The report highlights policy implications of research conducted on formal and informal labor market information systems and the disadvantaged. Policy implications are developed at the end of each of eight sections reviewing studies in the areas of: insurance, an inner-city training program, newspaper ads, the Job Bank system, immigrant labor, criminal participation in an age-work adjustment framework, the early labor market experience of young men, and a special type of disadvantaged, unemployed aerospace engineers. The report concludes with a summary of policy recommendations for the disadvantaged in the areas of: the development of informal information networks; the need for support systems in the internal labor market of firms; the need for help from short-run formal labor market information systems; improved access by way of the Job Bank to available entry level jobs; further immigration to fill low-wage jobs; education and employment opportunities to help young people avoid arrest and imprisonment and better work training programs in prisons; improved employer-designed job-enrichment efforts or more demanding first jobs; and, for displaced professionals, improved manpower programs, counseling, and job development. Appendixes list the Massachusetts Institute of Technology and Harvard studies referred to in the report. (NH)
MANPOWER POLICIES AND THE DISADVANTAGED

A Summary Report on Labor Market Information Systems and the Disadvantaged, with emphasis on Policy Implications

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This report was prepared under a contract with the Manpower Administration, U. S. Department of Labor, under the authority of the Manpower Development and Training Act. Researchers undertaking such projects under the government's sponsorship are encouraged to express their own judgment. Interpretations or viewpoints stated in this document do not necessarily represent the official position or policy of the Department of Labor.
Introduction

Two final reports are submitted in fulfillment of the obligation to complete the research contract on "Labor Market Information Systems and the Disadvantaged." Research by staff and graduate students in Economics and Management began at M.I.T. in June 1971 and continued through September 30, 1974, with a 15-month extension of the original two-year contract without additional funds. A longer report, Labor Market Information Systems and Manpower Analysis, has been prepared by Professor James E. Annable, Jr., drawing on some of his own research under the contract, as well as other M.I.T. studies and related research by other scholars elsewhere.

Annable's report is analytical, using a four-fold classification of labor market activities: (1) long-run external labor market activities, including occupational choice by individuals and manpower planning by firms/organizations, (2) short-run external activities such as job seeking by individuals and employee seeking by firms, (3) short-run internal activities including on-the-job behavior by individuals and by their supervisors, and (4) long-run internal labor market activities such as internal job progress by individuals and internal labor-force allocation by the firm. These categories obviously merge into each other, but are useful analytically for Annable's purposes. These were two-fold: (1) to identify all information-based barriers to equal employment opportunity, and (2) to use this specification of problems to suggest remedial programs.

While there may be some overlap between the two final reports, the purpose of the present shorter paper is to highlight the policy
implications of our research. Some brief reference to the research on which recommended manpower policies are based will be necessary, but since the separate studies have been submitted orally and in most cases in final written form to the Manpower Administration, only the citations will be listed. The studies under a subcontract to Harvard University will not be included in this report, as they have been reported separately.

Findings and Policy Implications of M.I.T. Research

1. The predominance of informal short-run labor market information systems is well established by prior local labor research, by Annable’s study of a number of Boston area insurance firms (1972), Allen’s study of job finding by unemployed aerospace engineers (1972), and Toney’s study of the employment of black professionals in the Boston labor market (1972). Annable’s insurance sample of 490 employees over the period 1961-71 showed that 35 percent of those holding clerical jobs found them through informal methods (24 percent friends and relatives), and 72 percent of those holding semi-skilled or unskilled jobs found them through the same informal methods (48 percent friends and relatives). The formal network most used was school referrals, followed by newspaper advertisements. Relatively little use was made of the public employment service.*

