

Swedish Pension Reform: Reflections and Lessons

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This paper gets the foundation of the programe from hebei province science bureau: study on pension system of farm loster in Hebei province (10457204D—3); from the hebei province human resource and social security bureau: study on social security of farm loster in Hebei province.

Abstracts

Sweden's welfare system once ensured the sustained economic growth and stable social order, but as the world economic situation changes and structural changes in Swedish society, the welfare system controlled by government confronted with severe challenges and need to reform urgently. This paper analyzes the specific reform measures based on the problems faced by the Swedish pension system and discusses in depth the operating system of nominal personal account system, the transformation cost of pension reform and the impact on labor market. Finally, according to the developments and reform effects of Swedish pension system, we combined with China's specific national conditions and brought forward the policy recommendations for pension reform such as the gradual path and sustainable development.

Keywords: Pay as you go system, Nominal personal account, Transformation cost, Labor market

In 1913, the Swedish Parliament passed the world's first national social security scheme---National pension program. After decades of development, Sweden established a perfect pension system which enhanced the citizens' quality of life and reduced the social poverty phenomenon and played a positive role on the Sweden's economic development and social stability. However, since the mid-70s of the 20th century, the Swedish social security system also faced a serious challenge because of slowly economic growth. In 1976, Social Democratic Party finally stepped down after 44 years of ruling. As a landmark, Sweden entered a so-called "welfare state crisis" era. Although this crisis was not fundamentally undermined the Swedish social security system, a series of questions exposed by the crisis had made the pension system in urgent need of reform.

1. The problems faced by Swedish pension system

1.1 The contradiction between slow economic growth and rapid expansion of public pension expenditure

Since 1973, Sweden's economic growth rate was significant decreased. From 1960 to 1965, the average growth rate was 5.7%, from 1965 to 1970, the growth rate was 3.8%, from 1973 to 1979 was 1.9%, from 1985 to 1990 was 2%, and from 1990 to 1995 was 1.2%. (Ding Bing, 1996) However, during this period, with the deepening of aging, welfare spending substantially exceeded the economic growth. Social security expenditure in 1965 accounted for 7% of GDP. From 1981 to 1990, the social insurance and welfare spending accounted for 46.1%, and from 1991 to 1995 accounted for 50.1%. (Zhou Hong, 2006) Sweden's weak economic growth and the expansion of public pension expenditure had led to the government's huge financial deficit. According to statistics, the central government's financial deficit in 1950 was 3.1 billion kronor, and increased to 3.23 billion kronor in 1970, in 1981 even reached 66.27 billion kronor, an increase of 212.8 times in 31 years. Financial deficit of GDP ratio increased from 3% in 1950, to 7% in 1970, and finally rose to 13% in 1982. To the late 80s, the ratio had been maintained at about 5% (Ding Bing, 1996). Sweden's public pension funds were in face of plight, which gave a mounting pressure for the government. The pension system faced the risk of

Insert Figure 1 here

1.2 The issue brought by the aging of population in Sweden

From the late 70s of the 20th century, the EU's birth rate had gradually fallen to below 2%. According to expert's analysis, in the next 50 years, average life expectancy in Europe may also be further extended which women increased 4.2 years and men increased 5 years. In 15 countries of EU, old age dependency ratio from 27.7% in 20 years to 53.4% in 2050. It was estimated that in developed countries each additional percentage point of the

proportion aged over 65, the direct result of growth in total social spending is equivalent to 0.65% of GDP. From 1973 to 1995, only the absolute changes in the elderly population led to social welfare spending growth was roughly 2.6% of GDP (Duane.Swank, 2004). Sweden had been regarded as an aging society in 19th century, in 1890 the elderly population aged over 65 was 7% of the total population and reached 14% in 1975, now entered a “super-old-type” state (**Note 1**). Sweden’s population proportion aged 0-14 declined from 20.22% in 1977 to 17.89% in 2001. ([Http://db.cei.gov.cn/scorpio-online/default.aspx](http://db.cei.gov.cn/scorpio-online/default.aspx))Between 1960 -1985, the proportion of people aged over 65 increased from 12% to 17%, and elderly dependent rate increased from 18% to 28%. (Tommy Bengtsson, 1994) In 1996, the proportion of elderly people was 17%, and 22% in 2050.(United Nations Polution Fund, 1997) Under the existing pension system, contribution rates needed to increase from 23.5% in 1990 to 28.3% in 2015 (assuming annual wage growth rate was 2%).(Jan Selen and Ann-Charlotte Stahlberg, 2007) This will lead to a substantial increase in tax rates, resulted in a more heavy tax burden and forced to substantially increased the cost of business, had seriously affected production efficiency, formed a vicious circle between economic growth and social security.

