

Economics explains discrimination in the labour market

5 Neoclassical models of discrimination

5.1 Introduction

Our earlier discussion suggested that to understand labour market discrimination we need to answer two principal questions. First, to what extent does the observation that, on average, some groups in society fare worse than others in the labour market actually reflect differences in productivity arising from differences in such things as education and training, and how much represents the unequal treatment of equally productive workers (i.e. discrimination)? Secondly, if discrimination in the labour market exists, what explanations are proposed to explain why it takes place? These two questions are, of course, not unrelated. The educational and training opportunities available to some groups in society may themselves reflect discrimination. As a result, labour market outcomes, which may or may not be discriminatory, may arise from discrimination that exists outside the labour market. In this section we consider those explanations usually grouped under the neoclassical label, which build upon human capital theory. No attempt is made here to provide an exhaustive coverage of all the neoclassical models and their variations, rather, we present two examples of neoclassically-based explanations. The first, Becker's 'employer taste' model, is based on the standard utility maximising model and emphasises the importance of market forces and competition; the second focuses on how imperfect information in the labour market can give rise to wage differentials even among comparable workers.

5.2 Becker's 'employer taste' model

The most prominent neoclassical explanation of discrimination is based on the work of Gary Becker and develops the idea that some workers, employers or customers do not want to work with or come into contact with members of other racial groups or with women (Becker, 1971). No explanation is given as to why this prejudice exists, rather it is simply assumed that there is a 'taste' or preference against people from disadvantaged groups and that this taste can be treated in exactly the same way that economists would analyse individual preferences between goods and services.

Suppose that an employer does not want to employ members of a particular group even though these workers are as productive as any others. If the firm has to pay all workers the same wage it will simply not employ members of the disadvantaged group. However, if it is possible to pay these workers less than those from other groups the firm then faces a trade-off: it can employ members of the disadvantaged group at lower wages and thus increase its profitability, or it can discriminate and employ only workers from the high wage group even though this will mean lower profits. Discrimination in the latter case therefore imposes a cost on the firm.

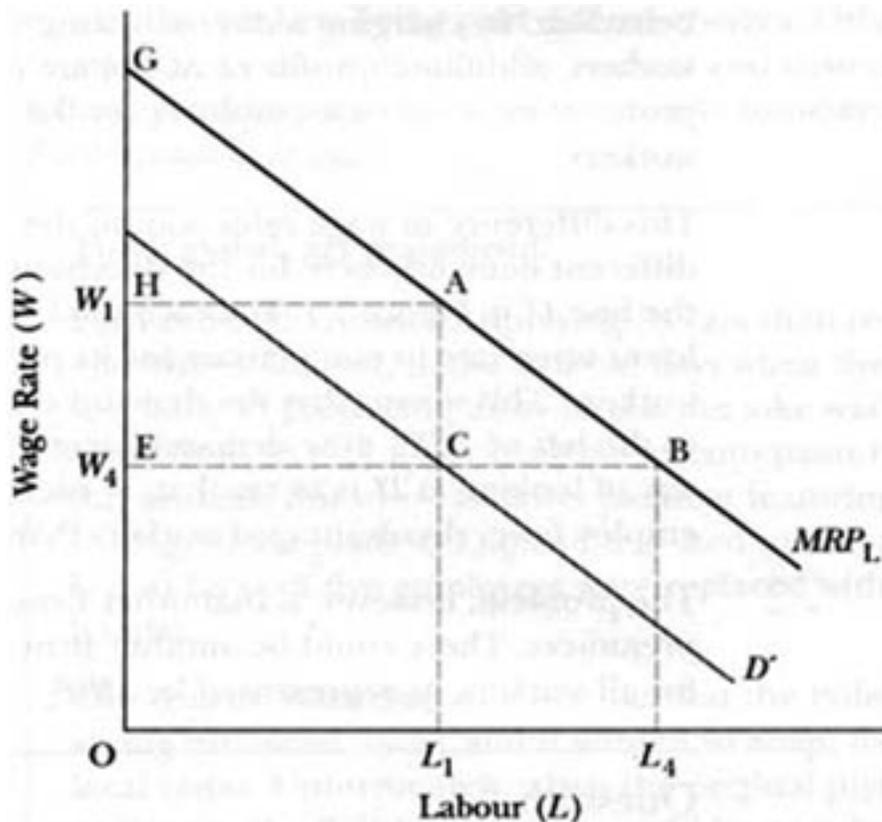


Figure 2 Employer discrimination in the demand for labour
[Long description](#)

