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Lower Barriers and Higher Social Status? — Chinese Women Working in E-commerce

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Abstract

With the recent development of Internet technology, the e-commerce industry is booming. However, under this rapid development, various inequality issues are hidden. Inspired by Goldin's (2002) study on declining gender significance, this paper focuses on the gender inequalities faced by female employees in the e-commerce industry in China. This paper focuses on one of the representatives of the e-commerce industry, Internet companies, to investigate the barriers and social status of female employees working in Chinese Internet companies. Using a qualitative research approach, this paper interviewed eight employees of Chinese Internet companies through semi-structured interviews. Acker's (2006) inequality regimes are then used to extract and analyze information from the responses given by the interviewees and finally draw conclusions.

The study found that female employees of Chinese Internet companies do face lower barriers, such as lower physical requirements that make it easier for women to enter the industry and higher salaries that make women more likely to be financially independent. However, as one digs deeper, higher barriers emerge, such as segregation by gender between positions or within positions, and different hierarchies. In terms of social status, women in Chinese Internet companies have not managed to gain a higher status, as the gender hierarchy created by the particular Chinese Confucian culture keeps women in a disadvantaged position. The development of e-commerce has not substantially changed the status of women in the cultural system.

Keywords: gender inequality, e-commerce, Internet companies, inequality regimes, barriers, social status, Confucian culture, China

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Content

1. Introduction

The debate about gender inequality and the importance of gender has been going on for a long time. Goldin (2002) suggests that in the early twentieth century, the importance of gender increased and created a discriminatory hiring pattern. However, in the late twentieth and early twenty-first centuries with the rise of white collar jobs for women and the increase in women's educational attainment, the importance of gender began to decline (Goldin, 2002). She also pointed out that this discriminatory pattern will break down when women obtain job-related certifications or credentials. However, the debate on gender importance, led by scholars such as Goldin, has remained in the traditional industry. For example, in Eagly and Carli's (2007) book they explain the changing gender importance by analyzing three barriers that women encounter in obtaining traditional high paying positions, such as judges, lawyers and accountants. Not only that, Goldin's (2014) later proposed pollution theory, in which women in predominantly male jobs are seen to "pollute" the prestige of the men in the occupation and make the occupation inferior, is also discussed mainly in manufacturing, office jobs (such as clerical workers and accountants) and some cutting-edge traditional occupations (such as doctors and lawyers). The discussion ends up in Goldin's (2014) conclusion that in pollution theory, gender importance is considered to be reduced due to higher visibility of women's capabilities in the whole society caused by women gaining education credentials and skill qualifications.

However, with the advent of the Internet era, more and more new jobs such as those related to the e-commerce industry, are emerging. The requirements for this type of jobs, compared to traditional industries, are more focused on education as well as skills, rather than physical nature requirements such as physical strength. Then the debate on gender importance is starting to be discussed in new industries such as internet-based e-commerce. Some scholars argue that e-commerce facilitates women's employment. For example, Scasserra (2018) mentions that e-commerce is neutral, which means pay is equal regardless of who is behind the computer selling or providing the service, and therefore e-commerce is a powerful tool to reduce the pay gap between men and women. Furthermore, Goudreau (2010) claims that job automation will highlight the irreplaceability of care work, which will ultimately benefit the main body of workers in care work, which is the women worldwide. However, there are some contrary opinions that e-commerce does not alleviate gender importance. Scasserra (2018) refers to the algorithms economics, where companies try to generate algorithms that explain, optimize, and predict human behavior based on information stored in large databases by holding data. Scasserra (2018) argues that algorithms based on big data generated algorithms are replacing entire production processes, even though these algorithms are not prepared for social change because they are developed based on information from past time and only

reinforce and repeat human history. A good example mentioned by Scasserra (2018) is the use of algorithm-based HR search engines by companies to find "successful candidates," and the search results are mostly highly educated white males aged 25-35, with a high chance that women, people with disabilities, and people from minority and gender groups are outside of the parameters. As O'Neil (2017) argues, such algorithms simply replicate the history of gender violence and reproduce it, and do not have the ability to go beyond it.

In terms of the definition of e-commerce, Turban, Lee, King and Chung (2000) defined e-commerce as the commercial activity of buying, selling or exchanging goods, services and information through computer networks or the Internet. Zwass (1996) extended this by arguing that e-commerce is the activity of sharing business information, maintaining business relationships and conducting business transactions through telecommunication networks. Scholars such as Applegate (1999), Fellenstein and Wood (2000) who agree with Zwass, arguing that e-commerce includes buying, selling and other activities in addition to different processes across organizations. On this basis, David and Benamati (2002) argue that e-business also includes collaboration with customers and business partners. This paper will focus on integrated enterprise groups in China that provide mainly Internet services, such as Alibaba, Tencent, BaiDu, ByteDance and so on. These conglomerates offer a range of services including B2B trading, online retailing, search engines, third-party payments, and cloud computing. Most of the departments in these conglomerates are similar, including but not limited to technical departments (responsible for software technology, e.g., algorithm engineers, etc.), operations departments (responsible for content operations, marketing campaign planning, etc.), and human resources departments. This paper will focus on the employees in the departments of the above-mentioned enterprise groups.

Therefore, in such a context, this study wonders could China, as one of the fastest growing countries in Asia, also reflect the reduced importance of gender in e-commerce that have been thriving through the development of the Internet? This brings the focus of this study to the barriers that women in China's e-commerce industry may face and whether they have actually benefited from the growth of the Internet to reap higher social status. This paper will use qualitative analysis from a feminist perspective to interview Chinese employees in one of the representative types of e-commerce industry, Internet companies, using semi-structured interviews. This paper attempts to use qualitative analysis to gain a deeper understanding and exploration of the situation of Chinese e-commerce women. Here, a research question can be proposed:

Research question: Has the e-commerce industry brought lower career barriers and higher social status to Chinese women working in it?

