

# Age Discrimination in Hiring Decisions

## A Questionnaire Study

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– Preliminary version –

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**Abstract.** The effect of age stereotyping on subject's rating in a simulated employment decision was investigated. Students (N=174) were asked to evaluate three hypothetical applicants regarding working skills and adequate wage levels. Also they had to decide whom they would hire. Participants were given applicant information, including various personal characteristics and a description of an age-neutral position. In a pilot study a respective age-neutral position was identified. The manipulated variable in the main study was age and a significant age effect was found regarding the hiring probability. Finally the paper describes briefly future research aspects.

JEL classification: J11, J14, J23, J71

Keywords: Discrimination, Older Workers,#

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# 1. Introduction

Due to demographic changes the society in the industrialized countries is aging. This requires a better understanding of the importance of age in the labor market. Nowadays it can be observed that age discrimination in the hiring process is already starting with the age of 40. Age discrimination is not a very new phenomenon and was already seen as a problem almost 50 years ago. Tuckmann and Lorge wrote in 1952: „In business and industry there are significant restrictions in the hiring, upgrading, and retention of older workers, i.e., men and women 45 of age and over ...”<sup>1</sup> In a study carried out in 1991 with 304 employers 43% think age to be an important consideration in the recruitment of staff (Taylor and Walker, 1993, p. 371). In a European poll (Eurobarometer) it was found out that in Germany 77.6% believe in age discrimination at the recruitment level. In some other countries this percentage was even higher: France - 81.8%, UK - 82.4% and Netherlands even 83.2%.<sup>2</sup> Eurolink Age gives the following definition for age discrimination: „The term age discrimination applies to situations in which the use of age to discriminate cannot be justified and which results in an unfair difference of treatment of older workers ...”<sup>3</sup> Leaving aside the question if this kind of treatment is justified or unfair, our study is focussed on detecting whether applicants are treated differently just due to age. Some people argue that age discrimination is a result of the decreasing productivity of older workers.<sup>4</sup> It is explained with the so-called deficit model.<sup>5</sup> But there is no gerontologic evidence for a decline in productivity of an individual (Thomae and Lehr, 1973, p.#). In our

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<sup>1</sup> Tuckmann and Lorge (1952) p. 149. One should take into account that since then life expectancy has increased significantly. For example in Germany life expectancy for men was 64.6 in 1950 and in 1998 in the West German states it was as high as 74.0 years. <http://www.statistik-bund.de/presse/deutsch/pm/p0316021.htm>

<sup>2</sup> It was for the first time that such a huge investigation on this subject was done. Samples of the population were directly asked, if they think that age discrimination (for people older than 50) regarding recruitment, training and status in the organisation is happening (Taylor and Walker, 1993a, p. 24).

<sup>3</sup> Eurolink Age (1997) p. 12. Eurolink Age is a network of 140 organisations and individuals in the European Union. It concentrates on policy issues concerned with older people issues of ageing and has members in all fifteen member states.

<sup>4</sup> See for example Bäcker (1979), Betzel and Pressel (1994), Frerichs (1998).

<sup>5</sup> For a short overview of the development of the deficit model see Weis (1983), p. 20-25.

study we want to show that even applicants with completely the same *qualifications* are treated differently in the selection process just on the grounds of age. The tool to identify age discrimination in the hiring process will be a questionnaire. In the next section we will explain how our questionnaire is composed and in the third section we will describe the main results.

## 2. The Questionnaire

So far psychologists have conducted most of the questionnaires. Rosen and Jerdee did one of the first questionnaires regarding age discrimination in 1976. Since then the questionnaire has been modified in several aspects. Our goal was to identify whether or not in Germany older applicants with the same qualifications are treated differently as compared to younger applicants. As far as we know similar projects were exclusively carried out in English-speaking countries like the USA or Australia. As mentioned before our study is focussed on the entry and not the outside option for older workers. The outside option depends to a large extent on pre-retirement and other pension system regulations that we do not want to discuss here and for which a large body of literature already exists.<sup>6</sup>

The study is based on the following two working hypotheses:

- Hypothesis I: An older applicant will get a smaller wage even if he has the same productivity as a younger applicant.
- Hypothesis II: An older person has a lower recruitment probability.

