Faculty of Law

TAX REFORM, DEMOGRAPHIC CHANGE AND RISING INEQUALITY

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Overview

Economies in Asia, Australasia and Europe face the challenges of

- demographic change with a declining total fertility rate
- rising inequality in income and wealth

Discussion covers:

- Data on fertility and female participation rates in selected countries
- Potential for a significant social dividend with declining fertility.
- Female labour supply and the economics of child care
- Tax reform, the social dividend and rising inequality
- Policy directions

Total fertility rates

Total fertility rates

Country	1960	1980	2011
Japan	2.00	1.76	1.39
Singapore	5.45	1.74	1.71
South Korea	6.16	2.83	1.24
China	5.76	2.71	1.66
Australia	3.45	1.89	1.87
Germany	2.37	1.44	1.36
Italy	2.41	1.64	1.41

Demographic change

Demographic change: Strong focus on ADR. Less attention to CDR.

$$TDR = CDR+ADR = \frac{(0\text{-}14)+(65+)}{15\text{-}64}$$

Australia's TDR: 63.5% in <u>1961</u>; 66.2% in <u>2050</u>; min ≈ 50% in <u>2010</u>
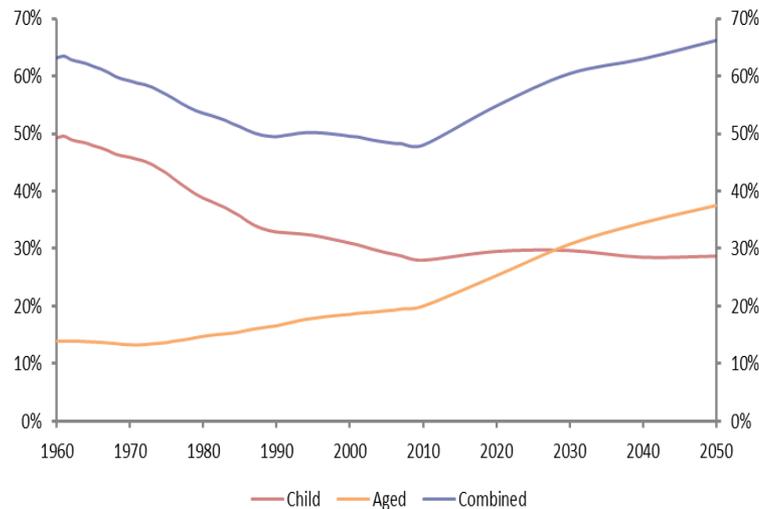
Social dividend

CDR and ADR need to be weighted by cost

Cost of a child:
- Opportunity cost of parental time
- Loss of future human capital
- Parental expenditure on children
- Govt expenditure on education, health and other benefits

Cost of a retiree:
- Consumption expenditure, private health costs, etc.
- Govt expenditure on health and other benefits

Social dividend
Per capita cost of a child is far greater than cost of a retiree

Policy challenge

Reallocation of female labour from home to the market

Female participation rates (24-54)

Country	1970	2000	2011
Japan	55.1	66.5	72.3
Korea, Rep.	-	-	60.8
China	-	84.0	80.4*
Australia	43.4	70.5	75.7
Germany	47.3	76.9	82.1
Italy	28.3	57.9	64.6

*2010 rate

Participation rates overstate rise in female labour supply in countries with a high rate of part-time female employment

Modeling female labour

Vast literature on female labour supply behaviour

Results need to be interpreted cautiously.

Models estimated on datasets with missing information on

- productivity of non-market time, misleadingly labeled "leisure".
- quality of bought in child care
- quality adjusted child care prices

Studies typically report a female wage elasticity that is significantly above the male wage elasticity, but results vary widely.

E.g., Japanese studies find higher education has no significant effect.

