Pension reform in France: towards a new European model?

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Introduction

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- **Pension in France : impossible reform ?**
  - Very large part of public spending
  - Rapid ageing of the French population
  - Very unpopular reforms
    e.g., PM Alain Juppé failed 1995 reform
- **However many reforms have taken place**
  - Reforms in 1993, 2003, 2010, 2014
  - With complex and technical changes, mid-term sustainability has been almost achieved
- **President Macron's new reform : an overhaul**
  - Structural reform of the system
  - To restaure trust and transparence in the system

Outline of the talk

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I. The French pension system in perspective
II. The Macron reform plan : the NDC model
III. A new European model ?

I. The French pension system

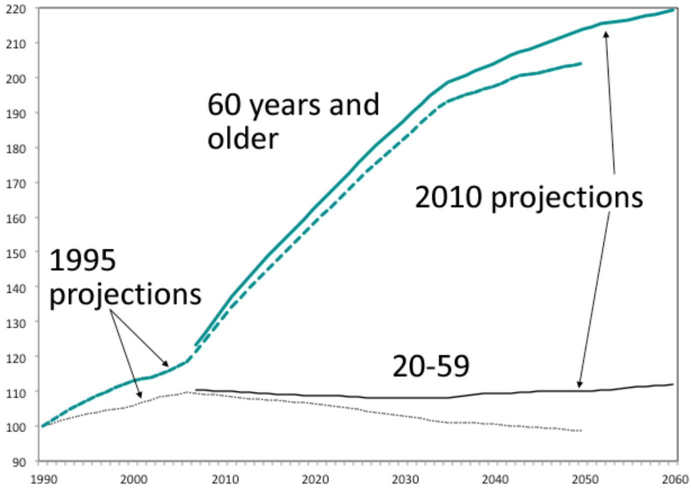
1. Ageing in France
2. Overview of the French pension system
3. Past pension reforms
4. Overview of main policy issues

Ageing in France

- **Two demographic shocks**
  1. Baby-boom cohorts (1945-1960) have started retiring
  2. Continued increase in life-expectancy at older ages
- **France is ageing by the top**
  - Debate about the source of ageing
    - By the top (lower mortality)
    - By the bottom (lower fertility)
  - France is ageing fast, mostly by the top
    - Baby-boom effects + life expectancy until 2030
    - Life expectancy only after 2030

Ageing in France

FIGURE 1: Ageing by the top in France

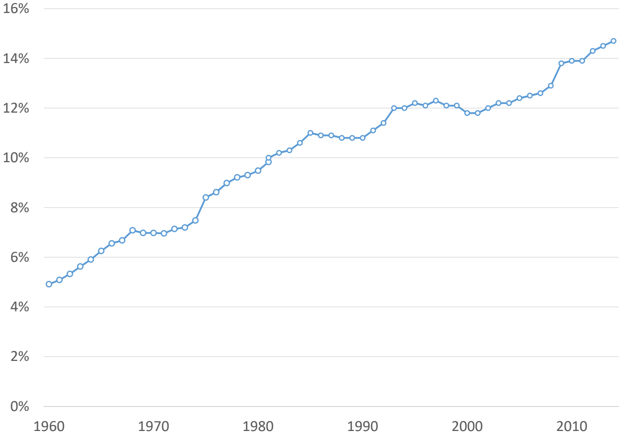


Source : Blanchet and Le Gallo, 2013.

The French pension system

- **Social insurance design : Bismarck**
  - Contributory system funded by SSCs
  - Mostly unfunded system
- **Non-contributory elements : Beveridge**
  - Minimum pension and family benefits
  - Funded by general taxation, though *Fonds de Solidarité Vieillesse*
- **High level of spending and contributions**
  - Spending : 14.7% GDP
  - Pension SSCs : $\simeq$ 26% gross earnings

FIGURE 2: Public pension spending in France (% of GDP)



Source : Drees, *Les comptes de la protection sociale en France et en Europe en 2014* (2016) ; 2013 edition for data before 1981.

