The impact of demography on financing social expenditure

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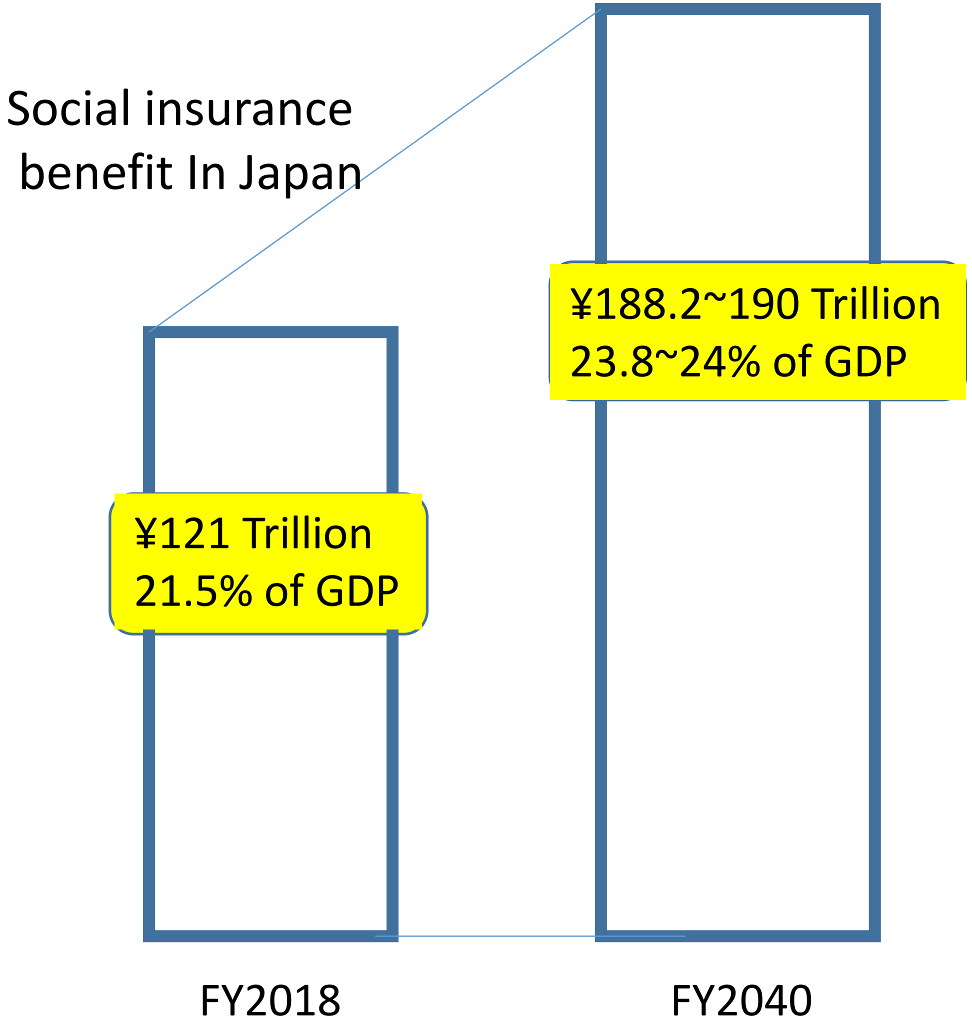
Increase in the social insurance expenditure

- Japan is aging!
- Aging will increase fiscal burden on the government as it needs to spend more on (a) public pension, (b) health care and (c) long term (nursing) care.

⇒ Increasing social security expenditure must be financed by (i) tax and/or (ii) social security contribution, which in turn raises the burden on people, especially the young.

□How to finance social expenditure and how to contain it?



Social Insurance in Japan

- Social security in Japan includes
  - public pension
  - health care
  - nursing (long term) care

  ⇒Universal coverage (in principle)=everyone has public insurance.

- Pension benefits and nursing care services are provided for more than 65 years old.

- Public pension and health insurance systems are different between (a) the employed and (b) the self-employed/ unemployed. ⇒ Dual systems

- The scheme de facto follows pay as you go transferring the contribution by the working aged to the benefit to the old.

⇒ The sustainability of the social insurance system

Pay as you go scheme and aging

- Pay as you go system (pension, health care) is susceptible to demographic structure.

□As society aging and wage growth declining, either burden of insurance premium on workers increases or pension benefit to the aged declines.