We consider applicants already at the age of 40 years to be old. This is not so obvious since an age limit is quite flexible. Taking into account the different studies regarding age discrimina-

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<sup>6</sup> See for example for Germany Gatter and Hartmann (1995), Klauder (1989) or Wübbecke (1999).

tion it exists a range of almost 25 years in which you can be called old. In some studies workers around the age of 40 are called old (Arrowsmith and McGoldrick, 1996, p.11) and in other studies you may find the age of 65 (Forte and Hansvick, 1999, p. 25). In general it can be observed that the age limit depends upon economic well-being. In prosperous times with labor shortages the boundary of being old is higher than in times of high unemployment (Lehr, 1990, p. 103).

Our age limit is also the same Cleveland and Landy (1987) used to identify age-neutral jobs. In our pilot study we applied their method to identify age-neutral positions. In addition the World Labour Report 1995 shows an evidence for this age boundary. According to this report age discrimination in advertising for vacancies starts at the age of 40 or even earlier (ILO, 1995, p. 49).

## **2.1. The tasks**

In total our questionnaire consisted of four different tasks, which are described briefly below. Before filling out the questionnaire the students read the introduction, the advertisement of the position and the CVs of the three applicants. The first task was to state for each of twelve items regarding different types of capacity the percentage of importance for fulfilling the position. The miscellaneous items are outlined in the section below. The reason for this task was that the students should get familiar with the different items. Then participants had to indicate on a 9-point bipolar rating scale where each point was anchored how capable every applicant is concerning all items.<sup>7</sup> The chosen kind of rating scale is rather similar to the semantic

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<sup>7</sup> In many other questionnaires regarding age discrimination they called it a seven or nine-point **Likert** scale (e.g. Finkelstein and Burke, 1998 Forte and Hansvick, 1999 or Singer and Sewell, 1989). But a Likert scale requires a

differential scale.<sup>8</sup> The scale is mainly used to find out what a person feels about or associates with something. The different items need *not* have the completely same definition for all evaluators (Atteslander, 2000, p. 247). The main goal of this first task was that students were obliged to read the CVs of the applicants carefully. Secondly we wanted to check if the evaluation of the different items depends on age. The third task was to specify which salary they would give each applicant if he would be hired. The students were requested to use the wage level as a measure for productivity and take into account the real wage gap for this kind of position, which was mentioned in the questionnaire. We wanted to have a monetary and thus a relevant economic measure for productivity. Last but not least students had to decide whom they would hire. The according recruitment probability represents a second important economic measure.

## **2.2 The Position**

To test our hypothesis we tried to give a realistic description of a recruitment situation. First of all it was important that the position was not mainly *physically demanding*. This was so since due to the literature there is some evidence that the physical strength could decrease with age (ILO, 1995, p. 46). Therefore we concentrated on white-collar worker positions. An important feature for designing a job profile seemed to be the result of an age-discrimination study by Perry and Bourhis (1998): Older applicants were evaluated less favorably for the more strongly compared with the less strongly young-typed job.<sup>9</sup> So it seems that certain posi-

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special extensive pilot study and is in fact used for opinion polls. In none of these studies was a description of an according pilot study for the scale.

<sup>8</sup> The semantic differential was developed by Osgood et al. in 1957 and since then it has been known in the German literature as „Polaritätsprofil“ or „Eindrucksdifferential“ (Bortz, 1984, p. 128).

<sup>9</sup> Applicants were evaluated on the basis of three questions: 1. How desirable is this applicant for the job? 2. How suitable is this applicant for this job? and 3. How likely would you be to hire this applicant for this job? (Perry/Bourhis, 1998, p. 1670 and p. 1684)

tions have age norms, or are characterized as being more appropriate for particular ages (Finkelstein et al., 1995, p. 654).

A suitable method to identify age-neutral positions was developed by Cleveland and Landy in 1987. In their experiment managers were asked to complete either a frequency grid questionnaire or a graphic rating scale describing their perceptions of the age distribution.<sup>10</sup> Since we used the same two questionnaires (for 20 jobs) we will give a short description of the method. The first questionnaire included 7 age categories (under 20, 20-29, 30-39...) and the second questionnaire just had seven categories ranging from 1 to 7 without any age specification. In the first questionnaire students were asked to express their feelings of the distribution of age in each job. They had to name for every job the percentage of people in each age category. In the second questionnaire participants had to say which of the seven categories was predominant for the certain position. A job was then defined as a younger person's position if 60% of responses from *both* questionnaires fell in the first three rating categories and as an older person's position if 60% of the responses fell in the last four rating categories. The convergence of both questionnaires was important for the identification. A job was classified as age neutral if less than 60% of the responses of both questionnaires were concentrated either in the first three or the last four response categories.

