WORKING PAPER
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

DISINVESTMENT IN MASSACHUSETTS:
A CASE STUDY OF
PERSONAL AND ECONOMIC IMPACTS

by

Thomas A. Barocci

MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139
DISINVESTMENT IN MASSACHUSETTS:
A CASE STUDY OF
PERSONAL AND ECONOMIC IMPACTS

by

Thomas A. Barocci

W.P. 1080-79

Prepared at the Sloan School of Management
at M.I.T. as Part of the
Harvard-M.I.T. Joint Center for Urban Studies Project:

"Private Investment, Public Policy and the
Decline of Older Regions:
An Analysis of the New England Economy"

This report was prepared for the Office of Economic Research, Economic Development Administration, U.S. Department of Commerce under contract #OER-620-G78-14 (99-7-13440). The project was also sponsored by the Office of Research, Employment and Training Administration, U.S. Department of Labor, and the Center for Study of Metropolitan Problems of the National Institute of Mental Health, U.S. Department of Health, Education and Welfare. Contractors conducting research under government sponsorship are encouraged to express their own judgments freely. Consequently, this report does not necessarily represent the official opinions of any of the agencies mentioned. The author is solely responsible for the content of this report.

*Special thanks are due to Lewis Brashares, Joseph Chow, Kathy Overskei, and Dale Conway for their assistance in the planning and preparation of this study. The author is an Associate Professor at the Sloan School of Management, M.I.T.
Though corporate decisions to shut down or relocate plants are routinely made according to the demands of profitability, the costs cannot be assessed in monetary terms alone. Long-range examination of plant closures reveals adverse effects on workers, plant owners, communities, other local businesses, and the general tax base. This study is focused on the employment and personal histories of a group of workers displaced from a plant in an economically declining area of New England. Our aim was to discover the experiences of those directly affected by a disinvestment decision in order to recommend appropriate governmental responses to the wider implications of shutdowns.

Background

The operation studied was a branch of a chemical company (referred to as "Acme") located in the Fall River, Massachusetts, labor market area. This area is declining in manufacturing employment, primarily as a result of the closing or relocation of apparel, textile, and some durable goods manufacturing. Over the 1970-74 period the area lost over 11 per cent of its total manufacturing job base. At the same time, about 1 per cent of the total job pool in the area was lost. Though there was some expansion of jobs in education, health, and other services—accounting for most of the area's specific growth—these are all industries into which it is difficult to transfer from a manufacturing job.¹

¹See Fall River CETA Consortium, Annual Plan, Title I and Title II, Fiscal Year 1978, 1977 (mimeograph).
The plant was originally built in the 1950s by local owners to supply local and regional manufacturers with polyvinyl chloride (PVC), the petroleum-based prime ingredient of most plastics. In the 1960s a multinational oil conglomerate purchased the operation but was subsequently ordered by the Federal Trade Commission and the U.S. Department of Justice to divest its interests in the PVC market, since it had a virtual monopoly. Acme bought the plant in the late 1960s, planning to run it profitably since the market for PVC in New England was then very good. But by 1970 Acme claimed to have lost many of its customers, even those in New England, to larger, more efficient plants in the south that could supply PVC cheaper. It turned out that shipment to New England of raw petroleum was more expensive than shipping the finished product to New England from the south. In addition, Acme did not have its own petroleum sources and relied on others for manufacturing input.

The outlook for the plant grew even dimmer when the following events occurred in rapid succession:

- Japanese customers, developed in the late 1960s to replace New England customers looking to the south, decided to purchase elsewhere in the world market and do some of their own manufacturing.
- The 1974 energy crisis resulted in higher prices and lower supplies of petroleum.
- The Occupational Health and Safety Administration (OHSA) threatened to enforce its health rules more rigidly (PVC was considered a possible health hazard).
- The Union refused to accept the lower wage gains and cooperative arrangements the company offered.
- Shipping costs were increasing.
According to an interview with the Director of Real Estate for Acme, these factors "force[d] Acme to close the plant and sell the real estate."

All employees were terminated in December 1974, and the closed plant was sold to a large corporation that was already producing in the area. According to Acme, a four-month notice of closure was given; employees received severance pay on the basis of seniority and were helped to find new positions. It is worth noting that the company closed another PVC plant in Florida that same year for similar reasons and is now out of the PVC business altogether. As the Real Estate Director said, "The plant[s] would still be open if [they] could make money."

Acme's Annual Report for 1974 stated that the plants were closed because of "lack of resources"—i.e., oil. It is also notable that the decision to close was made in January 1974 but was not announced to the employees or union until September.

Methodology

Acme Corporation supplied us with a list of the 92 displaced workers for whom it had records. They implied that this was the total of the production employees, although the Union representative from Providence, Rhode Island, stated that there had been 143 union members at the plant at the time of shutdown. We were unable to verify either figure, since the company records were unavailable, and the Union did not have a list.

In the summer of 1978, we mailed a questionnaire (Appendix A) to each of the 92 employees asking them for information on their employment history since the shutdown, their training and socio-demographic characteristics, and some of their general feelings about the impact of termination.
Eighteen questionnaires (20 per cent) were returned in usable form. In the spring of 1979, we called those who had not returned questionnaires until we had another group of 17 former employees to whom we administered a shorter telephone interview (Appendix B).

