MINORITY WORKERS, THE STRUCTURE OF LABOUR MARKETS AND ANTI-DISCRIMINATION LEGISLATION

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Research and Working Paper Series No. 128

March, 1977

MINORITY WORKERS, THE STRUCTURE OF LABOUR MARKETS AND ANTI-DISCRIMINATION LEGISLATION

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1. Introduction

A central issue of public policy in relation to employment behaviour particularly in North America and Britain since the 1960s has been the question of how to deal with discrimination against minority groups. The latter may be taken to include women, coloured employees, immigrants, foreign workers and the young, but in this paper we concentrate on race and sex discrimination which have tended to receive most attention from both academics and policy-makers. Further attention is focussed on the U.S.A., Canada and Britain on the grounds that there is more evidence on the workings of anti-discrimination legislation in the U.S.A. than in any other country and developments in Canada and Britain appear to mirror those in the U.S.A. Because it is difficult, if not impossible, to isolate the precise extent of discrimination at the macro-level on account of variations in personal characteristics and establishment variables detailed analysis of the operation of local labour markets and individual enterprises and establishments becomes crucial. Here a major feature of recent empirical work has been the emphasis placed on the internal labour market (I.L.M.) and the related concept of the dual labour market (D.L.M.).[1] This is, in fact, highly relevant to anti-discrimination legislation not only because it is at the level of the individual organisation or unit of employment that the laws are to be applied but also because, as will be outlined below, the legislation appears to have certain features which are consistent with a dualist interpre-

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1. The two concepts are related because dualism implies that minority groups are denied access to I.L.M.s as well as primary markets, the distinction between the two being discussed more fully below.

tation of the operation of the labour market and the emphasis on equality of promotion opportunities is most appropriate and significant in the context of a well-developed internal labour market. Notably the existence of I.L.M.s is likely to give rise where it is difficult to ascertain individual as opposed to group productivity, to the use of race or sex as a cheap screening device, since, whenever a long run employment relationship is envisaged it is more important to screen out those potential employees who possess undesirable characteristics as perceived by the employer. Whilst screening may be used as a discriminatory device, it may be a necessary policy for minimising costs. The implication of the D.L.M. hypothesis on the other hand, is that some minority workers, as well qualified as majority workers do not have access to high paying, secure jobs which is a matter of discrimination rather than screening.

The aim of anti-discrimination legislation in the U.S., Canada and Britain is to remove unintentional or intentional discrimination in the recruitment and staffing policies and practices of employers which have adverse or 'disproportionate' effects on the utilization of the groups outlined above and which are unrelated to actual job performance. Clearly the objective of the legislation is to promote what is considered to be a more equitable distribution of employment and career opportunities for those in the identified groups who are discriminated against for non-functional reasons.

In the United States the Equal Employment Opportunity legislation has at least three components: (a) title VII of the Civil Rights Act of 1964, as amended in 1972; (b) Executive Order 11246, and Equal Pay Act of 1963 and its extended coverage of executive, professional and administrative employees in 1972. The agencies administering this legislation have recently been given wide powers of enforcement. Moreover, the United States Courts have interpreted the law in such a way that guidelines issued by these agencies, which favoured the

increased utilization of blacks, women and other minority groups, have been upheld.

In Canada, the federal and provincial fair employment practices legislation prohibits discrimination in hiring and conditions of employment and in trade union membership on grounds of race, colour, religion or national origin. At present, both the federal government and the Provinces, apart from Quebec, have enacted laws which require equal pay for equal work without discrimination on the basis of sex. The Quebec fair employment practices law forbids discrimination in employment on the basis of sex, thus prohibiting among other things, discrimination in rates of pay solely on the grounds of sex.

In Britain equal pay and equal opportunities legislation with regards to women, became fully operational at the beginning of 1976. The first of these two pieces of legislation makes it unlawful to discriminate in terms of wages and conditions, whilst the second makes it unlawful for an employer to discriminate on account of sex or marriage in relation both to potential benefits (e.g. opportunities for recruitment, training and promotion) and to actions which may be detrimental to employees (e.g. short-time working or dismissals). Similarly, Race Relations legislation was first applied to employment in 1968 and has recently been considerably extended in coverage to bring it more into line with the sex discrimination legislation under the Race Relations Act (1976).

It has been suggested above that the equal employment legislation in the three countries is based on a dualist view of the working of the labour

market[2] which sees the market as being segmented into two distinct sectors - primary and secondary - one with favourable and one with unfavourable wage and working conditions with the implication that screening practices are in fact a means to practice unjustified discrimination. It is suggested that coloured workers and women together with certain other groups are concentrated into the second of these sectors with a low probability of mobility out of it. Indeed it seems to be agreed that one of the main reasons for the existence of duality is lack of job mobility from the secondary to primary sector due to discrimination and institutional restrictions such as licensing requirements etc. As Doeringer and Piore |15| note Becker type models of discrimination stress an increase in competition and the costs of discriminatory behaviour as means of eliminating discriminatory behaviour and would thus emphasise economic measures, whilst the D.L.M. hypothesis with its stress on hiring, training and promotion as social processes suggests legislation is the necessary corrective. Both the North American and British legislation refer to indirect as well as direct discrimination, that is requirements or conditions which are imposed equally on the races or sexes but have the result of screening out a larger proportion of one group and cannot be defended on the grounds that they are necessary for the efficient performance of the job. In addition, equal employment legislation in the three countries

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2. Thus Wachter |52|, suggests that as far as the U.S. is concerned "Court rulings following the 1971 Griggs V Duke Power Co. decision (401 U.S. 424), have in effect adopted the dualist view of the workings of the labour market. The decision makes almost no effort to control for the lower labour market endowments of blacks. For example, with blue-collar occupations, courts commonly find labour market discrimination when the percentage of blacks in the firm is substantially lower than the percentage of blacks in the community. This may be good social policy - or at least it is aimed at achieving a desirable social end - but its economic underpinning is open to controversy." Wachter feels that the dualist policy of moving secondary workers directly into primary jobs is more likely to result from individual legal cases concerning discrimination than from manpower programmes etc. However, his survey omits discussion of anti-discrimination laws, "since the only disagreements about them concern implementation." We argue in this paper that the form of the legislation is itself an important issue.

deals with the elimination of discrimination at the enterprise level. It is intra-firm rather than interfirm in its application (except for class action suits in the U.S.) and therefore related to the dual and internal labour market concepts in the literature.

This paper is divided into four parts. Following the introduction we provide an analytical framework in which we examine various definitions of the concepts of the I.L.M., D.L.M. and labour market segmentation and show how each of these is inter-related. The importance of the human capital approach is considered particularly in relation to the I.L.M. It is necessary to discuss these concepts in some detail because they have been rather loosely defined in much of the earlier work and clarification can help draw out their implications for the question of discrimination in a legal context. This section also summarises the empirical evidence relating to these concepts and attempts where possible to point to any differences between North American and British experience. In the third section an attempt is made to analyse the legislation outlined above and to discuss the limitations of the legislation in dealing with these issues. Finally in section four we consider the policy implications of the analysis.

2. The Analysis of Labour Market Structures

(a) The concept of the Internal Labour Market

In a competitive labour market it is generally assumed that labour is homogeneous and mobile, so that there is a long-run tendency towards equalisation of net advantages and the development of the concept of the I.L.M. may be seen as an attempt to explain how labour market imperfections arising from such factors as the costs of information and of specific training may emerge to modify this result.

In their original analysis Doeringer and Piore |14| define the I.L.M. as "an administrative unit within which the pricing and allocation of labour is governed by a set of administrative rules and procedures." This is distinguished from the E.L.M. where market forces have much freer play. The two markets are however linked at various job levels which constitute ports of entry and exit to and from the I.L.M., whilst other job levels are reached by transfer and promotion of existing employees. The distinction is crucial as far as the disadvantaged worker is concerned because existing employees may well be given preferable treatment over potential job applicants.

Examining the concept in more detail and following Kerr |31| and Alexander |2| we may consequently adopt a three way classification of labour markets:-

(i) open markets which are unstructured, subject to competitive forces and characterised by lack of skill, low capital/labour ratios and an absence of firm specific training.

(ii) "guild" or craft markets which are structured horizontally by means of occupational licensing, such that there is considerable mobility of labour between firms but little between industries or crafts. General training is more important than specific training.

(iii) "manorial" or enterprise markets which are structured vertically by means of promotion ladders with relatively little mobility between firms. Training specific to the firm, in part a function of technology, is all important. For manual employees the I.L.M. will generally correspond to the plant but for managerial staff it will be company-wide, whilst other white-collar employees will tend to either pole with clerical workers and technicians being closer to the manual case and the professionally qualified closer to the managerial extreme.

Most of the discussion has centred on the third market category which can be regarded in part as an employer response[3] to the state of the labour market, for if there is abundant labour in the E.L.M. there is little inducement to concentrate on internal recruitment. As Taira |50| has suggested there is an incentive for the employer to develop an I.L.M. where it can contribute to profitability. It can thus be judged on criteria identical to those in the case of other markets, namely:-

(1) the speed of adjustment of labour supply to demand.

(2) the cost of having unfilled vacancies and of labour turnover.

(3) the transactions costs of hiring a worker from the E.L.M.

