assumed to be general and associated with comments such as, "What is happening to the family farm?" Table 7 shows that, while the very small farms decreased in number, the area experienced a 56 percent increase in the number of farms selling products worth \$10,000 or more. The increase came primarily through the route of combining two or more small farms into a larger one. There was an 11 percent decrease in the number of farms selling between \$5,000 and \$10,000 worth of products and a 58 percent decrease in the number of farms selling \$5,000 worth of products or less. This reduced by half the number of small farms in the area in the 10-year period. The reduction in the number of small farms has been particularly large in all the counties in this southern Iowa area.

A farm with \$10,000 annual gross sales has a net income of about \$4,500. A total of \$10,000 in gross sales is generally needed to adequately support a farm family. Therefore, the number of family farms in the

FIGURE 4. FARM OPERATOR LEVEL OF LIVING INDEX*, IOWA COUNTIES
U. S. county average in 1959 = 100



Source: Agriculture census.

*Index based on average value of land and buildings per farm; average value of sales per farm; percent of farms with telephones; percent of farms with home freezers; percent of farms with automobiles.

TABLE 7. Commercial Farms in Area Classified by Value of Products Sold.

Counties	Farms selling \$10,000 or more				Farms selling \$5,000 to \$10,000				Farms selling under \$5,000			
	1949	1959	Change	Percent change	1949	1959	Change	Percent change	1949	1959	Change	Percent change
Adair	379	587	+208	+ 55	734	635	- 99	-14	811	325	- 486	-60
Adams	237	343	+106	+ 45	546	460	- 86	-16	623	225	- 398	-64
Clarke	125	239	+114	+ 91	414	345	- 69	-17	742	335	- 407	-55
Decatur	85	205	+120	+141	410	391	- 19	- 5	1,012	435	- 577	-57
Ringgold	182	381	+199	+109	489	385	-104	-21	822	335	- 487	-59
Taylor	297	303	+ 6	+ 2	526	580	+ 54	+10	1,015	505	- 510	-50
Union	191	270	+ 79	+ 41	414	355	- 59	-14	725	280	- 445	-61
Area	1,496	2,328	832	+ 56	3,533	3,151	-382	-11	5,750	2,440	-3,310	-58

Source: Agriculture census.

area has been increasing during the years of rapid change, not decreasing.

But even though the area had more large farms with higher incomes in 1959 than in 1949, there were still only about 30 percent of the farms selling products valued at \$10,000 or more a year. About 30 percent of the farms sold less than \$5,000 worth of products, and approximately 40 percent had between \$5,000 and \$10,000 in sales. These percentages indicate a great potential for continued change in the future.

Other Changes in the Economic Base of the Southern Iowa Area

POPULATION CHANGES

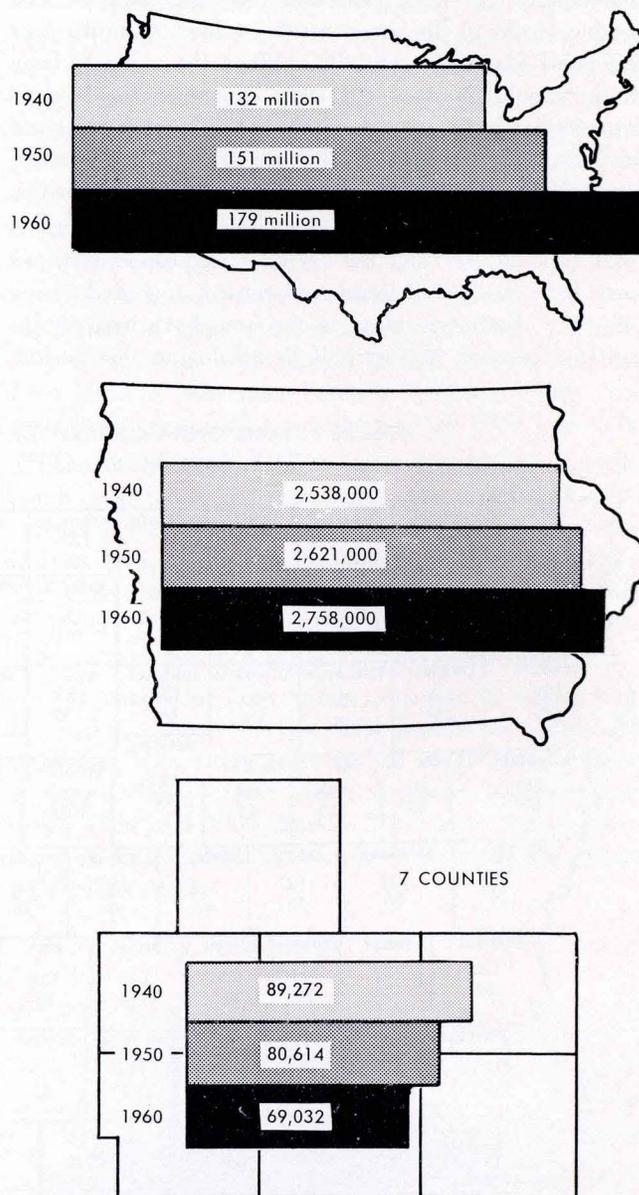
The population of this southern Iowa area has been declining steadily for several decades (see fig. 5). While United States population was increasing 18.5 percent between 1950 and 1960, Iowa population increased 5.2 percent and the population of the seven southern Iowa counties decreased by 14.4 percent. In 1960, these seven counties had 2.5 percent of Iowa's 2,758,000 people (table 8).

All the counties in the area appear to have reached their population peak in the year 1900 (table 8). Since the peak decade, all these counties have been undergoing a steady population decline. Although the big decrease came in farm population, there was also a decrease in many of the towns. Thirty-two of the 34 area towns of under 500 population decreased in population between 1950 and 1960. Forty-seven of the incorporated places in the seven counties lost population in the last census decade, 1950-60. Only four of the 51 towns exhibited a population increase (see table 9).

Migration helps determine the population of an area. Migration for this area for the 1950-60 period can be found by taking the 1950 population, adding the births, subtracting the deaths, and comparing this figure with the actual population in 1960. This process tells us the amount of out-migration or in-migration in the area in the 10-year period.

