



The effectiveness of trade adjustment assistance : a case study
by Diane Pauline Carlson Miller

A thesis submitted in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE
in Applied Economics
Montana State University
© Copyright by Diane Pauline Carlson Miller (1976)

Abstract:

The objective of this study is to determine the effects of the timing of receipt of trade adjustment assistance upon worker adjustment. The specific hypothesis tested is that an adjustment assistance program with an efficient and expeditious system for delivering benefits will be of greater assistance to workers than will be one where long delivery delays occur.

A group of workers who received adjustment assistance within one month of layoff was chosen as the experimental group. Another group of workers in similar circumstances who received adjustment assistance more than one - year after layoff was selected as the control group.

Two multiple regression models were formulated to compare worker adjustment. The first uses present wage as the dependent variable.

The independent variables are age, age squared, sex, education, number of years with the original firm, timing of receipt of benefits and training. Significant results are that present wage is higher for men, wage increases with education and that wages are higher among workers who received assistance shortly after layoff.

The second model uses length of unemployment as the dependent variable. The independent variables are age, age squared, sex, education, wage-earner status, timing of receipt of adjustment assistance, training, and imputed wealth. Significant results are that men and younger workers experience shorter periods of unemployment than do women and older workers. Workers with greater relative wealth positions incur shorter periods of unemployment. Recipients of adjustment assistance shortly after layoff experience longer periods of unemployment while workers who receive adjustment assistance more than one year after layoff incur shorter periods of unemployment.

The primary conclusion of this research is that receipt of trade adjustment assistance shortly after layoff does result in a higher wage upon reemployment than does receipt of trade adjustment assistance as a lump sum or than does receipt of no benefits. However, it must also be concluded that receipt of trade adjustment assistance shortly after layoff does not decrease the length of unemployment but rather increases it. Apparently recipients view the opportunity cost of reemployment as high compared to the benefit although they utilize the benefit to maximize their job search.

STATEMENT OF PERMISSION TO COPY

In presenting this thesis in partial fulfillment of the requirements for an advanced degree at Montana State University, I agree that the Library shall make it freely available for inspection. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by my major professor, or, in his absence, by the Director of Libraries. It is understood that any copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Signature

Quinn P. Miller

Date

March 22, 1976

THE EFFECTIVENESS OF TRADE ADJUSTMENT ASSISTANCE:

A CASE STUDY

by

DIANE PAULINE MILLER

A thesis submitted in partial fulfillment
of the requirements for the degree

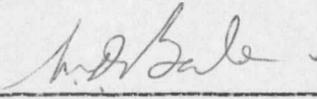
of

MASTER OF SCIENCE

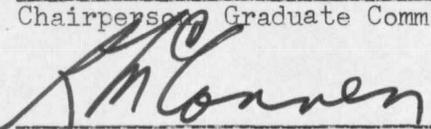
in

Applied Economics

Approved:



Chairperson, Graduate Committee



Head, Major Department



Graduate Dean

MONTANA STATE UNIVERSITY
Bozeman, Montana

March, 1976

ACKNOWLEDGEMENTS

I would especially like to acknowledge the help of the head of the graduate committee, Dr. Malcolm Bale, who gave constant support and guidance to this research as well as reading all previous drafts and offering constructive criticism on them. Thanks also go to the other members of the graduate committee, Dr. Terry Anderson and Professor Maurice Taylor who gave several helpful additions and clarifications to the final draft. Special thanks go to Dr. Jon Christianson who provided much helpful advice on dealing with the econometric models and tests in this study. I would also like to thank Dr. Ken Tiahrt of the Mathematics Department who helped to put the questionnaire in a codifiable form.