1.3 Gradual advance of retirement age and rising unemployment

In theory, the statutory pension age, pension replacement rate and wage income tax rates, contribution rates will affect people’s actual retirement age. As can be seen from Table 1, the Swedish pension replacement rate was just next to Japan and France, higher than other countries. Their wage income tax rate at the highest level, accounted for almost half of the wages. These factors had prompted the Swedish people easily tend to retire early. According to statistics, the retirement age in Sweden in 1950 was the 66.8, 66.0 in 1960, 65.3 in 1970, 64.6 in 1980, 63.9 in 1990, and 63.8 in 1995. Drops an average of 2.7 years for males and 1.3 years for females (Table 2). (Sveinbjorn Blondal and Stefano Scarpetta, 1998) As times goes by, the actual retirement age in Sweden brought forward continuously which means an increasing number of elderly pensioners without paying the fees, and increased the burden on the Government.

With the early retirement age, unemployment problem was also getting worse. In 1972, 3.5% of the labor force in Sweden unemployed for more than 4 weeks, 3.3% of the workforce unemployed for 5-12 weeks, 2% of the workforce unemployed 13-26 weeks, 1.9% of the labor force unemployed for 27 weeks or more, unemployment rate in 1995 as high as 12%. (Meyerson Per-martin, 1982) The increase in unemployment aggravated government transfer expenditure. According to statistics, transfer expenditure in the proportion of public expenditure from 42.8% in 1974 to 46.5% in 1980, and continued to increase to 48.5% in 1981 (Ding Bing, 1996).

Early retirement and serious unemployment, not only increased the government’s public expenditure, but also affected the effective functioning of labor market, distorted the price of labor, undermined the labor efficiency and had a negative impact on economic growth.

Insert table 1 here

2. Swedish pension reform--the introduction of nominal personal accounts

In 1994, after the Social Democratic Party came to power again, review old reform course, facing severe pressure on the social economic and social welfare, Sweden had to take a more radical reform program to cut part of the standard social insurance subsidies and reformed the social security funding model. The new system came into effect on January 1, 1999.

2.1 A gradual transition to the new system

The new pension system can not affect the nationals born before 1938, and the old one can not affect the people born after 1953. However, people born from 1938 to 1953 needed to gain a mixed income (as below).

Insert figure 2 here.

Insert Figure 1 here

2.2 Contributions and benefits of new pension system

In 1994, Swedish Parliament put forward a pension reform proposals and claimed to abolish the provision in supplementary pension system of the highest wage level in 15 years as the base, and provided with a wage index instead of the price index as the criteria determining pension base, also take a reference of continuous payment records within 45 years, coordinated the pension system and economic development, avoiding the defects of pension increase much faster than economic growth. Moreover, the minimum age of people who were part of the pension was raised to 61 years old, allowances decreased from 65% of the wage level of employees to 55%. During 1994 -1998, Sweden’s pension system reform was the most radical and thoroughly changed the public

pension system from the Defined Benefit to Defined Contribution. Before 1994, the Swedish pension, in terms of payment, took a “pay as you go” model. In 1995, Sweden’s pension reform introduced the “named personal account”, therefore, public pension associated with income was divided into two parts---pay as you go and fund accumulation. Pensions paid by individuals went entirely to their personal accounts, employers and state pensions went to the pay-as-you-go fund. But the Swedish pension fund account was nominal, without true funds. It only recorded the individual payments and the rate of fund return formed by personal contributions, and as an important basis for payment of pension benefits. In 1998, Sweden started to receive a new pension payment reform, stipulated the pension contribution rate was 18.5% of employment wages, employers and employees taken 50% respectively. Individual account started a real reserve fund, put 2.5% pension rate paid by employers and employees to their personal accounts. The management of this part of funds separated from the pay-as-you-go, can be used for individual risk investment, each insurance applicant can invest a certain amount of security costs in private funds on the basis of interest rate. The failure of investment was on his sole responsibility and the profits can be all exclusive, public and private managers both had the right to operate. The distribution plan increased the corresponding Defined Contribution type, it was based on the amount of payment before retirement and the rate of return on capital investment to determine the pension distribution standard, and began to relate the payment obligations of the individual to the benefits enjoyment rights. According to the new pension system, national income came from two parts. One part was under 16% of pay-as-you-go and the income growth rate as well as lifetime wage income levels to determine the retirement income. The other was from 2.5% of personal accounts and depended on the rate of return on investment of capital market. The second level of return related to the trust fund portfolio. At present, the total assets of the Trust Fund was 750 kronor, equivalent to 40% of GDP in Sweden, the income level was much higher than savings interest rates(). Overall, the new system compared to the old system will bring more benefits to the people (for below).

