

# **SEX DISCRIMINATION. IS THE LABOUR MARKET A MARKET FOR LEMONS ?**

**Rocío Albert  
Francisco Cabrillo**

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## **ABSTRACT**

In this paper, we discuss some aspects of sex discrimination in the labour market. In the first section, we explain the meaning and the different types of statistical discrimination. In the main section, we apply Akerlof's model (market for lemons) to the labour market and then, consider the problems related to asymetry of information. Finally, we look at the solutions given by the law for solving the problem and the alternative strategies suggested to reduce the lack of employers' information concerning the individual productivity of potential employees.

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## **RESUMEN**

En este artículo se analizan algunos aspectos determinados de la discriminación sexual en el mercado de trabajo. En la primera parte, se introduce el concepto y los tipos de discriminación estadística, para poder profundizar posteriormente en el tema central de dicho artículo: la aplicación del modelo de Akerlof (mercado de chatarra) al mercado de trabajo, y así poder considerar los problemas relacionados con la asimetría de información del empresario, que es en definitiva el origen de la causa de la discriminación estadística. Finalmente, nos planteamos la eficiencia de la regulación antidiscriminación así como de otras alternativas posibles como medios para resolver el problema de la falta de información del empresario sobre la productividad individual de cada posible trabajador.

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# **SEX DISCRIMINATION. IS THE LABOUR MARKET A MARKET FOR LEMONS ?**

**ROCIO ALBERT**

Universidad Complutense

**FRANCISCO CABRILLO**

Universidad Complutense

## **THE SEX DISCRIMINATION PROBLE**

Modern theorising about labour market discrimination began with G. Becker's book, *The Economics of Discrimination*. Becker<sup>1</sup> assumed that some employers have a dislike toward members of particular groups, which he called a "taste for discrimination", and that they discriminate against the group by paying them a lower wage equal to their subjective cost of employing women. In fact, employers' taste for discrimination is measured in terms of how much less they pay members of the groups they dislike than they pay others.

Why employers had a taste for discrimination was not Becker's concern. He was more interested in its consequences. One of his most important conclusions was that in a competitive labour market, discrimination by employers should eventually disappear, because it is economically inefficient. Employers who do not pay workers what they are worth, in terms of productivity, will eventually be driven out of business by employers who do<sup>2</sup>.

Becker's model remains the starting point for most serious discussions about labour market discrimination, but it has also been criticised. His prediction that discrimination would disappear as a result of the forces of the competitive market has not been borne

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<sup>1</sup> BECKER, G (1957) *The Economics of Discrimination* University of Chicago Press, Chicago

<sup>2</sup> BECKER also studies discrimination by employees and clients, but in this paper we focus our attention on employer discrimination as the main reason for the differentials between men and women in the labour market.

out. Progress in eliminating it has been limited. The functioning of the market has not eliminated employers' prejudices. Discrimination based on sex has persisted decade after decade.

Some economists<sup>3</sup> have therefore developed another alternative, called "statistical discrimination", accepting many of Becker's assumptions about markets but reaching different conclusions about the future of discrimination.

The concept of statistical discrimination was developed in response to the dilemma presented by Becker's work : "*If employers are rational and markets competitive, why doesn't employer discrimination disappear?*". Their basic approach was to add to Becker's model of labour market what they saw as an important factor: the cost of information about worker productivity. It can be costly for employers to learn about the likely productivity of job applicants. They want to keep this cost as low as possible, and one way to do so is to rely on generalisations or "stereotypes" concerning the productivity of members of different groups. It may be expensive to assess the productivity of individuals, but it is easy to ascertain their sex or race. If employers believe that on average men are more productive than women, it may be economically rational for them to use gender as a screening device, hiring members of the group they see as more productive for better jobs. The most productive workers of the group less favoured by employers will be paid less than they are worth, because they are being evaluated as members of a group; rather than as individuals and, under some circumstances, the labour market outcome for the group as a whole will suffer. Because such statistical discrimination is economically rational, it may continue for a long time.

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<sup>3</sup> AIGNER, D. and CAIN, G. (1977) "Statistical Theories of Discrimination in the Labour Market" *Industrial and Labor Relations Review*, 30. 157-187

## I. STATISTICAL DISCRIMINATION

Human beings have a tendency to group other human beings, to name those groups, and then to generalise about their characteristics. We are unable to talk and think about individuals; group names and reputations are a way of organising the massive amounts of information we must deal with in our lives. We need to be able to talk about “my relatives”, “women” “the elderly” “the gypsies”. Inevitably, some of our generalisations about groups are going to be negative.