This work was financially supported by the Manpower Administration, U.S. Department of Labor, under Grant Number 91-30-74-26.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF TABLES	v
Chapter	
1. INTRODUCTION	1
Background to International Trade	1
Background to Adjustment Assistance	5
The Rationale for Adjustment Assistance	7
2. SURVEY OF THE LITERATURE	10
3. STATEMENT OF THE PROBLEM	15
4. CHARACTERISTICS OF THE SAMPLE WORKERS AND SURVEY METHOD	17
The Sample Case	17
The Control Group	18
The Survey Method	19
Notes on the Survey Method	21
Characteristics of the Sample	22
5. SPECIFICATION OF THE MODELS	29
The Present Wage Model	29
The Length of Unemployment Model	32
6. RESULTS	36
The Present Wage Model	36
Further Tests	39
The Length of Unemployment Model	47
Other Regressions	51
7. CONCLUSIONS AND RECOMMENDATIONS	53
Conclusions	53
Policy Recommendations	55
APPENDIX A	56
APPENDIX B	65
BIBLIOGRAPHY	68

LIST OF TABLES

4.1	Age and Sex Characteristics of the Sample	22
4.2	Age and Sex Distributions for Maine Shoe	23
4.3	Age and Sex Distributions for Uniroyal	23
4.4	Education Level of the Sample	24
4.5	Wage-Earner Status and Sex of the Sample	24
4.6	Receipt of TRA by Sex	26
6.1	Present Wage Model	36
6.2	Present Wage Model: Women Only	41
6.3	Present Wage Model: Men Only	42
6.4	Present Wage Model: Uniroyal	44
6.5	Present Wage Model: Maine Shoe	46
6.6	Length of Unemployment Model	49
B.1	Present Wage Model: Currently Unemployed at Zero Wage	66
B.2	Present Wage Model: Currently Unemployed Excluded	67

ABSTRACT

The objective of this study is to determine the effects of the timing of receipt of trade adjustment assistance upon worker adjustment. The specific hypothesis tested is that an adjustment assistance program with an efficient and expeditious system for delivering benefits will be of greater assistance to workers than will be one where long delivery delays occur.

A group of workers who received adjustment assistance within one month of layoff was chosen as the experimental group. Another group of workers in similar circumstances who received adjustment assistance more than one year after layoff was selected as the control group.

Two multiple regression models were formulated to compare worker adjustment. The first uses present wage as the dependent variable. The independent variables are age, age squared, sex, education, number of years with the original firm, timing of receipt of benefits and training. Significant results are that present wage is higher for men; wage increases with education and that wages are higher among workers who received assistance shortly after layoff.

The second model uses length of unemployment as the dependent variable. The independent variables are age, age squared, sex, education, wage-earner status, timing of receipt of adjustment assistance, training, and imputed wealth. Significant results are that men and younger workers experience shorter periods of unemployment than do women and older workers. Workers with greater relative wealth positions incur shorter periods of unemployment. Recipients of adjustment assistance shortly after layoff experience longer periods of unemployment while workers who receive adjustment assistance more than one year after layoff incur shorter periods of unemployment.

The primary conclusion of this research is that receipt of trade adjustment assistance shortly after layoff does result in a higher wage upon reemployment than does receipt of trade adjustment assistance as a lump sum or than does receipt of no benefits. However, it must also be concluded that receipt of trade adjustment assistance shortly after layoff does not decrease the length of unemployment but rather increases it. Apparently recipients view the opportunity cost of reemployment as high compared to the benefit although they utilize the benefit to maximize their job search.

CHAPTER 1

Introduction

Background to International Trade

The theory of comparative advantage, originally formulated by David Ricardo in 1815, is one of the oldest economic theories still intact. Applied to international trade, the theory of comparative advantage states that countries will gain by trade as long as the ratios of their production costs differ. This can be seen by examining the labor costs of producing fuel and food in countries A and B with the following labor costs:

	1 unit of fuel	1 unit of food
Country A	60 man-hours	90 man-hours
Country B	120 man-hours	100 man-hours

It can be seen that Country A has an absolute advantage in the production of both goods: it costs less for Country A to produce one unit of fuel or one unit of food than it costs for Country B to produce them.

To produce one unit of fuel, Country A gives up $60/90 = .67$ units of food. It costs Country B $120/100 = 1.2$ units of food to produce one unit of fuel. Country A is the lower cost producer of fuel and is said to have a comparative advantage in its production.

