

# *The Enlightenment of German Short-term Work Schedule to China under the Background of COVID-19 Epidemic*

Cai Yuchen<sup>1,a,\*</sup>, Shen Yanyan<sup>1,b</sup>

<sup>1</sup> Shanghai International Studies University

a. 0191158002@shisu.edu.cn

\*corresponding author

**Abstract:** Starting from the concept of German short-term work schedule, this paper fully studies its operation system from various aspects and discusses the changes it made during the COVID-19 epidemic. Based on the actual situation, the ARMA model is used to analyze the data of the five major commodity industries in Germany during the epidemic. By comparing the average relevant data of Germany with those of the European Union, the euro area and OECD during the COVID-19 epidemic, the advantages of Germany's short-term work schedule are high-lighted and the disadvantages are analyzed. Finally, in view of the advanced experience of the schedule, combined with the national conditions of our country, the paper puts forward reasonable suggestions for the unemployment insurance system in our country.

**Keywords:** Short-Term Work schedule, China and Germany, COVID-19 Epidemic; ARMA Model.

## 1. Introduction

### 1.1. Background and significance of the selected topic

The COVID-19 epidemic has seriously impacted the world economy and brought severe challenges to employment. In order to stabilize the basic situation of employment, various countries have issued a series of measures to safeguard the wellbeing of the people by creating more jobs, adjusting working hours, improving the employment environment, and safeguarding vulnerable groups to promote economic recovery and stable social development. The International Labor Organization regards the short-term work schedule as an important policy deployment to support employment and maintain labor income. Among the countries that use the short-term work schedule, Germany's short-term work schedule is the most representative. The design of the German short-term work schedule combines the relevant employment theory, human capital theory and theory of welfare economics in the west. Compared with layoffs, it can not only retain the human capital in the enterprise, but also avoid mass unemployment. To a certain extent, it can also improve the staff's vocational skills and ultimately achieve the effect of stabilizing social employment. It eased the contradiction between supply and demand in the German labor market and made outstanding contributions to promoting social employment and preventing mass unemployment.

The earliest short-term work schedule in Germany was to provide a financial buffer for potash fertilizer workers in 1910. However, the current short-term work schedule was formed in the mid-

1920s, when it was applied to counter the hyperinflation in 1923. Of course, a series of social and economic reform measures were adopted at that time, and then the short-term work schedule was applied to all walks of life. In the 1960s, the postwar economic recession in Germany forced the German government to transform its social and economic structure, and adopted the short-term working system, which achieved remarkable results. Many scholars believe that the adoption of this schedule is one of the important reasons for Germany's "economic miracle" after the war. The situation at that time, such as mass unemployment, was very similar to that of China under the COVID-19 epidemic.

This topic has both theoretical and practical significance. From a theoretical point of view, the current domestic research on Germany's short-term work schedule is extremely limited, and it is difficult to clearly understand the specific content, characteristics and significance of Germany's short-term work schedule. Based on the analysis of the core concepts, this paper makes a reflection on the content of Germany's short-term work schedule and explores the advantages and disadvantages of Germany's short-term work schedule. Based on the experience of Germany's short-term work schedule, this paper puts forward some feasible suggestions to improve China's unemployment insurance system, in order to supplement China's unemployment insurance system to a certain extent and provide a certain reference value. Actually, after the outbreak of the epidemic, many enterprises have entered a low-power consumption mode. However, Germany's short-term work schedule has effectively promoted the recovery of the German economy to a certain extent, and brought some reference significance to China's economy, which is also under the epidemic situation.

## 1.2. Research theories and methods

The research in this paper mainly adopts the methods of literature study, comparative study and quantitative study.

First, literature research method. In this paper, the literature research method is used to sort out the relevant research status of Germany's short-term work schedule and unemployment insurance schedule, to define the relevant concepts, to understand the specific content of Germany's short-term work schedule and China's unemployment insurance system on the basis of fully understanding the relevant policies of Germany's short-term work schedule and China's unemployment insurance system, and to find out the advantages and disadvantages of the two systems.

Second, comparative research method. This paper compares the specific data of the short-term work schedule between Germany and its European economies in the context of the epidemic through comparative research method, highlighting the advantages of Germany's short-term work schedule. By comparing Germany's short-term work schedule with China's unemployment insurance system, combining the reality of the development of China's unemployment insurance system, and fully drawing on the advanced experience of Germany's short-term work schedule, this paper puts forward reasonable suggestions for improving China's unemployment insurance system.

Third, quantitative research method. This paper compares Germany's unemployment rate, GDP and GDP growth rate during the crisis with the performance of the European Union and other economies in the same period, reflecting the effect of Germany's short-term work schedule. When commenting on the advantages of Germany's short-term work schedule, we often use the ARMA model and GARCH model in the microeconomic analysis when we use the application in the microeconomic analysis of time series data. This paper takes the ARMA model as an example, analyzes its modeling application steps, and discusses the advantages of Germany's short-term work schedule in the face of inflation and mass unemployment under the epidemic situation.