2. Context

In 2015, the Internet+ action plan was first proposed by the Chinese government, namely to promote the healthy development of e-commerce, industrial Internet and Internet finance, and guide Internet enterprises to expand international markets and become a new engine for China's economic development. Relevant data show that China's e-commerce transaction scale ranks first in the world, and in 2014, the scale of China's cross-border e-commerce transactions was \$4.2 trillion, up 33.3% from 2013, and the penetration rate of cross-border online shopping among Internet users reached 10% (China Today, 2015). The "Internet+" has already formed a booming momentum in China, and the "Internet+ communication" has produced WeChat and Douyin, and the "Internet+ retail" has produced Taobao and Jingdong.

With the booming development of various e-commerce platforms and Internet companies, the employment rate has also been increased to some extent. The majority of the workforce in the e-commerce industry is currently focused on processes such as picking, packing, and shipping, also known as blue-collar workers. The expanding e-commerce industry has shown an increasing demand for warehouse labor. However, China's working-age population has declined by more than 5 million in the last decade due to a declining birth rate (National Bureau of Statistics of China, 2019). Therefore, more and more e-commerce companies are seeking automation to cope with the labor shortage, such as automated warehouses and automated operations (Morgan, 2019; Kharpal, 2021). In addition to this, the remaining workforce in the e-commerce industry, which is the core workforce, are the white-collar workers in the offices of the corporate buildings, who typically work in core technical and administrative departments such as R&D, operations, marketing, and human resources. The jobs in these departments generally require well-educated senior personnel, and because they require fewer physical factors such as physical strength, it also attracts more women. This has led to a significant increase in female employment rates, especially in the white-collar positions in the e-commerce industry, and has therefore contributed to some degree of gender equality in employment. However, not all voices are positive. Many opposing views have been raised, such as the perception that women may still be sidelined by the industry due to issues such as marriage and the inequality of women working longer hours resulting in lower hourly wages.

As what can be seen in China, e-commerce is booming and has become one of the mainstream businesses. While not much has been written about gender inequality within the e-commerce industry in China, there is currently research on female individual entrepreneurs, rural women facing gender inequality in the e-commerce industry (Shen & Ge, 2005; Xu, 2016; Sharma, 2019; Yu & Cui 2019). Therefore, this paper focuses on the white-collar workers of Chinese Internet companies to expand and

supplement the research on gender inequality within the Chinese e-commerce industry.

3. Literature review

3.1 Barriers

There has been some interesting research and findings on the barriers that women face in the Chinese e-commerce industry. Some argue that the less physically demanding nature of e-commerce makes it more likely that women will enter the industry, and arguably, education and socio-cultural background become more important constraints (Shen & Ge, 2005; Liu, Lin & Foster, 2016; Li, 2020). In addition, the higher earnings of women in e-commerce indicate a reduction in wage barriers (Shen & Ge, 2005; Sharma, 2019; Li, 2020). More importantly, working in the e-commerce industry allows women to have a better work-family balance, enabling them to perform both caregiver duties and productive work (Sharma, 2019). In the case of rural Chinese women, Yu and Cui (2019) suggest that the Taobao business allows rural women to work "triple shifts" of production, childbirth and care, which is what Robey and Jin (2014) suggest as "technologies potentially liberate workers from specific places and times" (Li, 2020).

However, some objections have been raised. Although women get relatively higher wages in the e-commerce industry, they also work longer hours, which leads to lower hourly wages (Shen and Ge, 2005; Li, 2020). Not only that, women in the e-commerce industry are mainly located in the human resource department rather than the higher paying scientific research department, while men are still more likely to enter the scientific research department compared to women (Shen & Ge, 2005; Li, 2020). Even if women do enter the IT sector, they will face greater challenges in balancing family and work. Compared to women in other industries, 70% of women in IT have little time to deal with family issues (Shen & Ge, 2005; Li, 2020). According to a study conducted by Sharma (2019), many companies have begun to replace their HR departments with algorithms that specify that they will only hire those 25-35 year old highly educated men because women are usually victims of discrimination, violence and labor harassment. Therefore, this algorithm simply replicates the history of gender violence and enforces it again. "There is no digital neutrality", Sharma (2019) exclaims. When the focus comes to rural women, the situation becomes even worse. Because rural women have much less access to higher education than urban women, it is more difficult for rural women to enter the industry (Shen & Ge, 2005; Li, 2020).

It is encouraging that the empowerment of women in e-commerce can already be observed worldwide. For example, IndiaShop, the most typical sari-serving e-sales industry in India, has almost exclusively women acting as sales intermediaries (Moya, 2018). Moreover, in Peru, there is a

nationwide network of housewives, Tortasperu, a platform that gives housewives a channel to sell the sweets they bake themselves at home (Moya, 2018). Not only that, but what challenges and opportunities women face in a world of labor and business models affected by the digital revolution were also discussed in a United Nations conference on opportunities for women in e-commerce (UN Women, 2017). The conference notes that e-commerce must be approached with care not to keep women at home and increase their double workload and unpaid domestic and care work, thus ultimately entrenching women's gender traditional roles in the family. In addition, the conference also discusses the strategies that enable women to benefit and contribute to the achievement of sustainable development in the era of the digital revolution. First mentioned was the Addis Ababa Action Agenda, which emphasized that member states should undertake political and legal reforms to enable women to access appropriate new technologies (UN Women, 2017). Furthermore, member states commit to address specific challenges and promote women's equal and active participation in domestic, regional and international trade activities (UN Women, 2017). These specific challenges are also mentioned in the document, such as the low percentage of women with access to the Internet and the plan to achieve gender parity among Internet users by 2020 (UN Women, 2017). Globally, UN Women (2017), in collaboration with the International Telecommunications Union (ITU), issued the program intended to close the Digital Gender Gap, EQUALS: The Global Partnership for Gender Equality in the Digital Age. EQUALS will address the key challenges by enhancing some crucial perspectives (some examples see below).