In the pilot study we only used the general description of the enterprise and of the respective position according to newspaper advertisements. We omitted the name of the enterprise and the information about the skills required for the job. Thus we had a more general description and made sure that the position profile was not mixed up with the applicant profile. To make it not too apparent that we are looking for age-neutral jobs we also used two older and two

younger jobs. The neutral jobs were Buyer (3), Production Planner (1), Supervisor of Customer Service (3), Regional Sales Manager (Assistant) (2) and Sales Engineer (3). The older jobs were Director of Accounting (2) and Director of Research and Development (2). The younger jobs were (Junior) Accountant (2) and (Junior) Project Engineer (2). The number in brackets indicates the number of representative positions we chose for the questionnaire in the pilot study for the respective job. Different descriptions of similar positions were necessary to make sure that we will find an age-neutral job. This is even more important because another study of Perry and Bourhis showed that the perception of a job depended to a large extent on its “product”. So the job of a person selling CDs, records and tapes was seen as a young-typed job in comparison to a person selling stamps and coins that was seen as an old-typed job.<sup>11</sup>

The first questionnaire was filled out by 26 and the second questionnaire by 35 students.<sup>12</sup> In total seven positions were identified as age-neutral. Only four of them were also recognized as age-neutral in the paper of Cleveland and Landy. To decide which of the seven positions we should work with in our main questionnaire we had a closer look at the results of the first questionnaire. The reason for this is that the first questionnaire allows us to identify how many people felt that the relevant position was age-neutral. To avoid any gender specific influence of the position we finally decided to take the position of a Project Engineer that was seen as age neutral by 13 students in the first questionnaire.

### **2.3 The Applicants**

We wanted to design a realistic picture of different applicants. All three applicants had more or less the same qualifications. First of all students were informed that all applicants had 2 years of experience in the specific industry and the required diploma. Additionally - to make

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<sup>10</sup> The graphic rating scale is quite similar to the method Perry and Bourhis et al., 1996, used.

<sup>11</sup> Perry and Bourhis, 1996, p. 634.

age not too obvious - the students received eight characteristics of each applicant besides age: last name, first name, grade of diploma, computer knowledge, stays abroad, additional qualifications, hobbies and reason for applying. The CVs of the three applicants were developed together with the personnel manager of the respective enterprise. The suitable details for the variables descriptions of the characteristics helped the students to evaluate every item in respect to each applicant.

The manipulated variable here was age. In many other experiments it was only distinguished between a pretty young and a pretty old applicant.<sup>13</sup> So they had a big age gap and could only analyze, if the older applicant was evaluated as favorably as the younger one. To avoid such a big age gap 12 different ages specifications for each applicant were used. We choose four different groups: group I: 27, 34, 41; group II: 31, 38, 45; group III: 35, 42, 49 and group IV: 39, 46, 53 from the possible  $12^3$  combinations of the number of applicants and age specifications. As you can see the applicant pool itself was characterized by a quite homogenous age structure. The age gap between the youngest and the oldest applicant in each questionnaire was only 14 years. Finally we had to randomize age and used in total 24 different questionnaires.

## **2.4 The Items**

Five of the items were mentioned in the advertisement and one was suggested by the corresponding personnel manager of the selected age-neutral position (in the enumeration below these six items are written in italics). Then we decided to use additional items connected to the four work-related scales, which were distinguished in the research project of

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<sup>12</sup> The results are listed in the appendix.

<sup>13</sup> See for example Bendick et al. (1996), Forte and Hansvick (1999), Singer (1986).

Rosen and Jerdee. The first scale is performance capability (*technical production knowledge, computer skills, organisation capability, foreign language skills, engagement*), the second scale is potential for development (capability to learn, flexibility), the third scale is stability (careful, reliable) and the fourth scale is interpersonal skills (*team capability, communication capability, persuasive power*).

### **3. Results**

In total 174 students filled out the main questionnaire (89 female, 76 male and 9 not reported). Due to the different types of questionnaires we were able to analyze how an applicant was evaluated if he was young, middle-aged or old compared to the others. A first result is that wages did not vary for different ages. The respective means are the followings: 81.555 DM for an applicant if he was young, 81.338 DM if he was middle-aged and 81.564 DM for the oldest one. So on average the oldest applicant received slightly more than the others. One could argue that this result is perhaps based on the fact that people tend to give seniority-based wages. A comparison of the expected productivity for the three age types showed that the youngest applicant received the highest value with 6,09 and the middle aged received 6,04 and the oldest one 5,98 (on a 9-point scale). So even though the youngest applicant was seen as slightly more productive than the other candidates, he did not receive the highest wage. Since the applicants' productivity varies only slightly it could easily be argued that the wage was used – as we asked students to do so - as a measure for productivity.

