

Thoughts on the Controversy of Levying "Robot Tax"

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Abstract: The widespread application of robots has brought about a great crisis to people's employment. From the point of view of production, the advantages of robots have surpassed those of human resources in terms of working efficiency, total output, cost and income, and the trend that robots will replace more people in production in the future has become irreversible. In order not to hinder the progress of technology, but also to change the contradiction caused by the rapid replacement of human beings by robots without being absorbed and digested by society, the formulation of "robot tax" came into being, but the controversy also followed. At present in the academic field can be said to be almost blank. So is a "robot tax" feasible or not? From the point of view of the dispute, this paper analyzes the dispute and expounds the feasibility of the levy, and puts forward the way of levying.

1. Presentation of the Question

If the first industrial revolution was accompanied by the emergence of mechanical manufacturing equipment driven by steam engines, the second industrial revolution was based on the division of labour and large-scale production driven by electricity. The first half of the third industrial revolution was to further automate manufacturing processes using electronics and IT technology; now it is the synthetic intelligence of the results of the previous industrial revolution, namely artificial intelligence. Artificial intelligence is based on the third industrial revolution of computer and Internet technology development. In the past, the technological revolution had only partially replaced the manpower, or replaced the physical strength of the human being, but now it is an overall replacement for the human from the brain, which gives the traditional manpower work belt. The destructive power is unprecedented. Artificial intelligence may make it easier to concentrate production advantages and wealth in oligarchs. A lot of traditional jobs will be replaced by intelligent robots, and new jobs will be created far behind the rate at which they disappear. Carl Frey and Michael Osborne of Oxford University analyzed that 47 percent of jobs could be replaced by artificial intelligence. Research by the Organisation for Economic Cooperation and Development (OECD) suggests that 9% of jobs will disappear in the next 20 years. The (WEF) 2016 report of the World Economic Forum also found that The global labour market will lose 7.1 million jobs in 15 major countries over the next five years as a result of the rise of robotics and artificial intelligence technology. The development of technological progress Will lead to the end of mankind "(voice is never mentioned before the development of artificial intelligence. Elon Musk has repeatedly stressed the potential threat of artificial intelligence since last year and called on governments to enforce regulation if necessary. [] what regulatory measures are in place? Restricting the development of artificial intelligence directly by law is suspected of hindering technological progress, at least not feasible until artificial intelligence has a material impact. So, yes. Can flexible measures have a regulatory effect on their development without causing substantial obstacles? The idea of a "robot tax" has been raised and has sparked a heated debate.

2. Is the Robotics Tax the Embodiment of the New Lud Movement?

If the Luddites who resisted the emergence of machine production at the beginning of the industrial revolution were against the historical trend, the discussion of the influence of technological progress on employment is undoubtedly a different picture now, more than 200 years

later. To put it simply, this is an epoch-led debate aimed at exploring whether a non-violent, non-dissuasive end means-taxation-can prevent technological progress from creating jobs for the human race now and in the future.

First of all, on both sides of the debate, there is no doubt that both are more influential and forward-looking organizations or figures than Luderism. The European Parliament voted on an additional "robot tax" on companies that use robots to subsidize and train workers on a large scale, although the bill ended up being opposed by about 80 percent. The 20 per cent ratio of support was not approved, but it was significant because it was an issue that had not been discussed at the government level at any previous stage of technological development. In 2017, the government was also prepared to revise the tax code to tighten investment Tax breaks for robotics to curb the negative impact on employment. The argument between the positive and the negative is thus unfolded. "if robots do the same thing as humans, we should impose similar taxes on robots," says supporters of the tax. By collecting VAT on the products made by robots, and according to the proportion of the corresponding wages of the people who need to hire labor to produce the VAT, the minimum living guarantee can be obtained by all members of the society. If you do not change the current tax system, artificial intelligence is the tide A sharp drop in the cost of modern automation of flow will result in a sharp increase in income inequality. Even if workers can hold on to their existing jobs, their wages will be reduced by the cost of technology applications. French economist Thomas Piketty believes that many working people in many countries have to pay personal income tax to increase their burden of living, and that owners of capital factors can be exempted from paying taxes in various ways. Technology usurping and unfair taxation make it more difficult for ordinary workers to survive. [] Cai Fang, vice president of the Chinese Academy of Social Sciences, suggested that good plans should be made ahead of time and that good policies could be formulated. The development of robots has brought about the face of mankind. Therefore, we tax it and use it to support the basic protection of universal participation. The opposition also came mainly from academics and business people such as Lawrence Summers, a Harvard professor and former U.S. Treasury secretary, and Foxconn boss Terry Gou. It can be seen that whether the supporters or the opponents, this debate is obviously from a higher level of thinking, that is, there are exploratory legislative ideas of government agencies, but also theoretical and practical debates. This has not happened in the past when technological progress affected employment.

