

The Impact of Artificial Intelligence on China's Labor Legislation

Yujie Zhang

Northwest University of Political Science and Law, Shaanxi 710000, China
Corresponding author e-mail:zyjsense@126.com

ABSTRACT. Artificial intelligence technology has been developed rapidly in recent years. While people imagine that AI technology can serve the future social scene, there is also a worry that AI can replace existing jobs on a large scale. From the perspective of history, the three previous technological revolutions have all seen the phenomenon of machine replacing labor force in a short period of time. But in the long run, technological change will create new jobs and create employment. Existing studies show that the impact of artificial intelligence on employment inherits the laws of previous technological revolutions, with both employment substitution and employment creation. The core of the scale and speed of employment increase or decrease depends on the employment cost of the enterprise. Excessively strict protection of labor laws and excessively high labor costs are bound to speed up the replacement of machines and further accelerate the rupture of labor relations. And add instability to the labor market. The key to avoid the negative impact of artificial intelligence technology on employment is to analyze the existing labor law and policy system from the perspective of labor cost. To amend the provisions that unreasonably increase labor costs. At the same time, future-oriented labor legislation should have more achievements in employment training system, atypical labor protection and social security cost socialization.

KEYWORDS: Artificialintelligence; employmentsubstitution; laborcost; labor legislation

1. Introduction

As the pioneer of the fourth wave of scientific and technological revolution, Artificial Intelligence (AI) technology has ushered in a qualitative leap in recent years. Artificial Intelligence technology has gradually penetrated into every aspect of social life. Existing research believes that, compared with previous technological revolutions, the impact of “artificial intelligence revolution” on employment will be broader, stronger and lasting for longer. Recognizing the huge potential dividend of the development of artificial intelligence, many countries have issued industrial policies to lay out the research and development and industrial layout of artificial intelligence, so that the country will be in an advantageous position in the future competition.

From the perspective of international strategic planning for AI, there are two themes that are generally concerned by all countries: First, the impact of artificial intelligence on employment; Second, the impact of artificial intelligence on social equity. Behind these two public policy issues, reflects the artificial intelligence era machine replacement of artificial labor concerns. What substantial impact will artificial intelligence have on employment in China in the future? Will the fourth technological revolution represented by artificial intelligence trigger a large-scale “machine replacement” problem in China? What role does current Chinese labor law play in the employment substitution effect of artificial intelligence? As labor legislation and social security legislation to protect the rights and interests of workers and maintain social fairness and harmony, the era of artificial intelligence will face new challenges and tasks.

2. The impact of artificial intelligence on employment

2.1 Technological change and employment from a historical perspective

Historically, in the real economy of the past, technological changes have basically followed the logical line of “technological progress — productivity improvement — expansion and complexity of demand — specialization of production — more employment opportunities”. In short, the impact of technological progress on employment is a double-edged sword. On the one hand, technological change is disruptive to employment. New technologies improve labor productivity and capital productivity, so the replacement of human by machines will inevitably have an impact on employment. On the other hand, technological change has the effect of creating jobs, as new technologies are introduced and applied, new jobs are created and stimulated. Deloitte examined the relationship between technological progress and employment in Britain since 1871. It concludes that “technological progress has become a job-creating machine.” Employment has fluctuated from time to time, but the quantity and quality of employment have increased on the whole.

Based on the analysis of the development experience of the previous three technological revolutions, it should also be noted that the impact of technological progress on employment is also staged. At the same time, the impact of technological progress on different industries and different people is also different. Technological progress itself is an evolving process. At the beginning of the emergence of new technologies, due to the limited scale of related core industries, the number of jobs directly decreases,” Machine replacement “has a direct impact on employment, at this time, the impact of technological progress on employment is often destructive; with the development of technology and the increase of core scale industries, a large number of jobs will be created; when it comes to the decline of technological progress, the promoting effect of technological progress on employment will gradually weaken. The three technological revolutions all show that the wave of technological innovation is highly correlated with the mass unemployment in the economic cycle.

From the short-term micro point of view, the application of technological progress may replace the labor force; But from a long-term macro perspective, technological progress creates a lot of new jobs through its impact on social and economic development. A common concern is whether AI technology will displace the workforce on a large scale from a short-term micro perspective. The key is whether companies adopt new technological advances, will the production scale be further expanded after the adoption? For the whole society, the real problem is not whether the employment will increase or decrease, but how large and fast the employment will increase or decrease.