All of the counties in this southern Iowa area experienced out-migration between 1950 and 1960 (table

FIGURE 5. POPULATION TRENDS



10). The county with the highest percentage loss due to migration was Adams County, 24 percent. The lowest percentage losses were in Clarke and Union counties, 18 percent each. For the area, about one of every five persons left during the decade. A total of 16,465

TABLE 8. Area Population Change by County.

Counties	1880	1900	1920	1930	1940	1950	1960
Adair	11,667	16,192	14,259	13,891	13,196	12,292	10,893
Adams	11,888	13,601	10,521	10,437	10,156	8,753	7,468
Clarke	11,513	12,440	10,506	10,384	10,233	9,369	8,222
Decatur	15,336	18,115	16,566	14,903	14,012	12,601	10,539
Ringgold	12,085	15,325	12,919	11,966	11,137	9,528	7,910
Taylor	15,635	18,784	15,514	14,859	14,258	12,420	10,288
Union	14,980	19,928	17,268	17,435	16,280	15,651	13,712
Area	93,104	114,385	97,553	93,875	89,272	80,614	69,032
State total	1,624,615	2,231,853	2,404,021	2,470,939	2,538,268	2,621,073	2,757,537
Percent state total	5.7	5.1	4.1	3.8	3.5	3.1	2.5

Source: Population census.

people left this southern Iowa area between 1950 and 1960 — a 20 percent loss. This compares with a 13 percent loss due to out-migration in NIAD (North Iowa Area Development) and a 9 percent loss in the state of Iowa during the same period.

When an area experiences out-migration, the migrants usually are not distributed equally over the population age range. Usually a large number of the migrants are of farm origin, and a particularly large number of them are between the ages of 20 and 40.

In the seven-county southern Iowa area, there were 3,000 fewer people under 20 in 1960 than in 1950, a decrease of 11 percent. In the age group from 20 to 40, the decrease was even larger — a loss of 6,700 people, 34 percent of all those in the age group. The only age group having an increase was the group over 60. There were nearly 300 more people in this age group in 1960 than in 1950. In 1950, those over 60 represented 19 percent of the total population; in 1960, 22 percent. Iowa leads the nation in the percentage of the population over 65 years of age.³

INCOME

Income is a measure of economic progress. Income is usually viewed in two ways:

1. *Total or aggregate income.* The income from all

³ A complete report of population and population changes in southern Iowa may be found in the population report for the area by Ronald Powers, extension rural sociologist, Iowa State University. Area population projections in the economic base study and in the population report may vary slightly, because of different assumptions and techniques used in making the projections.

TABLE 10. Out-migration in Area by County.

County	Population 1950	Population 1960	Change 1950-60	Percent change 1950-60	Natural increase 1950-60	Potential population 1960	Net change migration	Percent net migration 1950-60
Adair	12,292	10,893	- 1,399	-11	1,037	13,329	- 2,436	-20
Adams	8,753	7,468	- 1,285	-15	802	9,555	- 2,087	-24
Clarke	9,369	8,222	- 1,147	-12	522	9,891	- 1,669	-18
Decatur	12,601	10,539	- 2,062	-16	623	13,224	- 2,685	-21
Ringgold	9,528	7,910	- 1,618	-17	477	10,005	- 2,095	-22
Taylor	12,420	10,288	- 2,132	-17	506	12,926	- 2,638	-21
Union	15,651	13,712	- 1,939	-12	916	16,567	- 2,855	-18
Area	80,614	69,032	- 11,582	-14	4,883	85,497	- 16,465	-20
State	2,621,073	2,757,537	+136,464	+ 5	365,071	2,986,144	-228,607	- 9

Source: Population census.

TABLE 9. Area Population Change by Size of Town.

Size of town 1960	Increased 1950-60	Decreased 1950-60
Under 500	2	32
500 - 999	0	7
1,000 - 1,499	1	2
1,500 - 2,499	1	4
2,500 - 4,999	0	1
Over 5,000	0	1
Area	4	47

Source: Population census.

sources for a given area is observed and changes in income in absolute or in percentage terms are noted and compared with other areas. If no major changes in the price level occur, increases in total income for an area can happen as a result of two kinds of change or some combination of the two. These changes are (1) more resources used in the area and (2) improved productivity of the existing resources.

2. *Per unit income.* It is possible for the total area income and the average income per worker, per family or per capita to change in the opposite direction or in varying degrees. The change in income per worker or per family is usually considered to be a good barometer of the economic situation.

Between 1950 and 1960, both total and per family income increased in the seven-county southern Iowa area, indicating that economic progress was made.

It is possible that more capital was used in the production of goods and services in 1960 than in 1950, but fewer workers shared the return from labor and management. Whether or not more total resources were used in 1960 than in 1950 is difficult to determine. It

TABLE 11. Area Total Income and Average Family Income by County.

County	1949 ¹	1959	Change	Percent change	Average per family 1959
Adair	\$11,120,040	\$12,948,500	+\$1,828,460	+16	\$3,313
Adams	7,206,605	9,095,500	+ 1,888,894	+26	3,426
Clarke	9,943,470	11,112,000	+ 1,168,530	+12	3,664
Decatur	9,522,720	10,448,000	+ 925,280	+10	2,973
Ringgold	8,375,220	7,704,500	- 670,720	- 8	2,573
Taylor	11,588,220	10,501,500	- 1,086,720	- 9	2,867
Union	14,620,680	17,885,000	+ 3,264,320	+22	3,861
Area Iowa	72,376,956	79,695,000	+ 7,318,044	+10	5,069

Source: Population census.
¹Adjusted to 1959 dollars.

does seem apparent that the return per worker was substantially improved, with a decrease of nearly 5,000 jobs and a 10 percent income increase on a constant-dollar basis.

There are several possible reasons for the total income increase in this area in spite of the decrease in employment:

1. There was a substantial increase in the number of employed persons in the professional services. The per worker incomes in the professions are usually higher than the per worker average income for the area.

