To be hired or not to be hired, the employer decides: relative chances of unemployed job-seekers on the Dutch labor market
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3. LABOR MARKET THEORY

3.1 Introduction

The mixed set of beliefs which seems to mold labor market policy, may be seen as the reflection of a fundamental debate in labor economics: is what we observe the result of profit maximizing behavior or are there other forces at work, as well? This study, however, is in the first place an empirical investigation into the criteria employers use when selecting their lower skilled employees. There is no such thing as a well developed theory of personnel-selection, and I do not intend to build such a theory here. Within the field of labor economics, however, various assumptions are made, either implicitly or explicitly, about the mechanisms underlying employers' hiring decisions. This chapter on labor market theory tries to identify worker characteristics which are thought to be of importance to employers and to formulate a set of hypotheses with respect to mechanisms behind employer preferences for certain workers.

Section 3.2 deals with (neo-) classical labor demand theory, which starts from the viewpoint that demand for labor is "the outcome of employers' attempts at cost minimization or profit maximization" (Hamermesh (1986)). A natural extension of these ideas may be found in recent contributions to the theory of unemployment which will be looked at in section 3.3. Section 3.4 is devoted to studies of discrimination in the labor market. This line of thought also fits within the neo-classical framework, but as we will see, may imply that firms also pursue other goals than pure 'cost minimization or profit maximization'. Since economic theories of discrimination are more explicit in describing employer behavior with regard to the hiring of employees, we will pay relatively much attention to these theories. Section 3.5 will take a slightly different angle; this section looks at theories of labor market segmentation, which focus on the role of institutions and social structure rather than optimizing behavior of individuals and firms.
3.2 Marginal productivity theory

Firms can be pictured as production units, buying input and producing output. A simple model would distinguish two types of input: (homogeneous) capital and (homogeneous) labor. The model can be extended to the case where labor and/or capital are heterogeneous. The neo-classical paradigm assumes that a firm chooses that combination of inputs which maximizes its profit. In order to calculate this optimal combination it is necessary to define a production function and a cost function. The optimum will then be found if the marginal product of the last worker hired equals his price - the real wage rate. For this reason (neo-) classical labor demand theory may be called marginal productivity theory (see e.g. Addison and Siebert (1979)).

Of interest for this study is research in which different types of labor are distinguished. Hamermesh (1986) recapitulates that early empirical work used occupational differences as a line of disaggregation. From these early studies "the most consistent finding is that non-production workers (...) are less easily substitutable for physical capital than are production workers (...)". Although he questions the one-to-one relationship between occupation and skill, Hamermesh concludes that this finding "supports (...) the capital-skill complementarity hypothesis" (italics by Hamermesh). This hypothesis implies that "'skill' or 'education' is more complementary with physical capital than unskilled or 'raw' labor" (Griliches (1969)). Hamermesh finds further support for this hypothesis in (the few) studies which use educational attainment to disaggregate the labor force. As a second established result Hamermesh mentions that "the demand for skill is less elastic than the demand for raw labor".

According to Hamermesh, more recent studies in this line of research focus on disaggregations of labor along the characteristics age, sex and ethnic background. The relation of this disaggregation to the 'employers’ attempts at cost minimization or profit maximization’ seems to be less direct. Especially, possible causal relationships between gender or ethnic background at one hand and productive capacity at the other are of a delicate nature. For women, childbearing and traditional role-patterns in household duties may influence productive capacity in the market place over a life-time. Also, physical strength may limit opportunities for women in specific occupations. For ethnic
minorities, cultural differences, in particular regarding language, may form a possible cause for differences in productivity. The explicit study of inherent, 'natural', differences in capacities, however, remains highly controversial (see, for instance, the discussion on 'nature versus nurture' in The Economist (1992)). The motivation for economists to include these variables seems to be empirical differences in labor market position between different groups rather than theoretical considerations.

The relationship between age and productive capacity may be more outspoken. Productivity clearly changes over a life-time. This change may assume various forms. Older workers, for example, may have more professional experience but may also have an outdated education, they may be more stable and reliable but also less flexible, they may have more firm-specific knowledge but less physical endurance, etcetera. The age-productivity relationship depends highly on the type of job involved. Some occupations may require experience, whereas others require more physical strength.