The mail survey contained open-ended as well as short-answer questions. We wanted to give the former employees ample opportunity to discuss their experiences prior to and after the shutdown. Given that the questionnaire was mailed two and one-half years after the shutdown, the original number of 18 usable responses was considered satisfactory. Nevertheless, the supplementary telephone interview technique was chosen as a check on the responses of the first group. Aside from differences in some quantitative measures, the two groups had similar personal reactions (see Appendix C for a comparison of the two groups).

Overall, we believe the results of the survey provide reliable data on the impact of this shutdown. The one area in which responses from the two groups were significantly different was length of unemployment after the plant closing. The mail survey respondents averaged 60 weeks of continuous unemployment, while the phone respondents averaged 29. Thus, data on expected length of unemployment after shutdown are inconclusive, and assumptions about how individuals fare in the labor market need to be inferred cautiously. This seems to imply that non-response is related to "successful" job-finding.

---

2 Three questionnaires that had only written opinions on the closing without any personal data were also received.
Quantitative Results of the Mail Survey

On average, these Acme employees had worked 4 years and 11 months at the company prior to the shutdown. They had an average age of 40.4 years. Thirty-eight per cent (7 of 18) had less than a high school education, while 33 per cent had education beyond high school at the time of the shutdown. We can characterize these respondents as average male manufacturing workers in New England, earning a bit less than their counterparts in other manufacturing operations at the time of the plant closing.

At the time of displacement, these employees faced an unfavorable labor market. The unemployment rate in Massachusetts was 10 percent, with the rate in the Fall River area even higher. Data gathered on the length of unemployment following the shutdown support our assertion that the economic burdens assumed by displaced workers far outweigh those of other unemployed workers. On average it took the respondents 60 weeks to find a new position; the range was 26-156 weeks. They collected unemployment compensation for an average of 41 weeks, with a range of from 14 to 68 weeks, the maximum available under the law at that time. Sixty-one per cent (11 of 18) found new jobs before their unemployment compensation ran out, suggesting that they preferred work over receiving unemployment compensation.

Half of the respondents admitted to receiving some other form of public assistance besides unemployment insurance. All of this group obtained food stamps; an additional five had looked to other services offered through the welfare system. On several questionnaires the respondents had begun to fill in the public assistance questions and then stopped. We believe they were reluctant to admit needing this help.

All of the respondents were male; 16 of 18 were married and had
3.4 average dependents at the time of shutdown. Only five had spouses working full time; one reported that his wife worked part time. Therefore, for two-thirds of the respondents, family income dropped to sole reliance on unemployment compensation when the plant closed. Five respondents reported that, after the closing, their spouses were "forced" to obtain jobs and succeeded in doing so. These spouses worked exclusively in clerical and apparel-processing positions.

This finding reaffirms the claim often made in labor force literature that women enter the work force not only because they want to, but also because they have to. All of those who reported spouses working after the shutdown said that they were still employed, at least part time, even though the respondents had obtained new employment. Subsequent to the shutdown, then, the percentage of families with two earners increased from one-quarter to over one-half.

One-third of the respondents indicated they had obtained additional training after the shutdown (through the CETA programs in the area), but only one person believed that this training had aided him in finding new employment. Two of the men worked on CETA-sponsored Public Service Employment (PSE) jobs as their first position after the shutdown.

These workers were not geographically mobile. (The effects of displacement on workers who relocated after the plant closed were outside the bounds of our study.) Only one respondent reported moving.3 The rest remained in the same residence, making the best of the situation. None indicated that the company offered them a chance to transfer to another Acme plant. Significantly, 55 per cent reported that they would have moved to another job with Acme had one been offered. This was a direct contradiction of the company representative's statement that the workers were offered transfer opportunities.

---

3 Due to the two and one-half year time span between the closing and our survey, we were unable to determine the number of workers who moved away from the area.
In addition to having difficulty finding new employment, the workers found it hard to keep the jobs that they did find. Even though they had been employed by Acme for an average of almost 5 continuous years prior to the shutdown, they held an average of 2.5 jobs over the two and one-half years between the closing and our survey. Displacement caused these workers long-range problems in their careers and work patterns.

In addition, the respondents' recent positions were at lower real wages than their Acme job. During the last months at the plant, the employees' average hourly earnings were $4.52 with a range from $3.69 to $5.57. At the time we surveyed them, these workers had an average hourly earning of $4.98—a ten per cent increase in nominal earnings. However, using the 1975 earnings as the base, the workers actually experienced an 11 per cent drop in real hourly earnings over the two and one-half year period. Moreover, they worked fewer hours at the new positions. Our findings revealed a serious and significant drop in real personal income for these workers after the shutdown. This is somewhat offset by the fact that over half of the respondents had spouses in the labor force, which may have lessened the impact of the earnings drop on the overall family income.