While grouping other human beings is necessary for organising our thoughts, sensible and humane people understand that it may be dangerous. They recognise the human tendency to over-generalize about groups and to attribute to all members of a group the sins of some of its members. They know that some people think maliciously about certain groups, often for selfish and exploitative reasons; that some group reputations are undeserved. They know that even groups with deservedly bad reputations have better and worse members and that when dealing with individuals it is decent to reserve one’s judgement on them. A bigot, and racism and sexism are of course modes of bigotry, is a person who is not sensible and decent in this way. It is not easy to avoid bigotry, and some people never try, including some of those holding the power over who gets hired or promoted.

The common generalisations about certain groups obviously influence the employment prospects of those group’s members. Some researchers<sup>4</sup> recently asked employers about their perception of women as job candidates. Their study found that employers tend to have negative images of women as a group, and tend to associate

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<sup>4</sup> CLAYTON, S and CROSBY, J.(1992) *Justice, Gender and Affirmative Action*. Ann Arbor: University of Michigan Press, p. 70-100.

them with inferior education, lack of job skills, and unreliable job performance.

The average woman is less skilled and less experienced than the average man, has been unemployed more often, has fewer useful friends and contacts, and has had a lower-quality education. Yet hiring cannot be efficient if employers take into account perceptions about the average woman when considering the individual woman applying for a job. Some individual female applicants are better than the average male candidate. To take all women candidates less seriously because women on average are perceived to be a poor bet is bound to perpetuate the disadvantages suffered by women. It may be rational behaviour on the part of the employer, but it is harmful to individual female applicants.

### ***1.1 DEFINITIONS AND TYPES***

There are several models of statistical discrimination. The first is based on average differences in productivity between groups (women and men, blacks and whites...). The second is based on differences in the variances of groups' productivity and the last is based on group differences on how reliably or accurately screening instruments (such as tests) predict their productivity.

The first type of statistical discrimination occurs whenever an individual is judged on the basis of the average characteristics of the group, or groups, to which he or she belongs rather than upon his or her own characteristics. The judgements are correct, factual, and objective in the sense that the group actually has the characteristics that are ascribed to it, but these are incorrect for many individuals within the group.<sup>5</sup>

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<sup>5</sup> THUROW, L (1975). *Generating Inequality*. New York: Basic Books, Inc . Publishers,

We should start with two facts in our analysis of this type of statistical discrimination:

- 1). The probability of remaining in the labour market is higher for men than for women.
- 2). Employers benefit from the greater permanence of men in the labour market.

Any employer faced with these different probabilities (employers know that women are more likely than men to interrupt their careers or switch to part-time jobs) will practise statistical discrimination even though there are millions of women who will be in the full-time paid labour force for their entire lifetime. *Ex ante*, he cannot tell which woman will be a lifetime year-round full-time worker, and which will leave the labour force or which will become a part-time worker. Because the employer provides job-training, he will want to invest in those who are more likely to stay in the full-time labour force. If he provides training to women, the probability of not recovering his investments is higher than if he trains men, because there is a higher probability of women leaving their jobs. The employer will therefore prefer to contract men instead of women.

A woman, who decides to work for her entire life-time, is harmed if she is judged by the average characteristics of her group. But the other side of the coin is, that a woman who decides to work for only a brief period will be overpaid. The over and under-payments tend to cancel each other out, but it is likely that women will be under-paid because the first effect used to be more common than the second one.

Judge Posner<sup>6</sup>, portrays the prohibition of statistical discrimination as inefficient. There are statistical differences between men and women workers -for example, women live

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<sup>6</sup> POSNER R.(1987) "The Efficiency and Efficacy of Title VII" *University of Pennsylvania Law Review* 1987, vol.136. 512 a 521.

longer but lose more time due to illness each year-. Because these factors are relevant to worker productivity and compensation, it is inefficient for employers to ignore them. Certainly, if an employer knew that a particular applicant for a job would be likely to be away from work more than another, we wouldn't expect him to deem the two applicants equal. Efficiency would require him to pay them differently to reflect different values. Does this suggest that women should receive lower salaries, since statistical evidence indicates that they have a lower value on average than male workers?.