Considering the evaluation of the four work-related scales and comparing the outcome with results of the study by Rosen and Jerdee we see a similar tendency. As mentioned before Rosen and Jerdee gave only the information that the participants will soon meet a pretty young

and a pretty old person. Students had then to rate the two persons on a 10-point scale for 65 items.<sup>14</sup>

Table 1: Mean ratings regarding the four work-related scales

	Büsch and Königstein			Rosen and Jerdee <sup>15</sup>	
	Young applicant	Middle aged applicant	Old applicant	30-year-old man	60-year-old man
Performance capacity	6.00	6.05	5.98	6.30	4.94
Potential for development	6.30	5.92	5.48	6.29	4.56
Stability	5.91	5.92	6.10	5.05	5.79
Interpersonal skills	6.14	6.15	6.16	4.94	5.02

As you can see Rosen and Jerdee found out for the first two scales that the younger person was obviously evaluated more favorably than the older one. In our questionnaire it is evident for the second dimension. The younger applicant was clearly perceived as having a higher potential for development. For the third dimension the students nowadays evaluate the older person still as a little bit more stable. It is interesting to see that even though in our experiment the age gap between the youngest and oldest applicant was only 14 years and students received information about 9 characteristics age played still an important role for the evaluation. Therefore, it might be interesting to check whether or not the results will change if age is becoming more salient. For example in another questionnaire by Lee and Clemmons (1985) - related to training measures - it was observed that older people were rated less

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<sup>14</sup> These 65 items were as was mentioned before classified into four work-related scales. See section 2.4.

favorably when the old and young workers were concurrently rated. But in an experiment by Finkelstein and Burke the hypothesis that older workers are evaluated less favorably if age is salient could not be proved.<sup>16</sup> In the literature overview of Finkelstein et al. it was pointed out that there was mixed support for the salience hypothesis (Finkelstein et al., 1995, p. 659).

Another important factor for the result might be that students themselves are pretty young. In other experiments for example, it was found out that younger raters tend to rate younger workers better than older workers in terms of the workers' job qualification, potential for development and qualification for a physically demanding job (Finkelstein et al., 1995, p. 658). It has to be taken into account that in most of the studies there was no essential difference in older people's ratings of older and younger workers' job qualification. Perry et al. put it like this: the influence of the age of the rater is - according to other studies - not clear (Perry et al., 1996, p. 644).

A further interesting result of other experiments was that younger workers were rated more favorably than older workers in terms of job qualification and potential for development if no job-relevant information about the worker was provided (Finkelstein et al., 1995, p. 652). This result is strongly related with the findings of Perry and Bourhis: Participants did not give significantly different ratings to young and old applicants who matched on a moderate number of central features.<sup>17</sup> This is much more interesting since in our experiment the CVs included several relevant aspects for the position like computer knowledge and additional qualifica-

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<sup>15</sup> Rosen and Jerdee (1976a) p. 181.

<sup>16</sup> The first task was used as part of the age-salience manipulation. So in one questionnaire the first task was age-related; not so in the other questionnaire. Three different scales were distinguished in this questionnaire: interpersonal skills, economic worth and likelihood to interview (Finkelstein and Burke, 1998, p. 325).

<sup>17</sup> Perry and Bourhis (1998) p. 1691. In a pilot study central and irrelevant features (e.g. polite or serious) were identified for the several jobs. The questionnaires used in the experiment varied by the number of central features. For the three questions for the evaluation refer to note 9.

tions. But still younger applicants received a clear by better evaluation regarding the potential for development. Also if we break down the results for each item it can be observed that the evaluation differs especially between the young and the old applicant for the items 5 and 6 (see table 2).