2. The substantial out-migration might have tended to eliminate existing underemployment — particularly in farming.

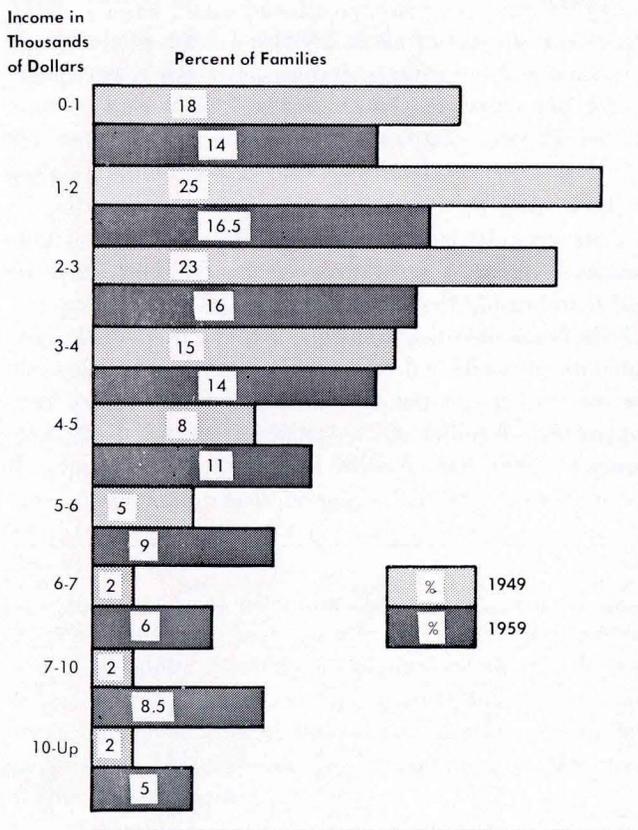
3. There is evidence that there has been an increase in output per worker. This is apparent in farming and is indicated in construction, manufacturing and some services (as illustrated by the supermarket).

4. The trend to more wives working and an increase in the number of workers with two jobs are also possible reasons for the increase in family income.

Table 11 shows that the seven-county total income in 1959 was approximately \$80 million. This represents an increase on a constant-dollar basis of 10 percent from 1949. Union County had the largest absolute increase — more than \$3 million. Adams County had the greatest percentage increase — 26 percent. Two counties, Ringgold and Taylor, experienced losses in income during this period. Average family income increased 24 percent in the area between 1949 and 1959.

In addition to an income increase, there has been an improvement in the distribution of incomes. Between 1949 and 1959, there was a big decrease in the number of families in the low-income brackets. Figure 6 shows that 82 percent of all families earned less than \$4,000 in 1949, but only 60 percent were in this category in 1959.

FIGURE 6. AREA FAMILY INCOME DISTRIBUTION



Source: Population census

GROSS AREA PRODUCT

Gross national product is a dollar value for all goods and services produced in the nation. A comparable "gross area product" for the seven-county southern Iowa area was computed and is shown in table 12 as \$140 million in 1960. The gross area product is further divided to show the relative importance in the various

TABLE 12. Estimation of Gross Area Product.

Production sectors	Employees 1960	Product per employee 1960	Gross product 1960
Livestock	5,836	\$4,334	25
Crops and other agriculture	4,226	6,591	28
Manufacturing	1,365	6,611	9
Transportation, communication and utilities	1,354	9,714	13
Other services	12,090	5,408	65
Area	24,871	140

producing sectors. The data indicate that the service industries are the largest contributors to this area's gross product. Gross area product is expected to be larger than the total area income, since depreciation and capital formation are included in the gross product figure.

RETAIL SALES

Table 13 shows a summary of retail sales changes between 1958 and 1962. The striking feature of the retail sales story in the southern Iowa counties is the lack of area change between 1958 and 1962. When retail sales for the area are adjusted to make allowances for changes in purchasing power, the 1962 figure is almost the same as it was in 1958. State retail sales increased by 4 percent, and retail sales for the nation rose by 14 percent. It seems apparent that the increasing area income is not reflected in a corresponding increase in local retail purchases. The fact that increasing local income does not bring increased local retail purchases could be explained by greater "leakages" from the area. Increased leakages could result from an increasing consumer tendency to purchase major retail items from cities outside of the area. Retail sales data on towns in the seven counties are in the Appendix.

TABLE 13. Area Retail Sales by County.

County	1958	1962 ¹	Percent change
	Thousand dollars		
Adair	9,585	9,234	- 4
Adams	6,224	6,467	+ 4
Clarke	7,890	7,969	+ 1
Decatur	7,894	7,163	- 9
Ringgold	6,174	5,640	- 9
Taylor	7,225	7,360	+ 2
Union	15,952	16,312	+ 2
Area	60,944	60,145	- 1
Iowa	3,233,111	3,347,205	+ 4
United States	200,400,000	228,100,000	+14

Sources: Iowa State Tax Commission Reports and *Survey of Current Business*, February 1964.

¹Adjusted for inflation to 1958 dollars.

WEALTH

Agricultural assets account for the greatest proportion of the wealth in the area (table 14). Union and Adair are the counties in the area with the largest grand total wealth.

FEDERAL AND STATE SPENDING

Federal and state economic activities have an important influence on an area's economic base. Some areas depend heavily on such things as defense contracts or military bases for much of their export activity. In southern Iowa, federal involvement in agricultural production is one of the more important sources of income entering the economy of the area. Road building provides another important source of state and federal funds. Purchases and construction by state and federal

TABLE 14. Area Agricultural and Urban Wealth by County.

County	Agriculture ¹	Urban ²	Miscellaneous ³	Total
				(million dollars)
Adair	75.3	22.2	24.4	121.9
Adams	51.9	7.3	15.7	74.9
Clarke	34.5	14.1	14.9	63.5
Decatur	38.0	14.4	16.8	69.2
Ringgold	49.2	8.4	14.3	71.9
Taylor	60.0	14.0	20.9	94.9
Union	48.3	40.0	33.8	122.1
Area	357.2	120.4	140.8	618.4

Source: "Private Wealth of Iowans by Counties," William G. Murray, Iowa Farm Science, March 1964.

¹Real estate, livestock, grain and machinery less real and non-real estate debt.

²Real estate and personal property.

³Bank deposits, bonds, monies and credits and life insurance cash values.

governments are important parts of the economic activity in any part of the nation. Although the amount of state and federal economic activity in the southern Iowa area is not as great as in some other areas of Iowa or some other areas of the United States, it is still an important part of the economic base.

All of the counties in this southern Iowa area received more from the state of Iowa treasury than they paid into the treasury in the form of taxes in the period shown in table 15. Union County received about the same amount as was paid to the state.

TABLE 15. State Contributions and Payments in Area by County, Fiscal 1961-62.

