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The Labour Market Effect of Social Security in Germany

L'EFFET DE MARCHÉ DU TRAVAIL DE LA SÉCURITÉ SOCIALE EN ALLEMAGNE

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Abstract: This paper investigates the relationship between social security and laobour market in Germany and calculates the regression relation among social security expenditure, social security contribution, enterprise investment and unemployment rate. The results indicated that the labour market has a closed relevance with social security. Reducing the social security contribution of enterprise is an important means to control the unemployment. And the proper level social security expenditure is the most crucial factor to keep the beneficial cycle between social security and laobour market.

Key words: Social Security Contribution; Social Security Expenditure; Labour Market

Résumé: Cet article étudie la relation entre la sécurité sociale et le marché du travail en Allemagne et calcule la relation de régression entre les dépenses de sécurité sociale, des cotisations de sécurité sociale, l'investissement des entreprises et le taux de chômage. Les résultats ont montré que le marché du travail a une relation étroite avec la sécurité sociale. Réduire la cotisation de sécurité sociale de l'entreprise est un moyen important pour contrôler le chômage. Et le bon niveau des dépenses de sécurité sociale est le facteur le plus crucial pour maintenir le cycle bénéfique entre la sécurité sociale et le marché du travail.

Mots-clés: cotisation de sécurité sociale; dépenses de sécurité sociale; marché du travail

1. INTRODUCTION

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Social security expenditure is a part of labour cost and effect the labour demand of employer. Furthermore, the high level social security expenditure perhaps leads to the increase of voluntary unemployment and early retirement.

In this paper, we adopt the data from 1995 to 2008 of German to inspect the correlativity between social security and labour market. And hope to find a method to effect the labour market by adjustment of social security.

2. EMPIRICAL ANALYSIS OF SOCIAL SECURITY IMPACT IN GERMAN LABOUR MARKET

2.1 Status of Social Security Expenditure and Unemployment in German

Social security expenditure in german is always a huge amount. It is almost 30% of German GDP. In the mean time a fairly high rate of chronic unemployment has placed great pressure upon the job market. Table 1 displays the two factors changes from 1995 to 2008:

Table 1: social expenditure and unemployment rate in German

year	1995	1999	2001	2002	2003	2004	2005	2006	2007	2008
%Social expenditure	25.4	29.9	29.5	29.3	29.6	29.6	29.8	28.9	29.1	28.4
%Unemployment	6.38	8.55	9.16	7.17	7.43	8.17	9.08	9.53	8.55	9.16

Source: <http://stats.oecd.org/wbos/default.aspx>

The social security expenditure and the unemployment rate have been keeping the high level for a long time. The data show that the serious disturbance between labour demand and supply has happened in German labour market.

But the regression analysis shows that there is no strong correlation between the social security expenditure and unemployment rate. The regression conclusions are as follows:

$$UE=0.42SE-3.85 \quad R=0.543 \quad P=0.105 \quad (1)$$

UE: Unemployment growth rate SC: Social security growth expenditure rate

2.2 Correlation Analysis of Social Security Contribution and Unemployment

According to the active mechanism between social security and labour market, the high level social security expenditure will result in the high contribution of enterprise. The German employers must turn more than 20% of payrolls to the social security for their employees.

Table 2: German Enterprise Contributions of Social Security in 2008

item	Old Age	Sickness	Work Injury	Unemployment	Sum
%contribution rate	9.75	7.55	1.4	3.25	21.95

Source: <http://www.ssa.gov/policy/docs/progdesc/ssptw/2007-2008/europe/german.html>

And the enterprise contribution burden is getting heavier and heavier in the view of the time trend. This has been a most important portion of the labour cost of German enterprise.

Table 3: Change of German Enterprise Contribution Rate

item	enterprise contribution rate				Employee contribution rate			
	1989	1999	2003	2006	1989	1999	2003	2006
%Sickness	3.65	6.9	7	7.55	3.65	6.9	7	6.65
%Old Age	9.35	9.75	9.55	9.75	9.35	9.75	9.55	9.75

Source: <http://www.ssa.gov/policy/docs/progdsc/ssptw/2006-2007/europe/german.html>

The most social security revenue has to depend on the enterprise contribution. With the increasing of the social security expenditure, the labour cost of German enterprise is much higher than before.

Table 4: Labour Cost growth rate

year	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008
%labour cost growth rate	2.43	2.21	2.24	2.69	3.05	2.57	3.14	3.89	3.43	3.21

Source: <http://stats.oecd.org/wbos/default.aspx>

Such heavy social security burden must bring out the decrease of the profit of the enterprise if the price of the product is still kept marketing competitiveness. The reduction of profit will cut down the ability to invest of German enterprise. With the decreasing of enterprise hiring ability, the unemployment must increase in large numbers.

Table 5: Growth rate of Investment, Unemployment and Social Contribution

year	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008
%Investment growth rate	-3	-2.79	-1.46	0.74	-7.19	-9.14	-3.03	-2.19	-3	-2.79
%Unemployment growth rate	8.55	9.16	7.17	7.43	8.17	9.08	9.53	8.55	9.16	8.55
%Social security contribution growth rate	0.69	3.03	-0.34	1.31	-0.99	1.31	1.29	-1.64	0.69	3.03

Source: <http://stats.oecd.org/wbos/default.aspx>

The correlation is still weak between the Social Security Contribution and the unemployment growth rate, the correlation coefficient is only 0.37. But if we add the growth rate of labor costs as the intermediate variables, test results will be greatly improved.

$$LC = 1.35SC - 0.41 \quad R = 0.62 \quad P = 0.018 \quad (2)$$

LC: growth rate of labor costs C: social security contribution

Regression analysis results indicate that the social security payment and the labor costs have the relatively close correlation.

$$UE = 0.29LC + 8.11 \quad R = 0.66 \quad P = 0.007 \quad (3)$$

UE: Unemployment growth rate LC: growth rate of labor costs

Obviously, German labor costs have a major impact on the unemployment rate. High labor costs in German have been seriously affected the external competitiveness of enterprises and employment issues.

On the other hand, the improvement of social security benefits will lead to an increase in involuntary unemployment? The test shows that German social security payments and unemployment changes has a very weak correlation, the correlation coefficient is only 0.023. The level of social security contribution does not impact the unemployment rate directly, but the high level of social security contribution rates will be an important factor to the unemployment rate in the long term.

3. CONCLUSIONS

Our results have several implications for other countries which are building or reforming their social security systems as we investigate the data of social security and unemployment in German.

Firstly, the social security expenditure must keep on the proper level. The proper level social security expenditure is the most important factor to construct the sustainable social security system. The high standard social security expenditure can bring the better living conditions; however, the cost is very expensive. We must exchange it by long-term unemployment, even the economic depression.

Secondly, there is a closed relevance between the social security and labour market, which leads us to estimate and find the optimum state of social security by observe the labour market.

Finally, reducing the social security contribution of enterprise is really an effective means to control the unemployment. We should break the vicious cycle by controlling the social security contribution of enterprise. The overtop social security contribution will decrease the investment and reduce the hiring ability of enterprise. Furthermore the rising unemployment expenditure will foster the social security contribution.

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