



# The Effects of Physical Discrimination on Income

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**Abstract.** It is widely acknowledged that height, age, and gender are positively associated with income. This paper categorized the three aspects into physical discrimination and analyzed how the three kinds of discrimination affect income distribution. To quantify the efforts in overcoming the three kinds of physical discrimination, several models were introduced, including how Chinese females are treated based on their income earned and employment status, how questionnaires could help to set a quantified impact of height on income as well as a rank of different age groups based on their obtained wages.

**Keywords:** Labor Market, Gender, Height, Age

## 1 Introduction

Some recruitment lists on the website showed that each position has its corresponding age demand. In addition, some women would be refused after the interview because the interviewers considered that women might focus on their families rather than their work. Furthermore, height discriminations also exist in a large proportion. It is surprising that teachers, for example, indeed have this problem. Due to the listed situations, this paper will focus on the factors that lead to physical discrimination mentioned in job applications and income distribution and potential contribution.

## 2 Gender Discrimination

According to an online survey responded by 65,956 respondents about the average monthly income among male and female respondents in China in 2019 and 2020, there was a 2222-yuan monthly income gap and a 1675-yuan monthly income gap, respectively, leading to the fact that, in general, women still earn less than men in

China [1]. Also, a paper about gender-based employment and income differences in urban China, by using regression models, indicates that gender female, as an independent variable, has a negative relationship with logged monthly income, the dependent variable [2]. After analyzing data and summarizing available literature, three possible factors contribute to the effect of gender on income: education, marriage and parenthood, and discrimination against work capability. As available literature that focused on situations after 2005 is insufficient, further research can be conducted to make comparisons from then to the 2010s in the three aspects.

## 2.1 Education

Statistics from the Chinese House Income Project from 1988 to 1995 show that women with primary education made only 75.4% of their male counterparts' earnings. The percentages rise to 79.7% and 88.0% for women with junior high school education and senior high school education, respectively. Among those with a college education, women made 91.7% of men's earnings [3]. In conclusion, it suggests that the higher the education, the smaller the gender gap is in earnings.

Further research can be conducted to show if the situation improved during the 2010s. The potential data source will also be from the CHIP, Chinese Household Income Project, to make a better comparison. The dependent variable will be the annual income, and the independent variables will be females with basic education, males with basic education, females with higher education, and males with higher education. Basic education indicates the nine-year compulsory education in China. By putting the data into regression models, it could be illustrated if the situation improves and, if so, how much it has improved.

## 2.2 Marriage and Parenthood

According to Shu and Bian [3], regression models based on a sample from the China Urban Labor Survey from 2001 to 2002 focused on the relationship between the dependent variable, employment status, and independent variables, married females and child-bearing females. The coefficient is -1.051 when the independent variable is a married female, and the coefficient is -0.910 when the independent variable is a child-bearing female. They both showed negative results. To conclude, it suggests that married and child-bearing women could receive more inequality in employment status.

Potential contributions provided by this paper are to give men the same maternity leave and to call for men to take more responsibility in parenthood. To conduct the research, the sample will also be from the CULS, China Urban Labor Survey, during the 2010s. The dependent variable will be employment status for better contrast. The independent variables will be female with maternity leave, male with the same maternity leave dummy, female with the same amount of time taking care of a child, and male with the same amount of time taking care of a child dummy. Potential results provided by the models can show whether the same maternity leave for men and more responsibility for fathers can make a difference or not.

### 2.3 Discrimination against Work Capability

According to a survey published in 2017 about general opinions in 24 countries on if men are more capable than women of working, earning money, being educated, and teaching, the average approval rate of the statement among all these countries is 25%, while in China, 56% of respondents support the view, exceeding all the other given countries [4].

Based on the given statement, regression models can be built on the mathematical relationship between the number of female staff and the company's revenue. The chosen sample will be a database of several selected corporations. The dependent variables will be the annual revenues, and the independent dummy variables will be the number of female employees exceeding a half or not, the number of male employees exceeding a half or not, the number of female board members exceeding a half or not, and the number of male board members exceeding a half or not. By conducting this research, the results can be possibly helpful to show the expected result, opposing the statement that men are better than women in work capacity and to help thus provide further solutions for improving women's employment status.

## 3 Height Discrimination

It is suggested that the effect of height discrimination on personal income is likely to be the same as that of gender or age discrimination [5]. It is found that a slight height difference can lead to about a \$200 income difference between males and females [6]. However, even involved people could hardly recognize them being discriminated against and unfairly treated [7], which implies that they could not protect their rights as supposed. Hence, it could be significant to address how height discrimination matters and how we can measure the improvement of this situation from an economic standpoint.

Some studies claim that taller people are expected to have higher productivity because being taller implies a person's strength and competence [5][8] associated adulthood height with adolescence, believing taller individuals are more capable of accumulating human capital and are rewarded with higher wages as a result.

It is argued that the effect of height on income closely relates to the general public's perceptions of people who are tall or short. The above reasons listed are all based on how tall people are thought by the public to have an advantage over their counterparts who are shorter. However, giving different wages to workers based on their height can lead to an ineffective market operation. This is because shorter people may be underemployed as they are not promoted for their height.

To improve this situation, it is important to figure out the extent to which consumers look upon workers' height.

It would be introduced one quantified approach to measuring the perceptions towards height difference since consumers' perceptions is concluded as a key determinant for the reason of varied income level. Sending out questionnaires is a relatively easier way to determine the general views. When giving out the survey, it is important to separate different types of jobs as height has different degrees of impact on differ-

ent jobs. The sample group should be selected from those "loyal" consumers of a company; this is because buyers who frequently purchase from one specific brand ought to be attracted by the service provided by employees or the entire company. The questions can be designed to ask consumers to rate how they regard different features in a company, for instance, whether they think sellers' persuasive tones are attractive or whether the average height of employees is important when they buy products. By obtaining the data from a large group of people, we can then assign weights to different jobs and conclude our final judgment on perceptions.

