

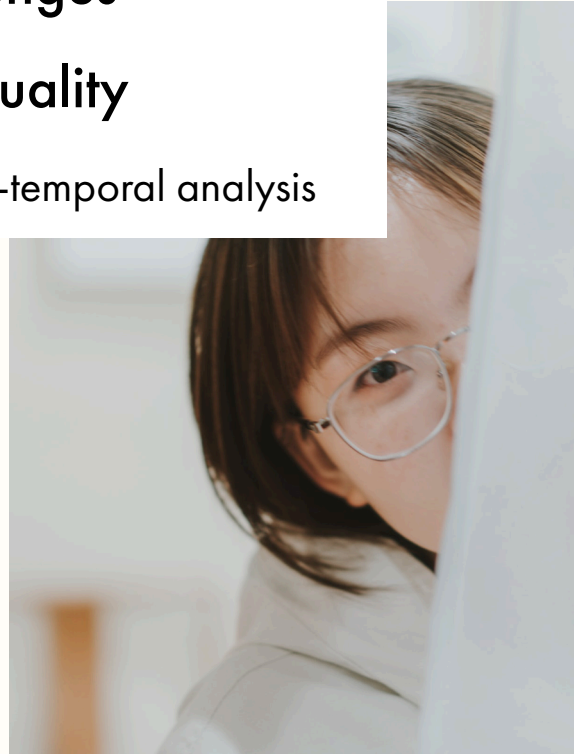
SUN XINBO

BEATRIZ LARRAZ

Gender pay gap and
inequality in China:

Evolution and
Challenges
for equality

A spatio-temporal analysis



Ediciones de la Universidad
de Castilla-La Mancha

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1

Introduction

The development of a global economy and the ensuing growth of industries, worldwide, has meant the workforce has increased significantly in a short period of time (World bank, 2019). At the same time, the advancement of education has led to more, and better qualified, female workers joining the workforce, contributing greatly to the expansion of the labour market. Women's participation in paid work has substantially increased globally, especially since World War II. In fact, this increased participation of women in the economy has been the most significant change in labour markets over the last century (Goldin, 1990).

But this greater participation of women in the labour market does not seem to have occurred on equal terms. This is one of the reasons why, in September 2015, the United Nations adopted the 2030 Agenda for Sustainable Development with 17 sustainable development goals at its core (UN, 2015). Among them is that of promoting equality between men and women. This includes a series of measures to eliminate all forms of discrimination, globally, against women and girls, to adopt and strengthen reasonable policies and effective legislation, and to promote gender equality and empowerment of women and girls at all levels, including the labour one.

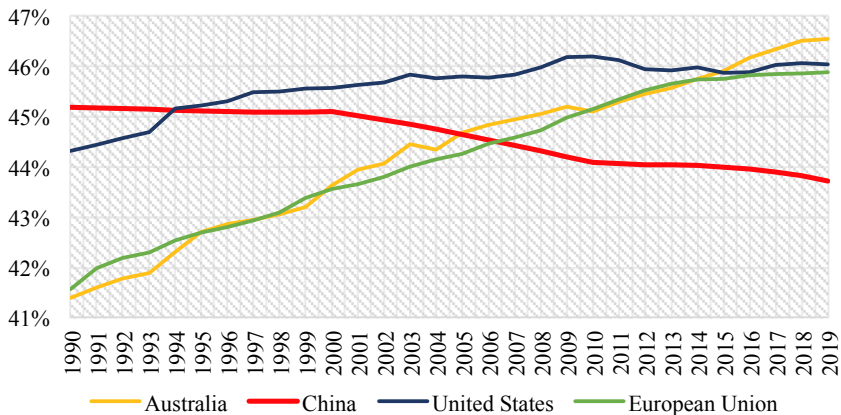
In fact, according to the report published by the United Nations Agency for Women on 2018, "Turning promises into action: Gender equality in the 2030 Agenda for Sustainable Development" (UN, 2018), women and girls around the world still face discrimination, especially on the issue of earnings, where earnings inequality between men and women in the world reaches 23%. Decisive action is needed to mitigate this because progress in reducing gender pay gaps has been too slow. The Secretary-General of the United

Nations, Mr. Antonio Guterres, added that achieving gender equality and the empowerment of women and girls is an ongoing issue of our time and the greatest challenge for human rights in the world today (UN, 2018).

After the founding of the People's Republic of China in 1949, China implemented a planned economic system. Under this system, the government proposed general objectives for economic and social development, formulated reasonable policies and measures in accordance with previously formulated plans, and organized the main economic activities in a controlled manner to guide and adjust the direction of the economic operation. Government intervention in the labour market was significant, a fact that had a major impact on China's labour market.

During this period, the participation rate of women in the labour market in China and the average earnings ratio of men and women both remained at a high level compared to other countries in the world (see Graph 1).

Graph 1 Rate of labour participation of women in China, Australia, USA and EU



Source: ILOSTAT database (2019)

Furthermore, prior to the economic reforms of the 1980s, the degree of gender equality at work was high (Chunling, Shi, 2008). This may be because during the period of a planned economy China's economic market remained closed. State-owned companies represented a large proportion of the economy and the government exerted significant control over the labour market and its workers, achieving a high rate of labour participation. In this context, the protection policies implemented by the government forced a reduction in the gender pay gap.

Following China's transition from a planned economy to a market economy, government intervention in the labour market has been reducing with respect to the allocation of labour resources. The gradual opening up of the market through reforms has had a significant impact on national and international investments in the Chinese national economy. Private companies have begun to represent a larger proportion of the market and the proportion of state-owned companies has gradually decreased, resulting in a decrease in the labour participation rate. In recent years, the Chinese government's ability to intervene in the labour market has weakened. In 2010, according to data from the 2011 China Statistical Yearbook (National Bureau of Statistics of China, 2011a), China had a working population of 780 million. China thus became the largest labour market in the world. Furthermore, the free market had an enormous impact on employment opportunities, specifically, on the wages of Chinese women.

Before the start of the 21st century, China's gender pay gap¹ was smaller than that of other major countries. In 1995, China's gender pay gap was 15.8% while, for the same year, that of the United States was 22.8% (Economic Policy Institute, 2020), the European Union 17% and the United Kingdom 26% (Eurostat, 2021a). But since the start of the 21st century, China's gender pay gap has increased rapidly. The latest data in 2018 shows that China's gender pay gap is 20.9%, compared to 21% in the United States, 14.4% in the European Union and 19.8% in the UK (Eurostat, 2021b).

According to the online recruitment website zhipin.com, which compares monthly salaries, China's gender pay gap widened in 2018. The average monthly salary of Chinese women was 6,497 yuan, which was 78.3 percent of that of men, an increase of 8.7 percentage points over the previous year. The report said that jobs, industries and seniority were the top three contributing factors of the gender pay gap, while education could help narrow it (China Daily, 2019). But this year 2020, the same source states that gender pay gap narrows in China for first time in three years (China Daily, 2020) Though women continue to earn only 81.6 percent of men's salary, it's the first time for the gender pay gap to shrink over the past three years, thanks to the growing number of well-paid female workers.

In literature on the gender pay gap, many researchers have tried to explain the origin of gender pay anomalies in China from different angles. Gustafsson and Li (2000) found that the reason for the growing gender pay gap

1 Gender pay gap measured from wages per hour measures the percentage that the average female wage per hour lacks to reach 100% of the male average wage per hour.

was due to the difference in the birth rate of men and women in China, which indicates that discrimination may be the main reason. Because of the patriarchal society in China, families preferred to have a boy, which guarantees the family's inheritance and income. In some very traditional areas and families, this social phenomenon is reflected in male and female birth ratios and gives grave cause for concern. In fact, according to the "Global Gender Gap Report 2020" (World Economic Forum, 2020) published by the World Economic Forum, China ranks last out of 153 countries worldwide for its gender inequality, in relation to the sex ratio of new-borns. Ng (2007) also found that in those regions of China that had experienced rapid development, more flexible pay ranges were having an even greater discriminatory effect.

According to research by Chunling and Shi (2008), the widening of the gender pay gap is an integral part of the current widening of China's social pay gap. Gender inequality in wage distribution is a manifestation of gender inequality in society. It is clear that the continued widening of the gender pay gap needs attention; the elimination of gender inequality in the field of wage distribution will help to increase equality in the entire field of wage distribution.

Zhang *et al.* (2008) state that from 1988 to 2004 the mean female/male earnings ratio declined from 86.3% to 76.2% (which means an increase in gender pay gap from 13.2% to 23.8%), because of the rapid increases in returns to both observed and unobserved skills, which accentuated the disadvantage associated with women's lower skill levels. Lee and Wie (2017) also state that in 1990s and 2000s there was an increasing wage inequality and skill premium with the rising supply of skilled workers. China's widened gap was attributable in those decades to gender-specific factors such as deteriorated observable and unobservable labor market qualifications and increased discrimination, especially against low- and middleskilled female workers. Su and Heshmati (2013) state that the income gap can be largely explained by the individuals' attributes, especially by level of education and type of occupation. Li and Xie (2015) indicate an overall steady increase in occupational gender segregation in China due to the changes in occupational structure. Guangye and Xiaogang (2017) show that occupational segregation plays an important role in affecting gender earnings inequality: the greater the occupational segregation, the more disadvantaged women are relative to men in earnings in a prefecture's labor market. In urban China's labor markets, women continue to be disadvantaged in earnings, even after taking into account their human capital and other characteristics. The significant improvement of women's qualifications contributed to gender wage gap reduction in China, but despite of that, the change in observed prices of skills worked unfavorably for high-skilled women, counterbalancing their improvement in labor market

qualifications (Lee and Wie, 2017). But more worrying is what Chi and Li (2014) suggest: an underestimation of the raw gender pay gap by 12–14% for the years 2005–2009 because of non-random selection into employment.

But in addition to this unequal distribution of wages in average terms between male and female workers, there is another inequality which also deserves our attention: The inequality in the distribution of wages. Inequality in the distribution of income and wealth, and its evolution, is at the root of the emergence of populist movements and in a large part of the problems that current societies are experiencing (Martín-Cubas *et al.*, 2019). In fact, the persistence of high inequality rates, together with the difficulties in reducing them, has been identified by some of the world's leading economists—including several Nobel laureates (eg, Amartya Sen, Joseph E. Stiglitz, or Paul Krugman)—, as one of the greatest threats facing Western democracies at the moment. This inequality can also be examined from a gender perspective, looking into the wage inequality among women, among men and gender inequality (excluding that among women or men). So, it is also of special interest for China the detailed study of the salary structure of its workers not only from the perspective of the gender pay gap, but also from the point of view of the between- and within-gender wage distribution.

This book contributes to the existing research of the gender pay gap in China, providing the most extensive analysis of the gender pay gap from a temporal point of view, using the wage surveys available from 1995 to the present. In particular, the gender pay gap is analyzed by age range, years of service, type of contract, company activities and level of education. In 2013, the survey allows the study by type of occupation, employment status at work, type of business and the company size. Using the definition of gender pay gap, as what is missing from the average female wage to reach the average male wage, a fundamentally descriptive type of analysis is used because of its very intuitive and useful characteristics. From this descriptive point of view, several conclusions can be deduced. Moreover, with the most updated data, in 2018, from a spatial point of view, this book provides a provincial analysis to detect the differences in gender pay gap between different areas of the country. Analysis of the detailed study carried out in this research, of the pay gap between men and women in China with a wide temporal and spatial interval, aims to help identify those population groups with the largest pay gap in order to formulate measures that could alleviate this gender inequality. This book also contributes with a spatial analysis of wage inequality, the extent to which there is inequality in income distribution, from a gender perspective with data from 2018. This type of analysis is a novelty in the literature about

China's labour market. The analysis of the Gini index and Larraz (2015) decomposition of wage distribution inequality is applied to the most updated data at provincial level in China.

To carry out this study, the gender pay gap related to annual earnings and hourly earnings has been calculated. The reason for this double computation is the fact that women have more responsibility for childcare and household chores in China, and this generally leads to women working fewer hours than men outside the home, so their average annual earnings will be lower. Following what happens in Denmark (Kleven *et al.*, 2018), the arrival of children creates a gender gap in earnings of around 20% in the long run, driven in roughly equal proportions by labor force participation, hours of work, and wage rates. This results in a wide pay gap when comparing annual earnings by gender which may not necessarily be a consequence of any type of direct discrimination but of ancient customs that persist today. However, the lower average hourly earnings observed for women does imply that their work is generally limited to certain types of activities which attract lower wages or, in other words, the presence of gender discrimination. Therefore, the comparison in the same study of these two types of gender pay gaps, one computed from annual salaries and the other one from hourly wages, is very informative and comes to fill a research gap. For example, Chi and Li (2014); Su and Heshmati (2013) or Xiu and Gunderson (2014), among others, use only annual salaries in their analysis.

Subsequently, the wage concentration will be analyzed through the Gini index. The Gini index measures the degree of inequality in the distribution of the wage bill among male and female workers as a whole. Remember that the closer to 1 this indicator is, the greater wage differences exist, or what is the same, there will be a greater concentration of the wage bill of the country in a few wage earners, the rest of the workers sharing the mass remaining. The Gini index has also been calculated for women as a group and for men as a whole, to detect the degree of concentration in the distribution of female and male wages, respectively. Finally, comparing only female and male salaries, excluding the comparisons of the salaries of women between them and of men between them, the so-called Gini Gender Index is obtained. This is intended to direct more precisely where public equality policies should be directed.

2

Framework of the 2030 Agenda on Sustainable Development

According to the latest United Nations information, countries are making progress on gender equality in line with the Millennium Development Goals (including gender equality in primary education) but women and girls, worldwide, still suffer discrimination and violence. To this end, in 2015, the United Nations approved the 2030 Agenda for Sustainable Development (UN, 2015), an opportunity for countries and their societies to embark on a new path towards improving the lives of all people, with no exceptions. The agenda has 17 sustainable development goals, including gender equality and the empowerment of all women and girls.

The Agenda focuses on eliminating all forms of discrimination against women and girls, worldwide: a reform in accordance with national laws which gives women equal access to economic resources and the right to ownership and control of land and other forms of property and access to financial services. Along with objectives such as heritage and natural resources etc., gender equality is a fundamental goal in the 2030 Agenda for Sustainable Development.

The UN 2030 Agenda has now entered the critical period of its remaining ten years, and China's gender pay gap is becoming increasingly conspicuous. What caused the gender pay gap? What are the geographical characteristics of the gender pay gap in China? Analysing these problems will enable us to identify those population groups in which the gender pay gap is widest and, therefore, propose solutions which can alleviate the pay inequality.

3

Data and Methodology

DATA

Analysis of the gender pay gap in China is mainly based on data from the Chinese Household Income Project (CHIP), surveys compiled by the Income Distribution Research Institute of Beijing Normal University, a scientific research institution whose main interests are in income distribution, labour economy and development economy.

Research carried out over an extended term by the China Income Distribution Research Institute of Beijing Normal University has accumulated a large amount of research material. The “CHIP” database has been created using data from household surveys completed in 1988, 1995, 2002, 2007 and 2013, and is considered the most authoritative source of information in the field of income distribution and research into the labour market in China.

In this analysis, data sets from 1995, 2002 and 2013 are used. The data from 1988 are not used as surveys of working time data are lacking and this would affect our research on the gender pay gap of hourly earnings. Likewise, the data from 2008 are excluded as different survey standards were used compared to the years 1995, 2002 and 2013, making the calculation of hourly earnings not comparable.

Throughout the analysis, we concentrate on urban areas and exclude rural areas in China, because in more than 90% of the observations related to rural areas there is no wage information and the methodology used in urban and rural areas is different and not comparable.

The 1995 data includes 11 provinces: Beijing, Shanxi, Liaoning, Jiangsu, Anhui, Henan, Hubei, Guangdong, Sichuan, Yunnan, and Gansu. Chongqing data was separated from Sichuan province in 2002. 2013 data also includes Shandong and Hunan provinces so, to maintain data consistency, the study eliminates samples from these two provinces. Therefore, in the end, the study uses data based on 12 provinces, among them the provinces of Chongqing and Sichuan which are combined.

The sample includes people over 16 and under 65 years, and eliminates observations of those people who are retired, unemployed, school students, disabled people and others who cannot work for various reasons. In general, it means that those included in the sample will have completed paid worked for more than one consecutive month by the end of the year, including casual work. Additionally, for outliers that appear in the data, we choose samples with wages greater than or equal to 0, and samples with daily hours worked greater than 0 and less than 20. The final sample, from the total of the three years selected, gives us 30,322 observations from the 62,124 observations taken from the original sample data. By year and gender, sample size figures are reported on Table 1.

Table 1. Sample sizes by gender for the years 1995, 2002 and 2013

Year	Men		Women		Total
	Number	Percentage	Number	Percentage	Number
1995	6,342	53%	5,682	47%	12,024
2002	5,561	56%	4,453	44%	10,014
2013	4,702	57%	3,582	43%	8,284

Source: compiled by the authors from data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The study also uses data from the 2018 China Family Panel Studies (CFPS) project authorized by Peking University and the National Natural Science Foundation of China. The data were published in December 2020. This study focuses mainly on analysing the situation in each province in 2018. China Family Panel Studies (CFPS) aims to collect data on the three levels of individuals, families, and communities to reflect changes in society, economy, population, education, and health in China and to provide data relevant to academic research. The CFPS sample, which began in 2010 and is carried out on a biannual basis, covers 26 provinces, municipalities, and autonomous regions.

This book provides a detailed study of the gender pay gap based on the following different variables.

AGE RANGES

In this part, we analyse the wages of men and women according to age ranges and any changes in gender pay gap over the three years selected. By subdividing the different ages, we can identify the ages at which the gender pay gap is at its widest, and smallest. The study is divided into age ranges separated by five years. Also, as there are a reduced number of observations for people under 20 and over 50, the age ranges are divided according to the following criteria (see Table 2):

Table 2. Classification of age ranges

Age ranges
$20 \leq \text{Age} < 25$
$25 \leq \text{Age} < 30$
$30 \leq \text{Age} < 35$
$35 \leq \text{Age} < 40$
$40 \leq \text{Age} < 45$
$45 \leq \text{Age} < 50$

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

LEVEL OF EDUCATION

In line with the CHIP standard, level of education refers to the academic qualification necessary to achieve a diploma. This education starts from the age of 6. Those who stop after obligatory schooling achieve a lower level. For example, a secondary school student who has not graduated from high school and only attended high school for 2 years, the highest education level awarded is “Lower level secondary education”. Because the standards used in the surveyed years of 1995, 2002 and 2013 are inconsistent, through consolidation of classification we divide the sample according to the following criteria (see Table 3):

Table 3. Classification of level of education

Level of education
Never studied or lower than primary education
Primary education
Lower level secondary education
Higher or professional secondary education
Professional training of a higher level
University graduates or higher

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

YEARS OF SERVICE

The length of service reflects the time that employees participate in work for the company and their contribution to the company by way of their level of knowledge, experience and technical competence. To identify the influence of years of service on the gender pay gap, the age ranges are divided according to the following standards (see Table 4):

Table 4. Classification of years of service

Years of service
Years ≤ 3
$4 < \text{Years} \leq 10$
$11 \leq \text{Years} \leq 15$
$16 \leq \text{Years} \leq 20$
$21 \leq \text{Years} \leq 25$
Years > 25

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

TYPE OF CONTRACT

According to Article 16 of the “Labour Law of the People’s Republic of China”, an employment contract is an agreement that establishes an employment relationship between a worker and an employer, and clarifies the rights and obligations of both parties. Furthermore, in accordance with Article 12 of the Implementing Regulations of the Labour Contracts Law of the People’s Republic of China (2012 Amendment), labour contracts include “fixed-term contract”, “permanent contract” and “temporary contract”. (Standing Com-

mittee of the National People’s Congress, 2012). In line with CHIP data, we classify work contracts as follows (see Table 5):

1. Fixed-term contract refers to a labour contract in which the employer and the employee agree on the time the contract ends. The employer and the worker can negotiate and agree to enter into an employment contract with an end date.
2. Permanent contract refers to a labour contract in which the employer and the employee agree that there is no fixed time for the end of the contract. This is a long-term contract.
3. Temporary contract is an employment contract that does not have a fixed period. It refers to a labour contract in which the employer and the worker agree to complete a certain job during the period of the contract. It is a short-term contract until the completion of the specified task.
4. Others refers to those workers who do not have a contract and are in work situations not covered by law.

Table 5. Classification of type of contract

Type of contract
Fixed-term contract
Permanent contract
Temporary contract
Others

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

COMPANY ACTIVITIES

Under CHIP’s classification criteria, company activities is classified according to the national standard “National Classification of Economic Industry” (National Bureau of Statistics of China, 2011b) which was first published in 1984, revised in 1994 and 2002, and revised for the third time in 2011. In addition, the “Regulation on the Division of the Three Industries” issued by the National Bureau of Statistics of China in 2012 provides information related to the sectors by activity.

Again, due to the inconsistency of the survey standards in 1995, 2002 and 2013, we have consolidated and classified the industries according to the following criteria (see Table 6):

Table 6. Classification of economic sectors

Economic sectors	
Agriculture	Agriculture, forestry, livestock and fishing
Industry	Manufacturing industry, Supply of electricity, gas and water
	Construction, geological and mining exploration
Services	Transport, storage and communications
	Wholesale and retail trade, hospitality and catering
	Real estate activities, maintenance and public services
	Culture, education, sport, entertainment and health
	Scientific and technical activities
	Financial and insurance activities
	Government organizations, political parties and social institutions

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

SPATIAL ANALYSIS AT THE PROVINCIAL LEVEL

In line with the CHIP surveys, the data sample group is stratified according to eastern, central, and western China, and observations from these 12 provinces and cities are extracted using the systematic sampling method. These 12 provinces and cities can be used to represent the three regions in China with a view to analysing the gender pay gap in different provinces in the years 1995, 2002 and 2013. This study adds much needed information to the geographical analysis of China's gender pay gap (see Table 7).

Table 7. List of provinces with available data in 1995, 2002 and 2013

Provinces		
Beijing	Anhui	Chongqing
Shanxi	Henan	Sichuan
Liaoning	Hubei	Yunnan
Jiangsu	Guangdong	Gansu

Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

During the analysis, due to the division and merger of provinces in Chongqing and Sichuan, the calculation data of the two provinces is combined.

In this part of the study, we use also data from the 2018 China Family Panel Studies (CFPS) project by Peking University and the China National Natural Science Foundation, since this dataset contains more information about provincial level. Omitted from the available data are inoperable samples, and samples with insufficient province information, leaving 11,513 data from the original 37,354 data sample. The following provinces are included in the study (see Table 8):

Table 8. List of provinces with available data in 2018

Provinces				
Chongqing	Yunnan	Tianjin	Liaoning	Heilongjiang
Hainan	Jiangxi	Fujian	Shaanxi	Gansu
Beijing	Sichuan	Guangdong	Shandong	Jilin
Jiangsu	Henan	Hunan	Hebei	Shanxi
Zhejiang	Guizhou	Anhui	Guangxi	Xinjiang
Hubei				

Source: compiled by the authors with data taken from CFPS 2018.

This more updated data have also been used to compute the Gini Index, to study the concentration in wage distributions under a gender perspective.

Since the survey methods and standards in 1995, 2002 and 2013 change significantly from year to year, the following analysis, related to occupation, only includes data from the 2013 survey.

OCCUPATION

A detailed classification is directly available from the 2013 CHIP dataset, which is used to make a comparison of the pay gap, by gender and by occupation. This is based on the “Occupation Classification of the People’s Republic of China”, issued in May 1999 by the Ministry of Labour and Social Security, the State Administration of Quality Supervision, Inspection and Quarantine and National Bureau of Statistics of China. According to this classification, occupations are grouped as follows (see Table 9):

Table 9. Classification of occupations

Occupations	
Directors and managers	Members of the executive branch of the Central Committee of the Communist Party of China
	Members of the democratic parties and social organizations
	Directors of administrative departments
	Directors and managers of the company
Technicians and support professionals	Professionals in physics, chemistry and mathematical sciences
	Engineering technicians
	Agricultural technicians
	Professionals in maritime and aeronautical navigation
	Healthcare professionals
	Economists and finance professionals
	Teaching professionals
	Journalists and professional linguists
	Professionals of different religions
	Creative and performing arts professionals
	Law professionals
	Sports professionals
Other technical and support professionals	
Administrative employees and other office employees	Office employees
	Protection and security services workers
	Postal and telecommunications services employees
	Other administrative and office employees
Catering, personal, protection and sales service workers	Warehouse section supervisors
	Catering and trade service workers
	Logistics and workers in passenger and freight transport
	Health care and personal care workers
	Social service personnel
	Other Catering, Personal, Protection and sales personnel
Skilled workers in the agricultural, livestock, forestry and fishing sectors	Skilled workers in the agricultural, livestock, forestry and fishing sectors
	Skilled workers in hydrological resources
	Other skilled workers in the agricultural, livestock, forestry and fishing sectors

Plant and machinery operators, assemblers and other related industries	Workers in the mining, quarrying and other extractive industries
	Workers in the chemical industry
	Workers specialized in mechanics and machinery adjusters
	Workers specialized in electrotechnology
	Workers in textile, clothing, leather, and footwear industries
	Workers in the food and beverage industries
	Medicine health workers
	Woodworking and related workers
	Construction material workers
	Ceramic and glass workers
	Printing, graphic arts and sporting goods workers
	Building construction workers
	Transport equipment workers, unloaders and replenishers
	Waste facility workers and scrap collectors
	Accounting and finance employees
Preparers and processors of tobacco and related products	
Workers in the plastics industry	
Workers in the fields of radio, film and television production and cultural protection	
Other facilities and machinery operators, assemblers and other related industries	
Military	Military
Others	Other practitioners difficult to classify

Source: compiled by the authors with data taken from CHIP 2013.

EMPLOYMENT STATUS IN EACH JOB

According to the CHIP classification, the employment status covers the following four categories (see Table 10):

Table 10 Classification of employment status in each job

Employment status in each job
Employer
Employee
Self - employed worker
Family worker

Source: compiled by the authors with data taken from CHIP 2013.

1. Employer: refers to a self-financed profit or loss entity, or the sharing of profit and loss with business partners, with the power to make business management decisions and hire other managers and whose remuneration depends directly on profits produced.
2. Employee: refers to people who work for one or more units or employers to receive remuneration.
3. Self-employed worker: refers to an operator who self-finances or shares profit and loss with partners, has management decision-making power and does not employ others.
4. Family worker: refers to those who work in a company operated by family members, but who do not have the decision-making power of the company and do not receive remuneration.

TYPE OF COMPANY

According to the CHIP classification, the type of work can be divided into the following 7 categories (see Table II):

Table II Classification of type of company

Type of company
Government
Public institutions
State-owned companies
Collective companies
Sino-foreign or foreign companies
Individual companies
Private companies

Source: compiled by the authors with data taken from CHIP 2013.

PRIVATE COMPANIES

1. Government: refers to government departments at all levels, various social groups, national police, military, etc.
2. Public institutions: refers to the state and social welfare purposes, organized by the state or other organizations that use state assets.
3. State companies: refers to companies whose assets are owned by the state or that control state assets.

4. Collective companies: refers to a company whose assets are collective property.
5. Sino-foreign: refers to a Chinese and foreign joint venture. Foreign-owned companies refers to companies whose headquarters are based in a different country.
6. Individual companies: refers to assets owned by individuals, based on individual work.
7. Private companies: refers to a company in which the assets are owned by individuals (or several people) and which operates through paid labour.

COMPANY SIZE

In line with the “Regulations for the Classification of Small and Medium Enterprises” (National Bureau of Statistics of China, 2011b), companies in different industries are classified according to various guidelines.

From the data provided by CHIP classification, companies can be divided into 7 categories (see Table 12):

Table 12 Classification of company size

Company size
≤ 10 persons
11-50 persons
51-100 persons
101-250 persons
251-500 persons
501-1.000 persons
≥ 1.001 persons

Source: compiled by the authors with data taken from CHIP 2013.

METHODOLOGY

In this study, data on annual earnings are provided directly by CHIP and CFPS, and include total fixed wages, variable wages, overtime pay, allowances and bonuses, end-of-year bonuses, rewards in kind (converted cash), second occupation, part-time or temporary income, and other income gained through working.