The respondents all held positions at Acme in the semi-skilled operative category. Only three were not directly involved in production, since they were in maintenance and repair. After the shutdown they all found new work in a wide variety of occupations. Only one reported being hired by the company that bought the abandoned plant, while five found initial re-employment in a textile mill. The remainder worked in various manufacturing industries, except for two who went to the public sector, one as a mailman and one as a civil servant in the local municipal building.
We asked the respondents to rate their jobs since the shutdown with their old positions at Acme. Half of the group reported that they believed the job at Acme was a better position, despite the possible health hazards of working with PVC. It is notable that there was no correlation between those who rated their new position higher and those who received increases in real wages in their new position.

A summary of the quantitative data is found in Table 1.

**Table 1: Summary Data from the Mail Survey (N=18)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Average/Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td>40.4 years</td>
</tr>
<tr>
<td>Educational level at time of shutdown</td>
<td></td>
</tr>
<tr>
<td>less than high school</td>
<td>7</td>
</tr>
<tr>
<td>high school</td>
<td>5</td>
</tr>
<tr>
<td>more than high school</td>
<td>6</td>
</tr>
<tr>
<td>Additional training after shutdown</td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>6</td>
</tr>
<tr>
<td>no</td>
<td>12</td>
</tr>
<tr>
<td>Did training aid you in obtaining employment?</td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>no</td>
<td>5</td>
</tr>
<tr>
<td>Length of unemployment since shutdown</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>20-156 weeks</td>
</tr>
<tr>
<td>average</td>
<td>59.6 weeks</td>
</tr>
<tr>
<td>Number collecting unemployment compensation</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>12-68 weeks</td>
</tr>
<tr>
<td>average</td>
<td>40.7 weeks</td>
</tr>
<tr>
<td>Present employment status</td>
<td></td>
</tr>
<tr>
<td>employed full time</td>
<td>14</td>
</tr>
<tr>
<td>employed part time</td>
<td>1</td>
</tr>
<tr>
<td>unemployed</td>
<td>3</td>
</tr>
<tr>
<td>Nature of business of present employer</td>
<td></td>
</tr>
<tr>
<td>private</td>
<td>17</td>
</tr>
<tr>
<td>public</td>
<td>1</td>
</tr>
<tr>
<td>Nominal wage change</td>
<td></td>
</tr>
<tr>
<td>increase</td>
<td>8 (47%)</td>
</tr>
<tr>
<td>decrease</td>
<td>5 (29%)</td>
</tr>
<tr>
<td>no change</td>
<td>4 (23%)</td>
</tr>
<tr>
<td>Number who rate Acme highest in job satisfaction (N=11)</td>
<td>9</td>
</tr>
<tr>
<td>Average hourly wage rate at Acme</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>$3.69-5.57</td>
</tr>
<tr>
<td>Average hourly wage rate at present job</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>$3.00-6.26</td>
</tr>
<tr>
<td>Real average hourly wage rate (1975=100)</td>
<td></td>
</tr>
<tr>
<td>Acme</td>
<td>$4.52</td>
</tr>
<tr>
<td>present or most recent job</td>
<td>$4.03</td>
</tr>
<tr>
<td>Average number of years worked at Acme</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>4 years 11 months</td>
</tr>
<tr>
<td></td>
<td>1-10 years</td>
</tr>
</tbody>
</table>
A summary of the quantitative data for the telephone survey is in Table C-1 of Appendix C.

Results of the Open-Ended Questions

The open-ended questions elicited several common threads in responses, with no significant differences between the mail-survey group and the phone-survey group.

We discovered, for example, that more than half of the workers who found jobs within six months of the shutdown found them through friends. One man said, "Isn't that the way everything happens in this country?" Certain complaints were also shared. For instance, many of the workers blamed the shutdown on the government's enforcement of health standards. The men simultaneously damned and praised the government standards, because they are aware of the dangers of chemical manufacturing work, but they nonetheless would have preferred the jobs. Three of the men complained about illegal aliens working in the area and keeping wages low. Several others were angry about the treatment they received at the Division of Employment Security. One said:

Employees at D.E.S., especially the Fall River office, are most inconsiderate and feel that they are superior. They are impolite, arrogant, and they definitely feel that they are doing you a favor when you apply for unemployment benefits. And if it was not for the unemployed, they wouldn't have jobs.

A common complaint of older workers was the problem of getting rehired. Several noted that employers "knew the health risks were high and were afraid they might get stuck with the bill." These employers may have feared that the long-term results of exposure to PVC at the Acme plant were due to show up in these older men. Another of these workers stated, "Only the young guys got jobs because the older ones were workmen's compensation risks."
Summary of Results

Overall, the displaced workers suffered severe dislocation problems. They remained unemployed, on average, for over a year and were forced to take positions that paid a lower real wage than what they had made at Acme. Moreover, family work patterns were altered significantly, as 25 percent had their spouses forced into employment. The collection of public assistance in the form of unemployment insurance, food stamps, housing assistance and AFDC-UF was a psychological burden on them, as well as a financial burden on state and federal taxes. (The community suffered as well, from an eroded tax base and the other costs of having more unemployed people competing for positions in the local labor market.) The dislocated workers consistently mentioned the shock and disbelief they felt on hearing of the closure and further surprise at the problems they had in finding new employment.

