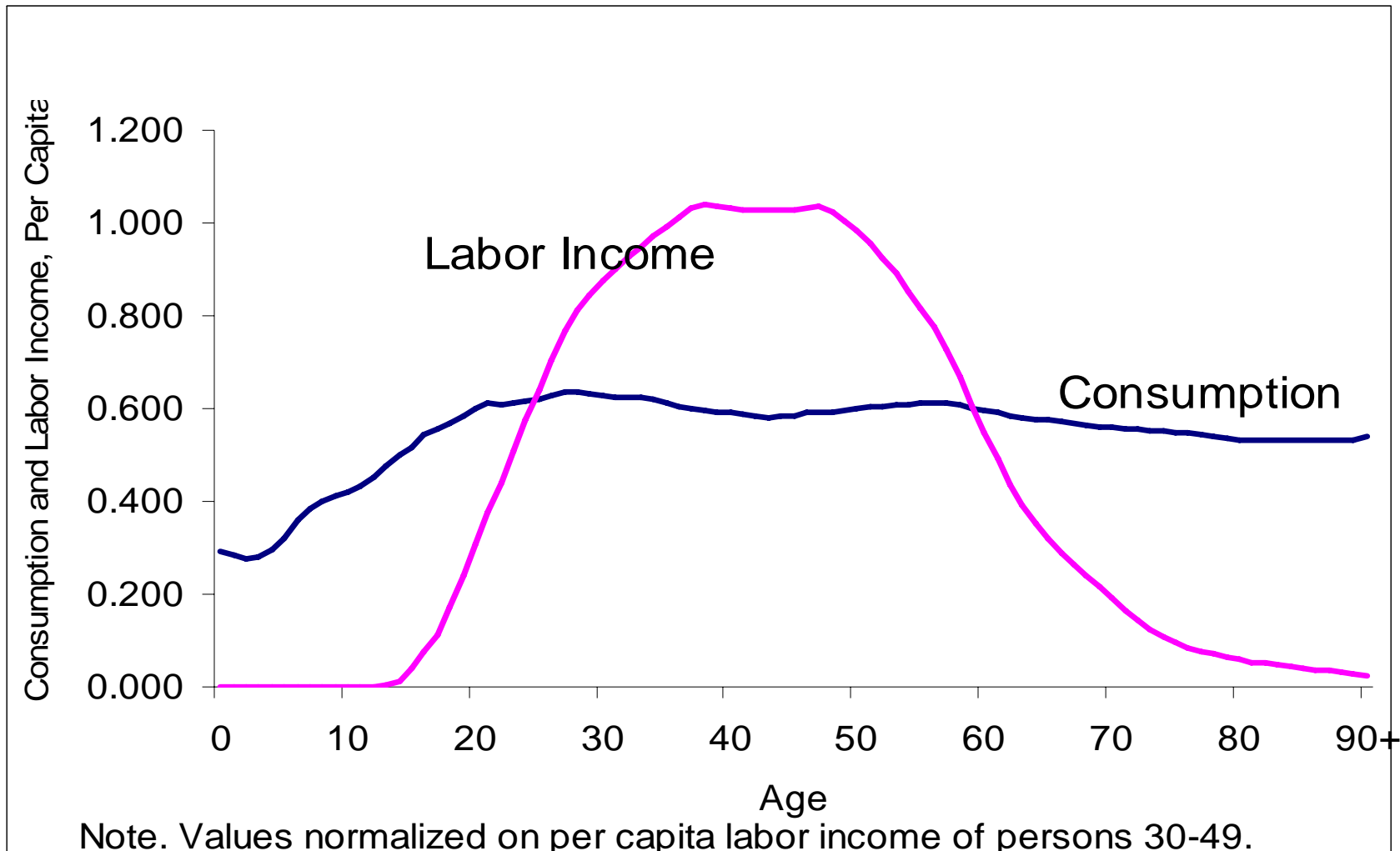


Labor Income

Nicole Mun Sim Lai

United Nations, Population Division

The Economic Lifecycle (per capita)