### **1.3. Research status of this topic at home and abroad**

#### **1.3.1. Domestic research status**

At present, domestic scholars' articles on the research of short-term work schedule are relatively limited. They mainly introduce Germany's transfer short-term work schedule and the general short-term work schedule, and on the basis of combining with China's actual situation, draw the enlightenment of the general short-term work schedule on improving the unemployment prevention function of China's unemployment insurance.

#### **1.3.2. The status quo of foreign research**

Foreign scholars have done a lot of research on the short-term work schedule, which can be summarized from the perspective of research content and research methods.

From the perspective of research content, scholars respectively study the social impact of the short-term work schedule and ways to improve the short-term work schedule. In terms of social impact, Günther Schmid pointed out that the short-term work schedule has a positive effect on stabilizing social employment under the background of the economic crisis. According to the research on the path to improve the short-term work schedule, Alexander Hijzen and others think that the improvement of the short-term work schedule should enhance its adaptability to the economic conditions, and achieve timely implementation and timely exit. Victoria Osuna points out that an appropriate level of payroll tax subsidies could improve the effectiveness of the short-term work schedule.

From the perspective of research methods, scholars mainly focus on the use of quantitative research methods and comparative research methods. Some scholars use quantitative research methods to analyze the effect of the short-term work schedule. Almut Balleer et al. analyzed the stabilizing effect of the short-term work schedule on employment through Tobit model and SVAR model. Some scholars summarize the contents and effects of the short-term work schedule by means of comparative research. Stefano Sacchi made a comparative analysis of the contents of the short-term work schedule in Italy, Germany and Austria. José M Arranz made a comparative analysis of the characteristics of the short-term work schedule in Spain and Italy during the two crises of 1991-1995 and 2008-2012.

### **1.4. The main information and collection of papers**

The main data used in this paper come from the academic papers published by scholars and think tanks in China, Germany, the United States, Britain and other countries in recent years. The cited data are all from the German Federal Employment Agency, the German Federal Bureau of Statistics, the OECD database and the China National Bureau of Statistics.

## **2. The concept of short-term work schedule in Germany**

### **2.1. Definition of core concepts**

The general short-term work schedule, also known as the regular short-term work schedule, is applicable to temporary shortages of jobs caused by serious economic situation. From an employee's point of view, avoid being dismissed because of business difficulties, and at the same time receive allowances on the basis of keeping jobs to maintain the living standard. From the employer's point of view, this schedule can protect "human capital", and once the economic situation improves, production can be resumed.[8]

### **2.1.1. Germany's short-term work schedule operation system**

The admission mechanism of the short-term work schedule mainly considers three aspects, i.e. the regulations for the implementation of the schedule, specific qualification requirements and conditions.

The provisions on the implementation of the schedule in the access mechanism of the general short-term work schedule are mainly reflected in the relevant contents of the labor law and the social security law. Relevant employees may apply for short-term work allowance of no more than 12 months, and will arrange to receive employment guidance and training during a special transfer period. If the employees work in the construction industry which is severely affected by seasonal weather, the acceptance mechanism of seasonal short-term work schedule is reflected in their right to receive seasonal short-term work allowance from December 1st to March 31st.

Among the specific qualification requirements, the general short-term work schedule requires the enterprise to meet the following conditions: provide evidence that the enterprise has temporary workload reduction. Enterprises should sign social partnership agreements to reduce social costs. Employees of an enterprise are entitled to unemployment insurance only if they have paid it. The conditional requirement is embodied in the transfer of short-term work allowance. The enterprise must have a continuous and inevitable shortage of labor posts, and the shortage of posts conforms to the industrial characteristics when the industrial structure changes.

### **2.1.2. Germany's short-term work schedule operation payment mechanism**

The payment mechanism of Germany's short-term work schedule is mainly embodied in the payment of short-term work allowance, including payment standard, payment time and other benefits related to the short-term work schedule. Judging from the payment standard, the payment standard of the short-term work allowance is the same for the three short-term work schedules. From the perspective of payment time and other related benefits, different short-term work schedules have their own characteristics. During the epidemic, the German government adjusted the short-term work allowance in order to protect the income level of workers. The wage level will be increased from the initial 60% (67% for those with children) to 70% (77% for those with children) and from the 8th month to 80% (87% for those with children) upon entering the 4th month of short-term employment. Generous payment mechanism has become an important measure to stabilize employment and guarantee income level in Germany under the epidemic.

### **2.1.3. The moral hazard method and mechanism of Germany's short-term work schedule**

The general short-term work schedule is reflected in the supervision of the Federal Labor Bureau and the active exercise of initiative power by the Enterprise Staff Committee. The transfer of short-term work schedule and seasonal short-term work schedule are reflected in the Federal Labor Bureau's review. At the same time, the application for this schedule requires the enterprise to provide financial proof, sign social partnership agreements, and employees to participate in unemployment insurance. This puts forward many restrictions on the enterprises applying for the short-term work schedule, which can undoubtedly avoid the abuse of the schedule.