Where pay is linked to seniority, this may of course have the effect of reducing labour turnover. I.L.M.s may also be beneficial to employees if their transactions costs of changing job are reduced and career prospects enhanced, but correspondingly their knowledge of alternative job opportunities may be reduced. From the point of view of the economy the implied reduction in labour mobility could have harmful consequences. Further as Wachter |7| notes even an efficient I.L.M. will not solve externality problems and the number of "good" jobs tends to be less than the social optimum. Efficiency also implies an absence of queues for particular jobs within the firm or of shortages of available labour to fill job openings.[4]

There is some suggestion that I.L.M.s predominate in high paying, large and well organised firms but Edwards et al |16| argue that I.L.M.s are a function not only of size of firm but also of bureaucratic control and the need for

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4. This interpretation of the I.L.M. contrasts with that of the D.L.M. theorists who claim, according to Wachter |52|, that "although efficiency factors are relevant to managerial decision-making in the I.L.M., they are not dominant. More specifically they claim that productivity at a high wage adheres to the job rather than the worker; that the wage structure is dominated not by efficiency considerations but rather by custom and habit; and that good jobs go to people who are already with the firm by methods of promotion that largely reflect institutional arrangements. Consequently the distribution of jobs and income in the primary sector is not dictated by ability and human capital."

stability. Size is important because the number of levels in a well developed career hierarchy presupposes a certain minimum size and as size increases the possibilities for satisfactory career development multiply. Size also tends to go hand in hand with high capital intensity which increases the need both for bureaucratic control and habits of predictability and dependability on the part of the workforce. It is in this sort of enterprise also that specific skills are required and experience over the working lifetime is important. It has recently been suggested that females in particular tend to be found more than proportionately in small firms,[5] so that many of this group will be excluded from the benefits of the I.L.M.

The relationship between relative pay in the I.L.M. compared with the E.L.M. is subject to a number of influences. Whilst the mean level of pay is likely to be lower for those excluded from the I.L.M. because they are deprived of promotion opportunities the same need not be true for every skill level. Thus a worker low down the skill hierarchy of a particular I.L.M. may be prepared to accept a lower current wage than he could obtain on the E.L.M. because of the possibility of future advancement and higher earnings in the I.L.M. Taira |50| suggests, however, that the existence of I.L.M.s will induce labour surpluses in the E.L.M. from which selective recruitment is made such that

> "the higher the wages in I.L.M.s, the larger the extent of the labour reserve that after a given fraction is employed by large firms, presses down the wages and working conditions in the E.L.M., accentuating internal-external wage differentials."[6]

Whether in aggregate wage differences widen as a consequence of I.L.M.s is therefore a matter of debate and needs to be subjected to empirical investigation.

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5. See Chiplin and Sloane |11|, the same authors |12| and Blau in |16|.

6. It is appropriate to assume, in general, that workers in the E.L.M. are subject to unionisation to a smaller degree than workers in the I.L.M., if at all.

However, of crucial importance to equal opportunities legislation is the extent to which discrimination manifests itself as a consequence of the operation of the I.L.M. This involves two main aspects - the extent to which enterprises with well developed I.L.M.s fail to hire workers of equal ability as a consequence of cheap screening devices or excessive use of credentials (which is basically a demand-side approach) and the extent to which workers in certain disadvantaged groups fail to advance up through the organisational hierarchy in the same proportion as workers with equal abilities but in membership of the favoured group, which is most appropriately considered in a human capital (or supply-side) framework.

(i) Cheap Screening Devices and Entry Into the I.L.M.

The existence of the I.L.M. implies that the costs of defective hiring procedures are exacerbated since lifetime productivities rather than productivity in initial job grade are relevant and as prior assessment of potential productivity is difficult if not impossible this will intensify the tendency to use race, sex or education as a cheap screening device. An employer is said to be using a 'cheap screen' when he automatically distinguishes between individuals displaying a particular, readily ascertainable, characteristic (such as race or sex) with the implication that unfavourable treatment will be given on the basis of this characteristic without consideration of other characteristics and attributes. Screening devices do not therefore sort perfectly but this must be assessed against the cost of fine sorting. Whilst this behaviour may be based on prejudice or misconception, there may, therefore, also be an economic rationale. Stiglitz |49| has demonstrated that under certain plausible assumptions - differences in productivity between groups, individual productivity differences unascertainable prior to performance of the job, high fixed costs of replacement and equal pay - that discrimination in hiring practices based upon group attributes is an efficient means of allocating labour. Adopting a similar approach Spence |47| has noted that

whilst some individual characteristics observable to the employer prior to hiring are subject to manipulation by the individual, others are not. Thus, whilst education and training can be acquired, race and sex are unalterable and we may refer to alterable characteristics as 'signals' and unalterable ones as 'indices'.[7] Spence suggests that a situation in which employers draw inferences about productivity from indices because the latter are correlated with productive capacity within the population be referred to as "statistical discrimination", but it is debatable whether the law should sanction such behaviour or not. Discrimination may also be present in relation to signals since these are also frequently only proxies for underlying attributes. Thus if education costs more on average for a member of a minority group than for a member of the majority, a given level of education implies more talent in the former case and this casts doubt on the principle of equal treatment for people with the same test scores, signals or indices. Equal treatment in terms of social productivity may imply unequal treatment at the level of signals and justify "reverse discrimination".

To some extent education may also be used as a cheap screen in the same way as race or sex when judging applicants and it is possible that employers may demand educational requirements which are higher and often unrelated to actual job performance - the problem of "credentialism".[8] Thus one American study has found that in service and to some extent white-collar occupational

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7. Spence notes that 'it is possible (and may be desirable) to make observable, unalterable characteristics like sex and race unobservable. To do so would probably involve an institutional or social decision. Colleges, for example, are forbidden in many states to seek to acquire information about an applicant's race, colour, religion, or national origin. There are obvious difficulties in designing effective disguises. But suppressing the observability of a characteristic does not make it adjustable."

8. This is not to say that education does not provide any useful information, since in that event we would expect it to be discarded as a screen.

categories 'dead end' jobs (as defined by employers) appeared to have higher entry requirements than those from which promotion was possible. Whilst allowing for a desire by employers to "cream the market" this would seem to point to requirements which for some reason or another were set too high.[9] One explanation is that higher educational requirements serve as an effective screening device for reducing applicant numbers to a manageable size for personnel decision-making. However this constitutes a barrier for persons with less than the required level of education and these individuals are excluded from employment not because they cannot perform the work but simply because they fall outside the employer's hiring requirements.[10]

Other forms of job barrier are also apparent and may be equally linked to the I.L.M. and aspects of discrimination. Thus employment tests, which lead to hiring and promotion only for those who achieve a pre-determined minimum score, are rarely validated in terms of job performance. Further, there is also the question of cultural bias in tests which might affect immigrants, or coloured workers disproportionately in terms of access to jobs they could perform.[11] Similar arguments apply to personnel interviews - the most widely used method of selecting employees. Likewise entry discrimination may be related to recruitment procedures. Some firms tend to establish rather narrow and stable channels of recruitment including referral of friends and relatives by present employees.[12] Reliance upon a narrow set of recruitment channels has advantages both to the employer and potential employee, producing applicant characteristics ressembling those of the incumbent workforce and possessing certain

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9. G S Hamilton and J D Roessner |26|.

10. See H C Jain, "Is Education Related to Job Performance?" in the same author (editor), |28|.

11. See H C Jain, "Employment Tests and Discrimination in the Hiring of Minority Groups", in ibid.

12. For the U.K. see |17|.

predictable traits, each of which is important in the context of the I.L.M. Relatives and friends can provide a clear picture of prospective employment for the applicant thereby reducing the costs of trial and error and job search. These benefits encourage the continuance of any set of recruitment channels once they are established and discriminatory recruitment practices may continue to yield employment patterns, excluding coloured workers and women from certain high level jobs, long after discriminatory intent has been removed.

Where behaviour is based on misconceptions, such as a mistaken belief that members of a minority group are less productive than members of the employed group, absence of the minority from employment means that there is no dis-confirming experience. As Spence notes |47| once the pattern of exclusion is broken, employers' market experience changes and we might expect a fairly rapid "tipping" phenomenon as employment moves to a new equilibrium. A minimum quota may be a useful policy decice in this context. However, if the barrier is based upon prejudice such a change may not take place. Where failure to hire is based upon mis-conceptions or more specifically a failure to update stereotypes on the basis of labour market changes, such as the changed participation rates of married women,[13] legislation over-riding employer hiring standards (e.g. quotas or affirmative action) need not dis-tort the allocation of labour and might even improve it. Whilst detailed discussion of hiring in practice is postponed until the following section it should be noted that we have little information on the extent to which employer hiring policies are sub-optimal or otherwise.

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13. Steinberg |48| found that over a five year period attachment to a particular I.L.M. was higher among women than among men, among older workers than younger, and among middle as opposed to lower income recipients. However, despite their higher attachment to given I.L.M.s, women did not exhibit as much upward mobility as men. However, these results may have been affected by the fact that workers employed at the beginning but not at the end of the period covered were excluded from the sample and individual employers are equated with I.L.M.s.

Finally, we should bear in mind the possibility that the relationship between the I.L.M. and hiring practices may operate in either direction in terms of cause and effect. An important purpose of the I.L.M. is to provide a continuous screening function. Whilst credentials acquired elsewhere can be evaluated at the time of hire, individual performance in relation to specific skills must of necessity be assessed within the I.L.M. As Wachter |52| notes, as long as the employer can rectify errors ex-post there is less necessity to establish entry barriers. Besides the possibility of dismissal of workers hired in error (increasingly difficult as a result of unionisation and protective legislation) workers may be held at a particular point on the promotion ladder. Statistical discrimination may still occur since employers will economise on costly information but this is more conveniently discussed in detail in the following section.

(ii) Human Capital Endowments and Promotion Within the I.L.M.

At the post-employment level, the I.L.M. is concerned with the numerous transactions that occur inside an organisation affecting employees in such matters as promotion, demotion, or transfer. Discrimination may occur with respect of each of these factors including the level at which an individual is hired, the rate of wage increase once hired and the rate at which he or she moves up through the organisational hierarchy. Discrimination may also be related to conscious and unconscious personnel policies related to personal characteristics of employees such as race, sex, marital status, education, and experience. Indeed, a major source of disadvantage among minority workers

including women is the lack of human capital possessed by these groups.[14] Thus, it is not only the structure of the economic environment in which individuals and minority groups work, but also the characteristics of individuals, on the supply side, which keep them in low income, low level jobs.