2.2 Employment substitution and employment creation of artificial intelligence

1) Employment substitution of artificial intelligence applications. The first impact of technological progress on employment is to impact the original jobs, the most typical manifestation of which is “Machine replaces man”. The development of artificial intelligence technology promotes the continuous deepening of the information technology revolution, and also brings the conjecture of a new round of technological revolution. The influence of technological progress on labor means has evolved to the stage of automation and intelligence. In recent years, the application of robot is the main symbol of “machine replacement”. With the continuous expansion of its application field, the process of production automation is accelerated. “Robot” replacement has become an indisputable fact of reality.

According to the model of modern production organization, any occupation/position can be subdivided into one or more work tasks, employees need a set of skills to complete different task modules in their jobs. When the task module that creates the core value in a certain position is the task module that can be replaced by artificial intelligence, the position becomes the position that can be cut down. Existing employees may be transferred to supervisory and management duties or other positions. With the rapid development of artificial intelligence technology, robots have been used to complete dangerous and extremely boring tasks that are not suitable for human beings, and gradually expanded to manufacturing, service, national defense, space exploration and other industries and fields. With the further development of artificial intelligence technology, as well as the increase of human cost and the decrease of robot cost, the field and scene of robot application will be further broadened. The substitution effect of artificial intelligence on employment will be further highlighted.

2) Employment creation of artificial intelligence applications. The productivity released by AI and the specialization of labor division also provide new employment opportunities. Historical experience shows that technological progress for the creation of jobs more from the resulting emerging industries and related industries. Under the conditions of traditional agriculture and traditional industrial economy, most workers are engaged in manual labor or work with relatively backward tools. With the advent of the era of intelligent economy, the mode of production, production tools have changed to a certain extent. As a result, workers can get more workplace experience in this era of economic transition. The substitution of robots

for jobs, for example, Acemoglu and Restrepo (2017) estimated the impact of increasing robots on local employment rate and wage level in various regions of the United States from 1993 to 2007, it found that for every new robot introduced, an average of 6.2 workers lost their jobs and 0.73 percentage points of average wages were reduced compared with regions without robots. Frey and Osborne (2013) divided 702 occupations according to the possibility of being replaced by machine automation, and it predicts that 47% of jobs in America are at risk of being replaced by machines over the next 20 years.

Due to different industries and different positions in the industry work content and artificial intelligence development potential are quite different. The replacement of labor force by intelligence is not the same. The first jobs to be replaced by artificial intelligence are routine, standardized jobs. Jobs that are creative, flexible, and emotionally or artistically creative are hard to replace in terms of core experience and skills. On the other hand, although some jobs have been displaced, new technologies are also creating new jobs. Researchers at the Organization for Economic Cooperation and Development (OECD) point out that the goal of machine automation is to improve work efficiency rather than replace existing jobs, essentially, new types of work tasks will be formed (Arntz et al. 2016).

In addition, AI is creating a new set of jobs that are very different from the traditional mode of getting to work on time. In terms of labor demand, enterprises no longer use a single labor contract; In terms of labor supply, individuals have various forms of employment. A series of new flexible jobs such as self-employment, independent contracting and crowdsourcing have emerged in large numbers. The flexible employment model complements the deficiencies of the labor market in terms of absorbing the youth group, eliminating employment discrimination and increasing the employment income of workers. Take the network platform Uber for example, the average age of workers on Uber platform is 35.97 years old, and the proportion of young adults aged 25-44 years old is about 80%. The ratio is relatively higher than that of the same age group in the national working population. In terms of the characteristics of workers, the flexibility of the network platform and the differentiated services broaden the radius of the labor market, and are of great inclusiveness. Providing fair and flexible employment opportunities and higher income opportunities for married women, floating population and other groups with difficulties in employment. It has reduced the risk of unemployment and stabilized the social foundation.