County	County contributions to state through taxes	Payments to county by state
	(thousand dollars)	
Adair	970	1,112
Adams	651	1,827
Clarke	718	918
Decatur	759	1,241
Ringgold	607	1,028
Taylor	797	2,120
Union	1,332	1,373
Area	5,834	9,619

Source: Iowa State Tax Commission.

Factors Relating to the Economic Base of the Southern Iowa Area

CHANGING EMPLOYMENT PATTERNS

Table 16 shows that 1,500 workers in the area do not live in the county in which they work. The growing trend toward driving 50 to 60 miles to work tends to prove the economic interrelationships of all communities in an area. Commuting to work is a growing activity in this southern Iowa area and has a significant impact on the total economy. Table 1 shows the number of commuters that leave the seven-county area and work outside the area. Table 16 is somewhat different. It shows the number working outside the individual county of residence. Consequently, the total number in table 16 is greater than the number of out-commuters in table 1.

TABLE 16. Area Workers Working Outside of County of Residence.

County	1960	Total employed	Percent of total
Adair	288	4,157	7
Adams	154	2,909	5
Clarke	207	2,977	7
Decatur	227	3,653	6
Ringgold	91	2,615	4
Taylor	306	3,683	8
Union	227	4,877	5
Area	1,500	24,871	6

Source: Population census.

This trend to work outside the county of residence is expected to increase. It is associated with the national trend of increasing mobility and flexibility of the nation's working force.

Another employment change in the area involves farmers working off the farm. The number of farmers working 100 days or more off the farm increased between 1950 and 1960. (See table 17.) The area increase would have been greater, except for the unusual change in Decatur County. Rather than having an increase, Decatur had a 17 percent decrease in the number of farmers working off the farm. This difference is undoubtedly associated with the high rate of farm consolidation that took place within the county during this same period — there was a 31 percent decrease in the number of commercial farms. A similar explanation could account for the relatively slight change in Taylor and Ringgold counties. Union, Adair and Adams had increases of more than 24 percent in the number of farmers working 100 days or more off the farm.

It appears that rapid farm enlargement, especially through the consolidation of smaller farms, is associated with a smaller increase in the number of farmers taking off-farm work. This is because farmers operating larger units are more fully employed than those farming smaller acreages.

The area has an increasing number of women in the labor force. Table 18 shows that nearly 20 percent more women were employed in 1960 than in 1950, while male employment in the area decreased. The increasing number of women in the labor force is partly responsible for increasing average family incomes, since many of the women add a second income for the family when they take a job. Ringgold was the only county in the

TABLE 17. Area Farmers Working 100 Days or More Off Farm.

County	1950	1960	Change	Percent change
Adair	131	158	+27	+21
Adams	130	150	+20	+15
Clarke	152	160	+ 8	+ 5
Decatur	238	197	-41	-17
Ringgold	176	179	+ 3	+ 2
Taylor	204	202	- 2	- 1
Union	152	175	+23	+15
Area	1,183	1,221	+38	+ 3

Source: Agriculture census.

TABLE 18. Area Women in the Labor Force.

County	1950	1960	Change	Percent change
Adair	877	1,074	+ 197	+23
Adams	526	753	+ 227	+43
Clarke	783	844	+ 61	+ 8
Decatur	815	1,174	+ 359	+44
Ringgold	644	558	- 86	-13
Taylor	763	860	+ 97	+13
Union	1,232	1,464	+ 232	+19
Area	5,640	6,727	+1,087	+19

Source: Population census.

area which had fewer women working in 1960 than in 1950.

The increase in the number of women in the labor force is a trend which is not peculiar to this area. It is seen throughout the nation and is expected to continue.

CHANGES IN SCHOOLS AND CHURCHES

The changing economic base in southern Iowa indicates that jobs and workers are moving from predominately rural areas to the cities. This fact is important to institutions, especially schools and churches, and must be considered in planning future programs.

This study does not attempt an analysis of southern Iowa institutions. However, a brief look at some of the school statistics indicates that the changing economic base is having an effect on school structure. In the school year 1959-60 there were 22 high school districts in the seven counties. In 1963-64 the number was reduced to 19, although high school enrollments had increased by 200 students. In spite of a stable total enrollment and a decrease in the number of high schools, 11 schools had less total enrollment in 1963-64 than in 1959-60. Six high schools had less enrollment in 1963-64 than 4 years earlier.

The total elementary school enrollment in the seven southern Iowa counties (table 19) was less in 1963-64 than it was in 1959-60. Of the 19 remaining districts, 13 lost elementary school enrollment in the period. The

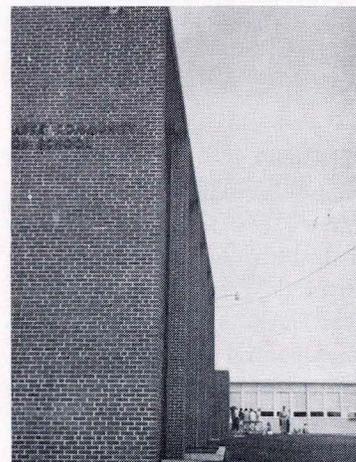


TABLE 19. Area High School District Enrollment Trends.

District	1959-60			1963-64		
	Elementary	High school	Total	Elementary	High school	Total
Creston	1,325	516	1,841	1,423	662	2,085
Clarke	1,100	391	1,491	1,008	454	1,462
Mount Ayr	873	338	1,211	854	429	1,283
Bedford	841	323	1,164	758	347	1,105
Central Decatur	767	322	1,089	712	303	1,015
East Union	736	287	1,023	607	316	923
Corning	528	383	911	857	334	1,191
Greenfield	610	224	834	609	237	846
Lenox	490	186	676	460	175	635
Bridgewater-Fontanelle	422	168	590	395	177	572
Mormon Trail	404	175	579	445	178	623
Lamoni	392	136	528	414	146	560
New Market	287	132	419	258	116	374
Grand Valley	264	119	383	254	116	370
Murray	265	112	377	250	109	359
Orient-Macksburg	229	133	362	359	159	518
Clearfield	238	89	327	221	100	321
Diagonal	225	86	311	181	89	270
Prescott	171	84	255	175	91	266
Cromwell	116	62	178	-----	-----	-----
Van Wert	79	46	125	-----	-----	-----
Richland	87	34	121	-----	-----	-----
Area	10,449	4,346	14,795	10,240	4,538	14,778

Source: Iowa State Department of Public Instruction.