According to the respondents, neither Acme nor the Union was able to help them find new positions, although the company did hire a placement consultant. Further, the Division of Employment Security was able to supply a new job in only one of the original eighteen cases. Friends' references led to jobs for 7 other workers.

Though studies show worsened health—physical and psychological— for those who are displaced by shutdowns, our health findings were inconclusive. Only two of the eighteen reported worsened health; one reported an improvement after being away from PVC manufacturing (his dizzy spells had ceased within two months). It was not possible for us to assess the psychological impact of the closing, but if the tone of the open-ended responses is any clue, workers felt considerable bitterness and resentment.

toward both the corporation and the union. The former was criticized for not offering notice far enough ahead of time to allow for a more orderly transition; the latter for not being informed enough to have aided the employees in preparing for the shutdown or possibly intervening to prevent it.

Recommendations

Currently, workers bear a disproportionate share of disinvestment hardships. Personal misery and dislocation do not have to happen to as great an extent as they did in the Fall River area. Public policy needs to be directed toward the prevention of closings and the cushioning of their impact when prevention is impossible. Acme was not moving the plant to decrease labor costs or take advantage of foreign production and tax breaks. Acme pulled out of the PVC business altogether. There is no way now to determine whether the operation was unprofitable or if it was just not up to standards set at corporate headquarters. Defining a "justifiable" closing from a public welfare point of view is perplexing; nonetheless, it is mandatory. Specific rules and procedures must be established in order to distribute the burdens of a closing equitably.

After reviewing the proposed and existing legislation as well as the literature on impacts of plant closings (see bibliography for the latter), we have developed the following minimum guidelines for legislation:

- Provision for mandatory advance notice time
- Required financial disclosure by the firm contemplating closure, relocation or substantial cutbacks in employment
- Mandatory severance pay
In the Acme study we found that the corporation did not provide sufficient advance notice of the closing, even though they made the decision to close about a year prior to the actual event. The union was not informed, nor were any state or local agencies. Though it may be that even the strictest public policy could not have prevented closure, the regrettable fact is that we will never know. The kinds of economic and personal problems endured by displaced workers are simply too great to be left unattended by legislation. After all, U.S. corporations have not ceased locating in Western Europe or Canada because of their various laws on closings.

The United States is presently the only country among the Western European and North American economic powers that does not have specific legislation on plant closings. Presently, the European Economic Community (Common Market) is issuing a binding directive to its member countries that will provide minimum standards for national legislation affecting corporate plant closings and major layoff decisions. The directive requires advance notice and prior consultation with government and trade unions. In addition, it establishes minimum severance pay standards. Sweden, which is not a member of the Common Market, has already implemented such legislation. Canada's standards exceed even Europe's. Thus it is hardly unreasonable to say that the United States has both a humane and an economic obligation to pass legislation that will cushion if not eliminate the devastating impacts of plant closings on workers, communities, and the public in general.

---

In this country, several states have legislation pending on plant shutdowns. Ohio's proposal is most notable. It came directly as a response to the crippling Youngstown Sheet and Tube Company shutdown, which put 5000 people out of work. The Ohio Public Interest Campaign (OPIC), with the backing of the AFL-CIO, put together a bill that would require companies that are closing, relocating, or substantially reducing their work force to provide employees with two years' advance notice, severance pay, and the community with aid through a community assistance fund.

In Michigan, legislation is being considered that will mandate severance pay and provide a state-paid staff to serve full time as investigators of threatened plant closings. This staff would also look into worker interest in purchasing these plants; if the workers are interested the state will assist them in putting together a funding package. Maine already has a law mandating severance pay, and Wisconsin required firms to provide at least 60 days' notice if they are going to merge, relocate or close operations. Massachusetts, as a result of the Acme closing and literally hundreds of others over the last decade, is now drafting legislation requiring advance notice, severance pay, and provisions for worker buy-outs.

Unfortunately, law-making on the state level alone is not sufficient and may serve merely to drive corporations out of states with legislative requirements. Moreover, the costs of shutdowns are felt far beyond the local level. Policy making on the national level is undoubtedly the most appropriate. The goal is to provide legislative standards that will eliminate competition among states for corporate start-ups and relocations. In addition, a certain required grace period would be given, because it often takes four or five years to discover whether a plant will become profitable.
By sharing the burdens imposed by closings, we can alleviate their devastating effects on displaced workers and on communities, state public assistance agencies, and general public welfare. We must balance the imperative of corporate profitability with a broader national perspective.
APPENDIX A

Mail Survey of

Former Employees of the ___

Corporation* in Massachusetts

*To ensure the confidentiality of this survey, the name of the company has been eliminated from the Appendix.
SURVEY QUESTIONNAIRE FOR THE
FORMER EMPLOYEES OF
CORPORATION IN
MASSACHUSETTS

GUARANTEE

Your answers on this questionnaire are confidential. No information about any individual will be made available to any agency of government or private organization.

We would appreciate your noting on the back of this form any additional information you believe might be useful to us in our study.

If you have any questions, please feel free to call Lewis Brashares at (617) 253-5227 or 495-3069.