From annual salaries, the gender pay gap can be defined as the difference between the average annual earnings of men and women, expressed as a percentage of men annual average salary.

$$\begin{aligned} \text{Gender pay gap of annual salary} &= \\ &= \frac{\text{Average annual salary for men} - \text{Average annual salary for women}}{\text{Average annual salary for men}} \times 100 \end{aligned}$$

However, the calculation of the gender pay gap of the annual earnings does not take into account individual differences, such as the number of hours worked. As women tend to care for children or family at home, they tend to work less hours outside the home than men. So, according to the Eurostat definition, the gender pay gap represents the difference between the hourly earnings of men and women (Eurostat, 2020). But to obtain the hours worked by each employee, the following issues have to be considered. As of January 1, 1995, pursuant to Article 51 of the Chinese Labour Law (Standing Committee of the National People’s Congress, 1995), employers must pay wages for official holidays in accordance with the law. This law applies to the data from 1995 to 2013 used in this study. In addition, according to the “Notice on average annual and monthly working hours of employees and salary conversion problems” (Ministry of Labour and Social Security, 2008), the 11-days statutory holiday should not be excluded when calculating daily and hourly earnings. The Notice also states that the number of working days per year is 261 days. Therefore, our method of calculating hourly earnings is:

$$\text{Hourly wages} = \frac{\text{Annual earnings}}{261 \text{ days} \times \text{hours worked per day}}$$

Therefore, we analyse the gender pay gap of hourly earnings, as the difference between the average earnings per hour of men and women, expressed as a percentage of men annual wage per hour. The formula is as follows:

$$\text{Gender pay gap on hourly wage} = \frac{\text{Male average wage/h} - \text{Female average wage/h}}{\text{Male average wage/h}} \times 100$$

Apart from this, the labour participation rate is defined as the proportion of the economically active population over the population of working age. It is the indicator used to measure the participation of people in economic activities (ILOSTAT, 2020). In this study, the participation rates of men and women are also compared. The formula is as follows:

$$\text{Labor participation rate} = \frac{\text{Employed people} + \text{Unemployed people}}{\text{Working age population}}$$

Working age population = people aged 15 years and over

Furthermore, the study of the degree of wage concentration has been developed through the Gini index (Gini, 1914). The Gini index is the inequality coefficient most used in the scientific literature (Giorgi, 2005; Basulto and Busto, 2010) and in all international reports that measure inequality in the distribution of wealth, income or wages (Bank World, 2020), being absolutely current after more than a century of validity (Mukhopadhyay and Sengupta, 2021). Gini's concentration index is based on the relationship between the accumulated proportion of the population $p_i = i/n$, $i = 1, \dots, n$ and the accumulated proportion of income, $q_i = A_i/A_n$, where $A_i = \sum_{k=1}^i x_k$, $\{x_i\}_{i=1}^n$ individual income after the n individuals that make up the study group have been ordered from lowest to highest according to salary.

$$(1) \quad IG = \frac{\sum_{i=1}^{n-1} (p_i - q_i)}{\sum_{i=1}^{n-1} p_i}, \forall n$$

Expression (1) can be computed as (2) in the case of survey data with non-unit weights. It is based on the definition of the Gini's mean difference (Gini, 1912).

$$(2) \quad IG = \frac{\sum_{i=1}^n \sum_{j=1}^n |x_i - x_j| n_i n_j}{2\bar{x} \cdot N(N-1)}, \forall N$$

The Gini index measures the extent to which the distribution of income (or, in some cases, consumer spending) between individuals or households within an economy falls away from a perfectly equitable distribution. The values of this index range from zero, which corresponds to a level of total equidistribution, and one, for maximum economic concentration or total inequality in the distribution of the variable. The higher the index value, the greater the concentration (greater inequality) in the distribution of wages.

In order to offer some reference points, the following data, obtained from the World Bank (2020), reflect the last available values of the Gini index calculated on the distribution of income (not wages) in some developed coun-

tries. Thus, we find Brazil and Colombia, with Gini indices of 0.539 and 0.504 in 2018 and 2017, respectively, as examples of countries with greater inequality, including the US (0.411, in 2016) or China (0.385, in 2016), United Kingdom (0.348, in 2016), Spain (0.347, in 2017) or Germany (0.319, in 2016). On the other extreme, we can find Norway and the Czech Republic, with index values of 0.270 and 0.249, in 2017.

In addition to the general inequality Gini index, we use the decomposition of Larraz (2015) in order to identify the contributions to the degree of total inequality of its components from the gender point of view. The Gini index can be decomposed as an aggregation of the inequality index between men and women (intergroup -or between- index) and the inequality indices of men and women with each other (intragroup -or within- index). Specifically, such decomposition is given by the following expressions:

$$(3) \quad IG = IG_w + IG_{gb}$$

where

$$(4) \quad IG_w = IG_w \frac{N_w - 1}{N - 1} \cdot \frac{B_w}{B} + IG_M \frac{N_M - 1}{N - 1} \cdot \frac{B_M}{B}$$

measures the contribution of intragroup (within) inequality to the total index and

$$(5) \quad IG_{gb} = IG_{Gender} \left(\frac{N_w}{N - 1} \cdot \frac{B_M}{B} + \frac{N_M}{N - 1} \cdot \frac{B_w}{B} \right)$$

measures the gross intergroup (between) contribution to total inequality, making the subscripts M and W reference to the sample of men and women, respectively and being, therefore, IG_w the female wage concentration index, IG_M the male wage concentration index, N_w and N_M the number of women and men in the salaried population, respectively, B_w and B_M the total salary received by all women and men, respectively, B the total salary mass to be distributed among all of them and IG_{Gender} being defined by equation (6).

$$(6) \quad IG_{Gender} = \frac{\Delta_{Gender}}{\bar{x}_w + \bar{x}_M}$$

$$\text{siendo } \Delta_{Gender} = \frac{\sum_{i=1}^{n_{mW}} \sum_{r=1}^{n_{mM}} |x_{Wi} - x_{Mr}| n_{Wi} n_{Mr}}{N_W N_M} .$$

In the latter case, $x_{Wi}, i = 1, \dots, n_{mW}$ is the woman's salary i , with n_{mW} the number of women in the sample; $x_{Mr}, r = 1, \dots, n_{mM}$ is the man's salary r , with n_{mM} the number of men in the sample; being, therefore, $N_W = \sum_{i=1}^{n_{mW}} n_{Wi}$ the number of women and $N_M = \sum_{r=1}^{n_{mM}} n_{Mr}$ the number of men in the salaried population, respectively, and $\bar{x}_W = \sum_{i=1}^{n_{mW}} x_{Wi} n_{Wi}$ and $\bar{x}_M = \sum_{r=1}^{n_{mM}} x_{Mr} n_{Mr}$ the average salaries of women and men in the salaried population, respectively.

Note that CFPS data does not provide neither describes the elevation factor in its methodology. So, when we calculate the Gini coefficient, we should consider that all the frequencies are 1. We just use the salary ranking from low to high.

Evolution of the Gender Pay Gap in China (1995-2013)

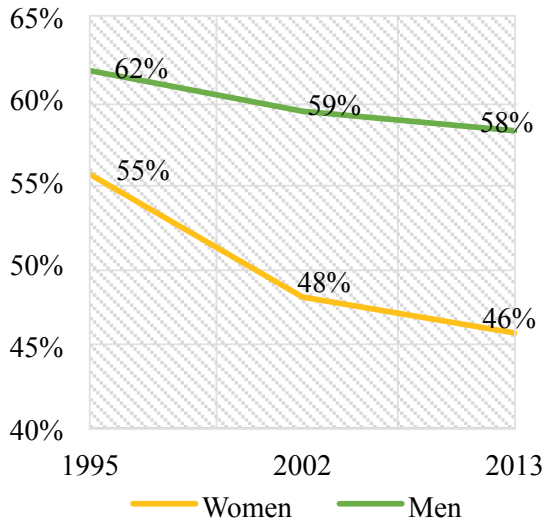
4.1. GLOBAL PAY GAP

This chapter looks at the gender pay gap in terms of annual earnings and hourly earnings in China. The analysis of both concepts is important. On the one hand, the existence of a gender pay gap in the hourly wage can be explained because women generally work in a type of occupation or type of economic activity with lower remuneration, or the presence of some type of gender pay discrimination. On the other hand, in addition to the previous argument, the gender pay gap calculated on annual earnings suggests a greater pay limitation for women, with less short and longterm purchasing power, which may have a limiting effect on future receipt of unemployment benefits and retirement pension. The differences observed between both gaps are because of the lower number of hours worked per year by women overall, a result of women in the family having more responsibility for work in the home and bringing up children. This reality can be voluntary or compulsory. The trends and characteristics of the pay gap in the CHIP survey carried out in the years 1995, 2002 and 2013 are analysed.

This chapter also provides the labour participation rate, which may explain the differences in economic activities between Chinese men and women. The labour participation rate is the proportion of the economically active population divided by the population of working age. It is an indicator used to measure the participation of people in economic activities. The active population accounts for the population that is working (also called employed population) or actively search a job but has not yet found one (also called unemployed population). Both the population over 16 years old who have a

job and the unemployed seeking employment are used to calculate the labour participation rate of Chinese men and women in 1995, 2002 and 2013.

Graph 2. Labour participation rate. Period 1995 - 2013 in China



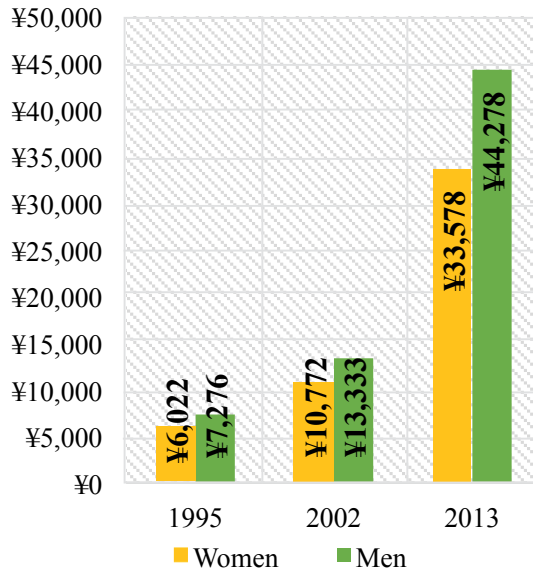
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

As can be seen in Graph 2, the global participation rates have decreased from 1995 to 2013. However, this decrease has not been the same for men and women. While the male workforce has gone from representing 62% of the working-age population to 58% in this period, a drop of 4 percentage points, the drop for women has been 9 percentage points, and from a lower starting point (55% to 46%). The participation rate of women is much lower than that of men. These Graphs indicate a higher rate of female inactivity, which could be a result of women in China having greater responsibility for childcare and household chores. Remember that inactivity can be voluntary or compulsory. However, it could also be due to direct discrimination by employers against women in Chinese society. This could be a reason for not looking for a job.

We now look specifically at the differences between men's and women's annual earnings, hourly earnings, and gender pay gaps. Starting with analysis of the average annual earnings of men and women from 1995, 2002, 2013, Graph 3 shows that the average annual earnings in this period has increased for both sexes, with the average annual earnings of women being lower than that of men in the three years analysed.

Men's earnings in 1995, 2002 and 2013 are ¥7,276 (¥, Yuan is China's official currency), ¥13,333 and ¥44,278 while women's earnings are ¥6,022, ¥10,772 and ¥33,578, respectively. Therefore, the differences in the average annual earnings between men and women in the three years surveyed are ¥1,254, ¥2,561 and ¥10,700. This fact already illustrates that from 1995 to 2013 the gender pay gap related to annual earnings widened significantly.

Graph 3 Average annual earnings per worker and gender

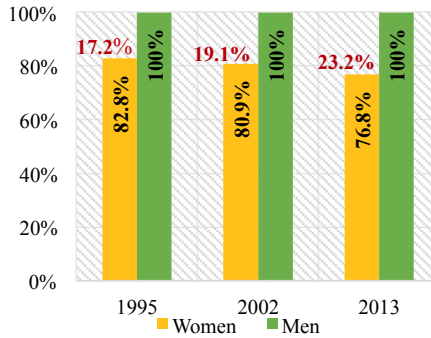


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

From a growth perspective, from 1995 to 2002, the average annual earnings of men increased by 83.2% and that of women, 78.8%. From 2002 to 2013, the average annual earnings of men increased by 232.1%, while that of women increased by 211.7%. It is clear that the average annual earnings of both men and women increased rapidly throughout the period analysed, but the growth of female rate was less than male one.

In terms of annual earnings, gender pay gap reach 17.2%, 19.1% and 23.2% in 1995, 2002 and 2013, respectively (see Graph 4). This means that the average annual earnings of women are 82.8%, 80.9% and 76.8% of that of men. Therefore, the gender pay gap in China measured in terms of annual earnings has gradually widened between 1995 and 2013.

Graph 4 Gender pay gap in terms of annual earnings

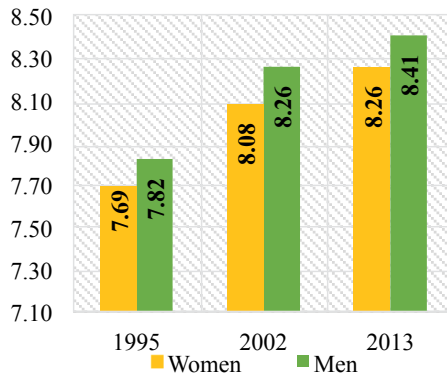


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Due to the model of society present in China, where it seems that women have more responsibility for family care than men, we have already seen that the rate of female labour participation is lower than that of men. Now, according to the calculations made, we find that this discrimination is also reflected in the number of hours worked, causing a significant impact on their earnings.

Thus, in 1995, 2002, 2013, while the average number of daily hours of work for men is 7.82, 8.26 and 8.41, in each of the years, that of women is 7.69, 8.08 and 8.26, respectively (see Graph 5). It is clear that average hours worked per day is increasing for both men and women, but men still work more hours per day than women.

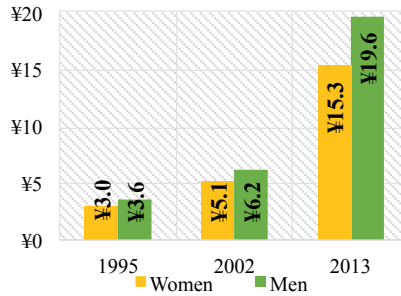
Graph 5 Average daily hours worked by gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Due to the impact that the reduced hours worked by women has on annual earnings, in order to have comparable wage amounts we also analyse the hourly wage. We find that women's hourly earnings are also lower than men's from 1995 to 2013 (see Graph 6). Specifically, in 1995, 2002 and 2013, hourly earnings for men are ¥3.6, ¥6.2, and ¥19.6, and hourly earnings for women are ¥3.0, ¥5.1, and ¥15.3. The difference in hourly earnings for these three years is ¥0.6, ¥1.1 and ¥4.3, respectively.

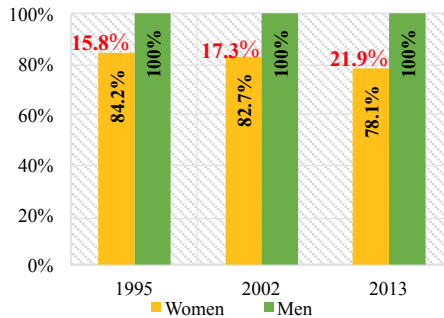
Graph 6 Average hourly earnings by gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Graph 7 shows that gender pay gap in hourly earnings is 15.8%, 17.3%, and 21.9% in 1995, 2002, and 2013, respectively. This means that the hourly earnings for women is, respectively, 84.2%, 82.7% and 78.1% that of men in these three years. Therefore, from the perspective of hourly earnings, the gap between these three years has also gradually increased.

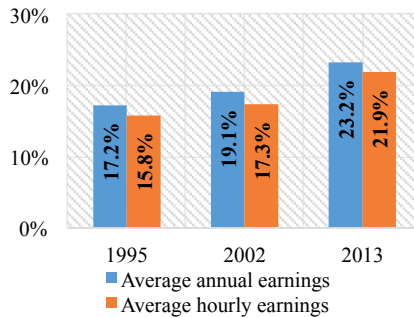
Graph 7 Gender pay gap in terms of hourly earnings



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

As the analysis indicates, given that women work, on average, fewer hours than men, we find that the gender pay gap of annual earnings is greater than the gender pay gap of hourly earnings, as shown in Graph 8. After having corrected the effect of the hours worked per year, the fact is that the gender pay gap still remains. Trying to deep on this phenomenon, trying to find in which groups the gender pay gap is greater, we continue with the analysis by personal and labour characteristics and by firm activity.

Graph 8 Gender pay gap related to annual and hourly earnings



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

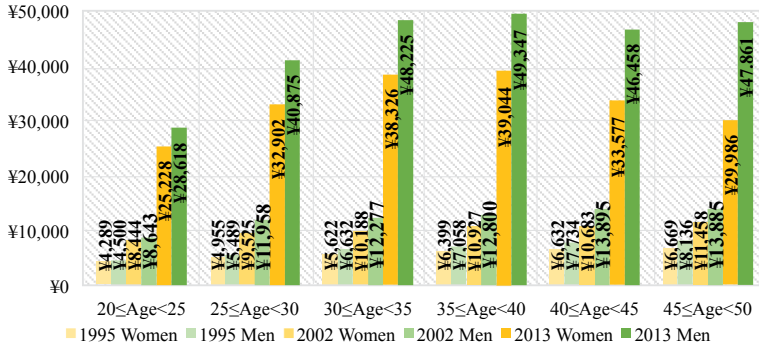
4.2. GENDER PAY GAP BY TYPES OF VARIABLES

4.2.1. AGE RANGE

The gender gap in wages presents different values depending on age. This can be because people of different ages often have different job preferences and different social responsibilities and, as each society evolves, so the social profile changes. By analysing the wage gap between men and women of different ages, we can better understand the effect of age on wages and even think what we can expect from the future. According to the provisions of the Chinese Labour Law, the retirement age is 60 years for men and 50 years for women. Consequently, this study does not carry out a gender pay gap comparison for ages over 50.

Graph 9 shows the annual earnings data for 1995, 2002 and 2013 by workers' age, and gender. From 1995 to 2013, the annual earnings of men and women increased significantly in all age groups. Within this period, the growth rate from 1995 to 2002 was relatively small, but there was a significant growth from 2002 to 2013.

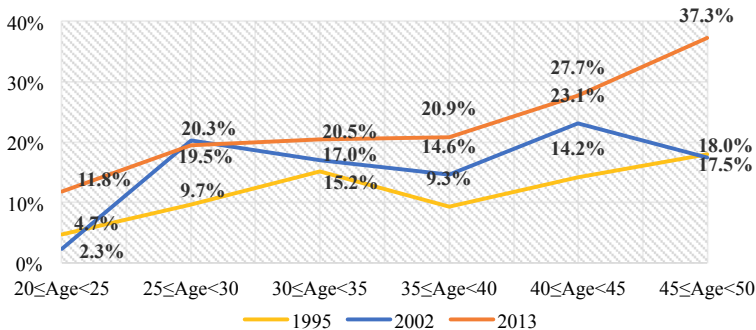
Graph 9 Average annual earnings per worker, gender and age



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The graph shows that annual earnings for men and women in age ranges 20-25 are the lowest. The mean annual earnings of women in 1995, 2002 and 2013 are ¥4,289, ¥8,444 and ¥25,228, respectively, and the mean annual earnings of men are ¥4,500, ¥8,643 and ¥28,618, respectively. In 1995 and 2002, the annual earnings of men and women reached their maximum as they approached retirement age, while in 2013 the maximum appeared in the age range of 35 to 40 years. Overall, it is clear that the annual earnings of women of all ages in 1995, 2002 and 2013 are lower than those of men. Calculation of the gender wage gap by age range is shown in Graph 10.

Graph 10 Gender pay gap in terms of annual earnings by age

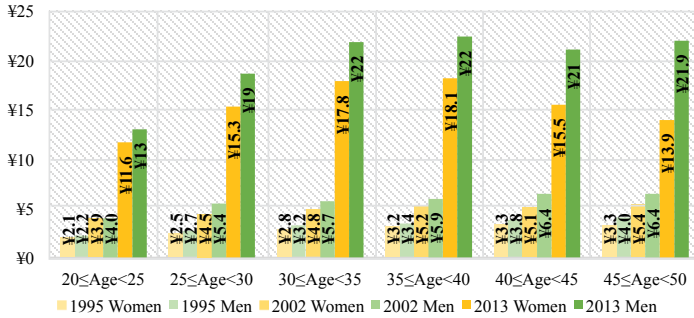


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

We see that the gender pay gap gradually widens in the three years surveyed. The gender pay gap in 1995 was less than 18%. The gender pay gap in

2002 was between that of 1995 and 2013 for most age groups, with the gender pay gap being greater in 2013 and all age ranges reaching more than 20% except in the 20-25 years age range. Of significant note is the wide pay gap of 37.3% observed in 2013 for the age range of 45 to 50 years, and a similarly high figure of 27.7% for the age range of 40-45 years.

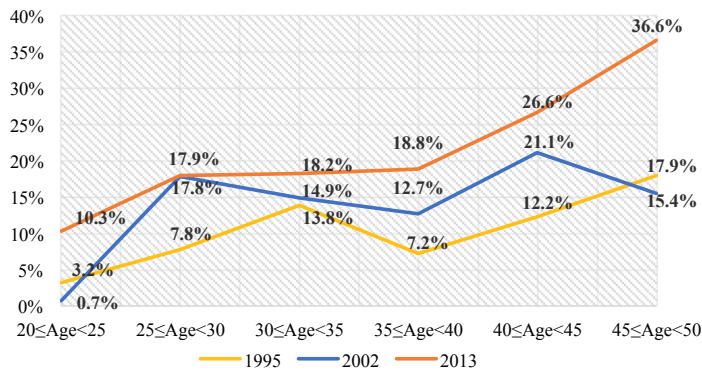
Graph 11 Average hourly earnings by gender and age



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

From the perspective of hourly earnings for men and women in 1995, 2002 and 2013, these also increase substantially over time for all age ranges (see Graph 11). In detail, hourly earnings in the 20-25 age range are the lowest in the 3 years analysed. The highest hourly earnings are seen in the oldest age range, nearing retirement, both in 1995 and 2002. However, in the latest survey available in 2013, the highest hourly earnings are paid to both men and women workers between the ages of 35 and 40.

Graph 12 Gender pay gap in terms of hourly earnings and age

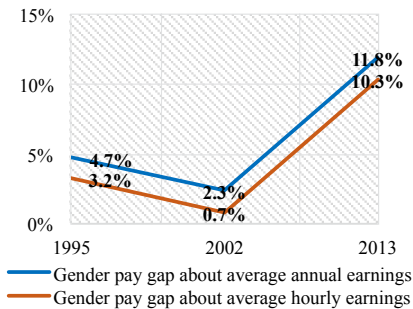


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

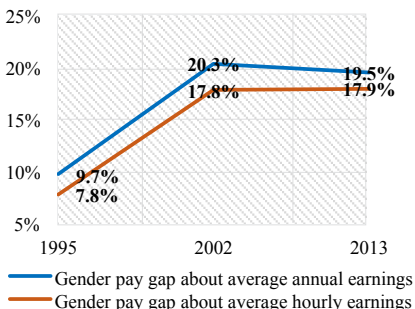
Looking at these hourly earnings and the relevant gender pay gap, the gender pay gap percentage increases gradually from 1995 to 2013 for all age ranges, with the pay gap being its widest in 2013 for all age ranges (see Graph 12). However, with increasing age, hourly earnings also tend to increase gradually in 1995 and 2013 but not in 2002, where they decrease at the end of working life. High figures observed for the 40 to 50 age range in the case of hourly pay gap should be noted, reaching 36.6% for those aged between 45 and 50.

Graph 13-1 to Graph 13-6 show the gender pay gap between annual earnings and hourly earnings for different age ranges. In the three age ranges, from 30 to 35, 35 to 40 and 40 to 45, the gender pay gap between annual earnings and hourly earnings has a clear upward trend. Although in some age ranges in 2002 there is a decrease, in 2013 almost in all age ranges, gender pay gap reached its highest level.

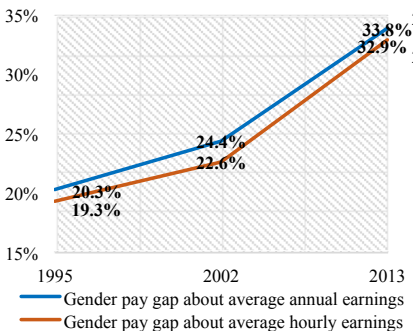
Graph 13-1 Gender pay gap by 20 ≤ Age <25



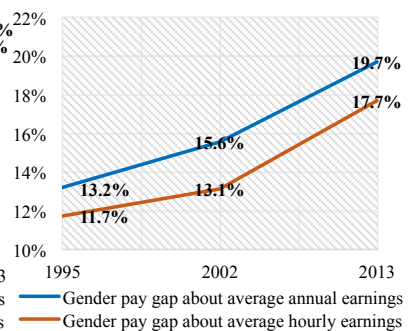
Graph 13-2 Gender pay gap by 25 ≤ Age <30

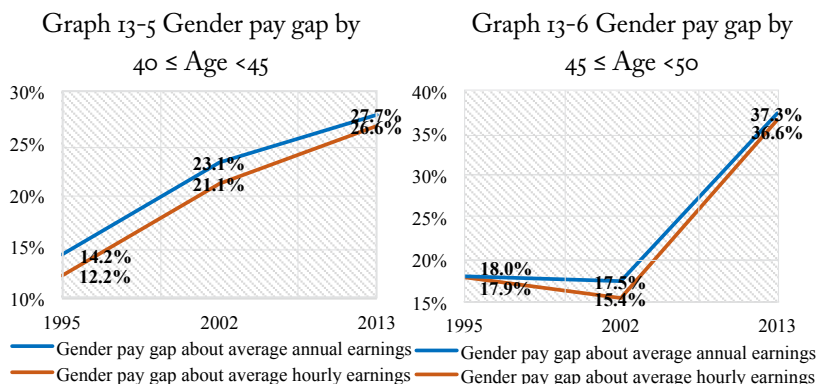


Graph 13-3 Gender pay gap by 30 ≤ Age <35



Graph 13-4 Gender pay gap by 35 ≤ Age <40

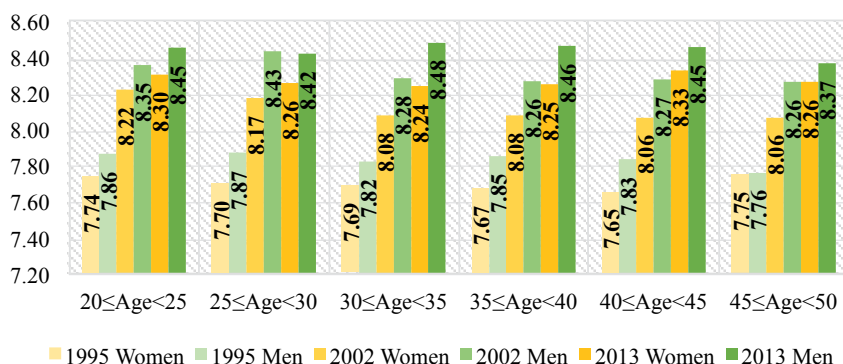




Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Furthermore, the gender pay gap of annual earnings for all ages is greater than the gender pay gap of hourly earnings. Remember that this is because women’s daily hours of work are generally lower than men’s (see Graphs 14) due to their additional responsibilities in the home and as the main carer. It is not hard to find that women face increased pressure from the family, such as early childhood education and parental care. In many families in China, women generally sacrifice their work time and put more time in the family. One of the most important findings in this analysis is that this reality happens in all age groups, not just in older ones.

Graph 14 Average daily hours of work by age group and gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

4.2.2. LEVEL OF EDUCATION

With the onset of the knowledge economy era and increasing global competition, the role of knowledge and skills in business development and competition is becoming increasingly important. Companies devote more and more attention to technological innovation and, consequently, more attention is paid to the educational level of workers. Today's society requires increasingly higher levels of education.

The level of education refers to the degree to which people are educated, with equality of education playing a significant role in the equality of men and women. To find out whether a relationship can be established between education and the gender pay gap, this section analyses the gender pay gap based on differences in the educational levels of men and women.