TABLE 20. Selected Area High School District Data, 1962.

County school district	Valuation per child	Size ¹ rank	Teaching positions	Cost per student
ADAIR				
Bridgewater-Fontanelle	\$10,682	281	14	\$436
Greenfield	10,686	177	16	424
Orient-Macksburg	16,189	327	14	554
ADAMS				
Corning	10,398	103	23	396
Prescott	15,024	451	8	524
CLARKE				
Clarke	9,000	81	23	351
Murray	9,175	398	11	379
DECATUR				
Central Decatur	8,274	125	21	390
Lamoni	7,467	313	14	367
Mormon Trail	11,002	240	13	440
RINGGOLD				
Diagonal	7,926	443	9	441
Grand Valley	10,152	427	12	470
Mount Ayr	7,868	97	25	400
UNION				
Creston	6,756	44	41	361
East Union	8,720	138	25	438
TAYLOR				
Bedford	10,779	111	22	431
Clearfield	9,368	428	9	382
Lenox	11,178	241	12	368
New Market	10,842	394	10	381

Source: "Information About Local School Districts," MA-1351-3-5, Iowa State University Cooperative Extension Service, January 1964.

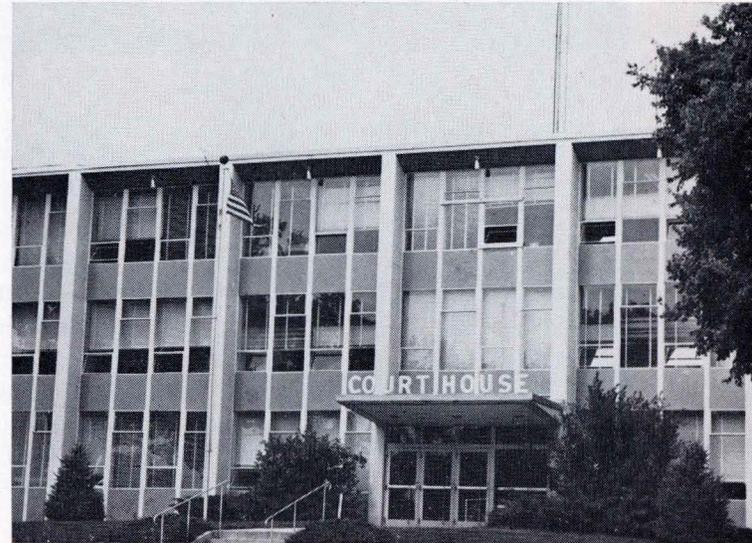
¹This number shows the state rank, by total enrollment, of each high school district. There were 469 districts.

changes in school enrollment and the adjustment to these changes are associated with the changes in the economic base.

Comparative data for all the school districts in this seven-county area are given in table 20. Analyses of all

Iowa schools indicate that the larger schools have lower per pupil costs and offer a greater variety of subjects. The students in the larger schools score higher on performance tests. There are exceptions in all size categories, however.

The economic base data indicate that schools and churches, especially in rural areas, could lose students and members if the decrease in farm jobs and increasing age of farm operators continues. Such a trend implies higher than average per pupil costs if a specified quality level is to be maintained.



LOCAL GOVERNMENT

The same factor is applied to county government costs. A recent study (table 21) divided Iowa counties into four groups: (1) metropolitan, (2) urban center, (3) near stable population and (4) declining population. Most of the seven counties in the southern Iowa area were in the declining population group. It appears that the lower population counties had much higher per capita costs of county government. The economic base data indicate that southern Iowa counties face a declining population trend. Therefore, the situation implies that (1) county government costs could increase on a per capita basis even though services offered remain the same and (2) rural counties are likely to have higher per capita costs than many of the more urban counties.

TABLE 21. Average per Person Costs of County Government.

County group	1920	1940	1960
Metropolitan	\$ 8.60	\$14.53	\$30.52
Urban center	12.07	14.66	37.96
Stable population	14.76	19.40	66.93
Declining population	15.03	21.51	91.05

Source: "Iowa County Governments Face Different Problems," Robert Wessel, Iowa Farm Science, February 1963.



Prospects for the Future in Southern Iowa

One of the purposes of conducting an economic base study is to make projections into the future. Projections must always be used within recognized limitations. All projections are educated guesses and will vary in accuracy in accordance with (1) the assumptions underlying the projections and (2) the thoroughness with which the projections are developed. The projections for the southern Iowa seven-county area are shown in table 2 and are based on numerous research studies conducted by Iowa State University.

The projected employment for this seven-county area indicates continued drastic change in the future. As in the past, the most significant change is expected to be in farm employment. A decrease of 5,000 farm jobs is expected between 1960 and 1980. There would also be a decrease in construction employment, transportation, communication and public utilities employment, wholesale and retail employment, and a continued decline in some types of services. It is expected that there will be an increase in manufacturing employment. The extent of the increase is difficult to determine. Consequently, the projections in table 2 are made assuming two different situations in regard to increases in manufacturing employment.

A predominant change between 1960 and 1980 will be the continued decline in farm jobs. There remains considerable potential for "per man productivity" increase in southern Iowa agriculture. There is general agreement that one farm worker could, on the average, handle a larger farm than is now represented by the average farm in southern Iowa. Secondly, there was a substantial amount of underemployment in southern Iowa in 1960. Seventy percent of the farms had less than \$10,000 gross sales at that time. It is in this class of farms (\$10,000 gross sales and below) that all of the farm number reduction took place between 1950

and 1960. As small farms continue to consolidate with one another or with a larger farm, farm employment will decrease.

The idea that approximately 5,000 farm jobs will be lost between 1960 and 1980 is an alarming prospect to many residents of southern Iowa. However, it should be recognized that the decrease in farm jobs doesn't necessarily mean that farmers are going to be forced off their farms because of financial failure.

Undoubtedly, some young and middle-age farmers will leave because their farms will be combined with another farm or farms, but the reduction in farm employment could take place entirely through retirement, if workers retire at the age of 65. Over 5,900 farm workers in southern Iowa will reach age 65 between 1960 and 1980. Also, much evidence shows that older farmers live on smaller farms. It is the smaller farms that are being consolidated upon retirement of older individuals. In 1959, the average age of the farm operator on the 50- to 70-acre farm was over 56. On the 80- to 100-acre farm, the average age was 53. On the 160-acre farm it was 46, and on the 200- to 260-acre farm, it was 44. Other evidence indicates that the youngest farmer usually has the largest sales volume.