- THANK YOU -
I. PERSONAL DATA

Please supply the following personal data:

1. Age ____

2. Sex: Male ____ Female ____

3. Marital Status (check one)
   Married ____
   Single ____
   Divorced ____
   Widowed ____
   Separated from spouse ____

4. Number of dependents excluding yourself ____

5. Please check educational or training level achieved prior to the shutdown.

   Grade School

   Some High School
   (number of years ____)

   High School graduate

   Apprenticeship
   (number of years ____)

   In what field? ________________________________

   Full-time technical-vocational training
   (excluding apprenticeship or training taken in high school) (number of years ____)

   Was training under the direction of (check those appropriate)

   Armed Forces ____
   CETA ____
   Job Corps ____
   Other federal jobs program ____
   Other ________________________________

   In what field? ________________________________

   Did you receive wages, pay, or a stipend? Yes ____ No ____
Technical-vocational training taken in high school (number of years ___) ___

In what field? __________________________
Some college (number of years ___) ___
College graduate ___

6a. Have you had any additional schooling or training since the shutdown?
    Yes ___ No ___

b. If yes, please indicate the type and duration of the program.
    On-the-job training ___ for ___ months
    Schooling ___ for ___ months
    Apprenticeship ___ for ___ months

7. Please describe the field in which you took training or schooling after the shutdown (e.g.: welding, computer programming, etc.). _________

8. Do you believe the training led directly to your obtaining employment?
    Yes ___ No ___

9. How would you describe your general health now as compared to your condition before the shutdown?
    Better ___
    Same ___
    Worse ___

    Please describe the nature of change in health if one occurred. _______

10a. Do you own your home?
    Yes ___ No ___

b. If no, have you ever owned your own home?
    Yes ___ No ___

11. Approximately, what was your own personal, individual before-tax income from wages, tips, interest, dividends, rents, etc., for the years

    1974 _________
    1977 _________

12. What was your family or household income for the years

    1974 _________
    1977 _________
13. If you searched for employment, did you have trouble finding a job because of any of the following? (Check all appropriate)

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>No difficulties</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Physical disability</td>
<td></td>
</tr>
<tr>
<td>Too little education</td>
<td></td>
</tr>
<tr>
<td>Available jobs too far away</td>
<td></td>
</tr>
</tbody>
</table>

The only jobs available were (are) above your skill level

The only jobs available were (are) below your skill level

No jobs available at all

Offered wages were (are) too

Other: __________________________________________
II. WORK EXPERIENCE

1. What is your present employment situation? (Check one)
   Self employed, full-time ___  Unemployed, seeking employment ___
   Self employed, part-time ___  Unemployed, not seeking employment ___
   Employed, full-time ___  Retired ___
   Employed, part-time ___  Disabled ___
   Other: ____________________________

2. If you are retired, did you retire immediately upon being laid-off at Corporation?
   Yes ___  No ___

3a. What was your last or highest position at before the shutdown? _____

   b. Your gross salary or wage rate (before taxes) was $______ per: (Check one)
      Hour _____  Week _____  Two-Weeks _____  Month _____  Year _____
      Piece _____ (estimate daily output _____)

   c. Average number of hours worked each week? _____

   d. How many weeks did you work in the year before the lay-off? _____

   e. Did you receive any of the following benefits? (Check all appropriate)
      Health Insurance ___  Pension ___
      Sick Leave ___  Disability ___
      Paid Vacation ___  Reimbursement for training or schooling ___

   f. Were you a member of a union at ___
      Yes ___  No ___

   g. If yes, which one? ______________________

4. How long did you work at ____ years ____ months

5a. In addition to your position at , did you have an extra part-time job while you were employed at ___
      Yes ___  No ___

   b. If yes, what was the extra job? __________________________

   c. Hourly wage rate on this outside job? _______

   d. Average number of hours worked at the extra job each week? _______
e. Did you keep this part-time job after the shutdown?  Yes ___  No ___

f. How many hours per week at the outside job after the shutdown?  ___

g. How many weeks per year at the outside job after the shutdown?  ___

6a. Were you invited to transfer to other operations in ?  Yes ___  No ___

b. If yes, did you transfer?  Yes ___  No ___

c. If you were offered the chance to transfer, but chose not to, why did you choose not to transfer?

Could not sell the house  ___

Required a move away from family and friends  ___

New wage offer was not high enough to warrant moving  ___

Other:  ________________________________

d. Did you want to transfer, but were not offered the opportunity to transfer?  Yes ___  No ___

7. Have you moved more than fifty miles since the shutdown?  Yes ___  No ___

8. Have you moved out of the state since the shutdown?  Yes ___  No ___

9. Have you been employed since the shutdown? (Check one)

Continuously  ___

From time to time  ___

Not at all  ___

10. Since the shutdown, how many weeks have you been unemployed?  ___

11a. Did you collect unemployment compensation after the layoff?  Yes ___  No ___

b. If yes, for how long did you collect?  ___ weeks

c. If you collected unemployment compensation, why did you stop? (Check one)

Found a job  ___

Eligibility ended  ___

Other:  ________________________________

12a. Have you received any form of public assistance other than unemployment compensation since the shutdown?  Yes ___  No ___
b. If yes, what forms of public assistance have you received since the shutdown? (Check all appropriate)

<table>
<thead>
<tr>
<th>Assistance Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Stamps</td>
<td></td>
</tr>
<tr>
<td>Housing Allowances</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
</tr>
<tr>
<td>Workman's Disability</td>
<td></td>
</tr>
</tbody>
</table>

Other: ____________________________________________

13a. Was another member of your household (e.g. spouse, children, etc.) working while you were employed at ___?