## **3. Implementation Effect of Germany's Short-term Work Schedule**

When commenting on the implementation effect of Germany's short-term work schedule, we often use the ARMA model and GARCH model in the microeconomic analysis when we use the application in the microeconomic analysis of time series data. This paper takes the ARMA model as an example, analyzes its modeling application steps, and discusses the advantages of Germany's short-term work schedule in the face of inflation and mass unemployment under the epidemic situation. The ARMA

model is proposed by bocks and Jenkins, which can well describe the dynamic characteristics of a single time series and make predictions. Its general form is:

$$y_t = \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + \dots + \alpha_p y_{t-p} + u_t - \beta_1 u_{t-1} - \beta_2 u_{t-2} - \dots - \beta_q u_{t-q} \quad (1)$$

The model is worth noting. First, it tests the stationarity of the original data. If the original sequence is not stationary, logarithmic difference or other transformations are used to make it satisfy the stationarity condition, and the difference order is recorded as d. Secondly, the autocorrelation coefficient and partial autocorrelation coefficient are calculated. The order of the MA model is determined by the autocorrelation coefficient, which is denoted as q. The order of the AR model is determined by the partial autocorrelation coefficient, which is denoted as p. It is also possible to select as few parameters as possible in the initial estimation according to the tailing and truncation judgment of ACF (autocorrelation function) and PACF (partial autocorrelation function). Thirdly, estimating the unknown parameters of the model and testing its significance. (1) Testing T statistics at 95% significance level. (2) The reciprocal  $1/\lambda$  of the model's characteristic roots are all less than 1 to ensure the stability of the ARMA model. (3) The model residual sequence is guaranteed to be white noise. At the same time, the rationality of the model is tested. Fourthly, diagnostic analysis is carried out to confirm that the model is consistent with the statistical characteristics of actual observed data.

Note: only stable time series can establish ARMA model, which is the precondition of the model. if  $d=0$ , establish ARMA (p, d, q) model directly; if  $d \neq 0$ , establish ARIMA(p,d,q) model.

The ARMA model can effectively solve practical problems in life and bring decision-makers a basis for judgment. Whether it is the correlation between research indicators in macroeconomics, such as exchange rate change and income growth, unemployment rate and inflation, or the fluctuation of financial market in microeconomics, prediction of stock market fluctuation and risk pricing investment, the ARMA model is an efficient and feasible method which can deeply understand the relation-ship between variables, predict the future and take measures to control when deviating from the target.



Figure 1: Values of Germany's Five Basic Industries. (Data source: <http://quote.eastmoney.com/gb/zsGDAXI.html>).

The ARMA(p,q) model can be expressed as follows:

$$y_t = \phi_1 y_{t-1} + \phi_2 y_{t-2} + \dots + \phi_p y_{t-p} + \epsilon_t - \theta_1 \epsilon_{t-1} - \theta_2 \epsilon_{t-2} - \dots - \theta_q \epsilon_{t-q}$$

$\varepsilon_t$  is the residual error;  $y_t$  is the observed value.

$\bar{y} = \text{mean}(y); n = \text{length}(y); R = \frac{\sum((y_t - \bar{y})^2)}{\sum((y_t - \bar{y})^2)}$ ;  $\text{RMSE} = \sqrt{\frac{\sum((y_t - \bar{y})^2)}{n}}$ ;  
 $\text{MAE} = \frac{\sum(\text{abs}(y_t - \bar{y}))}{n}$ ;  $\text{MAPE} = \frac{\sum(\text{abs}((y_t - \bar{y})/y_t) * 100)}{n}$ ;  $\text{Max-AE} = \max(\text{abs}(y_t - \bar{y}))$ ;  
 $\text{MaxAPE} = \max(\text{abs}((y_t - \bar{y})/y_t) * 100)$ ;  $\sigma = \sqrt{\text{var}(y - \bar{y})}$ ;  $\text{AIC} = n * \log(x) + 2 * (p + q) / n$ ;  
 $\text{BIC} = \log(x) + (p + q) * \log(n) / n$ .

Packaging the data file for processing by the Stata processor, and obtaining:

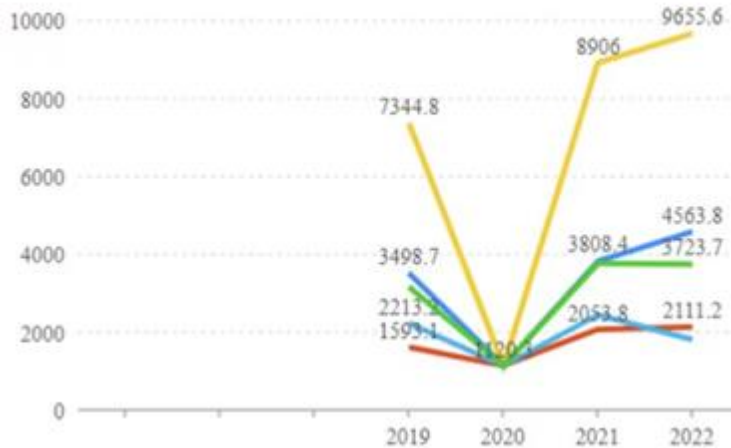


Figure 2: Status of Germany's Five Basic Industries under Epidemic Situation.(2019-based, bottom-up: oil, wheat, oil, natural gas, home appliances)Source: [https://data.eastmoney.com/cjsj/foreign\\_1\\_0.html](https://data.eastmoney.com/cjsj/foreign_1_0.html).