As a result of these studies of demand for heterogeneous labor, Hamermesh mentions a third finding which may be of importance for the questions of this study: "though (..) less solid a result", women may be substitutes for young workers. Hamermesh adds to the latter observation that "the substitution among groups of workers is only now beginning to be analyzed".

In their survey, Hartog and Theeuwes (1989) note that there are not many established results in the study of static labor demand relations. They only mention capital-skill complementarity. In their opinion the development of the labor demand model lags behind that of the supply model. They follow Hamermesh in noting that the main reason for this underdevelopment is the lack of disaggregated data on firms. Quality and technical approach of supply side studies have been stimulated by the quality of disaggregated data on households. We will see in the next chapters that studying firm-behavior at a disaggregated level is exactly what this study aims to do.

Although studies of labor demand do not address the question of personnel selection explicitly, the profit maximizing setting implicitly assumes that:

**hypothesis 1:** employers select their lower skilled employees on productivity-related characteristics.
This implies in particular that skill-level and labor costs are variables employers will take into account when hiring employees. The capital-skill-complementarity-result indicates that labor costs should be especially of interest at the lower end of the labor market, which is the focus of this study. Furthermore, the idea that suppliers of labor with different age, gender or ethnic background may face different demand curves, implicates that these characteristics may also play a role in personnel selection.

3.3 Theories of unemployment

Theories of unemployment are usually divided in two sectors: the market clearing (neoclassical) and the non-market clearing (Keynesian) approach. In the seventies the borderline between the two camps started to fade. Economists in the Keynesian tradition tried to develop micro-economic foundations for their theory of macro-economic market-instability. On the other side, economists in the (neo-) classical tradition more and more acknowledged the existence of involuntary unemployment and developed possible theoretical explanations for this phenomenon.

Lindbeck and Snower (1988) present an overview of the most recent contributions in both the market clearing and the non-market clearing approaches. They present a list of ten competing theories ranging from 'Union activity' to 'implicit contracts' and from 'increasing returns to scale' to 'insider-outsider' theory. The latter is their contribution to modern thinking on unemployment. As it appears all the theories they mention, including the insider-outsider theory, try to explain the level of unemployment rather than its composition. Group-differences with regard to the incidence of unemployment are not addressed in any way by the list of theories on unemployment they present. Thus, the choices made by employers between different types of labor supply do not play a role in any of these theories either.

A similar observation counts for the extensive survey of unemployment theories by Nickel (1990). Although he reviews close to 300 studies on the subject, employer preferences for certain types of labor are not mentioned once. Layard, Nickell and Jackman (1991) dedicate their standard work on unemployment "To the millions who suffer through want of work". Their answer to the question "Why are some people more
unemployed than others?" simply is: mismatch of skills. They do not address the question whether 'mismatch' may have anything to do with the way employers choose their employees.

Nonetheless, considerable attention is paid by Nickel, by Lindbeck and Snower and by Layard, Nickel and Jackman to the role of long term unemployment and the long term unemployed. One of the new theories in this respect is hysteresis (see also Blanchard and Summers (1987)). Hysteresis of unemployment addresses the idea that unemployment once high may remain high; in other words, the level of unemployment is path dependent. This phenomenon may be explained by differences in market power between insiders and outsiders, but also by the loss of human capital of the long term unemployed. This line of thought results in another selection variable. After labor costs, skill-level, age, gender and ethnic background, which were already identified in 2.3.1, length of spell of unemployment may be added to the list of criteria possibly used by employers.

3.4 Discrimination in the labor market

As we saw in section 3.2, some studies of labor demand incorporate the variables gender, ethnic background and age. These variables may be correlated to actual productivity, but it may also be that people are discriminated against on the basis of these characteristics themselves, without any linkage to economic profitability. Discrimination on the basis of gender or ethnic background gets considerable attention in economic literature. Age discrimination, on the other hand, does not seem to be a popular subject among economists, yet. Basing employment and/or remuneration decisions on age, however, may have discriminatory aspects similar to selection on sex or ethnic background.

3.4.1 Defining discrimination

"Discrimination is a concept that defies precise definition" (Cain (1986), p. 694). There is much emotion attached to the term and it seems hard to give an unequivocal description of this phenomenon while at the same time accommodating all the individual
feelings attached to it. "It may (...) be admitted that the term 'discrimination' has value implications that can never be completely eradicated, though they can be sterilized for specific empirical and descriptive analyses" (Arrow (1973), p. 3).