3. Labor cost is the core consideration factor of machine replacing labor

In the real society, whether enterprises need to reduce and increase the number of jobs should not only consider the technical feasibility, but also consider the economic feasibility. The real question for society is not whether employment will increase or decrease, but how large and how fast it will occur, and whether it is possible to help new and old workers master the labor skills needed in the era of artificial intelligence, so that the employment structure can complete a smooth transition. In terms of the employment impact of artificial intelligence, the speed and

scale of this process, but also depends on a number of factors. From the perspective of microeconomics, the key point of whether technological progress can produce the substitution effect of labor force is whether enterprises will adopt technological progress, whether the production scale will be further expanded after adoption. This is mainly a matter of cost and benefit.

Two types of costs must be taken into account: First, the initial r&d cost of the AI manufacturer. The higher the initial cost, the higher the product pricing will be. The second is the initial cost and transformation cost of the manufacturer applying artificial intelligence technology. If the initial cost is huge and the cost of replacing traditional production mode with artificial intelligence is high, the application of artificial intelligence products will also be delayed. Curb the demand for artificial intelligence products, this leads to a relatively slow process of replacement. Initial cost and transition cost include a very important consideration factor, that is, the employment cost of labor. If labor costs are high, the cost of establishing labor relationships is higher than the cost of developing and applying ARTIFICIAL intelligence, manufacturers or employers have an incentive to accelerate the scale of artificial intelligence replacement of labor, otherwise, it will slow down the scale of employment replacement. The role of labor protection is obvious. For a country, if the labor market is rigid and labor laws and policies protect the employment and related rights of workers too strictly, artificial intelligence will replace employment relatively slowly.

The cost of labor laws and policies has been pushing employers to try their best to escape from the formal labor relations, which some foreign scholars call the rupture of labor relations. Artificial intelligence will accelerate the rupture of labor relations, which largely depends on the risks and costs of labor relations brought by labor laws. This process cannot be avoided -- existing Labour Legislation has long emphasised increases in worker benefits such as the minimum wage. Such an approach would only increase the cost of employment and accelerate the replacement of existing labor by artificial intelligence. Constantly improving labor protection in the field of standard labor relations can only accelerate the generation of unemployment. It is time to examine whether some of the labor law policy rules related to labor costs indirectly affect the unreasonable labor costs, and adjust it accordingly. In addition, consideration should also be given to extending social welfare to the whole community.

From November 2017 to January 2018, the research team of China Development Research Foundation went to Suzhou, Jiangsu, Dongguan, Zhejiang and Hangzhou to investigate the development status of artificial intelligence industry and the situation of "machine replacement". Industrial automation and robot replacement of labor force in these areas can be regarded as the precursor of artificial intelligence employment replacement in the future. The research group found from the investigation of more than ten enterprises in Hangzhou that the machine automation process of large enterprises is faster and higher. In small and medium-sized enterprises, the degree of machine automation is not high, and the replacement of workers by machines is not obvious. There are also enterprises said that the development of enterprises, equipment is the only way, semi-automatic, automatic

step by step. According to the survey on the implementation of machine replacement in Suzhou enterprises, 70% of the enterprises have reduced personnel, 20% have increased personnel, and 10% remain unchanged. In the future, the number of low-end jobs will continue to decline, while the number of high-end jobs will continue to increase. Dongguan implemented the three-year action plan of "Machine Replacement" from September 2014 to the end of 2016. The municipal finance will allocate no less than 200 million yuan each year to subsidize enterprises to carry out a new round of technological renovation with advanced automation equipment. The project has applied for more than 2,400 machine replacement projects, reducing 250,000 front-line production workers, accounting for 5% of the registered employment in the city, with an average reduction of 100 people in each project. According to a survey by the Hangzhou government of representative enterprises in the whole city, the employment of production posts has decreased significantly after the use of ARTIFICIAL intelligence technology. In 37 enterprises, 800 workers in production posts were reduced due to the use of robotics, 539 of them were transferred within the enterprise, and 261 left the enterprise.

Although the unemployment rate obtained by different studies varies greatly, it is undeniable that artificial intelligence will cause a large number of workers to lose their jobs and need to find suitable jobs again. Chen Yongwei (2017) used the same method as Frey and Osborne (2013) to study more than 400 occupations in China, and estimated that 70% of occupations nationwide would be impacted by ARTIFICIAL intelligence. If the agricultural population is excluded, about 60% of the occupations will be impacted. According to the McKinsey Global Institute, the scale at which automation replaces full-time staff varies with the income level, demographics and industry structure of the economy. It is estimated that between 2016 and 2030, the number of full-time employees replaced in China will be about 40-45 million. Based on current technology levels, more than 40 percent of existing work content and 31 percent of existing working hours in China can be automated. Predictable physical tasks such as assembly line work are particularly vulnerable to automation. Automation will eliminate one in five manufacturing jobs in China by 2030. If automation accelerates, nearly 100 million workers will need to switch occupations by 2030 .