Through the ARMA model, Germany has many advantages in the short-term work schedule. Since the implementation of the short-term work schedule in Germany in 2020, the basic five major industries in Germany have continued to recover from the epidemic. At a time when the spread of the COVID-19 epidemic is worrying people all over the world, statistics from the Federal Bureau of Statistics show that in January 2022, German industrial enterprises recorded a five-and-a-half-year high in orders, an increase of 5.5% as compared with the previous month. Analysis shows that this is mainly due to large orders from abroad. However, even after the big orders are excluded, there was still a growth rate of 23%, which shows that the overall situation in many economic sectors is good. Manufacturing and exports are still the main driving forces of Germany's economic growth, so positive data in the industrial sector indicates the economic development. Under the shadow of the COVID-19 epidemic in Germany, this undoubtedly brings a glimmer of hope to the German economy.

### 3.1. Access to unemployment insurance prevents mass unemployment

The chain reaction caused by the COVID-19 epidemic in 2020 has severely hit the world economy and affected social stability and employment. During this period, the advantages of Germany's general short-term work schedule were highlighted.

In 2020, Germany once again implemented a new round of general short-term work schedule, and revised the application conditions and implementation details. The prerequisite for enterprises applying for the general short-term work schedule is "at least 10% of employees have lost more than 10% of their wages", which is not the original "one-third principle". The threshold is further lowered. Secondly, the new round of general short-term work schedule can cover the short-term work schedules groups in Germany, which to some extent expands the coverage of the schedule and improving the fairness of the schedule. Under the joint action of the above factors, employees and

enterprises' enthusiasm for participating in the short-term work schedule has been improved (figure3). Therefore, during the epidemic, there were more people in Germany who took part in short-term work schedule. The participation rate of employees in the short-term work schedule exceeded 7% every month, which made outstanding contributions to avoiding mass unemployment during the epidemic period.

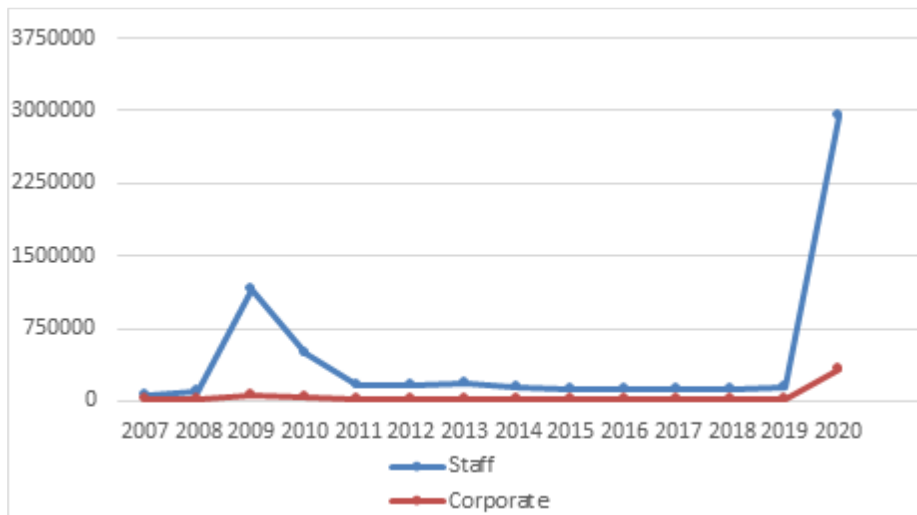


Figure 3: Annual participation in the short-term work schedule. Data source: <https://www-genesis.destatis.de/genesis/online>.



Figure 4: Average number of companies with short working hours per year in Germany from 2019 to 2021. Data source: <https://de.statista.com/statistik/daten/studie/154744/umfrage/anzahl-derkurzarbeit-anbietenden-betriebe-in-deutschland-seit-1991/>.

Figure 4 depicts the changes in the average unemployment rates in the Eurozone, EU, G7, OECD and Germany from January to December 2020. On the whole, due to the impact of the epidemic, the average unemployment rate in the euro area, the European Union, the G7 and OECD and the unemployment rate in Germany all show an upward trend. However, during the period from January to December 2020, the unemployment rate in the G7 and OECD changed significantly, while the unemployment rate in the EU and Germany changed steadily, and the unemployment rate was also low. Take the November 2020 data as an example, the average unemployment rates in the EU, OECD and G7 reached 7.5%, 6.91% and 6% respectively, while the unemployment rate in Germany was only 4.5% in the same period.