Country A gives up $90/60 = 1.5$ units of fuel to produce one unit of food. On the other hand, Country B gives up $100/120 = .83$ units of fuel to produce one unit of food. Country B gives up less units of fuel to produce one unit of food than Country A does. Country B thus has a comparative advantage in the production of food even though Country A has the absolute advantage.

If Country A can import one unit of food for less than 1.5 units of fuel, it will gain by trading. If Country B can import one unit of fuel for less than 1.2 units of food, it too will gain from it. By pursuing their respective comparative advantages, both countries can gain by trading. As long as the labor costs of production remain constant, the final result will be that Country A produces only fuel while Country B produces only food provided that each country has sufficient production capacity to supply the other's needs.

The widespread acceptance of the theory in this application has led a majority of economists to advocate freer trade as a desirable goal. It should be noted that the theory concerns itself with the economic welfare of the nation as a whole: it says nothing about the distributional effects of freer trade upon segments of the society.

The western world and many developing countries have been moving in the direction of freer trade since World War II. In 1944 an organization called the International Trade Organization was envisioned as a vehicle for bringing about a world of free trade. A charter was drawn

up but was never ratified by any country so the organization was never established. Instead several nations banded together in 1947 to form the General Agreement on Tariffs and Trade (GATT), an organization designed for group negotiations by member nations on trade policy. There are now more than seventy nations in GATT, two-thirds of which are developing nations. Negotiations sponsored by GATT to reduce tariffs were held in 1947, 1949, 1951, 1956, 1963 and another round is currently under way in Geneva.¹

In 1953 the U.S. Congress passed a one year extension of the Reciprocal Trade Agreements Act. President Eisenhower appointed a presidential commission to study aspects of foreign trade and to make policy recommendations to Congress. Among the staff papers published by the commission, was a proposal by David J. McDonald, the only labor representative on the commission. His proposal presented a novel approach to the problem of firms, communities and workers injured by tariff reductions and the subsequent increase in imports which he called adjustment assistance. He preferred technical assistance to affected firms to increase efficiency or to help them adjust by expanding into different product lines. Realizing that this would not always be feasible, he suggested community assistance. As a last resort, he advocated direct assistance to the impacted workers. Although

¹Bo Södersten, International Economics, Harper & Row, New York, Evanston, London, 1970, pp. 398-402.

his position was the minority one on the commission, the publication of his paper brought the idea of adjustment assistance to the attention of the public. His paper recognized the distributional effects of trade liberalization and offered proposals to rectify them.¹

These proposals were later incorporated into the trade bill proposed by President Kennedy in 1962. The purposes of the Trade Expansion Act (TEA) were: 1) to stimulate the economic growth of the U.S. and maintain and enlarge foreign markets for the products of U.S. agriculture, industry, mining and commerce; 2) to strengthen economic relations with foreign countries through the development of open and non-discriminatory trading in the free world; and 3) to prevent Communist economic penetration.² The Act granted the president the power to: 1) reduce tariffs on all commodities by up to 50%; 2) reduce tariffs by up to 100% on commodities which the U.S. and Common Market countries account for 80% of the world trade; and 3) eliminate tariffs of less than 5% on tropical goods if the Common Market countries did likewise. The passage of the TEA initiated a round of tariff negotiations under GATT auspices called the Kennedy Round. It was in progress from 1963-1967. The end result was an arithmetic average tariff reduction of

¹J. E. McCarthy, "Trade Adjustment Assistance: A Case Study of the Shoe Industry in Massachusetts," unpublished Ph.D. dissertation, Fletcher School of Law and Diplomacy, Tufts University, 1974.