4. The content that affects labor cost in current labor legislation

4.1 The empirical analysis of the rising labor costs of enterprises

In recent years, there has been a widespread belief that the promulgation of the Labor Contract Law has caused a series of problems. It focuses on two issues, one is the inflexibility of labor market; Second, Labour costs are higher. The unreasonable increase of labor cost caused by excessive labor protection will accelerate the rupture of standard labor relationship and the replacement of existing labor force by artificial intelligence. In the era of artificial intelligence, reducing labor costs and increasing the flexibility of the labor market have become the problems that must be faced in the field of labor law.Reducing cost and increasing flexibility are closely

related to Labor Law, especially Labor Contract Law. Therefore, to examine the rationality of the relevant provisions in the existing Labor Contract Law from the perspective of reducing labor costs, it is inevitable to discuss the reasons for the increase of enterprise labor costs, and the relationship between enterprise labor cost and relevant rules of Labor Contract Law.

Through the collection and analysis of the actual data, it is found that the viewpoint that the Labor Contract Law causes the labor cost of the enterprise to occupy a large proportion of the total cost per unit cannot be established. Take Shanghai as an example. From 2001 to 2007, when the Labor Contract Law was promulgated, the proportion of the total cost of employing persons occupied by enterprises was 6.9% on average. Between 2008 and 2014, when the Labor Contract Law was enacted, it was 6.3 percent. In fact, in the past 20 years, the wages of Chinese workers have been in a slow growth trend. The main reason for this trend is the large increase in the wages of migrant workers.

Statistics show that during the 12th Five-Year Plan period, the average monthly income of migrant workers increased by 12.7% annually. According to the analysis, the main reason for this growth trend is the rectification of the long-term low wages of migrant workers. In addition, the decline of the working age population in China is also one of the reasons for the increase of workers' wages. The trend has continued since 2012, when China's working-age population declined for the first time, according to the National Bureau of Statistics. The relative shortage of labor supply in China has become a normal state, and a direct impact of labor shortage is the rise of labor cost.

With the development of economy and society, the rise of labor cost has certain internal and rationality, at the same time, there are many reasons for the current rise in labor costs, which cannot be simply attributed to the implementation of the Labor Contract Law. On the whole, labor costs are closely related to changes in labor market supply and demand. In addition to labor costs — wages there are labor related taxes and social security costs. At present, the social insurance paid by enterprises for workers accounts for a large part of the labor cost, and is also the most important part to promote the rise of labor cost. The social insurance part is mainly adjusted by the Social Insurance Law and its supporting regulations, and has no direct relation with the Labor Contract Law.

4.2 Analysis of provisions affecting labor costs in Labor Contract Law

Through the above analysis, it can be seen that the rise of labor costs has no direct relationship with the implementation of Labor Contract Law, but it cannot be said that there is no correlation between the two. As the core law of labor protection in China, the rules of Labor Contract Law to protect workers are often accompanied by the obligations of employers and the resulting economic costs. In this sense, the Labor Contract Law, as a representative law of labor protection, has a potential impact on the labor cost of enterprises. There are few provisions in labor Contract Law that have a direct impact on labor costs, mainly focusing on wages during

probation period and compensation for double wages without a written labor contract. And The economic compensation when the labor contract is terminated and the compensation when the labor contract is released, etc.

The specific provisions involved are articles 20, 83 and 46~48 of the Labor Contract Law. The most controversial clauses in practice are the double wage Liability Clause (Article 82) and the economic compensation and penalty compensation system clause. As far as the double wage liability clause (section 82) is concerned, it is generally reflected in practice that the clause is too harsh on employers. According to Article 7 of the labor contract law, “the employer shall establish labor relations with the workers from the date of employment.”. It can be seen from the provisions of this article that the establishment of labor relations is marked by the occurrence of employment, and the fact that the employer does not sign labor contracts with the workers will not affect the establishment of labor relations in any way. The act that does not sign labor contract also does not necessarily harm other interests of laborer directly.