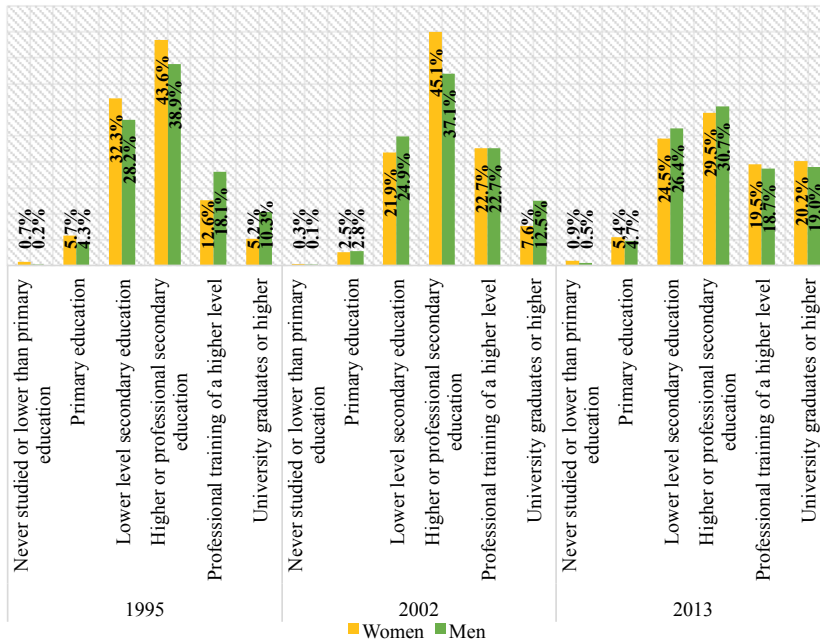
According to the regulations of the Chinese Ministry of Education, there are three education levels: primary education, secondary education and higher education (Standing Committee of the National People's Congress, 2015). Therefore, in line with the data provided by CHIP and the sample size, we divide the data according to the following standards:

1. Never studied or lower than primary education
2. Primary education
3. Lower level secondary education
4. Higher or professional secondary education
5. Professional training of a higher level
6. University graduates or higher

According to the percentage of workers who have acquired each of the levels of education (see Graph 15), in the three years of the survey the highest percentage of workers has an educational level of higher or professional secondary education. In fact, between 1995 and 2013 this proportion is higher than other levels of education for both men and women, decreasing in 2013 to 30.7% in the case of men and 29.5% in the case of women.

In addition, over the years, the proportion of workers with university graduates or higher has increased and, in 2013, reached 19.0% in the case of men and 20.2% for women. This also means that China's level of education improved and was spread more evenly over this time.

Graph 15 Percentage of workers by gender and level of education

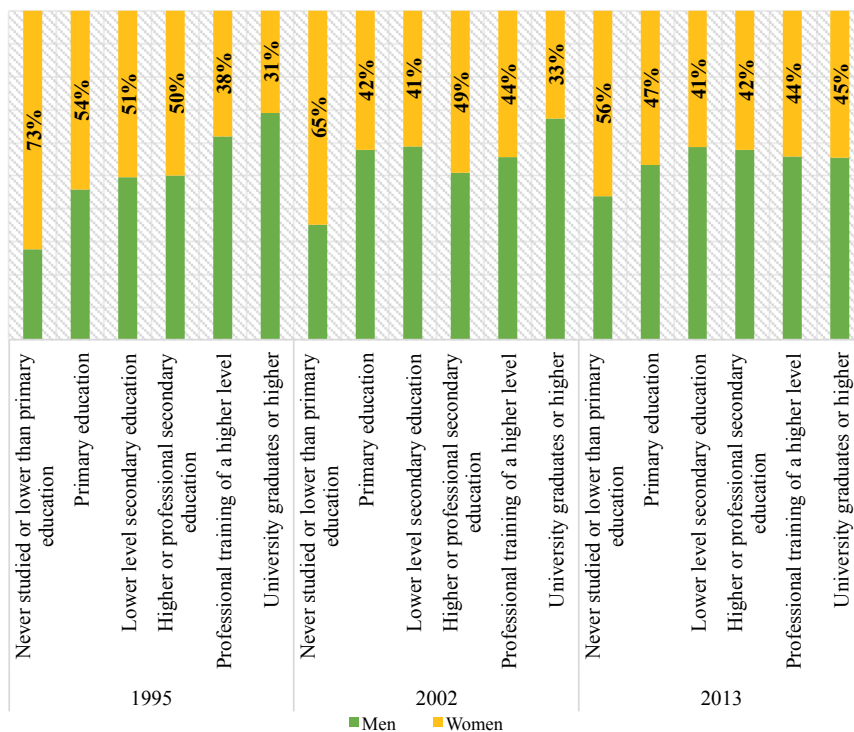


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

From a gender perspective (see Graph 16), in 1995, the proportion of women in higher education was less than that of men, and the proportion of women with primary and secondary education was greater than that of men. In 2002 and 2013, the proportion of all levels of education for women is less than that of men. This shows that women are still highly influenced by the traditional Chinese concept of “putting men before women” in the field of education. Families are more supportive of men gaining access to educational resources, but time allows us to be optimistic, because the situation in 2013 reflects a better situation for women than years ago.

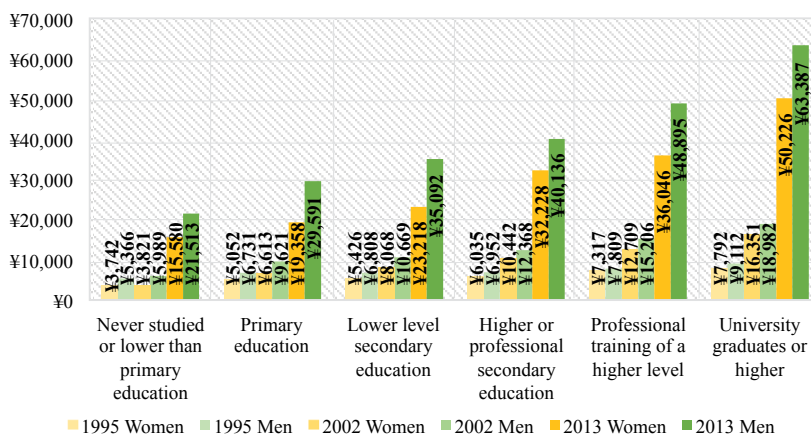
From 1995 to 2013, as time progressed, annual earnings increased significantly while the education level remained the same (see Graph 17). For example, although for never studied or lower than primary education the wage is relatively low, annual earnings increased during this period, from ¥3,741 to ¥15,579 for women and from ¥5,365 to ¥21,512 for men, an increase of 316.4% and 300.9%, respectively. However, annual earnings for university graduates or those workers with a higher education increased from ¥7,791 to ¥50,225 for women and from ¥9,112 to ¥63,387 for men, representing increases of 544.6% and 595.6%, respectively.

Graph 16 Percentage of workers by level of education and gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013

Graph 17 Average annual earnings per worker, sex and level of education

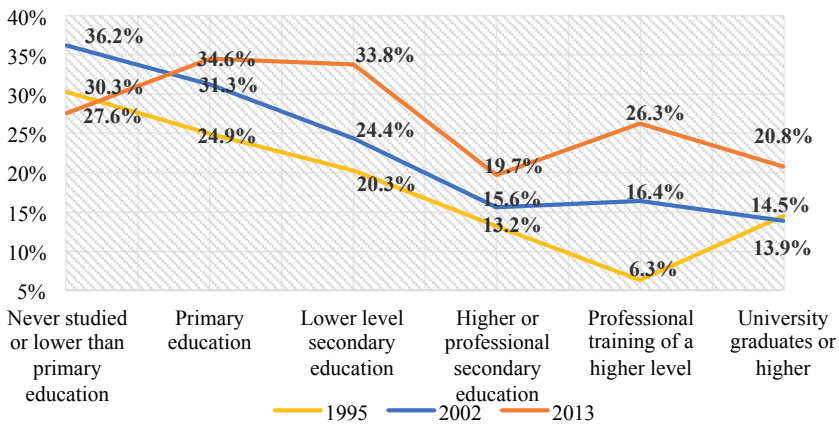


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013

In addition, with the increase in the educational level, the wages of men and women increase, as expected, indicating that the annual earnings are greatly affected by the level of education. In the case of men, the relationship between the earnings for workers with the university graduates or higher compared to never studied or lower than primary education is 69.8%, 216.9% and 194.6% higher in the three years of the period considered and in that of women 108.2%, 327.9% and 222.3% higher. In other words, both male and female earnings of those with the highest level of education is triple that of those with the lowest education.

However, focusing on annual earnings of men and women in 1995, 2002 and 2013 for all educational levels, it can be seen that annual earnings of women continue being lower than that of men. In other words, a gender pay gap is seen when analysing the population by education level. For example, in 2013, annual earnings of workers with university graduates or higher was ¥63,387 for men and ¥50,225 for women, which is ¥13,161 more on average for men than for women. By calculating the gender pay gap, we can better understand this difference, as shown in Graph 18.

Graph 18 Gender pay gap on average annual earnings by level of education



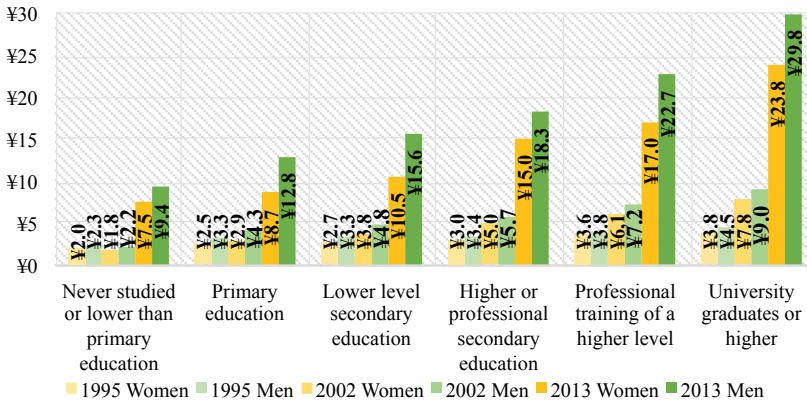
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP

The first observation is that, as the years go by, the pay gap increases at all educational levels except for never studied or lower than primary education, where in the final year it reduces slightly. In addition, over the three years analysed, the pay gap decreases with the educational level; the higher the educational level, the lower the gender pay gap, but with an upward trend.

The lowest gender pay gaps are seen in the higher education stage of professional training of a higher level at 6.3% in 1995, and university graduates or higher studies at 13.9% in 2002, and also among those with a higher education or professional secondary education level at 19.7% in 2013. However, the widest gender gap in wages, in 1995 and 2002, is seen among never studied or lower than primary education, at 30.3% and 36.2%, respectively while, in 2013, the widest gender pay gap is registered in workers with only primary education, at 34.6%. In 2013 it is important to note that workers with a lower level of secondary education suffer a gender pay gap of 33.8%.

From the perspective of hourly earnings (see Graph 19), from 1995 to 2013 these also increase in line with an improvement in the educational level. For example, in 2013, hourly earnings for men and women with university graduates or higher studies is 216% and 218% higher than for people never studied or lower than primary education. Similarly, in 2013, hourly earnings of men and women at all levels of education are much higher than in 1995 and 2002.

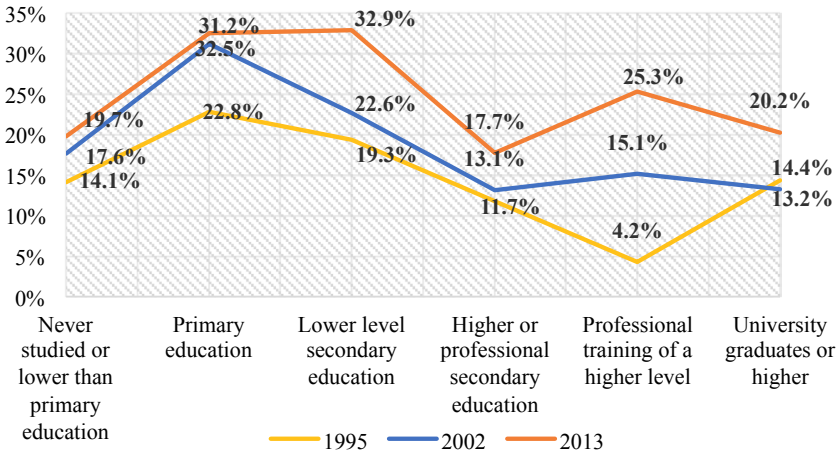
Graph 19 Average hourly earnings by gender and level of education



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

However, it is clear that women’s hourly earnings are lower than men’s in the three years studied regardless of the level of education attained. Analysis of the gender pay gap of hourly earnings (see Graph 20) shows an increase in the pay gap over the years. Compared to 1995 and 2002, the gender pay gap of hourly earnings rose to the highest level at all educational levels in 2013, showing that China’s gender pay gap is widening in all of the educational levels.

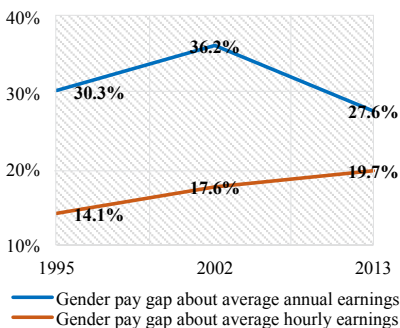
Graph 20 Gender pay gap for average earnings per hour and level of education



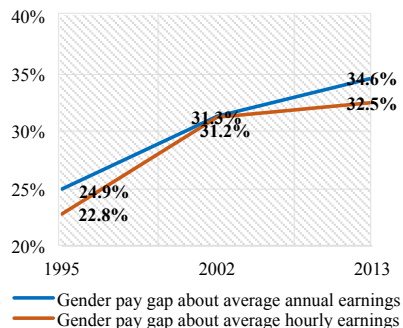
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

In particular, the gender pay gap between primary education and lower level secondary education in 1995, 2002 and 2013 is the widest, around a 32%. Also, in professional training of a higher level, the gender pay gap increased very rapidly, from 4.2% in 1995 to 15.1% in 2002 and reaching 25.3% in 2013. In Graph 21, where both pay gaps are compared (measured with respect to annual earnings and hourly earnings), there is a greater difference between the annual gender pay gap and the hourly gender pay gap for never studied or lower than primary education compared to the other educational levels. This is due to the great proportion of partial jobs among women with the lowest educational level.

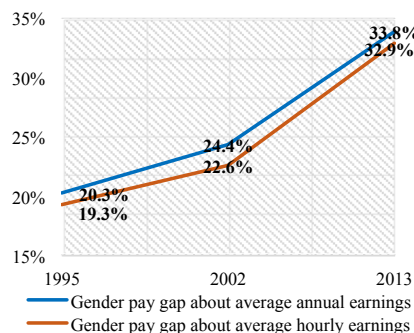
Graph 21-1 Gender pay gap for never studied or lower than primary education



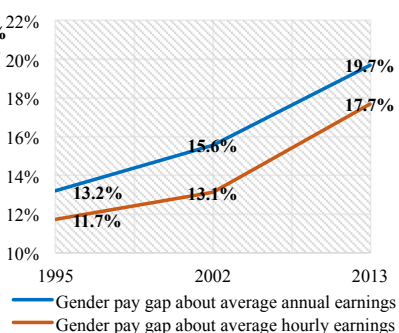
Graph 21-2 Gender pay gap for primary education



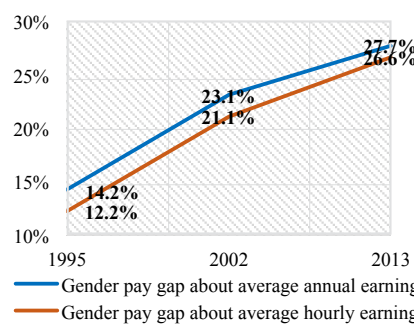
Graph 2I-3 Gender pay gap for lower level secondary education



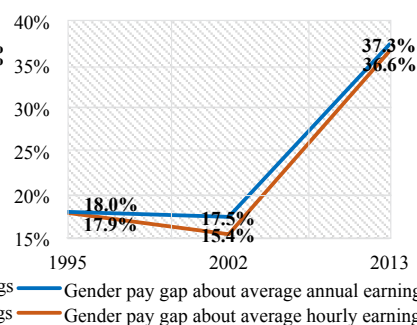
Graph 2I-4 Gender pay gap for higher or professional secondary education



Graph 2I-5 Gender pay gap for Professional training of a higher level



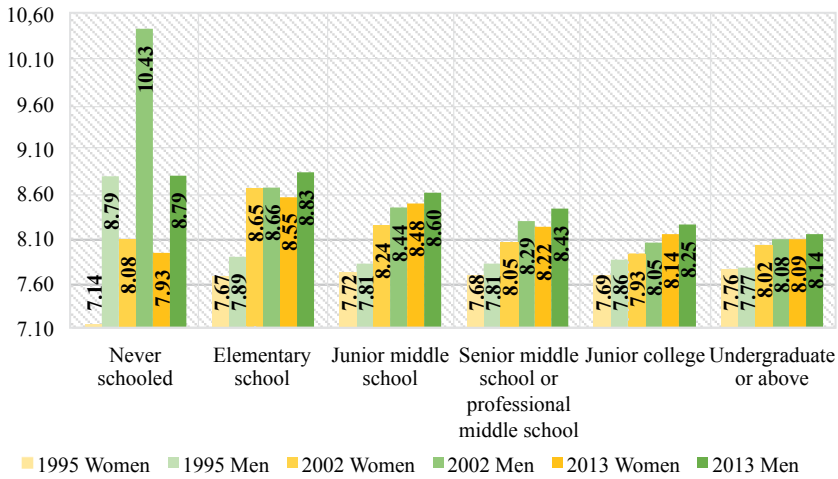
Graph 2I-6 Gender pay gap for university graduates or higher



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

This situation is repeated in the daily working hours of men and women, where the working hours of women are less than those of men at all educational levels (see Graph 22). This difference is the highest on never schooled group. The reasons can be found in the voluntary motives, as looking after the children, or in compulsory motives, when the company prefers a man instead, which is discrimination based on gender when it comes to securing a job.

Graph 22 Average daily hours worked by level of education and gender



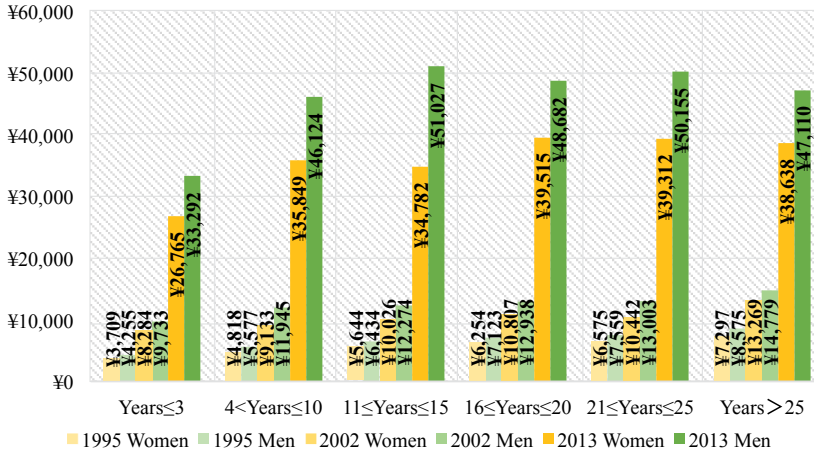
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

4.2.3. YEARS OF SERVICE

Years of service refers to the number of years employees establish an employment relationship with a company and receive a wage as the main source or only source of income. It reflects the contribution of employees to society and companies and their level of knowledge, experience and technical competence. This variable analyses the employees who have been working in the company for less than 3 years, up to those who have completed over 25 years of service.

According to Graph 23, as years of service increase, the wages of men and women show an upward trend in the first few years of 1995, 2002 and 2013, while a certain stagnation is noted after 15 years of service. According to the data, in the early stages of years of service, wages rise rapidly: from having less than 3 years of service to 4-10 years of service in 1995, 2002 and 2013, women's annual earnings increased by 30%, 10% and 34%, respectively, and men's by 31%, 23% and 39%. However, thereafter growth is weak.

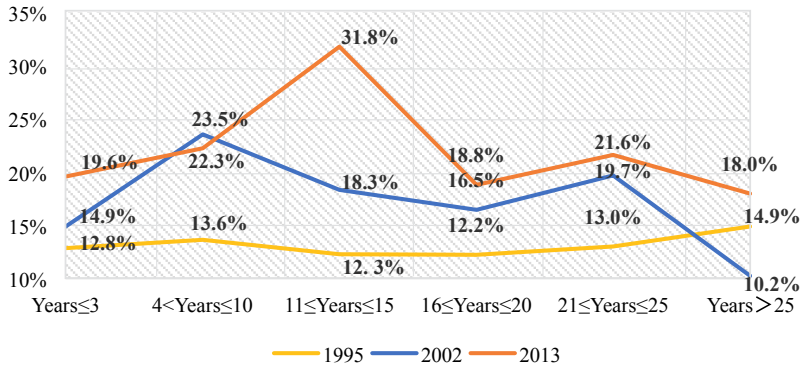
Graph 23 Average annual earnings per worker, sex and years of service



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

It is clear that women’s wages are lower than men’s, regardless of the years of service to the company. As Graph 24 shows, the gender pay gap in 1995 is relatively stable, remaining at around 13%, but in 2002 and 2013 volatility is relatively high. With 11 to 15 years of service, the data shows a maximum of an annual pay gap of 31.8% in 2013 between female and male workers.

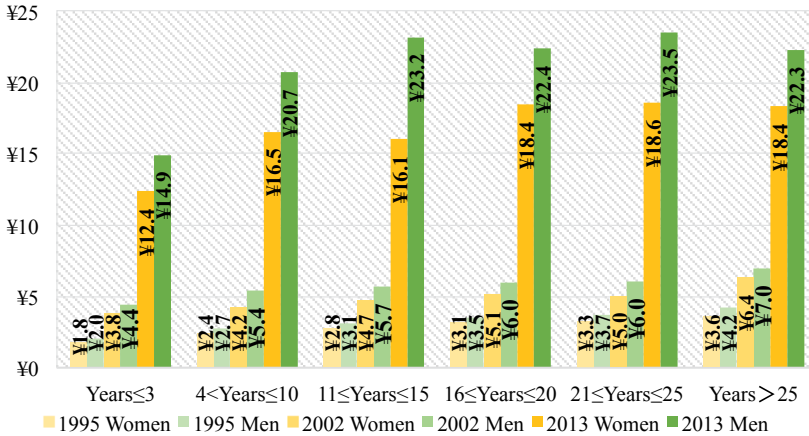
Graph 24 Gender pay gap of annual average earnings based on years of service



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

From the perspective of hourly earnings (see Graph 25), salaries also increase greatly in the three years considered until 15 years of service. For workers with 16 years or more years in the company, there seems to be a stagnation in the salaries.

Graph 25 Average hourly earnings by gender and years of service

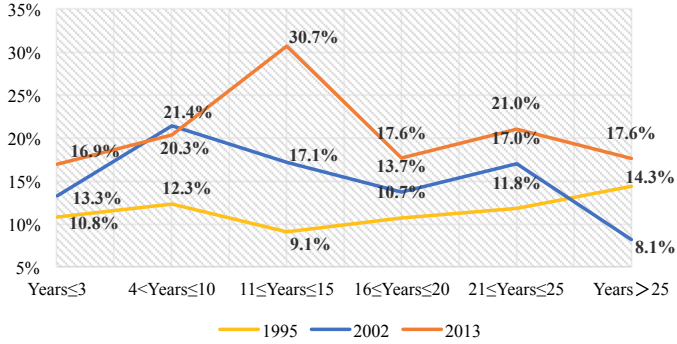


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The highest hourly earnings in 1995 and 2002 are seen among workers with over 25 years of service, where women earned ¥3.6 and ¥6.4, and men ¥4.2 and ¥7.0, respectively. If these wages are compared with employees who have just entered the workplace, with less than 3 years of service, the hourly earnings of women are seen to be 97.9% and 106% higher, and men’s hourly earnings 106% and 58% higher, as a result of longer service. For the year 2013, the maximum hourly earnings are seen for the range of workers with 21 to 25 years of service, with ¥23.5 for men and ¥18.6 for women. Compared to those with less than 3 years of service, men’s wages had increased by 57% and women’s by 50%.

As shown in Graph 26, the gender pay gap in hourly earnings also remains relatively stable in 1995, at around 12%. The gender pay gap reaches a peak for those workers with 4 to 10 years of service in 2002, at 21.4%, and then decreases slowly to a minimum for workers with more than 25 years of service, at 8.1%. The gender pay gap in 2013 reaches a peak for workers with 11 to 15 years of service, at 30.7%, and then decreases rapidly, fluctuating between 17.6% and 21% for those with more than 16 years of service.

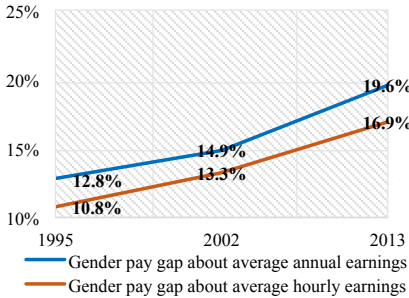
Graph 26 Gender pay gap on average hourly earnings and years of service



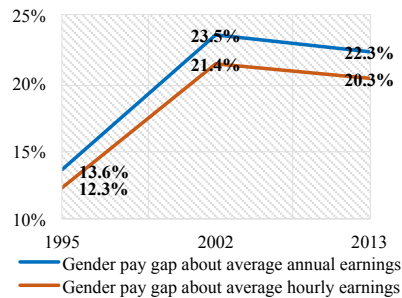
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Graph 27-1 to Graph 27-6 clearly show that, regardless of the annual earnings or the hourly wage, the gender pay gap has increased over time in all age groups, especially among those workers employed for between 11 and 15 years, where the gap increases from 9.1% to 30.7%.

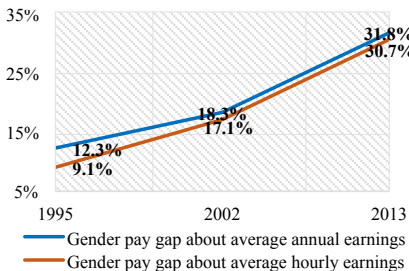
Graph 27-1 Gender pay gap by Years ≤ 3



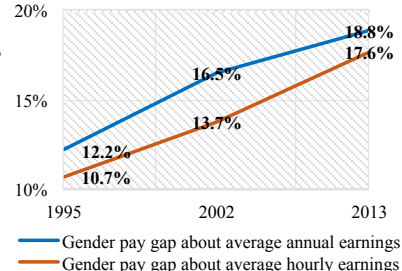
Graph 27-2 Gender pay gap by 4 ≤ Years ≤ 10

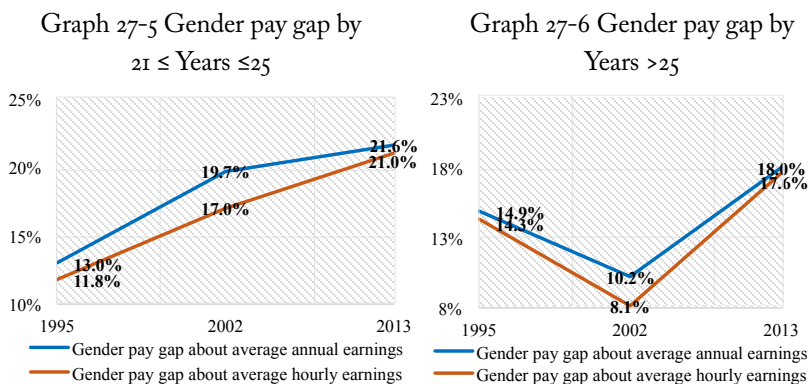


Graph 27-3 Gender pay gap by 11 ≤ Years ≤ 15



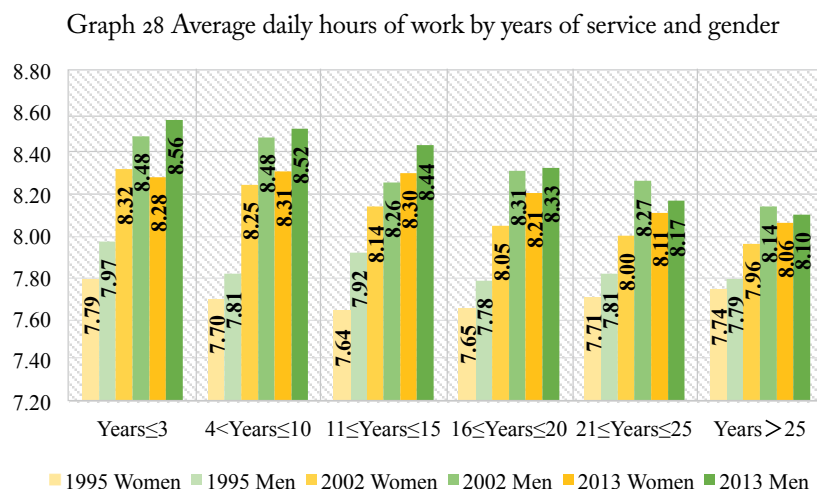
Graph 27-4 Gender pay gap by 16 ≤ Years ≤ 20





Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Furthermore, as it was expected, the gender pay gap of annual earnings is greater than the gender pay gap of hourly earnings. This is understandable, with women working less paid hours because of the increased pressure they face from family commitments, such as early childhood education and parental care. In many families, it is the women who sacrifice their paid work time and devote more time to the family. As shown in Graph 28, women work fewer hours a day than men.