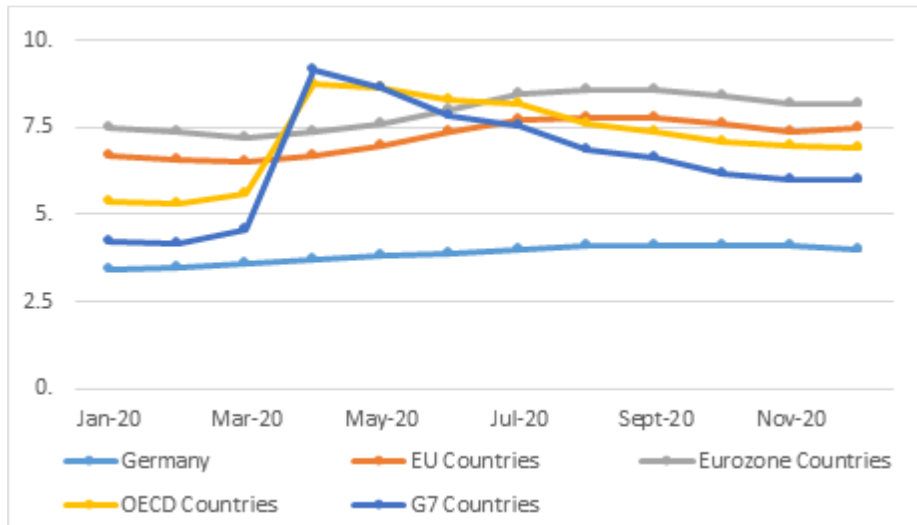


Figure 5: Comparison of monthly unemployment rate. Data source: <https://data.oecd.org/unemp/unemployment-rate.htm>.

The short-term work schedule has also contributed to reducing the increase in unemployment rate brought about by the continuous deterioration of the economy. As shown in Figure 5, Germany's economic growth rate was relatively stable before 2020. After 2020, Germany's economic growth rate dropped rapidly, reaching its lowest point (-9.8%) in the second quarter of 2020. Compared with the first quarter of 2020, GDP in the second quarter of 2020 decreased by 7.67%. Judging from the unemployment rate in the fourth quarter of 2019 to the first three quarters of 2020, although the unemployment rate has an upward trend, the overall change tends to be stable, which is not obviously affected by the economic downturn (figure6).

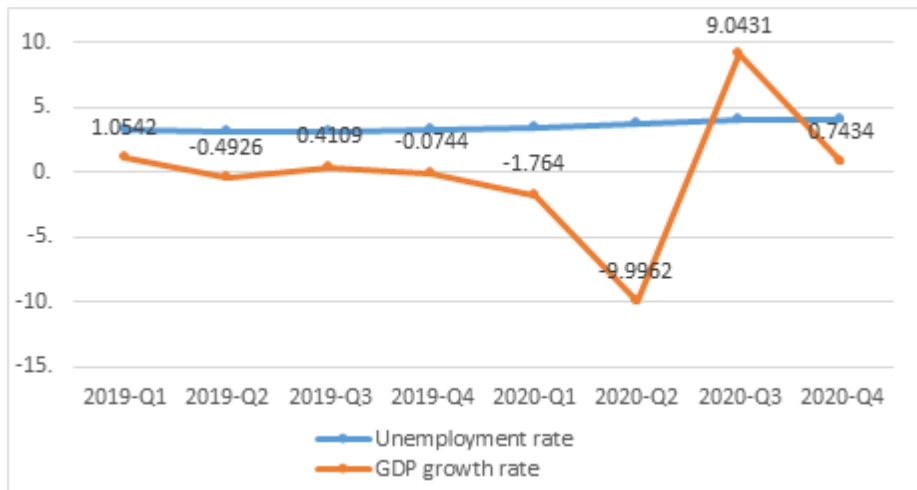


Figure 6: Changes in Unemployment Rate and GDP Growth Rate in Germany from the First Quarter of 2019 to the Third Quarter of 2020. Data source: <https://data.oecd.org/gdp/quarterly-gdp.htm#indicator-chart>, <https://data.oecd.org/unemp/unemployment-rate.htm>.



## **3.2. Improving unemployment insurance benefits and Stabilizing Society**

### **3.2.1. Promoting economic recovery**

For employment and economic development, the two are often mutually reinforcing. The improvement of economic development level can bring more employment opportunities for the society and promote social employment. To a certain extent, the increase of employment rate can create more material wealth for the society, thus further promoting economic development. From the perspective of unemployment, only a low level of unemployment can make the social economy develop healthily.

### **3.2.2. To prevent social unrest**

According to American criminological research, there is a certain correlation between unemployment rate and crime. For every 1% increase in the unemployment rate, the crime rate will increase by 5.7%. The laid-off workers will not only fall into material difficulties, but also feel pessimistic and disappointed in spirit, resulting in a great psychological gap in their inner world. This kind of psychological gap drives them to work hard or through proper channels to get rid of the poor status and the despised situation. Or through improper channels and in a more intense way to express their dissatisfaction in order to achieve a psychological balance.

According to the data released by the German Federal Labor Office, as of April 24, 2020, 751,000 enterprises in Germany have submitted "short-time work" subsidy applications, involving about 10.1 million workers. The livelihood of the beneficiaries of these short-term work schedules is guaranteed, reducing their likelihood of becoming a factor of social instability.

### **3.2.3. To prevent economic turmoil**

Under the impact of the COVID-19 epidemic, the number of German enterprises and employees participating in the short-term work schedule has reached an all-time high, and a large number of jobs have been reasonably retained. When the epidemic is over and the demand for labor is further increased, these employees can quickly put into their jobs to meet the demand for jobs, promote the development of enterprises and drive the social and economic recovery.