Whilst the screening hypothesis outlined above may be able to explain variations in starting salaries its ability to predict earnings of long term employees within the I.L.M. is limited by the fact that earnings are highly correlated with years of work experience as well as educational level. As Blaug |6| notes over time there is no reason why the employer should continue to rely on educational qualifications when independent evidence of job performance is available and indeed empirical data suggest that the correlation between earnings and level of education actually increases over the first ten to fifteen years of work experience, which is more consistent with the importance of on-the-job training than with certain versions of the screening hypothesis. Unlike the latter the human capital approach puts the emphasis on returns to investment in training in the context of individual utility maximisation. It is generally assumed that the individual is free (and sufficiently well informed) to invest in the acquisition of skills where the rate of return is greatest. As Rosen |43| has suggested "the theory of human capital is at heart a theory of 'permanent' earnings". The fact that attention is focussed on lifetime rather than current earnings means that it is particularly appropriate for the analysis of I.L.M.s as the quotation from Rosen below makes apparent.

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14. As Blaug |6| and Mincer |in 5| point out a large number of phenomena including health, education, job search, information retrieval, migration and in-service training may be regarded as investments rather than consumption and are consequently aspects of human capital formation in which individuals may share unequally. Blaug also sees the 'screening hypothesis' or 'credentialism' as a rival to the human capital approach linking up to D.L.M. or L.M.S. theory. He concludes that a new theory of signalling is being developed encompassing "the theory of how buyers and sellers select each other when their attributes matter but when information about these attributes is subject to uncertainty. In time, the screening hypothesis will be seen to have marked a turning point in the 'human investment revolution in economic thought', a turning point to a richer, still more comprehensive view of the sequential life style choices of individuals."

"So long as there is a modicum of competition and potential firms have the same technology, the existence of firm specific knowledge rests primarily on the presence of transactions costs in labour markets. Thus, in extreme cases of immobility, such as the lifetime tenure system in Japan or the reserve clause in professional sports, a legal sanction converts what would otherwise be general skills into firm specific ones. Large transactions costs make markets thinly traded, and break the link between current earnings and the amount of skills possessed. If most skills are specific, then the whole of lifetime earnings must be examined, not any particular annual figure."

In the light of this divorce between current earnings and skill there is not inevitably a conflict between the human capital and the L.M.S. approach discussed below.[15] Male-female earnings differences in particular will result from differences in lifetime participation in the labour market between the sexes (or varying quantities of specific capital) which in turn may give females a lower incentive to invest in skill acquisition.

The basic human capital model developed by Jacob Mincer |34| takes the form

$$\text{Log } E = a + bS + cX + dX^2 + U$$

where
- E = earnings
- S = years of schooling
- X = years of experience
- U = error term

Since earnings are the result of the interaction of supply and demand this is a reduced form equation. The amount of on-the-job training and other types of investment in human capital will tend to decrease with age or experience whilst depreciation and obsolescence reduce their value over time, and it is this fact which makes age/earnings profiles increase at a decreasing rate. It is generally assumed that the log of earnings is linearly related to years of schooling and quadratically related to years of work experience. Education and training are then at the heart of the human capital approach, the former

15. Cf. Flanagan |20| "This is particularly relevant to the discussion of L.M.S., since the occupational wage structure should be weakly related to human capital investments if for a given level of investment there are barriers to moving freely among occupations.

normally being undertaken prior to entry into the labour force and imparting general skills upon which a return is recouped over the whole working lifetime and the latter frequently being undertaken during the years of work, often imparting specific skills and sometimes involving learning on the job. Years of schooling are normally used to measure the extent of an individual's education but are in practice a crude proxy, hardly allowing adequately for qualitative differences and could possibly bias the results to indicate racial and sex discrimination. To the extent that productivity is improved simply by doing a job, earnings will be related to experience.[16] Where there is a well developed I.L.M., length of service with the enterprise will be more important than outside experience. Age is often used as a proxy for experience where data limitations prevent more appropriate measurement. Indeed, in macro-studies experience is often estimated indirectly as age minus years of education minus five or six years. In the case of females with breaks in length of service as a consequence of child-rearing this can give seriously misleading results.

In the context of anti-discrimination legislation it is also important to bear in mind that marital status may influence the level of earnings in a number of ways. First, it is possible that employers may regard marital status as a proxy for commitment to work. If it is judged that family responsibilities make married men more stable employees than single men, then married men will predominate in the better paid jobs. On the other hand, the Malkiels |36| and Gordon and Morton |24| suggest that employers may prefer single to married females because they expect higher absence and turnover rates in the latter case, with the general assumption that a geographical

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16. Though as Blaug |6| notes this model does not take into account "the role of costless learning by doing as a simple function of time, not to mention the organisational imperatives of the I.L.M."

job change by the husband will cause the married woman to quit her job.[17] Ferber and Lowry |18| take the view that in the absence of labour market discrimination one would expect single women to earn more than single men on the grounds that 'strong independent career orientated' women will choose to remain single and 'less aggressive, perhaps unsuccessful' men fail to marry. This contrasts sharply with the interpretation of Gwartney and Stroup |25| who present evidence to suggest that the employment preferences of men and women are most similar for single employees and dissimilar for those married with spouse present. Yet they acknowledge the difficulty of isolating supply side from demand side functions in a situation where neither employee preferences nor employer bias can be directly observed. A further difficulty, noted by Rosen |43| is the fact that 'never married' is an ex-post rationalisation. If females expect to become married at some uncertain future date this will affect the rate at which they invest in human capital and make it difficult to infer the precise part of the residual in adjusted male-female earnings equations which is the result of discrimination. At the minimum, however, it seems legitimate to expect, even in the absence of discrimination, that married women will fare worse than single women and either single or married men in terms of level of earnings and occupational advancement.

To summarise the above discussion of the concept of the I.L.M. there are clearly a large number of ways in which earnings and occupational level may differ between various groups in the labour market, some of which may reflect

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17. They also point out particularly in relation to marriage that a bias may emerge because certain independent variables measure different things in men and women. Thus, using the equation for men together with the means of the women's characteristics variables in order to measure discrimination is tantamount to saying that in the absence of discrimination married women would earn more than single ones. This suggests that it is necessary to run separate regression not only according to sex but also according to marital status or as in the case of Smith |46| to introduce interaction terms between marital status and experience.

efficiency criteria and some of which may reflect forms of discrimination. As Doeringer and Piore |14| note since the I.L.M. is at least in part the product of the employer's attempt to minimise the fixed costs of recruitment, hiring and training it is not at all certain that the removal of discrimination will raise economic efficiency. Before examining empirical evidence on the extent and nature of I.L.M.s, however it is necessary to examine the related concept of labour market segmentation (L.M.S.) and its stronger version - the dual labour market (D.L.M.).

(b) The Concept of Labour Market Segmentation

The distinction between the I.L.M. and external labour market (E.L.M.) implies some degree of segmentation in the labour market. Although certain authors treat L.M.S. as though it were synonymous with the D.L.M.,[18] it is perhaps more appropriate to regard the former as a more general approach to imperfections in the labour market and one in fact that has an established tradition in neo-classical theory. However L.M.S. is seen by the radical economists such as Edwards et al |16| to result from the attempt by employers to capture strategic control over product and factor markets through a policy of "divide and rule". For instance, the restructuring of the internal relationships of monopolistic corporations as part of the process of capitalistic development is held to have exacerbated L.M.S. through the creation of I.L.M.s and at the same time weakened the bargaining power of labour by heightening the difference of interests between various segments of the labour force. Whether L.M.S. has resulted from conscious management decision as the radical economists imply is, however, at the least debatable and differing interpretations can be placed on particular events in line with the mode of analysis being adopted.[19]

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18. Thus the title of Osterman's Paper |39| which is intended as a test of the D.L.M. hypothesis is "An Empirical Study of Labour Market Segmentation."

19. See, for instance, Cain |9|.

The essence of L.M.S. theories is the all pervasive nature of barriers to mobility. Labour supply schedules may differ among otherwise similar groups because of differences in education and training, geographical location, or work history, whilst labour demand schedules may differ because of differing industrial structures, discrimination by race and sex or trade union barriers to entry (Wachtel and Betsey |51|). As a result there are a whole series of possible wage and employment equilibria for particular groups of employee. Indeed, it is possible for individuals with low amounts of human capital to earn more than those with large amounts of human capital. According to this view, then, public policy should concentrate not merely on the acquisition of human capital but on how this is utilised within the labour market. As Wachtel and Betsey |51| note if an individual is sent on a training programme but on its completion simply returns to his original structural environment we should not be surprised at a lack of improvement in earnings capacity.

(i) Dual Labour Markets

The concept of the D.L.M. is not only an extreme form of L.M.S. but also a logical progression from the analysis of the I.L.M. since it broadens the coverage from the I.L.M. (in the form of primary markets) to a consideration of the E.L.M. and attempts to deal more specifically with mobility, or the lack of it, between the two sectors. An important feature of the hypothesis is the suggestion that the character of such markets is best explained by institutional and sociological factors rather than narrow economic variables in the neo-classical sense. Thus according to Doeringer and Piore |15|, in contrast to the assumption of human capital theory, much on the job training is not so much the outcome of economic decisions but a process of socialisation (i.e. acceptance and conformity to group norms). In particular social acceptability is a key factor in obtaining primary sector skills which means that promotion may be influenced by factors such as shared social beliefs, race and sex.

The simple D.L.M. theory states that the labour market can be divided into two quite distinct sectors. First, the primary labour market is characterised by high wages and fringe benefits, skilled jobs with opportunities for further training and promotion, employment stability and high levels of unionisation. By contrast the secondary labour market offers low wages and few fringe benefits, lack of skill and an absence of opportunities for promotion, employment instability and lack of unionisation. A high concentration of white adult males is to be found in the primary market, whilst there is a disproportionate number of females,[20] young workers, immigrants, coloured employees and other minorities in the secondary sector. As Andresani |4| points out this does not mean that all coloured employees and women, for instance, are confined to the secondary sector, that there is no upward mobility for such workers or that human capital has no value to them. Rather, it is held that

> "What upward mobility occurs and what value there is from investments in the schooling and training of disadvantaged workers derives solely within the primary labour market sector, and that blacks and women are disproportionately relegated to the secondary sector at the very outset of their labour market career independently of their abilities and skills. Abilities and skills in other words are thought to be of no value within the secondary sector and of no value in escaping from secondary jobs."