In the absence of a labor contract and without harming the legitimate interests of the employee, the employer is also liable to pay the employee twice the salary for up to 11 months, which is clearly too high a legal liability. In addition, compared with other main contract obligations stipulated in the Labor Contract Law, the responsibility of not signing a labor contract is too heavy. Take article 85 of the Labor Contract Law as an example. If the employer fails to pay the labor remuneration according to law and violates the main obligations of the labor contract, a penalty of 50% to 100% will be imposed if the case is serious. And the employer does not sign labor contracts with workers and most of the time there is no other violation of the legitimate rights and interests of workers, but to pay twice the wages. There is a clear mismatch between the degree of responsibility. When the Labor Contract Law was promulgated, the main reason for establishing the liability for double wages without a labor contract was that, avoid the situation that workers can't safeguard their rights because they don't have a labor contract. However, with the development of The Times, especially the popularity of mobile Internet and smart phones, it is easier to prove the existence of labor relations than it was a decade ago. Therefore, the necessity of double wages penalty liability also decreases.

A more common phenomenon in judicial cases is that some senior managers and the directors of human resource management departments in some enterprises intentionally fail to sign labor contracts with their employers. The intention is to get twice the wage in case of labor dispute. This part of the “employee” wages are generally higher than other ordinary employees, if there is a conflict employers often face to pay their high double wages. This kind of phenomenon can be regarded as the moral responsibility caused by the double wage responsibility, which is not conducive to the cultivation of the good faith relationship between the employer and the worker.

The rescission and termination of labor contract is the normal content of the human resource management behavior of enterprises, so the cost generated is an

important part of the labor cost of enterprises. The system of economic compensation and penalty compensation after the termination of labor contract is an important system that affects the employment cost of enterprises. Excessive economic compensation increases the protection of workers from dismissal, but this protection is often counterproductive. Excessive protection against firing employees will accelerate the rupture of labor relations and prompt business owners to accelerate the replacement of labor by artificial intelligence. In the long run, this is conducive to the reduction of labor costs, which can bring more profits. However, the rapid and large scale of labor force replacement is not conducive to the stability and harmony of labor relations, which will have a negative impact on the whole society.

Perfecting the economic compensation system to control enterprise cost reasonably is particularly important for the harmonious development of labor relations in the era of artificial intelligence. In fact, many enterprises have reacted that the protection level of firing employees is too high in China, and the existing economic compensation system has become a heavy burden for enterprises. Compared with other countries, the scope of application of economic compensation in China's Labor Law is broader, and the standard of compensation is relatively high, which does increase the burden of labor costs on enterprises. Take Germany as an example, its dismissal system can be divided into two types: dismissal under justifiable grounds and dismissal under unfair grounds. German Labor Law has a very high standard of dismissal on justifiable grounds. If the dismissal meets the reasonable cause determined by the court, the employer does not need to pay any economic compensation to the employee. If the standard of just cause is not met, the employer needs to terminate the employment relationship by paying the severance payment. Under normal circumstances, employees in the enterprise for each year of service, can be equal to half a month's salary compensation.

In the practice of German Labor Law, employers and employees generally choose to end labor relations by means of reconciliation. French Labor Law provides economic compensation to employees who are fired for personal or financial reasons. Regarding the amount of compensation, the law stipulates only the minimum amount of compensation, that is, the economic compensation equivalent to one-tenth of the monthly salary for each year worked. In practice, specific standards are generally determined according to the employee's salary years, labor contracts or collective agreements. Under the legal minimum standard, employees with 10 years of service can only receive economic compensation equivalent to one month's salary when they are laid off. Under the same conditions, employees with ten years of service in our country can receive economic compensation equal to ten months' salary when they are dismissed. In the Labor Law of The United States and Japan, there is no economic compensation system similar to that in China when the labor contract is terminated. In comparison, China's economic compensation system does have the problems of too wide application range and too high compensation standard. It increases the labor cost of enterprises invisibly, and the excessive labor protection for firing workers also makes the flexibility of labor relations insufficient. If it is not improved, with the rapid development of artificial intelligence technology, a large number of employers are bound to choose flexible employment methods to

replace the formal labor relationship employment, or directly choose artificial intelligence to replace the labor force. These are not conducive to the stable and healthy development of China's labor relations.