*For further detail on Annable’s findings, see his longer paper, Labor Market Information Systems and Manpower Analysis. The relative emphasis on informal labor market information networks contrasts with the reported use of job-search methods by unemployed jobseekers queried in the Current Population Survey concerning what the respondent who looked for work did to find work. Thomas F. Bradshaw, "Statistics on Jobseeking Methods," Employment and Earnings (U.S. Department of Labor, vol. 19, no. 44, May 1973, pp. 7, 32 (tables). Data were to be reported monthly; the first tables showed that applying to "employer directly" was mentioned most frequently, followed by "public employment agency," "placed or answered ads," and "friends and relatives." Non-whites tended to say they used the public employment service more frequently than did whites. These data, however, say nothing about how unemployed workers founds jobs.
These findings were somewhat consistent with data Annable secured for the insurance industry as a whole: 292 Life Insurance Home Offices, 1969. Here, the most effective recruiting sources reported by the firms were, in order: (1) employment agencies, largely private; (2) friends of employees; (3) newspapers and radio, and (4) voluntary applications. The presence of more formal methods (1) and (3) is perhaps significant. Toney also found that private firms recruiting black professionals in Boston used private employment agencies most frequently, and employees in the company next. But for all black placements (including private non-profit, community organizations, hospitals, and public schools) Toney concluded that jobs were most frequently found through "friends and relatives" (30 percent), direct application or appointment via Civil Service (20 percent), and through employees in the organization (20 percent). Only 13 percent found jobs of all types through private employment agencies, 5 percent through newspaper ads, and less than 2 percent through public employment offices. In Allen's sample of laid-off aerospace engineers, the successful job finders used the following: referrals by friends and relatives (30 percent), direct application (20 percent), newspaper ads (11 percent), and previous employer (5 percent). Others were scattered; the California state employment service and the Los Angeles LINC office combined were effective for only 1.5 percent of the successful job-finders.

2. The policy implications of these findings are clear. Job seekers with labor market disadvantages and non-whites in particular, will be handicapped in finding jobs unless there are already some "friends and relatives" employed in the firm or organization. These informal labor market information networks not only provide information on where jobs might be found; they also supply
qualitative job information not usually available through formal methods, such as the nature of supervision, working conditions, informal group relationships, the possibility of promotion, etc. Public policies are properly directed, as they have been more recently, to bringing pressures on firms and organizations to employ larger percentages of minorities, so that a "critical mass" will be developed to provide the informational network now used predominantly by the majority white employee group. It is also important that "role models" of minority employees who have been promoted be established. Minority applicants who stay on low-skilled entry level jobs indefinitely tend to leave; they need the prospect of better jobs in the future to overcome their suspicion, reinforced by prior ghetto labor market experiences, that "they will never make it in whitey's world."

3. These generalizations are supported by a major study undertaken by Leonard Davidson as a part of our research, The Process of Employing the Disadvantaged (1973). This was a participant-observation study of an inner-city training and orientation program (T.O.P.) established by a large Boston-area firm (Deeco) to move minority "graduates" into jobs in several plants. Davidson followed sixteen of the program graduates and their supervisors during the first six months of employment, and observed and interviewed a cross-sectional group of 25 additional graduates and their supervisors while on the job six months to four years. Data on 515 program participants were analysed separately. The research was organized around a "holistic" framework emphasizing the interaction over time of the individual, his job, and the social environment. At entry to T.O.P., many trainees referred by community agencies were cynical, viewing the program as one which would not provide significant job opportunity. But this changed over the five years of the program's operation as new trainees
were referred by friends, neighbors, and relatives, and as the program improved in quality. The same type of trainees in demographic terms applied, but their motivation was different. Concerned supervisors at T.O.P. also offered significant support to trainees, building trusting relationships and coaching them in job behavior. If trust was not built, the trainee was unlikely to believe in the Deeco opportunity.

In graduating from T.O.P. to Deeco jobs, graduates were differentially aided in interviewing and job placement by informal sponsorship. Most had a "wait and see" posture toward their initial jobs and social environments. Developing a good relationship with the Deeco supervisor was critical to employment success. In the case of such success, the employee received more support from the supervisor and was coached in proper behavior. But when an employee got a negative label from his supervisor, his future was limited unless he changed supervisors. Such changes to a more supportive supervisor brought significant improvement in a majority of the cases Davidson studied. In short, the employee-supervisory relationship, job quality, and employee motivation were related in positive as well as negative feedback loops. Promotion was particularly sensitive to the relationship; 90 percent of the promoted males but only 33 percent of the non-promoted males stayed at Deeco.

Public manpower policy can do little directly to encourage this type of supportive behavior by supervisors, apart from EEOC-FCC type pressures indicated earlier. But private manpower policies within internal labor markets need the type of commitment to supervisory sensitivity and sponsorship, supportive services, and pre-employment orientation that was characteristic of the firm Davidson studied. A continued support network to obtain promotion
and maintain minority employee, commitment was essential. In this firm, and in so many others reported in the literature, the chief executive was fully behind this effort, and the knowledge that he was made middle and supervisory management more involved in making the program work. We believe the findings in this longitudinal case study have significance for other firms and organizations which are trying to improve job opportunities and promotions for minority employees.