Pension benefit

Wage

$$N_t^{old} B_t = N_t^{young} \tau_t W_t$$

Year

Insurance premium rate

Need to be adjsuted

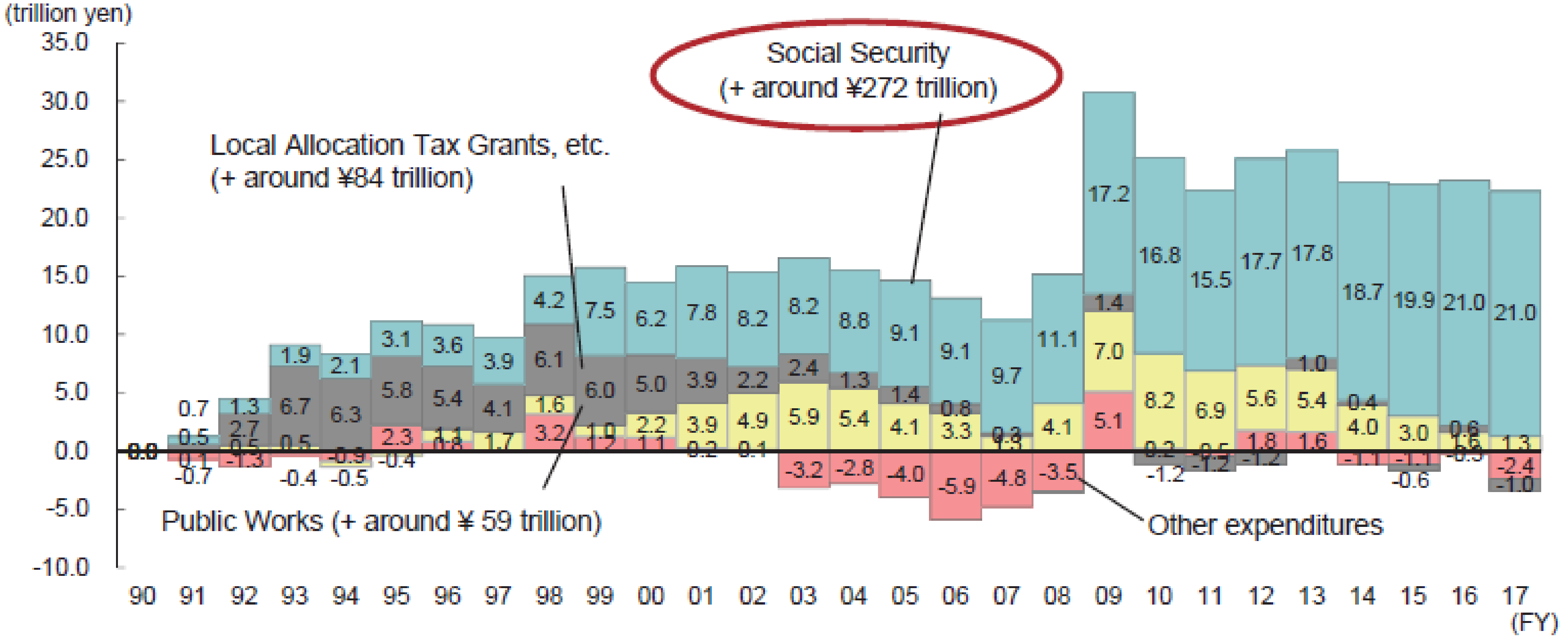
$$\boxed{\frac{N_t^{old}}{N_t^{young}}} B_t = \tau_t \boxed{W_t}$$

Society aging

Growth declining

Increase in Government Bonds Outstanding from FY1990 to FY2017: around 692 trillion yen

Contribution of expenditure: around 399 trillion yen



MOF2017

Financing social expenditure

- Social expenditure is financed by both tax and social security contribution

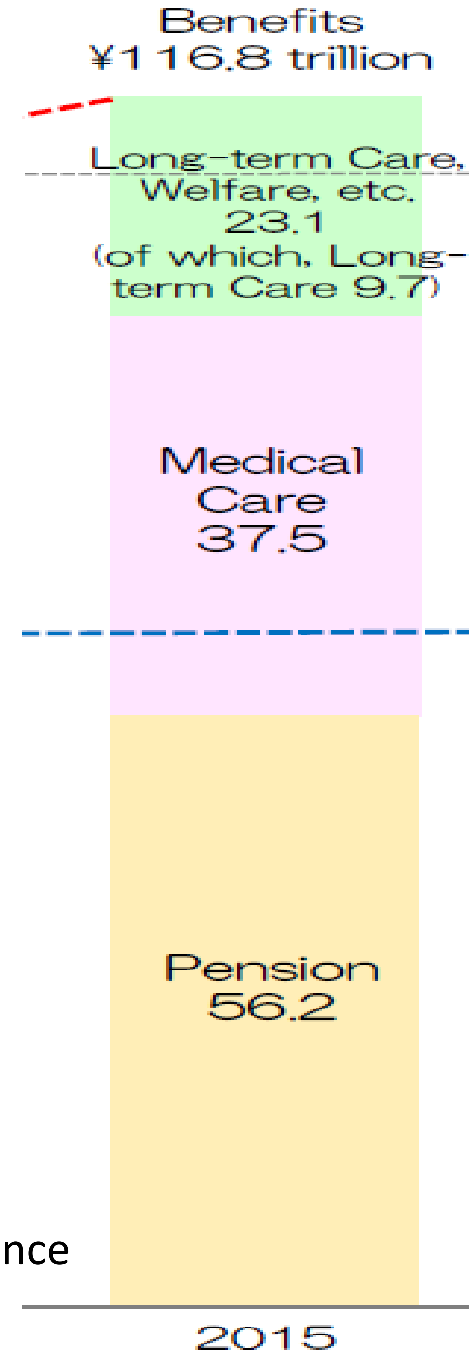
✓Consumption tax is earmarked for social expenditure.