5. Labor legislation for the development of artificial intelligence

5.1 To amend laws and regulations relating to labor costs

Cost is the first factor to be considered in the production of enterprises. Excessively high labor cost will naturally encourage enterprises' employers to replace labor quickly and replace high labor expenditure with machines. Labor cost is the main part of labor expense. As a research on Labor Law, we should examine the existing rules related to labor cost and affecting labor cost from the perspective of labor cost. Adjusting the unreasonable labor cost rules in the Labor Law, thus reducing the labor cost of enterprises and reducing the burden of enterprises, these have significant significance for the current study of artificial intelligence on Labor Laws and policies. As mentioned above, the stipulation of double wages in the Labor Contract law is a big cost of illegal employment. The purpose of making this provision is to urge enterprises to conclude written labor contracts to protect the rights of workers. It is necessary to conclude labor contract in writing, but the employer that does not sign labor contract does not have to punish the employer with the way of double wages. An enterprise that does not conclude a written labor contract may be punished by means of administrative penalty; Where a labor contract with a fixed term should be concluded, it may be directly deemed as having concluded a labor contract with a fixed term. All of the above measures can be used to urge employers to sign written labor contracts, which are in line with international practice and replace the obligation to double wages.

In practice, the scope of economic compensation and penalty system is too wide and the standard is too high, should also be adjusted accordingly. Firstly, the function of this system design is explored. The function of economic compensation and unemployment insurance is overlapped to a large extent. Can pass perfect the unemployed insurance system in social insurance accordingly, apportion the function of economic compensation system. The economic compensation rules for fixed term labor contracts should also be adjusted. At present, there is no limit on the maximum term of fixed term labor contract in China's legislation, so the employer may face high economic compensation obligation, there are also inconsistencies. Compared with non-fixed term labor contracts, fixed term labor contracts can predict the time point of termination of the labor contract, and the duration of the contract is the result of mutual agreement between the employer and the employee. Therefore, the necessity of economic compensation for fixed term labor contract is not very significant. According to the legislative precedents of some countries, the payment of economic compensation for fixed term labor contracts is rare, which reduces the cost of labor for employers. It is necessary to reduce the economic compensation standard of fixed term labor contract on the premise of perfecting the unemployment insurance compensation system from the

perspective of system function and labor cost rationalization.

Secondly, the scope of economic compensation for the termination of labor contract should be further refined and lowered. The reasons for the termination of a labor contract are various, and the rescission of a labor contract shall be differentiated between the individual reasons of the laborer, the reasons of the employer, and the reasons for the change of objective conditions, and shall be combined with different economic compensation standards. If the laborer's personal reasons for the rescission of the labor contract, the employer is not to blame. In order to find new employees to replace the workers left, the employing unit has to pay a certain cost, so the economic compensation under this situation should be limited. Generally the labor contract that causes the employer to remove the employee, the matters within the business scope of the employer have nothing to do with the employee. Compared with the former situation, the standard of economic compensation should be raised.

The third; A maximum limit shall be set on economic compensation and penalty compensation. Unlimited economic compensation and penalty compensation have become a heavy cost burden for enterprises. Moreover, for employees after receiving high economic compensation or penalty compensation, they lose the urgency to enter the job market again quickly, which virtually leads to the waste of human resources. Therefore, many countries will limit the maximum amount of economic compensation and penalty compensation to reduce the responsibility and risk of employers and improve the efficiency of human resources. Moreover, the compensation rules for the illegal rescission of labor contracts should be further improved. Although Article 47 of the Labor Contract Law provides for compensation for illegal rescission of labor contract, it is simple and feasible, however, there are still some unreasonable standards for the application of the amount, which need further refinement and adjustment.

5.2 Establish vocational training system suitable for new business forms

In the face of the impact of new artificial intelligence technologies, the importance of job conversion and the improvement of workers' own skills is further revealed. After entering the labor market, the updating and upgrading of workers' skills basically depend on the vocational and technical training system. From the perspective of industry, the focus of China's vocational training is mainly on vocational skills training, management training, IT training and language training. Although the scale of China's current vocational training market is huge, the existing problems are also very prominent.