Becker (1971) presents a definition of discrimination in the marketplace which may not always do well on the accommodating part, but at least seems to be unambiguous. He defines 'discrimination in the market place' in terms of money:

*If an individual has a 'taste for discrimination' he must act as if he were willing to pay something, either directly or in the form of a reduced income, to be associated with some persons instead of others. When actual discrimination occurs, he must, in fact, either pay of forfeit income for this privilege* (p. 14).

In Becker's definition of discrimination, paying workers less because they produce less cannot be seen as a discriminatory act. This notion of discrimination may not always coincide with other uses of the term 'discrimination'. For example: turning down a pregnant applicant only because she is a pregnant woman, will be viewed by many as a discriminatory act. If, however, hiring the pregnant applicant would imply a real (in money terms) loss to the employer, this rejection does not necessarily have to be an example of discrimination as defined by Becker: "An employer discriminates by refusing to hire someone with a marginal product greater than marginal cost; he does not discriminate by refusing to hire someone with a marginal value less than marginal cost" (p. 39).

As such, Becker's definition of discrimination also seems to imply a value judgment. Arrow (1973) emphasizes that this value judgment regards *what* we study rather than *how* we study it:

*The black steel worker may be thought of as producing both blackness and steel. We are singling out the former as a special subject for analysis because somehow we think it appropriate for the steel industry to produce steel and not for it to produce a black or white work force* (p. 4).
In his survey on the economics of discrimination, Cain (1986) argues that he sees no alternative to Becker's definition which would be equally applicable to the study of discrimination in labor markets. Therefore, throughout this study, we will stick to Becker's definition of discrimination in the market place quoted above.

3.4.2 Economic theories of discrimination

Economic theories of discrimination try to identify sources of discrimination and mechanisms to explain why these sources lead to observed differences in earnings or employment possibilities. Theories of discrimination are usually divided in two more or less separate fields. As we saw above, Becker's theory of discrimination attributes discrimination to tastes or preferences of individuals. Phelps (1972) and Arrow (1973) have developed alternative explanations based on the assumption that employers have imperfect information on the productivity of individual workers. The former will be referred to as taste for discrimination, the latter is called statistical discrimination. We will now turn to a brief discussion of the concepts involved. At the end of this subsection, we will see how the two concepts are linked.

Taste for discrimination

In Becker's framework, discriminatory tastes are part of the utility function of the individual. Becker identifies three different groups in the market place who may have a taste for discrimination: employers, employees and consumers.

Employers who discriminate against, say, minority workers, willingly pay (or forfeit money profits) in order to maximize their own utility and avoid employing minority workers. The amount they are willing to pay gives a measure of the size of their discriminatory taste. Although Becker's model is of a true neo-classical nature, it disputes the idea of the money profit maximizing firm. Employers who do not discriminate, are able to work more cost efficient than employers who do. Thus, in a fully competitive market, discriminating employers will be outperformed by less discriminating competitors and discrimination will vanish as soon as there are employers who have no taste for

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5 The term 'minority workers' is used here as shorthand for any group possibly being discriminated against, including numerical majorities like e.g. women.
discrimination. For this reason, many authors (including Becker) argue that inequalities resulting from tastes for discrimination should diminish under free competition (see, for example, surveys by Lundahl and Wadensjö (1984), Cain (1986) or Blau and Kahn (1992)).

In reality the invisible hand may be less successful in its purifying task, since competition is often limited. Becker points in particular at monopolies in the product market, which may give way to sustained discrimination. But there may be other limits to competition which may enable firms to transfer the extra costs involved with discrimination to their customers. We may, for example, also think of monopolistic competition. In the Dutch context cartels and barriers to entry in many trades, minimum wage legislation, collective bargaining and regulations regarding the hiring and firing of personnel are limits to competition as we saw in section 2.3.

In the case of co-worker or customer discrimination, as described by Becker, the employer is supposed not to have discriminating preferences, but acts as the agent of the discriminator. 

*Majority workers* with a discriminatory taste against minority workers, will demand a higher wage for working with minority workers than for working only with each other. In that case, even money profit maximizing employers may not employ a mixed work force, and segregation may result. Becker argues that wage discrimination may occur if labor unions are able to create a negotiation monopoly and effectively abuse this monopoly to raise wages of majority workers at the expense of minority groups.

