A Research Proposal on Taiwan's Social Security

by T. C. Wang Sept. 14, 2008

Taiwan's Social Security System was completed by adding to the long existing Labor Insurance Program and Farmers' Insurance Program, a new National Annuity Program so that everyone is covered, however not equally and fairly treated.

The Labor Insurance would face a collapse if the one-time pay were not replaced by an annuity. Even so, it is predicted after 19 years the collapse will be unavoidable. The Statistics and Budgeting Office disapproved the financing for the shortage of the insurance fund from the general revenue. It was proposed the shortage be made up from the energy tax. But this will raise the price of gasoline and electricity for daily life in this economically difficult time. Most recently a proposal for extension of compensation for pregnancy from 1 to 3 months has been withdrawn due the unavailability of funds. Also the private school employees' pension was refused to be transferred from the public employees' to this program due to the same reason.

The employers with less than 4 employees are to be legislated to pay for the contribution shares, the unions through which these employees originally join the labor insurance would lose their administration cost aid from the government.

The Farmers' Insurance is deliberately not combined into the new national annuity for the sake of keeping the better benefit status and the additional old farmer supplementary income.

The remaining, mostly low income employees were covered by the new national annuity program with relatively fewer insured. From the start, it has to be financed from the national lottery tickets and sales tax income. The contributions of the poor and the disabled are paid by the social welfare offices so benefits are not tied to working quarters .The social assistance for

be fined for the delay of paying annuity contribution. But still within 8 months since the start of the program, it already faces a shortage of fund. The Statistics and Budgeting Office again disapproved the general revenue financing. The other way to rescue is to raise the sales tax, but this will gear up the price of living commodities in this economically difficult time.

Besides, the labor's minimum wage, the women's baby-caring period compensation, the longevity of the old and the shrinking birth rate of the new generation, and the use of the reserve together with other reserve funds in the stock market are related issues. Even the public employees' retirement benefits are accused of being unfairly better and becoming an improper burden. The Students' Parents Alliance complained against the new private school teachers' annuity program.

The National Economic Planning Council suggested eventually a Second Generation Annuity will integrate the current three programs into one so that there will be no differential treatment of retirement benefit due to occupation status. For how long will this integration occur and how to solve the above mentioned public policy, actuarial, public finance problems? A simulation model can be constructed to foresee the picture of such integration. The above research was outlined and proposed for younger scholars to continue and complete after the author's retirement.

A Mix ture of Pay - as - you - go
and Reserve Financing
by T. C. Wang, June, 2009.

In social insurance , the benefits are tied to working incomes. But the pay - as - you - go financing uses the current instead of the past contributions to pay the current benefits. Due to the dropping birth rate the initial current contributions may not the enough to finance the current benefit need. The shortage due to the shrinking population is made up by evenly accumulated cost through past years toward a reserve. The contributions (cost) at certain point are to partially pay the current benefits plus the need to finance the future partial reserve.

So the financing of the social insurance remains self -contained and would not have to raise the fee and/or compete with other programs for the general revenue and hence the beneficiaries' rights can the 100% secured.

A Simplified Example

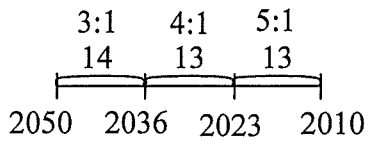
Population (2010-2050)=2000, 0000

Of Payer (age 25-64): payee (age 65-85)

=5 : 1 for 13 yrs (2010-2023)

4 : 1 for 13 yrs (2023-2036)

3 : 1 for 13 yrs (2036-2050)



(12000) (9000) (7200) Pay-as-you-go

+900 +900 +900 } Reserve

+1365+1365 +1365 }

(9465) (9465) (9465) Mixed

Population of current year

Payer (age 25-64): Payee (age 65)

=100 : 1 for 13 yrs (2010-2023)

80 : 1 for 13 yrs (2023-2036)

60 : 1 for 14 yrs (2036-2050)

Benefit/payee = $3000/month = $36000/yr=$720000/payee

Pay as you go:

In the first 13 yrs

yearly pay/payer=$\frac{\$720000\times1}{100}$=\$7200

In the second 13 yrs

yearly pay /payer =$\frac{\$720000\times1}{80}$=\$9000

In the third 14 yrs

yearly pay/payer =$\frac{\$72000\times1}{60}$=\$12000

Full Reserve: \$720000/40=\$18000/yr, payee-self

In the second 13 yrs, the yearly shortage of the initial \$7200 from \$9000=\$1800, evenly accumulated through past 26 yrs, yearly extra cost=$\frac{\$18000\times13}{26}$=\$9000

In the 3rd 14 yrs

the yearly shortage of \$7200 from \$12000=\$4800, \$4800-\$900=\$3900, evenly accumulated through past 40 yrs, yearly extra cost =$\frac{\$3900\times14}{40}$=\$1365

∴. For all 40 yrs, the yearly cost

=\$7200+\$900+\$1365=\$9465/payer.

In the 1st 13 yrs, every year

\$7200/payer is used to pay the current payees' benifits. The remaining \$(900+1365)/yr is used to reserve for the change of population.

In the 2nd 13 yrs, every year

\$7200+(900×26)/13=\$9000/payer is used to pay the current payees' benefits, the remaining \$1365 is used to reserve for population change.

In the 3rd 14 yrs, every yr

\$7200+\$900+$\frac{\$1365\times40}{14}$=\$12000/payer is used to pay the current payees' benefits.

For the above mixed financing, cost/yr =\$9465/yr=\$789/month,

benefit/yr=\$36000/yr=\$3000/month,

Benefit/Cost=3.8 : 1

If benefit is raised 4 times, Cost =\$3156/month

Benefit=\$12000/month