Figure 2 can be used to show what happens in these circumstances. Let us assume for the sake of simplicity that there are no differences in productivity between different groups of workers. Since all workers have the same level of productivity, the marginal revenue product (MRP) curve faced by the firm is the same, irrespective of which workers they employ. This is shown as MRP_L , the demand for labour curve. In a competitive labour market, a firm will employ labour up to the point where the wage equals the marginal revenue product of labour (which is why the MRP_L curve is also the firm's demand curve for labour). So, if the wage rate is W_1 the firm will employ L_1 workers. If the firm discriminates against members of a particular group, no workers from this group will be employed at W_1 . This employer will simply exercise prejudice against them and, if this is a common practice amongst firms, the disadvantaged group will face unemployment.

What would happen if these workers were prepared to work at wages below W_1 ? Clearly, this will depend upon the extent to which the firm is prepared to discriminate since by employing disadvantaged workers at lower wages, the firm can lower its costs and thus increase its profits. Suppose that the firm is prepared to pay to L_1 workers from the disadvantaged group.

Activity 2

Use [Figure 2](#) to identify the volume of total profits which the firm would make from this discrimination.

[Reveal answer](#)

The problem, however, is that other firms may not hold the same prejudices. There could be another firm which has only one demand curve for all workers, as represented by MRP_L .

Activity 3

Assume that a non-prejudiced employer hires labour at a wage rate of W_4 . Using [Figure 2](#), identify the following:

1. the total profits made by this firm;
2. any additional profits made in comparison to the prejudiced firm.

[Reveal answer](#)

Although we have only considered a simple variant of the Becker approach to labour market discrimination, it is sufficient to highlight the most important conclusion. This is that discrimination can persist only if there are factors which limit the amount of competition in the labour market or in the product market. If these markets are competitive, the increased profitability of non-discriminating firms compared to discriminating ones will encourage non-discriminators to enter the market. This will put downward pressure on the price level and eventually force the higher-cost discriminating firms out of business. The extent of the inefficiency faced by discriminating firms is shown by the fact that, at wage W_4 discriminating firms employ L_1 workers, whereas a non-discriminating firm would employ L_4 workers and produce more output as a result. If, however, there are substantial barriers to entry which make it difficult for new firms to enter the market, competition will not erode discrimination.

The 'employer taste' model predicts that discrimination exists because employers do not want to employ certain groups of workers and will only do so if these workers are paid lower wages than those paid to workers in general. It thus provides an explanation of wage discrimination – equally productive workers being paid different wages. Other variations on this theme involve discrimination by workers and customers. The case study that follows provides an example of perceived customer discrimination by the Ford Motor Company.

Think global, act prejudiced?

Ford is better known for spraying its cars than re-spraying its employees. Indeed, in the bad old days when the company seemed to specialise in producing tinny boxes, the joke was that Ford's profits came from its skill in spraying metal onto paint rather than the other way around. But when an advertisement featuring line workers from its Dagenham plant in England was used in Poland, the black and brown faces of five employees were replaced with white faces (and hands).

The reason, according to Ford, was that the Poles are not used to seeing non-white faces, and it wanted to adapt its advertisement to suit local tastes. Unfortunately, when the original picture was reused back in Britain, the Polish version was used by mistake.

When they noticed what had happened, the line workers at Dagenham all walked out for three hours – a rare event in a British factory nowadays. Ford, which has apologised to the victims of the retouching and sent them a cheque for £1,500 (\$2,320), blamed a mistake by its advertising agency, Ogilvy & Mather. The agency cannot say who was responsible for the mistake, because it happened 18 months ago, and institutional memories in creative organisations clearly do not stretch back that far.

In some ways the Ford saga, which immediately provoked cheap jibes along the lines of 'Any colour you want as long as it's not black', unveils yet another problem of globalisation. In America and Europe, Ford is abolishing many of its regional fiefs and setting up transnational

product groups. On the other hand, it has told its managers to demonstrate sensitivity to local peculiarities – particularly on the marketing side. Nobody at Ford seems to be apologising for what happened in Poland.