A public policy suggestion is offered more tentatively. Under the earlier federally-supported NAB-JOBS program, which is no longer independently funded under CETA, MA contracts were written with a minority of the employers who made goal commitments to hire minorities in each of several years; the majority were without contracts. These contracts often provided for pre-employment training, supportive services, and other costs which were considered beyond the normal employment and training costs for new employees. While the experience may be mixed, it is arguable that a number of firms learned through this process successful procedures in improving minority employment. I believe there is a role for this kind of technical assistance support along with the direct pressures through EEOC-OFCC. But under CETA, this kind of support would have to be approved at the local or state level by Manpower Planning Councils.

4. The development of informal short-run labor market information networks aiding minority job applicants, particularly those with other labor market disadvantages, will be a long one. To make a real impact, a large number of firms would have to become like Deeco. In the meantime, are there ways in which the formal information networks can be improved. Two M.I.T. studies
examined the (1) use of newspaper ads and (2) the Job Bank system of the Massachusetts Division of Employment Security (the public employment service system).

The first was a field study by Robert Moser under the direction of Professor Annable. The assumption tested was that Sunday newspaper ads for entry level primary jobs would reach the poverty community, and that some minority applicants would find jobs. All ads in the general Help Wanted section of the Boston Sunday Globe during Summer 1973 were analyzed by occupation, employer, and other job characteristics.* Despite a letter of introduction from the M.I.T. Industrial Relations Section, many firms visited would not permit Moser to inspect application blanks filled out in response to the ads, or to analyze them. The suspicion existed that failure to employ minorities would lead to reporting the firm to "the government." Out of more than sixty firms visited, only thirteen cooperated, and of these a useful analysis could

* A more extensive analysis of help wanted ads has been made by the Olympus Research Corporation in San Francisco and Salt Lake City. See Miriam Johnson, Jay C. Fantz, and John Walsh, Classified Help Wanted Ads: How Much Help?, Manpower Research Monograph No. 16, Manpower Administration, U.S. Department of Labor, 1974. Sunday editions of newspapers in each city were chosen for analysis of all Help Wanted ads; mail surveys were made of selected samples of employers who advertised, and surveys of job seekers were carried out in local ES offices. The study found that a relatively small percentage of employers hire workers through want ads, but they are used more widely in certain industries and certain occupational groups. A higher percentage of job seekers in Salt Lake City obtained work through want ads than did San Franciscans, where the minority population was much larger. Three of four jobs found (18.5% overall) were in clerical, service, sales, and unskilled blue collar categories. Most ads lacked much specific information about the jobs, and most advertised jobs required experience and skill. Blacks and Chicanos in San Francisco had lower opinions of want ads than did Orientals and whites. The study also pointed out that "until want ad readers report continuing violations to the attention of the Equal Employment Opportunities Commission, there is little indication that law enforcement agencies will concern themselves with the problem." This referred primarily to sex discrimination in ads, not to racial or sex discrimination in actual hiring.
be made in only eight firms. The principal finding was that newspaper ads did, indeed, penetrate the non-white areas of Boston and drew a substantial number of job applicants, in response to ads which often stated: "No skill or experience necessary, starting rates $2—$3 an hour." The supply of applicants was clearly greater than the jobs available. But few were hired, and various intangible reasons were given for rejections: "dress," "couldn't remember last job," or "lazy" because the person applied on a Tuesday for a Sunday job ad, etc. The response to ads was greater for larger firms, for those nearer to the central city, or those providing part-time work. When some minority applicants were hired on entry jobs, they tended not to stay long; voluntary turnover was high. As a consequence, several firms were noticed advertising the same job openings Sunday after Sunday.

The policy conclusion from this study is that while ads for lower-paid entry level jobs generate a large response, the kind of supportive policy represented by a firm like Deeco did not exist, and these firms appear to discriminate against minority applicants for various reasons. Possibly their small size enables them to evade EEOC pressures. Furthermore, the rejected minority applicants may not be aware of their right to file charges if discrimination exists. Eventually, firms such as these will have to be brought in line and forced to accept their obligations in the community.