Insert table 2 here

Insert Figure 2 here

3. The effect of pension reform in Sweden

With the Swedish government introduced radical reform policies after 1994, they expanded the scope and proportion of individual contributions of social insurance fund, and made personal payment accounted for the proportion of the Swedish Social Insurance Fund from 1% of the early 70s up to 7% in 2000. Not only made some achievements in the field of social security, but also improved the country’s financial situation. Swedish social welfare expenditure of GDP decreased from 38.6% in 1993 to 32.7% in 1999 (Ding, Jianding, 2004). At the same time, Sweden’s GDP had an increase of nearly 2.8 percentage points from 1995 to 2005, per capita GDP also increased almost 2.6 percentage points (Asia MarketScope). In 2006, Sweden’s GDP up to 2.9%.

3.1 Sustainable transformation cost was very limited

Many economists and policy analysts considered that from the pay-as-you-go system to the mixed system combined by pay-as-you-go system and fully fund system will show a long-term advantage. However, the transition will involve some transformation costs. Sweden’s pension reform, due to the progressive and the nominal account system, had a limited transformation cost.

In the new pension system, they needed to transfer part of payroll taxes to individual accounts, it seemed increased the government’s budget deficit, but in fact could not reduce national savings. Bureau of Statistics of national income showed government revenues decrease and the increase in private savings will not affect the country’s total saving level. If the reduced tax revenue led to pressure to the Government public expenditure and forced government to adopt policies to reduce public expenditure, in the long run, it may increase the level of national savings, reduce government spending, also proved by the facts (Table 2). Therefore, the current government’s financial cost caused simply by management cost resulted from transformation. Swedish pension transformation made administration costs increased by about 0.8% of assets. (Martin Feldstein) With the increase in assets and decline in market consumption, these administrative costs will accordingly decline.

Insert table 3 here

3.2 Avoiding labor market distortions

According to the traditional pay-as-you-go system, in order to meet the needs of an aging population, the income tax rate of wage will dramatically increase, and the individual marginal tax rate(**Note 2**) will increase too. This will result in a heavy burden to tax system, distorting labor market supply and demand. According to Feldstein’s calculation, if the wage income tax rate of employee increased from 10.6% to 16.4%, the increase degree of tax system burden was equivalent to an increase of 40% of workers tax revenues. If the marginal tax rate enhanced

from 38% to 44%, the burden of tax system was equivalent to 35% of the sum of personal income tax and wage tax. (Martin Feldstein) The traditional formula for tax burden: the change of burden degree $= 0.5E(T_2 - T_1)B / (1 - T_1)$, among which, E was relative flexibility, B was the tax base, assuming that $T_1 = 0.38$ (the initial marginal tax rate), $T_2 = 0.44$ (the marginal tax rate after tax increased), when $E = 0.5$, the changes of tax burden degree was 2% of tax base. (Martin Feldstein)

In accordance with the above analysis, if Sweden still uses the traditional pay-as-you-go system, in order to solve the problem of aging, according to Feldstein's derivation, at least increases 50% of payroll taxes, and personal marginal tax rate will go up accordingly. The burden of tax system will aggravate, the choices of workers in labor market will be affected also. At present, Sweden uses the nominal personal account, put 2.5% of wages into personal accounts, which can invest in capital markets, according to the rate of fund investment returns to calculate the benefits after retirement in the future. At the same time, the implementation of auxiliary pension and enterprise annuity effectively avoid the increase of personal marginal tax rate, and alleviate the cost of tax system as well as reduce the labor market distortions. Also enable labor costs to better reflect market relations between supply and demand, are conducive to improve the long-term economic efficiency.