²U.S. Congress, House, Trade Expansion Act of 1962, Pub. L. 87-794, 87th Congress, 1962, H.R. 11970, p. 1.

about 30% for GATT members.¹

Background to "Adjustment Assistance"

Protectionist strength in the U.S. was strong in 1962 before President Kennedy proposed the TEA. Labor leaders, concerned with the employment of their union members and aware of the distributional effects of freer trade, tended to be against the liberalization of trade. The subsequent passage of the bill was partly due to Kennedy's incorporation of trade adjustment assistance in the bill--an inclusion which gained labor support for the bill. As Kennedy explained it, the emphasis was to be on adjustment rather than on assistance. The bill provided for both firm and worker assistance. Worker assistance was of three types. 1) weekly cash allowances: the worker was to be paid an amount equal to 65% of his average weekly wage or 65% of the average manufacturing wage, whichever was less, for any week that he was unemployed. This allowance made up the difference between any weekly state unemployment security benefit and the guarantee. Benefits were paid for fifty-two weeks with a possible twenty-six week extension for workers enrolled in training courses before the end of the fifty-two week period or a thirteen week extension for workers who were sixty years of age before the date of total or partial separation. 2) training, counseling, testing and placement services: any of these services

¹Södersten, op. cit., pp. 402-409.

available under any other act were to be made available to trade impacted workers. 3) relocation allowances: heads of families who could not find suitable employment within a reasonable distance of their residence and who had secured a job or offer of a job in another area could receive assistance in moving. The actual benefit was the reasonable and necessary moving expenses as defined by the Secretary of Labor and a lump sum benefit equal to two and one-half times the average weekly manufacturing wage.¹

In order to qualify for assistance, the union or other worker representative filed an application with the Tariff Commission. The commission then determined "whether, as a result in major part of concessions granted under trade agreements, an article is being imported into the United States in such increased quantities as to cause, or threaten to cause, serious injury to the domestic industry producing an article which is like or directly competitive with the imported article."² The Tariff Commission then submitted its findings to the President. If the findings were affirmative or if there was a tie, the president could refer the report to the Department of Labor who determined individual worker eligibility. Workers were then notified by their state employment security office to apply for adjustment assistance.³

¹Ibid., pp. 21-25.

²Ibid., p. 13.

³Ibid., pp. 12-15.

The Rationale for Adjustment Assistance

The theoretical bases for adjustment assistance are based upon human capital theory and equity considerations.

Human capital theorists^{1,2} argue that unemployment causes human capital in the form of skills and productive abilities to be removed from the society's total productive capabilities. This causes society to operate inside its production possibilities frontier. In addition, unemployment causes a deterioration in skills and productive abilities. Adjustment assistance on this basis is given to reduce the costs to the worker of seeking reemployment on the assumption that the benefits to society of utilizing his full productive capabilities will outweigh the costs of the assistance program.

A second basis for assistance concerns the distributional aspects of trade liberalization and the equity considerations of the distribution. The Hecksher-Ohlin theorem states that a country will export those goods which use the country's relatively abundant factor of production intensively and import those goods which are produced primarily by the country's scarce factor of production. Stolper and Samuelson have shown that a reduction of a tariff results in a redistribution of national income in favor of the owners of the abundant factor of

¹Theodore W. Schultz, Investment in Human Capital: The Role of Education and of Research, the Free Press, New York, 1971, p. 43.

²Gary S. Becker, "Investment in Human Capital: A Theoretical Analysis," Journal of Political Economy, 70 (October 1962):9-49.

production. Owners of the relatively scarce factor of production receive absolutely as well as relatively less income expressed in terms of any good.¹ Thus trade liberalization results in a redistribution of income among factors of the economy and the scarce factor of production receives a smaller piece of an enlarged pie. Generally labor is thought to be the scarce factor of production in the U.S. while capital is considered the abundant factor. Cheh² indicated that unskilled labor can be considered the scarce factor while skilled labor the abundant factor. Adjustment assistance on these grounds is summed up by Stolper and Samuelson as follows:

"... it has been shown that the harm which free trade inflicts upon one factor of production is necessarily less than the gain to the other. Hence, it is always possible to bribe the suffering factor by subsidy or other redistribution devices so as to have all factors better off as a result of trade."³

Freer trade increases the economic well-being of society as a whole. The federal government then collects taxes from all segments of the economy and then transfers some funds to the injured factors in the form of adjustment assistance. If the compensation is sufficient, all

¹Wolfgang F. Stolper and Paul A. Samuelson, "Protection and Real Wages," Readings in the Theory of International Trade, ed., Howard S. Ellis, Lloyd A. Metzler, The Blakston Co., Philadelphia & Toronto, 1949, pp. 333-345. Reprinted from Review of Economic Studies, 9 (Nov. 1941).