Second, the attitude to the problem is more rational than Luderist hatred. Unlike the groups represented by Luddism who believe that technology may impact employment, the debate over the impact of technological progress on employment comes from those who support these technologies or directly use them to create economic benefits. Bill Gates, for example, is a major proponent of a robotics tax, but he has also been instrumental in the development of artificial intelligence technology. Mr Gou, who opposes taxes, is a representative businessman who has been using robots to replace factory workers in large numbers for the past year or two. This is enough to reflect Two issues: on the one hand, proponents of technology are equally aware of the possible negative consequences of technology in the current trend, and this negative possibility of not taking measures to prevent it in advance, In the long run, it is more unfavorable to the further development of technology, but not only to the short-term benefits. This is because technological progress is just as inevitable to the trend of worker substitution in traditional industries as technological development itself, and the benefits of this substitution are already greater than those of traditional labor. If technology really develops to the new Lude movement again, it will be the biggest disadvantage to technological progress. On the other hand, as a technical Users are clearly aware of the huge benefits that new technologies, such as artificial intelligence, can bring to replace traditional labor, rather than new restrictions when they first see them, or at least extend them indefinitely.

The debate about balancing the impact of technological progress on employment through taxation was initiated by both sides, who really understand technology. They are in essence supporters of technological progress, but they are arguing from different angles of view of the issue. The proponents of taxation are also pursuing the harmonious development of technological progress

and employment, which is essentially different from the resistance of the Ludd movement to technology.

3. Is the Tax Payer of "Robot Tax" Clear?

Based on the political power and legal provisions, tax collection is a kind of money or kind levy imposed by special government agencies on the property or specific behavior of residents and non-residents on the basis of political power and legal provisions, in order to realize the function of national public finance. It can not only maintain the operation of the state machine, but also the country's secondary distribution of wealth, which is conducive to achieving as much equity as possible. It is not difficult to understand from its concept that the tax subject of taxation is residents and non-residents, which can be said to have never been disputed. However, as the debate over the collection of a "robot tax" has emerged, it has led to a response by the party supporting the collection of the "robot tax" to the subject of taxation. Disagreement.

According to the divisive side, although it is called the "robot tax", the robot does not conform to the scope of the tax concept of resident or non-resident, and it is still essentially a tool of labor and does not have the status of tax subject. As the owner of a robot, it has the status of a tax subject, and the proceeds from the robot's "labor" are attributed to the owner. After all, the existing legal model does not get rid of the traditional figurative or even personification thinking mode. [] therefore, Even a "robot tax" should be levied on the owner of the robot. The other side argues that robots themselves should be taxed in the same form as workers. Workers gain by labour Salaries will be taxed, and robots should be taxed if they do the same work as workers, which means robots are treated as human beings, as Bill Gates calls "robot taxes." It might have been nonsense if it had been put forward a year or two ago, but since the moment the artificial intelligence robot Sophia (Sophia) acquired a citizen in Saudi Arabia (this statement is not entirely groundless, the so-called citizen). A person who has the nationality of a country and has rights and obligations under the law of that country. That is to say, Sophia has the right and the obligation to have Saudi nationality. Then, the right to work as a citizen's fundamental right is also owned by her (who is no longer suitable to be called "it" as a citizen), which generates income from labor and taxes the income. Although the proceeds may be "kept" by someone else and paid for by the escrow, there is nothing wrong in the legal sense that the subject of taxation is Sophia, the "person".