Avoiding labor market distortions also embodies in encouraging the workers to work more. According to the provisions of the new pension system, the retiree's income depends on income levels of lifetime, thus urging the workers to work as much as possible, rather than lazy and idle. In addition, different retirement age have different retirement pension, which also motivated workers to extend the retirement age instead of choosing early retirement.

Insert figure 3 here

3.3 Social fairness can still be guaranteed

Half a century, the high degree of fairness in Sweden attracted extensive attention in the world. Market-oriented reforms of their pension will not affect the fairness mainly based on two reasons. First, in the old pension system, the national pension level depend on the average income of the highest fifteen years in lifetime, which was in favor of white-collar workers, so they may get a higher retirement pension, while the blue-collar workers pension was relatively lower, so appeared the phenomenon of reverse income distribution (Note 3). In the new pension system, the pension levels relate with the lifetime income level. This relatively narrows the gap between white collar and blue-collar. Second, the new pension system set up safety nets. According to the traditional pension system, a number of workers with low wages and interrupted work history, the amount of pension will be very low. In order to ensure every elderly people living in Sweden, the government provides each national pension is no less than 9,000 dollars per year, a couple for the 16,000 dollars, about 40% national will accept grants of the safety net. ([http://www.heritage.org/research/social security/bg1381.cmf](http://www.heritage.org/research/social%20security/bg1381.cmf)) These two factors will help to avoid the increasing income disparity caused by pension reform and ensure social fairness.

4. The revelation for pension reform in China

Swedish pension reform was different from China in history and cultural background, as well as the starting point for economic development. Therefore, the experience of the Swedish pension reform may not be entirely applicable to our country's reform measures, but in terms of historical development, there are three points worth learning.

4.1 The reform of pension systems need to choose the path from progressive to radical

Sweden is known for high-welfare, the characteristics of rigid in welfare easily lead to national dependence on welfare and make reform more difficult. However, from the process and effect of Swedish pension reform, its reform is relatively smooth and successful. One reason for the success is the choice from progressive to radical.

China's economic development is not high, and facing the aging problem. According to the medium population predictions, in 2000, the population aged 60 and above in China reached 134 million, account 10.84% of the total population. To 2020, this proportion may rise to 16.84%, to 2050, the elderly population may reach 468 million, account 27.77% of the total population. Large elderly population groups and retired workers need for huge amount social insurance funds to support. In 2050, the pension will exceed 30% of the total wage. (Deng, Dasong etc., 2007) In accordance with this trend, if still continue to adopt the traditional pay-as-you-go system, the future pensions for elderly will not be able to bear. Program to resolve the pension crisis: pension market, reduce pension replacement rate, contraction of benefit level, raising the retirement age. Among which, China's pension payment standard has been very low, can not continue to reduce. China has a large population, the proportion of visible unemployment and invisible unemployment are rising, therefore, it is impossible to extend the retirement age, but retire earlier. Change from the system itself is the choice suited to China's national

conditions. However, change from pay-as-you-go system directly to the accumulation fund system, some people will face retirement crisis, and leading to social unrest. Therefore, we should follow the example of Sweden, first adopt a number of micro-policy such as local pension protection, privatization and other measures, then the introduction of nominal account system, and then gradually confirmed. Put personal accounts funds to capital market by fund management companies, improve of the value-increasing ability of pension funds,

Pension reform in China is on the march, some provinces and cities carry out the fund management mode of combing overall social planning with personal account and have achieved some practical results. In accordance with “the State Council on improving the basic pension insurance of the enterprise system’s decision”, from January 1, 2006, the scale of personal account adjusts from 11% of pay wages to 8%, all form by the individual contribution, and the unit payment is no longer assigned to individual account. This is the first step of pension system reform, and will continue to develop.