The next step is to create a model to determine the relationship between perceptions and the wage offered. By viewing the indexes, we can identify changes in the situation and determine whether certain social movement toward height discrimination is effective.

In the model, it should assign the quantified consumers' views on height importance mentioned above as the independent variable and the actual wage difference reported by companies as the dependent variable. The indexes calculated every year can therefore be a way to judge the improvement being made.

The potential contribution of this model could be a more accessible approach to deciding on policies or campaigns to address height discrimination. It also allows the economy to use human capital more efficiently and effectively so that people with adequate competence can receive similar compensation, and the income gap between people is therefore shortened. It is expected that the indexes appeared in different jobs varied because people may think height matters more in terms of physical work while care less about the height difference in selling services.

## **4 Age Discrimination**

### **4.1 Data analysis**

According to the data that comes from both developing countries and developed countries, the rate of employment in each country—the researchers put the working participants into three parts: age from 16 to 24, 25 to 54, and 55 to 64.

From the data, although each country has different economic conditions, there could be a similar tendency toward the rate of employment. For instance, in the United States, the age from 25 to 54 people has 79.9%, the age from 54 to 64 have 63.5%, and ages from 15 to 24 have 51.1%. In France, the age from 25 to 54 people has 82.6%, the age from 55 to 64 have 56.1 %, and the age from 15 to 24 people have 34.2%. Also, in some developed countries like South Africa, the percentage of employment between the ages of 25 to 54 is 47.9%, 34.4% is the rate of employment between the age of 55 to 64 people, and the hiring rate for people from age 15 to 24 people is 7.3%. As a result, it could be proposed that no matter country's economic situation, there could be the highest rate of employment in the age of 25 to 54. The relatively lower rate might be between the age of 55 to 64. And the lowest rate occurred in the age of 15 to 24. The possible reason why there is the lowest rate of employment among young people is that they are creative, emotional, and naive with little experience.

Specifically, they might graduate from educational institutions with ideas and passion, which could be relatively simple and unrealistic. Meanwhile, graduates are likely to lack working skills and experience, so most of them need a period to fit their workplace, which probably increases the cost of human resources without too much profit. Therefore, to some degree, companies might not be very interested in young people.

The situation of employment seems to be different for the age of 25 to 54. Firstly, middle-aged people could be the healthiest among age groups, which means that they have the basic physical conditions to support work. Secondly, based on years of social experience, they are likely to be sophisticated. In other words, they can manage the business effectively with working skills and an expanded horizon. For a company, the people aged between 25 to 64 would be better to be employed.

Age discrimination could occur at the age of 55 to 64. The main reason could be that the people are approaching the retirement standard and possibly have potential health or physical issues. Employers could be more willing to hire the younger because they could not shoulder the pension liability. Another potential reason is that although the elders are full of experience, they are likely to be conservative and lack innovation. Hence, the elder has some disadvantages in the workplace to some extent.

## 4.2 Further Research

It is a possible tendency for the rate of employment in China, but if we want to testify whether my assumption is right, or we want the exact value in China. We have to research on our own.

Further research will focus on Chinese circumstances. The potential method of data collection is the questionnaire, which will be sent to selected employers or interviewers and rank their age preferences among different age groups.

The expected results and policy suggestions could be beneficial for disadvantaged groups, such as.

In the model, the independent variable will be the three groups of people who are classified by their age and the dependent variable will be “the mean value of the rank”—the lower value is, the higher rank is. Encouragement in skills training and improvement in career planning.

Since it is hard to find the data that indicates age distribution in a company, it would be introduced one quantified approach to measuring whether employers have an age preference. This preference is based on the premise that the educational background and knowledge are the same. In another paper, the writer Avolio, B. J., Waldman, D. A., & McDaniel, M. A. [10] categorize 111 jobs in two ways. They sorted the jobs into five occupational groups paralleling Gottfredson's [11] occupational taxonomy, in which occupations are categorized in terms of the work performed or the product produced, and the skill and intellectual levels required. Partitioning jobs into occupations based on products produced should also improve the comparability of measures of performance. Consequently, it is clear that employers in different types of companies have different preferences for different ages of people.

## 5 Conclusion

To summarise, there are mainly three types of biological discrimination in job application and income distribution. Gender discrimination will be the first, as education, marriage, and opinions on work capability can affect the decisions of corporations. Height and age discrimination can also make a difference in the job application. Apparently, job applicants should absolutely work hard to get higher education by themselves, but the workplaces should also drop discrimination and treat every applicant fairly.

In the gender section, the first finding from previous literature is that higher education possibly leads to a smaller income gap. The second finding is that married, and child-bearing women are likely to receive more inequality in employment status. The last is that general discrimination against women's work capability is significant in China. In this paper, recent data can be put into regression models to find relationships between gender factors and income inequality from 2005 to 2010, and results can be seen if the situations can be better with the given suggestions.

In the height discrimination section, it is found that public perception served as a crucial cause for differences appeared in income earned. To quantify the extent of the difference in wages that should be implemented, it is suggested to send out questionnaires asking people to rate how different features of sellers would influence their purchasing choices.

In the age discrimination section, it is found that applicants aged 25 to 54 are the most popular, followed by those aged 55 to 64 and finally the people between ages 15 to 24. To solve this inequality, there are some feasible solutions like introducing pre-working lessons to young people (in the company or college), then young people's rate of employment will increase. Furthermore, the government can set a policy that gives subsidies to companies or lets companies pay less tax (according to the number of elderly people they have). As a result, elderly people's rate of employment will increase

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