## **3.3. Unemployed insurance fund makes wealth uneven**

### **3.3.1. The poverty rate has increased and income inequality has increased**

Although Germany's short-term work schedule has performed well in promoting employment, the problems it brings are also acute. One of them is the increase in poverty rate and the increase in income inequality. In 2005, the poverty rate in Germany dropped significantly, partly because of the implementation of "Hartz IV" and the implementation of policies that are more conducive to the reemployment of the unemployed. However, the poverty rate has been on the rise for more than a decade (figure 6). Part of the reason for this is that the new labor policy makes people work for a short time.

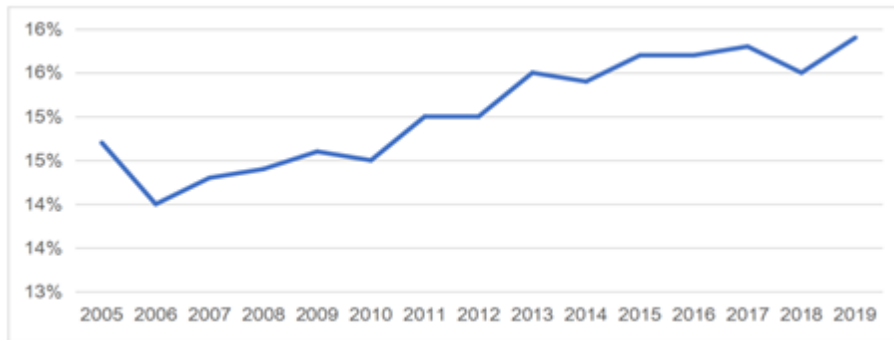


Figure 7: Poverty Rate in Germany, 2005 -2019. Data source: <http://www.destatis.de/EN/Themes/Society-Environment/Income-Consumption-Living-Conditions/>.

Since the implementation of "Hartz IV" in 2005, the short-term work rate has seen a significant increase, with the elderly and women having the most significant growth rates (figure 7).

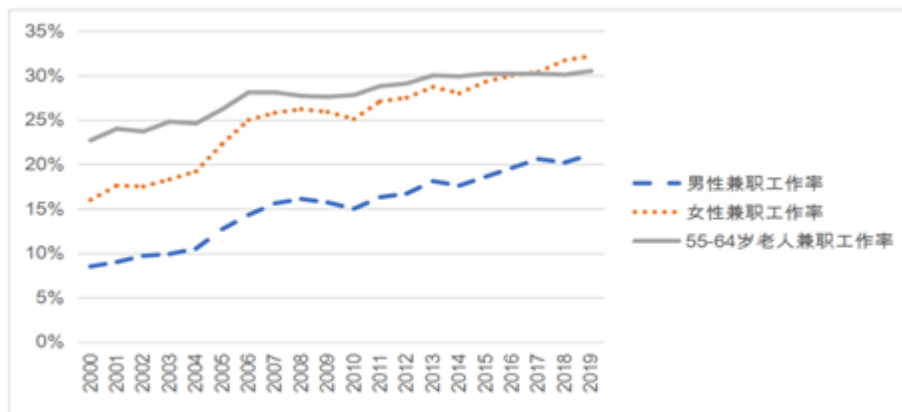


Figure 8: Short-term working rates, 2000 -2019. Data source: <http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm/>.

But increasing the short-term work rate also means an increase in the poverty rate. On the one hand, the short-term work itself has low wages and lack of workers' security, which makes it difficult for people to get out of the poverty line. On the other hand, due to the social security mechanism in Germany, the short-term workers tend to maintain the status quo and maintain a low income level. German workers have a tax exemption for micro-jobs, and as incomes rise, unemployment benefits will fall and income taxes will rise. Once micro-jobs are upgraded to small jobs, social insurance premiums are also paid, which further reduces the income of the unemployed. This has resulted in the contradiction between the increase in wages and working hours and the slow increase in real income. As a result, workers tend to maintain a low income but tax-free and social security status quo, but there is no incentive to increase working hours in exchange for more wages.

### 3.3.2. Increase of income inequality

In most cases, Germany's short-term work schedule only protects regular employees. Although the new temporary act will also include temporary dispatched workers in the scope of protection, Germany's short-term work schedule itself has a low basic wage and is not supported by labor unions, so the protection is inadequate. What is more serious is that small and micro-sized workers and self-employed workers cannot enjoy the relief of short-term work allowance, and the main labor force in

these jobs are women, immigrants and the elderly, further aggravating the income gap between regular employees and short-term workers.

### **3.3.3. To reduce the protection of workers**

Many policies in the labor market not only promote the employment of the unemployed, but also reduce the protection for workers.

The current German unemployment insurance system generally follows the Hartz plan adopted by the Schroeder government in 2002, in which the most important part is unemployment allowance, which is divided into unemployment benefit I and unemployment benefit II. Unemployment benefit I is compulsory unemployment insurance paid by the employees and the employers. The objects of protection are the employees and the people who voluntarily pay unemployment insurance. The unemployment benefit will be paid when the applicant loses his job due to dismissal or resignation. Unemployment benefit II is a kind of social welfare relief. Its fund source is financial appropriation and the management department is the employment center.