Table 2: Evaluation of the different items

	Young	Middle	Old
1. Technical production knowledge	5.93	5.88	5.86
2. Computer skills	5.88	5.86	5.79
3. Organization capability	6.20	6.32	6.53
4. Foreign language skills	5.65	5.86	5.67
5. <i>Capability to learn</i>	6.25	5.72	5.40
6. <i>Flexibility</i>	6.33	6.13	5.60
7. Careful	5.87	5.89	6.02
8. Reliable	5.96	5.98	6.17
9. Team capability	6.40	6.24	6.26
10. Communication capability	6.26	6.23	6.29
11. Persuasive power	5.73	5.91	5.99
12. Engagement (sollte an Pos.4#)	6.32	6.22	6.10

The biggest difference in treatment between the different ages can be seen in the hiring probability. The probability to employ the youngest in the group was 46.26, to employ middle aged was only 29.89 and for the oldest applicant it decreased even to 23.85. Even though all ages

were seen as more or less same having the same productivity the students clearly preferred to hire a younger applicant. This can also be seen if we take the wages into consideration (see table 3). The highest wage for the old person (senior-based wage) only implies a hiring probability for the old applicant of nearly 60%. But the highest wage for the youngest applicant (junior-based wage) implies a hiring probability of almost 80%.

Table 3: Hiring probability

	Probability to employ a “young” applicant	Probability to employ a “middle-aged” applicant	Probability to employ an “old” applicant
Senior-based wage (N=21)	23.81	19.05	57.14
Junior-based wage (N=19)	78.95	15.79	5.26

#### 4. Summary

The results show that questionnaire developed for the experiment is a good tool to identify age discrimination in the hiring process. Even though age was not a very salient parameter it seems that negative age stereotypes played a major role for the hiring decision. Since - as far as we know - it was the first time that such a questionnaire was used in Germany there are high requirements for further research. One point of special interest would be to find out how the results will change if -instead of an age-neutral position- an age-specific position would be described. It might be equally important to analyze whether or not the results will change if

age is becoming more salient. Another interesting aspect would be to ask personnel managers -instead of students- to fill out the questionnaire. Last but not least an interesting modification would be to describe female applicants.

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## Appendix

### Convergence of two questionnaires

Job/Position	QN 1		Type	QN 2		Type	Type
	C 1-3	C 4-7		C 1-3	C 4-7		
<b>BUYER</b>							
<i>Referatsleiter/in</i>	58.97	41.03	neutral	74.29	25.71	young	?
<i>Techn. Einkäufer/in</i>	43.78	56.22	neutral	57.14	42.86	neutral	NEUTRAL
<i>Einkäufer/in</i>	84.57	15.43	young	94.29	57.14	young	YOUNG
<b>PRODUCTION PLANNER</b>							
<i>Business-Planninng O.</i>	67.29	32.71	young	88.57	11.43	young	YOUNG
<b>SUPERVISOR OF CUSTOMER SERVICE</b>							
<i>Abteilungsleiter/in</i>	40.60	59.40	neutral	31.43	68.57	old	?
<i>Leiter/in Kundendienst</i>	55.54	44.46	neutral	45.71	54.29	neutral	NEUTRAL
<i>Kundendienstleiter/in</i>	64.17	35.83	young	85.71	14.29	young	YOUNG
<b>REGIONAL SALES MANAGER</b>							
<i>Regional Sales C.</i>	56.47	43.53	neutral	40.00	60.00	old	?
<i>Sales Manager/in</i>	69.87	30.13	young	97.14	28.57	young	YOUNG
<b>SALES ENGINEER</b>							
<i>Vertriebsing.</i>	49.95	50.05	neutral	51.43	48.57	neutral	NEUTRAL
<i>Vertriebsing.</i>	56.85	43.15	neutral	62.86	37.14	young	?
<i>Vertriebs/Projekting.</i>	47.41	52.59	neutral	42.86	57.14	neutral	NEUTRAL
<b>DIRECTOR OF ACCOUNTING</b>							
<i>Bereichscontroller/in</i>	36.96	63.04	old	20.00	80.00	old	OLD
<i>Leiter/in Rechnungsw.</i>	49.89	50.11	neutral	31.43	68.57	old	?
<b>DIRECTOR OF R&amp;D</b>							
<i>Leiter/in Entwicklung</i>	48.93	51.07	neutral	42.86	57.14	neutral	NEUTRAL
<i>Technische/r Leiter/in</i>	38.83	61.17	old	85.71	91.43	old	OLD
<b>ACCOUNTANT</b>							
<i>Dipl.-Kaufmann/Kauffrau</i>	69.15	30.85	young	82.86	17.14	young	YOUNG
<i>Referent/in</i>	61.15	38.85	young	68.57	31.43	young	YOUNG
<b>PROJECT ENGINEER</b>							
<i>Projektingenieur/in</i>	52.31	47.69	neutral	51.43	48.57	neutral	NEUTRAL
<i>Produktionsprozeßing.</i>	53.53	46.47	neutral	42.86	57.14	neutral	NEUTRAL