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Pension Reform of PRC: Incentives, Governance and Policy Options

by

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Organization

1. Introduction
2. Historical Background
4. Main Indicators of PRC Pensions
5. Major Issues
6. Basic Evidences from Microdata
7. Future Policy Options
8. Challenges for Better Implementation
9. Concluding Remarks
Historical Background

- The 1951 Legislation
- Period of the Cultural Revolution
- The 1978 Amendments
- The 1986 Enforcement
- The 1991 Resolution
- The 1997 Establishment of A New System
- The 10th Five-Year SS Plan in 2001
- 2001/2002 Experiments in Liaoning
The 1951 Legislation

Covered People:
workers of SOE, COE, Gov’t & Gov’t-related institutions

Normal Retirement Age:
60 for men (min. 25 yrs of coverage)
55 for white-collar women (min. 20 yrs)
50 for blue-collar women (min. 20 yrs)

Special Rules for those in hazardous occupations:
5 yrs before NRA
The 1951 Legislation (cont’d)

**Replacement Rate (RR):**
- 50-70% depending on covered years
  - (no flat-rate benefits)

**Contribution Rate**
- 3% by employers only

**Pooling of Contributions**
- nationwide (30%) & each local level across enterprises

**Current A/C**
- substantial surplus until 1965
Period of Cultural Revolution (1966-1977)

The system ceased to exist. The funds were used for other purposes. All SOEs stopped collecting money for public purposes. Individual enterprises virtually became responsible for paying pensions to their employees out of current revenues (an Enterprise-based Protection!). Payments of old age pensions were often postponed. Many older persons were forced to continue working beyond the NRA.
The 1978 Amendments

Providing Incentives to Early Retirement

- full pensions from 10 yrs of coverage
- 60% RR for those with 10-14 contributing yrs
  70% RR for those with 15-19 CY
  75% RR for those with 20 CY and more
- A job in a state sector was promised to one child per retiree for all state employees.

Rapid Expansion of Pension Expenditure

Forcing Each Enterprise to Bear Full Responsibility for Old Age Pensions of Its Employees
Economic Reforms in the Early 1980s

- giving enterprises more financial autonomy
- competition among enterprises intensified
- SOEs facing cost disadvantages due to social obligations
- great difficulty in downsizing the SOE work force
  - strong resistance from SOE workers

⇒ Lack of Pension Portability

becoming a major stumbling block to the SOE restructuring
The 1986 Enforcement

- pooling of contributions within each municipality started. Social Insurance Agencies (SIA) were newly established to administer the pension funds.

- 3% contributions of basic wages introduced to all new SOE employees

- 15% contributions of pre-tax wages by employers
The 1991 State Council Resolution

- integration of local programs promoted at the provincial level and eventually at a national level with unifying pension provisions
- guidelines of a three-tier system shown: mandatory basic pensions with state subsidy, voluntary occupational & individual pensions
- new experiments without basic pensions permitted in private and joint-venture enterprises
- introduction of old age pensions in rural areas decided
The 1995 State Council Circular

• establishing individual pension a/c announced
• expanding coverage to all urban workers regardless of firm ownership proposed
• great diversity in choosing system design for local pensions pools allowed
Two Major Developments after 1995

1. Massive Lay-off Emerged
   
   8.2 million workers in 1996
   14.4 million workers in 1997
   
   → Building pension portability became urgent.

   
   ← rising dependency ratio
   ← non-compliance in paying contributions
The 1997 Establishment of A New System

- consolidation of pension pools at the provincial level requested
- unification of the pension system (including benefit formula, contribution rates and eligibility requirements) across consolidated pools also requested
- shift to the three-tier system promoted
  - Mandatory DB tier for redistribution
  - Mandatory DC tier for each worker
  - Voluntary tier of occupational or individual pensions
The 1999 State Council Order

Speed-up of Expanding Coverage:

including non-state enterprises and migrant workers into the pension pools
The 2001 10th Five-year SS Plan

- **Contributions to the Individual A/C**
  - to be reduced from 11% to 8% from employees only
  - separate management from the social pooling funds

- **20% contributions from employers are to be deposited into the social pool.**

- **Increases in Basic Benefits**
  - from 20% RR to 30% RR

- **Unifying pension programs between civil servants and urban employees**
  - 8% payroll tax for each civil servant
  - 20% payroll tax for employers (state)
2001/2002 Experiments in Liaoning Province