²John H. Cheh, "United States Concessions in the Kennedy Round and Short-Run Labor Adjustment Costs," Journal of International Economics, 4 (1974):323-340.

³Stolper and Samuelson, op. cit., p. 357.

members of society will be as well or better off than they were before.

Proper redistribution can become a Pareto-optimal move.

CHAPTER 2

Survey of the Literature

Since the enactment of the Manpower Development and Training Act of 1965, there have been numerous studies dealing with the effectiveness of government retraining programs and manpower policy. Two sources which survey the literature are Cost Benefit Analysis: Theory and Applications to Manpower Training Programs¹ and "Benefit Cost Analysis of Occupational Training Programs: A Comparison of Recent Studies."² More recently contributions have discussed the theoretical backbone and methodological issues.³

Research on trade adjustment assistance is scarce. Although the TEA was passed in 1962, the first petition accepted by the Tariff Commission was in November 1969, seven years after the passage of the Act. Thus 1973 was about the earliest that meaningful effects could be observed. Interest in adjustment assistance grew with the introduction

¹U.S. Dept. of Labor, Cost Benefit Analysis: Theory and Application to Manpower Training Programs, May 1971.

²Einar Hardin, "Benefit Cost Analysis of Occupational Training Programs: A Comparison of Recent Studies," in Cost Benefit Analysis of Manpower Policies, G.G. Somers and W.D. Wood, Eds., University of Wisconsin, 1969.

³Glen G. Cain, "The Challenge of Dual and Radical Theories of Labor Market to Orthodox Theory," American Economic Review, 65 (May 1975): 16-22.

of a new trade bill, the Trade Act of 1974, which made it easier for workers to receive adjustment benefits.

The first comprehensive study on trade adjustment assistance was completed by Bale¹ in 1973. In that study a sample of 350 trade displaced workers from twelve firms in five industries were studied. Bale postulated four models to quantify the adjustment/re-employment process. The four dependent variables in his regression models are: 1) change in wage; 2) present wage; 3) number of days unemployed; and 4) percentage of days unemployed between impact and interview. These variables were regressed on several independent variables including past wage, sex, age, education, race, wage-earner status, number of years with the old firm, the unemployment rate in the town of residence and the available adjustment assistance programs offered.

The study produced several interesting findings. The socio-economic characteristics of trade-displaced workers were identified and found to be different from those obtained from national data. A higher proportion of workers were women, the duration of unemployment was longer, displaced workers were older and employed in traditional "old technology" industries than are similar workers in the national labor force. Perhaps the most significant finding of the study was that adjustment assistance had not been effective in rehabilitating displaced

¹Malcolm D. Bale, "Adjustment to Freer Trade: An Analysis of the Adjustment Assistance Provisions of the Trade Expansion Act of 1962," unpublished Ph.D. dissertation, University of Wisconsin, 1973.

workers. The explanation advanced for this finding was the long delay (averaging 54.5 weeks) between workers being laid off and receiving adjustment benefits. It was thought that most workers except those least able to adjust had found alternate employment before they were found eligible for adjustment assistance.

Pursell, Schriver and Bowley¹ studied the effects of trade adjustment assistance upon 397 workers laid off from an RCA electronics plant in Memphis in 1970. They formulated ordinary least squares regression models for the very short run, short run and long run. The very short run model used employed or unemployed as the dependent variable and age, sex, education, skill, previous work experience, race, and employment status of other members of the household as the independent variables. The short run model was the same as the very short run model except that training was added as an extra independent variable. The two long run models used information from approximately two years after the closing date of the firm. The first used duration of unemployment as the dependent variable. The second model used weeks of economic activity (employed or actively seeking work) as the dependent variable. Impacted workers were compared to a group of workers unemployed in the same area at the same time but who did not receive any

¹Donald F. Pursell, William R. Schriver, Robert Bowlby, Trade Adjustment Assistance: An Analysis of Impacted Worker Benefits on Displaced Workers in the Electronics Industry, Contract No. ILAB 73-7, United States Dept. of Labor, undated.

adjustment assistance benefits.