The truth is that when two individuals (employer and woman) are negotiating employment, if the woman is expected to require more sick leave, she could take measures to enhance her health; presumably she would be prepared to take the precautions since doing so should yield greater benefits through higher wages. But when a worker is offered a lower wage because she is taking more sick leave, she will lose the incentive to change her behaviour. The employer knows that women are more prone to get sick, and therefore he will pay her less. Since compensation is based not on individual but on group characteristics, workers will lack incentives to take optimal health measures. Individual investments in human capital will therefore be distorted.. Similarly, if employers do not want to train women for top corporate positions because they expect them to have children, the incentives to invest in human capital will be inefficiently impaired for women who do not plan to have children. This inefficiency will exist even if the firm is correct on average in relying upon its statistical information. Thus, while acting on statistical information may be profit-maximizing for the firm, it may be inefficient for society.

Macintosh<sup>7</sup> argues that even competitive markets including labour markets, may be affected by a relatively persistent averse

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<sup>7</sup> MACINTOSH, J.(1987). *Employment Discrimination: An economic Perspective*. Ottawa Law Review,.

selection problem. He argues that it may be privately rational for an employer to rely on various statistical proxies for evaluating the productivity of potential employees, rather than investigating each applicant's personal credentials and characteristics in detail

However, Macintosh argues that these statistical proxies, through perhaps privately rational, may be socially inefficient. For example, let us assume that because of prior deprivation and/or denial of educational opportunities women on average are less qualified or less productive than men on average for a particular class of job. An employer may therefore use sex as a proxy in making hiring decisions. This means that a particularly well-qualified woman who is more productive than any other applicant is unlikely to be contracted or hired. This, in turn, implies that the rates of return for women's investments in education and other forms of credentialling are likely to be lower on average for them, and will reduce investments in their human capital over time, thus reinforcing the accuracy of the original statistical proxy. Even if the original statistical proxy is inaccurate, this proxy may persist in the market indefinitely, having the same harmful effects of discouraging investments by women in their human capital and leading in both cases to a form of low-level investment trap entailing incomplete realization of the economic and social potential of women - a cost not only to them but to society at large.

The second type of statistical discrimination hinges on race or sex group differences in variance rather than averages. Suppose that women have the same average on a productivity-relevant characteristic as men, but the women's distribution has a large variance, indicating that more women than men have both extremely high and extremely low scores. If the cost of finding a better indicator of productivity and using it to screen each individual applicant is prohibitively high, risk averse employers will prefer the group with the smaller variance. If they are risk neutral, the expected value of productivity for women and men will be determined by the respective means of the two groups,

and if these means are the same, it is not rational to engage in statistical discrimination. However, if the employer is risk adverse, the group with smaller variance will be preferred even when group means are equal.

The relevance of risk-aversion to the preference for a group with smaller variance can be seen by making an analogy with investment on the stock market. In the same way that an investor decides on which stock investment to make, the risk averse employer will engage in discrimination against a more variable group because there is a greater risk of hiring an especially bad worker from this group. If employers are risk averse, statistical discrimination based on variance can produce sex differences in average earnings that are in excess of sex differences in average productivity.

The third model of statistical discrimination posits sex differences in the degree of accuracy with which ability is measured by testing or other selection devices. For one group, “the error term” in a regression predicting productivity is larger. Thus the selection device has lower reliability for the group with the larger error term. Most models assume that men and women have the same average productivity, but there is more variability around the regression line for women and minorities. And there is no assumption of any difference in the groups’ distributions on productivity, both means and variances may be equal. If the cost of finding and using a more reliable indicator of productivity is prohibitively high, the risk averse employers will discriminate. Even in the absence of risk aversion among employers, it is possible for this sort of discrimination to create discriminatory wage differences by encouraging incentives for groups for whom selection devices are worse predictors to invest less in unobservable forms or more in observable forms of human capital or other signals of productivity.

## ***1.2. A MARKET FOR LEMONS OR AKERLOF' MARKET***

Let us assume that there are two groups of individuals with whom a set of firms can choose to do business. One group (defined by race, sex or age), is regarded on average as superior to the other, in the sense that each firm would rather have any employee drawn at random from the first pool than one drawn at random from the second. What strategy should the firms follow in making their employment decisions? Much depends on the ability of the employer to discriminate (that is to determine differences) among the employees within each pool. If the employer is unable to obtain any information about the worker in question, then the strategic response is relatively clear. The problem is the familiar one of George Akerlof's<sup>8</sup> lemons, which asks how markets will behave when buyers in this case employers cannot differentiate superior from average products or in this case, workers. Here, they will choose on the basis of broad statistical average since they do not have any other information to go on. Sellers, and by extension employees, will respond by saving costs and reducing their goods to average quality, since there is no way to internalise the gain from marketing a superior product, or a superior set of labour skills. The lack of precise information leads to a deterioration in the overall quality of both products and labour.