Definition

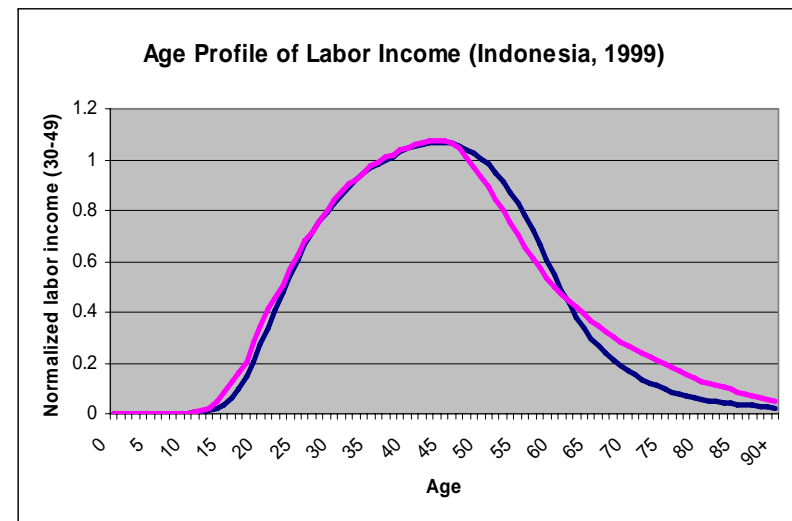
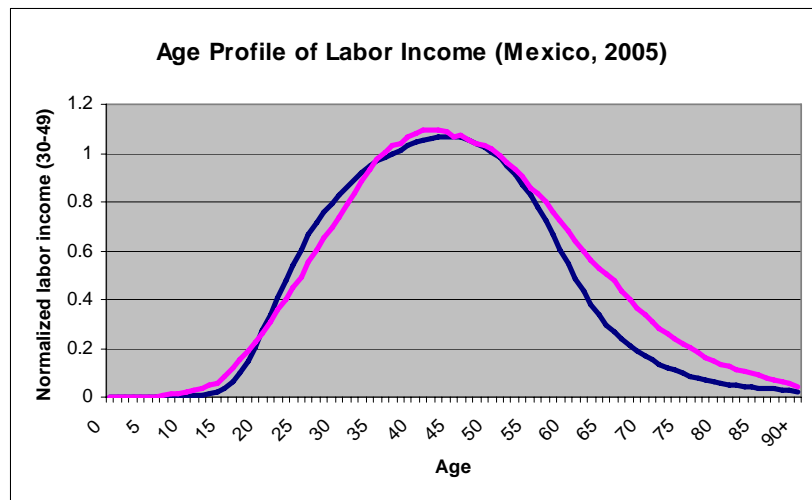
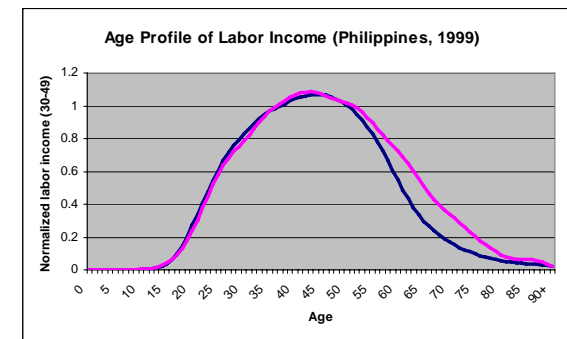
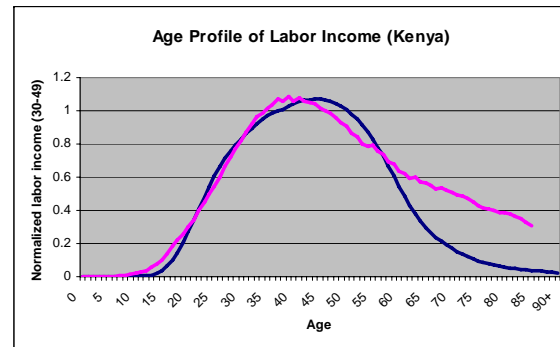
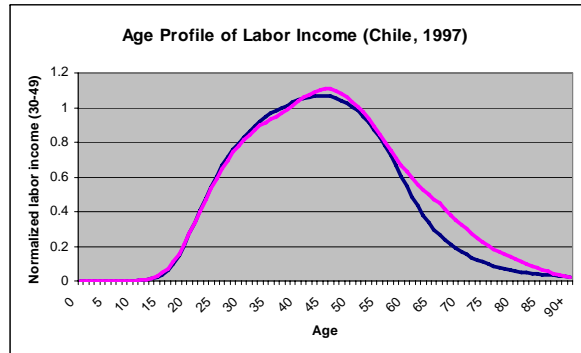
- Labor income is divided into two sub-categories:
- i) labor earnings (including fringe benefits) or compensation of employees (YLE) and
- ii) self-employment income (YLS)
- $YL = YLE + (2/3 * YLS)$