*Customers* with a taste for discrimination against minority workers, act as if goods produced or sold by minority workers were priced higher than their money price would suggest. In that case, money profit maximizing employers will pay minority workers less because their *marketable* production is lower. Regarding customer discrimination, Cain (1986) argues that discriminated groups will just seek out jobs which do not have direct customer contact. With the assumptions that workers have free mobility and that "most goods and services are not produced with customer contact" (p. 711), he argues that segregation in the labor market may result but that discriminatory differences in pay will vanish. Turning this argument around, customer discrimination may lead to wage inequalities not related to productivity, if there are not enough job slots without customer contact relative to the size of the discriminated group(s).
Statistical discrimination

The main critique of Becker’s theory of discrimination is that it seems incapable of explaining persistent economic differences in a fully competitive environment. A possible explanation of persistent differential treatment in a competitive world, may be found in the concept of statistical discrimination as developed by Phelps (1972) and Arrow (1973). Statistical discrimination starts with the idea that employers have incomplete information on the true productivity of workers. Therefore they use easy to identify characteristics (e.g. ethnic background, gender, age) as cheap indicators of productivity. Suppose, for example, that minority workers are known to be less productive at average than majority workers. In that case employers may base their hiring and remuneration decisions on the easy to observe fact that someone is a minority worker rather than trying to establish someone’s true productivity at some, possibly high, price. In that case, individual minority workers will be treated on the basis of the average productivity of the minority group. Minority workers with higher than average productivity will then be discriminated against.

Although to many this may seem to be a blatant case of discrimination, the question arises whether this description of statistical discrimination gives an example of discrimination as defined by Becker (see e.g. Cain (1986)).

First, in the example, minority workers were supposed to be less productive at average than majority workers. If this is the case, paying minority workers accordingly less (or offering them accordingly less employment possibilities) does not necessarily imply discrimination as defined by Becker. Cain points out that if employers base their employment and remuneration decisions on the average true productivity of minority and majority groups only, many workers will not be treated in accordance with their true productivity. Some will gain, others will lose relative to their true productivity, but differences will cancel out over larger groups. Thus, he argues, the use of cheap screening devices may result in individual cases of discrimination, but cannot serve as an explanation of differences in pay which are not related to productivity, across groups.

Second, if information on the true productivity of workers is not free of charge, the use of cheap indicators on productivity, as described above, may be cost-efficient to the employer. In that case, such behavior cannot be regarded as discrimination according to Becker’s definition, since employers would sacrifice money profits by using better (but
more expensive) information. It must be noted that several authors (e.g. Arrow (1973), Cain (1986)) point out that employers might use 'trial work periods' in order to assess the true capabilities of applicants. Cain argues that the costs of good information on productivity - estimated as the cost of a trial work period - seem to be low compared to the differences in earnings and employment possibilities the theory of statistical discrimination tries to explain.

We may conclude that statistical discrimination, as described so far, cannot explain discrimination according to Becker’s definition. However, several authors (see e.g. Arrow (1973), Cain and Aigner (1977) and Cain (1986)) put forward descriptions of statistical discrimination in which workers with equal capacities are treated differently. Suppose that majority and minority workers at average have equal productive capacities. Again, true productivity of individual workers is hard to measure. Suppose now that employers select employees on the basis of, say, some test score, which estimates true productivity. Assume that the test-score results give a more reliable indication of true productivity for majority workers than for minority workers. In that case, if employers are risk-averse, the group with the less reliable indicator will receive lower payments or, if wage-differentiation is limited, will be last in the queue to be employed.

This argument raises the question whether risk-aversion can be cost-efficient. If this is not the case, risk-averse firms will be outperformed by firms which are neutral to risk. Then, under free competition, risk-averse firms may be driven out of business in much the same manner as employers with a taste for discrimination. It can be argued, however, that risk-aversion may be an optimal strategy for small firms, since these may not have the means to take risks in individual hiring decisions. Bigger firms, on the other hand, may profit from the law of large numbers and thus be more neutral to risk. Therefore, under the assumptions stated, it may be hypothesized that in hiring personnel bigger firms will be able to take more risk and consequently attach less importance to characteristics not directly related to productivity than small firms.

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6 This depends on the return on investment in information.

7 For 'test-score' we may also read 'school-results' or some other easy to obtain indicator of productivity.

8 It may be argued that this assumption implies once more that minority and majority workers are in fact supposed to have different capacities: majority workers are better able to 'signal' their productivity!