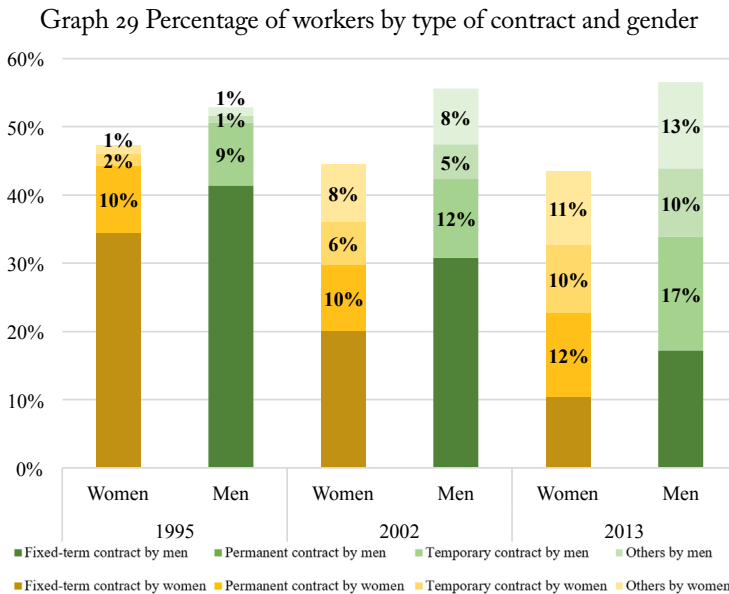


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

4.2.4. TYPE OF CONTRACT

In accordance with the CHIP classification standard and in accordance with Article 12 of the Implementing Regulations of the Labour Contracts Law of the People's Republic of China (2012 Amendment), labour contracts include *fixed-term contract*, *permanent contract* and *temporary contract* (Standing Committee of the National People's Congress, 2012). Those workers who do not have a contract and whose work situations are not covered by law are classified as *others*.

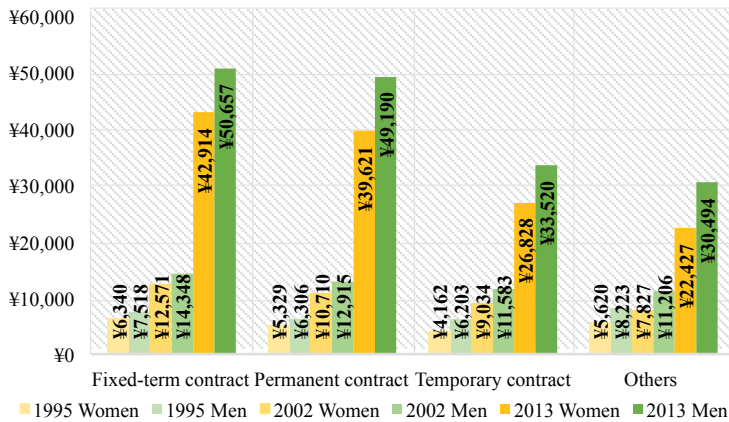
Based on CHIP 1995, 2002 and 2013 data, we see that fixed-term contracts account for a large proportion (75%) of the entire type of contracts in 1995 (see Graph 29), but this proportion then declines rapidly to 51% in 2002 and 27% in 2013. Permanent contracts gradually become the most prevalent contract types, with the proportions in 1995, 2002 and 2013 being 19%, 22% and 29%, respectively. There is also a substantial increase in temporary contracts, at 3%, 11% and 20%, respectively. But the study also found that, from 1995 to 2013, a balance seemed to be reached of all types of contracts. The equidistribution of contracts between the four types of contracting is evident. From a gender perspective, we can see that since 1995 there are always more men than women working in urban areas in China, and that the percentage of women working has decreased over time.



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Firstly, according to data from 1995, 2002 and 2013, annual earnings increase for all three types of contracts, the fixed-term contract showing the largest increase in annual earnings (see Graph 30). In the case of men, it increases from ¥7,518 on average in 1995 to ¥50,656 in 2013, which represents an increase of 680.11%. Women’s average annual earnings increased from ¥6,340 to ¥42,913, an increase of 643.4%.

Graph 30 Average annual earnings per worker by gender and type of contract



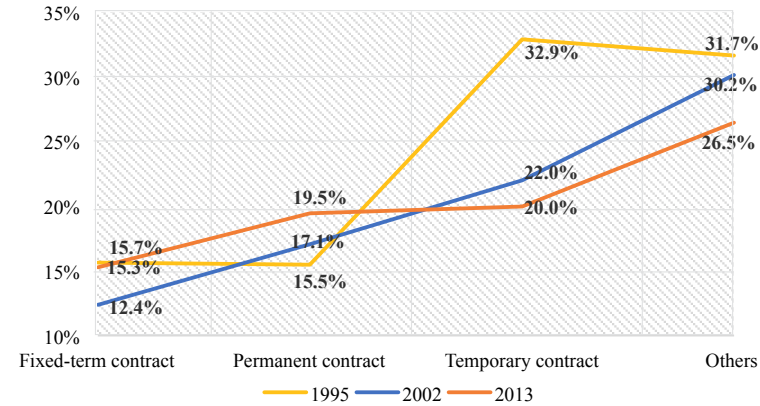
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The next largest increase is seen in the average earnings of fixed-term contracts, where men increase their average earnings by 573.7% and women by 576.8%. In the case of temporary contracts, men increase their average earnings by 440.3% and women by 544.6%. In addition, we discover that *other* workers (those who had no contracts or were not covered by law) had the lowest annual earnings because their labour rights are not normally guaranteed.

However, from the perspective of the gender pay gap, women have lower annual earnings than men, again, for all types of contracts. As shown in Graph 31, the gender pay gap for fixed-term contracts is relatively small, at 15.7%, 12.4% and 15.3% for the years 1995, 2002 and 2013, respectively. But in other situations, such as those where there are no contracts or contracts that are not covered by law, the gender pay gap is greater than the remaining types of contracts in 2002 and 2013, reaching 31.7%, 30.2% and 26.5% in the years 1995, 2002 and 2013, respectively. Also the gender pay gap for temporary contracts has to be highlighted, reaching in 1995, 2002 and 2013, 32.9%, 22%

and 20%, respectively, although the gradual reduction in the gender pay gap seen over time is good news for these types of contracts.

Graph 31 Gender pay gap for average annual earnings by type of contract



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

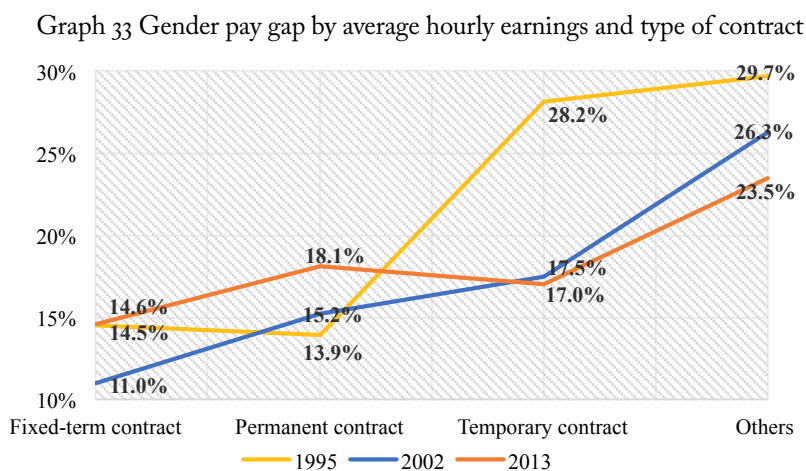
From the perspective of hourly earnings (see Graph 32), salaries also increase considerably for the three types of contracts in 1995, 2002 and 2013, with fixed-term contracts having the highest hourly earnings, followed by permanent contracts and, to a lesser extent, the average hourly wage of temporary contracts and other work situations.

Graph 32 Average hourly earnings by gender and type of contract



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

However, compared to the rapid growth of the hourly wage, the gender pay gap showed little improvement. The hourly earnings of women is lower than that of men in all 4 types of work situations analysed. Graph 33 shows that the gender pay gap of fixed-term contracts is the smallest, less than 15% in 1995, 2002 and 2013.



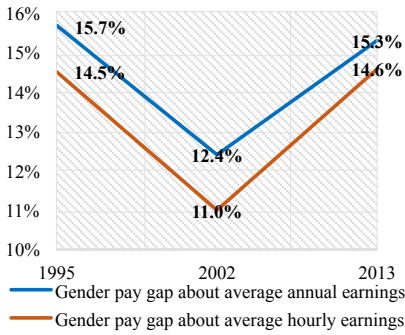
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The other situations, such as those where there are no contracts or contracts not covered by law, continue showing the largest gender pay gap, with 29.7%, 26.3% and 23.5% in 1995, 2002 and 2013, respectively, but this gap is gradually narrowing.

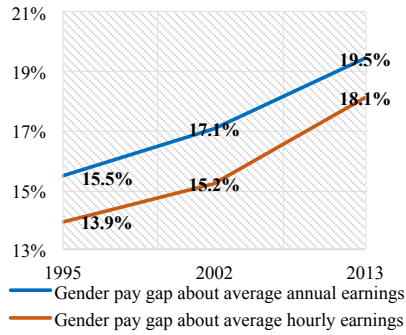
In permanent contracts, the gender pay gap of hourly earnings has gradually widened, going from 13.9% in 1995 to 15.2% in 2002 and reaching 18.1% in 2013. On the other hand, in temporary contracts, the gender pay gap is being closed with the years, going down from 28.2% to 17.0% in this period.

According to Graph 34, the gender pay gap of hourly earnings is less than that related to annual earnings. It has been already said that this is because the gender pay gap of hourly earnings eliminates the effects of the differences in number of hours worked, but even when eliminating this factor, the pay gap is still very wide.

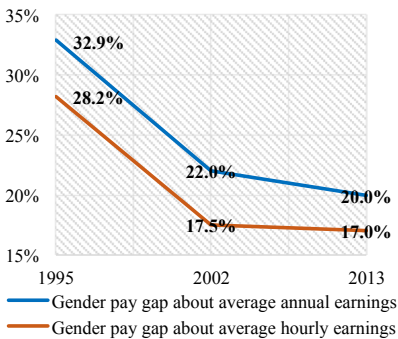
Graph 34-1 Gender pay gap by fixed-term contracts



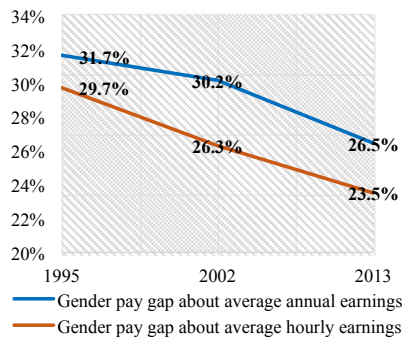
Graph 34-2 Gender pay gap by permanent contract



Graph 34-3 Gender pay gap by temporary contract



Graph 34-4 Gender pay gap by others



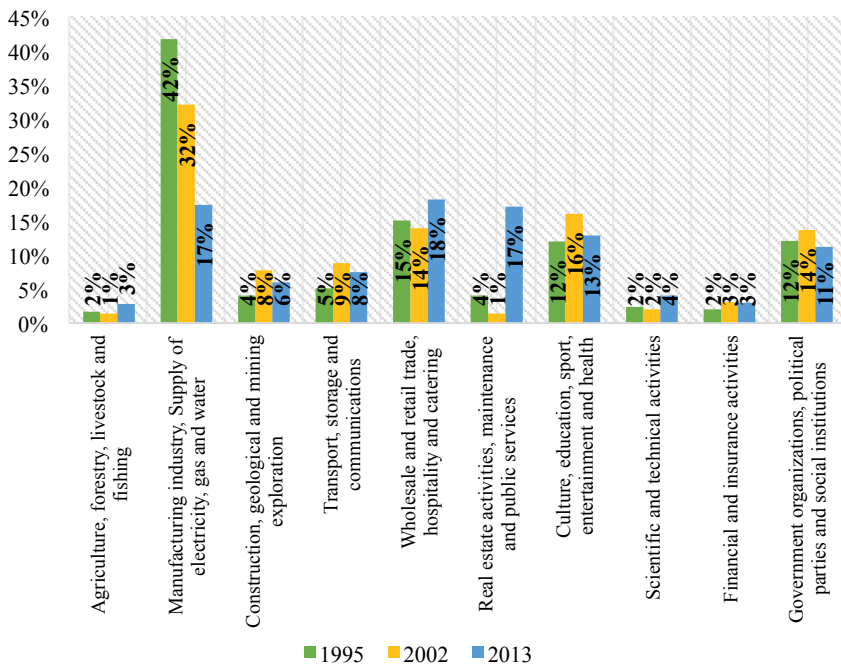
Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

4.2.5. COMPANY ACTIVITIES

The activity of the company refers to the detailed division of the organizational structure into business units or individuals dedicated to the production of the same nature in the national economy or other economic society. In the CHIP survey, the division of industries adopts the national standard of “National Classification of Economic Industry” (National Bureau of Statistics of China, 2011), which was first published in 1984, revised in 1994 and 2002, and revised for the third time in 2011. This revision was necessary to take into account new, emerging industries following development of the economy in latter years. In order to unify the standards, this study merges the CHIP 1995, 2002 and 2013 classifications using different criteria.

Analysis of the changes in the ratio of different company activities in 1995, 2002 and 2013 shows that many industries develop enormously during this period (see Graph 35), such as real estate, maintenance and utilities activities. The ratio of workers in companies engaged in these activities increases from 4% to 17% in the period 1995-2013. However, in terms of manufacturing industry and electricity, gas and water supply services, the percentage of people involved in these activities decreases rapidly, from 42% in 1995 to 17% in 2013, respectively.

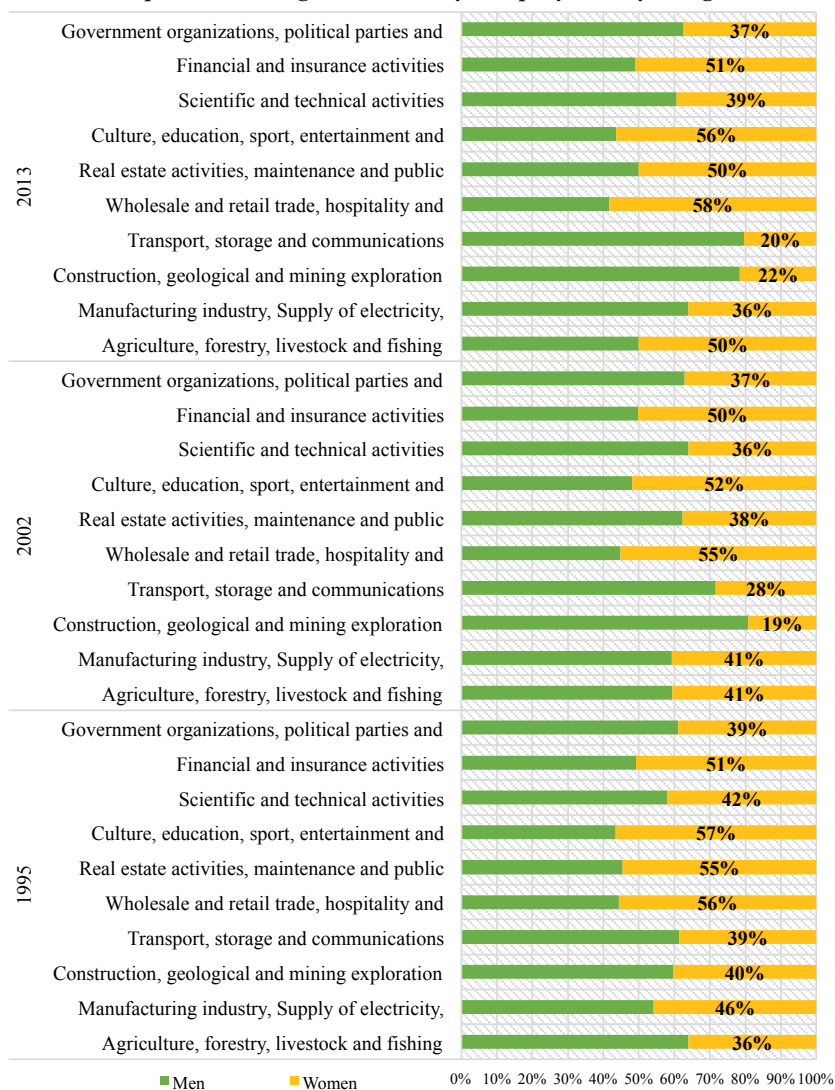
Graph 35 Percentage of workers by company activity



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

From a gender perspective (see Graph 36), we analyse the changes in the gender ratio of the main economic sectors in three years of CHIP. Specifically, in 1995, the highest percentage of workers were working in manufacturing industry, supply of electricity, gas and water (42%), women representing 46% and men 54%, followed by the wholesale and retail trade, hospitality and catering which represents 15% of workers, made up of 44% men and 56% women.

Graph 36 Percentage of workers by company activity and gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

In 2002, the industry with the highest percentage of workers is still manufacturing industry, supply of electricity, gas and water, accounting for (32%), with 41% women and 59% men. Culture, education, sport, entertainment and health represent the second highest percentage of company activity, at 16%, with men representing 48% and women 52%. In 2013, the highest percentage of workers is found in wholesale and retail trade, hospitality and catering

companies (18%), with 42% men and 58% women. Meanwhile, global organizations, political parties and social institutions maintains their proportion of workers around 12% in this period.

In general, the distribution by economic sectors has changed substantially in China since 1995, when the manufacturing industry, supply of electricity, gas and water dominated above other activities. As China's economy gradually opened up, the sectoral distribution became increasingly more evenly spread. In 2013, the largest proportion of workers was found in the wholesale and retail trade, hospitality and catering followed by culture, education, sport, entertainment and health, real estate activities, maintenance and public services.

From the perspective of annual earnings, from 1995 to 2013, annual earnings of almost all economic sectors increased (see Graph 37), and especially in the field of financial and insurance activities where the annual earnings of men rose from ¥8,472 to ¥82,296, an increase of 871.42% (remember that just the 3% of the total amount of workers develops their work in this sector). The annual earnings for women in construction, geological exploration and mining exploration saw the largest increase, from ¥5,745 to ¥46,121, an increase of 702.44% (but remember that women just represent the 22% of the 6% workers that are working in construction sector).

In 1995, the economic sector with the lowest annual earnings for men, which was ¥6,736, was Manufacturing industry, supply of electricity, gas and water while the sector with the lowest annual earnings for women, at only ¥5,421, were the wholesale and retail trade, hospitality and catering. However, the highest earnings for both sexes were observed in financial and insurance activities, with ¥8,472 for men and ¥7,326 for women.

In 2002, the economic sectors with the lowest annual earnings for men and women were the wholesale and retail trade, hospitality and catering, at only ¥10,804 and ¥8,459, respectively, while the highest earnings were seen in scientific and technical professions, at ¥18,794 and ¥18,837, respectively. Finally, in 2013, the lowest annual earnings were observed in agriculture, forestry, livestock and fishing, at ¥29,272 for men and ¥20,698 for women, with the highest being in the field of financial and insurance activities, at ¥82,296 and ¥55,370, respectively.

This part of the data shows that, with the implementation of China's reform and open market policy and its accession to the World Trade Organization in 2001, China's industrial structure changed significantly in many aspects, reflected not only in the increase in annual earnings but also in the

gender pay gap. Graph 37 shows women's earnings are much lower than men's in practically all economic sectors (with only one exception in 2002).

Looking at Graph 38 we can deduce that in 1995 the gender pay gap between various activities fluctuated little, which shows that the market-oriented economy had an impact on China's sectoral structure, not letting the gender pay gap widen. On the other hand, the gender pay gap in 2013 was the widest in many work activities compared to 1995 and 2002, and the fluctuation between different activities is also relatively large. For example, in construction, geological exploration and mining exploration, the annual gender pay gap is gradually decreasing, with values of 24.5%, 12.6% and 2.5% for the years 1995, 2002 and 2013, respectively. In 2013, the gender pay gap in this field is already very small, which shows that women are gradually exerting an equal role in this field. The incorporation of women in this sector has taken place in highly qualified positions, rather than low.

In contrast, in financial and insurance activities the annual gender pay gap increased considerably, going from 13.5% to 18.1% and reaching 32.7% over the three years surveyed. However, it should be noted that annual earnings for women in these activities are the highest in all women's activities, but annual earnings for men are still much higher than that of women. Also, in wholesale and retail trade, hospitality and catering the gender pay gap has increased during this period ten percentage points, reaching 30.0% in 2013. Be careful with this sector where women represent a 58% of the workers, what means that it is a feminized activity. Another sector which deserves our attention is the group called government organizations, political parties and social institutions because the gender pay gap has increased from a little 4.7% in 1995, to a 13.5% in 2002, reaching a worrying 24.4% in 2013. This is one of the most masculinized sectors, with a 63% of men working, after transport (80%), construction (78%) and manufacturing industry (64%). Also, in agriculture, forestry, livestock and fishing the gender pay gap reaches a 29.3% in 2013, which, together with the fact that it is the sector where wages are lower, leaves women in this sector at a clear disadvantage.

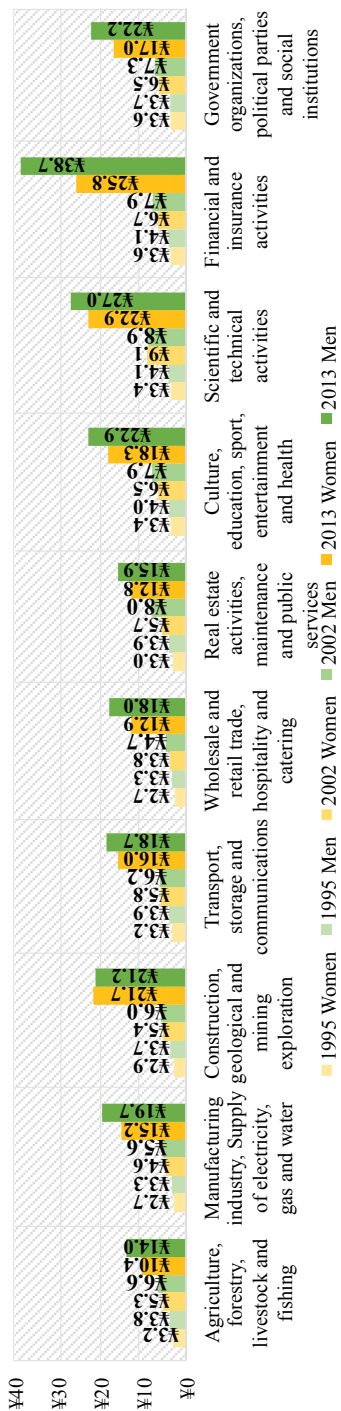
From the perspective of hourly earnings (see Graph 39), from 1995 to 2013, hourly earnings in various activities increased significantly but men's hourly earnings were seen to be higher than women's in most work activities. In particular, in 2013, the gender pay gap related to hourly earnings increased greatly in many activities, which seems to indicate that women faced increasing discrimination in most activities, as shown in Graph 40.

Interestingly, scientific and technical activities in 2002 show a gender pay gap of -2.3%, indicating that hourly earnings for women in this economic sector are higher than those for men. This data could be due to a greater level of females qualified in this field of scientific and technological research, development and software computing.

Also, in construction, geological exploration and mining exploration activities in 2013, the gender pay gap is negative, in this case at -2.4%. This means that women's hourly earnings are 2.4% higher than men's. Perhaps this is due to the flexible working hours in this economic sector, as tasks can generally be completed within a prescribed time limit. Nevertheless, in 2013 the gender pay gap returned to a 15%, so perhaps it was due to a sampling error.

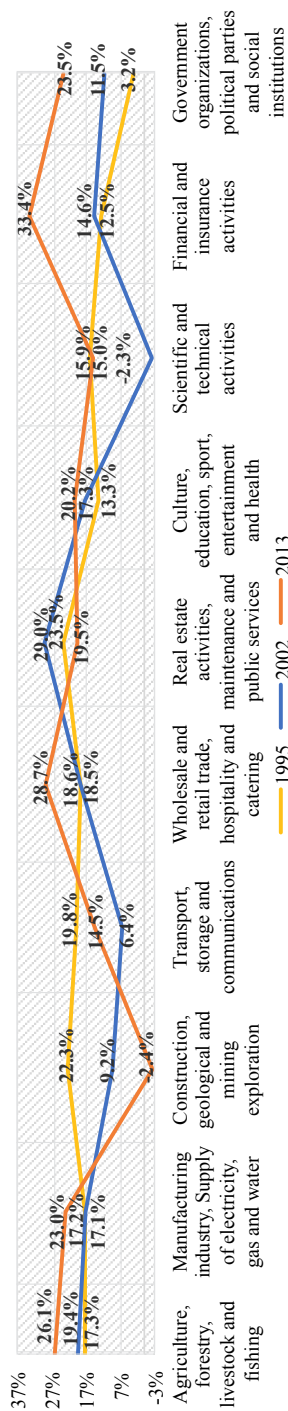
In the activities where the women are less paid, such as agriculture, forestry, livestock and fishing or in wholesale and retail trade, hospitality and catering, the gender pay gap measured from wages per hour has increased since 1995 to 2013, reaching 26.1% and 28.7%, respectively. Also, the gender pay gap is dramatic in financial and insurance activities, with a 33.4%, and in government organizations, political parties and social institutions, where the gender pay gap has increased from a 3.2% in 1995 to a 11.5% in 2002, and to a 23.5% in 2013. It seems worrying because the government should take care of equal pay per hour. Note again that, in construction, geological and mining exploration sector, women earn a little bit more than men, which is translated in a negative gender pay gap of a -2.4%. This may be due to the best qualified jobs where the women are working in these companies.

Graph 39 Average hourly earnings by gender and company activity



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Graph 40 Gender pay gap related to average hourly earnings and company activity

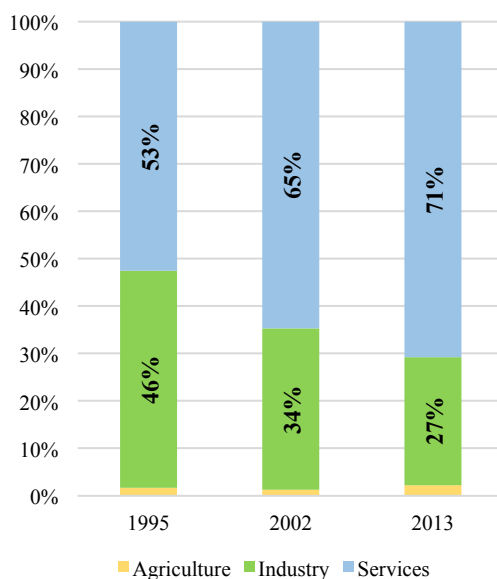


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

After analysing the detailed divisions, we divide the activities of the companies according to the “Regulation on the Division of the Three Industries” issued by the National Bureau of Statistics of China in 2012, to analyse them in the three different classic economic sectors: agriculture, industry and services.