The French pension system

- **Complex institutional architecture**
  - 35 mandatory pension schemes
- **French Social Security (1945)**
  - Programme of the *conseil national de la résistance*
  - Social Security : health care, family, maternity, old-age
  - Self-employed and public sector refused to join
- **Sector differences**
  - Private sector : SS scheme + complementary schemes
  - Public sector : civil servants, armed forces, utilities outside main SS scheme
  - Self-employed : many small schemes, lower contributions, lower pensions

The French pension system

Private sector : basic scheme

- **Basic scheme, "régime général" (CNAV)**
  - Contributory scheme, funded by employer and employee contributions
  - Pay-as-you-go system
  - Earnings related system under threshold
  - Social Security Threshold (SST) relatively low in France (mean earnings, or P70)
- **Complex pension formula**
  - Pension = 50% of average of last 25 years
  - Minimum age = 62
  - Normal retirement age = 67
  - Years of contribution for full rate = 41 years (increasing to 43)

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Private sector : complementary scheme

- **Complementary schemes**
  - Complementary pension scheme for executive (Agirc, 1947) and non-executive (Arrco, 1961)
  - Mandatory from 1972 onwards
  - Coverage between SST and 8SST (P99.5)
- **Point-based pension design**
  - Points (PTS) : $PTS = \frac{\tau \times w}{PP}$
  - Pension : $P = (\sum_i PTS_i) \times VP$
  - PP : purchasing price of the point
  - VP : value of the point

$$P_t = (\sum_i \frac{\tau_i \times w_i}{PP}_i) \times VP_t$$

The French pension system

Non-contributory benefits

- **Family-related benefits**
  - Three children or more : 10% additional pension
  - Women : 2 years of contribution per kid
  - Mothers who have stopped work can be credited some contributions
- **Minimum pension**
  - Minimum income above 65
  - Means-tested benefit to complement owns resources
- **Other non-contributory benefits**
  - Incapacity pensions
  - Unemployment spells taken into account

Past pension reforms

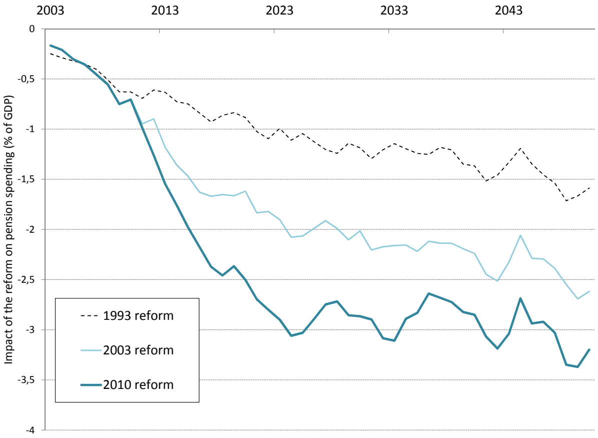
- **1993 reform**
  - Increase in contribution length to 40 years
  - Reference wage W_{ref} = best 25 years of earnings
  - Indexation on inflation of past earnings and pensions
- **2003 reform**
  - Increase in contribution length to 41 years
  - Decrease of pension penalty from 10% to 5%
  - Increase of pension bonus from 0 to 3%
  - Principle of indexing contribution length on life expectancy
- **2010 reform**
  - Increase of minimum age to 62 (57 for some public sector workers)
  - Increase of age with full pension to 67
- **2014 reform**
  - Increase in contribution length to 43 years

Past pension reforms

- **Impact on sustainability**
  - Large impact of pension reforms
  - Projected balance in 2030 under assumption of 1.5% growth
  - Uncertainty due to growth assumption
- **Impact on labour market**
  - Increase in older workers employment rate
  - Marked increase in the 55-59 group
  - Continued increase even post-crisis