Because the size of farm operation is increasing, the average farm income in southern Iowa is expected to increase.

PROSPECTS FOR NEW INDUSTRY

The changes taking place in farming overshadow the changes taking place in industry, because 40 percent of the labor force in this area in 1960 was in farming. Iowa had 20.6 percent of the labor force in farming in 1960, while the United States had only 6.6 percent.

Nevertheless, the changes expected to take place

in manufacturing will be important to southern Iowa. Iowa as a state can be proud of its record in securing new industry. According to the 1964 Economic Report to the President, the employment in manufacturing, mining and construction in the United States actually decreased by 2 percent from 1953 to 1963, compared with Iowa's 16 percent increase. Although southern Iowa has a relatively small industrial base, some of this new industry did locate in the area, and it is expected that more new industries will find suitable locations in southern Iowa in the future.

The projected increase of over 2,600 manufacturing jobs for the seven-county southern Iowa area between 1960 and 1980 (Case II, table 2) seems optimistic when based on historical performance. This increase is not unreasonable, however, if an effective coordinated plan for securing new industry is developed within the area with the cooperation of all communities. However, even such an optimistic increase would not completely offset the substantial employment decrease expected in farming.

Residents in the southern Iowa counties may wish to cooperate in a program for securing new industry and other export employment in an attempt to offset the expected decline in farm employment. Although it is unlikely that every community in the seven-county area will secure a new industry before 1980, it should not be considered an impossibility that the area as a whole could secure enough industry to maintain population. Two or three industries with payrolls similar to some of the larger industries now existing in southern Iowa could make large strides toward offsetting the expected population decline.

RISING LEVELS OF LIVING

Incomes increased substantially between 1950 and 1960. This is expected to continue between 1960 and 1980. It is expected that per worker productivity will increase even if there are fewer wage earners in 1980 than in 1960. Undoubtedly, the area will continue its income gain for both farm and nonfarm jobs.

Though incomes are expected to rise, the increased income will not be spent in the same manner as it has been in the past. With higher income, there is a tendency to purchase more services. The high "income elasticity" of education, recreation and professional and personal services indicates that a large portion of the income increases will be spent for these items. There will also be differences in retail sales. Some items (men's suits, for example) will be in greater demand because of income increases. However some items (such as work shoes) have a relatively low income elasticity, and demand will tend to decrease as population decreases, particularly in the farm labor force.



THE FUTURE FOR THE SMALL TOWN

There is a growing concern in rural areas of the United States for the future of the small town. It is true that most small towns of 1,500 population and below lost population between 1950 and 1960. Many of the small towns will also lose people between 1960 and 1980. This trend, however, does not mean that small towns are disappearing. What is happening is that the small town's function is changing. Many of the services — drugstores, hardware stores, clothing stores — which have been located in small towns in the past, are tending to move to county seats or larger towns. On the other hand, retail sales of lumber, feeds, fertilizer, seed, gasoline and other agricultural production inputs have increased more rapidly in small towns than in larger towns.

It is expected that small towns will continue to serve as vital "convenience centers" for the important agricultural industry, even though there may be a population decrease in some of the smaller towns.

INSTITUTIONAL CHANGES

Some of the schools and churches in the larger communities will experience the pressures of increasing

population. In specific localities, residential developments, mergers and consolidations will cause population pressures on the institutions. However, in many of the predominantly rural areas, schools and churches will be faced with the alternatives of (1) living with rising costs and declining clientele or (2) considering possibilities of merging activities and facilities with neighboring communities. Between 1960 and 1980, institutional mergers will be a growing concern and should be the subject of careful planning throughout the area.

Local government will receive increasing attention in predominantly rural counties. The future of county government will be discussed more frequently in the 20-year period between 1960 and 1980. The basic question emerging will be: "Can a small county which is likely to lose population in the future afford to provide all of the county government services that can be provided in a larger county without experiencing unreasonable per capita government costs?" No satisfactory answer to this question is apparent at present.

PROBLEMS OR PROGRESS?

Out-migration will continue in southern Iowa. A total of 16,465 people left the seven-county area between 1950 and 1960. It is expected that even more will leave the area between 1960 and 1980. Many of the out-migrants will be young people between the ages of 20 and 40.

There will be many good farming opportunities in southern Iowa in this period, but not enough to supply jobs for all farm youth. There will also be many good nonfarm jobs, but not enough to supply the demands of all the farm and nonfarm youth. Adequate training and education for the young people in southern Iowa will provide them with a solid foundation for competing successfully and making a maximum contribution to society, regardless of where they may locate. It has often been said that it is better to pay for training and education than to pay for unemployment.

The attitude of the people in the area will be one of the crucial problems in southern Iowa in the 20-year pe-

riod, 1960-80. Perhaps the area will be able to provide enough "good" jobs to enjoy a population increase. However, it should be recognized that an area can still be an excellent place to live — with high incomes, excellent main streets, good schools, good churches, good roads, good recreational and cultural facilities, and good education — even without an increasing population.

Income will stay high if the workers of southern Iowa continue to improve their productivity and remain competitive with workers in other areas in the production of goods and services.

It will be necessary to make some adjustments in school, church, retail and other services if high-quality services are to be offered to southern Iowans at the lowest possible cost. In order to do this, the fullest cooperation throughout the area, without regard to county lines or location of services in particular towns, will be essential. An attitude of success and progress can be achieved if citizens face the problems squarely and deal with them cooperatively.

Finally, it should be recognized that the problems in southern Iowa are not unique to the area. Other areas of the United States have faced the problems of economic change and adjustment in even greater degree. Southern Iowa is experiencing great change now, primarily because of the advances that have taken place in farming and the high proportion of farmers to total workers.

Changes and adjustments are part of economic progress. The progressive area is one that recognizes changes, faces up to them, and makes the necessary adjustments. The more effectively this is done, the more successful the community. Private enterprise has proved to be very effective in a democracy. Private enterprise, however, can work only when good information is available to the decision-makers. Southern Iowa residents can build successful communities, enjoy greater satisfaction and contribute to national growth, by becoming fully informed and making the best decisions available to them.

APPENDIX

BENEFITS OF THE BASE STUDY

(Adapted from *The Community Economic Base Study*, Charles M. Tiebout, Supplementary Paper No. 16, published by the Committee for Economic Development, December 1962.)