Source: *Economist*, February 1996

5.3 Statistical discrimination

5.3.1 Investment in education and training

Human capital theory has been used to show how investments in education and training lead to higher levels of earning. One reason why education and training are referred to as investments is because their benefits accrue over time and because training early in a career leads to higher earnings over the rest of an individual's working life. An important consideration, therefore, in the decision about whether to invest in additional human capital is the potential length of working life over which the benefits will be received. This would suggest that if certain groups of workers – most notably married women with family responsibilities – expect to have interruptions in their careers they will invest less time and energy in acquiring human capital. They thus face lower earnings as a result of having less training and lower skills. Because women themselves choose not to invest in skills and training, their lower earnings would not represent discrimination according to the definition used in this unit. Of course, it could be argued that some women decide to focus on their family and domestic activities precisely because they perceive poor career prospects for women, prospects which are themselves a reflection of discrimination. This is an example of reverse causation.

The impact that career interruptions can have on the earnings profile of women can be shown using [Figure 3](#). We shall initially assume that men come to the labour market with a certain amount of human capital and this determines their initial earnings. Subsequent training and promotion then result in their earnings increasing each year which is reflected in an upward sloping age-earnings profile (this shows how an individual's or group of individuals' earnings change over time). On the other hand, we shall also initially assume that all women expect to drop out of the labour force because of family responsibilities and, as a result, undertake less education and training before entering the labour market.

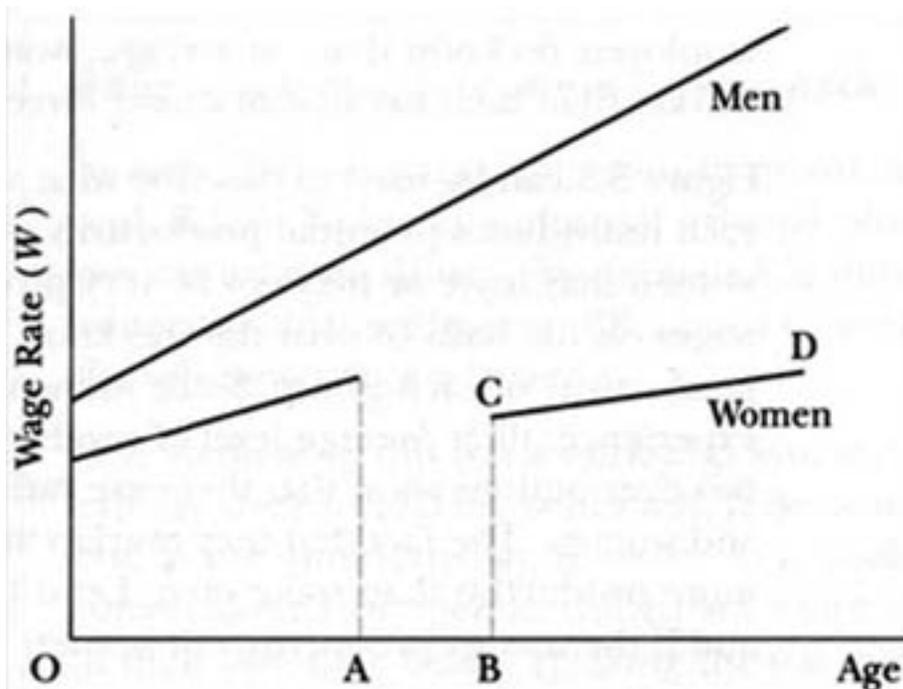


Figure 3 The age-earnings profiles of men and women
[Long description](#)

Hence, their age-earnings profile is lower than that for men. For example, women may choose education and training courses, such as those providing clerical, secretarial or nursing skills, that enable them to enter occupations in which breaks from work incur the smallest penalty. Once they enter these occupations they receive less training than men because expected career interruptions reduce the returns from such investments and consequently their earnings profile rises at a lower rate than that for men. This is shown by the segment of the age-earnings profile up to age A. At age A, we assume that women drop out of the labour force and that when they enter the labour market again at age B, depreciation of their skills has resulted in a reduction in their potential earnings. In addition, the interruption has also resulted in a loss of seniority which has depressed their scope for earnings growth even further. This is shown by the segment CD.

Human capital theory therefore predicts that women will earn less than men because they do not expect to spend as long in the labour force. Intermittent work histories will also influence career choice. Fewer women will pursue skilled occupations and the professions, and more will be attracted to those jobs that enable them to more easily combine family responsibilities and labour market activity. Women are less likely to be promoted to higher level grades where these involve additional training since the monetary gains to the firm will, on average, be lower for women. The result is that promotions will be biased in favour of men.