The meaningfulness of the distinction is dependent upon the existence of mobility barriers between the two markets such that certain workers become trapped in the secondary market. In the case of race such barriers will include not only overt discrimination by employers and unions but also the culture of the ghetto itself (Flanagan |20|). 'Statistical discrimination' will occur where certain workers are trapped merely because their superficial characteristics ressemble those of secondary workers.

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20. Thus, Gordon |23| notes 'women are much less able than previously 'disadvantaged' workers to identify with 'advantaged' workers and to follow their model in the transaction to stable work. Further the social definition of family and sex roles continues to undercut employment stability among women. And, as the percentage of women in the labour force continues to increase, some employers seem more and more likely to move many jobs into the secondary market in response to the (expected) behavioural characteristics of secondary women employees."

The parallels to the concepts of I.L.M.s and E.L.M.s are clear. As Doeringer and Piore |14| point out, the primary sector consists of a series of I.L.M.s with employment queues at the ports of entry, whilst in the secondary sector there exist various kinds of employment situation of which they distinguish three. Some workers are employed in casual labour markets which are too unstructured to qualify as an I.L.M.; some are employed in establishments with formal internal structures but many ports of entry or other features of the secondary market (examples being foundry workers and hospital auxiliaries); others are to be found in non-promotable jobs in establishments where the remainder of jobs are primary (e.g. labourers). It is held that the distinction between the two sectors is not so much technologically as historically determined, since work in the primary sector can be moved to the secondary sector when, for example, pressure of demand is sufficiently great. The real difference between the D.L.M. and other approaches is that segmentation eliminates opportunities for workers in the secondary sector as opposed to limiting them through either discrimination or market imperfections. It is also possible that the increasing importance of such factors as job training will tend to increase the separation between the two markets by making employment stability increasingly significant. In addition the growth of non-wage elements in labour costs within the I.L.M. implies the need to minimise numbers and maximise hours in order to spread those costs which are fixed in relation to the number of employees. (Chiplin and Sloane |12|). In contrast Doeringer and Piore |14| argue on the basis of the classification outlined above that

> "the distinction between primary and secondary markets need not imply the strict separation of the two embodied in the concept of a D.L.M. Whether a dichotomous or a continuous model of the labour market is appropriate is a matter of both emphasis and empirical judgement."[21]

This is very close to talking about segmentation along occupational lines and

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21. op.cit. p. 157.

we are back to Cairnes' non-competing groups. If a continuous model does apply there seems little scope for an analysis of D.L.Ms even if like Osterman |39| one believes that the concept of the I.L.M. lacks sufficient generality for purposes of macroeconomic analysis.

Later investigators have felt the need for a more precise definition of the primary and secondary sectors. As Osterman |39| notes, "simply segmenting the labour force into two parts ... leaves a primary sector of enormous variety and poor definition." Indeed it appears that the differences between groups within the primary sector are in some ways no less important than the distinction between the primary and secondary sector. Thus Piore |40| suggests that at the minimum one should distinguish between an upper and lower tier of the primary sector, which are categorised by Edwards |8| as "independent primary" and "subordinate primary" segments. The former group consists largely of managerial and professional groups with a considerable degree of job discretion, general training and often substantial job mobility. The latter group comprises both white-collar and blue-collar employees engaged on routine tasks, with specific skills and consequently low mobility and it is this group upon which the emphasis is normally placed in D.L.M. analysis. Since particular jobs tend to draw workers from particular areas and employees tend to hold jobs in a certain sequence Piore |40| suggests that we should think in terms of mobility chains or seniority districts which have stations at certain points along them, their division being determined by the structure of technology. Thus

> "the critical distinction between primary and secondary sectors is that the mobility chains of the former constitute some kind of career ladder along which there is progress towards higher paying and higher status jobs. This is true on both the upper and lower tiers and constitutes the rationale for speaking of the two tiers together as the primary sectors. In the secondary sector by contrast, jobs do not fall into any regular progression of this kind; they are held in a more or less random fashion so that a

worker coming into a job may take the place of another person moving to a job which the first person just left."[22]

Secondary markets may be expected where it is costly to create a well developed I.L.M., it is difficult to reduce turnover or the benefits of so doing are relatively unimportant and unions are weak. Alternatively certain groups of employees may not value job security very highly (e.g. moonlighters or married women only temporarily in the labour market). In the latter case it may be suggested that in some cases workers in the secondary market may be relatively well paid, such as those engaged on civil engineering or construction contracts, though the temporary nature of employment implies that differences in lifetime earnings will be rather less. The particular case quoted also suggests that it is wrong to infer that secondary markets are the sole preserve of small firms. Large firms may well segment their operations in such a way that the effects of instability of demand in the product market are felt by a clearly differentiated group of their employees.

It is suggested that the process of wage determination is quite different in the two sectors. In the primary sector wages, as in the I.L.M. analysis, are unresponsive to supply and demand because of sociological and institutional factors including equity considerations (Doeringer and Piore |15|). Further, incomes are determined by access to job clusters and the speed with which the individual passes through the structure of jobs, both of these being a function of the level of education. Seniority provisions mean that wages generally increase with age. In the secondary market variations in hours are more

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22. Some doubt might, however, be cast on Piore's view that jobs neatly divide into 'good' and 'bad' categories. Thus dockers with unstable work and car workers with monotonous working conditions are but two examples of high wage jobs with poor job characteristics. Perhaps also some secondary jobs are 'exploratory' jobs for young people. See the discussion in Wachter |52|.

important than variations in wage rates in determining income (Gordon |23|), those with lower incomes and larger families working longer hours, ceteris paribus, and the employer's assumption of homogeneous labour and zero turnover costs strengthening the forces of supply and demand in the labour market. As noted above it is held that endowments of human capital will not influence wages, because employers, anticipating high turnover, do little screening and provide little subsequent on the job training,[23] so that age/earnings profiles will be flat as a consequence of lack of promotion opportunities. Two separate arguments are put forward to suggest that wage differentials between the two sectors will widen over time. First, high profits in the primary sector allow firms to pay for considerable on-the-job training, which in turn raises productivity allowing still higher wages (i.e. there is positive feedback). This presupposes that profits are indeed higher in the primary sector and neglects the possibility that some firms may operate in both markets. Secondly, Piore |40| suggests that discrimination of any kind increases the labour force in the secondary sector, thus depressing the wage rate and giving the employers there, who in Becker's terms are presumably those with low discrimination coefficients or in Bergmann's terms members of the crowded sector, an interest in the perpetuation of discrimination. It is argued that higher wage costs for primary employers are offset by reduced costs of both screening and labour turnover. Klitgaard |32|, however, disputes the implication that discrimination can be in the interests of both primary and secondary employers because high voluntary turnover in the secondary sector should make that sector unattractive to employers. Otherwise it is difficult to explain why the primary sector should exist at all (unless unions are strong which then renders the conspiratorial theory redundant). Further, as Wachter |52| notes

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23. The fact that secondary sector contains the bulk of those with a low level of education and possibly a majority of the less able will lower the observed rate of return on education, thereby biasing downwards human capital coefficients.

we need to explain why, if secondary workers are basically sound employees new firms do not enter the market to utilise their skills. Explanations could be found in lack of information, discrimination or feedback effects resulting in poor work habits.

The last of these suggests that the motivation of workers may be a key factor, and one with which human capital models find it difficult to cope. The job satisfaction and performance of disadvantaged workers will be influenced by a number of factors in the social system including the organisation providing the job, community organisations, informal peer groups and family circumstances. Behavioural scientists generally agree that behaviour is a product of expectancies about behaviour-reward contingencies and the attractiveness of these rewards. Thus, high attendance (low rates of job turnover, absenteeism and tardiness) would occur when workers believe that remaining on the job leads to desired rewards, whereas leaving the job does not. It is not unreasonable to suggest that desired rewards will most frequently be forthcoming in the primary market and least often in the secondary market. Further to be productive a worker must internalise a wide range of middle class values least likely to be found in the secondary market. Thus, it is held that performance is a function of three major types of skills - adaptive, functional and specific. Adaptive skills are those that enable an individual to meet the demands for conformity and change made by the physical, interpersonal and organisational arrangements and conditions of a job. These are generally acquired in the early years as a consequence of family and school background. Functional skills are those that enable individuals to function in relation to machines or equipment, data or people and, are normally acquired through training and reinforced through experience on the job. Specific skills are those that enable an individual to perform a particular job according to the standards required by employers and customers and require specific training, perhaps on the job. It is probably in relation

to adaptive skills that differences between primary and secondary workers are most pronounced.

One consequence of such differences is that a process of self-selection by the disadvantaged may operate to create marked occupational segregation, in so far as members of such groups do not apply for particular jobs or to particular firms (Chiplin and Sloane |12|). An individual worker may not apply for a particular job either because he has a high propensity to quit and the wage structure favours those with low quit rates or because he has a lower level of productivity than the minimum required for entrance to a particular job, or for advancement within it. Equally, however, the individual may have misconceptions about his orher own characteristics in respect of these variables. It is difficult to isolate this process of self-selection from demand-side job barriers reflecting in employer hiring practices, since these practices influence self-selection and may result in self-confirming behaviour.

In general, the above discussion leads to the conclusion that the term duality is itself an over-simplification and that it may be more meaningful to talk in terms of multiple labour market segmentation, but discussion of this is postponed to the next section after the empirical evidence for the existence of D.L.M.s has been examined.