✓social security contribution becomes redistributive following pay as you go involving inter-generational redistribution

⇒De fact tax on wage

- Increasing social expenditure should be filled by tax or social security contribution??

⇒Which one is more equitable and growth friendly?



Japanese Public Finance Fact Sheet 2016

Economic Consequences of SSC

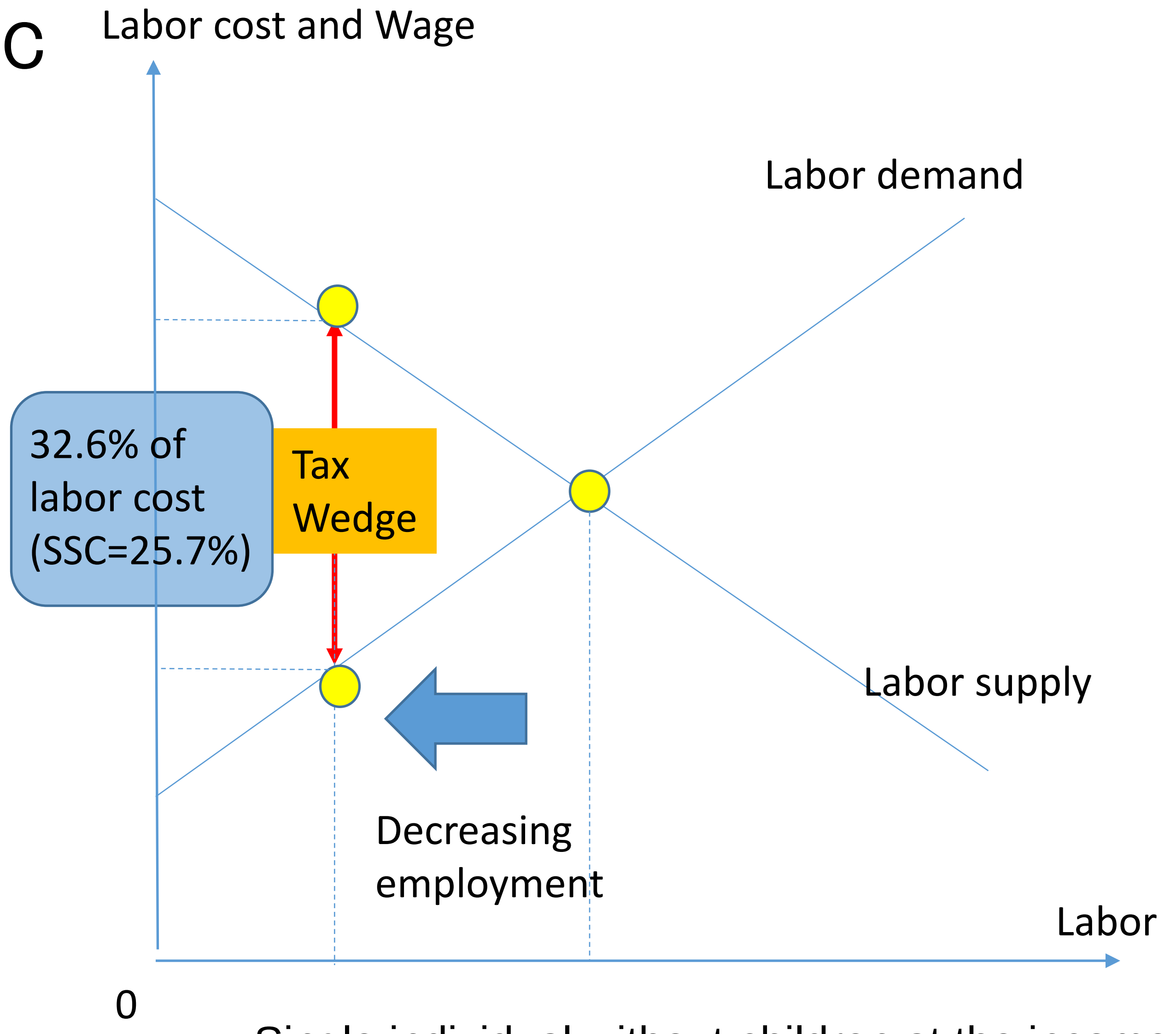
- Social security (insurance) premium leads to the same incentive effect as tax if it is not clearly linked to social insurance benefit.

