The impact of a large manufacturing plant on a small village in "middle America" was explored in this paper. Research was conducted in Illinois using Putnam County as an "experimental" region and Iroquois County as a "control." In the spring of 1966, the Jones and Laughlin Steel Corporation began construction of a major production complex at the village of Hennepin in Putnam County. Operation at the "Hennepin Works" began in December 1967. In June 1966, 1,128 household heads in Putnam and 411 heads in Iroquois County were interviewed. In the summer of 1971, 1,029 heads in Putnam County and 377 in Iroquois County were interviewed. Individuals' total yearly income measured economic status. The income of the samples from each region were dichotomized on the basis of age and sex. Findings provided strong empirical support for the hypothesis that the elderly residents and female heads of households receive little direct economic benefit from new industry. (NQ)
LARGE INDUSTRIES IN SMALL TOWNS: WHO BENEFITS?

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Working Paper RID 73.9

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The extent to which the government should intervene in industrial location and related business decisions is one of the critical questions facing the United States. Advocates of a laissez faire policy have argued that in the long run a competitive price system will produce an optimal spatial pattern of industrial activity at both the national and regional levels. Experience, however, has demonstrated that several major assumptions of the free market model are not completely substantiated in the real world. Consequently, uneven industrial development has generated severe social, economic and environmental problems throughout the country and has led to increasing intervention by the government.

One facet of this intervention which is most apparent is the massive effort to promote industrial activity in areas of lagging economic growth. For example, the Rural Development Act of 1972 authorizes 500 million dollars annually to stimulate industrial development in small towns and villages (also see the Appalachian Development Act of 1965). The reasoning behind these efforts is that the decentralization of industry will not only benefit economically depressed areas, but at the same time will help relieve the environmental and demographic problems of areas of "over-industrialization".

These governmental programs have received strong support from both the business and local community sectors of the population. Indeed, as Stuart has pointed out, one of the major trends in industrial location in
the United States is the construction of large manufacturing facilities in non-metropolitan regions. These new installations range across the industrial spectrum - from a steel plant in rural Illinois to a brick factory in the coastal plains of South Carolina to a tissue paper mill in central Mississippi.

Small towns and villages are attractive to industry for a number of reasons including decreased taxes and lower land and water costs. Similarly, local communities, anxious to attain a stable economic base and to stifle the outmigration of young adults are in ever increasing competition to attract industry. For example, the *Yearbook of Agriculture, 1971* included a chapter entitled "How a Town Can Attract Industry". And in a recent survey of its members by the American Bankers Association the respondents viewed the necessity of attracting industry as the major economic priority of small towns in the United States.

This broad based support for the industrial development of small communities is consistent with the American cultural perspective that industrialization is a panacea for social and economic ills. Beyond the general assumption that both community and industry will benefit, however, little research has been undertaken to determine the specific effects of the construction of large industrial facilities in small towns. Knowledge is especially sparse in regard to the nature of changes in the relative economic status of the various segments of the population. More specifically, which groups benefit and which groups are adversely affected by the industrial development of small communities?

Taylor and Jones have suggested that while the absolute income of the population at large may increase when a large industry locates in
a small town some segments of the community may be placed in relatively poorer positions than before. For example, the elderly residents of the area, unable to compete in the labor market, may be adversely affected. This possibility is especially important because of the large numbers of retired individuals who live in small towns. Social demographers have long been aware of the surplus of elderly people in these areas. As early as 1942, Smith labeled the small town as "America's old folks' home."7

A second segment of the population of small towns which may be adversely affected by new industry consists of the female heads of households. Communities are most eager to attract large manufacturing plants. Since these plants have predominantly male payrolls, females in the area may receive little direct economic benefit. Many of the 5.5 million American families which are headed by women are in small towns and villages which are currently undergoing or planning to undergo industrial development. Thus, like the elderly, female comprise a substantial proportion of the population of small communities.

The present study explores the impact of a large manufacturing plant upon a small village in "middle America". The analysis yields evidence of the effect of industrial development upon various segments of the population.