(c) Empirical Evidence on Structural Labour Markets

Examining first the extent of I.L.M.s the first question that arises is how far in practice is it possible to identify particular I.L.M.s. Doeringer and Piore |14| suggest that I.L.M.s can be analysed according to three characteristics: their degree of openness to the external labour market in terms of the proportion of ports of entry and exit and criteria for entry; their scope in

terms of size, geography and numbers of occupations; and the rules for internal job allocation. But in the case of "manorial" markets at least this is extremely demanding in terms of data requirements and they limit themselves to estimates of the proportion of the labour force within the two types of I.L.M. from data on employment by size and type of enterprise and by craft union membership. They conclude that about 80% of the employed labour force works in I.L.M.s, whilst the rest are engaged in agriculture or service occupations. The way in which an I.L.M. is defined in this case seems, however, to be far from adequate for most purposes. For instance, they include under the heading of structured markets 27% of workers employed in small enterprises, where administrative rules could well be relatively unimportant.

A perhaps more fruitful approach is that of Alexander |2| who classifies I.L.M.s on the basis of labour mobility. Thus a manorial structure implies a low probability of turnover which as a rule of thumb he takes to be less than 10%, whilst the unstructured market has a high probability of turnover which he takes to be greater than 20%. The existence of a guild market implies that there will be a significant difference between the probability of leaving the firm and of leaving the industry (taken as 10%). On this basis using the Social Security 1% work history file he calculates the mobility of each individual from equations including both personal and establishment characteristics and averages them for each structural class. It appears that both manorial and guild structures influence mobility to a greater degree than would be anticipated on the basis of the characteristics of the labour force. That is manorial industries reduce inter-firm mobility by almost seven percentage points and guild industries increase it by the same amount.

In comparison to the United States very little empirical work has been under-

taken in Britain on the operation of the I.L.M. However, Bosanquet and Doeringer |8| report that a brief survey undertaken by them of British hiring and promotion practices generally confirmed the significance of the distinction between open and structured markets. By contrast Mackay et al |35| found in their study of the British engineering industry that there was a major difference between American and British practice such that

> "None of the case study plants operated a procedure for internal promotion in which seniority was the only guiding principle, and there was no evidence that managements were under pressure from unions or workers to recognise the very informal procedures used to determine such promotion. This contrasts with much American experience, where promotion has become an important issue in labour-management relations, and the criteria used in selecting candidates for promotion have become a matter for collective bargaining."

Nonetheless the investigators conclude that plants did make use of their I.L.M.s to meet those requirements for labour which could not be met satisfactorily by means of direct recruitment and other sectors of industry may well have I.L.M.s which are rather more structured than in engineering. Thus, in an earlier study by S W Lerner et al |34|, which looked at four industries - engineering, chemicals, soap and baking - we are given some hints of the existence of I.L.M.s with a stress on the concept of the internal wage structure - encompassing wage differentials, wage setting procedures and forms of wage payment at a particular plant. In baking there was a definite preference for a stable workforce, partly stemming from a desire to maintain a high level of productive efficiency. Further, there was some doubt if the local labour market even determined the rate for key jobs, for if it did the bottom rung of unskilled workers where there is an internal promotion system or the pay of fitters in engineering would not vary from works to works. Nonetheless, for reasons outlined below it is unlikely that I.L.M.s are as significant in Britain as in the U.S.A.

There is some evidence that American employers in general take more care in selecting employees than their British counterparts. In addition to having

higher entry requirements than implied by the nature of the job, referred to earlier, far greater use appears to be made of entry tests than in the U.K. Further, a comparison of the findings of Rees and Schultz |42| and Mackay et al |35| suggests a tendency to rely on employee referral to a much greater degree and application at the gate to a much lesser extent in North America than Britain, which again might suggest greater care in hiring in North America. Further Mackay et al notes

> "The outstanding impression of selection procedures is that they were extremely casual and informal. Judgments were made on the spot, often after a rather perfunctory interview, and no attempt was made to subject hiring standards to objective tests. Interviewers ... seldom made any attempt to assess whether the recruit had potential for upgrading, possibly because the process of internal promotion was relatively little developed. Hiring was undertaken without particular thought to long-term considerations, and the requirements of the initial job had seldom been thought through systematically."

Further, there was little evidence that this informal procedure produced satisfactory results, but interestingly an exception to the general rule were those plants with American management which had more systematic methods of recruitment.[24] A second factor to consider is the importance of seniority. Indeed this provides a simple method for identifying the existence or otherwise of I.L.M.s for the stronger the relationship between inside experience (seniority) and pay and the less strong the relationship between pay and outside experience the more developed is the I.L.M. Thus in the Chiplin and Sloane study of a well developed professional I.L.M. |13| inside experience was highly significant and outside experience negatively significant. In the U.S.A. Rees and Schultz |42| found that seniority was the most important determinant of pay for nearly all occupational categories. Unfortunately no comparable data exist for the U.K.

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24. Mackay et al also found evidence of colour discrimination in a large number of plants which was frequently defended on the grounds that immigrants were difficult to employ because of bad health, absenteeism and language problems. Low wage plants in Birmingham had an exceptionally high proportion of coloured employees.

This brings us on to the work that has been undertaken on the application of the human capital model to particular labour markets. Using his basic equation Mincer |5| was able to explain a third of the variance in earnings for white non-farm men in 1959 based on the U.S. Census and over a half on certain additional assumptions. Using the same model Psacharopoulos and Layard |41| from a sample of 6873 adult males in the 1972 British General Household Survey were able to explain a third of the earnings inequality though the variance to be explained and the explained variance are lower than in the U.S. The conclusion that education and experience alone can account for as much as half of the observed variance in the distribution of earnings has been considered as "somewhat surprising" (Blaug |6|). Mincer and Polachek |38| using data from the 1967 National Longitudinal Survey of Work Experience also found that the earnings function was able to explain 25 - 30% of the relative dispersion in wage rates of white married women and 40% in the case of single women. Comparing the results with those for comparable males it seemed that differences in work experience accounted for roughly half the gap in male/female wage rates. However, for reasons outlined earlier studies of individual establishments seem more appropriate for the analysis of discrimination. Even, here, however, commitment to work may differ among groups according to sex or marital status which makes any precise measurement of discrimination difficult if not impossible. The human capital establishment studies have analysed in the main white-collar employees where measurement of productivity is most difficult. Results have also been influenced by the number of independent variables that investigators were able to include in their equations, by whether semi-log, double log or absolute scales were specified and by whether linear or quadratic forms were used for certain of the independent variables

such as education, age and experience.[25]

Also some investigators (e.g. Cassel et al |10|) include race and sex as dummy variables in single equation models, but the fact that separate equations for men and women generally show significant differences in values of the coefficients of the independent variables - and this is true also where marital status is identified[26] - indicates that the procedure of Cassell et al, is at the minimum dubious. For instance, in an analysis of three British I.L.M.s Sloane and Siebert |45| found that the education variable was in most cases highly significant, but this did not apply to married women in two cases.

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25. This problem is particularly well illustrated in the analysis of Ferber and Lowry |18|. In order to investigate the extent to which sex segregation of jobs influences female earnings they set up regression models as below

    (1) $Ym_i = bo + b_1 Em_i + b_2 Mi$

    (2) $Yf_i = bo + b_1 Ef_i + b_2 Mi$

    where Yi = median earnings in occupation i separately for men and women

    Ei = median years of schooling

    Mi = proportion of male employees in occupation i.

    The results reveal that schooling is a better investment for men than for women, that earnings rise with the proportion of male employees, whilst the addition of an interaction term raises the explained variance from 76 to 84% in the case of males and from 50 to 84% in the case of females. They conclude that

    > "the lower earnings in occupations with a higher proportion of women cannot be ascribed solely to the lower productivity of women, unless, of course, one is prepared to believe that women's productivity is somehow adversely affected by the mere presence of men and that men become less productive when they work with women."

    Given however that their model excludes experience this result is hardly surprising. If mean male experience exceeds that of females and is a significant determinant of earnings, then one would expect a positive relationship between proportion of males in the labour force and earnings. But the implications to be drawn are quite different than those stated by the authors.

26. Thus, Gordon and Morton |24| found that unmarried males earned 2.7% (t = -2.25) less than married males, whereas there was no such effect for women.

In general studies at establishment or unit of employment level by the Malkiels |36|, Cassell et al |10|, Gordon and Morton |24|, Ferber and Lowry |19|, Smith |46|, Chiplin and Sloane |13| and Sloane and Siebert |45| have been able to explain between approximately 50 and 90% in the variance of earnings for the various sex and marital status employment groups. Education and experience are highly significant in most but not all equations, whilst age is sometimes significant. This is in line with other studies including Rees and Schultz's major analysis |42| of the Chicago labour market, where seniority was the most important determinant of individual earnings and age was in most cases not significant, though more strongly associated with earnings in high wage occupations. The explanatory power of the human capital model seems remarkably high in some equations given the number of independent variables in the model. The Malkiels |36| were also able to use an expanded model using publications as a proxy for productivity (as well as including possession of Ph.D., critical area of study, absence rate and marital status). The additional productivity variables did increase the power to predict salary levels, with more than three-quarters of the variance in male and over eighty per cent in the case of female salaries being explained (as opposed to seventy-one and sixty-eight percent respectively). In some equations the Malkiels include organisational job level which causes the earnings gap to disappear, but women with the particular levels of training and experience are found to be in lower job levels than similar males. Likewise in the Chiplin and Sloane study |13| there was some evidence of discrimination in terms of access to the higher job level. It is important, therefore, to conduct analyses in terms of occupations as well as pay. Cassell et al |10| following Birnbaum |16| as outlined above, consider also the impact of initial grade upon current grade and wage and find that in the current wage regression's explanatory power is raised from 33 - 57% to 50 - 62% and in the current grade regressions from 29 - 63% to 64 - 86% when initial grade

is included. Further, all race coefficients become insignificant which might indicate that discrimination occurs at the time of hire rather than in employment. Cassell et al |10| also suggest that there may be a relationship between the method of payment and the amount of discrimination, or more precisely that the "objectivity" of payment-by-results may diminish discrimination. Finally, Smith |46| finds that sex is an important source of differences in government differentials over the private sector. That is, women appear to enjoy a premium in wages as a result of government employment and this premium increases with the level of government. The public sector may therefore be less discriminatory than the private sector which does not seem entirely in accord with Becker's hypothesis that discrimination will be a positive function of the degree of monopoly.