Need a life cycle model defined on family phases: evident from time use data that key issue is economics (price/availability) of child care.
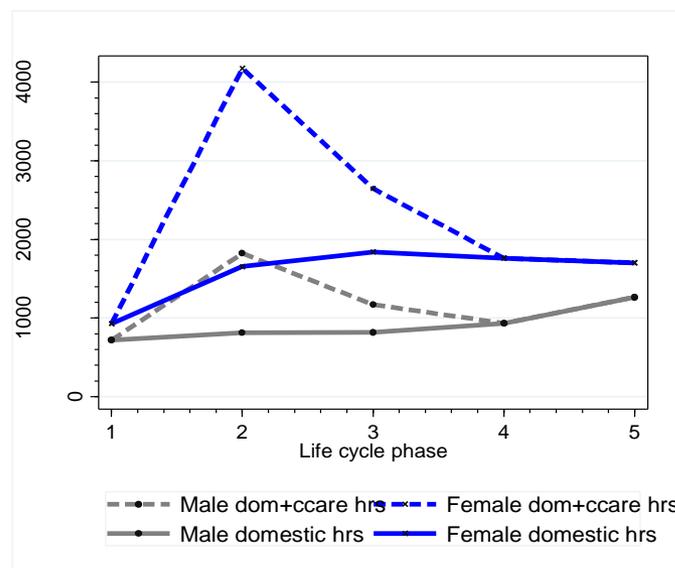
Life cycle time use: ABS data

Life cycle: 5 family phases:

1 pre-child phase
2 child $0-4$ phase
3 child $5+$ phase
4 post-child phase (under 60)
5 retirement (60+)

Labour supplies
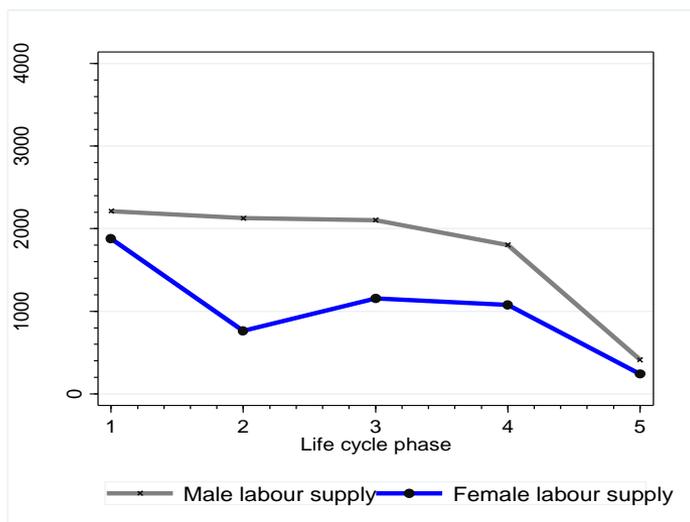
Child care & household production

Female labour supply in phase 2

Phase 1: almost identical male and female labour supplies.

Labour supply of female (as 2nd earner) changes dramatically in Phase 2 because the first child creates an additional work choice, that of working at home providing child care as an alternative to working in the market and buying in care and related services.

Data indicate that little of the heterogeneity can be explained by wage rates and demographic characteristics. Heterogeneity reflects elasticity of substitution between home and market child care.
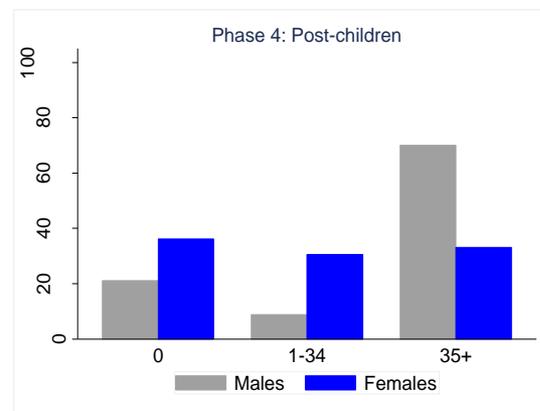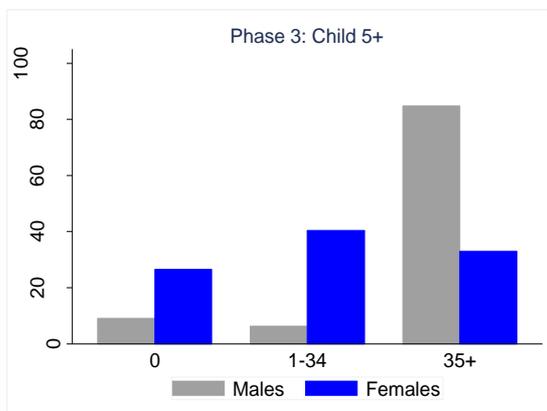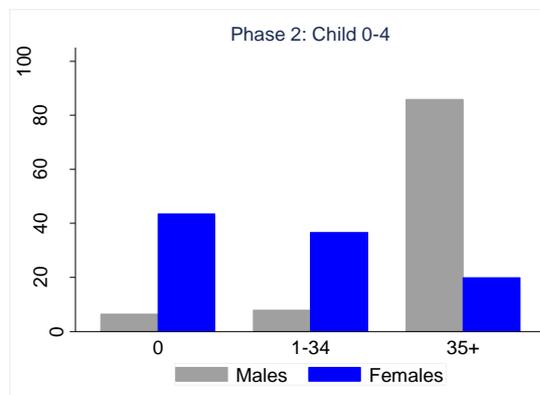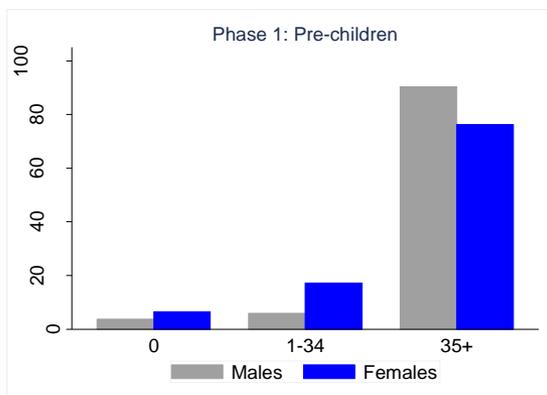
Substitutes if child care is essentially child minding–large price effects
Compliments if child care is learning/development focused