Five ways proposed by EQUALS (UN Women, 2017)

- "Women's and girls' full access to ICTs, including digital devices and services."

- "To ensure their full access, we also need to address potential threats that ICTs pose, such as cyber-related violence, harassment and online insecurity."

- "Women's and girls' learning of 21st Century ICT and digital skills so they can proficiently use ICTs in both their private and professional lives."

- "To ensure that women can become producers and creators of ICT and relevant content for the digital world, EQUALS will act as a marketplace to connect women job seekers with vocational skills providers and employers demanding digital/STEM."

- "At UN Women, we are developing a Virtual Skills School that will be linked to this pillar of EQUALS. Fostering enterprise development under EQUALS will expose women beneficiaries to e-commerce opportunities. This free virtual learning platform, We Learn, is meant to deliver skills development pathways that ensure that no woman or girl is left behind. The platform will deliver high-quality education and training that supports young women and girls to acquire critical 21st century digital, technical, professional and life skills, bringing innovative learning methods and knowledge to the most disadvantaged. Entrepreneurship, financial and digital literacy, procurement

and trade are some of the courses that will be offered on UN Women's We Learn platform."

3.2 Social status

From those previous studies on the barriers faced by women in the e-commerce industry, it is clear that overall e-commerce has become a new opportunity for women and an important player in empowering women. So, have women's social status actually been enhanced? Xu (2016) conducted a case study of 14 female entrepreneurs who started their own businesses through Taobao online stores and the results showed that women have more freedom in deciding which industry to enter because of the lowered barriers and relatively equal access to all resources in the e-commerce industry (Li, 2020). Thus creating a prerequisite for women's development and empowerment, female entrepreneurs have equal opportunities and control over resources (Robeyns, 2011; Narayan, 2002; Li, 2020). In this case study, almost all female entrepreneurs perceived little gender bias in the e-commerce industry. Moreover, the right to economic independence that comes with working in the e-commerce industry enhances their self-esteem and social status at home (Liu et al. 2016; Maier & Nair-Reichert, 2007; Li, 2020). Because they contribute so much to the household's financial income, they have more autonomy in managing their time and therefore can do fewer household chores.

Nevertheless, others argue that e-commerce has not improved the status of women in society and may even make the situation worse. Yu and Cui (2019) argue that as the boundaries between private and public, home and market, family life and productivity are blurred and reshaped by e-commerce, women of all ages, including women entrepreneurs, have no boundaries or limitations in e-commerce (Li, 2020). The need for women to juggle their work as daughters, mothers, wives and daughters-in-law has resulted in women working longer overtime hours (Yu & Cui, 2019; Li, 2020). Compared to urban women, most rural women are exploited as cheap, low paid and devalued labor, and are more bound by the traditional patriarchal norms of self-sacrifice, family life and obedience (Yu & Cui, 2019; Li, 2020). In addition, women face more difficulties than men in withdrawing from their careers in the face of family difficulties, social prejudice and economic pressures (Yu & Cui, 2019; Li, 2020). In terms of women's self-perception, according to Xu (2016) 's survey, female online store owners do not consider themselves as real entrepreneurs (Li, 2020). Their low self-esteem stems from a traditional Chinese belief that women should take care of their families, which makes women reluctant to see themselves as entrepreneurs.

It appears that male dominance has not been shaken in the e-commerce industry, especially in rural areas. One culture-related reason for this result is China's unique socio-cultural background, namely Confucianism. In Confucianism, Chinese women are often encouraged to be the opposite of

the modern independent woman, the virtuous wife and kind mother. Hence there is an old saying in China which is that "the right job is not worth the right husband" (Shen & Ge, 2005; Li, 2020). The deep-rootedness of Confucianism in Chinese society also suggests that the stereotypes women have of themselves are difficult to change. This is also shown in Xu's (2016) study that Chinese female e-commerce entrepreneurs do not consider themselves to be "true entrepreneurs", they believe they only contribute to share the economic pressure of their families and rarely have a higher degree of self-fulfillment because they are not considered independent and self-empowered in traditional Confucian culture (Li, 2020). Rosenlee (2012), however, argues that it is inappropriate to view Confucianism as a negative factor in the emancipation of women. She sees "a modified Confucian ethic", what she calls Confucian feminism, as a source of female emancipation as well. Her assumption is that women can affirm themselves in a network of relationships. Take the Confucian virtue of filial piety, the virtue of mutual care between parents and children. The virtue of filial piety is that the relationship between parents and children will be prioritized, suggesting that women can affirm the self as a person who truly cares for their loved ones in family relationships (Rosenlee, 2012).

4. Methodology

This paper uses qualitative analysis from a feminist perspective (Creswell, 2013) to interview employees in one of the representative types of e-commerce industry, Internet companies, using semi-structured interviews. The interviewee selection, interview setting, interview questions and bias issues are carefully considered in the following sessions.

4.1 Interview setting

Since the respondents of this study are mainly Chinese e-commerce employees, all interviews are one-on-one and conducted via Zoom online given the geographical distance and time difference. Respondents are asked to turn on their cameras so that it can be more visually observed how respondents feel about the questions. In order to get more realistic answers and protect the privacy of interviewees, the identity of the interviewed employees and the company are kept confidential and there are some pseudonyms to name the respondents.