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The use of easy to identify characteristics as cheap indicators of productivity may have a self-containing effect on the position of minority workers. A qualitative description of this effect may be found in the interaction theory of Veenman (1990). He assumes that communication between minority workers and majority chiefs is blurred by cultural differences. Mutual disappointment may subsequently cause minority workers to resign themselves to a hopeless situation, whereas majority chiefs lose interest in the potential capacities of minority workers. Over time, the interaction between the two parties may worsen labor market opportunities for minority workers.

Similar feedback mechanisms are found by Arrow (1973), Spence (1974), Aigner and Cain (1977) and Schwab (1986). Minority workers, knowing their indicators of productivity are viewed as less reliable, may in accordance with an optimal investment strategy, invest less in achieving good indicator values. As a result, minority workers will, at the average, have lower indicator values although their initial capacities might have been equal to those of the majority group.

These studies, however, do not address the question why minority workers do not break through the vicious circle. Minority job-seekers may, for instance, apply in firms with minority chiefs or start their own businesses, thus providing opportunities to other minority job-seekers looking for a minority chief.

Conclusion

In the previous discussion, we have seen several possible sources of discrimination: tastes of employers, customers or co-workers, (costs of) information and risk-aversion. Whether it concerns tastes for discrimination or statistical discrimination, however, employers are the ones who decide to hire or not to hire, to pay more or to pay less. Since these decisions are all in one hand, it cannot always be decided what exactly the source of discrimination is. Do customers really have a taste for discrimination, or do employers only think they do? Do minority workers really lag behind in productivity or do employers only think they do? There seem to be several types of overlap in the explanations discussed above. Figure 3.1 illustrates the central position of the employer and the instances in which the distinction between employer tastes, and the forces outside the scope of the employer cannot be made.
In co-worker and customer discrimination, employers act as the agent of co-workers and customers. Employers make the final decision to pay minority workers less or not to hire them. If they do so in anticipation of co-worker or customer discrimination, they must make some assessment of the size of customer and co-worker tastes. Employers may estimate the tastes of customers and co-workers correctly, but they may also miscalculate co-worker or customer discrimination or use these types of discrimination as pseudo-rationalizations for their own (latent) preferences. It must be noted that truly innocent mistakes will include both over- and underestimations of customer and co-worker preferences. Thus, the effects of truly erroneous assessments of co-worker and customer discrimination, should cancel out over larger groups and are therefore not in figure 3.1.

In statistical discrimination, the central role of the employer’s decisions is even more outspoken. Employers decide whether to use easy to identify characteristics as indicators of productivity. If there are differences in true productivity between groups, the profit
maximizing employer who bases his employment and remuneration decisions on group characteristics, must have a clear idea of the size of these differences, the variance of such differences, etcetera. Otherwise he may well erroneously make the wrong decisions with respect to his profit function. Furthermore, it is also possible that employers use spurious information about the productive capacities of different groups, or about the reliability of their indicators of productivity, as pseudo-rationalizations for their own (latent) tastes. Again, it must be pointed out that truly erroneous behavior should cancel out over larger groups.

Finally, being linked to employer tastes, pseudo-rationalizations of discrimination, whether consciously or subconsciously, are not cost-efficient. Thus, lower pay or less employment possibilities for minority groups resulting from pseudo-rationalizations should vanish under competition.

### 3.4.3 Empirical investigations into the nature of discrimination

Defining discrimination is one thing, measuring the incidence of discrimination is another. Suspicion of discrimination in the labor market may be aroused by wage or income differentials between groups. Such differentials, however, do not necessarily imply discrimination. For example: wage differentials between university graduates and people who did not go to university are usually attributed to differences in productivity. Thus, if we suspect discrimination against some minority group as defined above and if we want to assess such discrimination by looking at wage rates, we must control for the productive capacities of the groups involved.