As a result of the Hartz Reform, the payment period of unemployment benefit I was shortened and the treatment level of unemployment benefit II was lowered, which forced many people to accept low-level jobs, including dispatching, temporary and micro jobs. At the same time, due to the low treatment of unemployment benefit II, the applicants could not even afford food and clothing, which led to frequent lawsuits.

During the crisis, the short-term work schedule played a crucial role in stabilizing employment. However, many workers engaged in unstable and low-income jobs do not have the right to the protection of short-term work allowance and are therefore most likely to lose their income during the crisis.

In addition, the original intention of increasing the short-term work is to increase the flexibility of enterprises to adapt to the peak while using small and micro occupations as a bridge for low-skilled workers to enter the labor market. However, Kramarz F. A.(2012) points out that many companies take advantage of this loophole in the reform, replacing some formal jobs with low-paid workers and paying low wages while getting rid of the burden of social insurance premiums for their employees. Small and micro-sized workers are rarely transferred to regular employment, and are hard to find formal jobs in the labor market. They can only maintain a low-income status for a long time. In addition, Hartz I I has thoroughly reformed the rights and obligations of job seekers, turning the burden of proof for refusing job recommendation upside down, and changing the burden of proof of the original employment agency into the burden of proof for the irrationality of the job recommendation. This increases the burden on job seekers and makes them engage in jobs they do not want to participate in.

## **4. The inspiration of Germany's short-term work schedule to the improvement of China's unemployment insurance system**

Compared with the relatively mature short-term work schedule, China's unemployment insurance system was established relatively late and is still in continuous improvement. Therefore, based on the similarities between the two systems and the advantages of Germany's short-term work schedule, we can learn from each other's strong points and make suggestions for China's existing unemployment insurance system.

### **4.1. Optimize the unemployment insurance access package**

After the spread of the COVID-19 epidemic, Germany once again introduced the general short-term work schedule and expanded its coverage to protect the rights and interests of employment groups

with extremely unstable labor relations. Drawing on the experience of Germany's general short-term work schedule, the improvement of China's unemployment insurance system should also attach importance to the expansion of unemployment insurance coverage.

Since the implementation of the unemployment insurance system, China's unemployment insurance coverage has increased year by year. However, it must be admitted that the current unemployment insurance coverage rate in China is still relatively low. As of the end of 2018, the unemployment insurance coverage rates of urban employees and migrant workers nationwide are 45.3% and 16.8% respectively. At present, there are 290 million migrant workers in our country. They are the main force of industrial workers, but the rate of migrant workers participating in unemployment insurance is very low. In fact, many migrant workers' main source of income is obtained through migrant workers. Under the impact of the epidemic, many enterprises shut down and a large number of migrant workers lost their original jobs, which also meant that they lost their major source of income. During this period, unemployed migrant workers urgently need the support and help of unemployment insurance, but they cannot enjoy unemployment insurance benefits without insurance. Therefore, there is an urgent need to vigorously improve the participation rate of migrant workers, expand the coverage of the unemployment insurance system, and take this as a breakthrough to drive the overall increase in the unemployment insurance participation rate.

## **4.2. Improve the unemployment insurance benefits Project**

### **4.2.1. To raise the payment standard of unemployment insurance**

Germany pays a higher level of short-term work allowance, which can reach 60% or 67% of lost wages. From the perspective of the general short-term work schedule, some collective contracts will provide additional subsidies in addition to the short-term work allowance, so that the replacement rate of the employees' overall subsidies can reach 85% or 90% of the lost wages. From the point of view of the transfer short-term work schedule, employees are entitled to a subsidy of up to 2,500 euros before entering a separate entity during the transfer period.

Compared with the short-term work allowance standard in Germany, the unemployment insurance standard in China is lower, which is between the minimum living standard and the minimum wage standard for local urban residents. In recent years, the replacement rate of unemployment insurance has only reached about 20%. At present, the family burden of our country's workers is heavier, and the lower unemployment insurance standard will make the unemployed face a greater risk of loss of income and cannot better protect the lives of the unemployed. Therefore, it is necessary to raise the current unemployment insurance standard.

### **4.2.2. Enriching unemployment insurance to promote employment**

Germany's transfer short-term work schedule attaches importance to the improvement of employees' vocational skills and provides many services for the realization of employees' re-employment.