Past pension reforms

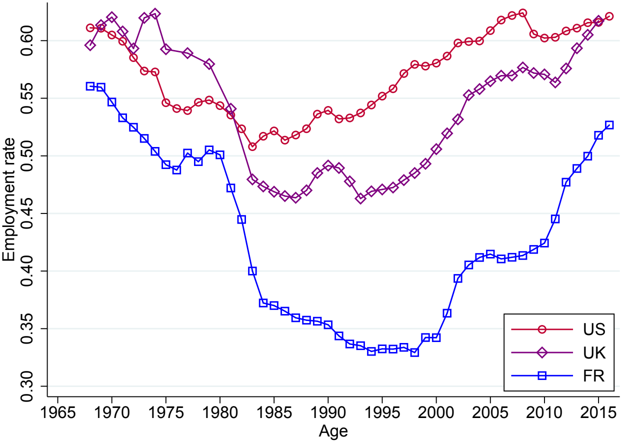
FIGURE 3: Impact of the French pension reforms on pension spending



Source : Blanchet and Le Minez (2012), Blanchet (2013).

Past pension reforms

FIGURE 4: Employment rate of 55-64 years old in France

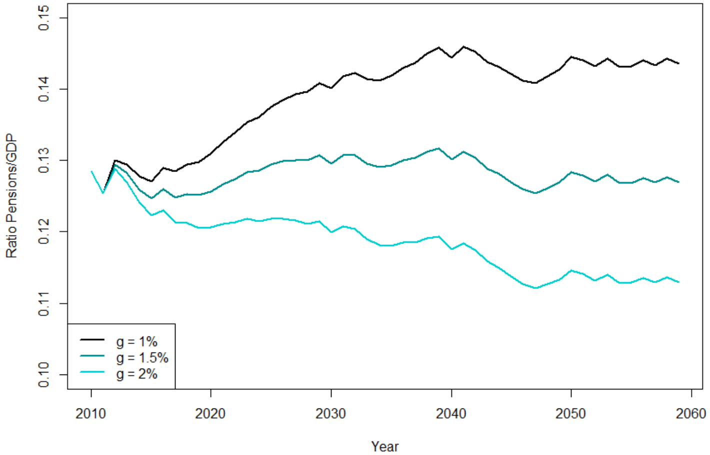


Source : CPS, LFS, enquête Emploi. Updated from Blundell, Bozio and Laroque (2011).

Policy issues : dependance to growth

- **Price indexation reduce pension liabilities**
  - Big impact of price indexation on reducing pension benefits
  - Biggest reform in terms of financial balance
- **Pension balance dependent on growth**
  - Need at least 1.5% growth to balance French pension system by 2030
  - Large variations in financial balance for small changes in expected growth
  - Create unneeded financial risk
- **Other impact**
  - Create uncertainty on expected replacement rate
  - Affects less individuals with steep earnings profile

FIGURE 5: Pension spending as a share of GDP depending on rate of growth



SOURCE : PENSIPP 0.0.

Policy issues

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1. **Uncertain long-term sustainability**
   - Dependance to growth, indexation mechanisms
2. **Lack of transparency/trust**
   - Complexity of the system
   - Lack of transparency of contributions/benefits
   - Lack of trust in the system by younger workers
3. **Inequalities within mandated system**
   - Inequality of non-contributory benefits
   - Inequality of pension benefits between occupations (i.e., public vs private sectors)
   - Inequalities due to indexation rules

II. The Macron reform proposal

1. The proposal
2. Notional defined contribution (NDC)
3. Simulations
4. Implementation issues

The reform proposal

"Our project is not to change this or that parameter of our pension system.

It is to restore trust, (...)

It is to clarify rules once for all, by installing a universal system, fair, transparent and sustainable (...)

We will create a universal pension system where one euro contributed offers the same pension rights, whatever the period it was contributed, whatever the occupation or status of the person who contributed."