The general information provided by an economic base study is valuable to farmers, businessmen, civic leaders, government officials, planners, educators and development groups. The following are examples of specific benefits: (1) Economic base studies provide an understanding of current sources of income and employment. *Example:* In some areas, seemingly small industries might be revealed as a major source of basic employment. (2) These studies can pinpoint weaknesses in the area's economy. *Example:* Most of the export employment can be tied to a single industry. (3) As an aid to economic education, economic base studies are extremely worthwhile. *Example:* Base studies made available to high schools are useful in teaching economics. Students can understand general economic principles more easily if they are related to a familiar situation in their area. (4) Information resulting from economic base studies assists in making governmental decisions. *Example:* Since the "business climate" depends largely on the attractiveness of the area to export concerns, government officials need to know whether present local taxes are relatively heavier on export industry than on locally oriented industries.

Periodic base studies can enable an area to evaluate its progress toward certain broad public goals. These would include (1) increasing total income and employment, (2) increasing per capita income, (3) obtaining reasonable cyclical stability and (4) maintaining healthy prospects for future growth.

Per capita income provides a measure of the average citizen's well-being. Base studies carried on over periods of time will measure changes in per capita income and help to unearth the reasons for these changes. Cyclical stability implies that employment and income in an area are not subject to extreme swings over a business cycle. A base study points to the industrial mix of export industries. If this mix of industries is highly sensitive to cyclical fluctuations, then encouragement of more stable industries is suggested as an appropriate policy objective.

A base study is valuable to business firms located outside the area and those located within the area. Outside firms looking for information on local market potential will find useful information in the area base study. The economic base study might indicate that a continuous flow of high-quality labor will be available, thereby justifying the establishment of a branch plant. The economic base study will reveal a number of eco-

nomie and social factors to a firm considering the area as a location.

For firms already established in an area, a base study helps trace the local sources of demand for their products and services. It indicates how the fortunes of these firms relate to other parts of a local economy. Even local firms selling largely in regional and national markets will find the base study valuable, because it describes the factors in the local economy which influence their costs.

DEFINITIONS FOR INDUSTRIAL CLASSIFICATIONS USED IN TABLES 1, 2 AND 3

Agriculture — Commercial and noncommercial farms, farm services dealing directly with farming, i.e., custom work, corn shelling, combining.

Construction and Mining — Building contractors, road and railroad construction, sewer and water main and reservoir work, plumbing and heating, electrical work, masonry, carpentering; mining for stone, sand and gravel, clay, gypsum, peat and coal.

Manufacturing — Foods and beverages for human consumption, textile mill products, apparel and other finished products made from fabrics, lumber and wood products, furniture, fixtures, paper and allied products, printing and publishing, chemicals, petroleum products, products made from metals.

Transportation, Communication and Public Utilities — Railroads, trucking service and warehousing, taxicabs and bus service, pipelines, telephone, telegraph, radio and television, electric, gas and water supply.

Wholesale and Retail — All wholesale and all retail activity, including eating and drinking places.

Finance, Insurance and Real Estate — Includes banks, credit agencies and investment companies, insurance agents, agencies and companies, real estate and related agencies.

Services — Hotels and other lodging places; establishments providing personal, business, repair and amusement services; medical, legal, engineering and other professional services; educational institutions; non-profit membership organizations. Most government workers are in this classification.

Out-commuters — Persons living within the area, but traveling to job locations outside the area as a regular and continual practice.

THE EMPLOYMENT INTERACTIONS TABLE

A Basic Tool for Area Analysis

Tables 1 through 4 of the text contain employment projections and employment ratios. The basic tool used in developing these projections and ratios is an employment interactions table for the area. The employment of each sector in the area is divided into subgroups according to the way in which sales of each sector are divided among other sectors. An understanding of the

Table A. Purchasing Sectors

Producing sector	Agriculture	Construction and mining	Manufacturing	Transportation, communications, public utilities	Wholesale and retail	Finance, insurance and real estate	Services	Out-commuters	Export	Total
Transportation, communications, public utilities	315	39	92	23	287	11	113	12	262	1,154

construction of an interactions table is perhaps best gained by starting with the analysis of one sector.

The combined sector of transportation, communications and public utilities had a total of 1,154 employees in 1960. Surveys and a study of census information showed that the following numbers of these employees owed their jobs to the demands from the various sectors:

- 315 owed their jobs to demand from area agriculture.
- 39 owed their jobs to demand from area construction and mining
- 92 owed their jobs to demand from area manufacturing
- 23 owed their jobs to demand from area transportation, communications and public utilities
- 287 owed their jobs to demand from area wholesale and retail
- 11 owed their jobs to demand from area finance, insurance and real estate
- 113 owed their jobs to demand from area services
- 12 owed their jobs to demand from area out-commuters
- 262 owed their jobs to demand from outside the area (export)

1,154 total

The arrangement of employment groups in this way gives us one row of an interactions table. The headings for the columns of table A can be shown as they apply to this one row.

This abbreviated table tells us that the sector listed

in a column heading (manufacturing, for example) buys the output of the number of employees listed (92) who work in the producing sector of transportation, communications and public utilities. We can also turn this statement around and say that the transportation, communications and public utilities sector sells the output of 92 employees to the manufacturing sector.

A row of numbers can be made for each sector. Each number in the row tells how many employees owe their jobs to demand from the sector which is named in the column heading above it. Table B is the complete table.

After building up this table, we find that each column of numbers also has an interesting story to tell. Take the column of manufacturing, for example. We can say that the manufacturing sector of the area buys the output of:

- 7 employees in agriculture
- 34 employees in construction and mining
- 6 employees in manufacturing
- 92 employees in transportation, communications and public utilities
- 115 employees in wholesale and retail
- 20 employees in finance, insurance and real estate
- 171 employees in services
- 0 of the out-commuters

445 total

Table B. Purchasing Sectors

Producing sectors	Agriculture	Construction and mining	Manufacturing	Transportation, communications, public utilities	Wholesale and retail	Finance, insurance, real estate	Services	Out-commuters	Export	Total
Agriculture	81	9	7	9	339	4	44	8	9,517	10,018
Construction and mining	493	31	34	49	103	23	234	13	173	1,153
Manufacturing	54	4	6	5	116	2	22	1	671	881
Transportation, communications, public utilities	315	39	92	23	287	11	113	12	262	1,154
Wholesale and retail	2,001	163	115	144	699	66	685	140	597	4,610
Finance insurance real estate	220	25	20	25	101	12	120	9	0	532
Services	1,945	224	171	224	895	103	1,064	179	674	5,479
Out-commuters	0	0	0	0	0	0	0	0	1,044	1,044
Total	5,109	495	445	479	2,540	221	2,282	362	12,938	24,871

This gives us a basis for predicting what will happen if manufacturing activity is increased in the area. Let us say that it is doubled. In general, we could expect that the demands of manufacturing from each of the sectors would also be doubled, so that the column would total to 890 (2 x 445) employees.