- **Creating Real Individual A/C**
  
  8% payroll tax for employees, separately managed from the social pool

- **Encouraging Employees’ Contributions**
  
  basic benefits to be increased up to 30% of provincial average wages with coverage of 15 yrs or more

- **Creating Guaranteed Minimum Pensions for those with no pensions**

- **Promoting the Third-tier Supplementary Pensions**
  
  Contributions from employers are tax-deductible up to 4% of total pre-tax wages.
Current Provisions

1. A New Benefit Structure
2. Group Category
3. Benefit Payments
4. Eligibility Conditions
5. Contributions
6. State Subsidy
7. Variations
A New Benefit Structure for Mandated Pensions

1. The 1\textsuperscript{st}-tier (DB)
   
   a flat-rate basic benefit:
   
   \[ 20\% \text{ of the average regional wage at retirement} \]

2. The 2\textsuperscript{nd}–tier (DC, individual a/c)

   the pensionable age: 55
   
   monthly benefits = \( (\text{total pension wealth})/120 \)

In total, 58.8\% RR will be assured for the average-wage earner with 35 covered years.
Group Category for the Transition Period

1. **Old Men**
   - People who retired prior to 1997

2. **Transitional Men (Middle Men)**
   - People who joined firms before 1997 and had not retired by that year

3. **New Men**
   - People who joined firms after 1997
Benefit Payments for Each Category

1. Old Men

   previous benefits maintained, financed from the social pool

2. Transitional Men

   1) a basic benefit from the social pool
   2) a benefit from the individual a/c
   3) a transitional benefit from the social pool depending on covered yrs prior to 1997

3. New Men

   1) a basic benefit from the social pool
   2) a benefit from the individual a/c
Eligibility Conditions for Old Age Pensions

• Coverage of 15 yrs and more
• NRA Remains Unchanged
• Early retirement is permitted to those who are totally disabled from age 45 for women, and from age 50 for men with 10 yrs coverage.
• Lump Sum Retirement Benefits: those with less than 15 yrs coverage
Contributions

(in 1997)

1. The Social Pool
   13% of payroll: employers only

2. The Individual A/C
   1) 4% of wages: employees
   2) 7% of pretax wages: employers

Total: 24% payroll tax with state subsidy

Contributory wages:
   60-300% of average local wages
Contributions (Cont’d)

Employer/Employee Split in the Individual A/C to Be Changed

1. The employee contribution rate was to rise every 2 years by 1% until it reached 8%.

2. There was to be an offsetting decrease every 2 yrs by 1% from the employer until its contribution rate equals to 3%.

3. In total, 11% payroll tax is to be maintained.
# Fiscal Subsidies to Pensions

<table>
<thead>
<tr>
<th>Year</th>
<th>Subsidies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Over 5</td>
</tr>
<tr>
<td>1998</td>
<td>Over 10</td>
</tr>
<tr>
<td>1999</td>
<td>Over 20</td>
</tr>
<tr>
<td>2000</td>
<td>Over 40</td>
</tr>
<tr>
<td>2001</td>
<td>Over 40</td>
</tr>
</tbody>
</table>

Source: Zhao-Xu (2002)
Fiscal Subsidies (Cont’d)

• heavily transferred to provinces which had the relatively high share of retired SOE workers: For example, Liaoning and Heilongjiang combined received 26% of total state subsidies in 1999.

• State subsidies were equivalent to 17% of aggregate pension benefits in 2000.
Variations

Between-urban Differences in the Mandatory Contribution Rate

Highest Extremes:

49.39%: Xinjiang Production & Construction Corps.
29.00%: Jinan
26.55%: Liaoning
25.12%: Heilongjian

Lowest Extreme:

13%: Shenzhen
Variations (Cont’d)

Urban/Rural Differences

Rural pensions launched in 1991. The core is voluntary individual contributions from age 12 to 50 at one of 9 levels between 4 and 20 yuan a month. The NRA is 60.

- 62m contributors & 1m pensioners currently
- 1% coverage
- low benefits (50 yuan or less per pensioner)
Variations (Cont’d)

Occupational Differences

Civil servants and employees of state organizations/institutions have a different program of generous benefits with no individual contributions. The program covered 30m people with aggregate benefits at 0.44% of GDP in 1999.