This model has a direct application to the problem of discrimination in the labour market. If men and women were the balls in two urns, then the employer would know the expected rate of return for the average worker within each class, but would have no knowledge of the relative strengths of individual workers in each class. If male workers, on average, have higher levels of productivity, then the employer is better off engaging in statistical discrimination because there is no way in which

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<sup>8</sup> AKERLOF, G. (1970) "the Market for Lemons: Quality Uncertainty and the Market Mechanism," 84 *Quarterly Journal of Economics*. 488.

further investigations would allow him to identify superior female workers.

Akerlof, and others<sup>9</sup> using his basic model, have been able to identify some efficiency losses that follow when employers discriminate, because they only have information about the average quality of workers within the group, and none about individual workers. This theoretical development identifies a form of economic inefficiency that is likely *even if* the preference to discriminate is taken as a legitimate, subjective given and not as some illegitimate inclination which should not be registered on the social scale.

Statistical discrimination will tend to cause inefficient investments by women in their own capital, because women will not be fully compensated for additional investments.

Statistical discrimination may adversely affect women's own decisions and behaviour. Even a relatively small amount of labour market discrimination can have greatly magnified effects if it discourages women from making human capital investments, weakens their attachment to the labour force, and provides economic incentives for the family to place priority on the husband's career. Although it is unlikely that labour market discrimination is responsible for initial division of labour in the family, it may well help to perpetuate it by inhibiting more rapid movement toward egalitarian sharing of household responsibilities.

For example, the male dominance in a given field can itself discourage young women from attempting to enter it. In this way, discrimination continues to have pernicious effects on young women. Lacking contact with first-hand knowledge of successful women, they assume they would not be able to succeed. Even if

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<sup>9</sup> SCHWAB, S (1986) "Is Statistical Discrimination Efficient?" *American Economic Review*, 228.

they believe that times have changed and that their prospects for success are greater than is indicated by the present low representation of women, the scarcity of women may still pose problems for them, limiting their potential success and lowering the returns from entering predominantly male fields.<sup>10</sup>

Some scholars<sup>11</sup> consider that women students may also be excluded from the desirable informal relationship and from eventual career success. Older individuals who are well-established in the field often take promising students under their wing, informally socializing them into the norms of the field, giving them access to the latest research in the area, and linking them with their networks of professional contacts.

Thus women often lack the support, encouragement, and access to the information and job opportunities provided by informal contacts between teachers and students and among students, as well as female role models to emulate. This raises the psychological costs for females in comparison to otherwise similar male students, lowering their incentives to invest in human capital with a view to entering traditionally male occupations. Finally, labour market discrimination can itself negatively affect the incentives of women to invest in formal schooling, in so far as it results in a lower return on their investments.

The net result can be called a “vicious circle”. Discrimination against women in the labour market reinforces traditional gender roles in the family, while the adherence to traditional roles by women provides a rational argument for labour market discrimination. However, this also means that effective policies to end labour market discrimination can have

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<sup>10</sup> EPSTEIN, C.(1970). *Women’s Place: Options and Limits in Professional Careers*. Berkeley: University of California Press.

<sup>11</sup> FERBER, F (1979) *Men and women in Graduate Schools*. New York: Basic Books.

far-reaching effects, particularly when combined with simultaneous changes in social attitudes toward female roles

Therefore, if we want to establish the causes of women's inferior position in the labour market, we do not have to choose either discrimination or women's unwilling acceptance of the largely unshared burden of housework and child care. We do not have to choose one explanation and label the other's influence as non-existent or trivial. Such acceptance and discrimination both go on, and are mutually reinforcing. Beliefs concerning women's primary devotion to domesticity may motivate some employers to discriminate against women. Discrimination discourages some women from giving a higher priority to possible careers and turns some of them away from the serious pursuit of career success. It rationalizes a husband's assumption that priority must be given to his career. His larger paycheck gives him the power to resist suggestions that they should share more evenly the burden of housework and child care.

As Kenneth Arrow<sup>12</sup> has pointed out, the consequences of statistical discrimination are particularly pernicious where there are *feedback effects*. For example, if the employers' view of female job instability leads them to give women less firm-specific training and to assign them to jobs where the costs of turnover are minimized, women have little incentive to stay and may respond by exhibiting exactly the unstable behaviour the employer expected. The employers' perceptions are confirmed and they see no reason to change their discriminatory behaviour.