□ Worker side= Working incentive is discouraged

□ Business side= Employment decreases as labor cost increases

✓Employers = business must bear social security contribution to hire regular workers whereas no employer based social security contribution is levied on non-regular workers.

⇒Incentive for employer to substitute regular workers by non-regular ones



Source of Data: OECD Taxing wage (2017)

Single individual without children at the income level of the average worker in Japan(2017)

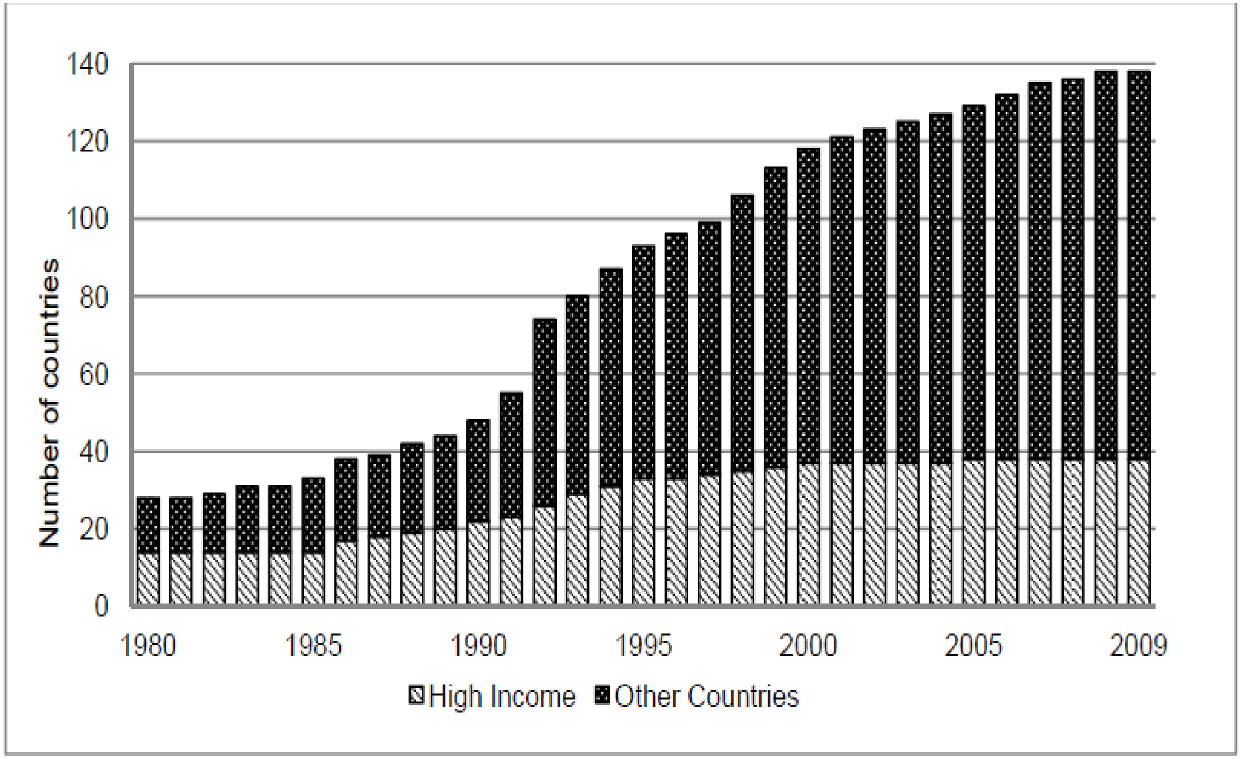
Increasing dominance of VAT

- In the last decades, (i) VAT has been widely spreading in both developed and developing countries, (ii) its share in GDP increasing relative to CIT and SSC

- There has been shift in tax mix toward consumption tax away from income taxation including SSC(Social security contribution)

