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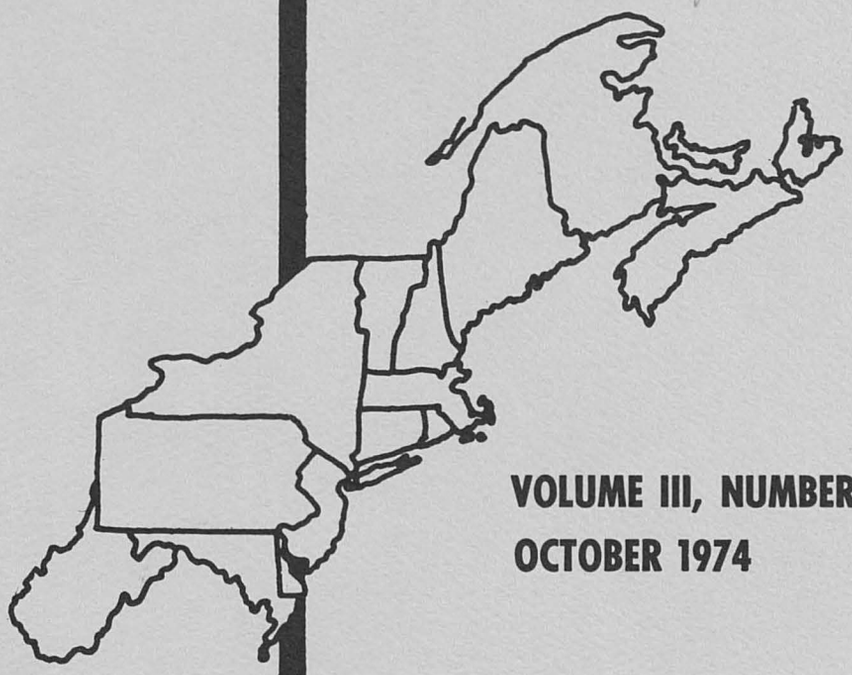

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COMMUNITY ADJUSTMENT TO A MAJOR PLANT CLOSURE: A CASE STUDY OF BERWICK, PENNSYLVANIA[1/]

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Introduction

In recent years, rural development has become an increasingly important domestic issue. External diseconomies such as congestion, water and air pollution, transportation problems have underscored the gravity of this issue. One proposed strategy of coping with this issue is that of promoting growth in existing small cities and towns in nonmetropolitan areas.

One such nonmetropolitan community which has experienced industrial growth in the last decade is Berwick, Pennsylvania. This study was undertaken to describe and relate this community's experiences with industrial development in the hopes that future rural development policies profit from Berwick's experiences. Specifically, the study was designed to describe the changes in economic activity in an area that experienced the closure of a major industrial facility and to investigate how the inhabitants of the study area adjusted to these changes.[2/]

[1/] This paper is based on a study conducted by William A. Lipovsky. For additional information on this study see Lipovsky's master's thesis entitled, "A Nonmetropolitan Community's Adjustment to Economic Change: A Case Study of Berwick, Pennsylvania: 1960-1970" (M.S. Thesis, The Pennsylvania State University, 1973).

[2/] The study area was defined to include not only the central area of Berwick but its surrounding environs, including the Boroughs of Briar Creek and Nescopeck and the Townships of Briar Creek, Mifflin, South Centre, Salem, and Nescopeck. The 1970 population of the study area was 24,089--or approximately 8,030 households.

Description of Berwick Area

The community selected for this study was Berwick, Pennsylvania. Berwick is a small city of approximately 12,000 inhabitants located on the northeastern branch of the Susquehanna River. In 1960 there were over 5,000 manufacturing workers employed within Berwick's city limits. Approximately half of these workers were employed by the American Car and Foundry (ACF). The principal product produced by this firm was railroad cars, although in the past it has produced armaments and munitions. The plant was located in a complex near the center of the city and consisted of forges, machine shops and various production lines. The work force was high-skilled, predominantly male, strongly unionized (AFL-CIO) and received relatively high wages in relation to alternative employment opportunities in the area. The skilled labor force included welders, milling machine operators, tool and die makers, and crane operators. The plant also employed a significant number of semi-skilled and unskilled workers.

In the early 1960's the American Car and Foundry decided to close its Berwick plant. The firm's reason for closing was that the centers of railroad traffic growth had shifted to the South and West, and it was no longer feasible to support a railroad equipment plant in Berwick.