The author thinks that these two kinds of understanding of "robot tax" are not opposite, but may produce new changes according to the different stages of the development of artificial intelligence. At present, it is generally accepted that artificial intelligence is divided into three stages: weak artificial intelligence, strong artificial intelligence and super artificial intelligence. Among them, weak artificial intelligence refers to a certain degree of intelligence in a field or a specific problem. Now is in the age of weak artificial intelligence, at present levy "robot tax", then the former kind of understanding is more in line with the reality, that is, still regard it as the tool of the subject of taxation. When it has a substantial impact on people's employment in different production In a short period of time, mass unemployment or a significant decline in employment benefits would require consideration of a "robot tax". For Bill Gates, "robot tax" is likely to appear in the stage of strong artificial intelligence or super artificial intelligence, strong artificial intelligence refers to artificial intelligence that can be compared with human shoulder, but it needs a process to realize. It can think, plan, solve problems, abstract thinking, understand complex concepts, learn quickly and learn from experience. Super-artificial intelligence is much smarter than the human brain in almost every field, including scientific innovation, general knowledge and social skills. As a result of these two phases, The ability of deep learning has enabled the artificial intelligence robot to achieve or even exceed the overall ability of human being, and it is possible to trigger the taxation of the robot. In fact, as early as 2016, the European Parliament submitted a report to the European Commission saying, "in the long run, the special legal status of robots should be created. To ensure that at least the most complex automated robots can be recognized as having the legal status of an electronic person, and that they have the responsibility to make up for any damage they cause, And it is possible to apply electronic personality in cases where robots make autonomous decisions or

otherwise interact independently with third parties. "[] it can also be seen from this that Europe National governments have begun to pay more attention to the possible impact of artificial intelligence robots on society and legal discussion of the status of robots.

4. Will a "Robot Tax" Curb Technological Progress?

Although some people do not deny taxing robots, they believe that artificial intelligence is still in its infancy, and premature taxation will bring pressure to development, which is not conducive to the popularization and rapid progress of new technologies. Would a "robot tax" really dampen technological progress? In other words, will a "robot tax" discourage factories or businesses from adding robots to replace more workers? To figure this out, you just need to consider which of the greater the factory or business gains from using robots and taxing them or hiring people. In the absence of a "robot tax," more and more companies are starting to From the point of view of increasing robot production, the profit generated by artificial intelligence robot replacing manpower is obviously positive.

First, artificial intelligence robots work more efficiently. This is reflected not only in the unit time, but also in the total working time. Under normal circumstances, workers work eight hours, five days a week, and they have 40 hours a week. Even these 40 hours are not 100 per cent invested; In the same week, if there is no trouble, it can work 24 hours * 7 days, or 168 hours, which is more than four times the working time of a single worker, which does not count that the unit time robot is more efficient than manpower. Foxconn used to have more than a million people in its mainland plant, but to reduce costs and improve efficiency 1 million robots were introduced to replace manual work. These robots are cheaper and easier to manage, and can work 24 hours a day. [.] Foxconn's introduction of robots to produce represents a trend in the world's manufacturing industry.

Second, the cost of artificial intelligence robot users is decreasing gradually. On the one hand, the robot greatly saves the additional input in human labor. The factory or the enterprise employs the worker to have the labor service relations, the worker creates the benefit at the same time, the factory or the enterprise also must undertake to the worker's duty, such as guarantees the employee's life safety and the health, pays the labor reward and so on duty. In addition, there are also the need to manage the complex system of staff and implementation and other issues. These costs are almost non-existent in robots; on the other hand, robot manufacturing costs are getting lower and lower. With the development of technology, the cost of robots has been greatly reduced. Factories or businesses will gradually get better robots at lower prices. Robots are taxed on a personal basis, and factories or businesses still earn more than they hire, so they still choose to make robots, even more eager for advanced technology.