Economic sectors	
Agriculture	Agriculture, forestry, livestock and fishing
Industry	Manufacturing industry, Supply of electricity, gas and water
	Construction, geological and mining exploration
Services	Transport, storage and communications
	Wholesale and retail trade, hospitality and catering
	Real estate activities, maintenance and public services
	Culture, education, sport, entertainment and health
	Scientific and technical activities
	Financial and insurance activities
	Government organizations, political parties and social institutions

Graph 41 Percentage of workers by sector of activity in China in 1995, 2002 and 2013

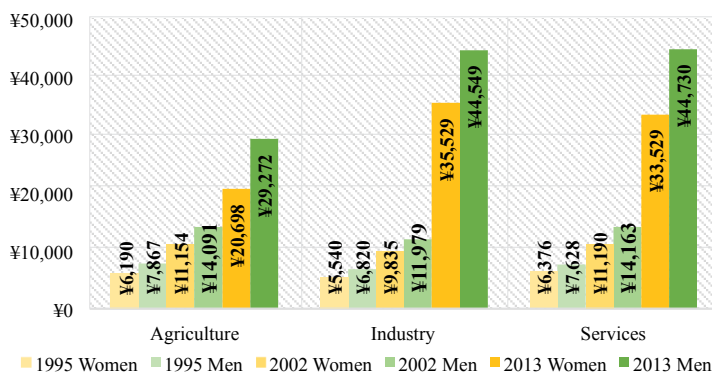


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

After grouping the data provided by CHIP for the years 1995, 2002 and 2013 it shows that the percentage of workers in the service sector has increased a lot (see Graph 41), representing 53%, 65% and 71% of workers, respectively, while the percentage in the industrial sector is gradually decreasing, representing 46%, 34% and 27% of workers over the three years surveyed. The percentage of workers in the agricultural sector remains constant at 2%. This shows that China's sectoral structure is being transformed.

With the impact of a market economic system and the improvement of the industrial structure, annual earnings in the three activity sectors undergo significant changes. From 1995 to 2013, annual earnings in the industrial sector increased much more (see Graph 42). Men's annual earnings rose from ¥7,867 to ¥44,549, an increase of 553.2%, and women's earnings rose from ¥6,820 to ¥35,529, an increase of 518.3%. The growth rate of the agricultural sector is relatively small, with men's earnings increasing from ¥7,867 to ¥29,272, an increase of 272%, and women's earnings increasing from ¥6,190 to ¥20,698, an increase of 234.3%. Always women see how their salaries grow less than men ones, widening the gender pay gap.

Graph 42 Average annual earnings of workers by gender and activity sector

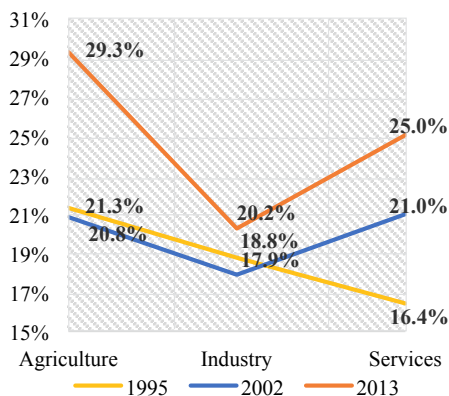


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

The widest gender pay gap (see Graph 43), from a temporal point of view, was recorded in 2013 in the agricultural sector, at 29.3%, followed by the services sector with 25% and finally the industrial sector with 20.2%. From the sectoral perspective, the gender pay gap in the industrial sector changed little at 18.8%, 17.9% and 20.2% in 1995, 2002 and 2013, respectively, but increasing. In the agricultural sector, the pay gap decreased from 1995 to 2002 but rose

eight percentage points in 2013, to 29.3%, while in the services sector the pay gap progressively increased from 16.4% to 25%.

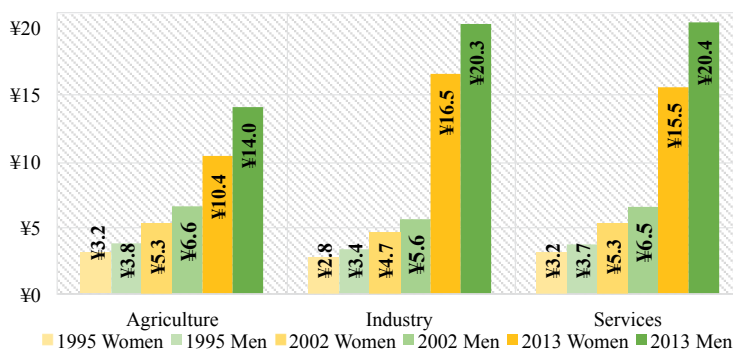
Graph 43 Gender pay gap related to average annual earnings by activity sector



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Hourly earnings in 1995, 2002 and 2013 increased in all sectors (see Graph 44). The most obvious growth is in the industrial sector. Hourly earnings for men increased by 504.8% and for women by 499.5%. The slowest growth occurred in the agricultural sector, with hourly earnings for men increasing by 268% and women by 228.9%. The service sector also grew faster, with hourly earnings for men increasing by 445.5% and women by 388.2%. However, women's hourly earnings did not increase as much as men's.

Graph 44 Average hourly earnings by gender and activity sector

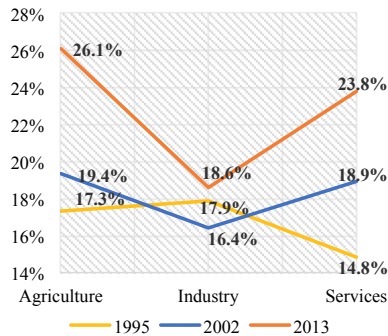


Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Analysis of the gender pay gap of hourly earnings shows the gap remains very high after having corrected the higher female presence of women in partial jobs (see Graph 45). For example, from 1995 to 2013, the gender pay gap in the agricultural sector increased from 17.3% to 26.1%, the service sector increased from 14.8% to 23.8%, with less growth in the industrial sector, which reached 18.6% in 2013.

According to the daily hours per worker, we discover that the daily working hours of women in different sectors are less than those of men. In particular, female workers in the agricultural sector have lower hours per day per worker compared to men, working 7.35 and 7.65 hours in 1995 and 2013, respectively (see Graph 46). This suggests that women in the agricultural sector cannot achieve the corresponding income due to various reasons, one of which is family care commitments.

Graph 45 Gender pay gap related to average hourly earnings and activity sector



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

Graph 46 Average daily hours worked by activity sector and gender



Source: compiled by the authors with data taken from CHIP 1995, CHIP 2002, CHIP 2013.

4.3. MULTIDIMENSIONAL ANALYSIS IN 2013

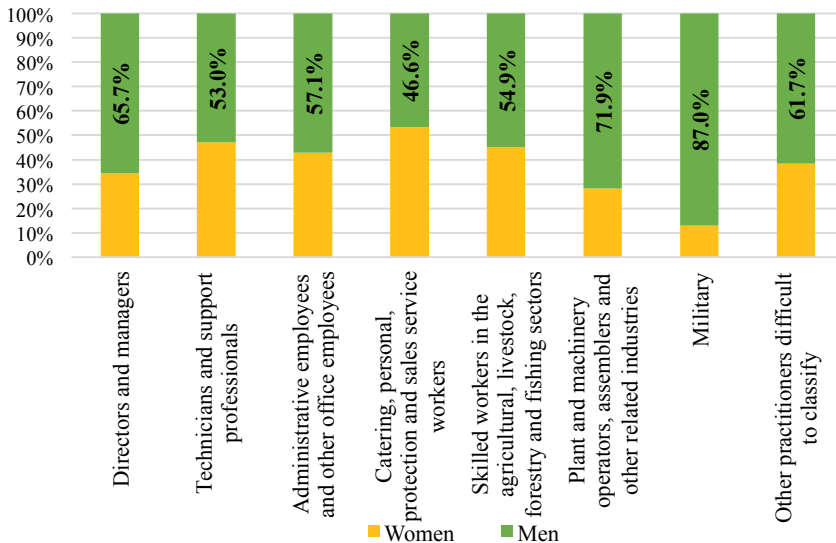
4.3.1. OCCUPATION

Occupation is understood as the social role of workers, a role through which workers assume certain obligations and responsibilities for society and, in exchange, receive the corresponding remuneration. According to the “Occupational Classification of the People’s Republic of China” issued by the Ministry of Labour and Social Security, the General Administration of Quality Supervision, Inspection and Quarantine and National Bureau of Statistics of China in May 1999, occupations are divided into 8 categories and 51 secondary classifications.

As CHIP provides the 51 cited secondary classifications, in this section they can be grouped into 8 categories following the guidelines. However, in the secondary classifications there are 12 occupations for which the sample size is insufficient, so these data will not be included.

Of the working population, women represent 43% and men the remaining 57%. Graph 47 shows the percentage of gender in the different occupations.

Graph 47 Percentage of workers by occupation and gender



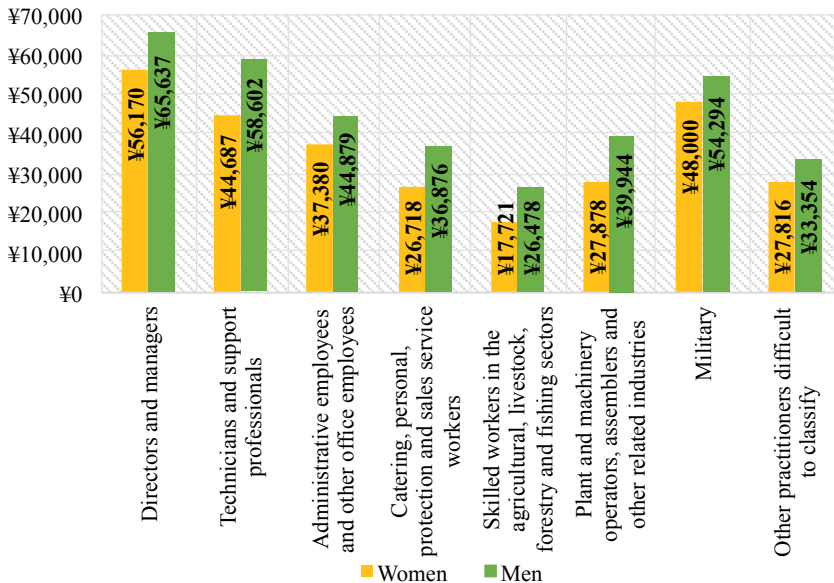
Source: compiled by the authors with data taken from CHIP 2013.

In the 8 occupational categories studied, there is only a higher proportion of women than men among workers in catering, personal, protection and

sales service, where women represent 53.4% of the workforce. In the other 7 categories, the proportion of men exceeds that of women, in particular in the two categories of operators of installations and machinery, and assemblers and other related and military occupations, where the percentage of men is higher than 70%. Also, directors and manager jobs are occupied by 65.7% men.

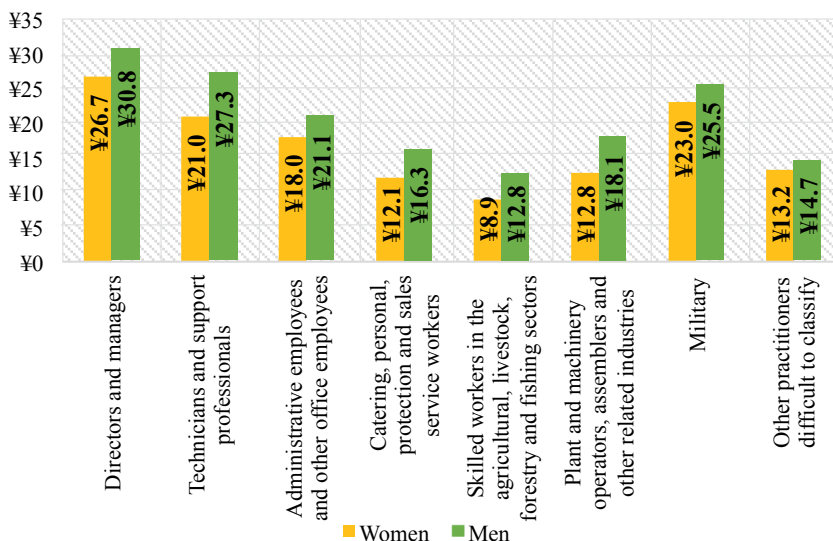
Again, according to 2013 annual earnings data, women’s earnings are lower than men’s in all categories (see Graph 48). In directors and managers, men’s earnings are the highest among all categories, reaching ¥65,637, while that of women is ¥56,170. However, qualified workers in the agricultural, livestock, forestry and fishing sectors are those who earn less per year, with men earning ¥26,478 and women, ¥17,721. But in addition to having the lowest earnings, this type of occupation also has the largest gender pay gap. Graph 49 shows that the gender annual pay gap of skilled workers in the agricultural, livestock, forestry and fishing sectors reaches 33.1%. In other words, women’s earnings represent 66.9% of men’s earnings per year. In contrast, directors and managers and the military occupations have much higher earnings and a very low gender pay gap. These results are consistent with the ones seen in the educational level subsection.

Graph 48 Average annual earnings of workers by gender and occupation



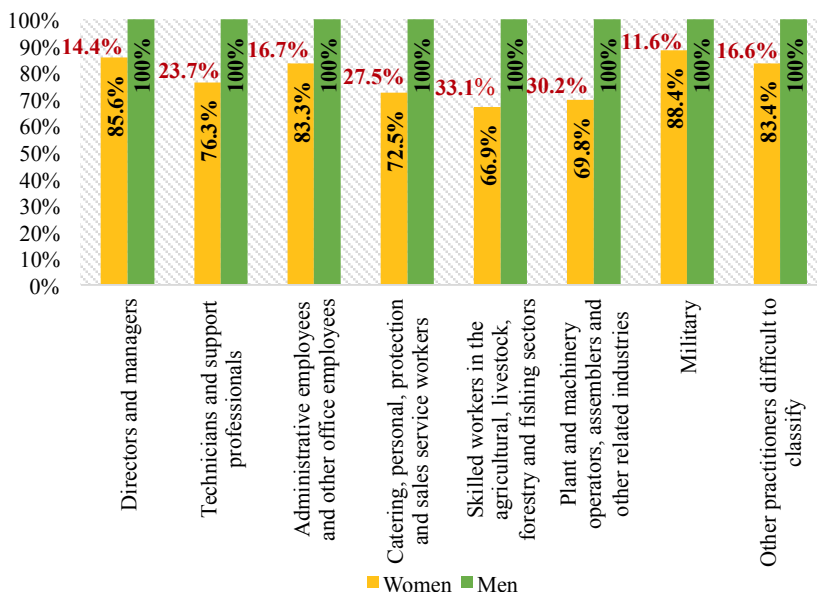
Source: compiled by the authors with data taken from CHIP 2013.

Graph 49 Gender pay gap on average annual earnings by occupation



Source: compiled by the authors with data taken from CHIP 2013.

Graph 50 Average hourly earnings by gender and occupation

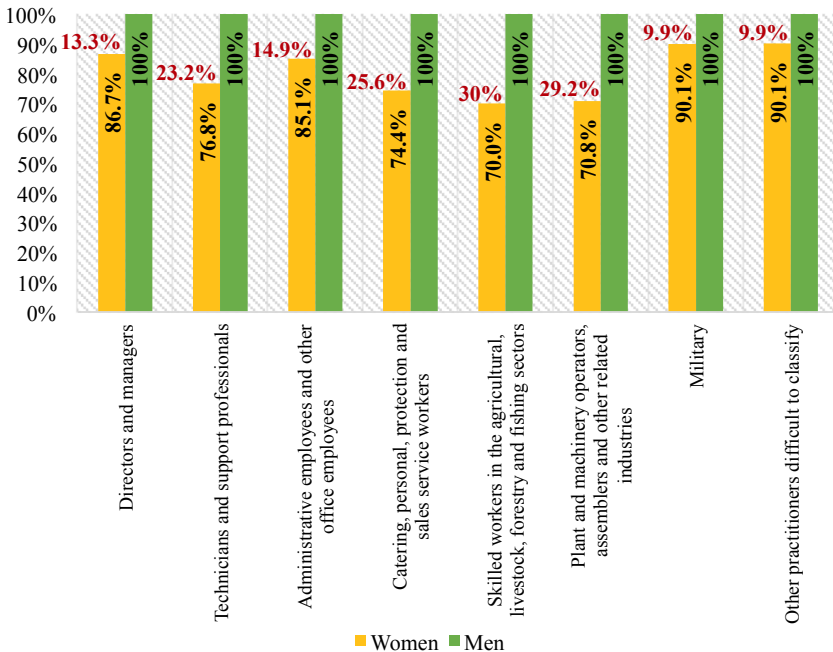


Source: compiled by the authors with data taken from CHIP 2013.

From the perspective of hourly earnings (see Graph 50), the people in charge of directors and managers continue to be the highest paid (for men and women: ¥30.8 and ¥26.7, respectively). This is 142% higher than the lowest-paid hourly staff, which is again that of skilled workers in the agricultural, livestock, forestry and fishing sectors, with wages per hour of only ¥12.8 and ¥8.9 for men and women, respectively.

The gender gap in hourly earnings for skilled workers in the agricultural, livestock, forestry and fishing sectors is also the highest, reaching 30% (see Graph 51). The category which includes plant and machinery operators, assemblers and other related workers shows a 29.2% gender pay gap, with the proportion of male employees also being very high in this category. So, these two high figures show us that the gender pay gap in these two occupation groups it is not due to a greater proportion of partial jobs among women, but to a great difference on salaries because discrimination or other reasons. Also, workers in catering, personal, protection and sales services, who represent a relatively high proportion of employed women, have a high gender pay gap, a 25.6%.

Graph 51 Gender pay gap related to average hourly earnings and occupation

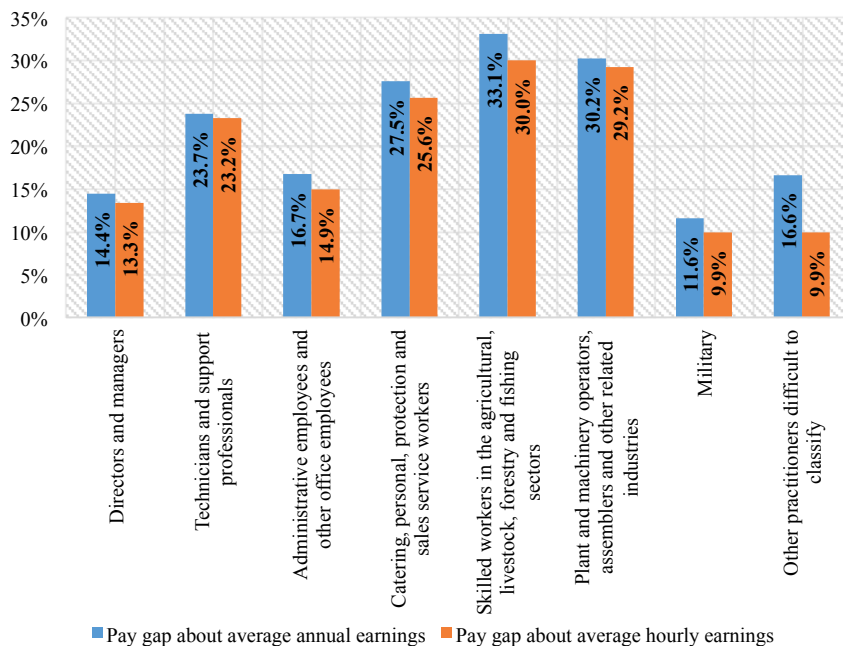


Source: compiled by the authors with data taken from CHIP 2013.

At the other extreme is the gender pay gap for hourly earnings for military occupations, which is 9.9%. The reason the gender pay gap in this category is smaller is because the state has provided adequate protection for the employment of female soldier personnel. Therefore, this category is greatly influenced by national policies. But remember that just the 13% of militaries were women.

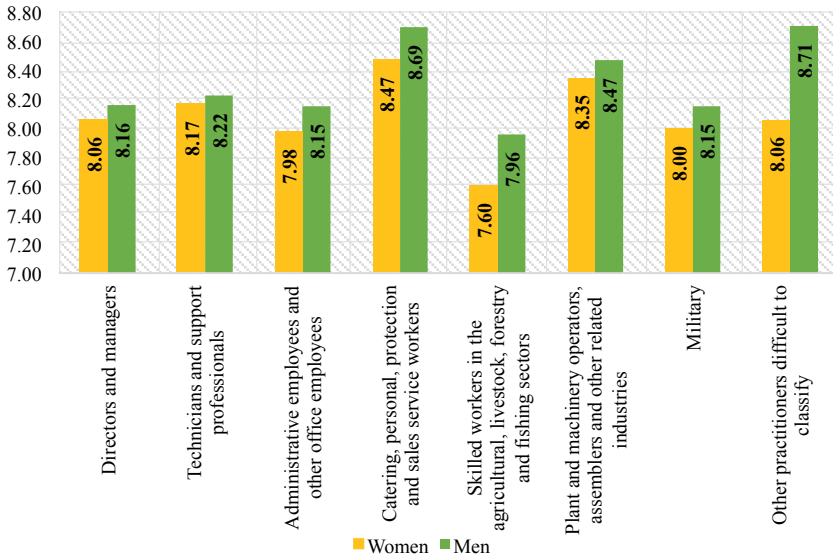
Graph 52 shows the gender pay gap between annual earnings and hourly earnings. Skilled workers in the agricultural, livestock, forestry and fishing sectors and other practitioners who are difficult to classify have a difference between the two, these being 3.1 and 6.7 percentage points, respectively. This is because women's daily working hours are less than men's due to a greater proportion of partial jobs among women, as shown in Graph 53.

Graph 52 Gender pay gap related to average annual earnings and hourly earnings depending on occupation



Source: compiled by the authors with data taken from CHIP 2013.

Graph 53 Average daily hours worked by occupation and gender

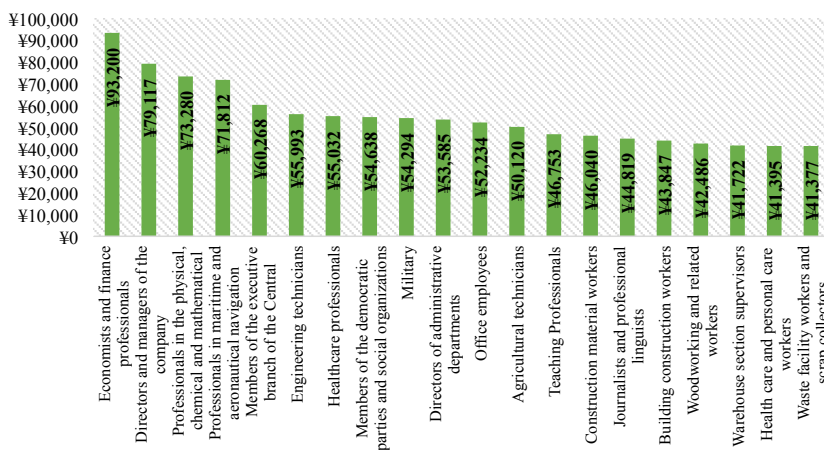


Source: compiled by the authors with data taken from CHIP 2013.

To go deeper in this interesting issue of the salaries that women and men receives in each occupation, we analyse the pay gap of 51 occupations based on CHIP data to show clearly the gender pay gap in each specific occupation. In the annual earnings section, this study just shows 20 occupations, which presents higher and lower annual earnings for women and men, respectively.

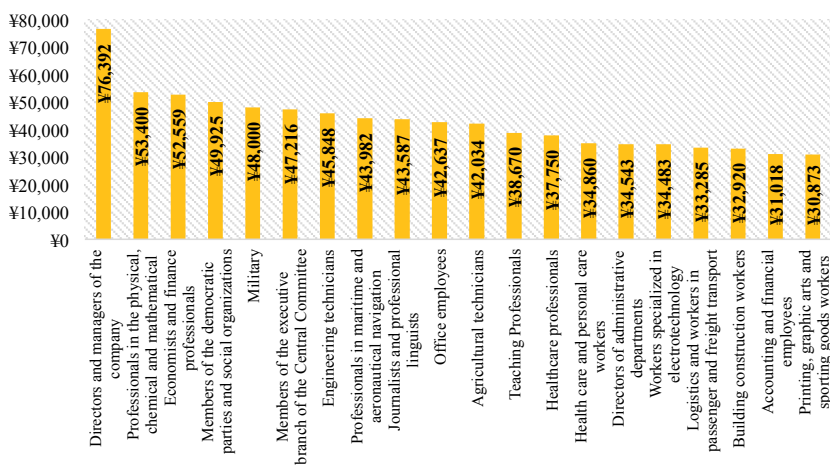
As shown in Graphs 54-57, the top 20 occupations with the highest annual earnings are different for men and women. Specifically, men employed as economists and finance professionals, directors and managers of the company, professionals in the physics, chemistry and mathematical sciences, and professionals in maritime and aeronautical navigation have earnings which exceed ¥70,000, specifically ¥93,200, ¥79,117, ¥73,280 and ¥71,812, respectively. In our previous analysis of the overall situation, men’s average annual earnings in 2013 were only ¥44,278, clearly showing that the annual earnings for these aforementioned occupations are way above the average.

Graph 54 Highest average annual earnings by men and occupation



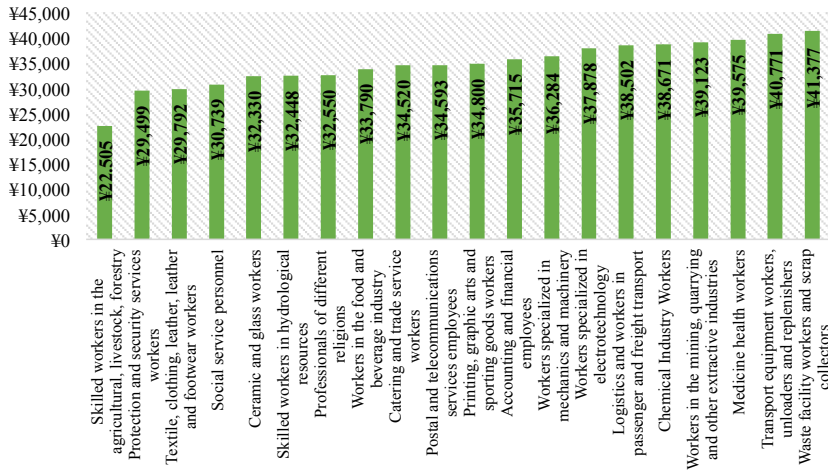
Source: compiled by the authors with data taken from CHIP 2013.

Graph 55 Highest average annual earnings for women and occupation



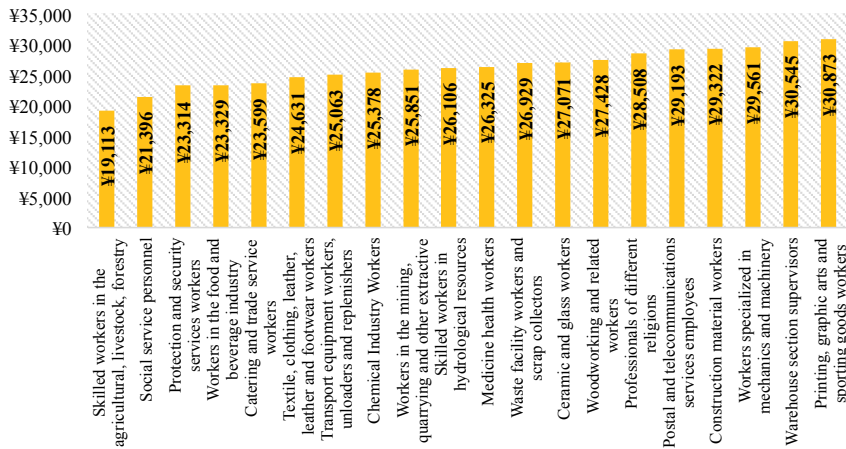
Source: compiled by the authors with data taken from CHIP 2013.

Graph 56 Lowest annual average earnings for men by occupation



Source: compiled by the authors with data taken from CHIP 2013.