Hence, where statistical discrimination is accompanied by feedback effects even employer behaviour based on initially incorrect assessments of average gender differences may persist

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<sup>12</sup> ARROW, K. (1973) "The Theory of Discrimination" in *Discrimination in Labor Markets*. Orley Ashenfelter and Albert Rees, eds. Princeton, NJ: Princeton University .

in the long run, and be fairly impervious to competitive pressures.<sup>13</sup>

An objection to this pattern of self-injurious behaviour has been made by some researchers<sup>14</sup>. They argue that the predicted behaviour obviously runs counter to the best interests of the two main actors, *the discriminated groups*, whose members want to overturn the expectations, and *employers*, who ought to prefer to increase the supply of high-quality labour by encouraging more investment in human capital and a positive attitude towards investment and work. Therefore it is difficult to see why the upward spiral would not be initiated by both groups.

### ***I.3. THE INFORMATION PROBLEM***

#### **I.3.1. The general problem of information**

Employers with job vacancies want to hire the most productive workers to fill them. Hence their human resources departments collect a variety of information concerning each job applicant, such as age, education, prior work experience, and so forth. Employers supplement this information with scores in preemployment tests which they feel are helpful indicators of potential job performance. We should make some considerations here:

- First, it is very expensive to collect detailed information about each applicant, hence only limited data are collected. Applicants must spend time filling out forms, attending interviews, providing references, and taking

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<sup>13</sup> BLAU, F. and FERBER M. *The Economics of Women, Men and Work*. Chapter 7. "Differences in Occupations and Earnings: The Role of Labor Market Discrimination". Lexington Books 2<sup>nd</sup> Edition 1989.

<sup>14</sup> CAIN, G. (1986) "The Economic analysis of Discrimination in the Labor Market" in *Handbook of Labor Economy. Volume, I*. Compiled by Ashenfelter, O. and Layard, R.

tests. Employers incur similar costs. Where both sides bear costs, then both have a need to economise on searching. With an offer in hand, a worker will seek another job only if the anticipated wage increase is greater than the costs incurred to procure it. Similarly, the firm will interview the next candidate only if it thinks that the improvement in worker level will be sufficient to justify further search costs. As these costs increase on both sides, the number of prospective contracts that can be pursued diminishes. Search costs can thus impose genuine losses on the market, given the risks of imperfect matches.

- Second, the limited information available to the employer from application forms and test scores will not permit the employer to predict perfectly which of the applicants will be the most productive.

- Third, even if the additional information about individual productivity can be obtained by testing procedures administered at relatively low cost, the test scores may be inefficient predictors of ultimate productivities for some groups<sup>15</sup> (third model of statistical discrimination). There are plenty of instances where ratings or scores are irrelevant in a realistic attempt to judge whether a candidate will perform well.

For these reasons, it is common for employers to use “considerations” such as race or sex or age in determining who is actually hired. In other words, statistical discrimination does not satisfy a taste for discrimination, but rather is used as a proxy for production-related attributes which are not easily discernible.

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<sup>15</sup> BUCHANAN J.M. (1989) “Equal Treatment and Reverse Discrimination” in *Economics Between Predictive Science and Moral Philosophy*; compiled by R Tollison and V.J. Vanberg;

This approach shows the main problem is an “information problem” rather than a matter of discrimination. It is therefore the government, firms and employees that have to try to solve this asymmetry of information.

### **I.3.2. The positive externality of information**

The employer may have serious misconceptions concerning the abilities of working women. This ignorance may be rational for the entire market, because of the well-known externality problems of information. Who would pay to draw up information about the working qualities of women in general? How would the social benefits of such information be translated into private benefits for the producer of the information? A pioneer in hiring women in a particular segment of the work force may simply pave the way for his competitors to learn from his mistakes

Information presents some aspects of a positive externality. Before firms have detailed knowledge about the qualities of women, they are not aware in advance of the value of this information but, once they acquire more accurate information on individual applicants because the first company has decided to invest and compile the information, then the other companies are not willing to pay anything, because they can learn from the experience of the former company without incurring any costs. Hence, no company will invest to obtain this information, since the other firms will act as *free-riders* using this information without paying for it.

For example, an employer interviews each applicant individually and develops a substantial information bank on each individual's qualifications then chooses to hire a female, because he considers her qualifications are better than those of the average female in the pool and of available male applicants. Here, he runs the risk, in the long run, that she may leave away, in effect, *free-riding* on the first employer's investments in

screening activities. It is possible that contractual arrangements between the first employer and the minority employee could reduce this *free-riding* risk by other employers, but courts have traditionally been sceptical of employment contracts that contain covenants which penalizes employee exit.<sup>16</sup>

#### ***1.4. THE EMPLOYERS' RISK AVERSION***

Sex and race discrimination tend to persist partly because people have good reason to be cautious in making hiring and promotion decisions. These decisions are some of the most crucial to any organisation's success. Employers have an understandable tendency to continue doing what has worked well previously. Hiring candidates of different sex or race is likely to be seen as risky and asking for trouble.