Among the major findings of this study were that long run adjustment of workers receiving benefits was not as satisfactory as those not receiving benefits. The workers receiving assistance tended to be unemployed longer than workers in the control group although part of this time could be attributed to unemployment during training. Training aided occupational mobility but had little influence upon earnings. Nothing was found to confirm that adjustment assistance aided a worker's job search procedure. Significant factors in reemployment tended to be sex, race, skill level and education rather than the variables associated with adjustment assistance. The workers in this study received benefits six months after layoff: twenty percent of the sample were reemployed at that time.

McCarthy¹ studied the effects of trade adjustment assistance on 101 workers displaced from twelve Massachusetts shoe firms. His four regression models used the following dependent variables: 1) number of weeks of unemployment; 2) number of weeks of benefits collected; 3) change in wage between pre-impact wage and wage of the first job; and 4) change in wage between pre-impact wage and the current wage.

McCarthy's results show that men adjusted more easily than women while older workers suffered more difficulty in adjustment. Training, especially on-the-job training, had positive effects upon wage level in

¹McCarthy, op. cit.

this study. Workers given advance notice of an impending layoff were better able to adjust because they had time to think about future plans.

These three studies are the major ones completed on the effects of trade adjustment assistance on workers. A related paper by Bale and Mutti¹ presents a four equation simultaneous model of trade adjustment under various conditions. Their estimates show that under pessimistic conditions in the domestic and foreign markets, unemployment in the affected domestic industry will decrease. Under normal or optimistic conditions, employment in the affected industry will increase. Using two averages for duration of unemployment, they then estimated the costs of providing adjustment assistance to the shoe industry over a ten year period to be between 29 and 164 million dollars depending on economic conditions. Mutti's² work also presents a theoretical analysis of the impacts (both positive and negative) of foreign trade on employment and welfare. His analysis indicated that even when unemployment costs are netted out, trade liberalization is beneficial to society.

¹Malcolm D. Bale and John H. Mutti, "Predicting Labor Market Adjustments to International Shocks," unpublished staff paper, Montana State University, 1975.

²J. H. Mutti, "The Employment and Welfare Effects of Foreign Trade Policy," unpublished Ph.D. dissertation, University of Wisconsin, 1974.

CHAPTER 3

Statement of the Problem

One of the severest deterrents to freer trade has been considerations of the domestic disruption that results during the adjustment to a new equilibrium. A decrease in protection generally results in a fall in the price of the imported good with resulting cutbacks, closures and unemployment among domestic import-competing producers and workers. Even in the United States where imports account for only 5% of national product, this has been a politically sensitive issue. Businessmen in the industries involved and labor leaders who are understandably more interested in their members' production opportunities than they are with possible benefits of freer trade to their members as consumers¹ have opposed measures to liberalize trade. The costs to affected producers and workers of freer trade may well be large and concentrated while the benefits to individual consumers are small and diffuse. This has historically resulted in an asymmetry in lobbying efforts for and against freer trade: producers and labor groups are far better organized to lobby for protection than consumer groups are for freer trade.

Due partially to these considerations, trade adjustment assistance

¹George H. Hildebrand, "Excerpts from Papers Presented to the Twenty-fourth Annual Meeting of the Industrial Relations Research Association, December 27-28, 1971," Monthly Labor Review, April 1972, p. 707.

provisions were included in the TEA. These provisions were regarded by politicians, businessmen and labor leaders as an efficient method of dealing with domestic disruptions resulting from freer trade.

The previous work on the trade adjustment assistance provisions cited in the survey of the literature has indicated that trade adjustment assistance has not been effective in worker adjustment. One of the possible reasons advanced for this finding was that workers became eligible for adjustment assistance so long after layoff that most had already found alternate employment. Those who received assistance were those who were least able to secure another job and the implication is that even with assistance they did not adjust as well as those who adjusted on their own.