Graph 57 Lowest average annual earnings for women by occupation

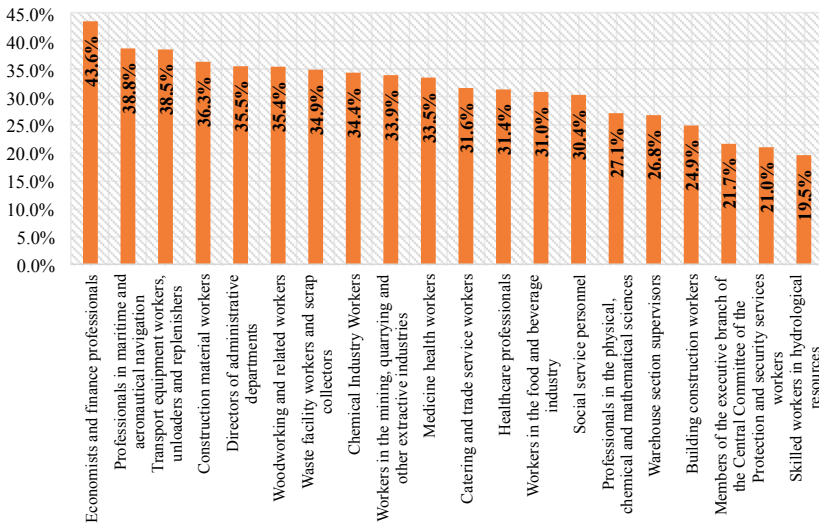


Source: compiled by the authors with data taken from CHIP 2013.

Among the occupations with the lowest annual earnings are that of men and women as skilled workers in the agricultural, livestock, forestry and fishing sectors, with average annual earnings of ¥22,505 and ¥19,113, respec-

tively. Even in this case, the annual earnings of women are still 17.7% lower than that of men. In addition, women have 18 occupations with annual earnings of less than ¥30,000, which shows that the gender pay gap is generalized. This phenomenon can be seen more clearly in Graph 58.

Graph 58 Highest gender pay gap related to average annual earnings per occupation

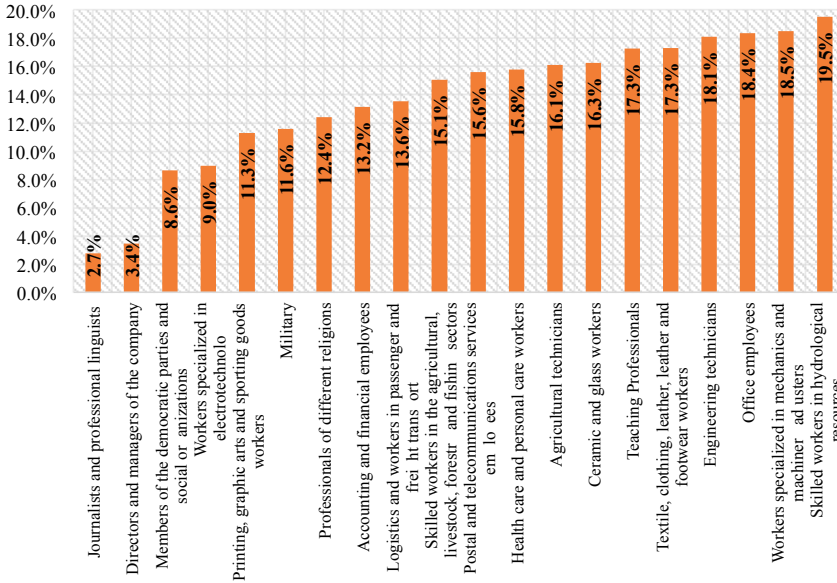


Source: compiled by the authors with data taken from CHIP 2013.

Among those people employed as economists and finance professionals, there is a gender pay gap of 43.6%. Therefore, women suffer more discrimination in this occupation because of their family commitments outside of work which limit their ability to work full time. In the three occupations of professionals in maritime and aeronautical navigation, transport equipment workers, unloaders and replenishers, and construction material workers, the gender pay gap for annual earnings is 38.8%, 38.5% and 36.3%, respectively. These occupations require more manual labour. Therefore, when employers choose employees, women are more likely to be discriminated against or overlooked.

Occupations with a lower gender pay gap include that of people employed as journalists and professional linguists, which is only 2.7%. (see Graph 59).

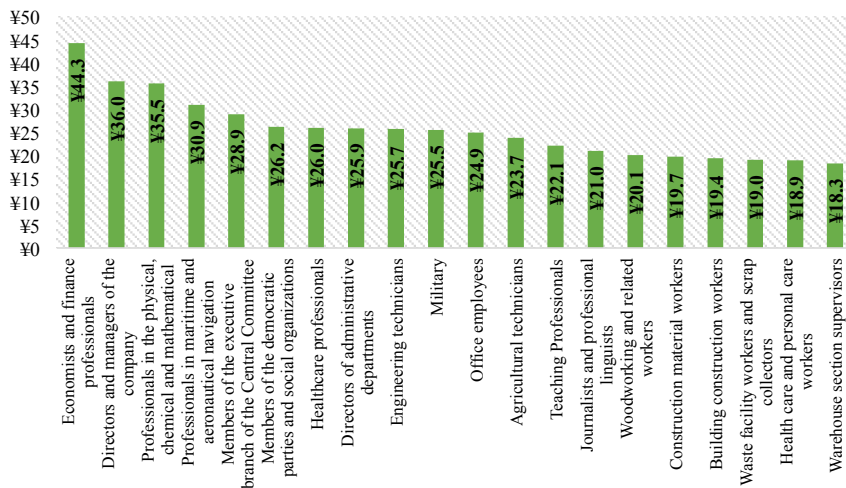
Graph 59 Lowest gender pay gap related to average annual earnings per occupation



Source: compiled by the authors with data taken from CHIP 2013.

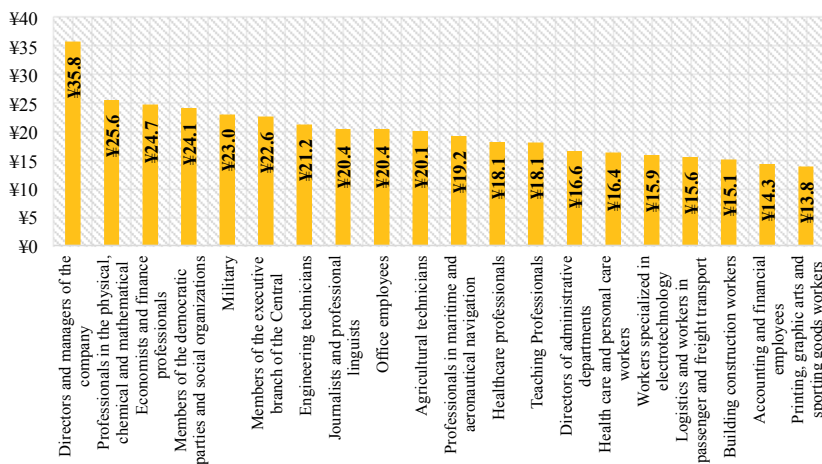
Analysis of hourly earnings (see Graphs 60-61) shows that men’s wages for economists and finance professionals, directors and managers of the company, professionals in the physics, chemistry and mathematical sciences, professionals in maritime and aeronautical navigation continue to be the highest, at ¥44.3, ¥36, ¥35.5 and ¥30.9, respectively, with all wages being over ¥30. However, among women, only directors and managers of a company exceed ¥30, reaching ¥35.8, followed by professionals in the physics, chemistry and mathematical sciences and economists and finance professionals, with hourly earnings of ¥25.6 and ¥24.7. It is clear that in occupations with higher hourly earnings, greater knowledge and a higher level of education are required. Working towards gender equality in education will also have an indirect effect on the wages of men and women and their future occupations.

Graph 6o Highest average hourly earnings by men and occupation



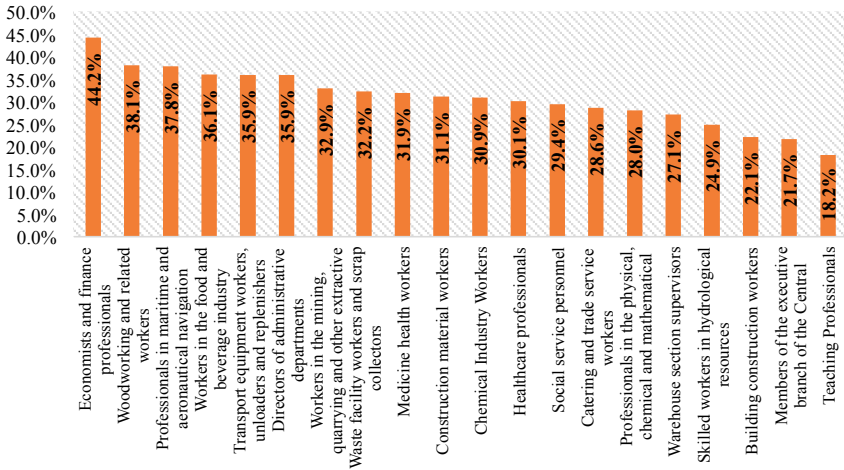
Source: compiled by the authors with data taken from CHIP 2013.

Graph 6i Highest average hourly earnings by women and occupation



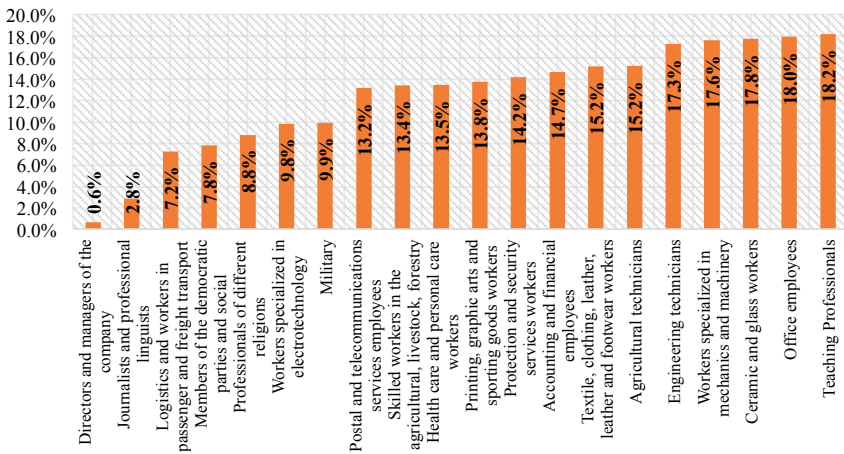
Source: compiled by the authors with data taken from CHIP 2013.

Graph 62 Highest gender pay gap related to average hourly earnings and occupation



Source: compiled by the authors with data taken from CHIP 2013.

Graph 63 Lowest gender pay gap related to average hourly earnings and occupation



Source: compiled by the authors with data taken from CHIP 2013.

Consequently, women employed as economists or financial professionals suffer the largest gender pay gap for hourly earnings, at 44.2% (see Graph 62). However, in this occupation, hourly earnings for men and women are very high, reaching ¥44.3 and ¥27.4, respectively, which are much higher

than the overall average wages for men and women. Therefore, we found that the gender pay gap in this high-wage occupation is wide perhaps because women are torn between devoting time to their career or their home commitments. But this does not happen in the directors' career. The smallest gender pay gap is seen in the wages of directors and managers of the company (see Graph 63), this being only 0.6%. In this occupation, male and female workers have greater decision-making power and generally have the right to independently decide their own wage, which seems to be similar in both genders.

4.3.2. EMPLOYMENT STATUS AT WORK

In this section, the gender pay gap is analysed according to the worker's employment status. Under the CHIP classification, employment status is classified into four main types: employer, employee, self-employed, and family worker.

Employer refers to people who self-finance, have corporate decision-making power, hire employees and pay them wages. An employee refers to those who work for an employer and receive wages. Self-employed worker refers to an operator who is self-financing, has decision-making power and does not employ others. Family worker refers to workers in companies run by relatives, people without decision-making power and without wages, with any income being the property of the family.

These four divisions can help identify the annual earnings, the hourly wage and the gender pay gap based on the different employment status of working people.

First, the proportion of men and women in the different types of employment shows us a great amount of information (see Graph 64). Among employers, men represent 71% and women only 29%. This can be due to the classic greater entrepreneurial capacity on the part of men in the society. The proportion of employees and self-employed is also higher for men than for women; men represent 57% and women only 43%, but the difference is not so marked. By contrast, in the case of family workers, women represent 76%, which talks about a less freedom for women when deciding their future employment. Remember that this can also be a free choice. But the pressure that from time immemorial has been placed on women to stay and take care of the family business may be among the reasons for this greater female presence in this type of job. And this has salary consequences, since as we will see now, they are the women who earn the least.

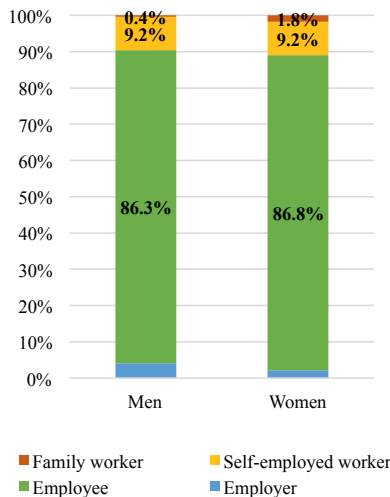
Graph 64 Percentage of workers by employment status and gender



Source: compiled by the authors with data taken from CHIP 2013.

It is very important to note the differences by gender on their type of employment (graph 65). Firstly, most of women and men are employees, around 86%, and 9.2% are self-employed workers. But the differences between genders can be observed in the proportion of employers: 4% for men and just 2.2% for women. And in family workers, because 1.8% of the women work with their families while just 0.4% of the men do.

Graph 65 Percentage of workers by employment status and gender



Source: compiled by the authors with data taken from CHIP 2013.

Graph 66 shows that employers have the highest annual earnings, ¥89,162 for men and ¥67,554 for women (and remember that women were just the 29%) while employees annual earnings are lower, at less than half that of the employer. This shows that between the status of employer and employee, the difference in annual earnings is huge. The annual earnings of the self-employed worker are lower than that of employers and employees, ¥40,472 for men and ¥29,455 for women. The annual earnings of the family worker are, in comparison, the lowest, ¥28,395 for men and ¥29,219 for women. This is because this type of work is auxiliary. However, in this last group of occupations the annual earnings for women are ¥842 higher than that of men, which is rarely seen in previous analyses. As a result of working in a family business, women are far less discriminated against than in other work situations, but salaries are very low, in contrast.

Graph 66 Percentage of workers by employment status and gender



Source: compiled by the authors with data taken from CHIP 2013.

The gender pay gap related to the annual earnings for employers, employees and family workers are relatively large, being 24.2%, 22% and 27.2% respectively (see Graph 67). The gender pay gap for family workers is -2.9%, due to the higher annual earnings of women than that of men in this group. As mentioned earlier, the proportion of women in this work situation is as high as 76%, which also shows that women in this type of work hold a dominant position, although the annual earnings of the family worker are the lowest of all types of employment status.

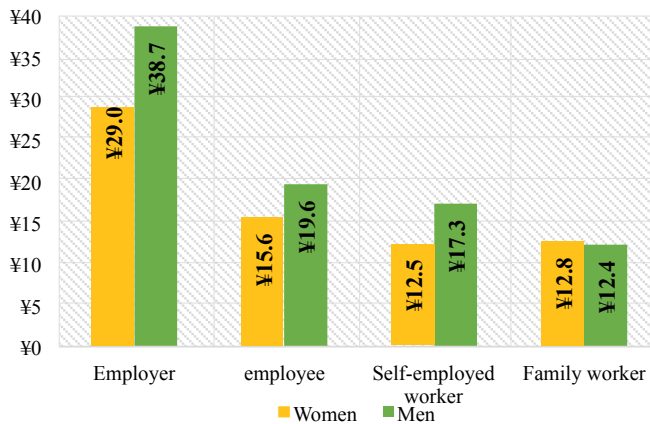
Graph 67 Gender pay gap related to average annual earnings by employment status



Source: compiled by the authors with data taken from CHIP 2013.

From an hourly wage perspective, among employers, the hourly wage for men is ¥38.7 and for women, ¥29, which is the highest for all types of employment (see Graph 68). Employees show hourly earnings of ¥19.6 for men and ¥15.6 for women, which is much lower than employers' hourly earnings. The difference in hourly earnings of men and women for self-employed workers is the largest, with ¥17.3 for men and ¥12.5 for women, a difference of 38.1%. Among the hourly earnings of family workers, men are paid ¥12.4 and women slightly more, at ¥12.8.

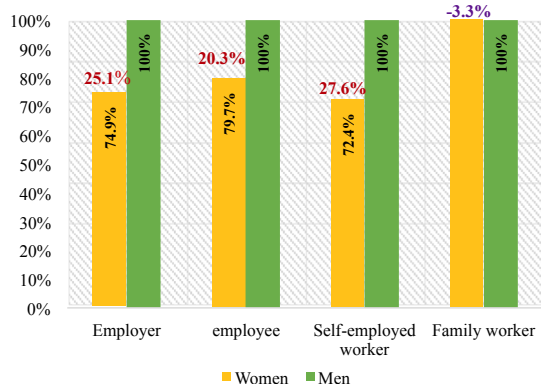
Graph 68 Average hourly earnings by gender and employment status



Source: compiled by the authors with data taken from CHIP 2013.

From the perspective of gender pay gap related to hourly earnings, the highest is observed for employers and self-employed workers, at 25.1% and 27.6%, re-spectively. This is greater than the gender pay gap related to annual wages, as shown in Graph 69.

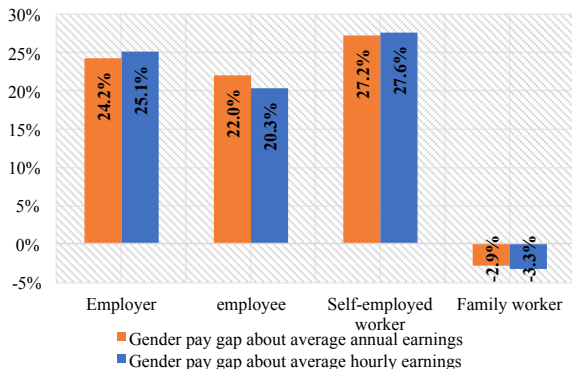
Graph 69 Gender pay gap related to average hourly earnings and employment status



Source: compiled by the authors with data taken from CHIP 2013.

Furthermore, we find that the gender pay gap in hourly earnings for employers and for self-employed workers is greater than the corresponding gender pay gap in annual earnings (see Graph 70). Based on daily working hours, this is found to be because women work longer hours than men (see Graph 71), which is rarely seen in previous analyses.

Graph 70 Gender pay gap related to average hourly earnings and employment status



Source: compiled by the authors with data taken from CHIP 2013.

Graph 71 Average daily hours worked by employment status and gender



Source: compiled by the authors with data taken from CHIP 2013.

4.3.3. TYPE OF BUSINESS

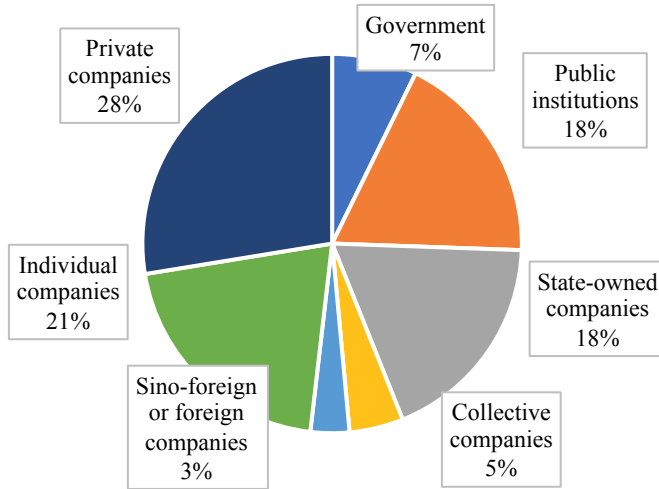
Due to the presence of the socialist system in China, the types of companies are also quite different from the capitalist system. For example, China's public institutions are social service organizations organized or owned by state bodies. Collective companies refer to the collective ownership of means of production by the workers with the government acting as their agent. These types of companies have a significant presence in China. The analysis discussed in this section focuses on the distribution characteristics and the gender pay gap of these types of companies.

According to Graph 72, private companies represent the highest proportion, at 28%, followed by individual companies, at 21%, and state-owned companies and public institutions at 18%. Thereafter, the government, collective companies and Sino-foreign or foreign company make up 7%, 5% and 3% of companies, respectively. In the gender ratio (see Graph 73), the proportion of men from all types of companies is greater than that of women. Among them, the proportion of men in government and state-owned companies is higher, reaching 66% and 65%, respectively.

Although the proportion of Sino-foreign or foreign company has the smallest presence, at only 3%, these companies show the highest annual earnings, with men reaching ¥67,458 and women ¥48,573. This is followed by the annual earnings paid to government personnel, with men and women

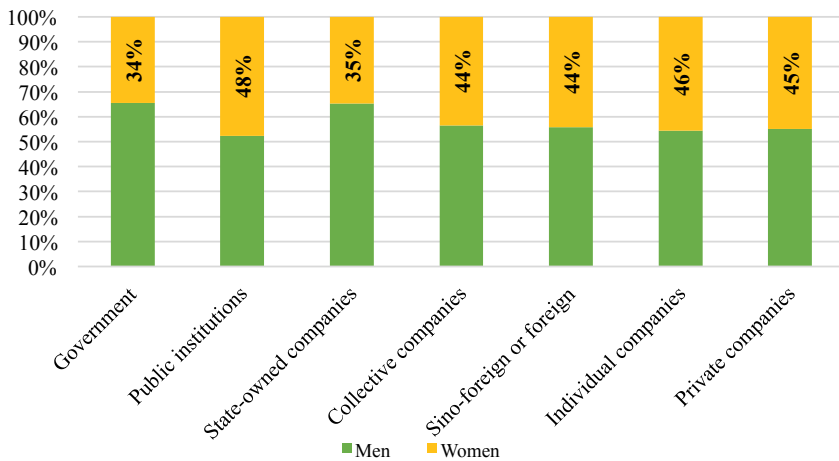
reaching ¥49,052 and ¥38,161, respectively, and men representing the highest proportion of workers in this type of company. The lowest annual earnings are seen in collective companies, with ¥39,118 for men and ¥26,748 for women (see Graph 74).

Graph 72 Percentage of workers in each type of company



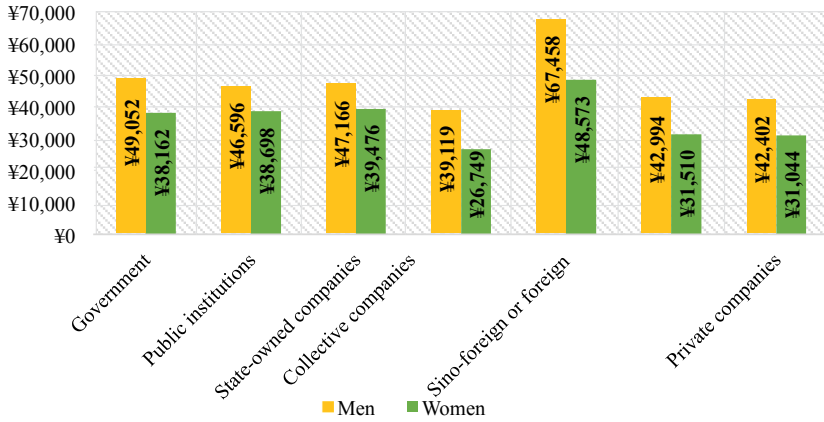
Source: compiled by the authors with data taken from CHIP 2013.

Graph 73 Percentage of workers by type of company and gender



Source: compiled by the authors with data taken from CHIP 2013.

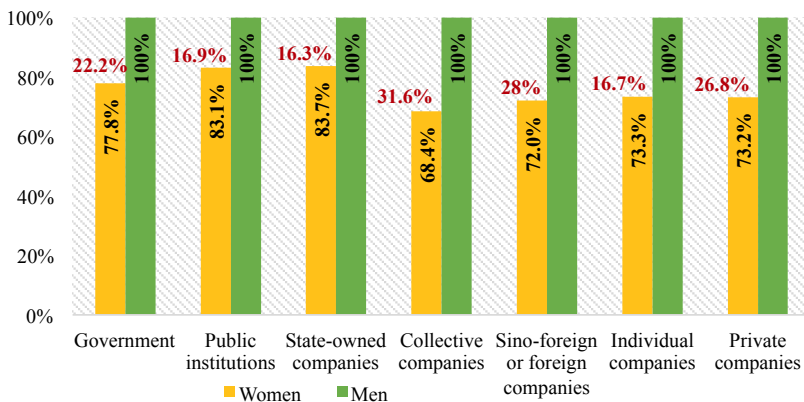
Graph 74 Average annual earnings of workers by gender and type of company



Source: compiled by the authors with data taken from CHIP 2013.

As can be seen, the annual earnings of men are much higher than that of women in all types of companies. Graph 75 shows that the gender pay gap of annual earnings of collective companies is the largest, at 31.6%, which means that the proportion of women’s annual earnings is 68.4% that of men’s annual earnings.

Graph 75 Gender pay gap related to average annual earnings by type of company



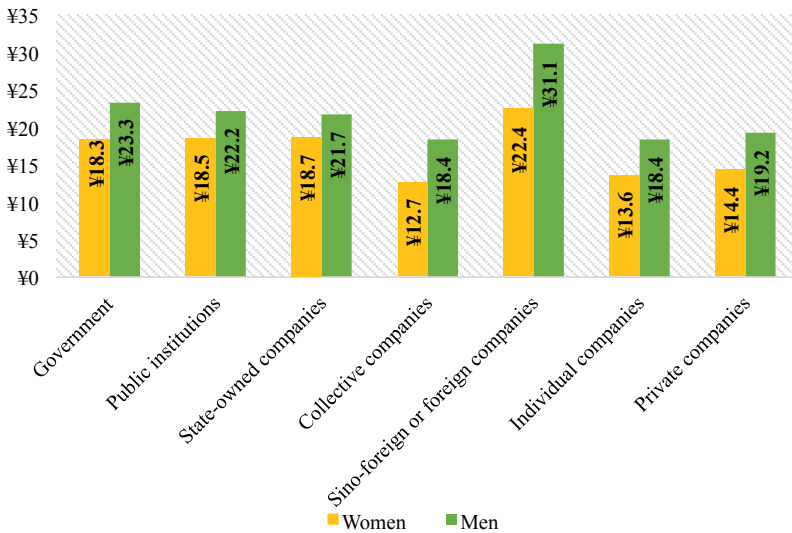
Source: compiled by the authors with data taken from CHIP 2013.

According to previous data, collective companies have the lowest annual earnings and men represent a high percentage of the workforce of this type of company, up to 65%. It is clear that collective companies show a greater degree of inequality in the pay gap.

Furthermore, although the annual earnings of sino-foreign or foreign companies is high, the gender pay gap is also relatively wide, at 28%. In the relatively high proportion of private companies and individual companies, the gender pay gap per annual earnings is also wide, at 26.8% and 26.7% respectively. Controlled by the state, for example, the government, public institutions, and state-owned companies have relatively small gender pay gaps of 22.2%, 16.9%, and 16.3%, respectively.

From the perspective of hourly earnings, those of Sino-foreign or foreign companies continue to be the highest (as shown in Graph 76), which is related to the large influx of funds from the international market following the opening up of China's economy and the attraction of its huge consumer market.

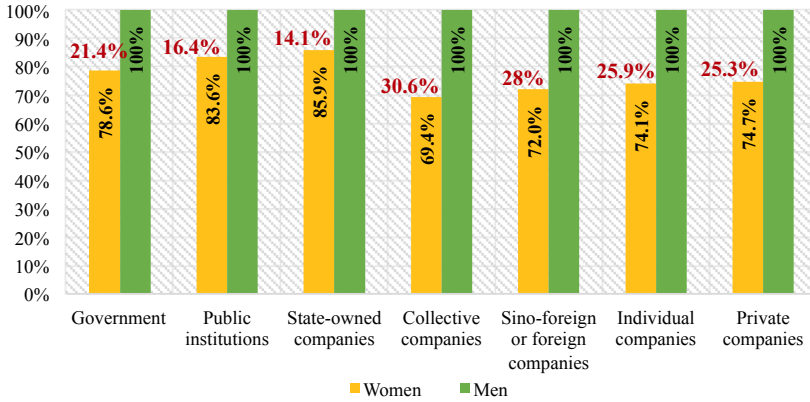
Graph 76 Average hourly earnings by gender and type of company



Source: compiled by the authors with data taken from CHIP 2013.