If a female candidate applies for a job held only by men in the past, those in charge of selection may wonder why they should take a chance on a woman, even if she looks as though she could do the job. After all, a woman may not "work out". Also, the responsibility of the head-hunters will be higher if they decide to take the risk of contracting a woman and she doesn't perform well, because that they are taking new risks and will have to pay for them.

If the people involved in the selection process want only to select the candidate who will perform the best, regardless of sex or race, they are not likely to select a candidate of a non-traditional race or gender, even if very promising candidates of this kind are available. People use minimal clues of manner, appearance and way of talking to make judgements about candidates of a familiar type. A person who has little experience with the performance of women on the job may not feel capable

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<sup>16</sup> EPSTEIN, Richard A.(1995) *Forbidden Grounds*. Chapter 2 "Force, Discrimination, and Free Entry". Harvard University Press.

of making good judgements about their abilities based on such clues, and he or she may find it safer to stick with candidates of a familiar kind.

One way employers can stick with the kind of worker they are used to is by filling vacancies with people recommended by those already working in the same kind of job. There is a considerable incentive for employers to fill jobs this way, because it saves on recruiting expenses and may make for congenial work groups. A worker who recommends someone vouches for that person as someone likely to do well. Unfortunately, this seemingly innocent recruiting practice makes it particularly hard for women to improve their status. Relying on employee recommendations effectively excludes from top positions those who do not have relatives and friends with good jobs.

Female candidates may be particularly disadvantaged by sexual conventions. A woman who wears a standard amount of makeup and jewellery may be considered *unbusinesslike*, since the standard businessperson a man wears none. On the other hand, a woman who wears less than the standard amount of makeup and jewellery risks being considered unfeminine and peculiar. People making hiring decisions tend to shy away from people who seem peculiar.

In conclusion, the people making hiring and promotion decisions who perpetuate these patterns are not necessarily malicious. But many people do think stereotypically about the qualities of women and may have strong beliefs about women's proper place. Many people do not give much importance to issues like sex and race, they just believe that they already behave fairly and that they are filling the vacancies with the best people available.

## **II. SOLUTION GIVEN BY THE ANTIDISCRIMINATION LAWS.**

Imperfect information in the labour market constitutes a market failure and therefore total welfare is lower than it would be in a world of perfect information. Employers' inability to assess the productivity of job applicants is a fundamental and realistic source of market failure. Because employers use information about group average productivity to estimate an individual's worth, no person in the group receives full credit for self-improvement efforts.

Laws forbidding sex discrimination may raise efficiency by increasing the productivity and self-esteem of women; improving the quality of the working environment, and eliminating inefficient interference with the human capital investment decisions of women. Anti-discrimination legislation will help women to decide freely how to invest in their human capital, because they know in advance that they will obtain net returns from their efforts.

The proponents of this kind of legislation say that the purpose of anti-discrimination legislation is to help people who have been disadvantaged because of their group membership. They consider that these programs oblige employers to consider the characteristics of individuals from previously excluded groups and to rely less on the reputations of those groups in judging the potential of individuals to do good work. Such programmes, if they are to work, must force employers to confront the bigots in their organisation and to cut off their power to make unfair exclusions.

We have considered an anti-discrimination policy in which the government forbids using group membership to determine wages. Because membership provides information about how to interpret the observed test score, employers have an incentive to evade this regulation. For example, employers can use some other type of information such as "height". Height bears no

relationship to worker's productivity but is correlated with group membership. That is, workers from group A (men) are more likely to be taller than members of group B (women)<sup>17</sup>.

Before anti-discrimination regulations are enforced, employers do not use height to determine hiring or wages since height provides no useful information. Once employers are prohibited from considering group membership, however, height becomes a useful index. To be optimal, employers will use height as a type of imperfect proxy for the proscribed index, group membership, and so will evade the antidiscrimination legislation. In the end, short workers (women) will have fewer incentives to invest in training than tall workers. In the long run, short workers (women) will have lower average productivity and the result will be that wage differentials between the groups will still exist.

It seems clear that enforcing equal opportunity legislation by such means is a difficult task. Employers have a strong incentive to look for apparently neutral characteristics correlated with gender and to introduce such characteristics into personal decisions. Usually, this will simply involve changing the weights assigned to legitimate indicators already being used.