Added to this, productive capacities within the labor market may (or may not) be influenced by discrimination prior to entering the labor market. Moreover, earnings of minority groups may also be influenced by (their own) expectations about returns on investment in human capital. Observed earnings differentials thus may include the results of discrimination outside plus discrimination inside the labor market plus (former) expectations about (future) discrimination (cf. Cain (1986)). Finally, income differences may not only pertain to wage discrimination but also to discrimination in employment possibilities (Niesing et al. (1993)). This line of thought is of particular interest if jobs are rationed, for example, as the result of institutionalized wage-setting as in the Dutch labor market.
Even if we concentrate for the moment on wage discrimination within the labor market, this still leaves us with the task of controlling for the productive capacities of the groups involved. Perfect indicators of true productive capacities, however, are hard to come by. Thus, in this type of analysis, productive capacities are approximated by means of educational attainment, work experience, etc. These variables are then used in a regression analysis of income or earnings data. Hersch (1991) gives a description of the unresolved discussion such an analysis may leave behind. She focusses on male-female income differences, but her remarks do apply equally well to other discrimination issues.

Twenty years of research on gender differences in earnings have failed to explain the entire wage gap as a consequence of measured differences between male and female workers. Some researchers view the unexplained residual as evidence of discrimination against female workers; others take the position that the entire wage gap is potentially explicable by differences in labor supply. According to the latter view, an unexplained wage gap remains because the data sets in use do not contain adequate information on all productivity-related characteristics.

In her study Hersch includes detailed human capital characteristics in a regression of wages of men and women. The inclusion of these detailed characteristics still leaves a great deal of the observed wage differentials unexplained. She concludes: "some observers may interpret the findings of this paper as providing evidence of discrimination. Alternatively we can view these results as evidence of the limitation of the residual approach to measuring discrimination".

Groshen (1991) takes a different angle and investigates demand-side characteristics as possible explanations for wage differentials between men and women. Her investigation does not include human capital or other personal characteristics. Instead, she uses variables describing the proportion of females per occupation (across establishments), establishment and job-cell (occupation within establishment) respectively. Her results suggest that men and women working in the same job-cell, generally receive equal pay. Mostly, however, they work in different job-cells and receive different pay. Groshen concludes that these results are "consistent with the existence of discrimination".
This argument seems to have a shortcoming similar to the 'residual approach' mentioned before: the analysis leaves discrimination as a possible explanation for the observed phenomena, but does not rule out the existence of alternative explanations. Especially, her results do not rule out the possibility of self-selection; women may prefer working in a 'female' environment to working in a 'male' environment at a higher wage rate.

Here we encounter a more general drawback in the analysis of wage-differentials. If the observed differences are really the result of discrimination, then who is to blame? According to Becker, employers, customers and fellow employees all are possible discriminators possibly causing lower pay for discriminated groups of workers. Moreover, people can even discriminate themselves, a process usually referred to as self-selection. It may be concluded that it is exceedingly difficult to demonstrate that differential treatment may indeed be called discrimination.

Notwithstanding these difficulties, regression analysis has been approved in (American) courtrooms as providing evidence of discrimination. Ashenfelter and Oaxaca (1987) cite the U.S. Supreme Court in stating:

(..) it is clear that a regression analysis that includes less than "all measurable variables" may serve to prove a plaintiff's case (..). Whether, in fact, such a regression analysis does carry the plaintiff's ultimate burden will depend in a given case on the factual context of each case in light of all the evidence presented by both the plaintiff and the defendant (..) (Bazemore vs. Friday (1986) p.331)

This remark illustrates that what is accepted as 'proof' of discrimination is not only a matter of scientific debate, but also of personal judgment.

A field which offers relatively good possibilities to measure discrimination is the market for professional sports. Sports are of interest because, especially in the United States, statistics on achievements in sports provide data on true productivity of individual players at a level of precision unthinkable in any other profession. In this context, discussions on 'imperfect indicators of productivity' (as in statistical discrimination) and
on 'missing variables' (as in the 'residual approach') seem to be irrelevant. In his survey on the subject, Kahn (1991) finds evidence of "salary discrimination and customer discrimination against blacks in baseball, and positional segregation on the basis of race or ethnicity in baseball, football and hockey". Researchers have also been searching for more direct ways of measuring discrimination. Within the sports market, Anderson (1988), Anderson and De la Croix (1991) and Nardinelli and Simon (1990) have found evidence of customer preferences for white baseball players by analyzing the collectors market for bubble gum cards depicting baseball players. Riach and Rich (1991a) present a short overview of other attempts at measuring discrimination directly; for example, by using actors or sending fake letters of application. In fact, the underlying study may also be seen as an attempt at measuring possible discrimination by employers in a direct manner.