In general, these results provide considerable support for the human capital theory since low earnings can at least partly be explained by low levels of human capital investment, but evidence of lower rates of return on the investment for female and coloured workers suggests that discrimination may also be a factor. Further, experience may reflect on-the-job training and the flatter experience earnings profiles for women and coloured employees is suggestive of less on-the-job training and less rapid movement up the promotion ladder.[27]

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27. Flanagan notes that when employers are uncertain of the employment stability of job applicants, it may be possible to protect themselves against capital loss by shifting a larger proportion of the training costs (and returns) on to the trainee. However, anti-discrimination legislation prohibits the implied lower wage for a given amount of training. For what may be required is a lower wage for females and coloured employees say during training and a higher wage than white males thereafter. It is doubtful however, if employers would be allowed by majority workers or their representatives to pay higher wages to minority workers in this way on completion of training.

The most complete test of the L.M.S. theory is that of Wachtel and Betsey |51| who adopt a two stage regression procedure. This involves running regressions with wages specified as a function of personal characteristics (education, years in present job, race, age, sex and marital status), then calculating an adjusted wage variable with the characteristics variable removed. The process is then reversed to test for the effects of personal characteristics upon wage after eliminating the effects of structural variables (occupation/ industry, region, city size and union status). All the independent variables proved to be significant, though only about one third of the variance was explained. An important aspect of the L.M.S. theory is the question of self-confirming behaviour. Thus as workers become categorised as members of a particular group they may well adopt behaviour patterns predominant in that sector, which implies that career origin may be a major if not the major determinant of career ending. Adopting this approach Birnbaum |16| finds that the inclusion of career origin as well as conventional variables such as education and race raises the explained variance of earnings from 39 to 41% and the additional independent variable is statistically significant. However, the interpretation of this result as support for the L.M.S. view depends on the assumption that career origin measures the job rather than some attribute of the individual concerned. Segmentation theories seem particularly appropriate in the context of female employment, for as referred to earlier, there is some suggestion that women are not only segregated by occupation but within any occupation where substantial numbers of male workers are to be found they may be segregated by firm. Thus Blau |16| found for a sample of clerical employees in three large cities a strong and consistent pattern of intra-occupational segregation of this kind. The policy implication is clear. Increasing the supply of female employees within particular occupations may not improve integration of the sexes unless demand side forces creating segregation can be overcome.

Some investigators have attempted to detect the existence of D.L.M.s using a single measure. Thus Bosanquet and Doeringer |8| suggest that an appropriate test for the evidence of a D.L.M. is differential rates of increase with age of age-earnings profiles of particular groups of employee, though one problem that emerges is the fact that labour statistics do not divide workers into a classification which accords precisely with that of the D.L.M. theory. However, age-earnings profiles would hardly seem by themselves to be an adequate test of D.L.M. theory since such results are capable of a number of interpretations. An alternative approach is to examine job tenure and turnover. Thus, Edwards |16| finds that there are significant differences in the job tenure rates of those groups said to be heavily represented in the primary sector (i.e. white males) and those in the secondary market (i.e. blacks, youths and all females over twenty-five). Here again, however, demographically defined groups are used as proxies for market determined categories, and the results can be interpreted in a number of ways. The same criticism would apply to a third possible measure - unemployment rates for different segments of the labour force. To some extent Gordon's (1971) factor analysis of multiple occupational and industrial characteristics[28] overcomes the problem of a single measuring rod. He examines weeks worked per year, whether or not the worker was looking for work during the year and personal characteristics such as marital status, whether or not head of household and years in the labour force. Both primary white and black males exhibit larger average job tenure in their first and present job than secondary white and black males, but the average duration of tenure seems remarkably stable even in the secondary sector - 8.90 years for secondary whites and 5.95 years for secondary blacks in their present job.[29]

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28. 'Class Productivity and the Ghetto: A Study of Labour Market Stratification' unpublished Ph.D. thesis, Harvard, Mass., 1971, reported in Edwards |16|.

29. Wachter |52| notes that neither the distribution of industries nor the distribution of workers by earnings show any evidence of bipolarity. Whilst it is preferable to consider several rather than one variable, even here the results are mixed and the null hypothesis is that there is a continuum of jobs.

Two rather more detailed examinations of the D.L.M. hypothesis than the above have, however, been undertaken. Osterman |39|, using data from the 1967 U.S. Survey of Economic Opportunity, assigns each male worker to one of the three segments in the Piore model, which provides 4130 observations in the lower primary tier and only 242 in the upper primary tier and 234 in the secondary tier.[30] Semi-log regressions were run to establish whether there were fundamental differences in the earnings functions among the three segments of the labour force and if so whether these were in line with the predictions of the D.L.M. theory.[31] Strong support is found for the theory with substantial differences in the earnings function among the three segments. The race variable is insignificant in both upper primary and secondary sectors which suggests that racial discrimination is confined to the lower primary sector.[32] One problem with this particular study, acknowledged by the author, is the fact that workers were assigned to each segment on the basis of subjective judgments and this increases the importance of further research currently underway to develop more refined classification procedures. In a rather different type of analysis Andresani |4| set out to examine three empirical issues - the incidence of mobility between the two sectors, the importance of skills in obtaining access to the primary sector and differences in the importance of skills within each sector - using a cohort of males aged 14-20 in 1966 from the National Longitudinal Survey and examining them over a period of three years. He found that although 43% of

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30. The danger of this procedure is that by segmenting workers into three separate groups one is denying the possibility of movement between groups. Yet upward mobility is precisely the way in which most of the gains to education are secured.

31. The independent variables in the model are age, years of schooling, race, weeks unemployed in the previous year, hours worked in the previous week and dummy variables for the industry in which the individual worked.

32. Osterman claims that the results show that policies designed to increase the human capital of secondary workers are not likely to improve their earnings. This claim is surprising in view of the fact that when separate equations were run for whites and blacks the education variable was significant for blacks in the secondary sector.

whites and 64% of black youths started their careers in the secondary labour market only 17% and 36% (respectively) remained there at the end of the period.[33] Secondly among both blacks and whites investments in human capital increase the likelihood that the individual will be in a primary rather than a secondary job. Thirdly, the returns to investment in human capital appear to be just as high in the secondary as in the primary sector for both groups. Thus the secondary sector hardly appears to be "a prison from which there is no escape." This finding is in line with that of Flanagan |20| who found that some of the barriers emphasised by the dual theorists did not appear to operate as predicted. Thus, using a housing segregation model it was found that for given characteristics ghetto residence did <u>not</u> depress market productivity. All in all the empirical evidence in favour of the D.L.M. is hardly conclusive, rather what firm evidence there is tends to cast doubt on the dichotomous model. Yet, there is no doubt that the hypothesis has had a certain appeal in terms of policy formation, at least as far as the U.S. is concerned, and therefore it is appropriate to examine ways in which the anti-discrimination legislation reflects the dualist philosophy.

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33. Leigh |33| also found that inter-firm and inter-industry mobility was similar for blacks and whites in similar age groups and in general his findings "cast doubt on the literal interpretation of the dual hypothesis as a guide for explaining labour market processes - at least during periods of full employment."

3. Anti-Discrimination Legislation and Structured Labour Markets

As outlined above legislation in both North America and Great Britain appears to reflect the growth in significance of the I.L.M. and the perceived importance of D.L.M.s Relevant aspects of the law include indirect discrimination, which is associated particularly with the rules for entry into the I.L.M., although, of course, enterprises with unstructured labour markets are equally subject to the law; the concept of strategic investigation and class action suits which are designed to generalise the gains of individuals in the courts to their co-workers within the I.L.M.; and positive discrimination or affirmative action which recognises that minority workers excluded from primary markets may require special treatment to compensate for their lack of acquired rights. Such a policy is however likely to incur both private and social costs which have to be offset against any gains resulting from a re-distribution of income and employment towards minority groups.

(a) Direct and Indirect Discrimination in Employment

To understand the practical implications of the distinction between direct and indirect discrimination, it is necessary to understand how "discrimination" is defined in law. In the U.S., the concept has undergone three definitions[34] since the first days of federal involvement in the area during World War II. Initially, discrimination was defined as "prejudicial treatment": harmful acts motivated by personal antipathy toward the group of which the target person was a member. However, since it is difficult to prove intent to harm, discrimination came to be defined in the courts as "unequal treatment". Under this second definition, the law was interpreted to imply that the same standards (job requirements and conditions) be applied to all employees and applicants. In other words, the employer was allowed to impose any requirements,

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34. Blumrosen |7|.

so long as they were imposed on all groups alike. Yet many of the most common requirements, such as education and testing, had unequal effects on various groups, even though they were imposed on all groups alike. Thus minorities remained at the bottom of seniority lists within I.L.Ms and suffered disproportionate unemployment in the secondary labour market. In recognition of these problems, the U.S. Supreme Court articulated the third definition of employment discrimination in Griggs V. Duke Power Co. in 1971. There the concept of indirect discrimination was articulated. The Court struck down employment tests and educational requirements that screened out a greater percentage of blacks than whites. Those practices were prohibited because they had the consequence of excluding blacks disproportionately, and because they bore no relationship to the jobs in question.[35] Therefore, the intent of the employer who discriminated does not matter. What is important is the effect of an act or a policy rather than reasons underlying it. The fact that a person "did not mean to discriminate" is not an excuse under the law. This concept of indirect discrimination, first introduced in the U.S., appears in both the British Sex Discrimination Act (1975) and Race Relations Act (1976) which seem to have borrowed and adapted this definition.[36] Thus, this part of the

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35. Jain and Ledvinka |29|. It is suggested that the third legal concept did not develop in a vacuum. A great deal of I.L.M. evidence bearing on industrial personnel policies aided in the emergence of the concept.