Time Differences

Significant changes for the past 10 yrs Further changes probable in the future
## Pension Benefits for Civil Servants

<table>
<thead>
<tr>
<th>Length of Service</th>
<th>Replacement Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>~9 Years</td>
<td>40%</td>
</tr>
<tr>
<td>10 to 19</td>
<td>60%</td>
</tr>
<tr>
<td>20 to 29</td>
<td>75%</td>
</tr>
<tr>
<td>30 to 34</td>
<td>82%</td>
</tr>
<tr>
<td>35 and over</td>
<td>88%</td>
</tr>
</tbody>
</table>

Main Indicators of PRC Pensions

Coverage
System Dependency Ratio
Replacement Rate
Contributions/wages
Aggregate Benefits/GDP
Speed of Aging
TFR & Life Expectancy
Long-term Financial Performance
Public Pensions: Coverage & Dependency Ratio

Pension Indicators of PRC

Speed of Aging in Selected Asian Countries

(Years)

(Population 60+)/(Total)

Year

Speed of Aging: China vs Japan

Source: NIPSSR, Japan (2002); State Family Planning Committee, China (1999)
Provincial Differences in Dependency Ratio

(year 1999)

(Population 65+)/(20-64)

Shanghai Jiangsu Beijing Zhejiang Guangdong Nationwide Liaoning Yunnan Heilongjiang Xinjiang Ningxia

Life Expectancy at Birth

Major Issues

Financing
Implementation/Governance
Program Design
Coverage
Detailed Studies
### Long-term Financial Performance

#### Pension Benefits over Aggregate Wages

<table>
<thead>
<tr>
<th>Year</th>
<th>Benefits/Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>22.4%</td>
</tr>
<tr>
<td>2020</td>
<td>34.9</td>
</tr>
<tr>
<td>2030</td>
<td>42.8</td>
</tr>
<tr>
<td>2040</td>
<td>42.4</td>
</tr>
</tbody>
</table>

Financing Issues

Deficit Financing from Increased General Revenue

• Recognition Bonds (Sun-Maxwell, 2001)

• Sales of SOEs (cf. Timing)

• A Lottery (James, 2001, Sun-Maxwell, 2001)

cf. Persistent Gov’t Deficit since 1979
Financing Issues (Cont’d)

Deficit Financing from Increased Contributions

full reporting of wages with full tax deductions of contributions (Sun-Maxwell, 2001)

Full Funding of the 2\textsuperscript{nd}-tier Contributions with a Higher Rate of Return (Sun-Maxwell, 2001, Zhao-Xu, 2002)

Reducing RR to 60\% (Sun-Maxwell, 2001, James, 2001)

Increasing the NRA to 65 (Whiteford, 2001, James, 2001, Dorfman-Sin, 2001)

Shift to CPI Indexation (Whiteford, 2001, James, 2001, Dorfman-Sin, 2001)

Extending the Min. Covered Years (Whiteford, 2001)
Financing Issues (Cont’d)

The 2nd-Tier Program

• An “Empty Box” (merely an entitled accounting book)
  Ding (2002), Zhao-Xu (2002), Sun-Maxwell (2001)

• Administered Rate of Return, Too Low
  set to equal the 3-month time deposit rate (1.98% in 1999)

• 10-yr Life Expectancy Assumption
  → a shift to pensions on an actuarially fair basis required

• Development of Domestic Financial Market, Lacking
  James (2001)
Implementation Issues

Weak Enforcement Capability with Little Incentives

• Enterprises still often operate as an administrative body, while financing obligations of pensions are separated.

• Most SOEs are owned by sub-national Gov’ts which have no power to issue debt.

• Central Gov’t has the power to issue debt, but fiscal resources are mostly controlled by provincial gov’ts. Thus, Central Gov’t is unlikely to issue debt for pensions.

□ Separation of Administration from Financial Responsibility

□ Moral Hazard and Low Compliance

□ Increased Financial Difficulties
Moral Hazard (Zhao-Xu, 2002)

- Removing the control of pension pools by municipalities
  (pension funds: an important source of investment for each municipality)
  - Disincentive to collecting contributions
- Cross-subsidization through the pension pool
  - No incentive for a municipality to generate a surplus
  - No incentive to keep the deficits down

⇒ Provincial Pooling Achieved by 2000
  complete pooling in 5 provinces
  partial pooling in 17 provinces
  no pooling in 8 provinces
  - unwillingness of municipalities
Implementation Issues (Cont’d)

The 15-yr Rule  ▪ Massive Early Retirement

Underreporting of wages
  unreported payments: about 50% of reported wages
  Sun-Maxwell (2001)

Underreporting of No. of Employees  (Zhao-Xu, 2002)

Disincentives to Honest Reporting
  • a heavy payroll tax for employers of non-SOE enterprises
  • a lower rate of return from the 2nd-tier investment
  • smaller tax deductions permitted in corporate income tax provisions, up to 800 (960 yuan in large cities) per employee per month
  • no penalty against underreporting or delay of payments
Liaoning Experiment:

Increasing Disincentive to Participation?

