

Why are Governments needed?

15.014

Market Failures

	Income Distribution	Education	Health	Social Security	Environ.	Defense	Technology
Failure of competition		X	X				X
Public Choice		X	X				
Public Goods		X	X	X		X	
Externalities	X	X	X		X	X	X
Incomplete Markets				X	X		X
Information Failures			X				
Macroeconomic Disequilibrium							
Unacceptable Allocation	X	X	X	X			

Social Security for the first time

- In a speech to mark the independence of Venezuela, Simón Bolívar (1819) pronounced that:

El sistema de gobierno más perfecto es aquel que produce mayor suma de felicidad posible, mayor suma de seguridad social y mayor suma de estabilidad política.

The most perfect system of government is that which produces the greatest amount of happiness, the greatest amount of social security and greatest amount of political stability.

Article 22: Universal Declaration of Human Rights

Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Social Security

- Social Insurance
 - Pensions
 - Disability
 - Unemployment
 - Health
 - Safety (work)
- Basic Security
 - Minimum standards of living
 - Food, clothing, housing, education, money, and medical care.

Objectives of a Pension System

- The primary objective: income security for all elderly people
- Four elements
 - Consumption smoothing
 - Insurance
 - Poverty relief
 - Redistribution

Pension System

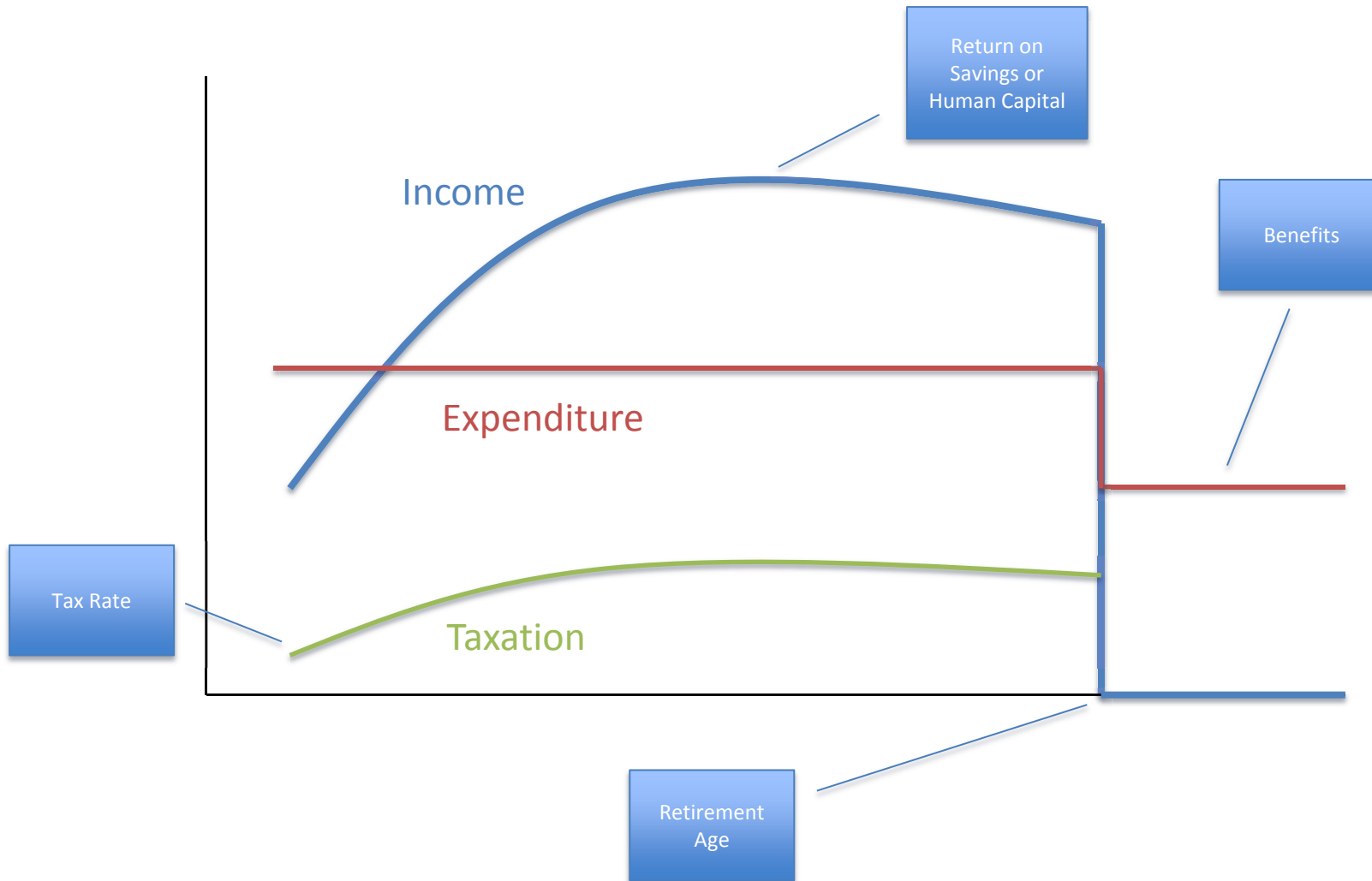
- Market Failures
 - Incomplete Markets
 - Difficult to insure Social Risk
 - Lack of indexing of inflation risk
 - Demographic risk and intergenerational risk
 - Adverse Selection
 - Imperfection in annuity markets
 - » Insurance companies want to give annuities to unhealthy people
 - » Women versus Men (lower life insurance premium, higher annuity premiums)
 - Moral Hazard
 - Individuals are underinsured if public insurance exists.
 - Unacceptable Allocation
 - Individual “bounded rationality”
 - Procrastination: Saving too little
 - Framing: Choices depend on framing
 - Complexity: Immobilizes consumers without financial knowledge
 - Early Retirement: Most people retire too soon