The second study of the impact of formal information systems dealt with the Job Bank system in Massachusetts, as noted (1973). A Master's student, John J. Mikulsky, conducted interviews in thirteen local employment service offices in Eastern Massachusetts, with emphasis on the Boston Metro district which had a common Job Bank system. Some reactions of employers and job
applicants were reflected in the interviews with local office placement staff. Mikulsky found that in the absence of a definitive evaluation program, it was impossible to demonstrate what the end effects of the Job Bank system were in Massachusetts. But applicants appeared to be favorably disposed to the system, especially when they could use it themselves to determine job availability in specific skills and occupations. But the system offered no particular advantages to minority applicants with labor market disadvantages. In fact, they faced difficulties in "shopping" for an entry-level job due to the current D.O.T. code organization which would require checking a number of code areas in which such jobs might be found. Nevertheless, with staff assistance, applicants did locate some jobs. But most jobs listed are for "job-ready" applicants rather than for those who might need more information about work habits, levels of skill, and training required. Finally, Mikulsky found that many of the good opportunities for the disadvantaged were located in areas where cheap public transportation was not available or which would require relocation to another housing area.

The policy implications are that the disadvantaged need help in using the Job Bank system, particularly the Job Information Display System, and that this may require more staff time, and additional help from employment counselors who have some knowledge of manpower training programs to assist the disadvantaged. Improvement of public transportation to job areas is also clearly indicated. Other policy recommendations made by Mikulsky included better feedback loops to interviewers from employers on the status of referred applicants. Interviewers needed more training in the broader goals of the Job Bank system, as well as some relief from persistent staff shortages which
reduced the effectiveness of the placement process under the Job Bank. Employers had not yet fully accepted the Job Bank system, and felt the loss of the one-to-one relationship they formerly had with particular placement officers.*

*These and other recommendations were not basically dissimilar from a broader study of the Job Bank system: Joseph C. Ullman and George P. Humber, The Local Job Bank Program: Performance, Structure and Direction, Lexington Books, D.C. Heath and Company, Lexington, Massachusetts, 1973. This study was done under a Manpower Administration Research Contract. Mikulsky's study was distributed to the Job Bank office of the Massachusetts Division of Employment Security, but it is not clear that any changes have resulted, even though Mikulsky pointed to what he considered important innovations in the Worcester district. Ullman and Humber concluded that their recommendations had resulted in few changes.

5. While the disadvantaged applicants were unable to use effectively the two formal labor market information systems described in our studies, employers with low-wage dead-end jobs with some secondary labor market characteristics were able to recruit Puerto Ricans for jobs they were otherwise unable to fill. Piore's case study of the origins and character of Puerto Rican migration to Boston (1973) pointed out that resident blacks either refused these jobs or that employers favored the more tractable Puerto Rican migrants. Most applicants were hired at the plant directly, some were contacted through Puerto Rican community and religious groups in the area, and some in Puerto Rico by an employee whose air fare was paid by the employer to return to his home village and induce others to come to work in the plant. Piore found that the Puerto Rican migrants were largely from labor surplus agricultural communities, poorly educated and speaking very little English. Yet these were not barriers to employment. In a broader context, Piore concluded that these low-wage employers facing labor shortages resorted to immigrant labor from poorer regions, as they did earlier with other immigrants and first-generation Southern black migrants.
From the perspective of the earlier migrants, these jobs were better than their previous employment opportunities, but as they settled in Boston and raised children, the children often did not share the labor market perspective of their parents and tended to reject these jobs.

The policy implications of Piore's research are that if these types of jobs continue to exist, immigration policies which permit the continuation of a supply of applicants will be sought by employers and may be desirable. An alternative would be the elimination of these jobs through failure of firms to get labor; but this would also eliminate what Piore considered complementary to skilled work in the primary labor market sector. The instability in these poorer jobs was in part the result of more stability in the primary sector, which relied on low-wage suppliers to reduce costs; or because they competed with low-wage foreign competition (as in shoes, garments, and some textile manufacturing). If legal immigration cannot continue, then the prospect is for illegal immigration, as has already occurred not only to Boston but even more from the Mexican border. In the context of economic development, the use of poorer immigrant labor for low wage jobs is part of United States economic history, and particularly over the past decade in Western Europe. There are only policy alternatives; no clear-cut policy conclusions.