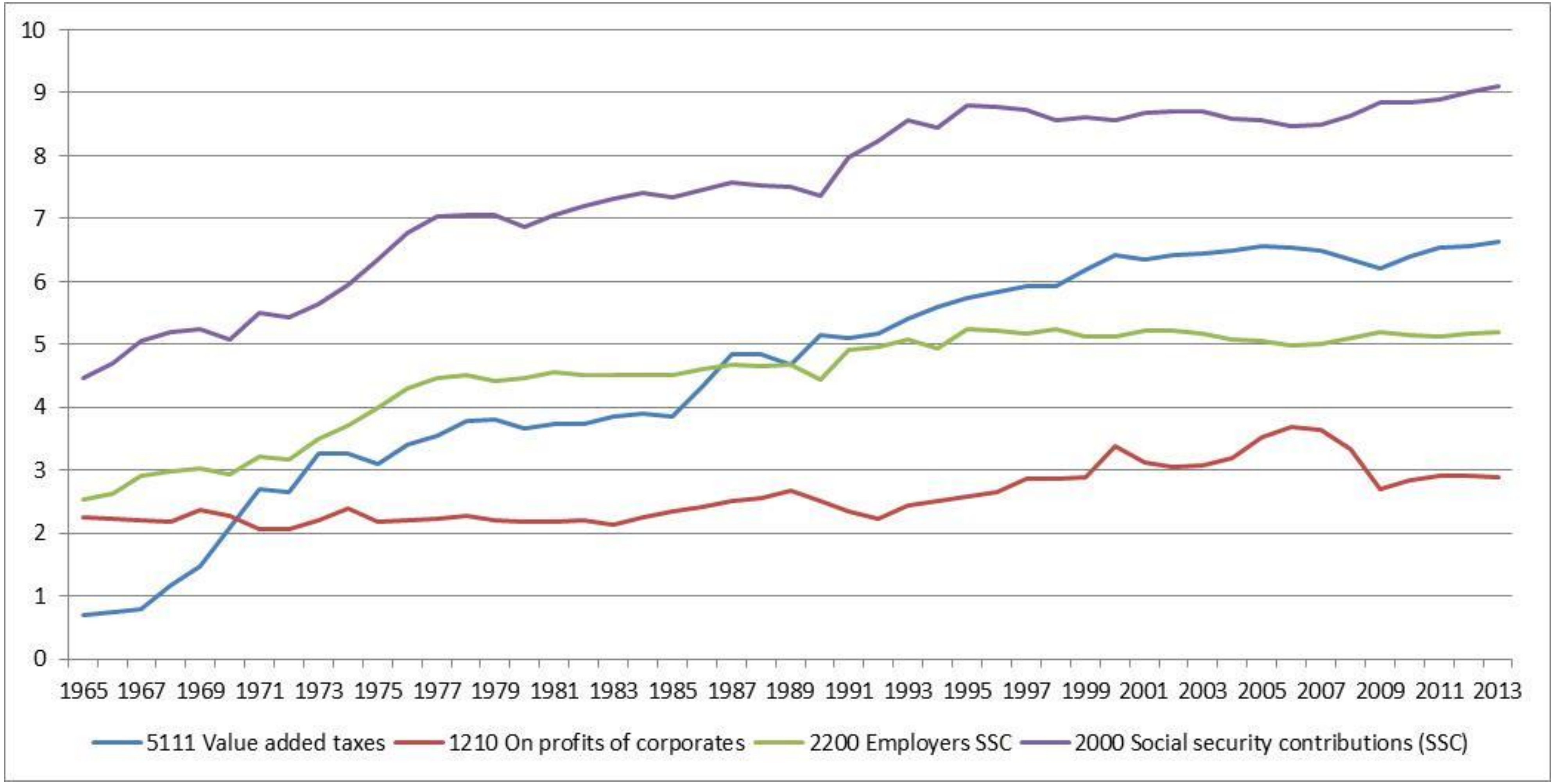
⇒VAT fits better to newly emerging economic environment namely economic globalization and ageing

The Spread of the VAT, 1980–2009



Source: IMF data.
Note: Figure shows the number of countries with a VAT at each date.

% of GDP (OECD Unweighted Average)



Source: OECD Revenue Statistics

What is good about VAT?

- VAT burden accrues to the final consumption.

➢ It does not accumulated at the production stages that assures the production efficiency.

➢ It does not undermine “international competitiveness”.

- In contrast, CIT as well as SSC (Social Security Contribution) distorts both (i) production efficiency and (ii) international competitiveness.

✓ VAT levied on every stage of transaction works to secure tax revenue as well

Key feature	Economic consequence
Tax refund/credit mechanism	Production efficiency ⇒Growth friendly
Destination principle	International competitiveness ⇒ Fiscal devaluation

Growth friendly feature

- VAT does not distort production process given that its burden is not accumulated doe to tax refund/credit mechanism

- It then turns out that VAT is growth friendly relative to other taxes including CIT and SSC.

✓Tax burden undermine growth but VAT is less harmful

- There has been empirical evidence that shifting toward VAT away from income taxation under tax revenue neutrality is growth promoting

Effect on growth		Revenue neutral tax reduction			
		PIT/SSC	CIT	VAT	Property tax
0.1% increase in tax revenue share	PIT/SSC		+0.101%	-0.096%	-0.135%
	CIT	-0.118%		-0.204%	-0.240%
	VAT	+0.092%	+0.216%		-0.012%
	Property tax	+0.155%	+0.271%	+0.071%	

Source: Arnold (2008) DO TAX STRUCTURES AFFECT AGGREGATE ECONOMIC GROWTH? EMPIRICAL EVIDENCE FROM A PANEL OF OECD COUNTRIES, ECONOMICS DEPARTMENT WORKING PAPERS, OECD
Data: OECD countries

Theory and Practice:
VAT and Intergenerational equity

- In theory, VAT is equivalent to tax on lifetime income.