Design of Pension System

- Complex system with multiple objectives
 - Policy needs to optimize – not to maximize!
 - Policy needs to balance consumption smoothing, poverty relief, and insurance depending on social preferences
- Different systems
 - Face different risks
 - Affect women and men differently
 - Have different intergenerational redistribution
- Tier system
 - Tier 1; minimum non-contributory pension
 - Poverty relief
 - Tier 2; mandatory insurance:
 - Replacement rate (Which is the income after retirement as a ratio of income before)
 - Consumption Smoothing
 - Tier 3; voluntary savings:
 - Compensate for inadequate design

In principle...

How does this work?



Four and only four solutions to problems of pension finance

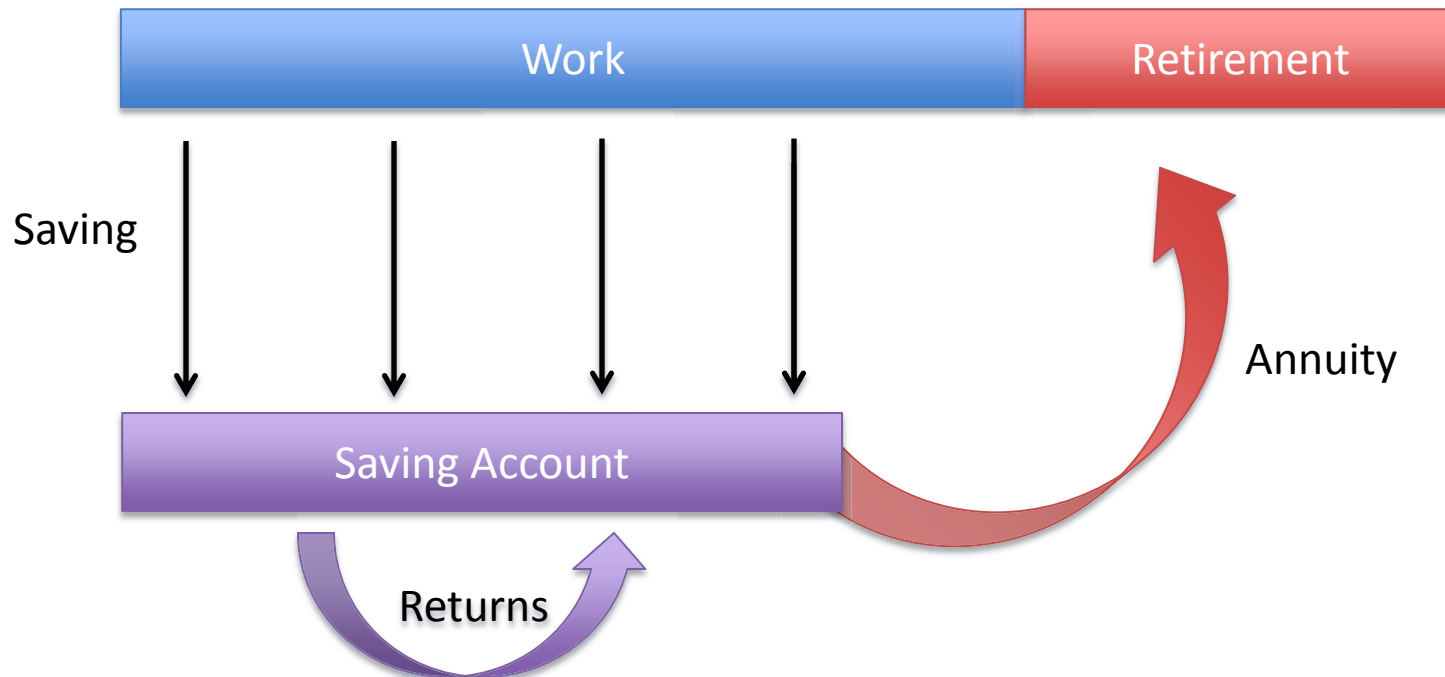
- A smaller pension, i.e. lower average monthly pension
- A later pension, i.e. an unchanged monthly pension from a later age
- Higher contributions
- Higher national output

Design Levers: Social Security Pensions

Distribution	Pay-as-you-go	Fully Funded	
Payments	Defined Benefits	Defined Contributions	Mixed
Investment Management	Private	Public	
Contributions	Individual Voluntary	Mandatory (Tax)	Noncontributory
Provision	Employer Provided	Public	Individual Accounts