i) Compensation of employees (YLE)

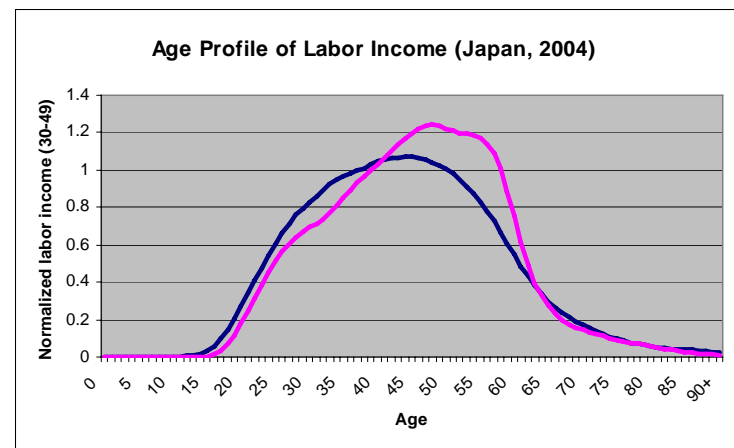
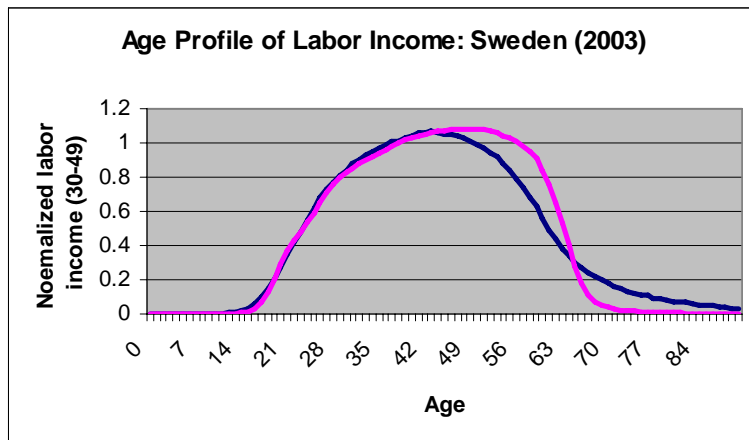
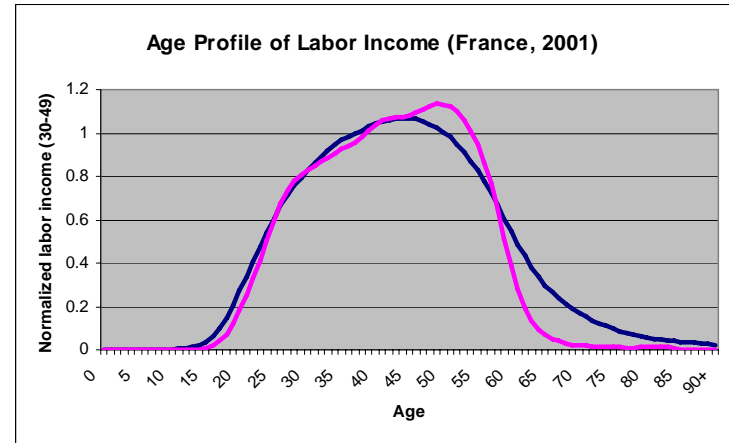
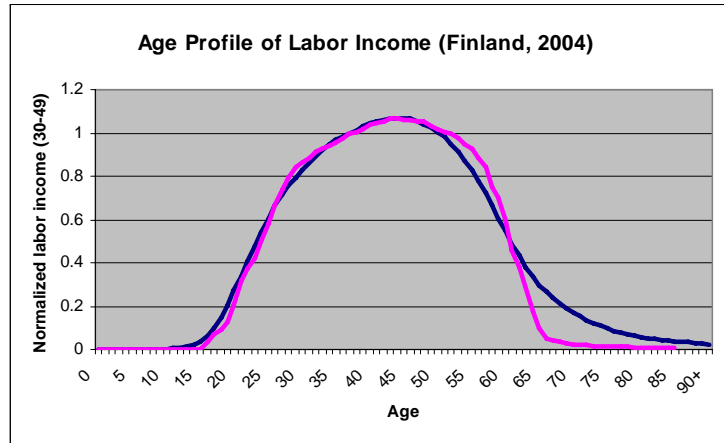
(a) Wages and salaries payable in cash or in kind;