Among the gender pay gap of hourly earnings, that of collective companies remains the largest, at 30.6% (see Graph 77). Excepting in public institutions or State-owned companies, in the rest of types hourly gender pay gap is greater than 20%.

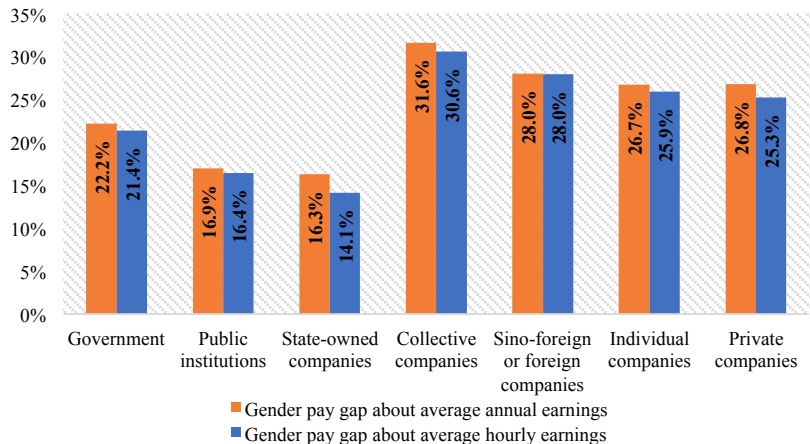
Graph 77 Gender pay gap related to average hourly earnings and type of company



Source: compiled by the authors with data taken from CHIP 2013.

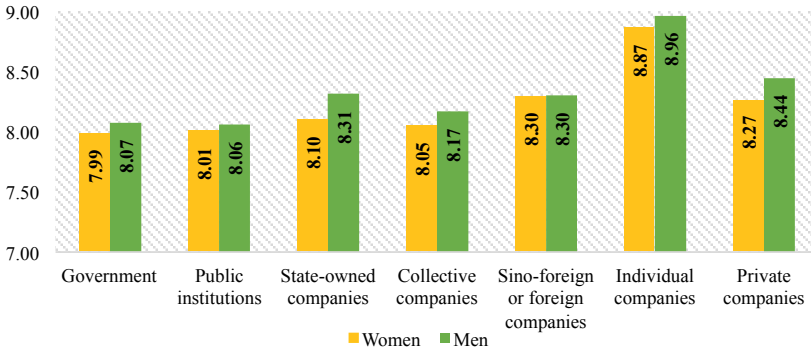
In general, in almost all types of companies, the gender pay gap of hourly earnings is less than the gender pay gap of annual earnings (see Graph 78). This shows that the average working hours of women in companies is lower than that of men. This stems from discrimination, from families and society, with the expectation that women spend more time at home regardless the type of company, as shown in Graph 79.

Graph 78 Gender pay gap related to average annual earnings and hourly earnings, depending on the type of company



Source: compiled by the authors with data taken from CHIP 2013.

Graph 79 Average daily hours worked by type of company and gender



Source: compiled by the authors with data taken from CHIP 2013.

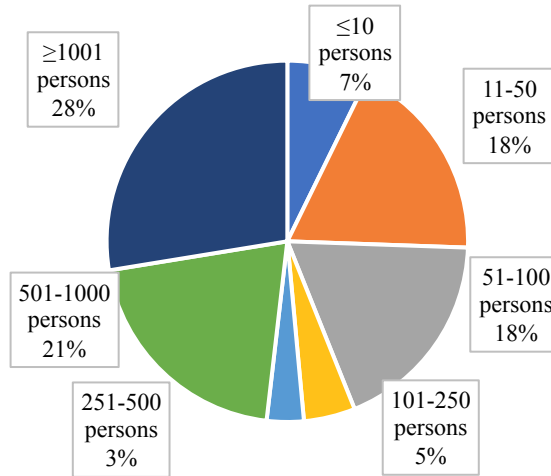
4.3.4. COMPANY SIZE

This section analyses the impact of company size on annual earnings and hourly earnings and on the gender pay gap in relation to the characteristics of different company sizes. According to the “Regulations for the Classification of Small and Medium-sized Enterprises” issued by the National Bureau of Statistics of China in 2011, companies in different industries are classified according to different standards. According to the data provided by CHIP, companies can be divided into 7 categories, from ≤ 10 people (micro-enterprises), 11-50 people (small firms), 51-100 people and 101-250 people (medium-sized companies), 251-500 people, 501-1000 people and ≥ 1001 people (large companies).

Graph 80 shows the distribution of companies according to the size of their workforce and it is clear that companies with more than 500 employees represent a relatively large proportion, accounting for almost half (49%) while companies with between 11 and 100 employees account for 36%. The smallest proportion is in companies of ≤ 10 people, as well as in companies with 101-250 and 251-500 people, where the corresponding proportions are 7%, 5%, 3%.

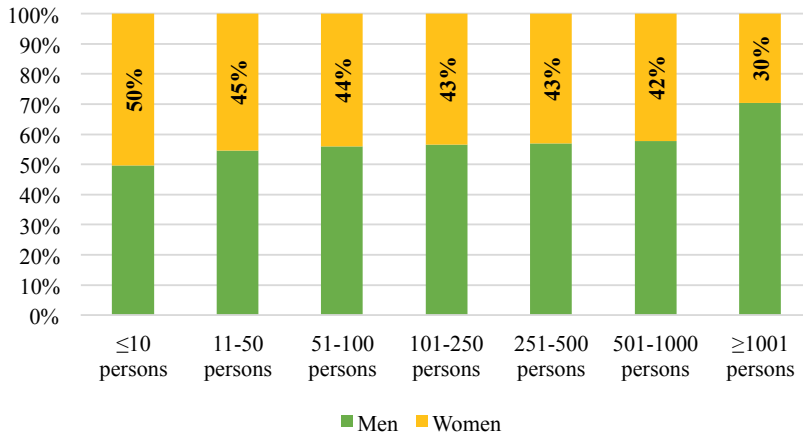
From the perspective of the proportion of men and women (see Graph 81), the larger the size of the company, the greater the proportion of male workers. Companies with ≤ 10 people have the most balanced proportion of men and women, and companies with $\geq 1,001$ people have only 30% women, men being clearly dominant in companies of this size.

Graph 8o Percentage of workers in each size of company



Source: compiled by the authors with data taken from CHIP 2013.

Graph 8r Percentage of workers by company size and sex

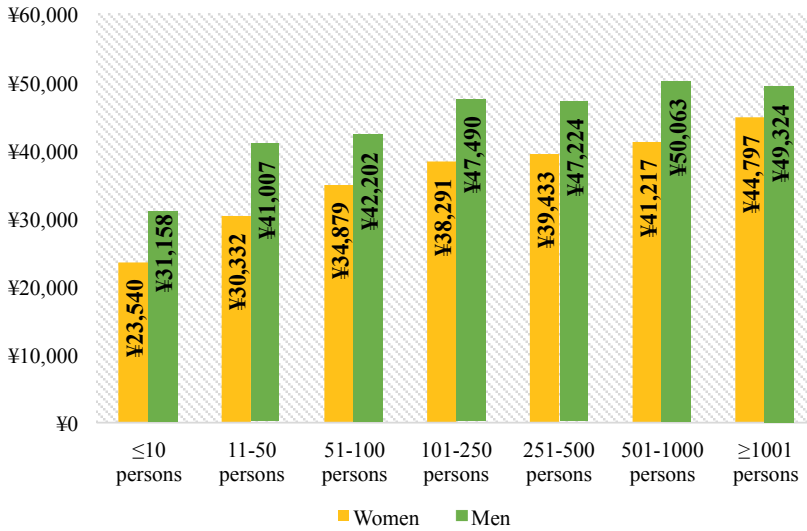


Source: compiled by the authors with data taken from CHIP 2013.

In relation to annual earnings, as the size of the company continues to expand, the annual earnings of men and women tend to increase (see Graph 82). The size of the company with the highest average annual earnings for men is 501-1,000 people, with annual earnings of up to ¥50,063, and the

size of the company with the highest annual earnings for women is $\geq 1,001$ persons, with annual earnings of up to ¥44,797. From the lowest salary companies to the highest there are differences by gender: women increase their salary a 190.3% (from ¥23,540 to ¥44,797) while men do a 158.3% (from ¥31,158 to 49,324).

Graph 82 Average annual earnings for workers by gender and company size

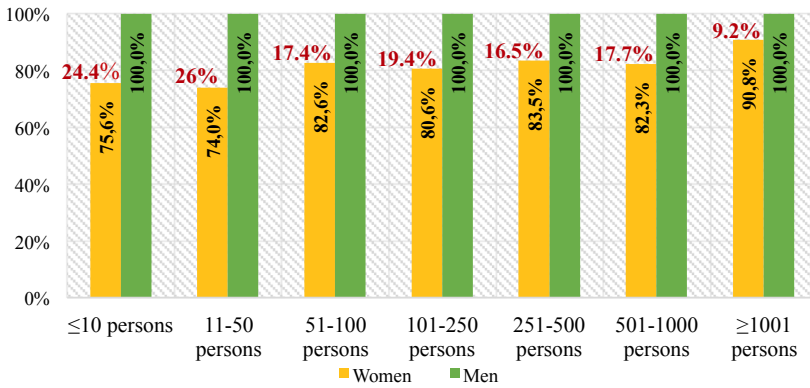


Source: compiled by the authors with data taken from CHIP 2013.

The smallest companies, with ≤ 10 people, have the lowest annual earnings of men and women but between ≤ 10 people and 11-50 people, the annual earnings of men and women increase faster, by 31.6% and 28.8 % respectively. This shows that the company has undergone rapid development at this stage. As the scale of the company increases, annual earnings growth tends to slow down.

Nevertheless, regardless of company size, women's wages are lower than men's. Analysing the gender pay gap of annual earnings (see Graph 83), we find that the largest companies have a lower gender pay gap than the smallest companies; companies of less than 10 people have a gender pay gap of 24.4%, companies with 11-50 people have a gender pay gap of up to 26%, and companies with $\geq 1,001$ people show a gender pay gap of only 9.2%.

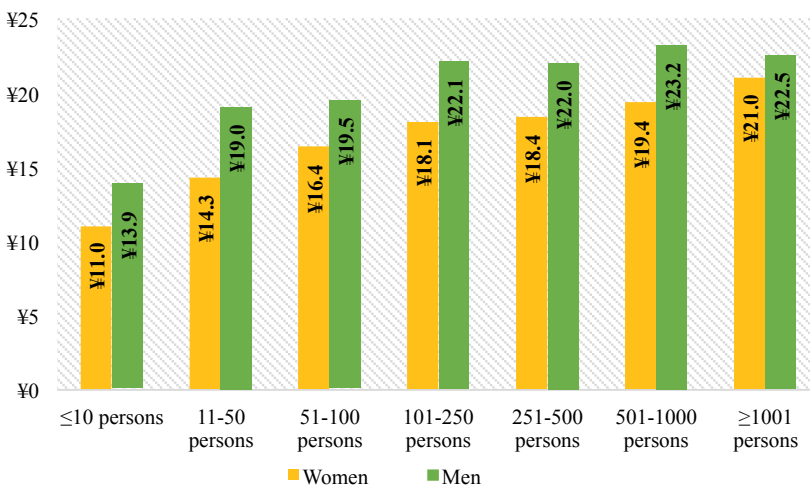
Graph 83 Gender pay gap related to average annual earnings by company size



Source: compiled by the authors with data taken from CHIP 2013.

In terms of hourly earnings, these also increase as company size increases (see Graph 84). In companies with $\geq 1,001$ people, the hourly wage for men and women is ¥22.5 and ¥21, respectively. For companies with ≤ 10 people, the hourly wage for men and women is only ¥13.9 and ¥11, which is only half of what the largest companies pay. Although companies with $\geq 1,001$ people have the highest hourly earnings, men represent a higher proportion, with women representing only 30% of the workforce.

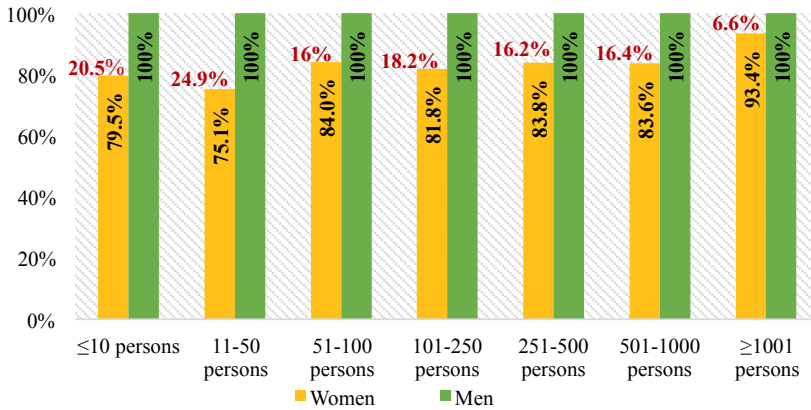
Graph 84 Average hourly earnings by gender and company size



Source: compiled by the authors with data taken from CHIP 2013.

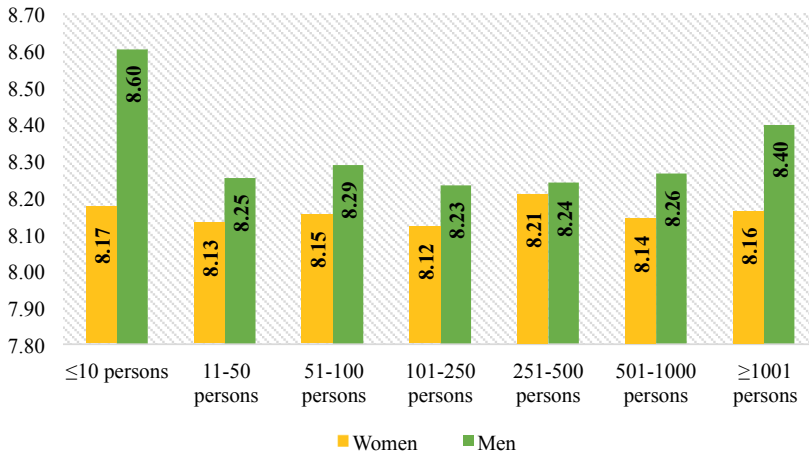
By contrast, as the size of the company expands, the gender pay gap of hourly earnings gets ever smaller, suggesting that, with growth, a company assumes more social responsibility with regards to the gender pay gap (see Graph 85). However, regardless of company size, women’s daily hours of work are less than men’s (see Graph 86).

Graph 85 Gender pay gap related to average hourly earnings and company size



Source: compiled by the authors with data taken from CHIP 2013.

Graph 86 Average daily hours worked by company size and gender



Source: compiled by the authors with data taken from CHIP 2013.

Spatial Analysis of the Gender Pay Gap in 2018

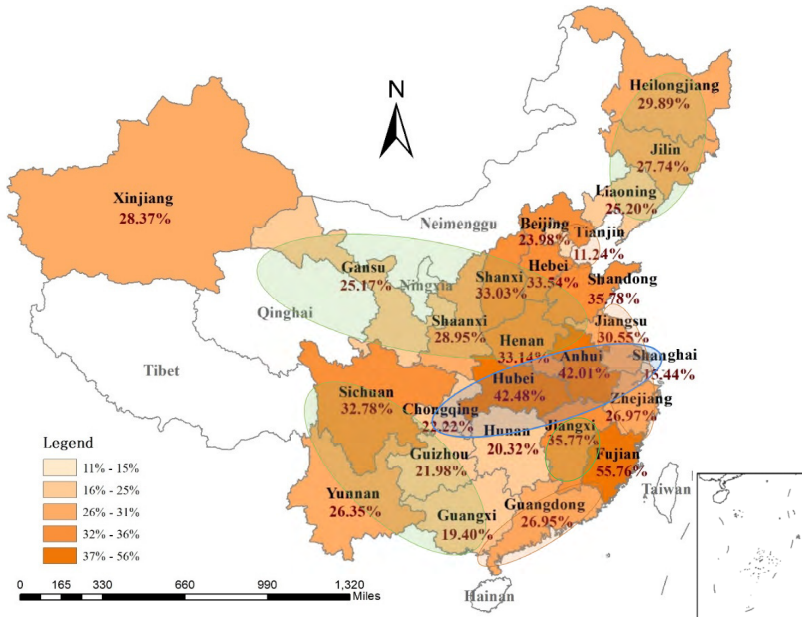
Using the 2018 data published by CFPS enables us to analyze what happens in China's provinces. In a first stage, the gender pay gap analysis has been conducted from annual wages to see the differences by gender in the total annual income. This is a very important issue, because lower annual salaries will imply lower retirement pensions and unemployment benefits, if it is the case. Thus, firstly, we observe that Beijing and Shanghai have the highest annual wages. The annual salary for men in Beijing is ¥70,929 and the annual salary for women is ¥53,918. The annual salary for men in Shanghai is ¥73,216 and the annual salary for women is ¥61,905. These salaries are much higher than in the rest of the provinces and regions in China. In fact, Beijing is China's political center and Shanghai is China's financial center. These areas are population attraction focusses, people creating wealth and GDP (see Graph 87).

Secondly, in the coastal zones (yellow zones), the level of annual earnings for men and women in Tianjin, Jiangsu, Shanghai, Zhejiang, Guangdong and other provinces are higher than those of inland provinces (excepting Beijing), although in the Yangtze River Economic Zone (blue area), Anhui, Hunan, Hubei and Chongqing, relatively high annual earnings are also seen. Shanghai is the coastal area of the Yangtze River Economic Zone. Note that the province of Sichuan also belongs to the Yangtze River Economic Zone, but the natural conditions in this province are very demanding, with the majority having mountainous areas. This weakens land communications, which cannot be replaced by river trade due to the narrowness of the Yangtze River as it passes through the province. Both issues affect to its economic development.

great increase, but remember that the databases come from different sources, which implies that we must be careful in the comparison.

The map shows several provinces above average of 26.5% for the whole country. The coastal province of Fujian has the largest gender pay gap, with 55.76%, which means that the annual earnings of women in the province represents only 44.24% of that of men. In Jiangsu, Anhui, Hubei, Sichuan belonging to the Yangtze River Economic Zone, the gender pay gap reaches 30.55%, 42.01%, 42.48%, 32.78%, respectively, very high in comparison with the less developed provinces (from a socioeconomic point of view) and worse than the average gender pay gap in China (see Graph 88).

Graph 88. Gender pay gap related to annual earnings by province in 2018

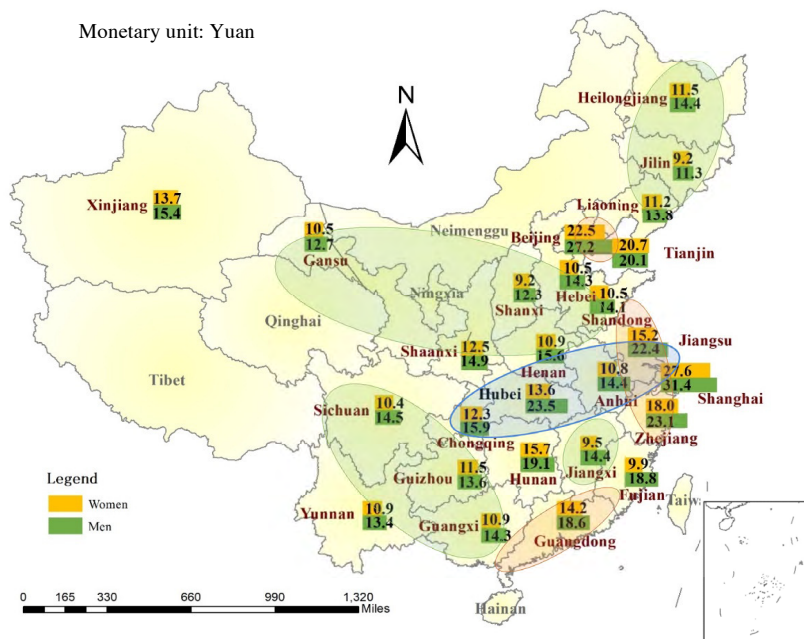


Source: compiled by the authors with data taken from CFPS 2018

The regions with smaller gender pay gaps are mostly concentrated in inland provinces, such as Gansu (25.17%) in the north, and Guizhou (21.98%), Hunan (20.32%), Chongqing (22.22%), Guangxi (19.40%) and Yunnan (26.35%) in the south. The gender pay gap in all of these provinces is lower than the country average of 26.5%. In addition, they show relatively low annual earnings. Finally, the smallest gender pay gap can be seen in Tianjin (11.24%), a major port city in northeast China with relatively high wages for

women and men, and in Shanghai (15.44%). Finally, Beijing shows a gender pay gap smaller than the country average, 23.98%, being the province with higher annual salaries.

Graph 89 Average hourly earnings by gender and province in 2018



Source: compiled by the authors with data taken from CFPS 2018

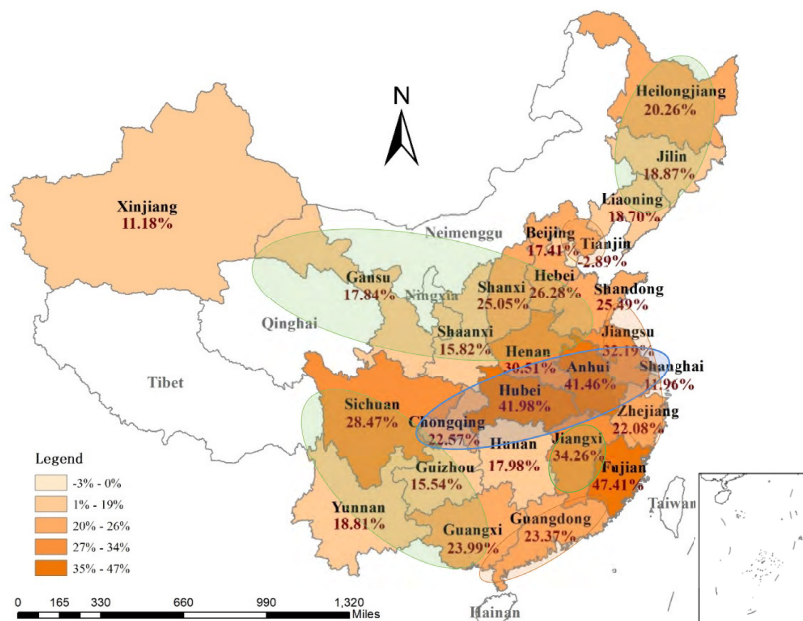
From the perspective of hourly wages, the hourly wages in Shanghai and Beijing are also much higher than in other provinces and regions, as happened with the annual salary’s analysis. In particular, in Shanghai men earn ¥31.4 per hour while women earn ¥27.6 per hour, being the highest wages per hour in China. Second, Beijing’s men’s hourly salary is ¥27.2 and women’s is ¥22.5, the second highest provinces in China (see Graph 89).

At the same time, hourly wages in coastal areas are also higher than inland areas. In addition to Beijing and Shanghai, there are also coastal areas such as Tianjin, Jiangsu, Zhejiang, and Guangdong with high wages per hour for both genders. In these provinces, men’s hourly wages are higher than ¥18.6, and women’s hourly wages are higher than ¥14.2.

Inland areas, such as Shanxi, Gansu, Hebei, Sichuan, Yunnan, Guizhou, Guangxi, Jiangxi, Anhui, Henan, etc., as well as Heilongjiang, Jilin, and Liao-

ning in the Northeast, have relatively low hourly wages for men and women, in comparison with the rest of the country.

Graph 90. Gender pay gap related to hourly earnings by province in 2018



Source: compiled by the authors with data taken from CFPS 2018

Regarding the gender pay gap of hourly earnings (see Graph 90), Beijing and Shanghai, which have the highest hourly wages, have lower gender pay gap of hourly earnings, with 17.41% in Beijing and 11.96% in Shanghai, far below the average level in China. The study also found that the gender pay gap of hourly earnings in eastern and coastal areas is higher than that in inland areas. For example, Hebei, Shandong, Jiangsu, Fujian and other provinces presents higher gender pay gap in wages per hour. The gender pay gap of hourly earnings in the Yangtze River Economic Zone is also relatively high, such as Sichuan, Hubei, Anhui, and Jiangsu provinces (excepting Shanghai). On the other hand, the gender pay gap of hourly earnings of the inland provinces are relatively low (see data from Xinjiang, Gansu, Shaanxi, Yunnan, Guizhou, Hunan and other provinces). At the same time, we noticed that their hourly wages are also relatively low.

6

Inequality from a Gender Perspective: A Spatial Analysis in 2018

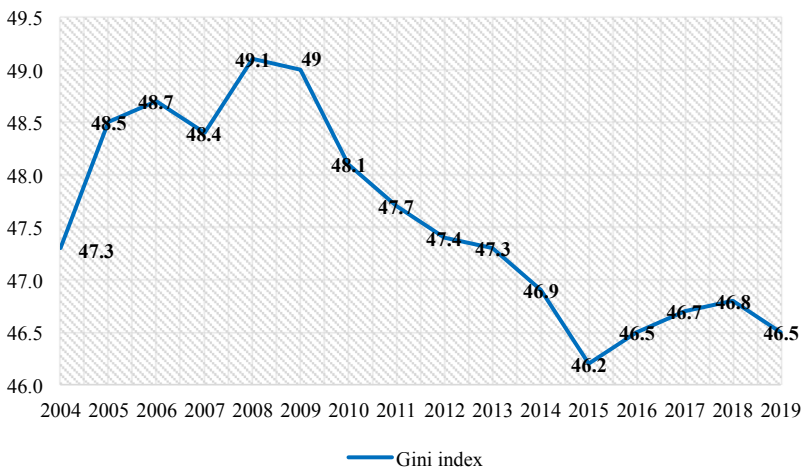
Following Larraz et al. (2019), gender inequality has been considered a political priority in many countries over last decades, with the focus centered on reducing the so-called gender pay gap, i.e., looking for a mean-convergence. However, approaching gender averages does not imply fairer (total and gender) wage distributions. How the wages are distributed among workers in a more or less equal way is an issue that also worries people nowadays. This is why in this chapter 6 we focus the objective on an absolutely topical issue that is closely related to that of the gender pay gap: The distribution of salaries among workers.

The phenomenon of inequality, of how the wealth is distributed among people, is one of the main topics in international literature nowadays. And, in general, all the data on the distribution of wealth suggest that China is one of the countries in the world in which the distribution is most unequal. Following one of the World Development Indicators from the World Bank, the Gini Index, which we have seen in the methodology chapter that is one of the widespread indicators to measure the distribution of wealth, we see that China presents a value of 38.5 in 2016, having reached its maximum in its time series in 2010, with a 43.7. A Gini index of 0 represents perfect equity, while an index of 100 represents perfect inequity. The closer the value is to 100 the greater is the inequality. 40 (or 0.4 between 0 to 1) is the warning level set by the United Nations. In order to compare, there are countries in the world with a worse distribution, less egalitarian, as Brasil (53.9 in 2018), Chile (44.4 in 2016) or United States (41.1 in 2016), and many countries with a better distribution of wealth, as Belgium (27.6 in 2016), as north European countries, with a Gini Index around 28%, Germany or France (31.9 in 2016) or even Spain, with a 35.8, but being one of the less egalitarian countries in Europe (World Bank, 2020).

Looking at the World Data Atlas (World Economic Forum, 2018), China is in the top four countries by Gini Index in the world, with an index of 51.0% in 2018, just before Sri Lanka (51.40), Namibia (55.0) or South Africa (57.7). On the other hand, the National Bureau of Statistics of China states that China's Gini Coefficient data was reported at 0.465 in 2019. This records a slight decrease from the previous number of 0.468 for 2018. From December 2003 to 2019, the data reached an all-time high of 0.491 in 2008 and a record low of 0.462 in 2015. The data is categorized under China Premium Database's Household Survey.

Following the International Monetary Funding, in China income inequality increased sharply from the early 1980s and rendered China among the most unequal countries in the world (Jain-Chandra et al, 2018). The Standardized World Income Inequality Database (Solt, 2009) estimates the Net Gini coefficient (based on post-tax and -transfer income) for China at 50 points as of 2013, which is above various regional averages and among the highest in Asia. What is worse, it has rapidly increased over the last two decades by a total of about 15 Gini points since 1990 (in USA case, Gini Index has increased ten percentage points since 1990, to 0.48 in 2019). Some optimism can be found in the fact that this trend has started to reverse as China has experienced a modest decline in inequality since 2008 (see Graph 91) (National Bureau of Statistics of China and CEIC Data, 2020).