First of all, the quality of vocational training is low, unable to meet the actual needs of labor skills. Lack of qualified teachers, obsolete knowledge and skills, and disconnection from the practical skills demand of the workforce. The improvement of the labor skills of the trained objects is very limited, which cannot improve the occupational competitiveness of the workers. Secondly, the market structure of vocational training is unreasonable. The existing vocational training institutions are

mostly small ones, which are under great pressure of competition and have low anti-risk capability. In order to survive in the fierce competition, most organizations make short-sighted choices in their development strategies. It is difficult to invest a lot of resources in the construction of teachers, hardware facilities and training system, which directly leads to the low quality of vocational training. Third, there is a lack of standards and norms. Due to the absence of government supervision and lack of industry self-restraint mechanism, vocational training industry standards and norms are seriously missing. The low entry threshold in the field of vocational training, on the one hand, intensifies the market disorder and fierce competition, on the other hand, also leads to the rights and interests of consumers are not fully protected. Therefore, vocational training as a whole falls into a low-level trap, which makes it difficult to embark on the road of benign and sustainable development.

The previous analysis points out that the impact of ARTIFICIAL intelligence on employment can be divided into employment substitution and employment creation. As far as workers are concerned, how to avoid being replaced by artificial intelligence or how to be transferred to new jobs requires skill updating and upgrading, and the importance of vocational training is obvious. Labor Law and labor policy urgently need to face up to a series of problems existing in China's vocational training, and improve China's vocational training system in a targeted way. Creative establishment of vocational training system facing new technology and new business forms.

5.3 Improving the employment protection mechanism of atypical labor

Some scholars think that the arrival of the era of artificial intelligence will not lead to the situation that machines completely replace human beings, and it is more likely that workers and artificial intelligence machines work together. When artificial intelligence liberates human beings from dull and repetitive labor, the organizational form of labor is bound to change. At that time, the labor market needs more flexible employment patterns. Compared with traditional typical labor, atypical labor emphasizes the flexibility of employment. Atypical labor is the product of market mechanism demand, and the application of artificial intelligence technology promotes this market demand. Thus, a variety of labor forms with more complex labor relations and weaker subordination have evolved.

However, China's Labor Law is based on the premise that typical workers are the main body of application. The legal system of the labor market emphasizes the protection of standard labor relations and discourages atypical employment. As a result, there are some problems in atypical labor relations, such as unclear positioning, imperfect adjustment mechanism and inadequate protection measures. All of the above problems make our current labor law system unable to adapt to the diversified development of labor forms in the era of artificial intelligence. Obviously, the inherent idea of realizing labor protection by standard labor relations can no longer solve the social practical problems of flexible employment. It is necessary for us to strike a balance between flexible demand and stable employment. On the one hand, we can't ignore the personality attribute of labor force different from that of

general commodities. To protect the basic rights of typical and atypical workers equally through labor standard law. On the other hand, utilizing the commodity attribute of labor force, the labor market law promotes the flexible allocation of atypical labor forms, adjusts the supply and demand relation of labor market better, and makes the labor market more flexible and dynamic.

And a dynamic labor market will generate and release a large number of employment demand, so as to realize the effective unification of employment flexibility and employment security. Facing the development and challenge of artificial intelligence, the existing Labor Law system must be changed. We will establish a unified labor protection system that integrates both typical and atypical work, and work to build an open, inclusive and unified labor market. To be specific, the legal attributes and status of atypical labor relations should be clarified first, including the determination of the scope of application of atypical labor, the legal responsibility of the subject of employment, etc.; Secondly, flexible employees are also included in the scope of work-related injury insurance; In addition, the current way in which the responsibility for labor security is mainly borne by enterprises should be gradually changed to the mode of socialized sharing, so as to ensure that workers with emerging working forms can be protected by the social security system.