4.2 Interviewee selection

This paper focuses on the employees of well-known Chinese Internet companies, also widely known as *da chang* by the Chinese. In this case, the selected companies include Alibaba, Tencent, Baidu and ByteDance, who are ranked first, second, fourth and ninth, respectively, in the overall strength of Chinese Internet companies in 2020 (ISC, 2020). Two perspectives are chosen for the interviewees: the male employee perspective

and the female employee perspective. The reason for choosing the male employee perspective is that the paper intends to capture the professional barriers faced by female colleagues and the social status gained by female colleagues in the eyes of male Internet employees (under the male gaze) in Chinese society. The female perspective represents the self-perception of female employees regarding barriers and social status. The positions selected for both the male perspective and the female perspective are in two categories, HR positions and technology positions, as these two categories are well compared during the literature review in terms of barriers to entry for women in the industry. A comparison of the male perspective and the female self-view of the two extreme positions also adds value to the study. This study selects 2 male HR, 2 female HR, 2 male programmers and 2 female programmers. Table 1 illustrates the detailed contents of sample companies and interviewees, including rankings of the companies, main business and brand, and the number of interviewees and their positions in each company.

Table 1
Introduction to sample companies and interviewees

Ranking	Enterprise name	Main business and brand	Location	Number of interviewees and their positions
1	Alibaba	AliPay, Taobao, TMall, Ali Cloud	Zhejiang	1 (1 programmer)
2	Tencent	WeChat, Tencent Video, Tencent Meeting	Guangdong	2 (1 programmer and 1 HR)
4	BaiDu	BaiDu	Beijing	2 (1 programmer and 1 HR)
9	ByteDance	TikTok, Douyin, Lark, Toutiao.	Beijing	3 (1 programmer and 2 HR)

Contents of the first four columns of the table are from Research Report on the Comprehensive Strength of Chinese Internet Enterprises in 2020 (ISC, 2020)

There are two reasons that determine the number of respondents. Firstly, this paper is time limited as an undergraduate thesis. Secondly, the purpose of this paper is to deepen the understanding of the above research topic. Therefore, interviewing 8 interviewees is feasible within the time limit and

could contribute to the topic to some extent. Furthermore, since I completed an internship in HR at a cutting-edge Internet company in China not long ago, I have a great deal of convenience in finding respondents, as I knew some employees in the target group of companies for the study. I adopted the snowball technique (Portwood-Stacer, 2010), starting with interviews with those I knew and then reaching out to other potential interviewees through them. Although the initial stage respondents, which are the people I knew, may have introduced selection bias into the study, subsequent respondents ensured a degree of randomness and generalizability. Although the number of interviewees is not evenly distributed in each company, it is not affected because the job content (programmer and HR) of these interviewees is similar, but only their working environment and personal perceptions are different.

Additionally, I have barely touched on the discussion of the information of respondents' personal experiences, backgrounds and class status since the personal characteristics may influence respondents' answers on the topic. Although it may be very interesting to relate this information to the topic of the study, it is beyond the scope of this paper.

4.3 Interview questions

The basic themes are introduced to the respondents and the interviews start by asking fixed questions and then followed by open-ended questions based on the interviewee's answers (see the fixed questions in table 2). The questions set for male employees are asked to female employees in the same way to compare the differences between male and female employees' answers to find out whether their assessment of gender equality is the same. While, most of the questions are only set for female employees. In terms of the accuracy of the responses, since my research topic has little to no adverse impact on the respondents, e.g., potential damage to interests, the accuracy of the responses can be guaranteed to some extent. The only thing that needs more consideration is the accuracy of the HR respondents' responses. They are more sensitive to the topic of gender inequality because they need to avoid damaging the company's image and reputation. Therefore, for HR respondents, in order to accurately understand the gender equality situation in the company from their answers, the questions are organized in a more soft way, such as "What kind of gender inequality problems did you encounter when applying for a job, how did you solve them and how did you feel about them, what gender inequality problems have you seen or heard about in your working environment, etc.", rather than asking them directly whether they would give more consideration to the gender of the applicant. In addition to this, anonymous mode also helps to get more accurate answers.

Table 2 Fixed questions that starts the conversation in interviews

Questions for male (also being asked to female in the same way):
What is your approximate monthly salary range and how many hours a day do you work (including days off)? And How do you feel about the intensity of the work?
What was the approximate percentage of women in your most recent larger team effort at the same time? What was the role of the female colleagues in this work? Was it a central role?
What kind of barriers do you think women might face in getting a job in your position? Do you think the barriers get smaller compared to other traditional industry positions?
Questions for female (only being asked to female):
Have you worked in the traditional industry before engaging in the e-commerce industry? What do you think is the difference in the treatment of female employees between the two?
What barriers did you face in getting the job? How were they resolved?
Does your current job give you more freedom? What kind of freedom? Why?
What do your family or friends think about your job?

5. Theoretical framework

For the information collected from the respondents' answers, this paper will use Acker's (2006) inequality regimes for extraction and analysis. There are three reasons for choosing inequality regimes as the theoretical framework. First, the application of Acker's (2006) inequality regimes is at the organizational level, which coincides with the selected object of this study, i.e., the firm and its employees, since the firm is one of the multiple models of organizational units. Second, Acker (2006) suggests that inequality regimes are useful when analyzing organizational change projects in order to better understand why these projects often fail and why they succeed in certain situations. E-commerce is essentially a change in the business model of an organization like a firm, so inequality regimes are a good tool to analyze the reasons why inequality issues are not handled well under such changes. In addition, it helps to understand what kind of conditions should be created by companies to deal with inequality under the change of e-commerce model. Third, although Acker (2006) developed the inequality regimes based on her research primarily in US, it has been successfully

applied to different cultural contexts such as the Chinese context (Cooke & Xiao, 2014), Bangladeshi, Caribbean, and Pakistani contexts (Healy, Bradley, & Forson, 2011), and the Australian context (Murray & Syed, 2010).