Heterogeneity

Preceding profiles represent "average". Heterogeneity in female employment emerges in Phase 2 and continues to retirement.

Employment status - Phases 1 to 4.

Persistence

ABS HES data

- Overall participation rates: prime aged males 91%, prime aged females 71%, only 20 percentage points lower.

- Participation rates are misleading. Female hours are around half male hours even in Phase 4, due to low full-time rate

- Data reflect a high degree of persistence in labour supply decisions made in child rearing years.

Explanations

Since 1980's:

Australia's progressive individual income tax replaced by a system of "quasi-joint" taxation with high MTRs on 2nd income

Early 1980's: Child payments were universal *family allowances*

PIT scale was highly progressive

We now have joint income targeted family payments (FTB-A) which transform the rate scale into an inverted U-shape

- highest MTRs apply to "middle" incomes and 2nd earners.

System of "quasi-joint" taxation has negative effects on female labour supply, the tax base, human capital accumulation and fertility.

Explanations

Merits of progressive individual taxation:

- encourages reallocation of female labour from the home to the market by imposing a lower marginal tax rate on the second earner.

- Increases tax base

- more equitable treatment of single and two earner families with the same wage rates, given that home production is untaxed

- well known efficiency gains (see literature since 1980's)

Failure to develop a public sector child care system

- Privatised child care - too costly for each generation.

- Fees include rent on rising property values + infrastructure + profit
  - prohibitive for many families
  - insufficient collateral to borrow at an affordable interest rate

- Fee subsidies alone will fail in long run.
- With rising female labour supply since 1960's we are in the long run.

Failure of successive governments to invest in a public sector child care system has constrained growth in female labour supply and child outcomes.

More generally

Public sector investment in education - a rational policy response to:

- Imperfect capital market – borrowing rate above lending rate
  Gap negatively related to parental income and wealth.

- Incomplete market for insurance against future income uncertainty.
  Investment in education – difficult to diversify – wide variance in
  outcomes for same investment. Parental agency problems.

- Need social insurance, i.e., progressive income tax (not HECS) to
  ensure equal opportunity and reduce risk.

- Income profile necessitates a public education system for
  sustainable growth

Tax reform and rising inequality

Rise in female labour supply since 1960's:

Growth in tax base can be expected to have raised tax revenue per capita.