Before the plant closed, an industrial development association was formed by concerned citizens. They purchased the complex and began encouraging industry to locate there. A group of local entrepreneurs formed a firm, Berwick Forge and Fabricating (BF&F), which used some of the same labor and produced the same type products as the ACF. By 1967, the BF&F employed about 1,000 people and was using about one-third of the physical facilities of the plant. Various other firms also located in the complex. Two mobile home construction plants, a plastic jug operation, and a welding operation began operations in the vacated facilities. Another new firm attracted to the area, U. S. Steel, decided to reopen a building in which the ACF had produced shells for armament pieces. Except for U. S. Steel, wage rates paid in the other firms were generally lower than those paid by the ACF.

In summary, Berwick had a major plant in 1960 employing nearly 2,500 people paying competitive wages. By 1970, a conglomeration of production facilities were located within the same complex, employing more people but generally paying a lower wage. Because the situation in Berwick is similar to that found in other rural communities, a case study of this community seems likely to provide valuable insights into the adjustment process of a changing economic structure in a rural community.

Changes in the Industrial Structure Between 1960 and 1970

To analyze the changes in the "industrial mix" all manufacturing industries operating in the Berwick area were subdivided according to

the two-digit Standard Industrial Classification (SIC) code for the designated years of 1960, 1963, and 1970. Nineteen-sixty and 1970 served as temporal benchmarks while 1963 data indicates the manufacturing employment nadir of the community.

Data for the study area indicate that 36 firms have operated continuously in the community between 1960 and 1970 and these firms have increased total employment from 3,062 in 1960 to 4,286 in 1970--a 40.0 percent increase. There were 2,137 new jobs created during this same time period with 27 new manufacturing establishments entering the study area. The 13 firms which left the area after 1960 accounted for a loss of 2,875 jobs.

Total manufacturing employment for the study area at two-year intervals were reported as follows:

Year	1960	1962	1964	1966	1968	1970
Number of Employees	5,937	5,272	4,638	5,547	6,347	6,423

All manufacturing industries in the study area were placed in subdivisions according to two-digit Standard Industrial Classification code for the years of 1960, 1963, and 1970.

To supplement the employment data, wage and salary data for manufacturing industries were computed.[3/] Average wage and salary figures were weighted by the number of individuals in each subdivision for 1960, 1963, and 1970.

A summary of these data for all manufacturing industries are shown in the following tabulation:

Manufacturing Division (SIC)	1960	1963	1970
Number of Employees	5,937	4,201	6,423
Number of Firms	49	57	62
Number of Manufacturing Subdivisions	14	15	17
Average Wage and Salary (dollars)	4,757	3,962	5,800

It is apparent that the "industrial mix" of the study area became increasingly diversified after 1963. Between 1963 and 1970 total employment increased 53 percent, firm numbers increased nine percent, the number of manufacturing subdivisions increased 13 percent and average money wages and salaries increased 47 percent. One factor which did not

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[3/] These average wage and salary figures were developed employing a statistical technique of weighted averages, by D. K. Smith, N. B. Gingrich, and J. D. Jansma in Pennsylvania Manufacturing Statistics for 1965 by Four-Digit Standard Industrial Classification Code and by County, (A.E. & R.S. No. 71, University Park, PA: The Pennsylvania State University, 1968), pp. 1-15.

increase was real wages. The manufacturing division's average real wage was 574 dollars less in 1970 than in 1960.[4/]

In 1960, transportation equipment was the largest employer, accounting for 41.1 percent of the study area's total manufacturing employment. Other employers with large numbers of employees were food and kindred products (21.4 percent), tobacco manufacturers (12.2 percent), and apparel and related products (11.4 percent).

The average wage and salary of the employees of the transportation equipment subdivision was 37 percent higher than the average wage and salary figure for the manufacturing division as a whole. The only other subdivisions with higher than average wage and salary were printing, publishing and allied products (7.3 percent), fabricated metals (10.6 percent), and electrical machinery (9.2 percent). But these three subdivisions account for only 3.3 percent of the manufacturing labor force. Thus, the transportation equipment industry was by far the most important manufacturing subdivision as it employed 41.1 percent of all manufacturing employees and accounted for 56.2 percent of the total wages and salaries paid to manufacturing employees in the area.

The 1963 situation reveals that 57 firms were employing 4,201 people in 15 subdivisions. The average wage and salary figure for all firms in the manufacturing division was 3,962 dollars. A comparison of these figures with 1960 indicates that the number of firms increased by 16.3 percent, but these firms were employing 29.2 percent fewer people. Further, the average wage and salary in 1963 was 16.8 percent lower than comparable figures for 1960. The largest four subdivisions in terms of manufacturing employment were food and kindred products (32.4 percent), apparel and related products (17.8 percent), tobacco manufacturers (16.4 percent), and textile mill products (10.6 percent). Transportation equipment decreased to such an extent that this subdivision accounted for only 8.9 percent of all manufacturing employees and 14.6 percent of all manufacturing wages and salaries. This represents a 78.3 percent decline in transportation equipment employment and a 74.0 percent decline in the percentage that wages and salaries from the transportation equipment subdivision were of the total manufacturing division.