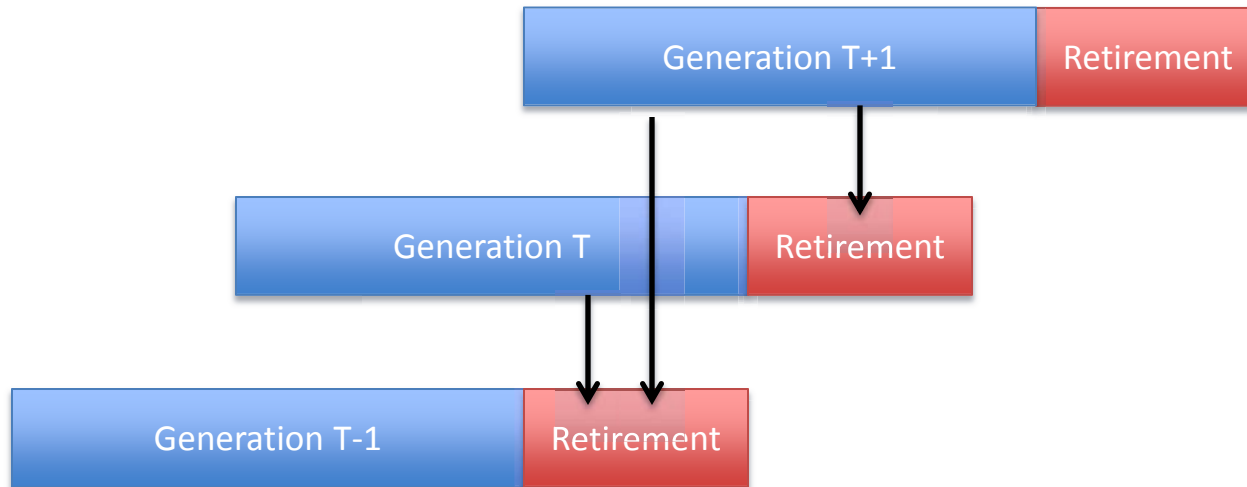
Distribution

- Fully Funded
 - I save for myself



Distribution

- Pay-as-you-go
 - I pay for others

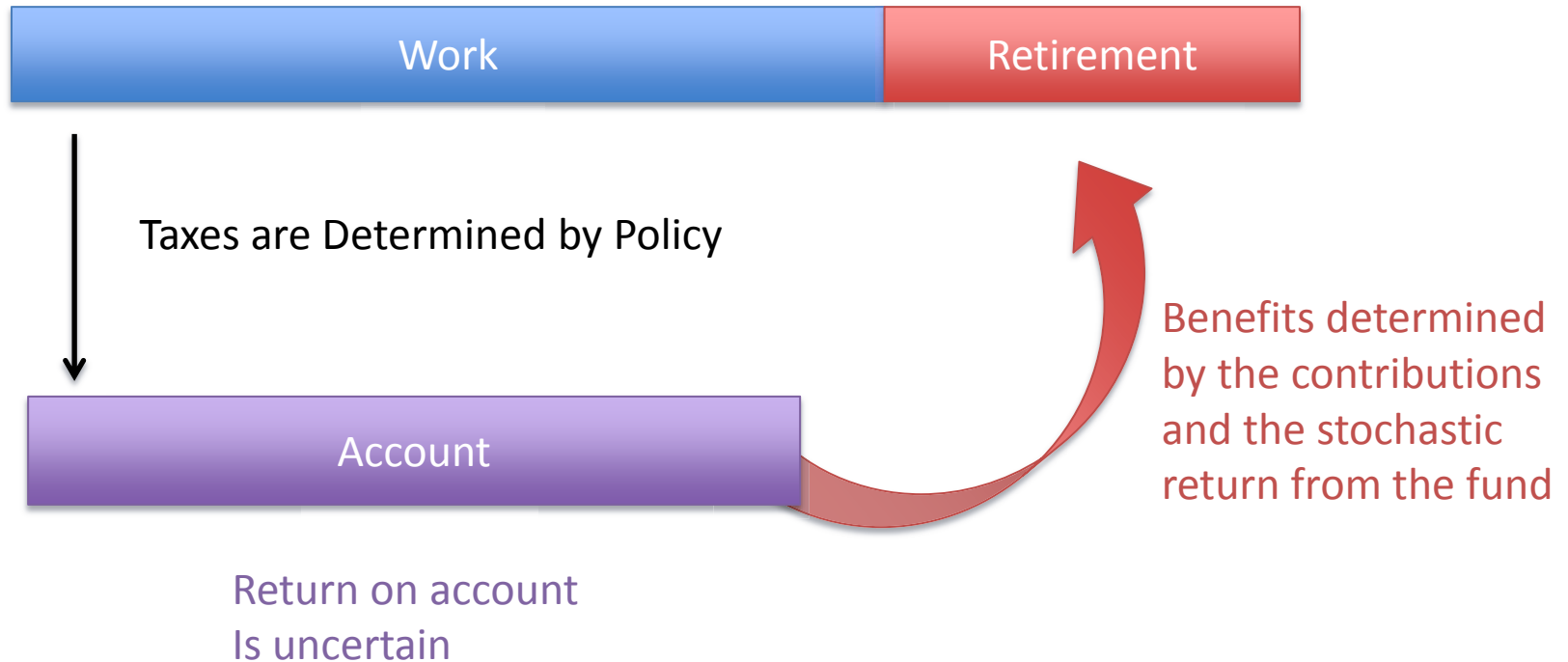


Distribution

- Advantages and Disadvantages
 - Pay-as-you-go versus Fully Funded
 - Lower cost of administration
 - PAYG 3 bps
 - FF 160 bps
 - Subject to demographic risk
 - Subject to political risk
 - Hedge against stock market and bond risk
 - Hedge against agency risk