Graph 91. Inequality of income distribution in China from 2004 to 2019



Source: National Bureau of Statistics of China and CEIC Data, 2020

In the scientific literature it is recognized that inequality in the distribution of wealth, —the disposable income concentration—, is closely related to the distribution of wages —the degree of concentration of salaries among workers. Despite total personal income also depends on other sources such as labor income, property income, personal contributions to social insurance or transfer payments, among other issues (Treyz *et al.*, 1991), in general high wages imply high disposable income and the reverse is also true. Thus, minimizing inequality in the distribution of wages would result in a more equal disposable income distribution (Larraz *et al.*, 2020). In other words, as long as the wage differences remain so high among workers, the differences in terms of wealth will continue to exist.

That is why in this book we dedicate this chapter to the analysis of the Gini index of concentration of wages in China. And we do it from a spatial perspective. It is of special interest the analysis of these existing differences in terms of the unequal distribution of wages among workers in each of the provinces of China, because, as we have seen in this book, there are very different realities throughout the length and breadth of Chinese geography.

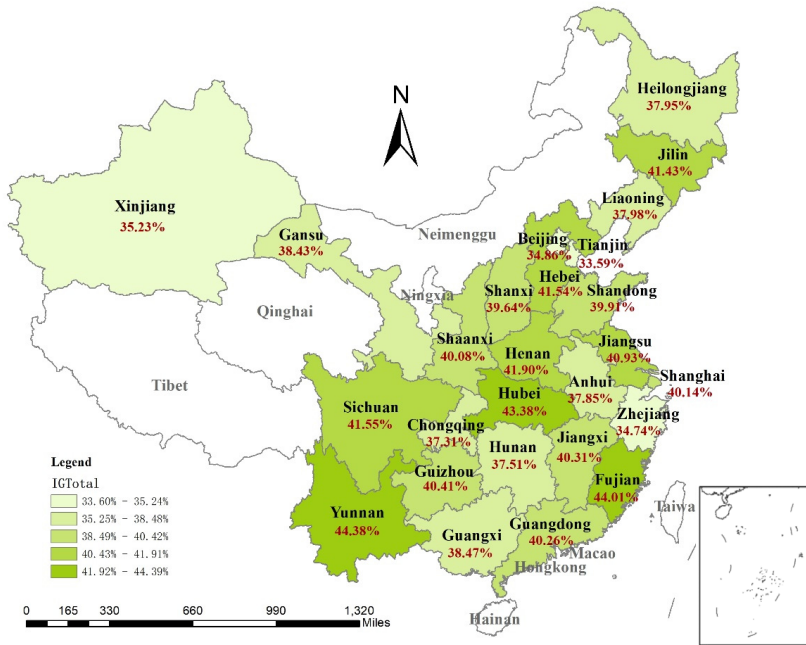
In addition, we will study it by carrying out the analysis for the group of women on the one hand and that of men on the other, in a differentiated way. Because, from the gender perspective, it is interesting to know how the situation is in the distribution of wages among women (among them) and among men (among them). Also, between gender distribution deserves our attention. That is, in this chapter we carry out the inter (or between) and intra (or within) group decomposition based on gender.

For the whole country, figures show us that annual wages inequality in China is 41.64 points in 2018 with the data published by CFPS. It can be expressed as the sum of within groups inequality (21.67) and between groups inequality (19.97). It means that more than a half, a 52.04% of the global inequality is because of wages concentration inside each group, while the other 47.96% is due to differences in wages between genders. In particular, female wages are distributed on an unequal way than men's. Female inequality Gini index is 42.76 points, greater than global one, while men inequality Gini index is 39.88 points. Gender inequality, understood as the distribution of wages among women and men is 42.84, also greater than global index.

$$IG = IG_w + IG_{gb}$$
$$41.64 = 21.67 (52.04\%) + 19.97 (47.96\%)$$

From a spatial point of view, Graph 92 shows us that there are 13 provinces with a global Gini index over 40 points, which remember us the warning level set by the United Nations. In particular, Yunnan suffers the higher Gini index (44.38 points) mainly due to the high figure observed among men (male Gini index of 46.88). After this province, we find the coastal province Fujian, with a global Gini index of 44.01 but with a gender Gini index extremely high, of 48.91 points. In fact, this province presents male average annual salaries above male's average in China, female average annual salaries below female's average in China and, as a consequence, a great gender pay gap, both measured in annual or hourly wages.

Graph 92. Inequality of wages distribution in China in 2018



Source: compiled by the authors with data taken from CFPS 2018

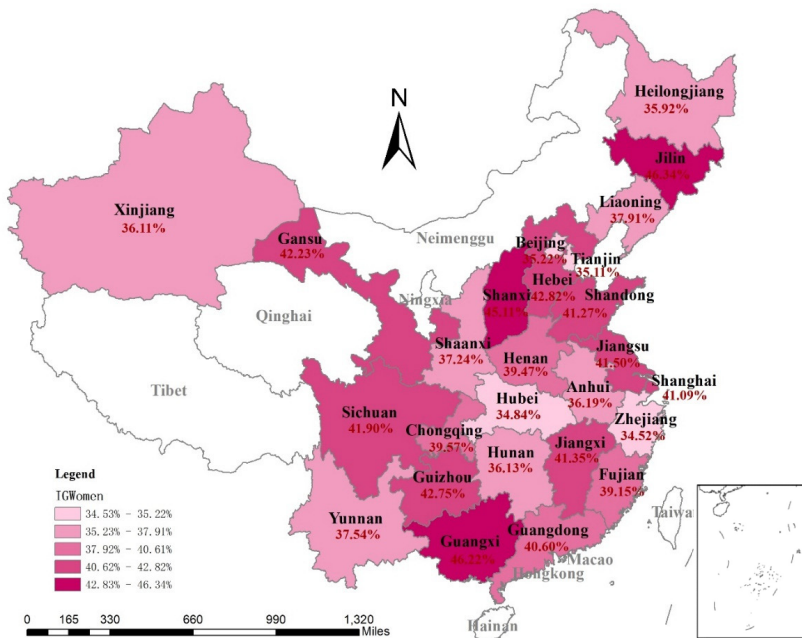
After this two provinces, we find another two ones with high global Gini index, Hubei (43.38) and Henan (41.90), in this case in the inner zone, both due mainly to men and gender inequality, because female Gini index is more moderate (34.84 in Hubei and 39.47 in Henan). Hubei also presents male and female average wages above the average in China and a great gender pay gap, while salaries in Henan are lower than the average.

Then, we find eight provinces with a Gini index above 40 points mainly due to the presence of great inequalities among women. Sichuan, Hebei, Jilin, Jiangsu, Guizhou, Jiangxi, Guangdong and Shanghai present female Gini indexes greater than 40 points and more moderate male Gini indexes. Most of them present also high gender pay gap excepting Guizhou and Shanghai, that have a especially lower gender pay gap.

On the other hand, with the lower Gini global index, less than 35 points, we find Tianjin (33.60), Zhejiang (34.74) and Beijing (34.86). These provinces also present the lowest Gini index among men.

Looking at inequality in the distribution of wages among women, Graph 93 shows that the highest figure can be observed in Jilin (46.34) in the North-East, followed by Guangxi (46.22) in the South, and Shanxi (45.11), near Beijing. These three provinces suffer from a female Gini index above 45 points, but there are also nine provinces with this index between 40 and 43 points, which should merit our attention: Hebei, Guizhou, Gansu, Sichuan, Jiangsu, Jiangxi, Shandong, Shanghai and Guangdong. On the other hand, Zhejiang, in the coast, and Hubei, in inner China, show a female wage concentration below 35 points.

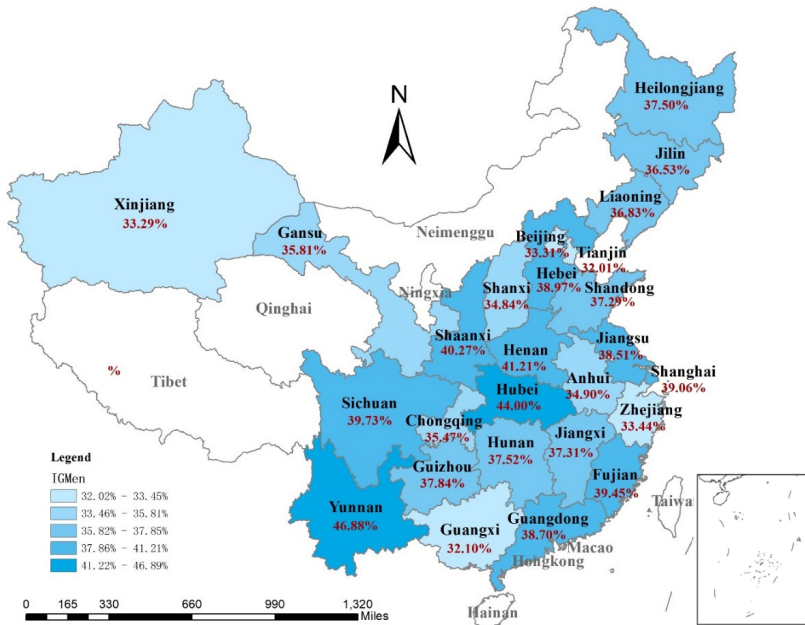
Graph 93. Inequality of wages distribution among women in China in 2018



Source: compiled by the authors with data taken from CFPS 2018

Nevertheless, wage inequality among men is not so sharpened: just three provinces present a male Gini index above 40 points, which are Yunnan, in the South (46.88), Hubei (44.20), Henan (41.21) and Shaanxi (40.27) in the middle China. Other provinces with a better distribution of wages among men are Tianjin (32.02), Guangxi Zhuang (32.11), Xinjiang Wei (33.30), Beijing (33.31), Zhejiang (33.44), Shanxi (34.84) and Anhui (34.91) (see Graph 94).

Graph 94. Inequality of wages distribution among men in China in 2018

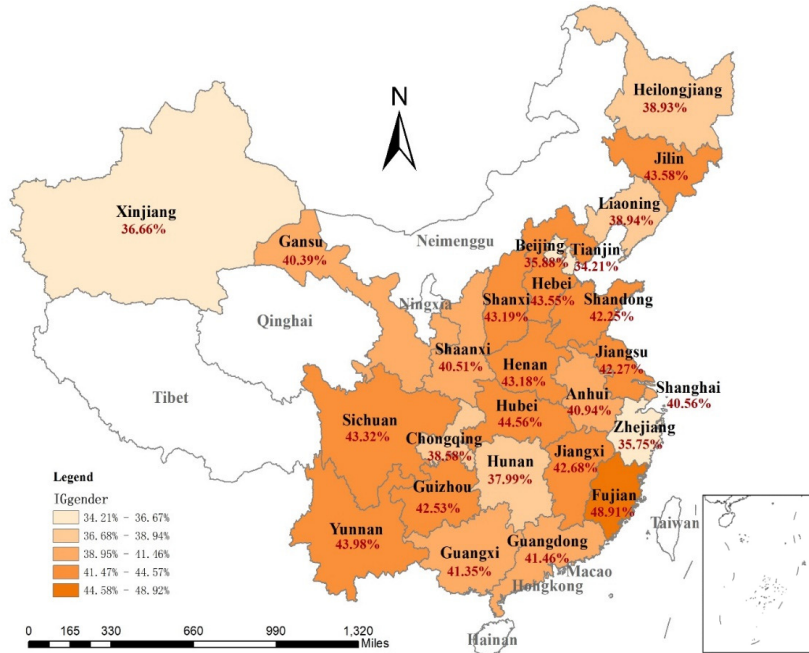


Source: compiled by the authors with data taken from CFPS 2018

Inequality in the distribution of wages between genders is worrying in China, because 14 provinces out of 26 present a gender Gini index higher than 40 points. The most worrying one is the province of Fujian, which scores 48.91 points. It was the second one with the highest global Gini index, but curiously, both female and male inequalities are around 39 points. As a consequence, the gross between groups inequality accounts for 53.97% of global inequality, leaving 46.03% for within groups inequality. It follows Hubei (44.57 points) and Yunnan (43.98). However, in Hubei gross between groups accounts for 45.25% and within groups for 54.74%. Similar values can be found in Yunnan. And just one province, Tianjin, has a gender Gini

index below 35 points. It also presents a low global, male and female index as well as a low gender pay gap (see Graph 95).

Graph 95. Inequality of wages distribution between genders in China in 2018



Source: compiled by the authors with data taken from CFPS 2018

This analysis shows us the importance of going beyond the national scale, of delving into what happens in each area. This chapter has identified some provinces with great wage inequality, higher than the global Gini index for China, which already is one of the greatest in the world. This leads us to conclude that the policies to reduce the inequality should be thought at least at provincial level. Knowing that fiscal policy reforms have the potential to enhance inclusiveness and equity, both on the tax and expenditure side (IMF, 2020), and that wages should be distributed in a fairly way to reduce wealth inequality, all these issues should be supported from a local perspective.

Final Considerations

Attention to gender equality is an important issue in this era and underpins the UN 2030 Sustainable Development Goals. With only ten years remaining before the 2030 deadline, this study of the historical and spatial evolution of the gender pay gap, wage inequality and the relation with the more recent developments in China is particularly relevant. Our study highlights that China is currently facing serious problems of gender pay gap and inequality in the distribution of wages, compared to other countries in the world.

Throughout the research process, in this book, a temporal multidimensional study on the gender pay gap in China in 1995, 2002 and 2013 is carried out based on Chinese Household Income Project. Subsequently, a spatial analysis of the gender pay gap is shown at provincial level, from 2018 data published by China Family Panel Studies (CFPS). The temporal and spatial analysis of the gender pay gap is carried out in terms of both annual and hourly salaries to correct differences in the number of hours worked by men and women per year. This more updated information of 2018 allows the analysis of the inequality in the distribution of salaries among workers, from a gender perspective and its differences at provincial level.

In global terms, the gender pay gap of the annual earnings in these three years has increased, standing at 17.2%, 19.1% and 23.2%, respectively, with the gender pay gap of hourly earnings standing at 15.8%, 17.3% and 21.9%. In addition to this data, current data from the CFPS data for the year 2018 shows that the gender pay gap of China's annual earnings has reached 26.5%, with the gender pay gap of hourly earnings standing at 20.9% (see Table 13). This gender pay gap is greater than that of the European Union,

the United States and the United Kingdom. Furthermore, over the period of 1995 to 2018, the gender pay gap in China shows an upwards trend, which is particularly worrying.

Table 13. Gender inequality indicators in China 1995-2018

		1995	2002	2013	2018*
Average annual salary (¥)	Women	6,022	10,772	33,578	32,860
	Men	7,276	13,333	44,278	44,729
Gender pay gap on annual salaries		17.2%	19.1%	23.2%	26.5%
Average hourly salary (¥)	Women	3.0	5.1	15.3	13.1
	Men	3.6	6.2	19.6	16.6
Gender pay gap on hourly salaries		15.8%	17.3%	21.9%	20.9%
Inequality Gini index	Global	-	-	-	0.4164
	Women	-	-	-	0.4276
	Men	-	-	-	0.3988
	Gender	-	-	-	0.4284

Source: compiled by the authors.

**Gender pay gap of year 2018 should be compared with the previous ones with caution due to the use of different databases.*

It therefore appears that the phenomenon of gender pay gap in China is growing and that the difference on the hours worked still remains and appears as a problem. On the one hand, women in the family are still more responsible than men for the education of children and housework. But the fact that the gender pay gap computed on hourly wages is so high, on the other hand, appears to be because of the type of employment, skills and, finally, because of some type of discrimination against women by employers in Chinese society due to ancient costumes. In other words, the gradual widening of the gender pay gap in China is an issue requiring attention. In order to better understand this issue, this book contains all the variables that influence wages, such as age and educational level of the worker, type of occupation and sector of economic activity to which the job belongs. These variables can help explain the characteristics and trends of the gender pay gap through a better definition of the problem and therefore a clearer idea of how to tackle it.

From an age range perspective, from 1995 to 2013, women's wages are lower than men's for all age ranges. The gender pay gap is relatively small for workers in the age range of 20 to 25 years who are just starting their working life, and this would suggest an optimistic outlook for future pay equality. However, as women face situations such as motherhood and responsibility for family members, the gender pay gap widens over the following years, especially for the age range of 40 to 50 years. This is the age at which workers generally face greater family pressure in China, not only because of childcare commitments but also because of the need to care for ageing parents. Women are more likely to sacrifice work opportunities outside the home, allowing men to continue in their careers. Therefore, companies tend to invest in those workers who are more likely to continue to add value over a longer time, which clearly discriminates against women and overlooks the contribution that women make on a social level to society and the workplace.

Reflected in the rising wages, China's economy has developed rapidly since the start of the 21st century. This is due to reforms and a more open economic policy from the 1980s onwards which attracted more funds and international markets into China. But these changes bring their own challenges. With the transformation of China from a planned economy to a market economy, the state has less and less intervention in the market. It could be that this lack of control may have contributed to the widening of the gender pay gap for all ages. Nevertheless, wages have risen for both men and women and, although young employees, new into the workplace, have significantly lower wages due to their lack of work experience and skills, wages are seen to increase in line with years of service and age.

Education is very important in a country as it generally affects the direction of its social, economic and cultural development. From the educational level perspective, we find that the gender pay gap decreases with an improvement in the level of education, but from 1995 to 2013 the gender pay gap at all levels of study gradually increased. In particular, in the stages of primary education and lower secondary education, the gender pay gap was worse compared to the general average for each year. In the study, we also found that the gender pay gap for higher vocational training is expanding very rapidly and needs to be tackled. Furthermore, the proportion of women in education is less than that of men, and this is mainly influenced by the traditional Chinese concept of "patriarchy". There are still some Chinese families who do not give the same importance to the education of women as to men. In fact, even if women receive the same level of education as men, women's annual

earnings and hourly earnings are less than men's annual earnings, demonstrating that discrimination also occurs at all educational levels.

From the perspective of years of service in a company, the study finds that the number of years that workers have been in the company has a significant influence on the annual earnings, hourly earnings and the gender pay gap. Generally, in terms of annual earnings and hourly earnings, these increase rapidly from 1995 to 2013 regardless the years of seniority. Also, as years of service increase, the annual earnings and hourly earnings also tend to increase. This is especially true for the first 10 years of service, where men's and women's wages increase rapidly, probably reflecting increased experience and job training. However, women's annual earnings and hourly earnings are generally lower than men. Thus, the gender pay gap reaches a peak in two stages: the first peak is between 4-15 years of service in the company, and the second peak is between 21 and 25 years of service. The first peak coincides with women likely to take maternity leave, and the second peak occurs at a time when women may face the task of caring for their children and parents.

From the perspective of the type of contract, from 1995 to 2013 the annual earnings and hourly earnings of a fixed-term contract are the highest, but the gender pay gap for fixed-term contracts is the smallest. However, the gender pay gap is wider in temporary contracts and *other* situations such as where there are no contracts or these that are not covered by law. It seems that women often face greater discrimination in temporary contracts and *other* situations, possibly due to discrimination by employers. The reduced availability of women as a group at work in the long-term may make employers more willing to sign fixed-term contracts or permanent contracts with men who have more stability in relation to their availability for work. Also, the clear widening of the gender pay gap of long-term contracts is concerning and needs further attention.

We see that the proportion of workers in *other* situations such as no contracts or those not covered by law has expanded, and their gender pay gap is wider. We believe that the government should improve relevant laws, such as the Labour Law, to guarantee that both men and women can work under the protection of the law.

Analysis of the economic sector and activity of the company leads us to conclude that from 1995 to 2013, the sectoral structure in China changed, showing an increase in the size of the services sector and a gradual decrease in the the size of the industrial sector. In company activities, the share

of manufacturing and electricity, gas, and water supply services gradually decreases while, at the same time, the share of other business activities gradually increases, and the ratio between the range of activities balances. With regards to gender ratio, men have long-term advantages in such industries as transportation, warehousing, and communications, and women have long-term advantages in activities such as wholesale and retail trade and hospitality and catering.

Annual earnings and hourly earnings in 1995, 2002 and 2013 increase in various sectors and company activities. From sectoral perspective, annual earnings and hourly earnings in the industry and service sectors are higher. Financial and insurance activities have the highest annual earnings and hourly earnings for men and women. But regardless of company activities or sectors, in most cases, women's annual earnings and hourly earnings are lower than men. And over time, the gender pay gap has gradually widened in various sectors and in most company activities although, in contrast to this, there are some specific activities where the gender pay gap is gradually decreasing, such as construction, geological exploration and mining. However, this situation is very rare in the context of this study, where the widening of the gender pay gap between men and women points that discrimination against women still exists.

Different occupations have a greater influence on the annual earnings and the hourly wage. Generally speaking, in occupations that rely on a higher level of knowledge, technology and education, higher salaries are seen, such as for directors and managers. In occupations that are more dependent on physical activity, such as skilled workers in the agricultural, livestock, forestry or fishing sectors, wages are relatively low. However, we find that gender-dominated occupations have a larger gender pay gap, such as transport team workers, unloaders and replenishers, and workers in mining, quarries and other extractive industries, where the proportion of male workers reaches 84.9% and 83.8%, respectively and the gender pay gap for annual earnings reaches 38.5% and 33.9%, respectively. But higher paid occupations do not mean there is a smaller gender pay gap. For example, both men and women employed as economists and finance professionals have higher wages but the gender pay gap is also high, suggesting that discrimination by society against women working is still prevalent.

Earnings between men and women continue to be different, depending on the employee's employment status. Men are highly represented among employers, and women's wages are lower than men's for both employers, employees, and self-employed workers. For family workers, although women

are more prevalent and their wages higher than men's, it is, nevertheless, the work status with the lowest average earnings. Men have a greater representation, generally, in the workforce and hold higher paid positions. Women represent a large proportion of work situations that attract lower wages. This indicates that discrimination is pervasive in society, and the work situation and wages of women continue to give cause for concern.

We also analyzed the types of companies in the Chinese socialist system, noting that it is in the Sino-foreign or foreign companies where workers are paid the highest annual earnings and hourly earnings. For state-controlled companies, such as the government or state-owned companies and institutions, annual earnings and hourly earnings are also relatively high. Collective companies show the lowest annual earnings and hourly earnings, and there is a wide gender pay gap between their workers. However, although the proportion of private and individual companies is relatively large, annual earnings and hourly earnings are also lower than those in companies controlled by the state. It is clear that the wages of state-controlled companies are more guaranteed, and the gender pay gap is smaller than in other types of companies. But no matter what type of business, it is a fact that women's annual earnings and hourly earnings are lower than men's annual earnings.

Regarding company size, the larger the company, the higher the annual earnings and hourly earnings. However, in terms of the gender pay gap, as the company size grows, the gender pay gap gradually decreases, meaning that the size of larger companies is more effective in controlling the gender pay gap. However, as the company size increases, the proportion of women workers decreases.

The spatial analysis corresponds to 2018 and shows that China's annual earnings, hourly earnings and gender pay gap differ greatly for each of the provinces analysed. This is particularly acute in the differences seen between the southern coastal provinces and the northern interior provinces, and the differences seen between zones of highest economic development and those with the least development.

The gap between coastal and inland provinces is mainly reflected in the gender pay gap of hourly earnings. In 2018, the gender pay gap in most eastern and coastal areas is higher than that in inland areas. Also, the Yangtze River Economic Zone presents a relatively high gender pay gap in wages per hour. The exception comes with Shanghai and Beijing, which presents the highest salaries and low gender pay gaps. The study also finds that the annual earnings and hourly earnings of coastal provinces are much higher than those

of interior provinces. Finally, the difference between the most economically developed area and the zone with the least development is reflected in the higher annual earnings and hourly earnings in the former.

The results of this study lead us to conclude that the gender pay gap is highly influenced by the conditions of regional economic development; the greater the development process, the greater the regional pay gap, excepting Shanghai and Beijing. This represents a challenge for the government, as this calls for the formulation of relevant policies in order to reduce this gap. Detailed measures are needed to reduce the wage gap and thus achieve gender pay equality and move closer to total gender equality. As can be seen, there are many factors that affect the gender pay gap. With a view to improving the situation, the government needs to approach the gender pay gap from different perspectives.

We believe that the main reason for the gender pay gap is that men and women in China are still heavily influenced by the traditional concept of “patriarchy”. In general, women are more responsible for taking care of the family and ageing parents. These responsibilities are time consuming for women, directly leading to women working fewer hours with their corresponding salaries than men. The government must aim to correct this biased social concept. In addition, education is also affected by this concept and the government must guarantee that everyone’s right to education is not violated.

Furthermore, women’s careers are affected by motherhood, as in the rest of the world. They have to stop work, either temporarily or permanently, during this time while men’s working commitments are not affected in the same way. From a company perspective, the longer-term value of an employee comes first, which leads to discrimination against women when employers are choosing suitable candidates. Therefore, when the government formulates relevant policies, it must take into account the difference between men and women at this stage, such as by giving women on maternity leave an additional subsidy, or by offering maternity leave that can be shared between both men and women.

Another possible reason for the wider gender pay gap may be the underestimation of women’s work capacity. For example, for jobs that require more physical work, employers are more likely to choose men. In fact, since China’s economic reform and more open economic market, companies have been given more power in personnel management and wage setting but this has resulted in some companies discriminating against women when choosing employees. This discrimination is manifested by the growing gender pay

gap. Therefore, the government may impose fines on companies with large gender pay gaps and reward companies with more balanced gender pay gaps. The government may encourage companies to provide free training to all employees so there is a greater balance of knowledge and skills.

Furthermore, the government needs to pay more attention to the balance of regional development, especially in rapidly developing regions. In these regions, where industrial changes and staff turnover is rapid, companies are more likely to have discrimination issues in choosing employees in order to gain a competitive advantage. The government must formulate different policies according to different development regions.

Chinese labour law and related laws have many provisions to protect women, such as prohibiting the firing of women during childbirth, but women continue to be discriminated against in various ways during job search and in the workplace. The government needs to formulate more laws, requiring that the proportion of men and women in companies be balanced, that more women are trained in occupational skills and that there is more consideration given to accessibility of nurseries and nursing homes to reduce the responsibility that women have as careers in the home.

After this deep analysis of the gender pay gap, it is important to note that approaching gender averages does not imply fairer wage distributions. This is why, apart from the gender pay gap, the analysis of the phenomenon of inequality, of how the wealth is distributed among people, is included in this book. In general, the data on the distribution of wealth indicate that China is one of the countries in the world with more inequality. Following the most widely used index to measure inequality, the Gini Index, China presented a value of 51.8 in 2018, following the World Data Atlas (World Economic Forum, 2018), or a 46.5 in 2019, following the National Bureau of Statistics of China, among the highest in Asia.

The spatial analysis of wage inequality carried out in this book shows that, with the data published by CFPS, annual wages inequality in China was 41.64 points in 2018. Of this global index, more than a half is because of wages concentration inside each group (the so-called within inequality), while the other 47.96% is due to differences in wages between genders. It is important to remark that female wages suffer a worse distribution than men's: Female inequality Gini index is 42.76 points, greater than global one, and greater than men inequality Gini index, which is 39.88 points. Gender inequality is also greater than global index (see Table 13).

By provinces, Yunnan presents the higher Gini index, followed by the eastern coastal province Fujian, with a high global Gini index and an extremely high gender Gini index. Shanghai presents a Gini index above 40 points mainly due to the presence of great inequalities among women but remember that the gender pay gap was low. With the lowest inequality in the distribution of wages we find Tianjin, Zhejiang and Beijing.

In summary, although women make the same contribution as men in terms of a global social contribution, sometimes in exchange for a salary and sometimes not, they are not treated equally. In the face of a growing gender pay gap and a great level of inequality in the distribution of wages, the government may give greater consideration to tackling this imbalance through more effective social policies.

Statement of the source of data:

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Attention to gender equality is an important issue in the UN 2030 Sustainable Development Goals. This book analyses the wage inequality and the gender pay gap in China from a temporal and spatial point of view, using the wage surveys available from 1995 to the present. Due to their rapid growth since the country's entry into a free market economy, the analysis carried out in this book seems crucial. Our study highlights that China is currently facing serious problems of gender pay discrimination. It also finds that the earnings of coastal provinces are much higher than those of interior provinces. In terms of wage inequality, figures in China are currently high. The spatial analysis of wages distribution shows that there are very different realities throughout the Chinese geography.