4.2 China’s pension reform should focus on system sustainability

Swedish pension reform was a choice in the context of demographic change and economic difficulties, because of the rigidity of social security feature, pension reform was difficult and encountered many setbacks. As the former British Minister of Finance and Foreign Affairs Jeffrey.Hao stressed that social security is a social project, when determining the baseline level of social security must be careful because social security has a feature that once the measure be introduced, and the base be established, which will only increase and hard to fall. (Lin, Yuming, 1998) This tell us that China’s social security reform needs to take sustainability as an important design principle. We should not extend coverage blindly, increase the benefit level substantially, also should not stand still. We must consider the affordability of our economy as well as the spending capacity of government finance.

Sustainability of social security must take full account of resources amount of social security, considering the impact of value-added feature of social security resources on the future. During system designing, first of all, need to pursue the fairness principle based on efficiency, and gradually eliminate the urban-rural dual structure phenomenon. We should both realize the lend technical and vertical equity between generations. Second, realizing the lower starting point, gradually expand the pension benefits and coverage level, finally in line with the productivity of our country. At Last, according to China’s specific national conditions, we need the social security funds of multi-channel, multi-level, rights and obligations coexist, management and service socialized. Only in this way, can we obtain a sustainable and dynamic pension system.

4.3 The success of pension reform need a rational balance between the interest groups

Brog (2005) considered that one radical reform need a few conditions: First, raising questions in political parliamentary. Second, must propose a solution. Third, problems must be solved. Fourth, most people have confidence. From 1984 to 1990, the Swedish Parliament pointed out the existing problems of the pension system, and considered that it’s time to reform. Under the condition of groups exchange and consultation, 85% of the congressional representatives signed a reform plan.

(Jan Selen and Ann-Charlotte Stahlberg, 2007) An important reason for the success of Swedish pension reform was in line with the above-mentioned conditions, among which, the formation of a rational balance between the social interest groups was the internal social factor. Brian Ting once said that Sweden was a country dominated by compromise. Swedish Federation of Trade Unions and the Employers Federation participated in deciding some issues closely related to benefits of enterprises and workers. West Berlin’s two scholars P. Wagner and H. Wallman once studied the Swedish government policy-making style. They believed that, as a coordinated combination nation, a significant feature of Sweden was to ensure all policies were under “parties consensus” rather than in opposition with each other, therefore its policy system was open. Before making major policy decisions, government had always been willing to absorbing all kinds of behaviors and found reasonable solutions together. Policy making and policy research had been incorporated into the mutual consultation and cooperation network formed by government, the central administration, parliament, and representatives of various interest groups. Even the universities attached great importance to policy research and advice. Social scientists provided knowledge and information for decision-making in advance rather than after investigation and evaluation. Swedish pension reform’s success was also in relation with the participation of various interest groups in decision-making, and embodied their interests. Pension system was a social security system, a redistribution system, which involved in the interests of all sectors. If each class of interest groups formed a mutual equilibrium relationship, then they can carry equal negotiation with each other and easy to reach an agreement.

China’s pension reform is inevitably a process of redistribution of interests, some people may benefit, while

others may suffer. In facing of the phenomenon of increasing gap between rich and poor, prominent social conflicts, during the social security system reform, the Chinese Government paid more attention to vulnerable groups in order to form a balance power between different interest groups. With formal organizations and representatives and is convenient for various sectors to reach agreement. Thus, through social dialogue, public hearings and other consultative approaches, various different voices can interact with each other, make the public fully understand and support reforms, further to reach a consensus and promote the success of reforms.