36. For instance, on October 27, 1976, The Minister of State, Home Office stated in the House of Commons that the concept of indirect discrimination in the Race Relations Bill (1976) is "... new because it deals with a question where there is nominal equality but de facto inequality. For the concept of indirect discrimination to be established, five primary issues of fact have to be decided - first, whether a condition or requirement has been applied to the complainant; second, whether the complainant has failed to comply with it; third, whether the failure has operated to the detriment of the complainant; fourth, whether the condition is such that the proportion of those of his racial group who can comply is considerably smaller than those not of his racial group; fifth, whether the condition or requirement is justifiable, irrespective of the racial group". Weekly Hansard, House of Commons Parliamentary Debates, Issue No. 1050, 22nd October - 28th October, 1976. This mirrors the earlier Sex Discrimination Act.

legislation strikes at the root of discrimination - requirements for entry into the I.L.M. - by forbidding selection on the basis of group rather than individual attributes, unless the former can be clearly demonstrated to be fundamental to the job in question.[37]

(b) The Concept of 'Strategic' Investigation of Industries, Firms or Institutions

It appears that the British Race Relations Act (1976) has benefited from the U.S. experience in other ways as well. For instance, the burden of asserting rights has now shifted to the individual (complainant) and away from the system previously adopted, which was that of reporting to the Race Relations Board and of that Board taking up the matter on behalf of the individual. This avoids the cumbersome delays and backlog of complaints which require individual investigations as is the case with the Equal Employment Opportunity Commission in the U.S. which is heavily burdened by such complaints.[38] Consequently the important lesson from the U.S. is the need for 'strategic

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37. In the British legislation it appears that it is no defence in the case of selection on the basis of group attributes to demonstrate that a particular group is inferior to another (e.g. on the basis of turnover or absenteeism rates). Selection must be based on individual attributes.

38. It has been pointed out that "... the experience of the last ten years or so of operation under the machinery set up to administer the anti-discrimination laws and others has been deeply disappointing to those who had hoped for early substantial progress. Symbolic of the failure to make headway against discrimination is the mountain of 98,000 unresolved complaints at the Equal Employment Opportunity Commission, which administers the Civil Rights Act ..." Barbara R Bergmann, "Reducing the Pervasiveness of Discrimination", in |22| Bergmann goes on to suggest that "The strategy of dealing with complaints in order of filing, regardless of the nature of the complaint, has left most of the people who have complained as well as millions of discriminated against non-complaints without relief, "and that an alternative strategy, in which most of the resources of the E.E.O.C. would be devoted to systematic investigation of occupational segregation in the largest corporations, would clearly be more productive ..." (p. 133). It is apparent that this conclusion is reflected in the British legislation (1976) which incorporates the concept of 'strategic investigation' and the issue of non-discrimination notices.

investigation'[39] and "class action" suits. There are numerous precendents for strategic investigation and findings of discriminatory practices leading to settlements on corporate wide basis.[40] Thus, in the case of the Civil Rights Act in the U.S., an aggrieved person has the option of taking individual action through the courts with or without the assistance of the E.E.O.C., or file a complaint with the state equivalent of the E.E.O.C. or with the E.E.O.C. itself. In addition, the various federal agencies including the E.E.O.C. can initiate strategic investigations of employers.

"Class action" suits or charges can be filed on behalf of a large number of persons, in addition to the individual actually filing the charge. This ability to file a class action has been helpful in enlarging the scope of both investigation and remedies to cover all persons "similarly situated" who have suffered as a result of the same practices. Such actions are possible under all of the laws and regulations prohibiting discrimination. One notable example was the class action suit filed on behalf of discriminatees by an employee of the Bowman Transportation Company. In this case, the essential fact that the company had discriminated against black workers in

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39. This is reflected in the following extract from the debate on the Race Relations Bill in the House of Commons on 4 March, 1976. "If, for instance, the Race Relations Commission decides that it wants to do a strategic investigation into the employment, promotion and general conditions at, say, Ford of Dagenham, and comes to the conclusion that a system of discriminatory practices has grown up, based upon racial grounds, within Ford, and then issues a non-discrimination notice putting an end to those discriminatory practices, it will affect the lives of thousands of people by one decision, whereas the Race Relations Board in the whole of its life considered 7,000 complaints most of which in the end had to be rejected." Weekly Hansard, House of Commons Parliamentary Debates, London: H.M.S.O., Issue No. 1027, 27th February - 4th March 1976, p. 1662. This is not to say that the Commission for Racial Equality is prohibited from assisting and representing individuals in appropriate cases. But the Commission's main task is to identify and deal with discriminatory practices by industries, firms, or institutions.

40. See for example, 'The I.T. & T.' and the Bethlehem steel cases referred to in Jain and Pettman |30|.

hiring, transfor, and discharge was not in dispute. To circumvent the Civil Rights Act, the company introduced a "buddy system" whereby no new driver would be hired without the sponsorship of a driver who would train him. Blacks were not sponsored, and blacks hired for other jobs were not transferred to over-the-road positions.[41] A collective bargaining agreement with the union perpetuated the discriminatory practices.[42] In this case, the Supreme Court of the United States declared that the remedy for the in-hire discrimination is the employment of the discriminatees with full seniority, back to the date of their application for work. This is but one example of a number of cases brought by an individual employee and decided in favour of the affected class of employees in a particular company or industry. The basis for retro-active seniority is that merely to order an employer to recruit a job applicant, who has been refused employment unlawfully, as a new employee, rather than requiring seniority retro-active to the date at which the applicant was first refused employment, falls short of a 'make whole' remedy. It has also been ruled however that Title VII of the Civil Rights Act should be construed to permit the assertion of plant-wide (as opposed to departmental) seniority only with respect to new job openings, and that white male incumbents should not be bumped out of their jobs even by blacks or women with greater plant-wide seniority. Such an action would offend the notion of job rights within the I.L.M. which is firmly embedded in the American system and is a particularly sensitive issue in periods of declining employment opportunities. It is suggested that

> "resistance offered by employers and unions to those mandatory and prohibitory requirements stems not so much from opposition to the underlying policy against employment discrimination as from a defence of long standing institutional arrangements within the context of collective bargaining that are threatened by statutory and administrative implementations of that policy."[42]

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41. Franks V. Bowman Transportation Co. Inc., 96 S. Ct. 1251 (1976) 11 EPD.

42. David Ziskind |54|.

43. Aaron |1|.

(c) Positive Discrimination

The British legislation (i.e. both the Sex Discrimination Act and Race Relations Act) permits positive discrimination in favour of women and coloured groups under carefully defined circumstances. In both these pieces of legislation, some 'reverse discrimination' or positive discrimination in favour of women and coloured people is allowed, but not required of employers. That is, the Acts contain provisions allowing employers and training organizations to provide special training facilities to members of such groups and to encourage them to take advantage of opportunities for doing particular work where within the previous twelve months there were no persons of the race or sex in question performing that work or the number so doing was comparatively small.[43] In the U.S., Executive Orders[44] require affirmative action on the part of federal contractors and federally assisted construction contractors. This requirement, involving contractors with a plant containing 100 or more employees and a contract of $10,000 or more, to take affirmative action means the setting of goals[45]

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43. In addition, there are similar exemptions allowing the provision of special training facilities and encouragement by trade unions, employers' associations, and professional and trade organizations. The Race Relations Act also permits discrimination in the employment, where necessary, of persons of a particular ethnic or national origin.

44. Executive Orders are not statutes. Rather, these are Presidential Orders which require non-discrimination and affirmative action of federal contractors, who accept these (federal) contracts voluntarily, as conditions of doing business with the federal government. The courts have ruled that they (executive orders) have the force of law and that the government has the right to set the terms of its contracts with contractors. (See, for example, Contractor's Association of Eastern Pennsylvania v. Secretary of Labor, 442 F. 2d 159, 162-166 (3d cir. 1971), cert. denied, 404 U.S. 854 (1971) for a discussion of the authority under the Executive Order.

45. Numerical goals are not to be confused with numerical quotas. The government and the courts have made a clear distinction between the two concepts; goals are legal, while quotas clearly violate both the Constitution and various federal statutes. (For a discussion of legal precedents of affirmative action, see Statement of Affirmative Action for Equal Employment Opportunities, U.S. Commission on Civil Rights, Washington D.C. 1973). Quotas keep people out; goals are targets to help assure that people previously excluded are included. Goals are an attempt to estimate what the employer's work force would look like if there had been no illegal discrimination. Thus, the development of numerical hiring goals is a strategy to end the continued effect of numerical hiring goals in the present and to give relief to a specific class that employers have discriminated against in the past.

and timetables for minority employment in job categories where minorities and women have been under-utilized. This involves an annual report to the E.E.O.C. of the number of employees by race, sex and occupation and location. Thus, while in the British legislation, there is a provision for positive discrimination with the intent to increase the supply of qualified coloured and women workers to compete effectively against the white workers and to redress past discrimination in this manner, the U.S. Executive Orders require employers to submit numerical goals to eliminate past discrimination by actively recruiting and staffing via internal transfers, training, promotion etc. of minority and women workers. The numerical goals, according to the guidelines issued by the U.S. Department of Labour, should be significant, measurable, attainable, and specific for planned results; the failure in developing and implementing an acceptable affirmative action program within a specified time could result in cancellation or termination of existing contracts. It is estimated that at least a third of America's work force is employed in enterprises which are involved in some way with government contracts, so that the potential area of impact is considerable. Of some importance also is the question of what constitutes the relevant labour market area. For certain professional groups the relevant labour market may be the number qualified in the economy as a whole and the matter is relatively straightforward.[46] In other cases,

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46. Here goals are aligned with the number or percentage of qualified women and minorities available, not in terms of their general representation in the population. For example, women receive about 23% of the doctorates awarded in psychology in the U.S.A. and research indicates that 91% of women with doctorates work. Furthermore, approximately 23% of the psychologists listed with the National Register of Scientific and Technological Personnel are female. Thus, if there were no women or substantially less than 23% women in a University's department of psychology,"underutilization" would presumably exist. Such a presumption, based on statistical analysis, has been upheld in the courts. Indeed, statistics such as these can be used as prima facie evidence of discrimination during litigation. The aim of numerical goals is not punitive and employers are not required to fire anyone. Moreover, goals do not constitute preference when undertaken to remedy past discriminatory practices. They do not require employers to give preferences to minorities and women; rather, they require employers to end giving preference to majority (white) males.