The question this study attempts to deal with is whether prompt receipt of adjustment assistance upon layoff results in better adjustment than receipt of adjustment assistance after a long delay. The effectiveness of the adjustment assistance provisions upon workers who received assistance promptly, workers who received assistance after a long delay, and workers who did not receive assistance will be compared. The specific hypothesis to be tested is that an adjustment assistance program with an efficient and expeditious delivery system for allocating benefits will be of greater benefit to workers than will be one where long delivery delays occur.

CHAPTER 4

Characteristics of the Sample Workers and Survey Method

The Sample Case

An atypical experience with adjustment assistance was that of workers formerly employed by Uniroyal, Inc., a rubber footwear plant located in Woonsocket, R.I., a town of 46,820 in 1970. The workers are atypical in that they received adjustment assistance shortly after lay-off. Several factors combined to make their case different. First, hints that the plant was considering closure began in early 1967. The official announcement that the plant would close the following year came on August 18, 1969.¹ Actual layoffs began on April 3, 1970.

Secondly, the union representing the workers (United Rubber, Cork, Linoleum, and Plastic Workers of America, AFL-CIO) acted quickly to submit a petition to the Tariff Commission on February 19, 1970. This early action resulted in the petition being approved on April 20, 1970, very shortly after initial layoffs.^{2,3}

¹Jane Mayerson, "The Trade Expansion Act: An Untapped Resource for Middle-Aged and Older Workers," Industrial Gerontology, Spring 1972, pp. 36-38.

²Ibid., p. 39.

³U.S. Congress, House, "Statement of John H. Campbell, Associate General Counsel, United Rubber, Cork, Linoleum, and Plastic Workers of America, AFL-CIO," Hearings before the Subcommittee on Foreign Economic Policy, Committee on Foreign Affairs, 92nd Congress, 2nd session, 1972, pp. 370-1.

Thirdly, the Rhode Island State Department of Employment Security, aware of the impending influx of unemployed persons in Woonsocket, familiarized themselves with the provisions of the TEA. Three staff members were transferred to Woonsocket to assist in the reemployment process for the workers. Ms. Mary C. Hackett, Director of Employment Security in Rhode Island reported that of the 906 former employees of Uniroyal who filed for adjustment assistance, 738 received individual counseling. Training programs were begun by 287 workers with 207 workers completing their training. Thirty-five workers were still in training at the time of the report and only forty-five had dropped out.^{1,2}

The workers were laid off five years ago. This allows sufficient time for the longer-range effects of trade adjustment assistance to be detected.

The Control Group

Six months prior to the closing of the Uniroyal plant in Woonsocket, Maine Shoe in Brunswick, Maine closed laying off 367 workers. These workers received more typical trade adjustment assistance. Due to delays, receipt of benefits was more than one year after layoff and the workers received their trade readjustment allowance (TRA) as a lump

¹Mayerson, op. cit., pp. 43-45.

²U.S. Congress, House, "Statement of John H. Campbell. . .", op. Cit., pp. 372-3.

sum payment. No training programs were offered. This seemed to be an appropriate control group because the product produced was similar, the plants closed at about the same time, the employment structures in the two towns are similar, the plants were located in the same geographic area (New England), and the population of the Brunswick-Bath area was 22,225 in 1970.

The Survey Method

A ten percent random sample of workers at Uniroyal, Woonsocket, was obtained from Ms. Mary Hackett, Director of Employment Security for the state of Rhode Island. A twenty percent random sample was taken of a list of 367 workers employed and working on the impact date at Maine. The twenty percent sample was taken to make the samples from the two firms of similar size. The sample size for Uniroyal workers was seventy while that for Maine Shoe workers was seventy-six.

A preliminary letter explaining that a telephone interview would be conducted and the nature of the questions to be asked was sent to each person in the sample at the address given in the lists. Prior to mailing, the names were checked in local phone books and a postcard was included in letters addressed to persons without a phone number at the address given in the lists. These postcards were stamped and provided a place for the respondent to indicate his or her phone number or whether they would be willing to answer a questionnaire mailed to them.