RESEARCH PROCEDURES

Background: In April, 1965, Jones and Laughlin Steel Corporation (J&L) announced plans for the development of a major production complex at the village of Hennepin (1960 population 391) in Putnam County, Illinois. Putnam County, which had a population of 4,750 in 1960, is a
primarily agricultural region in north central Illinois. Construction began in the spring of 1966 and operation at the "Hennepin Works" began in December, 1967. This facility is a heavily capitalized, ultra-modern cold rolling mill with a payroll of approximately 1,050.

Data: Two study areas were identified. First, as an "experimental" region we utilized all of Putnam County and bordering sections of the four contiguous counties. Segments of surrounding counties were included on the basis of previous findings that a considerable amount of "leakage" occurs when a large industry locates in a small community.

Second, we selected a comparable region across the state - Iroquois County - as a "control" region. Details on the selection of the control region as well as extensive comparisons of the regions on important variables were reported by Summers and his associates. Let it suffice to state that the research was planned to approximate a "natural experiment" and thereby allow us to take advantage of the many virtues associated with classical experimental design.

In June, 1966, when construction of Hennepin Works was still in the earth moving stage, we interviewed 1,128 heads of households in the experimental region and 411 heads in Iroquois County. The samples were selected on a probability basis by means of a multi-stage cluster format. Five years later, in the summer of 1971, after Hennepin Works had been in full operation for over three years, we selected and interviewed similar samples of household heads in both study areas. The number of respondents in 1971 was 1,029 in the experimental region and 377 in the control region.
We employed total income of head in the year preceding each survey (i.e. 1965 and 1970) as the measure of economic status. Change in this variable is generally seen as one of the primary consequences of industrial development.

FINDINGS

Before turning to the income characteristics of the different age and sex groups, it is useful to examine the gross changes in the median income of the regions over the study period (see Exhibit 1). These data strongly support the assumption that bringing industry to small towns is economically beneficial to the residents of the area. In 1965, the median income of respondents in the experimental region was over $200 less than that of respondents in the control area. By 1970, however, residents of the area in which the plant was located were about $400 ahead.

(Exhibit 1 about here)

Age: The samples from each region were dichotomized on the basis of whether or not the respondent was age 65 or older at the time of the survey. Exhibit 2 presents the median income of these groups. As these data indicate, the under 65 residents of the experimental region disproportionately benefitted over the study period. The income of this group increased by 38% over the five year period compared to an increase of only 17% for the over 65 group in the same region. Further, the data demonstrate that the aged group in the control area gained $602 more than their counterparts in the experimental region. Thus, while the younger residents of the test area were outpacing a similar
group in Iroquois County, the aged residents of the experimental region were falling behind all groups.

(Exhibit 2 about here)

These findings provide strong empirical support for the hypothesis that the elderly residents of small communities receive little direct economic benefit from the construction of new industry. Further, the results buttress the argument that the elderly actually lose economic status because of sharp increases in the income of the younger residents of the area. More specifically, in the experimental region, the median income of the aged rose only $420 compared to an increase of $2,436 for the younger household heads in the area. And by 1970 the elderly residents of the control county had moved ahead of their counterparts across the state. Thus, the aged in the experimental area lost ground both intra-regionally (compared to younger residents of the area) and inter-regionally (compared to the aged in Iroquois County).

Sex: Exhibit 3 presents the median head income by sex, region and year. As would be expected from previous findings, in all cases the income of females is markedly inferior to that of males. In no instance do women have even half the income of men.

(Exhibit 3 about here)

These data also support the assumption that industrial development (at least when it has a male specific labor demand) may be of little economic benefit to female heads of households in the area. For example, in 1965 females in the experimental region earned $3,298 less than their male counterparts. By 1970, however, this gap had increased to $5,116.
On the other hand, the females in the control region also were outpaced by their male colleagues. This suggests that while females in both regions were losing ground to males, the construction of the plant in Putnam County did little to stifle the trend. In other words, while the construction of the mill probably did not actually hurt female heads in the area, it also did not benefit them.


cONCLUSIONS AND IMPLICATIONS

The following conclusions can be derived from the results of the present research. First, the construction of a large steel mill in rural Illinois substantially increased the median income of household heads in the area. Second, these increases were quite unevenly distributed throughout the population. More specifically, the elderly and females in the area received little or no direct economic benefit from the construction of the plant. The income of working age males increased dramatically. Third, this unequal distribution of benefits placed large segments of the population, i.e. the aged and females, in relatively poorer positions than they occupied prior to the development of the plant.