References

- Deng, Dasong etc. (2007). *Theory and Practice Development Research of Social Security*. People's Publishing House, published in February, p.219.
- Ding Bing. (1996). *The Swedish school*. Wuhan: Wuhan Publishing House, April, 1st Edition, p.195-196.
- Ding Bing. (1996). *The Swedish school*. Wuhan: Wuhan Publishing House, April, 1st edition, p. 194
- Ding Bing. (1996). *The Swedish school*. Wuhan: Wuhan Publishing House, April, 1st edition, p.187
- Ding, Jianding. (2004). Development of the Swedish social security system [M]. Beijing: China Labor and Social Security Press, March,1st Edition., P. 180.
- Duane.Swank. (2004). The restructure of political system and of the welfare system: The impact of System on developed democratic countries social policy changes, listed in Paul.Pearson. The New Politics of the welfare system (Wang Chunbo, Miao Zhenmin etc. Li Bingqin check). Beijing: Commercial Press.
- Jan Selen and Ann-Charlotte Stahlberg. (2007). Why Sweden's Pension Reform was able to be successfully Implemented. *European Journal of Political Economy*, 15 January.
- Jan Selen and Ann-Charlotte Stahlberg. (2007). Why Sweden's Pension Reform Was Able to be Successfully Implemented. *European Journal of Political Economy*, 12 March, pp3.
- Lin, Yuming. (1998). *Large changes in social security system during transformation*. China Financial and Economic Publishing House, edition, p.16.
- Martin Feldstein. Structural Reform of Social Security, Working Paper 11098,NBER,P24
- Martin Feldstein. Structural Reform of Social Security, Working Paper 11098,NBER,P16
- Martin Feldstein. Structure Reform of Social Security, NBER Working Paper 11098,pp19.
- Meyerson Per-martin. (1982). The Welfare State Crisis, *Stockholm*, p18.
- Sveinbjorn Blondal and Stefano Scarpetta. (1998). The Retirement Decision in OECD Countries. OECD Economics Department Working Papers, No.202.
- Tommy Bengtsson. (1994). *Population, Economy and Welfare State*. Berlin, p124
- United Nations Polution Fund(Annual Report 1997)
- Zhou Hong. (2006). Welfare state:Where are you going. Social Sciences Academic Press, p. 175
- [Online] Available: [Http://db.cei.gov.cn/scorpio-online/default.aspx](http://db.cei.gov.cn/scorpio-online/default.aspx), 2003-11-07
- [Online] Available: <http://finance.sina.com.cn>. Asia MarketScope
- [Online] Available: [http://www.heritage.org/research/social security/bg1381.cmf](http://www.heritage.org/research/social%20security/bg1381.cmf)
- [Online] Available: [http://www.heritage.org/research/social security/bg1381.cmf](http://www.heritage.org/research/social%20security/bg1381.cmf)

Notes

Note 1. Super-old society is one in accordance with international standards, people older than 65 years account the proportion of 15% or more of the total population.

Note 2. Marginal tax rate: the tax amount proportion in the increment of object of tax

Note 3. The phenomenon of reverse income distribution refer to the distribution system which is beneficial to rich people and disadvantage to poor people

Table 1. The average pension replacement rate and wage income tax rate of seven western countries in 1965-1994 (%)

	Canada	France	Italy	Japan	Sweden	England	America
pension replacement rate (Mean between 1965-1994)	46	52	45	54	49	24	42
wage income tax rate (Mean between 1965-1994)	22	36	30	16	47	23	20

Source: Leibfritz, W.D. Roseveare et al., Ageing Populations. Pension Systems and Government Budgets. How Do They Affect Savings? OECD Economies Department Working Paper No.156, 1995. Auerbach, Alan J. and Laurence J. Kotlikoff. Dynamic Fiscal Policy. Cambridge University Press, 1987. *Sweden wage income tax rate was the mean between 1965-1994.

Table 2. Personal accounts bring more retirement income

	Blue-collar workers	White-collar workers
The old system	\$15,000 (SEK 131,000)	\$19,000 (SEK 166,000)
The new system	\$21,000 (SEK 186,000)	\$21,500 (SEK 189,000)

Source: Stefan Foster, R. Svensson, and P. Thulin. Hur bra or världens bosta pensions- system? Forskningsrapport S37. Handelsn Utredningsinstitut. Stockholm. 1999.

Table 3. The level of national savings and public expenditure

	1998	1999	2000	2001	2002	2003	2004	2005	2006
The overall level of national savings	21.3	21.7	22.6	22.1	21.8	21.7	22.7	23.0	23.1
Public expenditure	60.8	60.2	57.3	57.2	58.1	58.1	57.3	56.6	56.3