6. A special problem exists with labor market information systems available to some particularly disadvantaged persons: those who have been processed by the criminal justice system. The degree of labor market disadvantage in terms of characteristics associated with individuals becomes more severe as one moves along the stages of the criminal justice system, and among the most disadvantaged of job seekers are released offenders.
Philip Moss, a doctoral student in Economics, has examined how labor market structure helps explain the participation in crime and how participation in crime then feeds back into labor market processes. The proposition is that the particular labor market conditions facing lower class youth in general as well as offenders in particular, are conducive to participation in crime. An important hypothesis tested is that higher degrees of labor market success decrease the probability of rearrest for offenders released from prison and also for first and second offenders diverted from normal trial procedures.

The analysis looks at criminal participation in an age-work adjustment framework. Most criminal activity takes place during the ages of 16-25. Early work experience (ages 15-18) is casual and often intermittent for most young people across middle, working and lower classes. Work is not a central concern, and interests lie outside the labor market. Studies indicate that delinquency proneness is also reasonably widespread across the same classes. Official contact with the law, which is more concentrated in the lower classes, is usually for "petty" or lesser crimes of larcency, joy-riding type auto theft, and a variety of misdemeanor charges. Many of these kids during this period are identified as problem cases in school and usually drop out of school.

More serious criminal involvement develops around and during the ages 19-25, and is concentrated in the lower class and among racial and ethnic minorities, when the job experience for these people diverges from the working and middle class. Although job turnover remains high, working class young people appear to be getting intermediate level jobs with some training and access to better work later on. Lower class young people, however, appear to have similar jobs to those held by all three classes in the earlier age period. For a portion of those who have become involved in crime, the reward structure may have
shifted, with legitimate work opportunities the same or poorer (due to the
effect of criminal record, and expectations of increasing opportunity) than
during adolescence, and criminal activity providing better economic rewards as
illegitimate skills and contacts are acquired. Better labor market experience
is associated with those who "go straight" during this period.

For those who do get sent to prison, the situation is worsened. Work
organization in prison is extremely low paid, and has little relation to work
outside. Training and education programs reach very few inmates. In addition,
isolation in prison retards or disrupts stable family formation and/or peer and
friendship links to stable work which are associated with the transition to
adult working lifestyles. The institution processing these people, and in
particular the corrections institutions, reinforce a pattern of interaction
(informal, short term, personalized, and unpredictable) that is characteristic
of the low-wage, unstable "secondary" employment sector from which these people
come and most often return.

The empirical observation (derived from offender statistics and conversa-
tion with corrections people) that the preponderance of the people do not re-
appear as arrestees after ages 27-30, coupled with the above mentioned, and
tested inference, that lower recidivism is associated with better labor market
experience suggests that policies may be able to improve and/or hasten the work
establishment process, and thereby reduce recidivism.*

*The experience of actual manpower policies, however, does not suggest
optimism (see Robert Taggert III, The Prison of Unemployment, The Johns
Hopkins University Press, 1973), and a history of labor market disad-
vantages and institutional rigidities are not easily overcome by short
run policies.
Three implications for policy are suggested. The first is that work is important, but that it means something different (as does unemployment) at different ages. The key appears to be not in rehabilitative training, but in job content with successful socialization at the workplace and promise of some future, being critical factors (see Leonard M. Davidson, The Process of Employing the Disadvantaged). The most promising programs within the present institutional setting are work-release, and training operated by an outside firm that can and will employ the inmates it trains. The Massachusetts experience with work-release suggests that employers are willing and interested in cooperating (the guarantee of stability is good because the inmate remains in some degree of confinement and faces total incarceration as opposed to work) and that decent longer term work credentials can be developed.

The second implication is that an understanding of the relevant institutions is crucial to policy formation. The correctional institutions often alienate the individuals they process, isolate and reinforce disfunctional patterns, and pervert programs (through the need for control) within the institutions. The institutions are extremely hard to change through the introduction of peripheral programs (e.g., the corrections bureaucracy has resisted work-release, and the Employment Service, without special program specific funds, has been in most cases uninterested in changing normal operations).