□ Lifetime consumption = Life time income

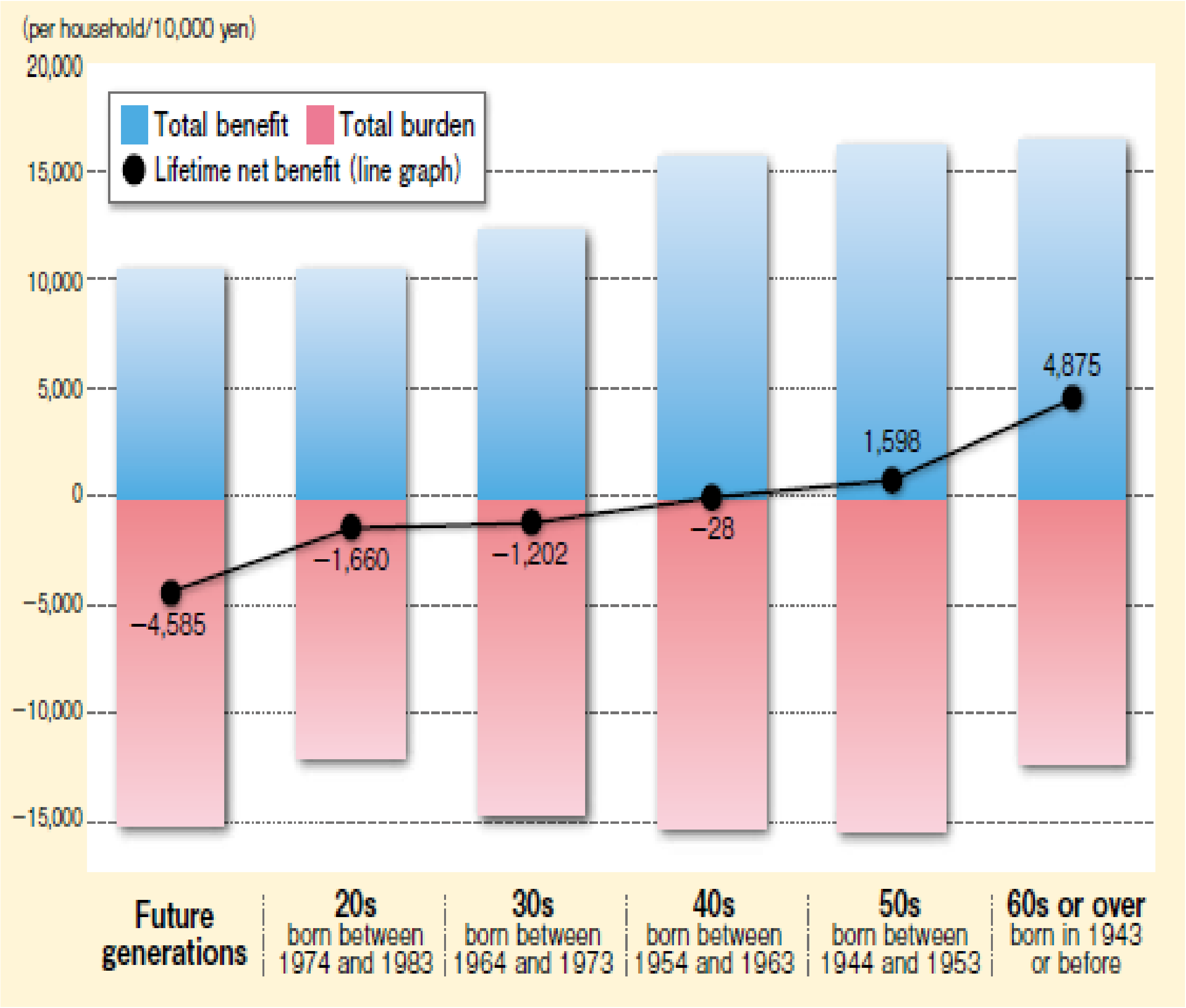
- For the elderly, VAT serves to tax on their savings/assets which they withdraw to consume

□ Old time consumption = Pension + savings assets (inclusive of interests)

- Compared to SSC that is mostly born by the working age populations, VAT financed social expenditure works to improve inter-generational equity.

✓ VAT as tax on the old generations!

■ Lifetime benefits and burdens, by generation



(Source) Cabinet Office, "Annual Report on the Japanese Economy and Public Finance FY2005"
(Note) The data in the above graph are based on a test calculation made by generational accounting, which measures the relation between the total lifetime benefits from the government sector (e.g. social security benefits and public services) and the total lifetime burdens of payments to the government sector (e.g. tax and social security premiums) for each generation.