The inequality regimes contain six components, which are, the bases of inequality, the shape and degree of inequality, organizing processes that create and recreate inequalities, the invisibility of inequalities, the legitimacy of inequalities, and the controls and compliance (Acker, 2006). In the bases of inequality, Acker (2006) identifies class, gender and race as three important bases. This study focuses on one of the three important bases, which is gender inequality. In terms of gender inequality, Acker (2006) argues that in recent times, gender has been almost exclusively combined with class in many organizations , that is, top managers were predominantly male. Now, on the other hand, women have begun to be distributed in organizational class structures in ways similar to those of men, and gender and class are no longer so perfectly aligned (Acker, 2006). For example, there are now more and more women distributed in the management ranks of organizations. However, lower paid occupations such as secretaries, clerks, waiters and caregivers are still predominantly occupied by women (Acker, 2006). Thus, although things have changed from the past, gendered and sexualized assumptions continue to shape the class status of men and women in different ways (Acker, 2006).

In the first part of the analysis, which is "whether female employees of Internet companies face lower barriers", the shape and degree of inequality are applied since it is believed to be helpful to analyze what inequality is likely to be experienced to what extent in the organization (Tatli, Ozturk & Woo, 2017). This is also how I related the inequality regimes to my research question, that is first identifying theoretically different shapes and degree of inequality and then applying these theories to extract the barriers in real situations from the respondents' answers.

In terms of the shape and degree of inequality, Acker (2006) proposed four dimensions, including the degree and pattern of segregation by gender, the size of wage differences in organizations, the steepness of hierarchy and the severity of power differences. For the degree and pattern of segregation by gender, Acker (2006) first distinguishes between "job" and "occupation", where "occupation is a type of work" but a "job" is a particular cluster of tasks in a particular work organization". She argues that "job" is the relevant unit to review segregation within the organization. This is because even if women and men are in the same occupation, they are likely to be working in different positions and companies that possibly create inequality issues (Wharton, 2005). Not only that, jobs and occupations may also be internally segregated by gender (Acker, 2006).

The wage difference is easily understood because it tends to vary by rank (Acker, 2006). Women are at a greater disadvantage in terms of wage gap,

as evidenced by the fact that white women and women of color are at the bottom of the wage scale in most service industry organizations according to Acker's (2006) research.

For the steepness of hierarchy, Acker (2006) describes the hierarchical intensity of several different management models and further reveals that some of the less hierarchically intense management models also still present stronger barriers for women.

In terms of the severity of power differences, Acker (2006) argues that managers are not always equal. In some organizations, female managers quietly do the less important tasks within the organization and just keep things running, while male managers are responsible for solving high-profile problems (Ely & Meyerson, 2000). There are certainly cases where women and men manage and exercise organizational power in the same way (Wacjman, 1998), however, such cases often present gender contradictions because the exercise of power by women violates the tradition of relative subordination to men (Acker 2006).

In the second part of the analysis, which is "whether women have gained a higher status due to their work in internet companies", the combination of three concepts, which are the invisibility of inequalities, the legitimacy of inequalities, and the controls and compliance, is applied since they are believed to be able to identify the contextual and historical factors outside the organization that may bring about inequality problems (Tatli, Ozturk & Woo, 2017). Furthermore, in the Chinese context, culture and tradition are seen as important factors that constitute the legitimacy, invisibility, control and compliance of the inequality regimes (Tatli, Ozturk & Woo, 2017). Therefore, it is more appropriate to put these three dimensions together than discussing them separately.

Acker (2006) defines the visibility of inequality as the degree of awareness of inequality. She argues that the lack of awareness may be intentional or unintentional. And managers may intentionally hide certain forms of inequality (Acker, 1991). She also suggests that gender and gender inequality tend to disappear in organizations or are seen as irrelevant to the organization because practices of gender inequality are sometimes so transient or insignificant that it is difficult to see.

Regarding the legitimacy of inequalities, Acker (2006) stated that despite a large number of laws and regulations to limit the occurrence of gender inequalities, gender inequalities still exist in work organizations because they are often legitimized through arguments that naturalize inequality (Glenn, 2002). For example, some employers still believe that women are better suited to take care of families, believe in biological differences between the sexes or endorse the superiority of male characteristics, all of which legitimize inequalities (Acker, 2006). And the inherent superiority of

people with these characteristics who win the competition also naturalizes inequality (Acker, 2006).

According to Acker (2006), the purpose of control in organizations is to maintain the power of managers, to ensure that all actions of employees are aimed at achieving organizational goals, and to make employees accept the system of inequality. There are three models of this control, which are direct control, indirect control and internalized control (Acker, 2006). Direct control is the use of salary to control employees (Acker, 2006). Indirect control and internalized control, on the other hand, is the targeted recruitment of less selective workers or convincing employees of the legitimacy of male privilege in a certain cultural or social context, such as patriarchal and collectivist cultures (Acker, 2006).

Next, the above theoretical framework is applied in analysis and provides the research valuable insights.

6. Analysis

6.1 Lower Barriers for women? — Four dimensions of the shape and degree of inequality.

6.1.1 The degree and pattern of segregation by gender & the size of wage differences in organizations

By analyzing the respondents' responses, it is clear that programmers (both men and women) are generally paid two or three times more than HR staff in terms of salary. However, high-paying positions like programmers are dominated by men. Sarah, an algorithm engineer who just joined the team a year ago, said that she is the only female in her team, probably because there are few females studying computer science, which leads to a small number of females doing this job. She described the situation of her computer science major in college, "There were only three females in a class of more than 90 people," she said. Chris, an algorithm engineer at another company, expressed a similar view, saying that there were no females in his team. The observed facts support Acker's (2006) point in the discussion of the degree and pattern of segregation by gender that women tend to be segregated from higher paying positions. In this case, although more and more women are entering Internet companies, which pay more than other industries, they still have difficulty getting into higher-paying positions in Internet companies.