The third implication is that a labor market information system should be interpreted very broadly. Labor market information as provided by special Employment Service teams, and pre-trial diversion teams (in both cases including
job developers and counselors) has been successful for placing a limited number of offenders on a case by case basis. However, the best jobs arising out of these programs have been the few reasonably good white-collar jobs as counselors and job developers within the programs. The majority of offenders do not and cannot (because of program resources and restrictions) use these sources because few barriers are broken by this type of information, and they already know the kinds of jobs they are likely to get. Labor market information is also crucial for employers and institutions. Evidence of employer discrimination; research on the potency of supervisory support in employment success; the experience of employer recruitment efforts by the work-release program; and the intransigence of most local, state, and the federal civil services, all suggest that information and action directed at employers and at statutory restrictions (combined with EEO operations) can be very important.

7. A study of the early labor market experience of young men by Leslie I. Boden, also a doctoral student in Economics, suggests that different types of work require different attitudes on the part of workers. Some jobs require initiative; others require compliance. Some require workers who are "involved" in the work itself; others need workers for whom work as such is not very important. These various jobs in an occupational hierarchy (if they are to be adequately filled) must provide an environment which supports the kinds of employee behavior they need. As young men enter the labor market, their job-relevant characteristics (including their involvement in their work) at any point of time are determined by their previous characteristics and how they have been changed by the prior job environment. For his study, which draws on the Ohio State national longitudinal study of young men, Boden
has developed a two-dimensional analysis of jobs from DOT descriptions: job complexity and autonomy. These indices of job complexity and autonomy are then integrated into a model of occupational mobility. Observed mobility in the Ohio State data is then used to estimate parameters of the model. Boden concludes that people in jobs with low complexity and autonomy tend to become "stuck" in such jobs. He also determines the effects of education, father's occupation, race, and IQ on measured occupational mobility.*

The study strongly confirms the hypothesis that jobs with low complexity and autonomy produce alienated workers. The hypothesis that alienated workers pick such jobs is at best weakly supported. This research thus implies that job enrichment is a potentially useful policy to reduce worker alienation. The study also confirms that, independently of education, race, father's occupation, etc., one's early job history has a strong effect on later job experience. This finding may follow from either of two causes: (1) more demanding jobs produce more qualified workers, or (2) there are unmeasured differences among workers which lead to some consistently getting better jobs than others. In this study, there is no way of differentiating between these hypotheses. To the extent that the first is true, providing young workers with more demanding jobs is a method of improving their later labor market outcomes.

*A longitudinal study of a national sample of males in the high school class of 1969 found that the amount of part-time work during high school was related to whether a student obtained any employment after leaving high school. Those who never worked part-time had 19 percent unemployment rate subsequently, while those who worked more or less continuously during high school showed an unemployment rate of only 5 percent. Work experience may establish work behavior patterns and/or employment contacts which lead to obtaining employment later. High unemployment was associated with two groups: those with low academic ability who came from low status families and those with very high academic ability who came from high status families. The Transition from High School to Work: the Work Attitudes and Early Occupational Experiences of Young Men, Institute for Social Research, University of Michigan, Ann Arbor, Michigan (unpublished research under contract to the Office of Research and Development, Manpower Administration, U.S. Department of Labor, completed 1974). The report states: "What strikes us most is not so much the relative importance of these factors, rather it is the degree to which the status of the first job after high school is determined by factors largely outside the individual's control."
8. A special type of disadvantaged - unemployed aerospace engineers as a consequence of the defense-space cutbacks of July 1969 to January 1972 were the focus of a significant study by Thomas L. Allen, doctoral student in Economics. His thesis, *Aerospace Cutbacks: Impact on the Companies and Engineering Employment in Southern California* (1973), was based on interviews with personnel officers in six large and four smaller companies, followed by a questionnaire mailed to engineers laid off in Southern California by these companies in the period considered, and in other parts of the United States by the same companies. When contracts were cut back, the companies laid off some highly-skilled people whose skills and salaries were no longer justified by particular program cancellations, along with less qualified engineers based on performance ratings. About 1600 laid-off engineers (41 percent of the target group) provided usable replies. At the time of the survey, some 25 percent were still unemployed, 82 percent of the total sample had college degrees and higher*, 83 percent were married. Those unemployed were slightly