In addition, a government may be unable to observe all the factors that firms use: it cannot prevent employers from using subjective impressions from interviews with applicants, and such assessments may be among the most damaging for minority and female workers.

Therefore, the ideal anti-discrimination policy would forbid using group membership to determine wages, but this is ineffective if the firm can use substitute indicators. A government cannot feasibly prohibit the use of all substitutes

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<sup>17</sup> Women on average are shorter than men, however there are some women taller than the average and by the same token men shorter than the average of their group.

because they will be different for each firm and some substitutes may also be legitimate qualifications that have taken on a dual purpose.

Let us turn to affirmative action policies. This term is used to denote measures that attempt to enforce equal opportunity by monitoring the outcomes of the firms hiring and promotion decisions rather than monitoring the process itself. Two important characteristics differentiate affirmative action from other antidiscrimination measures. One is that affirmative action concentrates not on the procedures that firms should follow but on the outcomes of firms' decisions in terms of their employment pattern. The second is that affirmative action requires firms to eliminate the effects of past discrimination from their labour forces.

Therefore, affirmative action is the activity required from employers so as to demonstrate that they are acting in compliance with equal opportunity laws. Employers must analyse the extent of their underutilization of women and then submit a plan to remedy such under-utilization<sup>18</sup>.

The private cost to employers of misallocating labour will be higher than it is under *laissez faire*, in which employers can use all available information freely. But on the other hand, the incentives of both groups will be brought together more than they are under *laissez faire*, and this will reduce the total cost of training in the economy

We should keep in mind that sometimes these laws may reach a different result, because women are contracted following the rules imposed by the government. They are therefore again contracted again according to the average qualities of their

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<sup>18</sup> Under-utilization exists when a job category contains fewer women or minorities than may be expected based on their presence in the pool of available labour

group, but in this case, preferential treatment benefits them and they are the ones that are hired

Consequently, this kind of programmes does not solve the problem of statistical discrimination, because such policies recognise that rational employers will use race or sex implicitly, if they not explicitly. They attempt to eliminate discrimination by going against the tendency of firms to under-employ or under-compensate certain groups.

It might be possible for employers to be forced by affirmative action legislation to hire unqualified workers just to prove compliance with regulations. Some employers would conclude that it would be better to hire an unqualified worker than to suffer the embarrassment of a public hearing or lawsuit.

Finally, a drawback of affirmative action from the point of view of women is that those selected and hired will have to face the suspicion of their workmates that they are not competent. Such suspicions are especially galling to those women who feel they were hired on the basis of their perceived merit and would have been hired even if no affirmative action had existed. Such people feel that these programs have ruined their careers by labelling them as incompetent

### **III. ALTERNATIVE SOLUTIONS**

In this section, we will summarise other possible alternatives given by different researchers trying to solve the problem of discrimination created by asymmetry of information. All of them are based on the idea that the dilemma can be solved, or at least attenuated, using different ways to reduce the lack of information about the individual productivity of workers.

Buchanan<sup>19</sup> argues that in a world where employers initially have no information about the potential productivity of entrants, and where various groups differ in average productivity although individual productivity overlaps, there may be a case for imposing “*a temporary quota regime for a demonstration period*”. This would oblige employers hire new entrants in proportion to the relevant numbers of the two groups in the inclusive set and to pay first-period wages equal to the average productivity of all the members of the inclusive set. After the demonstration period is over, presumably, employers would be able to identify more productive individual members of each group and treat them equally<sup>20</sup>.

Another alternative has been suggested by Spence<sup>21</sup> based on the following idea:

“If wage differentials are large merely because of differential test reliability (third type of discrimination), then both minority workers and employers have incentives to improve the tests and reduce this impediment to transactions. If as is reasonable to assume, the worker knows his or her own abilities, a low-cost private exchange method of minimizing this impediment is for workers to offer a trial period, but the benefits are higher earnings in a subsequent career.”

The strategy assumes that if workers know better than anybody else about their qualities, they can transfer this knowledge to the employer during the trial period. However, D. Aigner and G. Cain (1977) considered that trial periods are not a

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<sup>19</sup> BUCHANAN, J.M. (1991). “Fairness, Hope and Justice” in *New Directions in Economic Justice*.

<sup>20</sup> See also, SCHIPPERS, S (1995) “Pay Differences between Men and Women in the European Labour Market” in *Women and the European Labour Markets* edited by A. van Doorne-Huiskes, J. Van Hoof and E. Roelofs; Paul Chapman Publishing Ltd.