3.4.4 Hypotheses regarding the selection of employees

The preceding exposition does not directly lead us to a theory on employee selection behavior of employers. We may, however, ask whether employers, contrary to hypothesis 1, select their employees on the basis of criteria not directly linked to productivity:

**hypothesis 2:** Employers may select their personnel (partly) on characteristics which are not *directly* related to potential productivity.

If hypothesis 2 proves to be anywhere close to being correct, the next question should be: "why do employers do this?". The previous search of discrimination theories has provided us with a set of possible answers to this question. There are basically two starting points for answering it, which are presented as hypotheses 3 and 4:

**hypothesis 3:** Employers select their personnel (partly) on characteristics which are not directly related to potential productivity because doing so is cost-efficient.

**hypothesis 4:** Employers select their personnel (partly) in a discriminating way because they have a taste for discrimination.

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Hypothesis 4 is straightforward Becker's theory of discrimination by employers. If this is the case, employers willingly forfeit part of their profits in order to satisfy their taste for discrimination. As a corollary to hypothesis 4 it may be thought that a lesser competitive environment provides more room for discrimination (see also Blau and Kahn (1992)). In hypothesis 3 employers are seen as money profit maximizing agents who are forced by circumstances to select their personnel on characteristics which are not directly related to productivity. Several possibilities to explain the latter possible phenomenon have been presented above. Becker's theory of tastes presents us with possibilities 3a and 3b:

**hypothesis 3a:** If customers discriminate against certain groups, employers will be restrained in hiring discriminated workers for jobs with direct client contact.

**hypothesis 3b:** If co-workers discriminate against certain groups, employers will be restrained to hire people who may be discriminated against by their employees. As such the composition of the work force may influence the employers' hiring criteria.

Theories of statistical discrimination lead us to a third situation in which selection on characteristics which are not directly related to potential productivity may be a cost-efficient strategy.

**hypothesis 3c:** If real productivity is harder to measure for one group than for another, risk-averse employers may find it profitable to select employees from the group with the more reliable indicators of productivity.

As a corollary to 3c, it may be thought that big firms are able to take more risk than small ones. Following this proposition, hypothesis 3c may apply in particular to small firms.

Finally, it may be argued that employers use easy to observe characteristics as cheap screening devices of known underlying productivity:
hypothesis 3d  employers select their employees on characteristics which are not directly linked to productivity, because they use these easy to observe characteristics as cheap indicators of expected (true) productivity.

3.5 Labor market segmentation

Whereas theories of discrimination may dispute the idea of profit maximizing behavior of firms within the neo-classical paradigm, theories of segmented labor markets (SLM) challenge the neo-classical description of the labor market itself (Cain (1976)). In his survey Cain points out that SLM-theories constitute a critique of orthodox economic thinking rather than presenting an alternative coherent theoretical concept. According to Cain, this criticism is motivated by dissatisfaction with the capability of (neo-) classical economic thinking to deal with issues as: "persistence of poverty" and "(..) income inequality", "the failure of education and training programs", "discrimination in labor markets", "levels, trends and structure of unemployment", "monopolies, unions and other sources of 'protected' labor markets" and finally "psychological dissatisfaction of workers". In their survey, Taubman and Wachter (1986) position SLM-theories in a similar manner: "(..) the thrust of neo-classical economics is the study of maximizing behavior on the part of individuals and firms. In this approach, changes in the tastes of individuals and details on the institutional framework of markets are largely ignored. The SLM, on the other hand, focuses specifically on the development of institutional constraints and on the determinants of endogenous tastes".

The set of beliefs which is covered by SLM-theories seems to have in common the idea of limited access of some subgroup(s) to (certain parts of) the labor market. Thurow (1975) describes this idea by means of a 'labor queue'. His theory of job competition sees wage-rates as primarily determined by institutional forces (e.g. internal labor markets, collective bargaining) and social custom. The number of jobs is determined by the wage rate and job-seekers queue for jobs with fixed wages. Furthermore, Thurow postulates that "marginal productivity resides in the job and not in the man" (p.77). Thus, Thurow argues, employers will screen their employees on trainability rather than on human capital acquired outside the labor market.
Thurows’ model of job competition does not describe a segmented labor market. However, as is pointed out by Cain (1976), it is in many respects similar to the idea of a dual labor market. Doeringer and Piore (1971) are most commonly seen as the founding fathers of this view which distinguishes two segments in the labor market: a primary sector with 'good' jobs and a secondary sector with 'bad' jobs. The primary sector is governed by institutions such as internal labor markets and unions and the 'good' jobs in this segment are rationed. The secondary segment bears more similarity to a spot market and contains low-paid and unstable jobs. An important feature of this line of thought are the self-containing aspects of working in the secondary segment: workers in 'bad' jobs may develop corresponding working habits and employers may use (previous) employment in a 'bad' job as a (negative) screening device (cf. Cain (1976)).