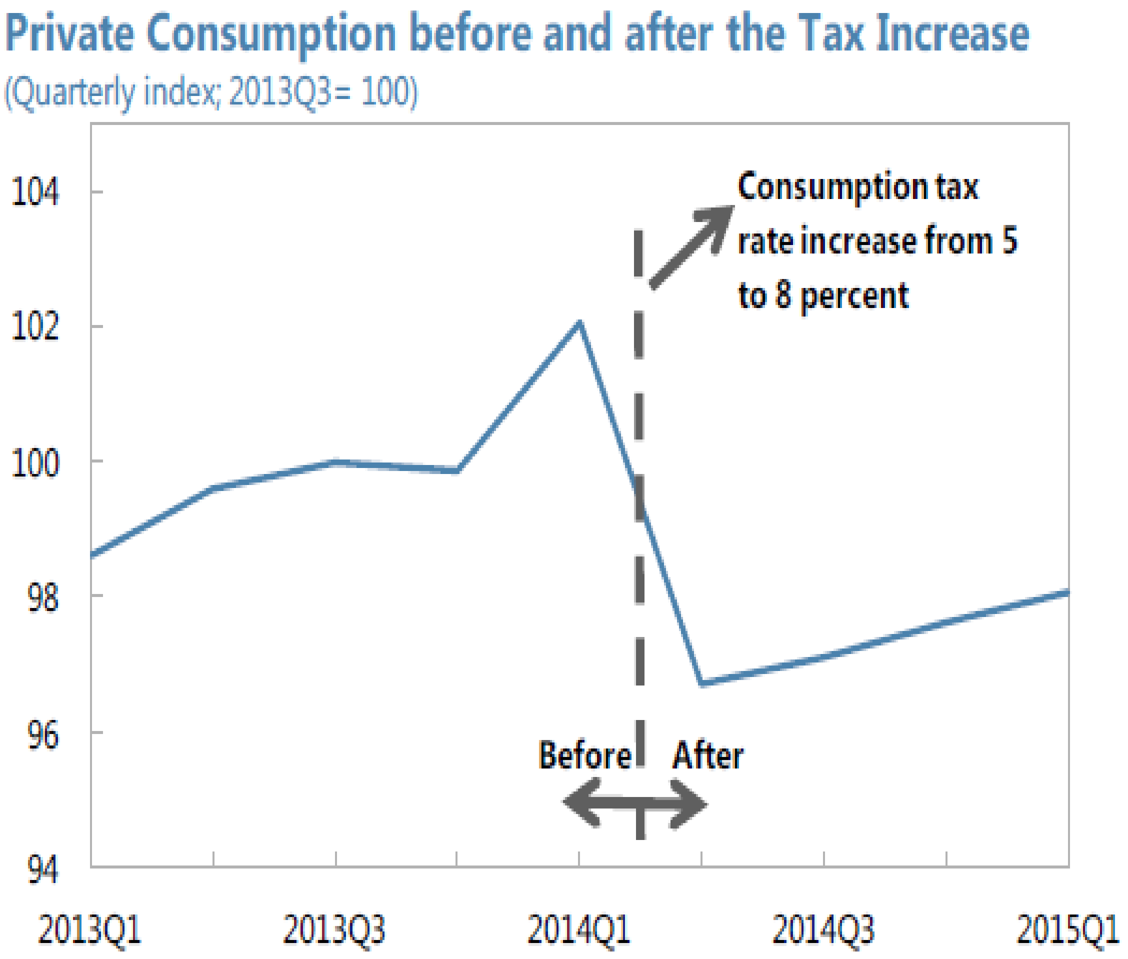
Theory and Practice: Consumption tax shock in Japan!

- In Japan, consumption substantially declines at the time of raising its VAT rate from 5% to 8% on April 2014

□Intertemporal substation effect of consumption was substantial with consumption increasing just before the VAT rate hike and diminishing afterward