However, this is not the end of the story. When the employees of a sector increase because of the in-

crease in manufacturing demand, then that sector is also larger and makes extra demands on all other sectors. For example, the wholesale and retail increase of 115 employees is 2.5 percent of its original employment of 4,610. Therefore, each number in the wholesale and retail column would go up by 2.5 percent. Thus, a change in total employment of any sector eventually causes effects in all sectors.

TABLE I. Employment Data for Seven Southern Iowa Counties.

Type employment	ADAIR Employment			ADAMS Employment			CLARKE Employment		
	1950	1960	Change	1950	1960	Change	1950	1960	Change
Agriculture	2,734	1,961	- 773	1,838	1,371	- 467	1,876	1,027	- 849
Construction and mining	266	276	+ 10	175	128	- 47	191	192	+ 1
Manufacturing	102	141	+ 39	84	158	+ 74	118	257	+ 139
Transportation, communications and public utilities	207	197	- 10	144	70	- 74	225	132	- 93
Wholesale and retail	601	802	+ 201	388	474	+ 86	506	587	+ 81
Finance, insurance and real estate	63	66	+ 3	38	41	+ 3	57	84	+ 27
Services	655	659	+ 4	476	612	+ 136	551	638	+ 87
Industry not reported	98	55	- 43	49	55	+ 6	25	60	+ 35
Total employment	4,726	4,157	- 569	3,192	2,909	- 283	3,549	2,977	- 572
Total population	12,292	10,893	- 1,399	8,753	7,468	- 1,285	9,369	8,222	- 1,147
				RINGGOLD					
Agriculture	2,114	1,201	- 913	2,133	1,387	- 746			
Construction and mining	288	181	- 107	146	94	- 52			
Manufacturing	135	169	+ 34	40	81	+ 41			
Transportation, communications and public utilities	187	173	- 14	137	126	- 11			
Wholesale and retail	581	607	+ 26	415	388	- 27			
Finance, insurance and real estate	51	74	+ 23	49	30	- 19			
Services	897	1,140	+ 243	533	476	- 57			
Industry not reported	86	108	+ 22	142	33	- 109			
Total employment	4,339	3,653	- 686	3,595	2,615	- 980			
Total population	12,601	10,539	- 2,062	9,528	7,910	- 1,618			
				TAYLOR					
Agriculture	2,443	1,688	- 755	1,787	1,240	- 547			
Construction and mining	203	154	- 49	350	303	- 47			
Manufacturing	175	117	- 58	341	334	- 7			
Transportation, communications and public utilities	180	130	- 50	697	501	- 196			
Wholesale and retail	594	659	+ 65	1,251	1,106	- 145			
Finance, insurance and real estate	59	84	+ 25	143	143	0			
Services	763	807	+ 44	1,055	1,143	+ 88			
Industry not reported	111	44	- 67	113	107	- 6			
Total employment	4,528	3,683	- 845	5,737	4,877	- 860			
Total population	12,420	10,288	- 2,132	15,651	13,712	- 1,939			

TABLE II. Family Income Distribution for Seven Southern Iowa Counties— Percent of Families.

Income range	ADAIR		ADAMS		CLARKE		DECATUR		RINGGOLD		TAYLOR		UNION	
	1949*	1959	1949	1959	1949	1959	1949	1959	1949	1959	1949	1959	1949	1959
Under \$1,000	14	13	19	10	15	11	24	16	23	20	18	17	16.5	10
\$1,000-\$1,999	24.5	15	21	16.5	25	14	29	18	28	20	28	17.5	20	15
2,000- 2,999	24	17	23	17	28	15	21	16	20	17	23	18	21	14
3,000- 3,999	17.5	15	19	15	16	15	12	15	12	12	14	16	17	13
4,000- 4,999	9	9	8.5	13	7	11	7	9	6	11	7	9.5	10.5	12
5,000- 5,999	5	10	3.5	7	3	11	3.5	8	5	7	4	8	7	12
6,000- 6,999	2	7	3	6	2	6	1.5	6	2	5	2	6	4	6
7,000- 9,999	2	9	2	10	1	10	1	7	2.5	4	2	5	3	12
10,000 and over	2	5	1	5.5	3	7	1	5	1.5	4	2	3	1	6
Total families	3,040	3,055	2,105	2,119	2,695	2,353	3,270	2,772	2,595	2,259	3,475	2,937	3,905	3,895

*"Industry not reported" excluded in 1949 totals.

TABLE III. Retail Sales by Locality in Seven Southern Iowa Counties.

County Locality	1958	1962*
	(thousand dollars)	
ADAIR		
Greenfield	5,676	5,601
Rural	3,888	3,598
Nonpermit	21	35
Total	9,585	9,234
ADAMS		
Corning	5,196	5,185
Rural	1,004	1,263
Nonpermit	24	19
Total	6,224	6,467
CLARKE		
Osceola	6,540	6,588
Rural	1,344	1,360
Nonpermit	6	21
Total	7,890	7,969
DECATUR		
Lamoni	2,112	2,036
Leon	4,243	3,855
Rural	1,524	1,213
Nonpermit	15	59
Total	7,894	7,163
RINGGOLD		
Mount Ayr	4,769	4,334
Rural	1,394	1,295
Nonpermit	11	11
Total	6,174	5,640
TAYLOR		
Bedford	2,998	3,208
Lenox	2,087	2,174
Rural	2,118	1,969
Nonpermit	22	9
Total	7,225	7,360
UNION		
Creston	13,482	14,034
Rural	2,451	2,257
Nonpermit	19	21
Total	15,952	16,312

Source: Iowa State Tax Commission.

*Adjusted for inflation to 1958 dollars.

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