* The lower the degree, the higher the percentage of that group unemployed, except for Ph.D.'s whose percentage of unemployment was higher (25.8%) than for those with an M.B.A., M.A. (20.7%), or M.S. (17.0%). Also, the more recent the degree, the lower the percentage of the group unemployed: 10.4% for degrees less than 5 years ago as contrasted with 47.1% for those 35 or more years ago.

older than those who found jobs after their layoff. Twenty-six percent returned to the firm, and about 6 percent more to aerospace subcontractors or suppliers. The remaining engineers who found jobs were scattered over a variety of industries, but nearly 16 percent in a non-government-oriented manufacturing company, and nearly 12 percent in service enterprises.
Engineers were asked about their usage of various labor market information systems in the job search, and the ones which were successful in finding a job. Many gave multiple answers; informal channels were most frequently mentioned: direct application (87.9%), referrals of friends and relatives (76.8%). The latter was also the most successful method, the former the second most successful, and newspaper ads third. More formal methods of job finding were much less significant. For example, the California Department of Human Resources Development (the public employment service system) was listed by only 1.3 percent, and the Los Angeles office of a computer-based LINCS by 0.2 percent of those who found jobs. Private employment agencies were successful for 2.2 percent, and Experience–Unlimited (an unemployed engineer self-help agency) for another 2.2 percent. A federally supported Project ADAPT (Aerospace and Defense Adaptation to Public Technology) trained about 200 unemployed engineers at the University of California, Berkeley, for jobs in local government, but only 0.4 percent of all engineers who replied had found jobs. Of course, the percentage of those enrolled who were placed was higher and nearly 43 percent of the enrollees rated the program as excellent. The problem was the lack of effective demand.

Beyond the actual placement success, some of the government-supported programs (as well as the private Experience Unlimited) provided helpful counseling to engineers, job workshops, and some additional training which may have led to jobs through other methods. One problem noted by Allen was the unwillingness of many laid-off engineers to look for jobs outside their narrow fields of specialization, and another problem was the systematic bias of many non-aerospace employers against unemployed aerospace engineers as too old, too highly specialized, not familiar with the requirements of their industry, etc. Allen
concluded that information systems themselves failed to extend beyond the traditional boundaries of the aerospace engineer labor market to provide useful and reliable information about good jobs outside of aerospace, or to inform non-aerospace employers of the vast range of skills available in the layoff pool. Many of these findings were summarized in a two-page letter by Allen to all respondents and in a longer report with statistical tables to the Office of Research and Development of the Manpower Administration.

The policy implications of this study are that formal labor market information systems need strengthening, as do some of the government-supported training programs, if there should again be a significant cutback in defense-space contracts. Allen recommends improvements in programs such as the California HRD, and programs such as EST, a training program funded by the Technology Mobilization and Reemployment Program, with on-the-job training, interview and relocation grants. Limiting the latter by law to six months, and to those occupations in which employment demand can be demonstrated, meant that blue collar jobs were the main ones to meet the requirements. The training was not linked to any counseling program to help the engineer adapt to a new self-image as a blue collar worker (although over 5 percent of the respondents took such jobs).* Allen concluded that training programs and formal labor

* Allen's conclusion about TMRP and the effectiveness of the public employment service in California in placing unemployed aerospace engineers seems to be in conflict with the report on TMRP claiming that "the employment service offices aided 33,100 registrants - almost 2 out of every 3 - in locating jobs: 11,900 were placed by the employment service and another 21,200 found their own jobs with assistance from the program." Manpower (U.S. Department of Labor), October 1973, p. 21. Allen's emphasis on local labor market information systems, however, corresponds with Trevor Bain's conclusion that unemployment problems of engineers are best tackled at the local level. Labor Market Experience of Engineers During Periods of Changing Demand, Center for Policy Research, Inc., New York, 1973. This was an analysis of Manpower Administration-sponsored R&D projects on the subject.
market information systems should be instituted only in consultation with those job searchers and potential employers who are going to use the systems. In particular, job development with employers using the formal system was neglected, except in Project ADAPT, where a particular effort was made to place trainees through the National League of Cities.

Other policy implications were that extended unemployment compensation enable engineers to spend a longer time on their own job search, and that contracting procedures which result in the rapid layoff of thousands of professionals and other employees in one industry need review to ensure planned phaseouts which would dampen the layoff impact and allow time for training and job search before employment is terminated. Finally, where engineers might create their own employment opportunities (as a small percentage did), through small businesses or franchise operations, loans might be provided in existing or specially-designed programs.