A substantial change took place in the total number of firms paying wages and salaries greater than the division average. In 1960, there were nine firms employing 2,637 people with above average wages and salaries, while in 1963 there were 33 firms employing 2,250 people with higher than average wages and salaries. The closure of the ACF lowered the average wages and salaries in the community and resulted in a greater number of firms with higher than average wages and salaries.

[4/] The money wages needed in 1970 to attain real wage rate levels of 1960 was computed as 6,374 dollars.

In 1970, 62 firms employed 6,423 employees in 17 subdivisions. The four employers with the largest number of employees were food and kindred products (23.2 percent), transportation equipment (17.4 percent), tobacco manufacturers (13.5 percent), and apparel and related products (11.1 percent). There were 24 firms in various subdivisions which paid wages and salaries above the average.

Comparing 1970 data with those from 1963, the number of firms increased by nine percent, while employment increased 52.8 percent. The average division wage increased by 46.3 percent. Also, two new subdivisions were added within this time period--rubber and plastic products, and ordinance and accessories which, in 1970, employed 363 people.

Employment in the transportation equipment subdivision increased from 375 in 1963 to 1,116 by 1970, and once again was a prominent economic subdivision. However, transportation equipment did not dominate economic activity as it did in 1960. By 1970, employment in this subdivision accounted for 17.4 percent of the total number of manufacturing workers and 23.5 percent of the total wages and salaries in the manufacturing division. The comparable figures for 1960 were 41.1 percent of the employees and 56.2 percent of the wages and salaries.

It is apparent that the 1970 "manufacturing mix" is quite different than in 1960. In 1960, manufacturing activities consisted of 49 firms and 14 subdivisions dominated by the transportation equipment subdivision. By 1970, 62 firms from 17 subdivisions were operating in the study area. Between 1960 and 1970, employment decreased in transportation equipment (-1,322), paper and allied products (-28), and stone, clay and glass products (-25). All remaining subdivisions increased in employment. Major employment increases were reported in fabricated metals (+468), textile mill products (+286), food and kindred products (+217), and electrical machinery (+170).

Individuals Adjustment to the Changing Economic Structure

A survey questionnaire was designed to determine how the residents of the study area believed the changes in the "industrial mix" had affected their lives, and more specifically, to determine how the former ACF employees of the transportation equipment subdivision had been affected. A sample of slightly over one percent of the total number of taxable units (households) within the study area provided a potential sample of 140 households. Data was secured from 123 of these households. Of the 123 usable interviews, eight or 6.5 percent did not work in the study area in 1960 or 1970. They may, for example, have been retired for the entire period or entered the labor force since 1970. A second group consisting of 31 contacts, or 25.2 percent of the sample

households worked in the study area in 1970 but not in 1960.[5/] A third group, those in the work force in 1960, but not working in 1970 accounted for 13 contacts, or 10.6 percent of all households interviewed.

For example, the 13 wage earners who had been employed in the study area in 1960 but not in 1970, seven had been employed by the American Car and Foundry in 1960. By 1970, three of these workers had retired, two were commuting to the ACF plant at Milton, Pennsylvania, a distance of 29 miles, one was commuting to another job in Bloomsburg, a distance of 11 miles, and one was unemployed. The remaining six workers had been employed in various other plants in the Berwick area in 1960. By 1970, three of these were unemployed, one had retired, and two were commuting to jobs outside the study area.

The fourth and largest group were those contacted who worked in the Berwick area in both 1960 and 1970. These households account for 71 contacts or 57.7 percent of the total sample. It is these 71 contacts that provided additional data to help understand the impact of economic change in a rural area.

"Non-Head of Household" Employment

One objective of the survey was to ascertain whether changes in the economic atmosphere of the study area affected the number of main wage earners holding part-time jobs or whether participation rates had been influenced. The survey results indicated that only small changes took place in part-time employment by the 71 main wage earners between 1960 and 1970. Rather than a hypothesized increase (due to closing down of the ACF), part-time employment decreased by eight percent. Especially significant was the decrease in part-time employment by main wage earners in the transportation equipment subdivision which had incurred the brunt of the real income loss. However, we were not able to determine whether or not there had been an increase in the number of full-time job holders holding part-time jobs in the time period immediately following the ACF closing. Although no discernible variations among types of employment were in evidence, a general trend was evident with fewer people holding part-time jobs in 1970 than in 1960. But there was a significant difference between service oriented main wage earners and those employed in the basic industries. Almost twice as

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[5/] Since the major emphasis of the study was the workers in the study area since 1960, these 31 respondents were asked one additional question and then the interview was terminated. This question was designed to determine what factors motivated the worker to enter the Berwick labor force. In general, the major reasons and percentages were: new entrants to labor force, six percent; better employment possibilities, 14 percent; transferred to area by company, five percent; social and recreation atmosphere, five percent; and other, one percent. For a more detailed evaluation, see Lipovsky thesis cited earlier.

many service oriented main wage earners held part-time jobs as did those employed in the basic employment.