Empirical tests of the duality hypothesis are not unambiguous. Taubman and Wachter (1986) view the results of such tests as "disappointing". Dickens and Lang (1992), however, point at the "success of labor market segmentation theory both in the theoretical and empirical domain" when reviewing a hardly renewed set of literature on the subject. Empirical work by Magnac (1991) suggests that the assumption of a competitive labor market cannot be rejected in favor of the duality hypothesis. However, his results also show that "market forces do not clear comparative advantages of individuals across sectors (segments). Therefore, he concludes that "labor markets seem to be only weakly competitive". For the Dutch situation Brouwer et al. (1992) have tried to find empirical evidence of a demarcation line in the labor market. They conclude that some occupations have typical secondary whereas others have typical primary characteristics. The dividing line, however, seems to be vague and their estimations indicate that the possible size of a secondary segment may range from 6 to 50% of the entire labor market.

Finally, SLM-theory also had its roots in Marxian dialectical analysis (Cain (1976)). This so-called radical school entirely rejects the analytical framework of neo-classical economics and replaces it with historical analysis. At this point it may be interesting to recall some conclusions of such a historical analysis (Reich et al. (1973)): "Labor market segmentation is intimately related to the dynamics of monopoly capitalism, (..) (it) arose and is perpetuated because it is functional, that is, it facilitates the operation of capitalist
institutions (..). Segmentation is functional primarily because it helps reproduce capitalist hegemony. First, (..) segmentation divides workers and forestalls potential movements uniting all workers against employers. Second, segmentation establishes fire trails across vertical job ladders (..). Less pressure is then placed on other social institutions (..) that reproduce the class-structure. Third, division of workers into segments legitimizes inequalities in authority and control (..)." It must be noted that these quotes are not taken from a pre-Gorbatsjov Pravda-editorial but in fact can be found in the American Economic Review.

Summarizing, the importance of SLM-theory seems to lie particularly in the (qualitative) description of certain persisting labor market problems. Quantitative assessments of SLM-postulates seem to have been less successful. In the Dutch context, however, Thurows' theory of job-competition seems to be of interest. As we have seen in section 2.3, wage setting in the Netherlands, especially at the lower end of the labor market, is largely institutionalized. Therefore, wage competition seems to be of minor importance. Following Thurows' description, we may formulate:

hypothesis 5: employers will select workers on trainability and adaptability rather than on accumulated human capital.

3.6 Summary

The selection of employees by firms is not an issue which is intensively dealt with in labor economics. In this chapter we have, however, identified a variety of implicit notions about why firms prefer which workers.

Regarding the 'why-question': theories of labor demand and unemployment see maximizing money profits as the sole objective of firms; choosing employees is implicitly understood to be in accordance with this objective. The development of the economic theory of discrimination seems to reflect a more or less permanent struggle with the idea of profit maximization. Some theories (e.g. Becker) explicitly assume other objectives. This type of behavior can only persist in non-competitive circumstances. Other theories try to explain discriminating behavior as the outcome of profit
maximization (e.g. statistical discrimination theories). Finally, theories of labor market segmentation approach labor market thinking from an institutional angle. In this line of thought only Thurows’ model of job-competition, although not a true segmentation theory, seems to be of interest for this study.

Regarding the 'which-question', we have identified the following set of employee characteristics which may be of importance to employers:
- labor costs
- skill-level/ human capital (level of education, work experience, etc.)
- age
- gender
- ethnic background
- duration of spell of unemployment

In spite of the absence of a readily available theory of personnel selection, existing labor market theories have provided us with some general ideas of why firms may select which workers. It has been possible to formulate a set of hypotheses which may be tested in practice. In chapter 7 we shall see whether the empirical investigation presented in chapters 5 and 6, provides us with some answers to the hypotheses formulated here.
TO BE HIRED OR NOT TO BE HIRED, THE EMPLOYER DECIDES