- increases in contributions to the social pool
- reduction in contributions to the 2nd-tier

Zhao-Xu (2002)
Program Design

The 1997 Provisions:

- partial applications to the World Bank model (1994)
- few doubts yet from PRC domestic pension experts
- hot debate around the world

The 2nd-tier in Practice:

- A PAYG DB plan instead of an envisaged funded DC plan
- Switching to what?
  - to a funded plan or to a Notional DC plan
Coverage

Urban workers

Rural farmers

Migrant workers
Detailed Studies

- Lacking are detailed studies using micro data.
- Figures on average are only available.
- Deeper understanding is required before assessing the effects of alternative policy options.

Whiteford (2001)
Basic Evidences from Microdata

Data Guide

1) *The 2000 Survey of Workers and Pensioners in 42 Major Cities of PRC*, conducted by MOLSS in June-August 2001

2) *The 1995 Family Income and Expenditure Survey*, conducted by Chinese Academy of Social Science, containing 6935 hh observations (21,696 persons) in urban areas
Proportion of SOE Pensioners
1) Males

Source: Ding-Takayama (2003)
Proportion of SOE Pensioners in 2000
2) Females

Source: Ding-Takayama (2003)
Proportion of SOE Workers in 2000
1) Males

Source: Ding-Takayama (2003)
Proportion of SOE Workers in 2000
2) Females

Source: Ding-Takayama (2003)
Early Retirement in 2000
1) Males

Source: Ding-Takayama (2003)
Early Retirement in 2000
2) Females

Source: Ding-Takayama (2003)
Age Profile of Monthly Pension Benefits (DEC 2000)

1) Males

Source: Ding-Takayama (2003)
Age Profile of Monthly Pension Benefits (DEC 2000)

2) Females

Source: Ding-Takayama (2003)
Distribution of Monthly Pension Benefits (DEC 2000)

1) Males (Total)

Mean: 475 yuan
Median: 448 yuan
CV: 35.3%

Source: Ding-Takayama (2003)
Distribution of Monthly Pension Benefits (DEC 2000)

2) Females (Total)

Mean: 392 yuan
Median: 410 yuan
CV: 23.5%

Source: Ding-Takayama (2003)
Age Profile of Monthly Wages (DEC 2000)

1) Males

Source: Ding-Takayama (2003)
Age Profile of Monthly Wages (DEC 2000)

2) Females

Source: Ding-Takayama (2003)
Distribution of Monthly Wages (DEC 2000)

1) Males (Total)

Source: Ding-Takayama (2003)
Distribution of Monthly Wages (DEC 2000)

2) Females (Total)

Mean: 500 yuan
Median: 420 yuan
CV: 44.4%

Source: Ding-Takayama (2003)
Distribution of Monthly Pension Benefits (Dec 2000)

1) Males (Age: 60-64)

Source: Ding-Takayama (2003)
Distribution of Monthly Pension Benefits (DEC 2000)

2) Females (Age: 55-59)

- Mean: 396 yuan
- Median: 402 yuan
- CV: 20.1%

Source: Ding-Takayama (2003)
### Distribution of Monthly Wages (DEC 2000)

1) Males (Age: 50-54)

<table>
<thead>
<tr>
<th>Wage Range</th>
<th>Percentage (%)</th>
</tr>
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<tbody>
<tr>
<td>350-359 yuan</td>
<td></td>
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<tr>
<td>360-449 yuan</td>
<td></td>
</tr>
<tr>
<td>450-599 yuan</td>
<td></td>
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<tr>
<td>600-799 yuan</td>
<td></td>
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<tr>
<td>800-1099 yuan</td>
<td></td>
</tr>
<tr>
<td>1100-1499 yuan</td>
<td></td>
</tr>
<tr>
<td>1500+ yuan</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Ding-Takayama (2003)

**Mean:** 620 yuan

**Median:** 455 yuan

**CV:** 55.7%
Distribution of Monthly Wages (DEC 2000)

2) Females (Age: 40-44)