⇒Macro economy was temporarily disturbed

✓Growth rate recorded minus in the two consecutive quarters in 2014



Source :IMF Article IV Consultation 2015

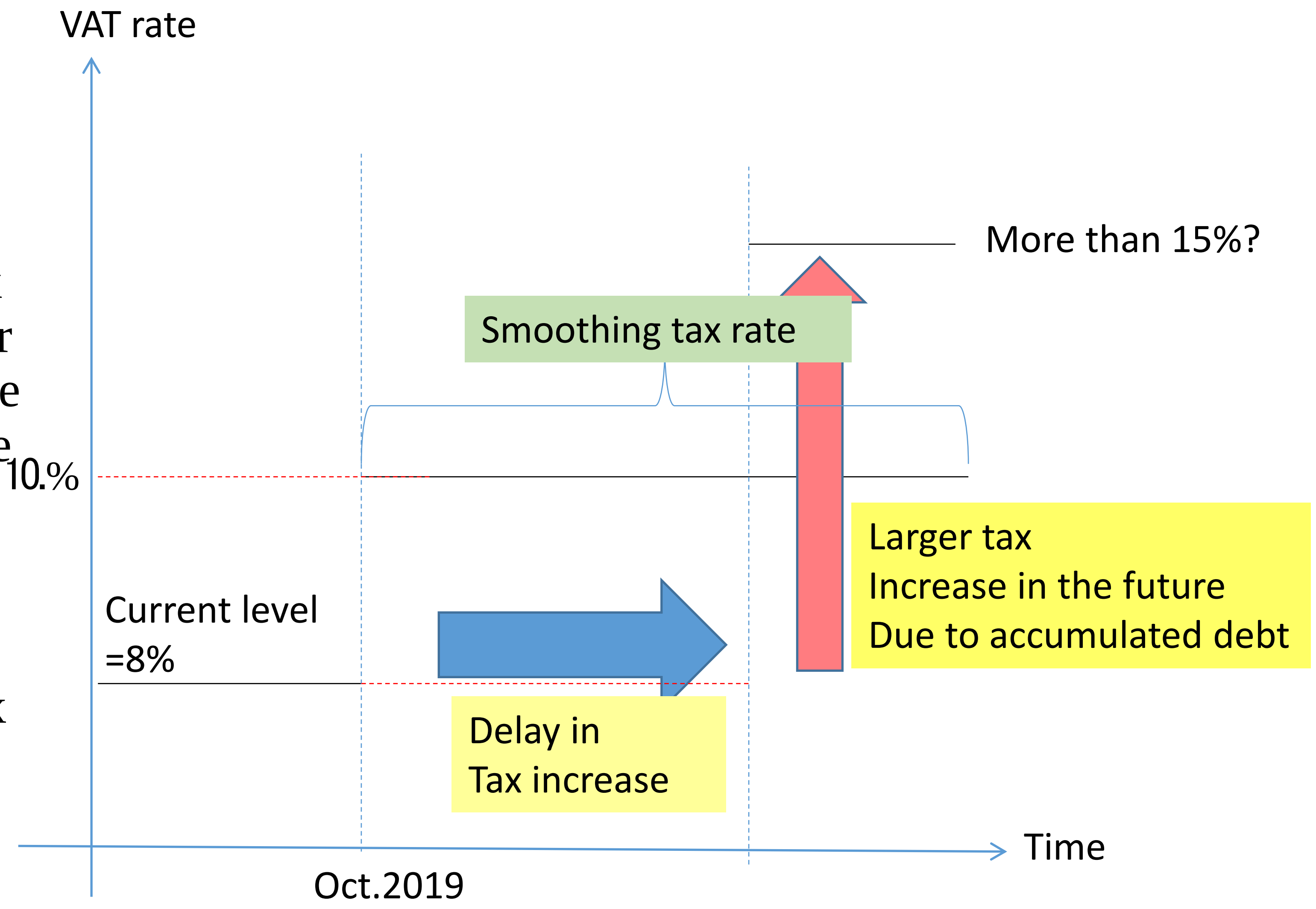
Tax smoothing

- We should not increase consumption tax rate?
- Given that social expenditure is increasing, delaying tax increase requires further tax increase in the future

⇒Future economy will be undermined

✓Tax smoothing

・Compared to other taxes like CIT, consumption tax (VAT) is growth friendly in the mid and long term.



Options for Fiscal Policy Adjustment by 2030 (in percentage point of GDP) 1/

Adjustment needs by 2030	**7**
Improve structural primary balance by 0.5 percent of GDP to stabilize debt	5
Increase in health and long-term care spending	2
Options for adjustment	
Increase consumption tax rate from 8 to 15 percent	**3.5**
Health and long-term care reform (potential gains by 2030)	**Up to 2**
Curb growth rate of health spending	
Increase the share of out-of-pocket spending	
Other potential options	**Up to 2.5**
Personal income tax reform	
i) Broaden personal income tax base	0.5 - 1
ii) Eliminate preferential tax treatment for pension benefit income	0.25
iii) Targeted tax credits 2/	–
Increase property tax	+
Raise pension eligiblity age to 67 or higher	0.25
Containing non-social security expenditure in percent of GDP	Up to 1

Challenge on VAT

- Newly emerging economic and social environments = ageing and globalization

+ Digitalization

- Digitalization poses challenge on VAT administration and policy
- Challenge = Digitalization may make it more difficult for tax authority to identify/trace consumption in own jurisdiction

✓Rapidly growing sharing economy (ex. ride sharing) with digitalization (development of IT) may turn to be informal/ underground economy in 21 century that is hard to tax.