Emmanuel Macron, *En Marche* platform

The reform proposal

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- **The outline of the reform**
  - Unification of pension formula around NDC
  - Keeping current pension schemes
  - Unification of non-contributory benefits
  - Automatic balancing with increased life-expectancy
- **High commissioner for pension reform**
  - Jean-Paul Delevoye in charge of the reform
  - With a team of special advisers
  - Timing of the reform scheduled for 2019

The reform proposal : debate

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- **Bozio and Piketty (2008)**
  - Unification of pension schemes
  - Progressive switch to NDC system
- **Vigorous debate in 2008-2010**
  - Sterdyniak (2008) : NDC breaks the labour contract which includes pay and pension
  - Bichot (2008) : Ideal system is point-based system
  - Official report by Pensions Advisory Council (2010)
- **Cautious view from the administration**
  - Dominant idea that financial sustainability is more important than clear and transparent system
  - Fear of difficulties in implementation
  - Fear of opposition from trade-unions

The reform proposal : politics

- **Across party divide**
  - Mrs Royal (Left) in favour in 2007
  - Mrs Kosciusko-morizet (Right) in favour
  - Mr Bayrou (center) in favour
  - Reformist trade-union CFDT in favour
- **President Macron's themes**
  - Favoring labour market mobility
  - Moving away from occupational schemes
  - Restoring trust in pension system
  - Restoring trust in the EU about French long-term public finances

Notional defined contributions (NDC)

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- **Definition**
  - Notional defined contributions (NDC)
  - Unfunded pension system (hence *notional*)
  - Defined contribution : benefits depend on past contributions
  - Insurance : benefit is a life annuity
- **NDC vs FDC**
  - Financial defined contribution : funded pensions
  - Both have individual accounts
- **Rate of return**
  - FDC : market returns r
  - NDC : internal rate of return g

Notional defined contributions (NDC)

Origins

- **Samuelson (1958)**
  - Internal rate of return of unfunded pension schemes is growth rate of the economy (g)
  - Unfunded pension can be written as defined contribution : $P = CONT(1+g)$
- **French and German point systems**
  - Each euro of contribution leads to points
  - Total points are converted into life annuity at retirement
- **Swedish reform (1990s)**
  - 1992 Parliamentary working group on pensions published sketch of reform
  - 1994 vote in Swedish Parliament
  - Swedish NDC reform has raised large interest in Sweden and abroad in the NDC model

Notional defined contributions (NDC)

How does it work ?

- **Individual account**
  - Each individual i has an individual account
  - Record of all contributions paid
  - Record accumulated pension rights or pension wealth
- **Conversion principle**
  - Between pension wealth and annuity benefit
- **Lifetime approach**
  - Account exists until death
  - Possible to work and pay contribution after a full pension has been claimed
  - Annuity can be converted back into an account value

Notional defined contributions (NDC)

How does it work ?

- **Accumulation of pension wealth (W)**
  - Contribution rate c_t in period t
  - Earnings $w_{i,t}$ in period t
  - Rate of return index I_t

$$W_{i,T} = \sum_{t=1}^{T} c_t w_{i,t} I_t$$

$$I_t = \prod_{t+1}^{T-1} (1 + \alpha_t)$$

  - With α_t the internal rate of return

Notional defined contributions (NDC)

How does it work ?

- **Pension benefit : annuitization**
  - At retirement R, pension wealth accumulated is converted into pension annuity P, by applying an annuity factor $G_{R,\kappa}$, which depends on year of birth κ and age at retirement a_R :

$$P = \frac{W_{i,R}}{G_{a_R,\kappa}}$$

  - Annuity factor depends on life expectancy of the cohort LE_{κ,a_R} at age of retirement

$$G_{a_R,\kappa} = G[LE_{\kappa,a_R}]$$

  - Pension is indexed on the internal rate of return α

Notional defined contributions (NDC)

How does it work ?

- **Redistribution separately funded**
  - No redistribution imbedded in the NDC formula
  - Second pillar of non-contributory rights
  - Funded through general taxation, i.e. taxes that do not lead to additional rights
- **Non-contributory rights**
  - Minimum pension
  - Free contributions for caring of children, unemployment period, etc.
  - Only constraint is explicit redistribution

Notional defined contributions (NDC)

How does it work ?