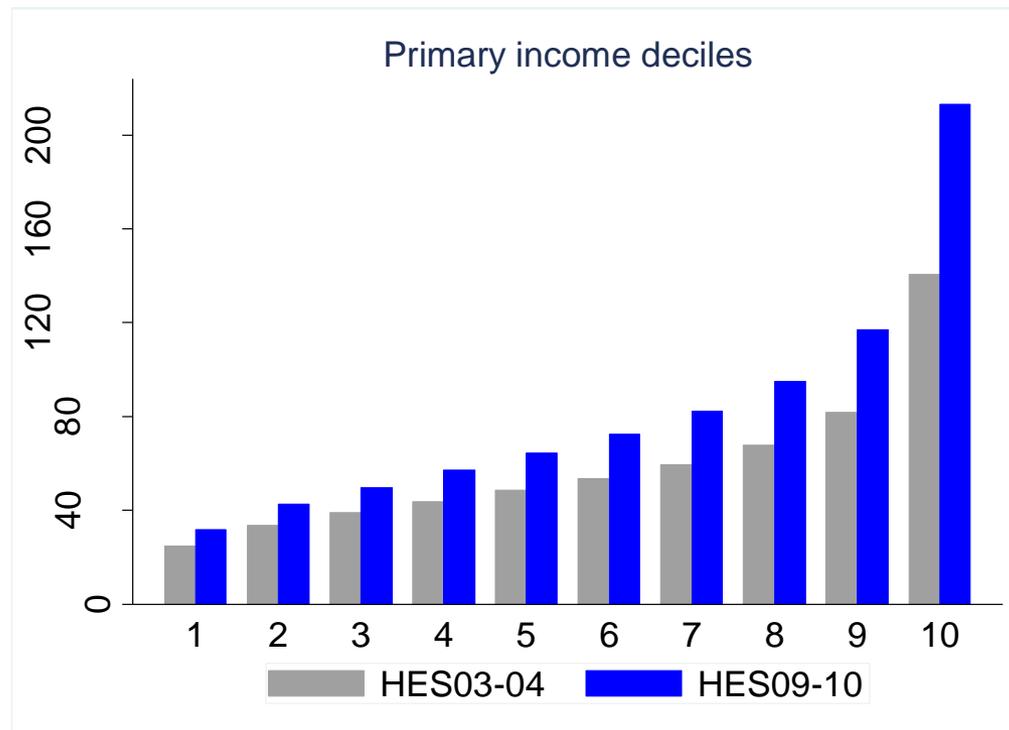More recent gains from resources boom + economic growth

Who has benefited?

Have the gains been used to reverse the rise in inequality?

Rising inequality

ABS data HES 2003-04 and 2009-10:

Figure compares "primary" incomes of couples: partners aged 20 to 60 and primary earner employed for min. 25 hours/wk.
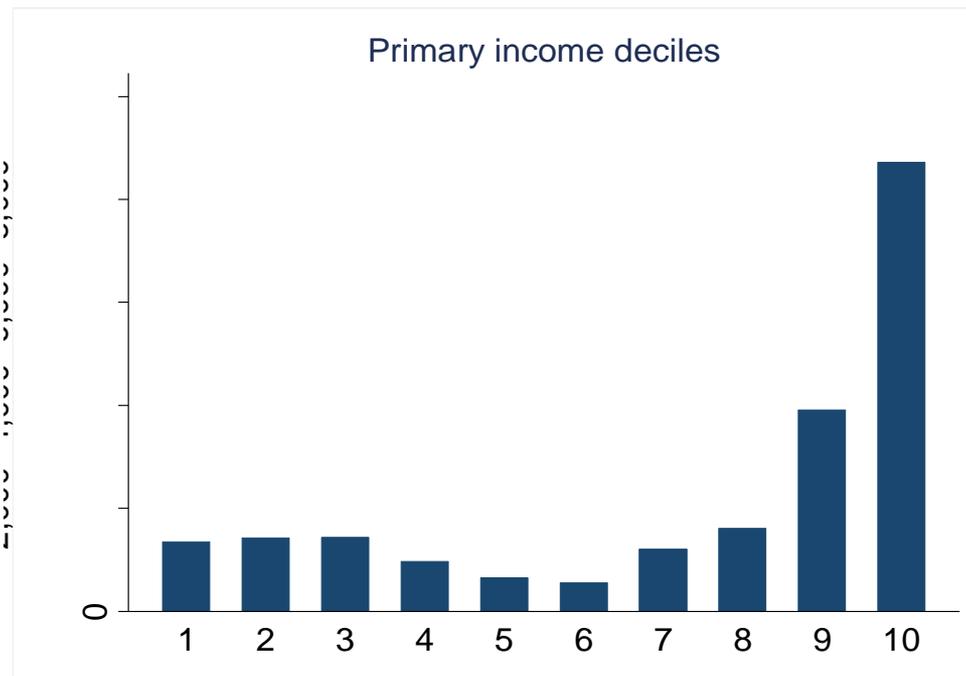

Rise in nominal incomes: 6: 35%;   9: 43%; 10: 52%;   Top percentile: 71%

Tax reform: burden shifted to "middle"

<u>From 2004-05 to 2008-09</u> Top bracket limit rose from $70,000 to $180,000.