China's unemployment insurance has also contributed to the re-employment of the unemployed. The "Regulations on Unemployment Insurance" stipulate that the unemployed in cities and towns can also receive vocational training subsidies and job introduction subsidies during the period of receiving unemployment insurance benefits. After that, the "Notice on Relevant Issues Concerning the Pilot of Appropriate Expansion of the Expenditure Scope of the Unemployment Insurance Fund" (No.5 [2006] of the Ministry of Labor and Social Affairs) issued on January 11, 2006 launched the pilot of policies such as vocational training subsidies, vocational introduction subsidies, and small guaranteed loan interest subsidy payments in seven regions such as Beijing, which effectively promoted the promotion of the number of local reemployed workers. The government work report for 2016 points out that we should make full use of the balance of the unemployment insurance fund to further improve the

"employment promotion" work of the unemployment insurance, thus further promoting the development of the "employment promotion" function of the unemployment insurance. On November 10, 2017, the Ministry of Human Resources and Social Security issued the "Unemployment Insurance Regulations (Draft for Consultation on the Draft Revision)" (hereinafter referred to as the "Draft"), preliminarily determining the specific forms of "employment promotion" of unemployment insurance, including the payment of vocational training subsidies, vocational skills appraisal subsidies and entrepreneurship subsidies through the unemployment insurance fund, so as to further improve the "employment promotion" function of unemployment insurance.

In order to further enrich the projects of unemployment insurance to promote employment, the unemployment insurance fund's entrepreneurship subsidy should be implemented at the national level as soon as possible to achieve the effect of entrepreneurship to promote employment. In addition, additional welfare subsidies, such as transportation subsidies and childcare subsidies, can also be provided to unemployed people who participate in skills training, so as to enhance the enthusiasm of unemployed people to participate in skills training.

#### **4.2.3. Timely introduction of measures to shorten working hours**

Germany's general short-term work schedule can provide experience for China's unemployment insurance to prevent unemployment. At the beginning of the outbreak of the COVID-19 epidemic, China's social employment situation was relatively grim. However, if the general short-term work schedule is introduced into the unemployment insurance system at the beginning of the epidemic, the unemployment rate in society can be further reduced on the existing basis. Although the possibility of economic crisis in our country is very small, there are many factors that challenge the stability of social employment, especially unexpected events with large impact scope, such as the COVID-19 epidemic, which will have a strong impact on the stability of social employment. Therefore, the corresponding policy design concerning the unemployment prevention function of unemployment insurance should pay attention to the introduction of the general short-term work schedule. By shortening working hours, a large number of jobs can be reserved for enterprises to avoid mass unemployment in the society, thus easing the contradiction between supply and demand in the labor market.

To introduce the measures of shortening working hours into the unemployment insurance system, we should explore the establishment of a short-term work schedule with Chinese characteristics. The establishment of the short-term work schedule can be divided into the early forecast of the commencement of the measures for shortening working hours, the formal implementation of the measures for shortening working hours and the timely withdrawal of the measures for shortening working hours. The early-stage forecast of shortening working hours can mainly forecast the possibility of large-scale unemployment through the unemployment dynamic report established by the unemployment monitoring and early warning, so as to prepare for the implementation of the measures of shortening working hours. In the formal implementation of the measures to shorten working hours, attention should be paid to the establishment of an incentive mechanism and the formulation of specific and reasonable content for reducing working hours. The incentive mechanism of shortening working hours can draw lessons from Germany's way of reducing the social security contribution base of the lost working hours and returning the social security fee for a certain period of time to motivate enterprises to implement the measures of shortening working hours. The specific and reasonable content of shortening working hours is mainly reflected in the formulation of strict application conditions and flexible treatment and payment. Strict application conditions can ensure the effective use of the unemployment insurance fund by standardizing the application of enterprises, and flexible treatment payment can set different payment standards according to the severity of the shortened working hours so as to clarify the focus of the unemployment insurance fund expenditure.

The timely withdrawal of the measures to shorten working hours should be based on the actual situation of economic recovery, and a reasonable withdrawal mechanism should be formulated to avoid the abuse of the unemployment insurance fund.

## 5. Conclusion

The epidemic situation in COVID-19 has endangered the world economy, leading to the continuous increase of unemployment rate. Various countries have issued various policies to stabilize social employment, among which the short-term work schedule is favored by OECD countries. In fact, before the COVID-19 epidemic, the short-term work schedule had played an important role during the economic crisis and made outstanding contributions to stabilizing employment. Among the short-term work schedule implemented by OECD countries, Germany's system is quite representative.

The short-term work schedule in Germany is similar to the unemployment insurance system in China. Germany's general short-term work schedule and seasonal short-term work schedule are both designed for on-the-job employees to prevent unemployment, and the function of unemployment insurance in China is similar. Germany's transfer short-term work schedule has both the functions of preventing unemployment and promoting employment. From the perspective of unemployment prevention, the possible unemployment faced by the employees is delayed by setting up a separate entity with a transfer period to accept some employees to work for shorter working hours instead of directly considering layoffs. In the independent entity during the transfer period, the employees receive skills training and job introduction services to help the employees realize re-employment as soon as possible. In addition, employees who participate in the short-term work schedule can receive a short-term work allowance with a higher level of benefits to maintain their income and ensure their livelihood, which is also the same as the effect of unemployment insurance in our country.

Although Germany's short-term work schedule plays a similar role to China's unemployment insurance system, there are certain differences in specific content, especially the idea of shortening working hours has not been widely accepted in China. Considering the rationality and scientificity of Germany's short-term work schedule and its similarity to China's unemployment insurance system to some extent, the concept of shortening working hours can be introduced based on China's own reality to make China's unemployment insurance system develop in a long-term way.

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