(b) The value of the social contributions payable by employers: these may be actual social contributions payable by employers to social security schemes or to private funded social insurance schemes to secure social benefits for their employees; or imputed social contributions by employers providing unfunded social benefits.

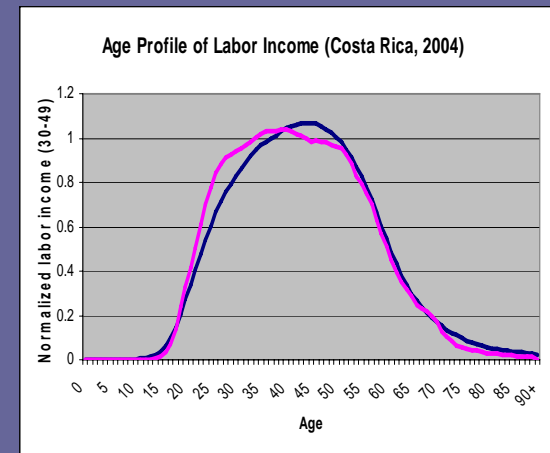
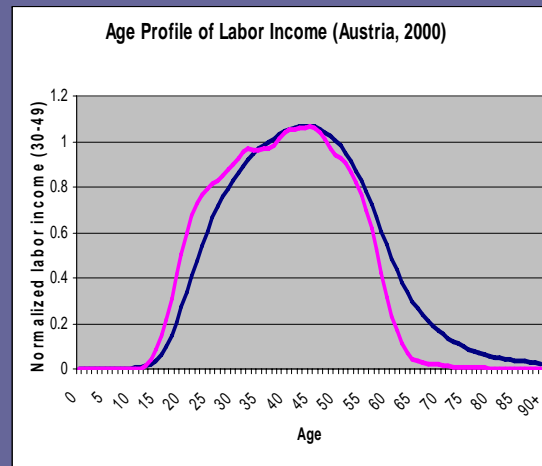
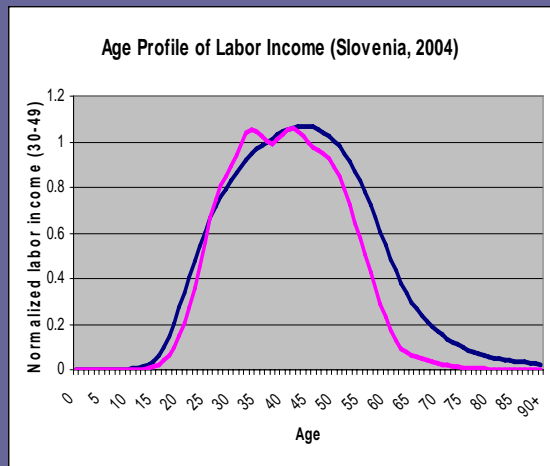
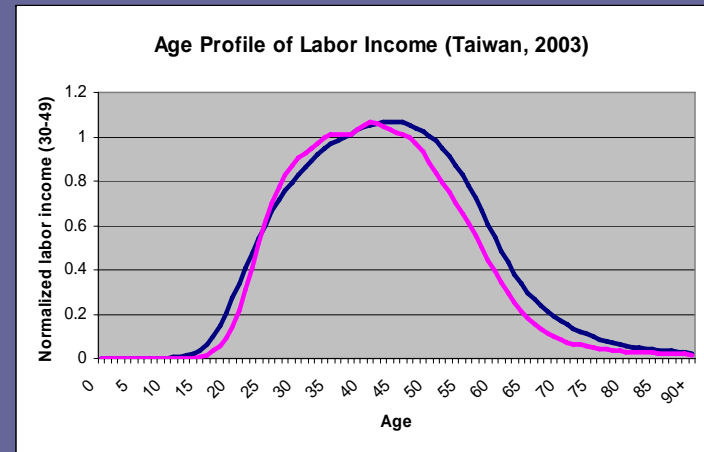
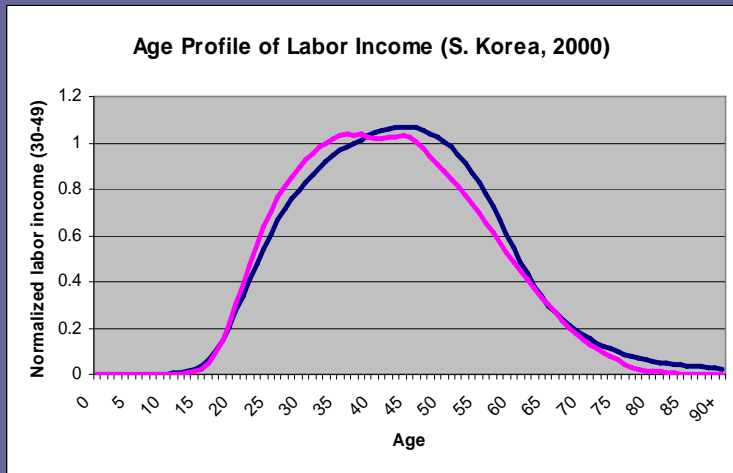
Labor Income: Thick Flat Tails