Top MTR fell two percentage points. LITO used to extend zero rated tax threshold and while raising middle tax rates by 4 cents above $30,000.
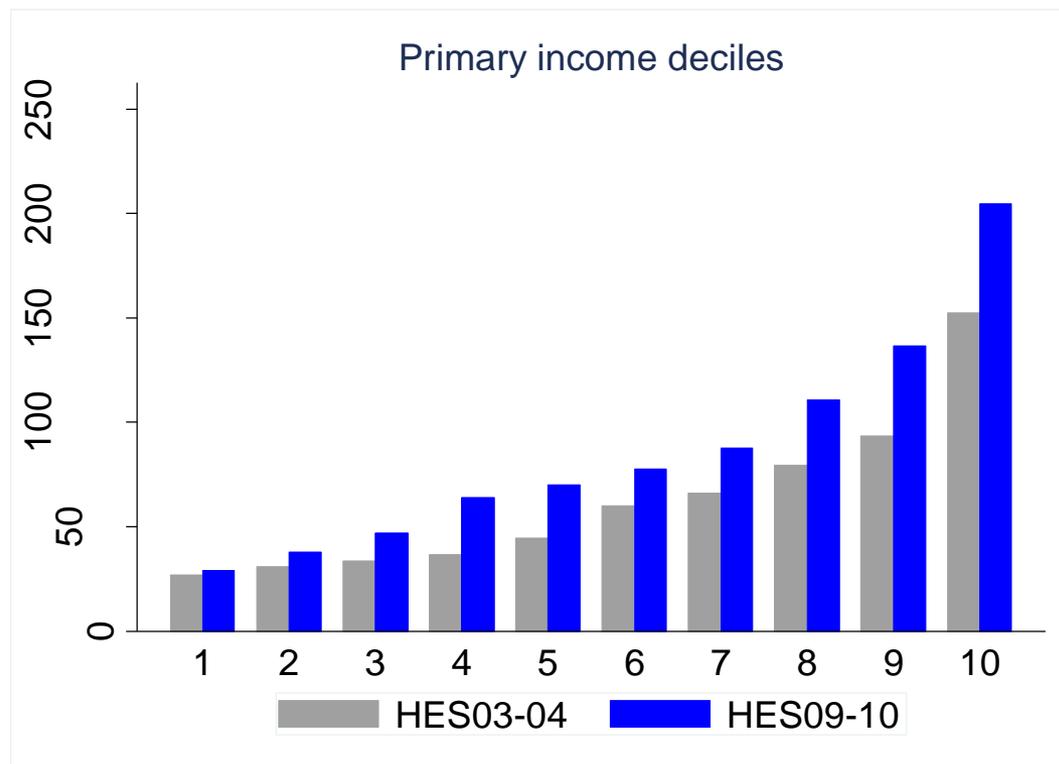

Primary income deciles

Nominal tax cut: 6: $553; 9: $3,907 10: $8,717 (40% of total)

Top percentile: $48,680.

Super and the taxation of capital income

<u>ABS data: HES 2003-04 and 2009-10</u> Figure compares super balances of "primary" income partner. Employer contributions and entity earnings taxed at 15%.

Flat rate – regressive – adds to gains towards the top of income distribution.
Supported by arguments for a lower or zero tax rate on capital income.

Super tax expenditure

Comprehensive income tax benchmark:

Est. revenue forgone 2012-13: $30.25 billion

Est. revenue gain $24.2 (can avoid tax, e.g. negative gearing)

Consumption or cash flow expenditure tax (EET):

Est. revenue forgone ≈ $5.5 billion

A zero tax rate on capital income under an EET (or labour earnings tax with exemption for income from saving, TEE) is unlikely to be optimal.

Inconsistent with modern tax theory

Tax design: an application of the theory of the second-best.

Given a distortion in one sector of the economy, e.g., taxation of labour earnings (hhp, leisure untaxed), it will in general be (second best) optimal to create distortions in related sectors, e.g., in the capital market by taxing income from saving.