- **Financial balance**
  - If the system offers a rate of return on contribution equal to α, then the system is financially balanced *over the course of a generation*
  - No guarantee that the balance will be reached every year (different cohort size, wage growth, etc.)
- **Reserve fund**
  - Need of a reserved fund, attached to NDC to accumulated reserves and fund temporary deficits

Notional defined contributions (NDC)

How does it work ?

- **Automatic balancing**
  - Change in life-expectancy incorporated in benefit formula e.g. increase in life-expectancy leads to reduction in annuity benefit for given retirement age, and given pension wealth
  - Change in growth rate of earnings lead to changes in benefit level
- **Valdes-Prieto (2000)**
  - Suggests importance of short-run financial balance
  - Shows lack of financial balance in the short-run in NDC systems

Simulations

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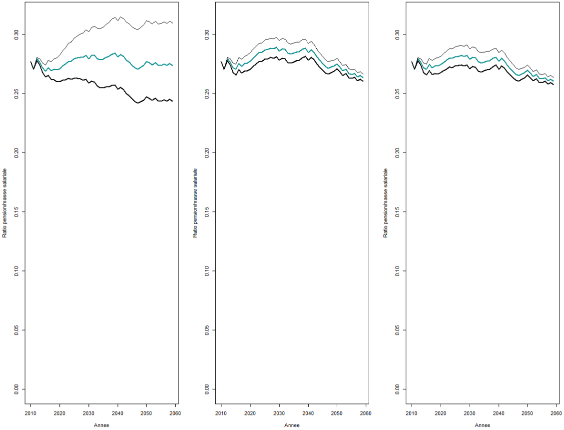
- **Blanchet, Bozio and Rabaté (2016)**
  - Simulation of structural reform : NDC, points-based or other reforms
  - Focus on long-term sustainability
- **Using microsimulation techniques**
  - Development of PENSIPP model : IPP dynamic microsimulation model
  - Model French population until 2060
- **Results**
  - NDC automatically corrects for growth dependance
  - Point-based system can achieve similar results, but with strict rules on value of points

Simulations

FIGURE 6: Pension spending as a share of GDP



SOURCE : PENSIPP 0.0.

Implementations issues

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- **Transition**
  - Current retirees not affected
  - Workers close to retirement not affected (less than 5 years)
  - Quick transition for pension formula (i.e., same formula for all pension schemes)
  - No fusion of pension schemes in short-term
- **Crediting past pension rights**
  - Computing acquired right for each worker
  - Computing effective pension contributions in each scheme
- **Computing new non-contributory benefits**
  - Kids-related pension benefits
  - Credits for maternity, sick leave or unemployment period

Implementations issues

- **Public sector issues**
  - Bonuses today to not lead to pension contributions nor pension benefits
  - Some public sector workers have earlier retirement age (i.e., policemen can retire at age 52)
  - Military personnel have very specific pension rules (early retirement, etc.)
- **Options for implementation**
  - Convert current benefits into higher pension contributions
    $\Rightarrow$ no impact in the short term
    $\Rightarrow$ but sustainability in the long term
  - Options to reduce progressively pension contributions in exchange for higher pay

1. Debate about NDC
2. Swedish experience
3. Italian experience
4. Towards a European model ?

Debate about NDC

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- **Different views about NDC**
  1. Advocates of NDC
  2. Criticism : still unfunded
  3. Criticism : similar to trad. PAYG
  4. Criticism : lack of redistribution
- **Pension reform strategy**
  - A transparent reform process
  - Or a diversion from real issues ?
- **NDC adoption**
  - Sweden, Italy, Latvia, Poland, Norway, Kyrgiz Rep., Egypt
  - Under consideration in China, Spain, Austria

Debate about NDC

- **Advocates of NDC**
  - Swedish academics and policymakers
  - Various economists : E. Palmer, R. Holzmann
- **Arguments**
  - A transparent reform process
  - Financial balance over the long run
  - Pedagogy of reforms : increase in life expectancy
  - Recovering trust in PAYG systems : pension contributions do provide positive rate of return
  - Expected impact on labour supply : clearer tax-benefit link
  - Explicit redistribution mechanisms
  - Automatic balancing mechanisms, isolation from political meddling