Mean: 501 yuan
Median: 421 yuan
CV: 45.7%

Source: Ding-Takayama (2003)
Replacement Rate (RR) in 2000

Notes: RR=Benefits (age of 60-64)/Wages (age of 50-54) for males
       RR=Benefits (age of 55-59)/Wages (age of 40-44) for females

Source: Ding-Takayama (2003)
Distribution of Household Saving Rate in 1995

Overall Saving Rate = 1.71%

Source: The 1995 FIES
Saving Rate in the PRC Economy

Note: Saving Rate = 1 - (Final Consumption) / GDP

Source: Dr. Ding's own calculation from China Economic Yearbook
Distribution of Monetary Asset Holdings for the Elderly (Age of 55+) in 1995

Source: The 1995 FIES

Mean: 12,842 yuan
Median: 6,000 yuan
CV: 227%
Distribution of Wealth/Income Ratio in 1995

The Overall Ratio = 71.7%

Note: Wealth = Gross Monetary Assets
Source: The 1995 FIES
Summary of Main Findings

1. Economic status of PRC workers and pensioners basically varied by sex.

2. SOE pensioners and SOE workers were overwhelming in 2000. Social security pensions involved income transfers from non-SOE male workers to SOE male pensioners.

3. Early retirement was very often taking place in 2000. More than 50% of male workers retired by age 57 and nearly 40% of female employees stopped working by age 49 in 2000.
4. As for the amount of wages and pension benefits, the mode is usually below the mean or the median. Discussions only based on the mean (the average) would be misleading. Rather, the mode or the median will clarify much more the realities of workers and pensioners. For example, about 30% of workers were earning the minimum monthly wages around 355 yuan in 2000. The mean value of monthly wages was about 580 yuan for males and 500 yuan for females respectively, both standing at about the top 30th percentile of the respective wage distributions.
5. The typical amount of monthly pension benefits was around 450 yuan for males and 410 yuan for females in 2000. For female pensioners, there was another typical amount of a little less than 300 yuan.

6. Income disparity of pension benefits was relatively small in 2000. Wage disparity was a little wider, whereas the gap in wealth holdings was much larger.

7. Pension benefits played quite an important role in securing old age income. The replacement rate of social security pension benefits was considerably high in 2000. It was about 100% or more for the middle- and low-wage earners. This would operate as a great incentive to early retirement for them.
8. The saving rate varied very much from household to household in 1995. Nearly 50% of urban households reported negative saving rates, and consequently the overall saving rate was very low at 1.71%. Those households with saving rates of 20% and over remained minor, consisting of 29% of the entire households.

9. Small savers were quite predominant in PRC and their wealth/income ratio was accordingly very low in 1995. Those households enjoying higher wealth/income ratio at 2.0 and over consisted of only 5.4% of the entire urban households in 1995. The percentage will gradually increase in the future, but will still remain minor.
Hot Pension Debate for the Past 10 Years

New Consensus Reached

- No pension plan is demographically immune. The crucial variable is economic growth.
- The game is a zero net sum, whether it is PAYG or funded.
- Important are incentives and governance, as well.
  - The latest position of the World Bank; changing

Notional DC Plans Implemented in Sweden, Italy, etc.
Shift to NDC Plans

- Any penny counts. incentives increased
- political risks prevented
- the transition cost problem escaped
- evasion deterred
- undesirable redistribution eliminated
  - increased policy options
The Swedish Pension System

![Graph showing the relationship between earnings and benefits in the Swedish pension system. The graph illustrates how earnings-related pensions and guarantees are determined based on earnings levels.](image-url)
No matter how well a pension system may be designed, the system will fail unless participants comply with their contribution obligations. The system has to be incentive-compatible.

The administration should have enough enforcement capabilities.

Lacking are accurate data, record keeping (which is independent of employment) and effective communication with transparency.

Financial literacy is still weak both for the majority of urban workers and for the regulatory body (Gov’t).

Incentives, governance/implementation, and system design, are major challenges for PRC pensions. The current 2nd-tier pension operates as a “PAYG DB” plan, which would be opposite to an originally envisaged “funded DB” plan. The administratively set low rate of return from investment to the 2nd-tier incurs a “hidden” tax. Lacking is accumulation of microdata analyses. The prospects of PRC pensions in the future will not be gloomy if parts of the dividend of economic growth are properly transferred to the elderly population through the pension scheme.
Annual Average Growth Rate in Urban PRC

Source: SSB, cited from Zhao-Xu (2002)