The implications of these results are far reaching. While the findings lead one to concur with the policy of encouraging industrial activity in areas of lagging economic growth, they also demonstrate that careful consideration must be given to the type and nature of the incoming industry. Communities should strive for balanced industrial development rather than rely upon the economic benefits generated from one large plant. For example, if an industry with a male specific labor demand, e.g. a steel mill, locates in a local community, an
attempt should be made to attract an industry which would employ females—especially female heads of households. This would at least partially reduce the economic gap between the sexes that characterizes many industrializing communities.

In regard to the elderly, of course, the problem is much more complex. Palmore and Whittington have indicated that the economic status of the aged is declining throughout the nation. Our findings, although confined to Illinois, support this conclusion. Further, the results of our research suggest that this process of deterioration is accelerated in rapidly industrializing areas. Given (1) the surplus of aged individuals in small towns, and (2) the large numbers of small towns actively seeking industry, the practical importance of this finding can hardly be overstated. The erosion of the income status of the elderly could pose profound obstacles to the economic rejuvenation of local communities.

As early as 1964, Taylor and Jones warned of possible undesirable consequences of industrial development in regard to the aged residents of small towns. As far as we know, ours is the only research to explicitly investigate and document this phenomenon. As the trend toward industrialization of non-metropolitan areas proceeds, however, problems such as those discussed here will become more and more apparent. Business, political and local community leaders should recognize that rapid industrial development of small towns and villages is not necessarily the panacea for the economic problems of these areas that has generally been assumed. Careful planning at all levels is
needed to maximize the benefits of industrial development for all sectors of the population including the aged and females. The decentralization of industry holds great promise for relief from the social, economic, and environmental ills that beset many areas throughout the country. In planning this decentralization, however, care must be taken to make certain that the problems which characterize our metropolitan areas are not brought to local communities.
### Exhibit 1: Median Income of Household Heads by Region, 1965 and 1970

<table>
<thead>
<tr>
<th>Region</th>
<th>1955 Income</th>
<th>1970 Income</th>
<th>Increase</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6,204</td>
<td>7,790</td>
<td>1,586</td>
<td>24</td>
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<tr>
<td>Control</td>
<td>6,418</td>
<td>7,397</td>
<td>979</td>
<td>15</td>
</tr>
<tr>
<td>Region and Age Group</td>
<td>1965 Non-aged</td>
<td>1965 Aged</td>
<td>1970 Non-aged</td>
<td>1970 Aged</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------</td>
<td>-----------</td>
<td>---------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Control Region</td>
<td>6,550</td>
<td>324</td>
<td>8,530</td>
<td>282</td>
</tr>
<tr>
<td></td>
<td>1,980</td>
<td>95</td>
<td>1,980</td>
<td>30</td>
</tr>
<tr>
<td>Experimental Region</td>
<td>6,449</td>
<td>774</td>
<td>8,888</td>
<td>2,436</td>
</tr>
<tr>
<td></td>
<td>2,560</td>
<td>240</td>
<td>2,980</td>
<td>420</td>
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</tr>
</tbody>
</table>
EXHIBIT 3  Median Income of Heads of Households
by Region and Sex, 1965 and 1970

<table>
<thead>
<tr>
<th>Region and Sex</th>
<th>1965</th>
<th>1970</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
<td>N</td>
<td>Income</td>
</tr>
<tr>
<td>Experimental Region</td>
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<tr>
<td>Males</td>
<td>6,448</td>
<td>920</td>
<td>8,606</td>
</tr>
<tr>
<td>Females</td>
<td>3,150</td>
<td>208</td>
<td>3,490</td>
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<tr>
<td>Control Region</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>6,676</td>
<td>329</td>
<td>8,581</td>
</tr>
<tr>
<td>Females</td>
<td>2,900</td>
<td>82</td>
<td>3,158</td>
</tr>
</tbody>
</table>
FOOTNOTES


2. Smith, *op. cit.*; Hansen, *op. cit.*


4. An extensive bibliography of research in this area is available from the authors.


10. Taylor and Jones, *op. cit.*