No
Yes, working full-time ___
Yes, working part-time ___

b. If yes, doing what kind of work? ________________________________

14a. Has another member of the household worked since closed? (Check one)

No
Yes, working full-time ___
Yes, working part-time ___

b. If yes, doing what kind of work? ________________________________

15a. Is another member of your household working now? (Check one)

No
Yes, working full-time ___
Yes, working part-time ___

b. If yes, doing what kind of work? ________________________________
III. EMPLOYMENT SINCE THE ___________ SHUTDOWN

We are interested in your employment history starting from your present or most recent job and working backwards through time. Please provide the information requested on up to four jobs.

NOTE: If you have not had a job since the shutdown, you have finished the questionnaire.

Present or Most Recent Job

a. Employer ____________________________________________

b. Location ____________________________________________

c. Nature of business (for example: construction, auto repair, textile, needle making, etc.) ____________________________________________

d. Your position (for example: lathe operator, weaver, maintenance, etc.) ____________________________________________

e. Your salary or wage rate $ _______ per (Check one)

   Hour _______
   Week _______
   Two-weeks _______
   Month _______
   Year _______
   Piece _______ (estimate daily output ____)

f. Average number of hours worked each week ____________

g. Average number of weeks worked each year ____________

h. Fringe benefits (Check all appropriate)

   Health Insurance _____ Pension _____
   Sick Leave _____ Disability _____
   Paid Vacation _____ Reimbursement for
      training or schooling _____

   Other: ____________________________________________

i. Job is (Check one) Permanent _____

   Temporary _____

   Seasonal _____

j. Held job from ___________ to ___________

   (date) (date)

k. If you are not now employed, please indicate reason for leaving this job. (Check one)

   Quit _____
   Laid-off _____

   Other:
Present or Most Recent Job (Continued)

1. Are (were) you a member of a union on this job? Yes ____ No ____  
   If yes, which one? _______________________________________________________________________

m. Relative to the skill requirements of your job at __________, the skill  
   requirements of this job are (Check one)  
   Higher ____  
   The Same ____  
   Lower ____

n. With which job are (were) you more satisfied? (Check one)  
   Your job at __________  
   This job __________  
   Please indicate the reasons for preference. (Check all appropriate)  
   Wages ____ Conditions ____
   Benefits ____ Nature of Supervision ____
   Hours ____ Interesting Work ____
   Steadiness of work ____ Other ________________

o. How did you find this job? _______________________________________________________________________

p. How many weeks were you unemployed between this and your previous job? ____
Next Most Recent Job

a. Employer

b. Location

c. Nature of business

d. Your position

e. Your salary or wage rate $_________ per (Check one)

   Hour _____
   Week _____
   Two-weeks _____
   Month _____
   Year _____
   Piece _____ (estimate daily output ___)

f. Average number of hours worked each week ______

g. Average number of weeks worked each year ______

h. Fringe benefits (check all appropriate)

   Health insurance _____ Pension _____
   Sick Leave _____ Disability _____
   Paid Vacation _____ Reimbursement for training or schooling _____

   Other: ____________________________

i. Job was (Check one) Permanent _____
   Temporary _____
   Seasonal _____

j. Held job from ________ to ________
   (date) (date)

k. Reason for leaving this job (Check one)

   Quit _____
   Laid-off _____
   Other: ____________________________
Next Most Recent job (Continued)

1. Were you a member of a union on this job? Yes ____ NO ____

If yes, which one? __________________________

m. Relative to the skill requirements of your job at, the skill requirements of this job are (Check one)
   - Higher ____
   - The Same ____
   - Lower ____

n. With which job were you more satisfied: (Check one)
   - Your job at ______
   - This job ______

Please indicate your reasons for preference. (Check all appropriate)

Wages ______ Conditions ______
Benefits ______ Nature of Supervision ______
Hours ______ Interesting Work ______
Steadiness of work ______ Other _________________________

o. How did you find this job? __________________________________________

P. How many weeks were you unemployed between this and your previous job? ______
3rd Most Recent Job

a. Employer ____________________________________________

b. Location ____________________________________________

c. Nature of Business ____________________________________

d. Your position _________________________________________

e. Your salary or wage rate $_________ per (Check one)
   Hour ______
   Week ______
   Two-weeks ______
   Month ______
   Year ______
   Piece ______ (estimate daily output ___)

f. Average number of hours worked each week _____________

g. Average number of weeks worked each year _____________

h. Fringe benefits (check all appropriate)
   Health Insurance ______ Pension ______
   Sick Leave ______ Disability ______
   Paid Vacation ______ Reimbursement for training or schooling ______
   Other: _____________________________________________

i. Job was (Check one) Permanent ______
   Temporary ______
   Seasonal ______

j. Held job from ______ to ______
   (date) ______ (date) ______

k. Reason for leaving this job (Check one)
   Quit ______
   Laid-off ______
   Other: _____________________________________________
3rd Most Recent Job (Continued)