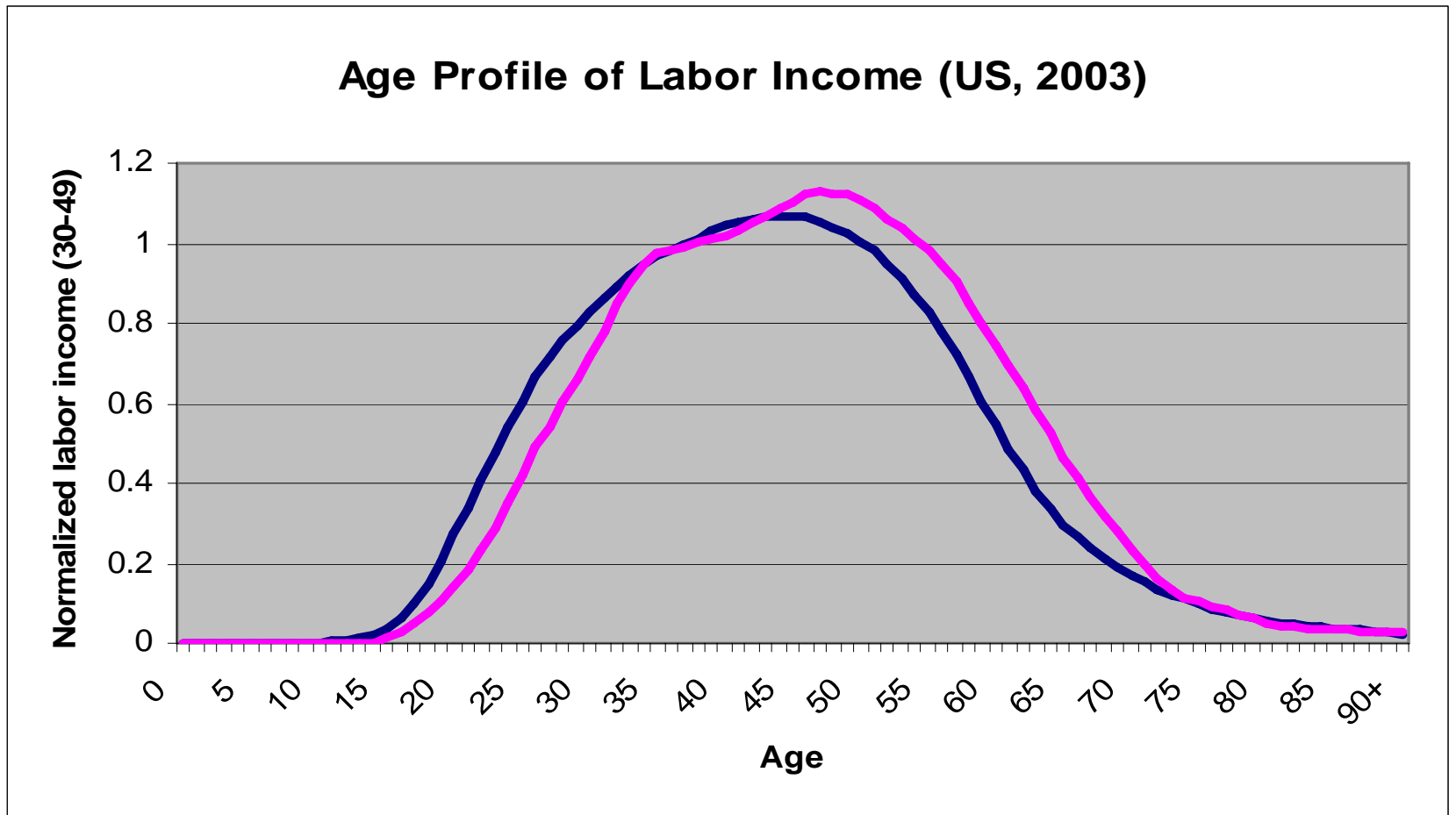
Steep at Old Ages



Steep at Early Ages



Start late, exit late

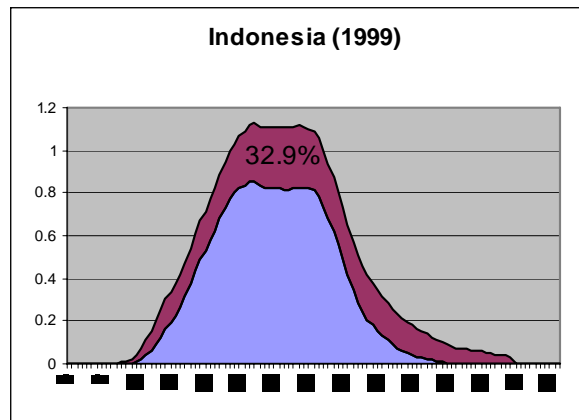