<sup>21</sup> SPENCE, A. M (1973) “Job Market Signaling” *Quarterly Journal Of Economics*, 87. 355-374

realistic solution, because a rigid system of monitoring newly-hired women might destroy the strategy of trial periods to the extent that the women would behave and work in a different way if they knew in advance that they are being monitored.

Also, this alternative presumes that women can offset their perceived disadvantages by engaging in price-cutting, that is, they can provide the same services for less, but if anti-discrimination laws, minimum wage laws or the Unions forbid employers to offer positions below a certain level, this possibility will be distorted, since employers may no longer offer wages below a minimum.

Both authors (Buchanan and Spence) eventually suggest the same solution using a trial period in order to show the individual productivity of workers, but they differ in the method of obtaining this outcome. While Buchanan believes in the virtues of temporary quotas, Spence advocates the private exchanges between the members of the labour market.

Some writers such as Epstein, consider that the aim of the laws should be *to encourage employers to obtain as much individual information as possible about workers*, so they can place less reliance on broad statistical judgements. The more information available, the less significant the role of baseline information on which statistical theories of discrimination are based. Epstein<sup>22</sup> points out that:

“Present discrimination laws impose enormous restrictions on the use of testing, interviews, and indeed any information that doesn’t perfectly individuate workers, then by indirection it encourages the very sorts of discrimination that the law seeks to oppose”.

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<sup>22</sup> EPSTEIN, R. (1995) *Forbidden Grounds*. Chapter 2. “ Force, Discrimination, Free Entry”. Harvard University Press.

The solution, therefore, could be to organise institutions to minimise search's costs and solve the asymmetry of information. Middlemen of all kinds, have, as their function the matching of producers with ultimate sellers. In real estate transactions, people typically hire brokers to expand the class of potential purchasers to include high-pay persons that the seller could not identify unassisted. Brokers cost money, but the payments are made in exchange for services worth more than their cost. The increase in selling price obtained coupled with the reduction in seller's labour, makes brokerage a common and successful occurrence. In some cases, the owners are in a position to sell more effectively by themselves. Even where brokers are used, it is easy to find cases in which brokers betray clients or clients take advantages of brokers. But these costs are minimized by good contract terms, by bonding and by reputation.

What is true in real estate markets carries over to head-hunters and labour markets. People who find searching expensive can reduce their costs by buying information or hiring people to find information for them. The middleman will keep to himself all the information he has about women and those who are interested in this knowledge should pay for it, avoiding the information problem. It is a mistake, therefore, to assume that search costs and information uncertainties lock victims of discrimination into dealing with parties who are hostile to their welfare and ambitions.

Yet once the imperfect information can be taken into account, employers have an incentive to break down the stereotypes that lie at the root of effective statistical discrimination. The use of background information will persist even when individualization is possible. But the more information available, the less significant the role of baseline information on which statistical theories of discrimination rest.

## CONCLUSIONS

Long term data show that the market has not eliminated employers' bias against women in the labour market. And, since taste for discrimination does not play a relevant role in today's society, statistical discrimination seems to be the main reason explaining gender discrimination in the demand for labour.

Statistical discrimination is not only a problem of fair distribution of income women's wages are lower than those received by men with the same level of productivity, and the rate of unemployment for women is substantially higher than that for men. An efficiency problem also exists since human resources are not allocated in society in the best possible way

The labour market behaves like an Akerlof market or market for lemons, the main effect being a small number of women in the market with a high level of human capital. Given the imperfect information employers have about their prospective employees, they use average group productivity as a proxy for individual productivity when offering jobs and salaries to specific people. The most productive women, therefore, will receive lower wages than men, the alternative being a higher rate of unemployment. The rate of return of their investment in human capital may be so low that it will create significant incentives to reduce these investments. So employers would then have an even stronger argument for not offering high positions to women.

Governments have applied anti-discrimination laws and affirmative action policies for a long time in order to deal with sex discrimination. Their results, however, have been quite poor. Is it possible to think of alternative policies?

Since the main difficulty for removing this specific discrimination seems to be an information problem, the main goal of public policies should be to reduce information costs, in order to create incentives for employers to use individual productivity,

instead of average group productivity, as their main criterion when choosing between a woman and a man for a job. Temporary quotas for a demonstration period, middlemen to reduce information and search costs or trial periods have been suggested as devices to reduce such costs and, therefore, sex discrimination.

All these proposals may, however, be no more than wishful thinking since the incentives they offer to employers will not be strong enough to change long-established practice. Probably only the passing of time will eliminate sex discrimination in the labour market.

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