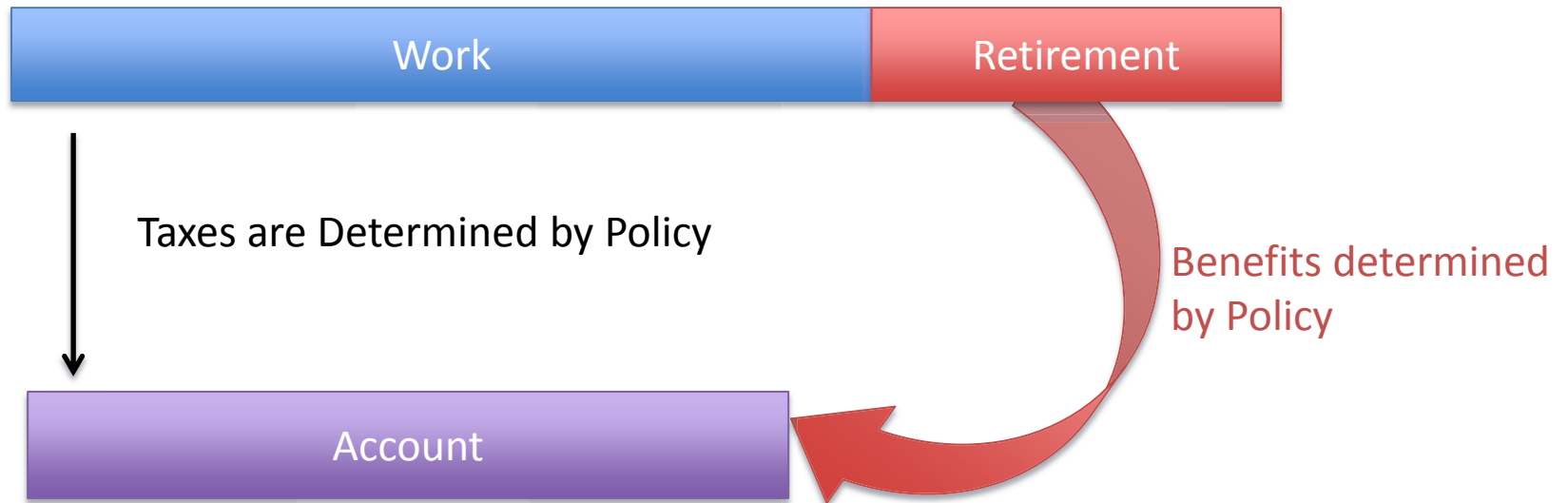
Benefits

Defined Contributions



Benefits

Defined Benefits



Return on account is uncertain
And savings in the account are the
differences between the taxation
and the exogenous benefits

There is no single best system

- Pure consumption smoothing:
 - Singapore (CPF): mandatory savings account
- Pure poverty relief:
 - New Zealand: noncontributory flat-rate pension
- Pay as you go systems:
 - France, Germany, Italy
- Fully funded:
 - Canada, Chile, Sweden
- Individual accounts:
 - Chile, and 401k
- Trust Fund:
 - Canada and US social security
- Noncontributory:
 - Netherlands (years of residence)

Social Security

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IRA or 401k

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Elements of a developed nation Pension System

- Tier 1:
 - Some contributory or noncontributory minimum pension for poverty relief
- Tier 2:
 - Publicly organized defined benefit pension
 - Publicly Notional Defined Contribution system
 - Savings plan with access to annuities
 - Mandatory, funded, defined benefit pensions
 - Mandatory, funded, defined contributions pensions
- Tier 3:
 - Voluntary, defined contribution pensions

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