1. Were you a member of a union on this job? Yes ___ No ___

If yes, which one? _______________________

m. Relative to the skill requirements of your job at the skill requirements of this job were (Check one)

Higher ___

The Same ___

Lower ___

n. With which job were you more satisfied: (Check one)

Your job at _____

This job _____

Please indicated your reasons for preference. (Check all appropriate)

Wages ___ Conditions ___

Benefits ___ Nature of Supervision ___

Hours ___ Interesting Work ___

Steadiness of work ___ Other ________________

o. How did you find this job? _____________________________________________

________________________________________

p. How many weeks were you unemployed between this and your previous job? ___
4th Most Recent Job

a. Employer

b. Location

c. Nature of Business

d. Your position

e. Your salary or wage rate $________ per (Check one)
   Hour ______
   Week ______
   Two-weeks ______
   Month ______
   Year ______
   Piece ______ (estimate daily output ___)

f. Average number of hours worked each week ______

g. Average number of weeks worked each year ______

h. Fringe benefits (Check all appropriate)
   Health Insurance ______
   Pension ______
   Sick Leave ______
   Disability ______
   Paid Vacation ______
   Reimbursement for training or schooling ______

   Other: __________________________________________

i. Job was (Check one) Permanent ______
   Temporary ______
   Seasonal ______

j. Held job from ______ to ______
   (date) ______ (date) ______

k. Reason for leaving this job (Check one)
   Quit ______
   Laid-off ______
   Other: __________________________________________
4th Most Recent Job (Continued)

1. Were you a member of a union on this job? Yes ___ No ___

   If yes, which one? ______________________________

m. Relative to the skill requirements of your job at , the skill
   requirements of this job are (Check one)

   Higher ___

   The Same ___

   Lower ___

n. With which job were you more satisfied: (Check one)

   Your job at ___

   This job ___

   Please indicate your reasons for preference. (Check all appropriate)

   Wages ___ Conditions ___
   Benefits ___ Nature of Supervision ___
   Hours ___ Interesting Work ___
   Steadiness of work ___ Other: ____________________________

o. How did you find this job? __________________________________________

p. How many weeks were you unemployed between this and your previous job? ___

- THANK YOU FOR YOUR COOPERATION -

If you wish a summary of the survey results, please include your name and address.

__________________________________________

__________________________________________

__________________________________________
APPENDIX B

Telephone Verification Survey

of Former Employees of the _____

Corporation in Massachusetts

*To ensure the confidentiality of this survey, the name of the company has been eliminated from the Appendix.*
RESPONDENT

PERSONAL INFORMATION

1. What is your age? __________

2. What is your sex (M or F)? __________

3. What was your educational or training level achieved prior to the shutdown?
   High school   yes ___
                 no  ___
   Post high school  yes ___
                  no  ___
   Apprenticeship  ___   Number of years  ___
   Full-time technical-vocational training (excluding apprenticeship or training taken in high school)  ___   Number of years  ___
   Technical-vocational training taken in high school  ___   Number of years  ___
   College     Graduate   yes ___   no  ___

4. Have you had any additional schooling or training since the shutdown?
   yes ___   no  ___

5. If yes, please indicate the type and duration of the program.
   On-the-job training  ___   for  ____ months
   Schooling          ___   for  ____ months
   Apprenticeship    ___   for  ____ months

6. Do you believe the training aided you in obtaining employment?
   yes ___   no  ___
EXPERIENCE AT

1. What was your last or highest position at before the shutdown?

2. Your gross salary or wage rate (before taxes) was $____________ per _______ (hour, week, piece, month, etc.) If piece, estimate daily output ____________.

3. How long did you work at ?

EXPERIENCES AFTER PLANT CLOSING

1. How long were your unemployed after shut down? _____ months

2. Did offer to help you find a new job?

3. How many jobs have you held between the time of the plant closing and September 1978?

4. Did you collect unemployment compensation after the layoff?

5. If yes, for how long did you collect? (In weeks)

6. If you collected unemployment compensation, why did you stop?

   Found a job _____
   Eligibility ended _____
   Other _____
EXPERIENCES AFTER PLANT CLOSING (continued)

7. Have you received any form of public assistance other than unemployment compensation since the shut down?

PRESENT OR MOST RECENT JOB

1. What is your present employment situation?

   Self-employed, full-time ____
   Self-employed, part-time ____
   Employed, full-time ____
   Employed, part-time ____
   Unemployed, seeking employment ____
   Unemployed, not seeking employment ____
   Retired ____
   Disabled ____
   Other ____

2. What is the name, location, and nature of business of your present or most recent employer?

3. What is your position?

4. Your salary or wage rate is $_______ per _________?
5. With which job are (were) you more satisfied?
   Job at
   This job

GENERAL COMMENTS ABOUT THE SHUTDOWN OR YOUR EXPERIENCES AFTERWARDS

1. Is there any additional information that you think might be useful in our study of the shutdown?
APPENDIX C

Differences Between the Mail and Phone Surveys

Table C-1 offers a summary of the results of the telephone verification survey for the major categories of questions asked in both surveys. As pointed out in the text, the major differences are in the length of unemployment subsequent to the shutdown and the higher real earnings of the verification group. Further, the verification group had better experiences with the jobs they held subsequent to the shutdown in that they held them longer and were, on average, more satisfied with the recent positions than they had been with the Acme job.