So if women succeeded in getting high-paying positions on the Internet, such as programmers, would segregation still exist? Ruby, a server-side tester (a type of programmer), gives some valuable answers. According to her description, there are 6 females in her team of 10, because a position like server-side tester often requires more precise checking and careful

character, for example, her job is often to run and check certain programs constantly, and the group with such traits is often female. This shows that despite the emerging IT industry, there are still occupations similar to traditional industries that prefer female workers, such as secretaries, clerical workers, etc. In IT jobs where women are preferred, women face lower levels of inequality and are therefore more likely to be hired. However, as Ruby said, "women have a greater advantage in applying for server-side tester, but men prefer to work in research and development, such as algorithm engineers, because the salary of R&D positions is higher than tester." Therefore, it can be seen that although women have greater advantages in certain IT positions, these positions tend to give them lower wages compared to male programmers in other positions. It supports Acker's (2006) another point in the discussion of the degree and pattern of segregation by gender that jobs and occupations may also be internally segregated by gender. She takes as an example that although more women are entering the once predominantly male medical profession, female doctors may specialize in pediatrics rather than surgery, which is still considered a male-dominated job with a higher salary. In this study, it is reflected in the fact that although more women are participating in IT jobs, they are usually in lower-paying technical positions rather than the higher-paying R&D positions that are still dominated by men. Therefore, it can be concluded that both the segregation between higher and lower paying positions and the segregation within higher paying positions suggest that women are more vulnerable to the wage gap (Acker, 2006).

In addition, Ruby also mentions certain positions where women may experience higher levels of inequality, such as client-side tester, which tend not to hire women due to the fact that client-side tester's work is mainly outdoors evaluating machines, which is more physically demanding and may also face extreme environments. This fact argues against a previous literature review that e-commerce presents lower barriers for women due to its low physical requirements such as physical strength (Shen & Ge, 2005; Liu, Lin & Foster, 2016; Li, 2020). It can be seen that there are positions in e-commerce that create a higher degree of inequality for women due to higher physical requirements similar to traditional industries.

6.1.2 Hierarchy

The extent of inequality experienced by women also varies depending on the management characteristics and culture of the organization. Lucy is a new HR professional, and her company is known for its flat management. In her work environment, she hardly feels a strict hierarchy, and all employees are free to communicate and collaborate with each other regardless of their rank. In contrast, she had a previous experience in real estate sales, where she felt a strong sense of discrimination and devaluation of women and a strict hierarchy. Male salespeople always had more say than female salespeople, and supervisors would assign high-ranking accounts to male salespeople. "That job made it hard for me to breathe and I am glad I am

now in a company that gives me respect and freedom", she describes. For the steepness of hierarchy, Acker (2006) argues that hierarchy is steepest in traditional bureaucracies, followed by organizations with different levels and shared decision making, and least pronounced in flattened team structures. Lucy's answer shows that Internet companies using a flat management model indeed have a much weaker hierarchy than the traditional real estate industry, and women face a lower level of inequality in a flat management model.

However, Acker (2006) suggests that although flat team structures provide more equality and opportunity for professional women than hierarchical bureaucracies, the premise is that women work in the same way as men. Some interviewees did experience such a dilemma. Daisy is an HR professional with 7 years of experience in Internet companies, and she is still single. She says she is "forced to be single" because her work is so intense that she has little time to think about relationships or marriage. As an HR professional, she says that the flat management system does provide for fair competition, but it also means that all promotions and successes are closely related to individual performance. " If I want a successful career, I have to be a 'masculine woman' without any relationship or family responsibilities," says Daisy. A similar statement can also be found in Acker's (2006) study:

> "work is organized on the image of a man who is totally dedicated
> to the work and who has no responsibilities for children or family
> demands other than earning a living" (Acker, 2006, p. 448)

Therefore, Acker (1990, 2006) argues that the ideal employee for an organization is constructed in the image of a male employee, and that this hidden assumption affects the structure of work time, job roles, and expectations, thus perpetuating a disadvantage for female employees.

Such negative effects are not only on Daisy, Chris described him and his girlfriend as "both of us are algorithm engineers in the same department of the same company. Even if we work on the same floor of the office every day, but we barely have time to send each other a text message, it is not even as good as those long-distance relationship couples". It can be seen that female employees of Internet companies are forced to work "like men", resulting in a certain loss of the right to enjoy life and build relationships. This situation becomes even more serious when both parties to the relationship work for the Internet company because the forced inability of both parties to invest enough energy in the relationship can lead to psychological damage to both parties.

6.1.3 Severity of power differences

The degree of inequality may also vary by the severity of power differences. Even though women have access to leadership positions like men, the power and importance of the work women are responsible for is not worth

mentioning compared to men (Acker, 2006; Ely & Meyerson, 2000). Such a phenomenon is also reflected in the answers of the respondents. By asking respondents to answer the questions "How many female colleagues were on your most recent large teamwork and what role did they play (was it a central role?)" and "Are there many female leaders in your company" and the open-ended questions that followed, it was observed that there are few female leaders in programmers' departments, except for the aforementioned female-preferred positions, such as tester, and departments in the companies with a female-friendly company culture. Ruby says, "Although we have a preference for women in this position, the core leadership of our entire department is still male, and most women are general employees, with a small number of women in leadership roles, but only as mentors in small teams." Contrary to Ruby's description, HR respondents (Lucy, Daisy, John, David) indicated that 95% of their department's employees are women, and therefore leadership is almost exclusively female, making the severity of power differences not as great as in the programmer department. Thus, the extent of inequality that women face is lower in the HR department due to lower severity of power differences.