It is also important to note that the obligation to meet the numerical goal is not absolute. The employer must be able to demonstrate,(when unable to meet the goal) good faith efforts to recruit minorities and women; that job criteria were job related; and that the criteria was equally applied to all workers.

however, the situation is more complicated. It is suggested that relevant features include the size of the minority population or occupied and unemployed workforce within the labour area surrounding an establishment relative to the total population or workforce; availability of minorities with the requisite skill either within the immediate labour market area or the area in which the contractor can reasonably recruit; the availability of promotable minority employees within the contractor's organisation; the anticipated expansion, contraction and turnover in the labour force; presence or otherwise of training bodies capable of providing requisite skills for minorities and the degree of training the contractor is reasonably able to undertake as a means of making all job classifications available to minorities. These provide by no means unambiguous guidelines and the courts have fallen back on a number of criteria including the percentage of blacks in the total population of a city, Standard Metropolitan Statistical Area, State or region. As Gastwirth and Haber |21| note ideally we should consider a labour market as an area over which wage uniformity prevails but identification of this area is complicated by varying costs of travel for potential members of the labour force which effect different establishments unequally. Consequently they propose a model which allows for the percentage of the minority in the labour force of an area and distance from work. As they note, however, there are still complications arising from such factors as the propensity of employers to locate in predominantly white areas to facilitate discrimination or the "chilling effect" of past discrimination if the employer's own records are the basis for evaluation. Yet, failure to allow adequately for the above complications will provide inaccurate estimates of actual discrimination and lead to various forms of inefficiency.

In effect the Affirmative Action Programme seeks to remove discrimination by increasing exclusively the costs of hiring white males and the impact of a given penalty (i.e. goal) on increasing minority employment will be a function

of how rapidly the marginal costs of hiring minority workers increase.[47] As Amsden and Moser |3| note the employer's costs of recruitment may rise as a result of excessive interviewing where the number of available minority workers is in short supply. In fact, a government contract compliance programme is analytically distinct from a general anti-discrimination law (which approximates to an involuntary quota) (Heckman and Wolpin |in 27|). In the former case entrepreneurs can choose not to bid for federal contracts and thus not bear the costs of affirmative action whilst in the latter case such costs cannot be avoided, if there is effective enforcement. In both cases, however, product price will rise and output fall as a consequence of increased costs of production. Indeed the Government must, in a competitive industry, offer a higher price per unit of output on its contracts to achieve any affirmative action effect, otherwise there will be no bids. The partial coverage of affirmative action itself makes it difficult to ascertain the precise effectiveness of the policy, for gains for minorities in affirmative action firms could possibly be offset by a deterioration in non-government contract enterprises. An alternative theoretical approach is to assume that the whole economy is covered. Using such an approach Johnson and Welch |in 27| demonstrate that the likely impact of a policy will depend crucially on whether or not enterprises find it possible to skill bump[48] as well as whether or not they can engage in reverse discrimination. For if we take the plausible case where the quota is fixed at a level in excess of the available supply of labour, then either arbitrary upgrading (in which unskilled minority workers are designated as skilled) or downgrading, in which some

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47. M Goldstein and R S Smith "The Estimated Impact of the Anti-Discrimination Programme Aimed at Federal Contracts" |in 27|. They note that penalties are a function of three factors - the probability of being reviewed by a Government Agency, the probability of being found to be out of compliance if reviewed, and the size of the penalty if non-compliance is judged.

48. For a detailed theoretical discussion of this see F Welch |53|.

skilled majority workers are forced to become unskilled, must occur. The result will be the social cost of allocative inefficiency and an income transfer towards the beneficiaries in the minority sector. Now, however, it is profitable for some firms to hire downgraded skilled majority workers at a wage lower than that prevailing in the skilled occupation and to meet their own quota by 'bumping' some unskilled minority workers into skilled jobs and no allocative inefficiency results from skilled workers being employed in unskilled jobs. Thus 'reverse wage discrimination' may arise from the fact that firms engaging in skill bumping will offer lower skilled wages than those firms who meet their quota by hiring skilled minority workers.[49]

What of the effects of the affirmative action programme in practice? Allowing for the fact that only a part of hourly wage rate differentials are attributable to racial differences in the price paid for productive characteristics, the effect of removing training differentials and those relating to experience through feedback mechanisms and the fact that the programme is not comprehensive, Flanagan |27| estimates that the potential impact is some 23-24% of the wage-rate differential. As Ashenfelter |27| notes, however, the fact that the Equal Employment Opportunities system contains no information on levels of earnings is a problem and makes it difficult to determine whether minority representation increases in establishments with above average earnings or otherwise. As far as employment effects are concerned empirical studies suggest a significant increase in minority employment in contract compliance firms, but the results are quantitatively small (less than 1% per annum in the case of the ratio of black to white males) and the effect in

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49. With the assumption of a continuous skill distribution Johnson and Welch also demonstrate that an affirmative action programme would probably lower incentives to accumulate high levels of skill for minority workers but raise the incentives for majority workers thereby increasing income inequality.

terms of relative occupational position has been negligable. The results also seem to imply that females have been adversely affected by the programme which could be explained by the fact that prior to 1972 the emphasis of the programme was on racial rather than sex discrimination. In general, it seems valid to conclude that where I.L.M.s are well developed change induced by affirmative action will take a considerable time before it has a major impact and some of the effects may not be wholly desirable.

4. Conclusions and Policy Implications

Various studies have highlighted the extent and significance of I.L.M.s with the possibilities of various types of discrimination relating both to entry into the particular labour markets, characterised by the use of race or sex as a cheap screening device, and relating to advancement within such a market, characterised by lower rates of return on the investment in human capital. Other investigators have stressed the role of dual labour markets in excluding minority workers from the advantage of primary markets even where they possess the necessary skills to be productive there, but the empirical evidence seems to be more consistent with a labour market segmentation approach which stresses lack of perfect mobility between a number of different markets rather than a two sector model. However, whether or not the D.L.M. approach is descriptive of labour markets in practice it is suggested that it has had some influence on the form in which labour laws have been applied - notably in relation to the concepts of indirect discrimination, strategic investigation or class action suits, affirmative action and reverse discrimination, though it may be possible to justify each of these on alternative grounds than the alleged predominance of D.L.M.s. Indeed, they seem equally applicable to the I.L.M. concept.

There would appear to be three broad types of manpower policy which might be utilised to assist minority workers. Firstly, taking labour supply and demand as given, one might attempt to make the labour market operate more efficiently by means of placement activities, worker counseling and labour mobility or related measures, which would be appropriate regardless of the structure of labour markets. Secondly, one might attempt, consistent with the human capital approach, to upgrade the labour supply of minority workers by means of greater investment in education and training,though a note of caution may be required since it is possible that labour market efficiency requires equilibrium of supply and demand in all sectors including the unskilled, and it is possible to have supra-optimal as well as sub-optimal investment even in this area. Thirdly, the labour market segmentationists, broadly defined, would see the solution as lying on the demand rather than the supply side with a requirement for government employment and expenditure policy to favour those in the secondary sector. This would include equal opportunity and affirmative action programmes.

Following the third of these broad approaches Doeringer and Piore |14| argue that it is possible with determination to create more primary jobs or to stabilise most secondary jobs and provide levels of wages and career hierarchies characteristic of the primary sector. This might involve increasing the coverage and extent of minimum wage laws, encouraging unionisation and expanding social legislation in general. This, however, ignores the contribution that the secondary labour force makes to the adjustment of labour supply to fluctuations in product demand and the fact that some workers may prefer not to form long term relationships with a particular employer. It is also held that by the dualists that full employment has a primary role in encouraging the structural transformation required to expand the primary labour market and facilitate the absorbtion of minority employees into it.

As far as the I.L.M. is concerned one would wish to emphasise the crucial role of hiring practices in perpetuating discriminatory behaviour, and as Doeringer and Piore |14| note in this respect

> "to achieve any degree of control over discrimination occurring through screening procedures will require the formalisation, precise definition, and validation of screening procedures."

Such evidence that is available suggests that in the U.K. in particular hiring practices are informal, imprecise and rarely validated, and to the extent that this is not amenable to change the alternative for anti-discrimination policy would appear to lie either with quotas or subsidies. The analysis also suggests, however, that both 'cheap' screening and the operation of the I.L.M. itself can increase efficiency, and public policy both in the U.S.A. and U.K. has been slow to recognise the fact that the elimination of discriminatory practices involves the balancing of competing interests, not least of which is the protection of the job security of other groups in the labour force. If as Doeringer and Piore |14| suggest the costs of changing hiring and promotion standards vary with the conditions surrounding each I.L.M. general rules should perhaps be subordinated to ad hoc judgment.

Given the multiplicity of factors operating in the I.L.M. including the supply of and demand for human capital, technology, capital intensity, unionisation and the bureaucracy of large organisations (Alexander |2|) it is most unlikely that anti-discrimination legislation is a sufficient as opposed to a necessary condition for the elimination of inequality between majority and minority groups within the labour force, though its long run effects in eliminating that part of the differential in job and wage opportunity which reflects discriminatory behaviour remains to be determined.

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