The data also provided a comparison of employment of household members other than the main wage earners in 1960 and 1970. Between 1960 and 1970, employment of other household members increased by 20 percent. The increase was more pronounced among wage earners classified in the basic employment with the transportation equipment subdivision revealing the largest divisional increase (60 percent) in this type of employment. Previous analysis has shown this division incurred a substantial reduction in real income between 1960 and 1970. Thus, it seems that the loss in real income directly influenced the employment of other household members, but not the addition of part-time jobs by the main wage earners. The reasons given for the second main wage earner working in 1970 but not in 1960 were as follows:

	Number	Percent
(a) Second main wage earner too busy in 1960 and did not want a job.	7	39
(b) Second main wage earner too young or for some physical reason incapable of working.	5	28
(c) The rise in the cost of living forced second main wage earner to help out by getting a job.	5	28
(d) The main wage earner's salary was reduced.	1	5
	18	100

The least number of respondents (in fact, only one respondent) answered in a direct fashion that the reason for the second main wage earner was that the main wage earner's salary was reduced. However, reasons (c) and (d) could be lumped together in the sense that economic conditions were such in 1970 which led to the second member of the household becoming a major wage earner.

Skill Utilization

The survey also investigated the respondents' beliefs on the level of skill utilization. The study revealed that 89 percent of the main wage earners felt their skills were fully utilized in 1960. By 1970, this figure had increased slightly to 91 percent. Fourteen percent of the main wage earners in basic employment felt their skills were not fully utilized in 1960 or 1970. In 1960, ten percent of the employees in the service industries believed their skills were not being fully utilized. By 1970, none of the service oriented main wage earners felt their skills were not being fully utilized. The transportation equipment subdivision was the only division where more people felt their skills were less fully utilized in 1970 than in 1960. In 1960, eight percent of these employees felt their skills were not fully utilized. By 1970, this figure had increased to 23 percent. Survey results also

indicated that skill utilization was thought to be more of a problem for other household members than for the main wage earner in 1970.

Income Perceptions

Another portion of the survey tested the recollection of the respondents in terms of their take home pay in 1960 and 1970 and their perceptions of the relative buying power in terms of goods and services in these two time periods. Fourteen percent of the respondents believed the take home pay of the main wage earner was higher in 1960 than 1970. Seventy percent of those reporting higher incomes in 1960 were members of the transportation equipment subdivision (40 percent) or the wholesale and retail trade division (30 percent).

Eighty percent of the respondents felt the take home pay of main wage earners had decreased or increased by 20 percent or less between 1960 and 1970. As indicated above, the cost of living increased 34 percent during this same time period. In terms of purchasing power, at least 80 percent of the respondents were worse off in 1970 if we assume the respondents can recall percentage changes in take home pay. When a question was asked directly to the respondents, 48 percent of the households believed they could afford to buy more goods and services in 1960 than in 1970. The greatest proportional increase in perceived real income was realized by employees in miscellaneous manufacturing and government. Seventy-two percent of the households in the miscellaneous manufacturing division and 100 percent of the households in the government employment felt they could afford to buy more goods and services in 1970 than 1960. The percentage of households in the transportation equipment division which felt they could afford to buy more goods and services in 1960 than 1970 was 54 percent which is slightly above the average (48 percent) for all employees interviewed.

Seventy percent of the households surveyed believed they saved a higher percentage of their incomes in 1960 as compared to 1970. Slightly over 75 percent of the basic employment households felt they had saved more in 1960, while 57 percent with service oriented employment believed this to be true. About 80 percent of the households in the transportation equipment subdivision felt they had saved a higher percentage of their income in 1960 than in 1970. This percentage was about ten percent higher than the average for all divisions.

In summary, the results of this analysis suggest that for at least the community in this study, a nonmetropolitan area can regain its employment base following an "economic disaster." It is impossible to generalize from a case study, but the community of Berwick did recover when a plant representing nearly one-half of its employment base closed. Whether this same economic recovery could be expected in other communities is unknown.