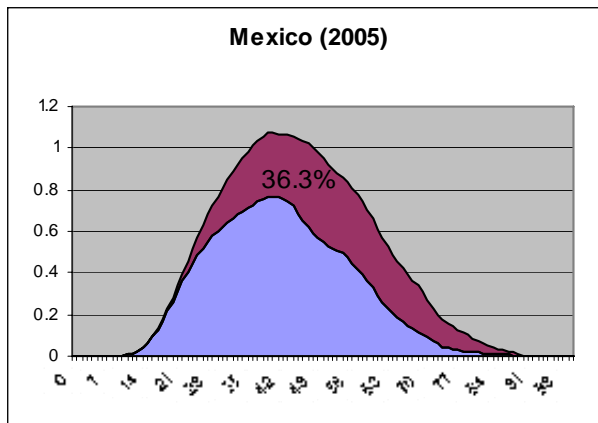
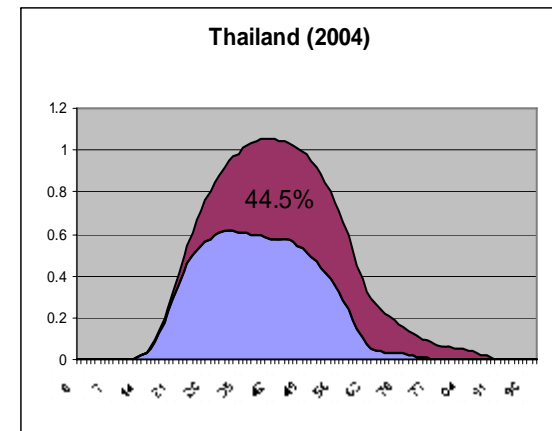
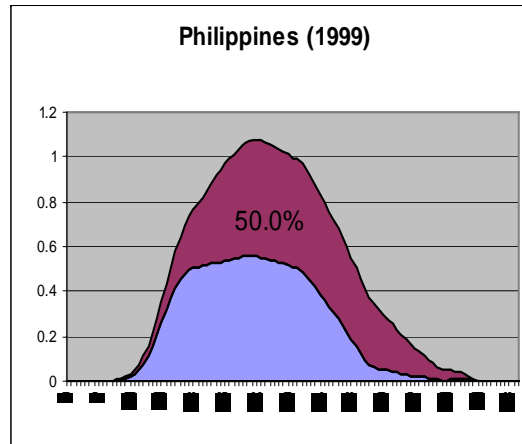
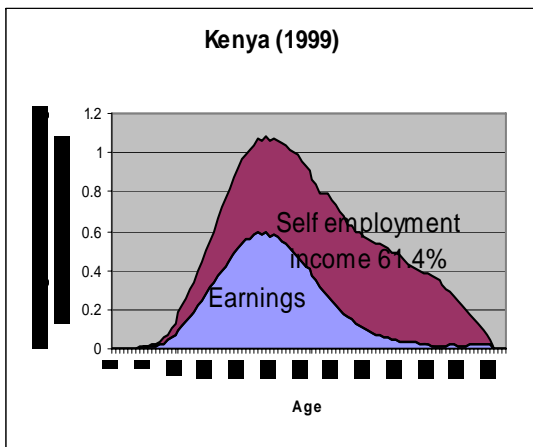