Acknowledgement

This work is supported by 2020 School-level youth Research Project of Northwest University of Political Science and Law "Phased achievements, Study on the evaluation of pilot cities of long-term Care Insurance and its legal Countermeasures"

References

- [1] Edward. H, Kaplan (2015). A method for evaluating needle exchange programmes, *Statistics in Medicine*, no. 10, p2179-2187.
- [2] David Otto (2016). How can there be so much work left? The history and future of factory automation, *Journal of Compare*, vol.85, no.4, p.21-34.
- [3] Wang Jun, Zhang Yuzhe, Zhang Yibo, Hong Qunlian (2017). The mechanism and Countermeasures of the influence of new technology progress such as artificial intelligence on Employment, *Macroeconomic research*, no.10, p. 169-181.
- [4] Forecast and analysis of sales demand and prosperity of industrial robots at home and abroad in 2017 (2017), Top 10 Strategic forecasts for global robotics from 2017 to 2020, Chinese Government Report network, <http://free.chinabaogao.com/it/201802/02113205222018.html>.
- [5] Restrepo, Pascual, Acemoglu, & Daron. (2017). Secular stagnation? the effect of aging on economic growth in the age of automation. *The American Economic Review*, vol.107, no.5, p. 174-179.

- [6] Osborne, Michael, A.Frey, Carl, & Benedikt (2017). The future of employment: how susceptible are jobs to computerisation? *Technological Forecasting & Social Change*, vol.114, p. 254-280.
- [7] Melanie Arntz, Terry Gregory, Ulrich Zierahn (2016). The Risk of Automation for Jobs in OECD Countries: A COMPARATIVE ANALYSIS OECD, Social, Employment and Migration Working Paper, Published in 2016, p.35.
- [8] Ji Wenwen, Lai Desheng (2016). From entrepreneurship to Employment: The Reshaping and Challenge of new forms of business to labor Relations, *Journal of China Institute of labor relations*, no.2, p.23-28.
- [9] Deng Zhiping (2016). Technical discourse and Workers' Autonomy: The legitimacy of man-machine confrontation is eliminated—Based on the empirical research of "machine replacement" in The Pearl River Delta region, *Journal of Academic Forum*, no.11, p.23-28.
- [10] The editorial department of this journal (2018). Interpret the action plan of "Robot +" in Zhejiang Province, *Journal of Robot technology and Application*, no.2, p.18-20.
- [11] Chen Yonwei (2017). How to treat "technical unemployment", *Journal of QunYan*, no.2, p.44-46...
- [12] McKinsey Greater China (2018), Sharpen up and forge ahead: Chinese labor force in the post-industrial Revolution era. <https://www.mckinsey.com.cn/>.
- [13] Wang Quanxing, Su Yu (2016). Analysis of Quasi-Subordinate Labor System in Italy and Its Enlightenment, *Journal of Law Science Magazine Law*, no.10, p.102-115.
- [14] Zhang Chengang, Wu Jingyu (2016). Empirical Observation on the Effect of Labor Contract Law implementation on the market, *Journal of XueHai*, no.3, p.160-166.
- [15] Compiled by the State Bureau of statistics of the people's Republic of China (2012). 2012 national economic and social development statistical bulletin of the people's Republic of China, China Statistics Press, Published in 2013, p.47-48.
- [16] Compiled by the State Bureau of statistics of the people's Republic of China (2018). 2017 national economic and social development statistical bulletin of the people's Republic of China, China Statistics Press, Published in 2018, p.60.
- [17] Zhang Chengang, Wu Jingyu (2016). Empirical Observation on the Effect of Labor Contract Law implementation on the market, *Journal of XueHai*, no.3, p.160-166.
- [18] Li Shi (2016). The basic judgment of labor cost in China, *Journal of Jinggangshan Cadre College of China*, vol.9, no.5, p.57-59.
- [19] Wolfgang Doyle (2016). German Labor Law, trans. Wang Qian, Shanghai People's Publishing House, Published in 2016, p.370-371.
- [20] Xie Zenyi (2017). The revision of labor contract law from the perspective of labor cost, *Journal of Law*, no.11, p.66-76.
- [21] Personal reasons here do not include gross negligence or willful misconduct.
- [22] Zheng Aiqing (2010). Summary of French Labour Law, Guangming Daily Press, Published in 2010, p.165.

- [23] Liu Qingzheng (2017). Smart Bonus—The coming post-work era, Electronic Industry Press, Published in 2017, p.182.
- [24] Du Chuanzhong, Xu Bin(2018). The influence of the fourth Industrial Revolution on employment Structure and China's countermeasures, Social sciences front, no.2,p.68-74.
- [25] Alphonse Berthoff (2015),New models, new strategies, and new thinking for the industry of the future,trans. Liu Xin, Machinery Industry Press, Published in 2015, p.76.