Those workers who had phones listed in the phone books were

surveyed. The survey form used was a modified version of the form used by the Bureau of International Labor Affairs, United States Department of Labor in a field survey conducted in February 1972. The form included in Appendix A. Of the sixty-six persons contacted by phone, forty-six completed the survey, six completed the survey but had retired or were no longer in the labor force, two were deceased, one couldn't remember, one had joined the service after impact but before layoff and ten refused the survey. Five others were sick, out of town for the summer, had moved, or were not contacted after repeated tries. These workers were sent mailed questionnaires.

In addition to workers who returned their postcards responding that they would answer a mailed questionnaire, all workers who did not return their postcards but whose letters were not returned indicating a correct address were mailed questionnaires. In total, forty-seven questionnaires were mailed and twelve were returned. Of these twelve, two had retired and one was excluded from the sample because adjustment assistance had been received in 1974 rather than in 1970-1 as had the other workers in the sample.

Either by phone or by mail, 77.4% of the sample was contacted with 69.0% of these responding. After excluding retired workers and others as explained above, the sample consisted of fifty-five workers.

Four female respondents not currently employed but considering themselves part of the labor force are in the sample. They have been

assigned an imputed average wage to housewives as derived by Gronau¹ and adjusted to June 1975 by the manufacturing hourly compensation index.

Notes on the Survey Method

Complete reliance upon telephone and mailed surveys was necessitated by the destruction of all employment service records in the state of Rhode Island after a two year period and the reluctance of the U.S. Department of Labor to release information concerning workers receiving trade adjustment assistance even though they have funded this research. It should be noted at the outset that the surveys are subject to response error--the questionnaire called for information on events which occurred five years ago. For this reason the analysis will not use the dollar amounts or the length of time benefits were received given by the respondents but simply whether or not they received trade adjustment assistance in the form of weekly payments, a lump sum payment or training.

It should also be noted that 22.6% of the sample were never contacted. Their initial letters were returned and their names did not appear in local phone books. Presumably many of these have relocated. This will produce a bias in the results of this research. The workers could have been unable to find any employment in the community of their

¹Reuben Gronau, "The Intrafamily Allocation of Time: The Value of the Housewives' Time," American Economic Review, 62 (Sept. 1973): 634-651.

residence and had to accept employment elsewhere at a wage below what they had received prior to layoff. On the other hand, workers could have received offers of higher pay in other communities that enticed them to leave their pre-layoff communities. In either case, a bias will be present. A high proportion of the sample was women and many of the workers unlocated may have been women who relocated following their spouses. No workers were located who had received the relocation allowances provided under the TEA so it is not known if any of these workers were able to take advantage of it.

Characteristics of the Sample

Of the fifty-five workers in the sample, the majority are women as has been the case in other studies of shoe workers. Women comprise 60% of this sample. The average age of the sample members is 44.4 years. Thirty-three persons (60%) are over the age of forty-five.

TABLE 4.1
Age and Sex Characteristics of the Sample

Age	Male	Female	% of total
26-35	7	3	18.2
36-45	6	7	23.6
46-55	8	20	50.9
56-65	1	3	7.3

Breaking the sample down into experimental group and control group reveals that the composition by sex is essentially the same as

for the entire sample: 57.1% are female among Maine Shoe workers while 63.0% of former Uniroyal workers are women. The age distributions are different for the two firms with the average age for Maine Shoe workers being 42.3 years and that for Uniroyal workers being 46.7 years.

TABLE 4.2
Age and Sex Distributions for Maine Shoe

Age	Male	Female	% of Maine Shoe Workers
26-35	7	1	28.6
36-45	4	5	32.1
46-55	1	8	32.1
56-65	0	2	7.1

TABLE 4.3
Age and Sex Distributions for Uniroyal

Age	Male	Female	% of Uniroyal Workers
26-35	0	2	7.4
36-45	2	2	14.8
46-55	7	12	70.4
56-65	1	1	7.4

The average education level for the sample was 10.8 years. Formal education only was measured in this study. Maine Shoe workers averaged 10.1 years while Uniroyal workers averaged 11.6 years. About half the sample have completed high school. As can be seen in Table 4.4, the majority of the Uniroyal workers have completed high school while the education level of Maine Shoe workers is dispersed.

Respondents were asked whether they were the primary or secondary