Source: Euro State, 2007

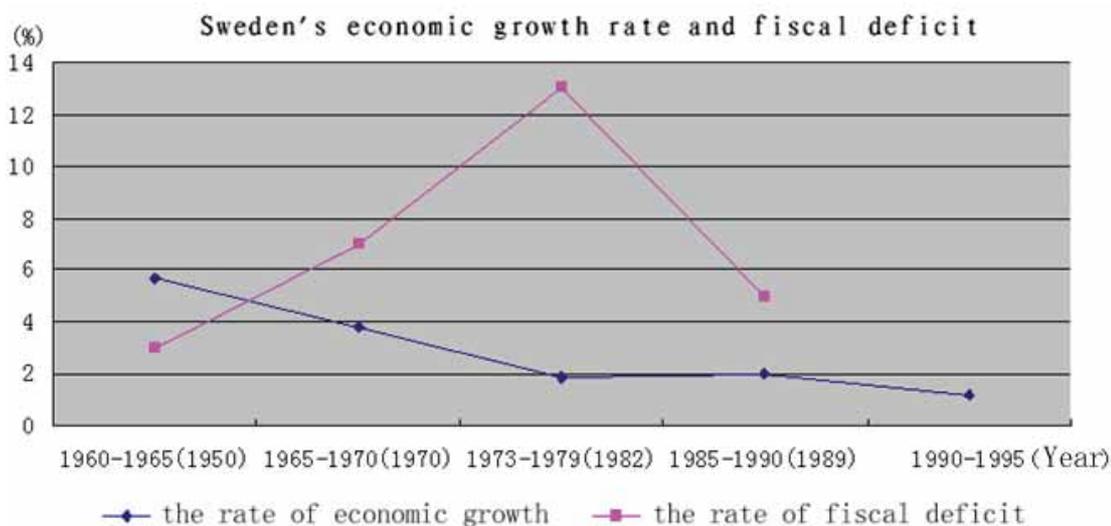


Figure 1. Sweden's economic growth rate and fiscal deficit

Note: The horizontal axis represents year, vertical axis represents the Swedish economic growth rate and fiscal deficit.

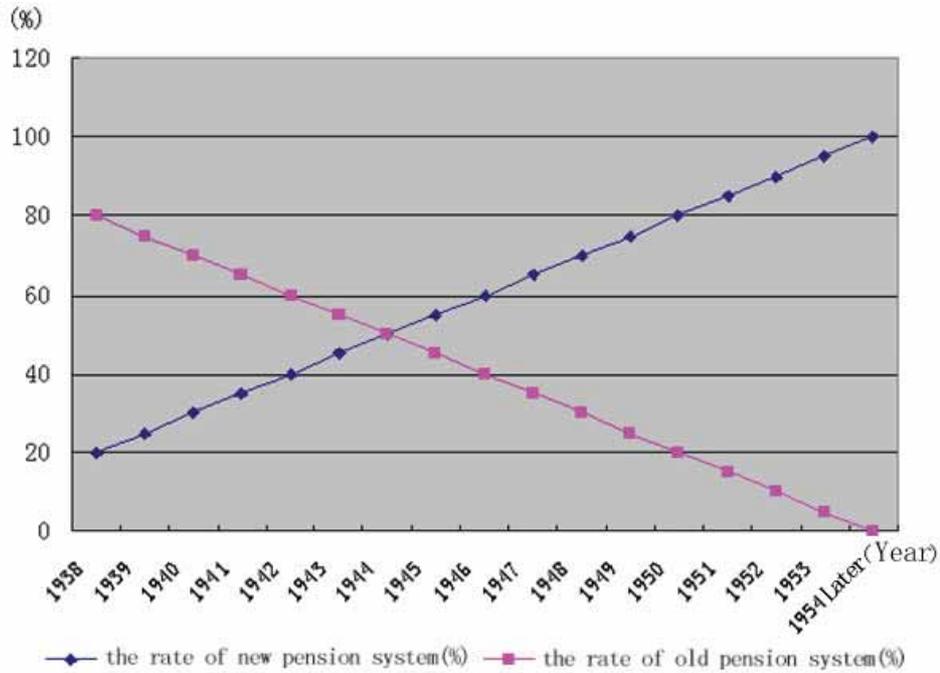


Figure 2. Introduction of the new system

Note: The horizontal axis represents the birth age, vertical axis represents the proportion of pensioners.