We have, of course, made some very strong assumptions in painting the above picture of participation and occupational choice. Women now account for about half the total UK workforce (though women as a whole work shorter hours in employed labour and a larger proportion are part-time) and many women have as strong a commitment to their careers as men. The ability to combine family responsibilities and a career depends upon a number of different factors, not least of which will be the nature of the job and the availability and cost of such things as crèche and childcare facilities.

5.3.2 Productivity difference

The preceding discussion has only considered what would happen if all women undertake less investment in human capital than men. If men and women invest to the same extent, human capital theory suggests that no wage differences would be observed. What happens, however, if there are differences in skill levels both between genders and within gender groups? To consider this we will also make the additional assumption that firms do not know when recruiting workers who are the most productive. However, employers do know that, on average, women spend less time in the labour market than men because of career interruptions.

Figure 4 can be used to describe what will result. Since firms do not know each individual's potential productivity when hiring – both men and women may leave or may not be very productive once trained – they will set wages on the basis of what they do know, and that is the average level of productivity of each group. Since women have less training and work experience, their average level of productivity will be lower than men's. The two distributions show that there are variations in productivity among men and women. The fact that they overlap indicates that some women are more productive than some men. Let α be the *average* productivity of men and β the *average* productivity of women ($\alpha > \beta$).

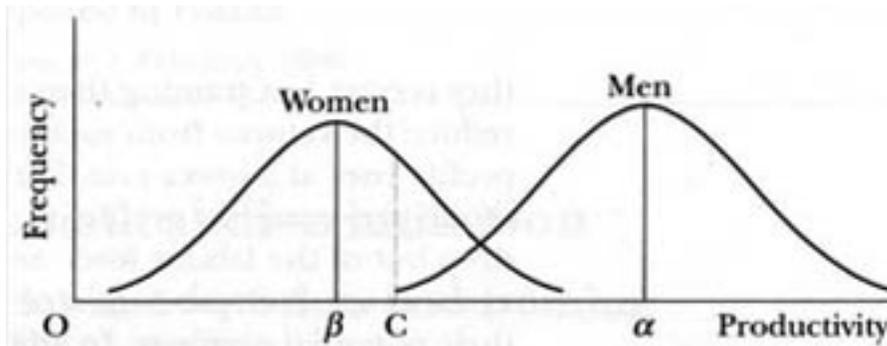


Figure 4 The productivity distribution for men and women
Long description

For a man, individual productivity is equal to:

$$\alpha_i = \alpha + u_i$$

whereas for a woman, it is likewise equal to:

$$\beta_i = \beta + u_i$$

where u_i represents the individual difference between actual productivity and the average for all men (women).

The *average* level of human capital investment, and thus productivity, differs between men and women and this is reflected in the *average* earnings differential. On these assumptions, there is no discrimination, on average, against women. However, there is discrimination against *individual* women. Specifically, those women who have a productivity level to the right of the line above point C are being paid less than comparable men. It is also evident that the greater the variation in productivity within the female group, the more women will be underpaid compared with men who may be less productive. The curve showing the distribution of productivity would be wider, and, hence, there would be more overlap with the distribution curve for men. Discrimination here involves the unequal treatment of *individuals* on the basis of actual or perceived differences in the *average* characteristics of the groups to which they belong.

An additional point about potential productivity concerns the methods used by firms to try and identify which applicants are potentially the best employees. Firms use a variety of 'screening devices' when recruiting in order to establish the best potential employees. One such device is psychometric testing which many firms are now using to test applicants. However, it is possible that the very nature of these tests may be biased against women or ethnic minorities, adding further to the discrimination faced by individual workers.

Bringing selection procedures back on track

In early 1991 several ethnic minority guards at Paddington Station took British Rail to an industrial tribunal, alleging that the selection process for train drivers discriminated against applicants from ethnic minorities. In a settlement, BR agreed to work with the CRE to make the selection process fairer.

One element of this was a workshop with the Paddington guards to explore their test-taking behaviour. It became apparent that they were not, as the Americans say, test-wise. As a result, British Rail commissioned an open-learning pack which the guards could work on in their own time before retaking the test in September 1992

The pack gave advice and tips on how to develop successful test-taking behaviour, as well as extensive practice materials to develop language proficiency. Six weeks were allowed, and the pack was supported with workshops at the beginning and at the end. The result? Five of the seven guards passed the tests and have gone forward for training.

Source: *Personnel Management*, December 1992