However, situations in which women and men manage and exercise organizational power in the same way often present gender contradictions because the exercise of power by women violates the tradition of relative subordination to men (Acker, 2006; Wacjman, 1998). Ruby's answer reflects this view: "Every time our department held a large meeting, there are always some colleagues whispering when the female leaders speak, and some even start to play with their phones, very disrespectful. This is hardly ever the case when a male leader speaks. If a female leader shows a strong and rigorous attitude when following up on the teamwork she is responsible for, there will be some male employees talking about her doing so as 'meddling'." As expressed by Acker (2006), female leaders who attempt to use power like male leaders will risk being labeled as "witches" or "bitches" because they violate subordination practices relative to men

6.1.4 Corporate cultures

In the course of the interviews, some findings emerged that are outside of the four dimensions of the shape and degree of inequality. Different corporate cultures under similar management models have also been found to have a potential impact on the levels of inequality faced by women. Chris describes his last professional experience. The company he worked for advocated the "wolf culture", which is a kind of fighting spirit with wildness. It means to have "greed" for work and career, and never stop striving and exploring. The company is trying its best to cultivate employees with the three characteristics of wolves: first, a keen sense of smell; second, the indomitable and defiant spirit of attack; third, the sense of group struggle. However, Chris believes that the company is more inclined to cultivate the ferocious and cold characteristics of wolves in its employees than the fighting and aggressive spirit in the wolf culture, such as "caring

only about the results and not the process", which leads the whole company into a continuous high-pressure and cold-blooded competitive environment. "Many female colleagues in my previous team resigned because they did not like the corporate culture," says Chris. For such phenomena, Martin and Meyerson (1998) suggest that masculine, aggressive, competitive, and self-promoting stereotypical male work patterns make women feel that they are somewhat of an outsider and do not belong. However, There are also companies that have a relatively good culture for women. Chris describes his first work experience at the Suzhou branch of a globally recognized foreign-owned Internet company. "In that team, if my mentor managed to hire a female employee, or female intern, it would give my mentor extra points in terms of 'SKILL', because the company emphasized a culture of team diversity", Chris said. By comparing Chris's two work experiences, it is clear that although the workplaces are both in China, the branches of foreign Internet companies have a more explicitly defined corporate culture that is good for women than Chinese Internet companies.

In addition to the company's explicit corporate culture, there are hidden cultures that may lower the extent of the inequality that women face. Mike describes the company he is working in and his team, "Most of the R&D positions in the early stages of the company were held by women, resulting in many of the company's R&D departments being led by women. My mentor is also a woman and is responsible for the core of our team's R&D content. And our company has significantly more female employees than other Internet companies, probably because of the indispensable status of female workers since the company was founded." Thus, it can be seen that companies led and developed by predominantly female groups tended to take on more female employees in later years. Although it is not explicitly stated, this hidden culture plays an important role in reducing the level of inequality faced by women.

6.2 Have women gained a higher social status?

6.2.1 the (degree of) invisibility of inequalities, the legitimacy of inequalities & the controls and compliance

As what can be seen from the above analysis, the barriers women face and the extent of these barriers vary depending on a variety of factors. So does working at an Internet company really give women a higher status, or, for that matter, more respect? As mentioned before, the combination of the three concepts from Acker's (2006) inequality regimes, the invisibility of inequalities, the legitimacy of inequalities, and the controls and compliance, are applied together to analyze this question in terms of contextual and historical factors outside the organization.

All of the female respondents reported that working in an Internet company brought them a great deal of financial freedom in terms of higher salaries (compared to other traditional industries). In addition, Lucy recounted how

her friends described her as a person with "halo of *da chang*" when they found out she had joined an Internet company. "Because being able to work for a well-known Internet company means you are one of the best in your age group since a high threshold means high capability, and everyone envied me." Lucy says so. This fact supports the view mentioned in previous literature reviews that the economic independence that e-commerce work brings to women brings them more respect (Liu et al., 2016; Maier & Nair-Reichert, 2007; Li, 2020).

It has to be admitted that greater financial independence does lead to some degree of advancement for women, but it is only a superficial advancement. When explored at a deeper level, the study found that women's status was not elevated by working for an Internet company. At the beginning of the first part of the analysis, Sarah stated the fact that the number of female students studying computer science was low. The underlying reasons for this fact emerge through Ruby and Lucy's answers: "My parents wanted me to major in finance instead of computer science in college, and then to have a stable and easier job (compared to an Internet company) after graduation. Because they think an easy and stable job is good for me to get a stable marriage in the dating market." Lucy gave a similar answer "I completed my undergraduate studies in English at a teacher training university. My parents expect me to become an English teacher because it is the most popular profession for women in the dating market. Because first of all, teaching is a decent job, and secondly it means I have plenty of time to take care of my husband and kids, something I would not be able to do if I worked in a very intense internet company." These responses reflect gendered social relationships influenced by cultural beliefs that affect the distribution of roles and resources in society and organizations, thus influencing individuals' perceptions of their environment (Ridgeway & Correll, 2004). In this study, this cultural belief is a strictly Chinese Confucian gender hierarchy where women have relatively low social status compared to men.

Confucian traditions tell us about the gender role hierarchy inside and outside of work, i.e., men are responsible for the outside (*wai*) and women are responsible for the inside (*nei*), meaning that men should be responsible for earning money to support the family, while women should be the virtuous wives and kind mothers who focus on taking care of the family. It can be seen that both Ruby and Lucy's parents believe that it is more important for their daughters to find a good husband than to have a job that fulfills their self-worth. And this traditional gender discourse subliminally influences Chinese women's perceptions of the environment they are in. As a result, the difference in the number of male and female workers in organizations is often not acknowledged as unreasonable, thus normalizing the low number of female workers (Tatli, Ozturk and Woo, 2017).

In addition, the majority of female respondents reported that the work they are doing at the Internet company is not supported by their families or partners. It can be argued that the lack of support is most likely due to the

fact that they violate the conventions of Confucian gender culture. Although they see this as a good way for them to achieve self-worth and financial independence, they are frustrated by the lack of support and recognition. As a result, in women's self-perceptions, they are also unable to sincerely believe that their work brings them a higher social status.