Taxation of capital income

Argument for an expenditure tax draws on a model of intertemporal choice that assumes:

1. Single-person household
2. Perfect capital market
3. Consumption and leisure are separable

None of these assumptions are supported empirically.

Two-person households

Most adults live in couple households, with/without children

A well designed labour income tax will always be superior to a consumption tax because it is a less constrained policy instrument.

Individual earnings can be observed and taxed progressively, allowing a lower tax rate on 2nd earner

Individual consumptions cannot be observed. We can never observe **whose** consumption has been reduced to fund household saving

A broad based consumption tax is inevitably a flat rate joint tax.

Imperfect capital market

Evident that capital market is imperfect from family life cycle time use.

- parents are not using the capital market to smooth consumption and leisure.

Consumption and "leisure" (home child care) are not separable but substitutes

Consumption, household income and saving track female labour supply.

Median household incomes, earnings and saving, HES 2009-10

Phase	Household income	Female earnings	Saving
1	116141	47502	19760
2	83824	6240	5824
3	110244	30212	9776
4	94744	26208	14040
5	6980	0	1404

Life cycle literature: treats household as single person and defines life cycle defined on age of "head". Misreads data: "excess sensitivity puzzle".

Raise top tax rates – not the GST

Expanding GST with compensation based on family income:

Regressive - shifts tax burden further towards "middle"

Compensation raises 2nd MTRs: reduces female labour and saving

Saving and 2nd earnings by primary income (phases 2 to 4)

| AU$: Primary income quintiles	34265	54701	71982	96648	201855
H1: Saving $pa	-8227	331	4095	14268	54642
2nd earnings $pa	330	9745	9494	16794	12835
H2: Saving $pa	297	9075	16167	30634	76973
2nd earnings $pa	24425	37410	43001	60451	67281

H1: 2nd earnings at or below median; H2: 2nd earnings above median

By switching from H1 to H2 saving almost doubles.

Note: level of saving <u>rises</u> with female labour supply while saving rate falls if female earnings < male earnings. Missed in single-person model.

Wealth

More unequal than income (excludes housing)
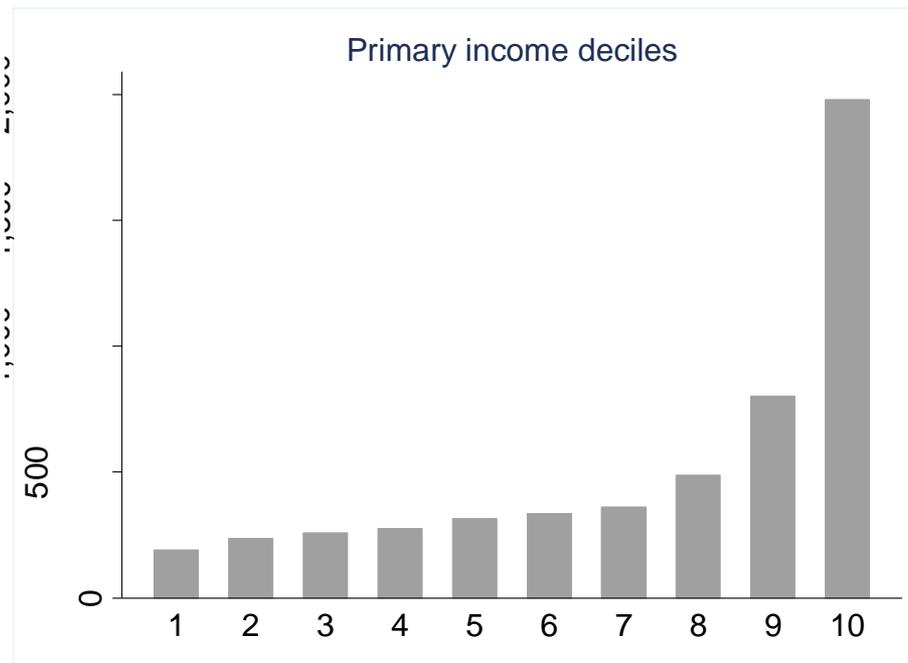
Can we afford not to tax capital?

Concluding comment

Proposed policy response:

- Move to more progressive taxation of income from labour and capital by raising top tax rates and lowering upper bracket limits
- Invest additional tax revenue in child care and education.