Summary: Policy Recommendations

The policy implications of our research have been developed at the end of each section following a summary of research findings. It is now appropriate to summarize our major manpower policy recommendations.

1. If applicants and workers with labor market disadvantages are to find better jobs in what Piore has called the primary labor market, the informal information networks used successfully by most job applicants need to be developed by the disadvantaged. This will only occur when employers voluntarily or through government pressures such as EEOC-OFCC employ more minorities who will spread the word among their friends and relatives in the minority community if the
jobs meet expectations. Successful role models are important, too, for those aspiring to better jobs.

2. Job availability is not enough, however. The internal labor market of firms and other organizations needs support systems for the disadvantaged: counseling, supervisory help, clear promotion ladders, job transfers when either the job or the supervisory environment is unfavorable, and most important of all, top management commitment to making the whole program work to employ and promote minority applicants.

3. Disadvantaged applicants need help also from the short-run formal labor market information systems. Newspaper want ads reach many, but the percentage hired is much smaller, possibly because of discrimination implicit in the selection procedure of firms which advertise low-paying jobs and attract many applicants. Public policy pressures are needed to make sure that minority applicants get a chance at advertised jobs.

4. While the public employment service has made increased efforts over the past several years to improve its services in placing the disadvantaged, the computer-based Job Bank system has not worked well to provide access to available entry level jobs by disadvantaged applicants. Skilled workers looking for jobs in specific skill areas for which D.O.T. code numbers are readily available have no difficulty; but there are many entry-level jobs in different skills and occupations. Applicants for these need to be assisted in their search of the Job Bank by Employment Service staff assigned for this purpose as part of their responsibilities. It may be necessary, also, to provide more training to staff people in the uses of the Job Bank.
5. Low-wage jobs, if they continue to exist, tend to be filled by immigrants, as in the case of Puerto Rican migrants to Boston. These jobs are generally rejected by second-generation U.S. citizens born of immigrant parents locally. Further immigration may have to be permitted to fill these jobs, which are often complementary to skilled work in the primary sector.

6. The employment problems faced by released offenders and parolees, a substantial percentage of which are non-whites, are serious enough to require long run policies to provide education and employment opportunities which may help young people to avoid arrest and imprisonment, and shorter-run policies to provide better educational and work-training programs in prisons. There should also be encouragement of efforts by firms to establish specific training programs in prisons for inmates who will be employed by them on release, or on-the-job training through work-release programs with inmates. Redicivism, often the result of crimes committed when no work is available on release, would be reduced as a consequence of these efforts.

7. The effect of early job history of young males on their later job experience indicates the importance of internal as well as external labor market information systems. When first jobs are dead-end and routine for young people, the chances of their finding better jobs later on can be enhanced by employer-designed job enrichment efforts or by providing more demanding first jobs. In the external labor market, young people initially confined to secondary labor markets need help from manpower policies designed to move them into primary labor market jobs characterized by the possibility of promotion. Subsidized private sector jobs, similar to the past contracts under the NAB-JOBS program, as well as Public Service Employment, are needed.
8. Engineers and other professionals displaced by sharp changes in federal funding, as in the case of unemployed aerospace engineers in the 1969-72 period, have been assisted by public manpower programs which were not generally successful in Southern California. Most laid-off engineers still found jobs through informal methods. Our study indicated the need for improvement of local programs organized by the public employment service and by federally-funded training such as EST under the Technology Mobilization and Reemployment Program. In particular, more counseling and more job development with employers outside the displaced engineer's specific occupation will be needed, as well as loan funds to enable those who want to establish small businesses. Contracting procedures resulting in sharp displacements need review to determine whether planned phasouts can be provided to enable job search and retraining in advance of layoff.
Appendix 1

List of studies under Research Contract 71-25-71-02

Industrial Relations Section, Sloan School of Management
Massachusetts Institute of Technology


----- *A Topographic Analysis of Labor-Market Information Systems (with Special Attention to Their Relationship to the Disadvantaged Worker)*, a working paper, October 1972.


Moser, Robert B. and James E. Annable, Jr., "Newspaper Want Ads and the Disadvantaged" (notes), 1974?

Appendix 1 (continued)


Studies under the Harvard Subcontract

Supervised by Professor Peter B. Doeringer