Debate about NDC

- **Criticism : still unfunded**
  - Valdes-Prieto (2001), Disney (1999), Borsch-Supan (2005)
- **Arguments**
  - NDC are still unfunded systems
  - Implicit tax with lower rate of return
  - NDC do not address properly labour supply distortion due to lower rate of return
  - If optimal system is funded individual accounts, NDC is a distraction from real reform
  - NDC do not achieve short-term financial balance, which opens the door to political meddling, hence NDC do not bring much to pension reform strategy

Debate about NDC

- **Criticism : close to trad. PAYG**
  - Barr and Diamond (2008), Diamond (2005)
- **Arguments**
  - NDC are economically similar to trad. PAYG systems
  - Well designed PAYG systems are like NDC :
    - Average lifetime earnings, indexed by wage growth
    - Annuity rate change slowly with cohort life-expectancy
  - Most of what NDC claims can be done with trad. PAYG systems

Debate about NDC

- **Criticism : lack of redistribution**
  - Barr (2005), and others.
- **Arguments**
  - Pure NDC do not have redistribution or poverty relief imbedded
  - Objectives of pension design includes redistribution and poverty relief
  - NDC are designed to enforce higher actuarial fairness
  - This is at the expense of redistribution
  - Optimal pension system should redistribute across the life cycle and NDC reduce ability to redistribute

Swedish experience

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- **Two reforms in one**
  1. Unfunded pensions NDC
  2. Mandatory funded defined contribution FDC
- **NDC component**
  - Rate of contribution set at 16%
  - Rate of return set as per capita wage growth
  - Early retirement age set as 61
- **FDC component**
  - Rate of contribution set at 2% (later 2.5%)
  - Individuals asked to choose investment fund (up to 700 different funds)
- **Transition process**
  - 16 years of transition 1999-2015
  - Idea to smooth transition

Swedish experience

- **Orange envelops**

- **Information needs**
  - Each individual receives annually annual account statement in "orange envelops"
  - Personal information on expected benefits
  - Brochure explaining the system

Italian experience

- **1995 reform**
  - Quick reform process (2 months)
  - Introduction of NDC in Italy
- **Specific elements**
  - Long transition : new entrants only
  - Higher benefit than contribution rate
  - Annuity factor not indexed on life expectancy
  - Lack of information about the system
  - NDC not properly understood by policymakers at the time of reform
- **Very unsatisfactory post-reform**
  - Lack of sustainability
  - Lack of support or understanding of NDC

Italian experience

- **Fornero reform 2011**
  - Monti government facing financial crisis
  - Elsa Fornero, Minister of Labor
  - Increase in retirement age of current pension system (from 62 for women to 66 by 2018)
  - Change in rules for proper indexing of NDC benefit
  - Change in rate of return used towards GDP growth
- **Post-reform**
  - Unpopular reform
  - But saved Italy from IMF supervision
  - Very large impact on long-term public finance

A new European model ?

- **A new dominant model ?**
  - Sweden, Italy, Poland with NDC
  - Reforms prepared in France, Belgium
  - Germany has close to NDC with point system
- **European welfare system**
  - High level of spending
  - But high level of social insurance
  - NDC makes salient contributory linkage
- **EU mobility**
  - NDC offers easy conversion of pension rights across EU countries
  - Favours mobility across countries

Conclusion

- **NDC as reform option**
  - NDC is an unfunded pension system with most desirable features of any unfunded pension system
  - No characteristics is linked to proper framing of NDC
  - NDC framing do bring transparency in the working of unfunded pension schemes
  - NDC needs to be supplemented with non-contributory benefits (like trad. unfunded systems)
- **NDC option in France**
  - Harder reform with complexity of schemes
  - Higher gains from reform in simplifying the system

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