Source: Swedish Ministry of Health and Social Affairs, Pension Reform in Sweden: A Short Summary, at www.pension.gov.se/in%20English/summary.html

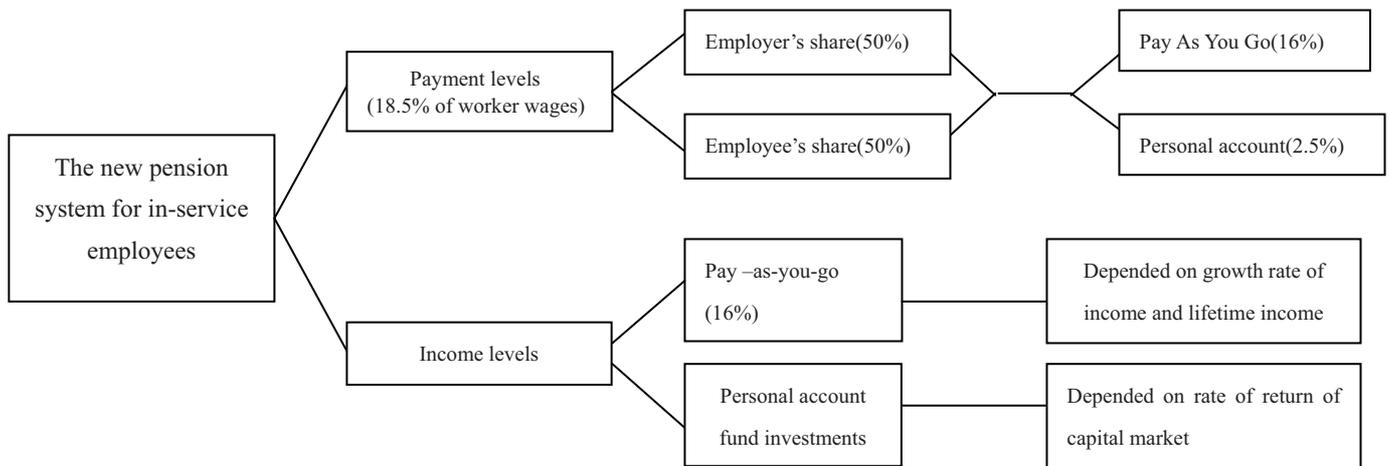


Figure 3. Composition and operating graph of new pension system

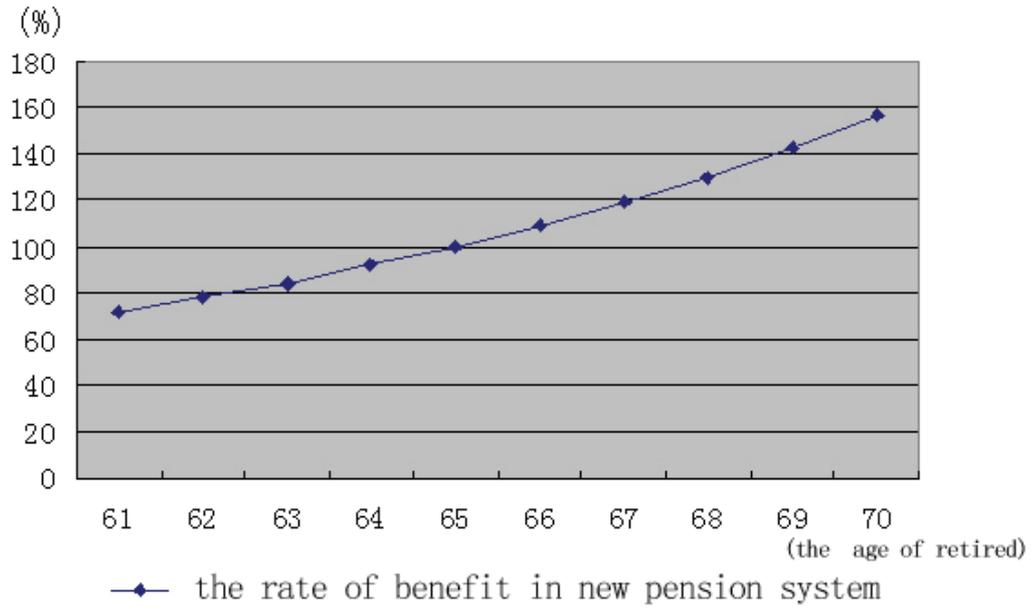


Figure 4. The new pension system returns

Note: The horizontal axis represents the retirement age, the vertical axis represents the new pension system returns.

Note: *As a % of normal retirement age (65) pension.

Source: Swedish Ministry of Health and Social Affairs, "Pension Reform in Sweden: A Short Summary", at www.pension.gov.se/in%20English/summary.html