However, most of the male respondents have been failed to mention these cultural influences on women in response to the question "Do you think your female colleagues in the same position as you would be given a higher status and more respect because of this job," and only when I actively mention these factors do they express some degree of recognition. This phenomenon occurs because the visibility of inequality varies depending on the identity of the observer, and is generally manifested by the fact that the privileged are barely aware of their privilege, thus consciously or unconsciously ignoring the inequality faced by the disadvantaged (McIntosh, 1995; Acker, 2006). For the purposes of this study, I tend to describe the invisibility of inequality as the degree of invisibility of inequality. If the degree of invisibility of something is the same for all people, then this is equal for all people. Once invisibility varies in degree across groups, it raises the issue of inequality. And the degree of invisibility of inequality is different in the male and female groups, manifested by the female group experiencing a lower degree of invisibility while the male group experiences a higher degree of invisibility. This is reflected in the fact that female respondents can actually see, feel and express the inequalities they experience under the Confucian gender cultural hierarchy. Male respondents, on the other hand, were barely aware of their privileged position in the Confucian gender cultural hierarchy and the inequalities that women may face in this hierarchy. This varying degree of invisibility of inequality, especially the higher degree of invisibility experienced by men, leads to the re-creation of inequalities as they are ignored, consciously or unconsciously, by men under the perspective of their privileged observers, further naturalizing these inequalities.

Acker (2006) refers to these phenomena mentioned above as the invisibility of inequalities, the legitimacy of inequalities and the controls and compliance. In my study, it is observed that in the specific context of China, the gender beliefs promoted by the Confucian gender hierarchy have become a powerful and universally shared model of organizational life that confers unequal legitimacy on gender, and women tend to internalize prevailing such gender beliefs and traditions, which is similar to Tatli, Ozturk and Woo's (2017) findings in their research on the underrepresentation of women in management in China. As a result, women remain invisible in the lower status of being naturalized and legitimized by a particular culture, and are helplessly subordinated to this setting. And the work of Internet companies has not made a considerable difference to this phenomenon.

7. Conclusion

Now, Let us go back to the research question:

Has the e-commerce industry brought lower career barriers and higher social status to Chinese women working in it?

This paper answers the first part of the research question about lower barriers by mainly using Acker's (2006) four dimensions of the shape and degree of inequality. In the course of the analysis, it is found that working in Internet companies does bring about some reduction in barriers for Chinese women, but in some ways, the barriers become higher.

First, the degree and pattern of segregation by gender and the size of wage differences in organizations are applied to show that Internet companies focus more on the individual capabilities of workers than on other factors such as gender, which makes it easier for women, especially well-educated women, to enter this high-paying industry. However, despite the fact that more women are entering Internet companies, higher-paying positions such as programmers and other technology-related positions are still dominated by men. Nevertheless, there are some technology-related positions in Internet companies that prefer women due to their specific trait requirements for workers, making women more likely to be hired. However, such positions tend to pay less than those dominated by men. In addition, there are some positions that do not even have a pattern of focusing more on individual ability than on other factors because such positions have a preference for men due to their specific trait requirements, making it almost impossible for women to enter such positions. Second, in terms of the hierarchy dimension, Internet companies have a flat management model that allows women to face less inequality compared to traditional industries. However, this also makes women take on a more intense workload because they are expected to "work like men". Third, in terms of the severity of power differences dimension, women are less likely to be in leadership roles in Internet companies, except in HR departments where 95% of employees are women. As a result, women still face higher barriers to leadership in Internet companies. In addition, although some women are able to enter management, they might also experience gender contradictions by going against the tradition of relative subordination to men. The final study in this part of the analysis also identified a dimension that is not part of the inequality regimes, namely corporate culture. It is observed that the branches of foreign Internet companies established in China generally have a corporate culture that is more friendly to female employees, and that women face lower barriers in such an environment. In addition, some Internet companies initially led by a group of female entrepreneurs also tend

to take on more female employees at a later stage, which can be seen as a hidden corporate culture that also presents lower barriers for women.

The second part of the research question about whether women gain higher social status by working in Internet companies has been answered by applying the combination of Acker's (2006) theories on the invisibility of inequalities, the legitimacy of inequalities and the controls and compliance. Overall, it shows that working in Internet companies does not necessarily bring higher social status to Chinese women.

A fact can be observed is that women who are able to work in Internet companies are mostly perceived as talented and outstanding, therefore receive more respect from others. In addition, the high salaries that Internet companies bring to Chinese women also give them a degree of economic independence, which can be seen as a status enhancement. However, China's unique Confucian gender cultural hierarchy tends to place women in the position of caring for the family as good wives and mothers, while men are responsible for realizing their personal careers to earn money to support the family, resulting in a lower social status for women than men because they are considered dependent on the family or on their husbands. Therefore, the realization of a personal career is considered irrelevant for women in such a system, which leads to a lower representation of women in high paying and highly competitive jobs. In addition, the close family ties under Confucian culture make individuals more susceptible to the opinions of family and friends. Women who work in Internet companies do not receive enough recognition and support from their families because they violate the traditional image to a certain extent, thus they can not perceive themselves as having a higher status in this job. The Confucian gender culture hierarchy, as a deeply embedded consciousness in Chinese society, has established a set of unwritten social institutions, thus perpetuating the inferiority of women. The prevalence of e-commerce has not brought about Substantial changes either.

In terms of limitations and implications, the small number of interviewees due to time constraints makes it difficult to draw generalized conclusions. However, it is sufficient to provide a deeper understanding of the research topic to a certain extent. Future research directions could examine the impact of personal characteristics such as personal experiences, backgrounds and class status on the same research topic. Comparing the impact of e-commerce on gender importance in Asian countries with collectivist cultures and Western countries with individualist cultures may also be a valuable study.

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