Labor Income

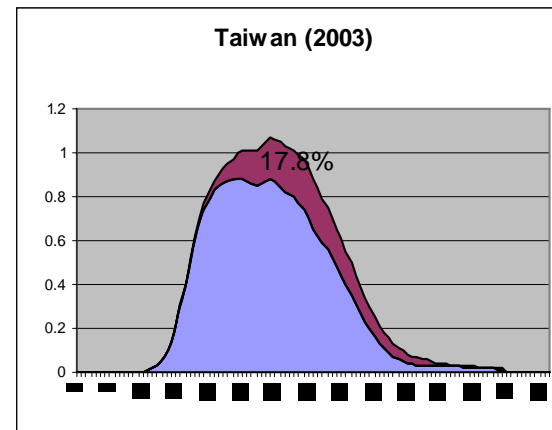
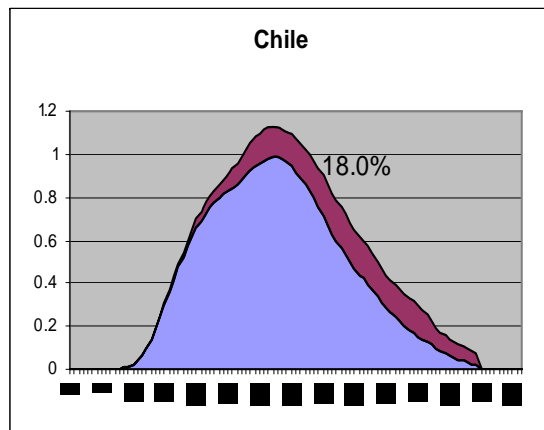
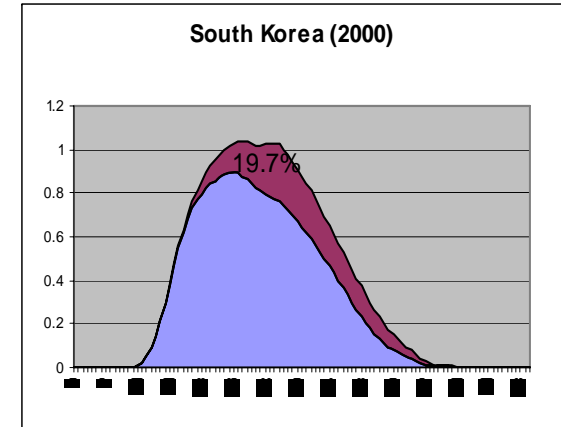
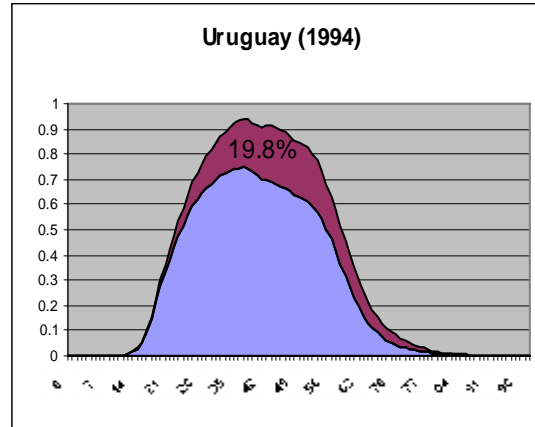
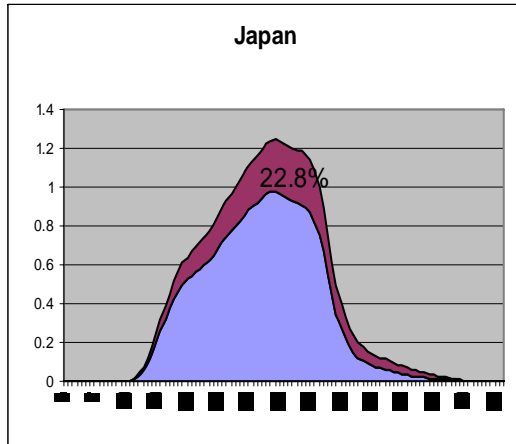
$$\left(\frac{Y}{N}\right)_a = \left(\frac{L}{N}\right)_a * \left(\frac{Y}{L}\right)_a \text{ or}$$
$$y_a = l_a * \bar{y}_a$$

- Per capita labor income profile depends on several things.
 - Richer countries have low LFPRs for children and elderly
 - Richer countries have low share of self-employment income.
 - Old age productivity varies across countries.
 - Institution (legal age of work, mandatory schooling, minimum wage, seniority-based wage system) matters.
- Data problems
 - Measurement of self-employment income

Primary Target: Countries with Large Share of Self-Employment Income (per capita)



Secondary Target: Countries with Moderate Share of Self-Employment Income



How do we estimate labor income?

- Step 1: Micro-level: use household survey to construct labor income age profile
- Step 2: Macro-level: use National Income to measure the aggregate value of labor income

How to construct the micro-level age profile?

- i) usually earnings (YLE) are reported at individual level in the survey.
- ii) however, self employment income(YLS) is usually reported at household level. Therefore, we need to reallocate it to individual household members.

How to re-allocate household self-employment income to individual members?

- $$YLS_{ij}(x) = YLS_j \gamma_{ij}(x)$$
$$\gamma_{ij}(x) = w(x) D_{ij}[SE, x] / \sum_{\alpha} w(\alpha) SE_j(\alpha)$$

where x is the age of the i^{th} household member,

$D_{ij}[SE, x]$ is a dummy variable that equals 1 if household member i is self-employed and age x ,

$SE_j(x)$ is the number of people in household j who are self-employed or unpaid family workers of age x ,

$w(x)$ is the average earnings of employees. Thus, is the share of total household self-employment labor income allocated to each household self-employed or unpaid family member who is age x .

How to construct Macro level labor income?

	SNA compensation of employees (A)	2/3 SNA gross mixed income (B)	Adjustment for labor income portion of taxes less subsidies on other production (C)	NTA labor income macro controls (A+B+C)
Labor income	100	20	15	135
Labor earnings	100	-	15	115
Self-employment income	-	20	-	20

The End