Third, artificial intelligence robot application field is more and more extensive. Artificial intelligence robot in industry, service industry and special industry development momentum is strong. In terms of industrial robots, products such as dual-arms dexterous robots, intelligent warehousing robots, etc., are developing rapidly. The application of industrial robots is developing from the fields of automobiles, electronics and other fields to the general industrial fields such as household appliances, and further extends to plastics, rubber, etc. Food and other segments of the industry. In the aspect of service robot, the robot products supported by artificial intelligence technology are more and more abundant, autonomy is constantly improved, floor sweeping robot, food delivery robot to emotion robot, escort robot, education robot, rehabilitation robot Robot, supermarket robot and so on extension, the service domain and the service object unceasingly expands, the robot volume is smaller, the interaction is more nimble. In terms of special robots, artificial intelligence has also promoted the development of robots in special fields. According to the China Robotics Industry Development report 2017, the global robot market will reach \$23.2 billion in 2017, of which \$14.7 billion is industrial robots. Service robots \$2.9 billion, specialty robots \$5.6 billion. China \$6.28 billion, of which \$4.22 billion for industrial robots, \$1.32 billion for service robots, 740 million for specialty robots The dollar; in terms of the average growth rate for 2012-2017, the world is close to 17 percent, while China is as high as 28 percent. [] and both

will continue to increase year by year.

5. How to Set the Standard of "Robot Tax"?

Combined with the above mentioned, the author thinks that "robot tax" is only a matter of levying ways. Of course, this requires a comprehensive assessment of the country's automation and robotics industries, and on this basis, proceeding from safeguarding the vital interests of workers, reasonably determining the tax rate, in order to strike a balance between scientific and technological innovation and the protection of workers' rights and interests as far as possible. So that the "robot tax" collection system is not only conducive to enterprise scientific and technological innovation, but also conducive to the retention of appropriate jobs for workers; It is not only helpful to improve the tax structure, but also to lighten the tax burden of enterprises. It also helps to promote automation and robot industry to raise the level of science and technology, and to produce more efficiently. A tall robot.

But the taxation of robots should not be "one-size-fits-all", but should be determined according to the characteristics of industry and the proportion of manpower and automation in the benefits. Such as the progressive tax set. We can set a certain proportion, when the proportion of manpower over 20% can be exempted from the "robot tax", when the proportion of manpower between 15% to 20%, the company profits at the tax rate of 3%; When the proportion of manpower is between 10 percent and 15 percent, it is levied at 10 percent; when the proportion of manpower is between 5 percent and 10 percent, it is levied at 20 percent; and when the proportion of manpower is less than 5 percent, it can be levied at more than 30 percent. While for non-high-tech industries, such as the system The proportion of manpower in manufacturing industry is higher than that in high-tech industry, and the corresponding progressive tax rate is set. At the same time, the difference in tax rates should also be reflected in the rate of substitution, such as the sudden increase in the proportion of high-tech industry manpower from 20% to 5% in the short term (which can be set for one to two years according to specific circumstances). The tax rate to set a weighted value, so that the tax rate is higher than the normal standard. The above are just illustrative methods and principles of expropriation. As for the tax rate, the industry levy standards and other needs for detailed tax planning.

6. Note

The report also said that a third of the unemployed as a result of robotics and artificial intelligence will go to office and administrative staff, as these jobs are more likely to be replaced by robotics and artificial intelligence technology.

In 2014, Stephen William Hawking (Stephen William Hawking) told the Independent: "We already have primitive forms of artificial intelligence and have proven to be very useful." But I think the full development of artificial intelligence will lead to the end of mankind, "once the human development, artificial intelligence will develop itself to accelerate the redesign of themselves." in 2017, at the GMIC Global Mobile Internet Conference, Hawking video speech again warned that "artificial intelligence may also be the end of human civilization."

Sophia, a smart robot defined as a woman, was granted Saudi citizenship on October 26, 2017, at the "Future Investment Initiative" conference in Riyadh, Saudi Arabia. As a result, she became the first robot to acquire citizenship.

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