Commonality of experience, tenure, and earnings at Acme is evident from the responses for both groups, as is their bitterness toward the company for not notifying them early or helping them find new positions or transfers to other Acme plants. Overall, though different on some quantitative measures, the two groups had personal and family reactions that were similar. All of them experienced hardship and economic and psychological loss as a result of the shutdown.
Table C-1: Summary Data from the Telephone Verification Survey (N=17)

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td>39.94 years</td>
</tr>
<tr>
<td>Educational level at time of shutdown</td>
<td></td>
</tr>
<tr>
<td>less than high school</td>
<td>3</td>
</tr>
<tr>
<td>high school</td>
<td>14</td>
</tr>
<tr>
<td>more than high school</td>
<td>8</td>
</tr>
<tr>
<td>Additional training after shutdown</td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>4</td>
</tr>
<tr>
<td>no</td>
<td>13</td>
</tr>
<tr>
<td>Did training aid you in obtaining employment?</td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>2</td>
</tr>
<tr>
<td>no</td>
<td>2</td>
</tr>
<tr>
<td>Length of unemployment since Acme shutdown</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>0-104 weeks</td>
</tr>
<tr>
<td>average</td>
<td>24.18 weeks</td>
</tr>
<tr>
<td>Number collecting unemployment compensation</td>
<td>14</td>
</tr>
<tr>
<td>range</td>
<td>0-65 weeks</td>
</tr>
<tr>
<td>average</td>
<td>24.94 weeks</td>
</tr>
<tr>
<td>Present employment status</td>
<td></td>
</tr>
<tr>
<td>employed full time</td>
<td>16</td>
</tr>
<tr>
<td>employed part time</td>
<td>0</td>
</tr>
<tr>
<td>unemployed</td>
<td>1 (disabled)</td>
</tr>
<tr>
<td>Nature of business of present employer</td>
<td></td>
</tr>
<tr>
<td>private</td>
<td>14</td>
</tr>
<tr>
<td>public</td>
<td>3</td>
</tr>
<tr>
<td>Nominal wage change</td>
<td></td>
</tr>
<tr>
<td>increase</td>
<td>14 (82%)</td>
</tr>
<tr>
<td>decrease</td>
<td>1 (06%)</td>
</tr>
<tr>
<td>no change</td>
<td>2 (12%)</td>
</tr>
<tr>
<td>Number who rate Acme highest in job satisfaction</td>
<td>7</td>
</tr>
<tr>
<td>Average hourly wage rate at Acme</td>
<td>$4.54</td>
</tr>
<tr>
<td>range</td>
<td>$3.89-$6.00</td>
</tr>
<tr>
<td>Average hourly wage rate at present job</td>
<td>$6.08</td>
</tr>
<tr>
<td>range</td>
<td>$4.00-$8.70</td>
</tr>
<tr>
<td>Real average hourly wage rate</td>
<td></td>
</tr>
<tr>
<td>Acme</td>
<td>$4.54</td>
</tr>
<tr>
<td>present or most recent job</td>
<td>$4.92</td>
</tr>
<tr>
<td>Average number of years worked at Acme</td>
<td>4 years 8 months</td>
</tr>
<tr>
<td>range</td>
<td>11 months - 10 years</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


Foltman, Felician F. White and Blue-Collars in a Mill Shutdown. New York State School of Industrial and Labor Relations, Cornell University, April 1968.


---


Wilcox, Mary E. The Displaced Textile Worker: A Case Study. Commonwealth of Massachusetts, Division of Employment Security, Research and Statistics Department, August 26, 1954.
HD28.M414 no. 1080 - 79
Barocci, Thomas/Disinvestment in Massac
737932
D-BKS 00137118
3 9080 001 984 678

HD28.M414 no. 1082 - 79
Van Maanen, Jo/Pathways to membership
737935
D-BKS 00137119
3 9080 001 984 894

HD28.M414 no. 1083 - 79
Williamson, Sc/The moral hazard theory
737939
D-BKS 00137197
3 9080 001 988 515

HD28.M414 no. 1084 - 79
Stocker, Thomas/Statistical aggregation
739540
D-BKS 00135664
3 9080 002 032 156

HD28.M414 no. 1084 - 79A
Von Hippel, Er/ Appropriability of inn
737930
D-BKS 00135687
3 9080 002 032 214

HD28.M414 no. 1085 - 79
Stocker, Thomas/Statistical aggregation
737944
D-BKS 00131981
3 9080 001 988 499

HD28.M414 no. 1087 - 79
Keen, Peter G./Information systems and
737953
D-BKS 00137664
3 9080 002 257 597