Grandma is my landlord: potential effects of population ageing and taxes on the demand for housing

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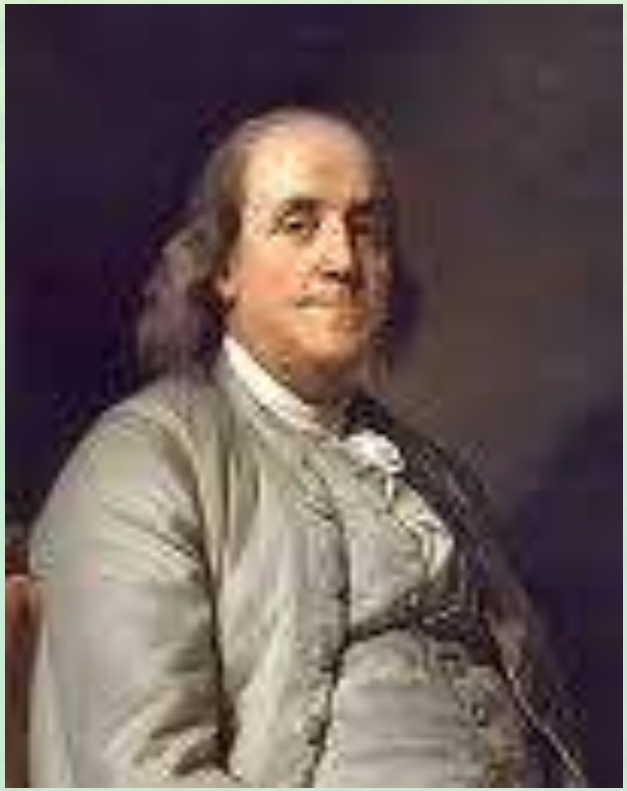
Motu Economic and Public Policy Research.

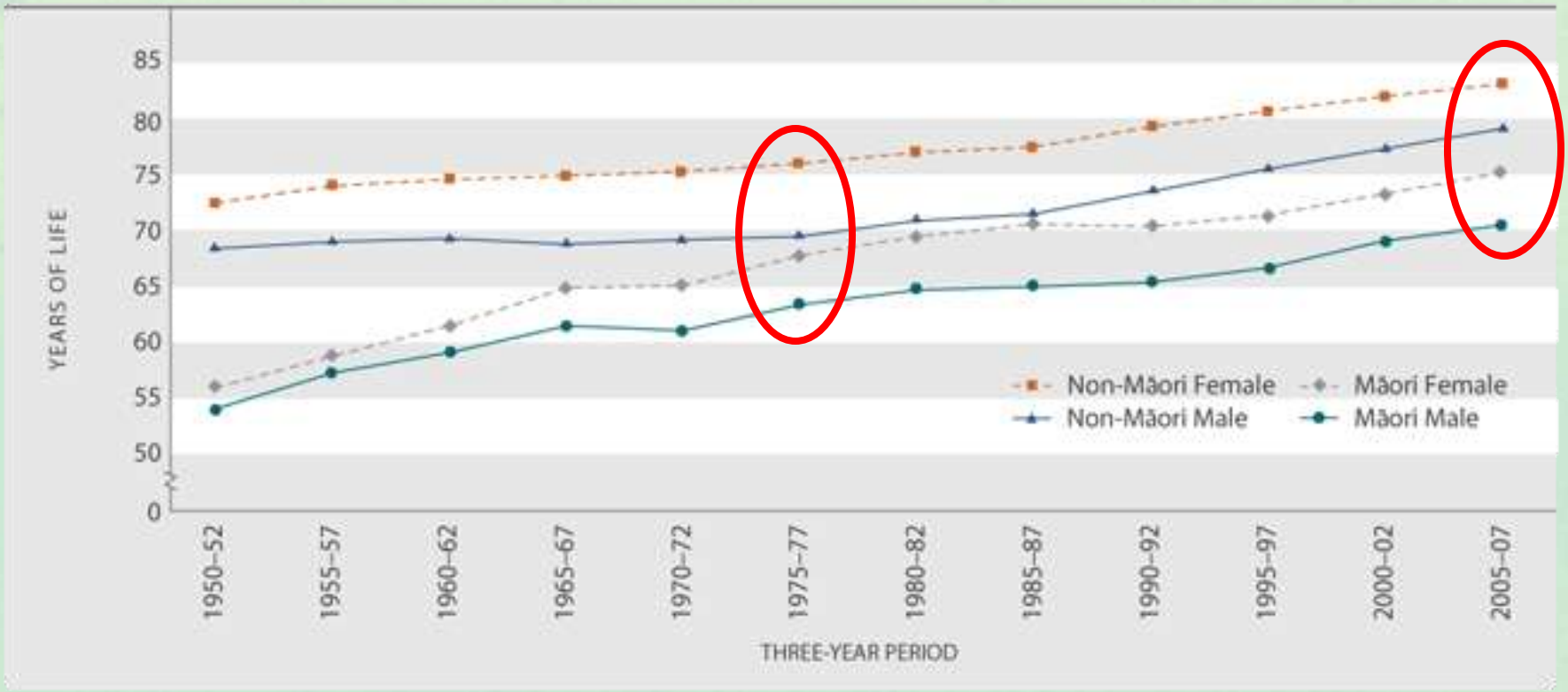
May 2010



"In this world nothing can be said to be certain, except death and taxes."

Benjamin Franklin

Death may be certain….but it takes place at ever increasing ages.



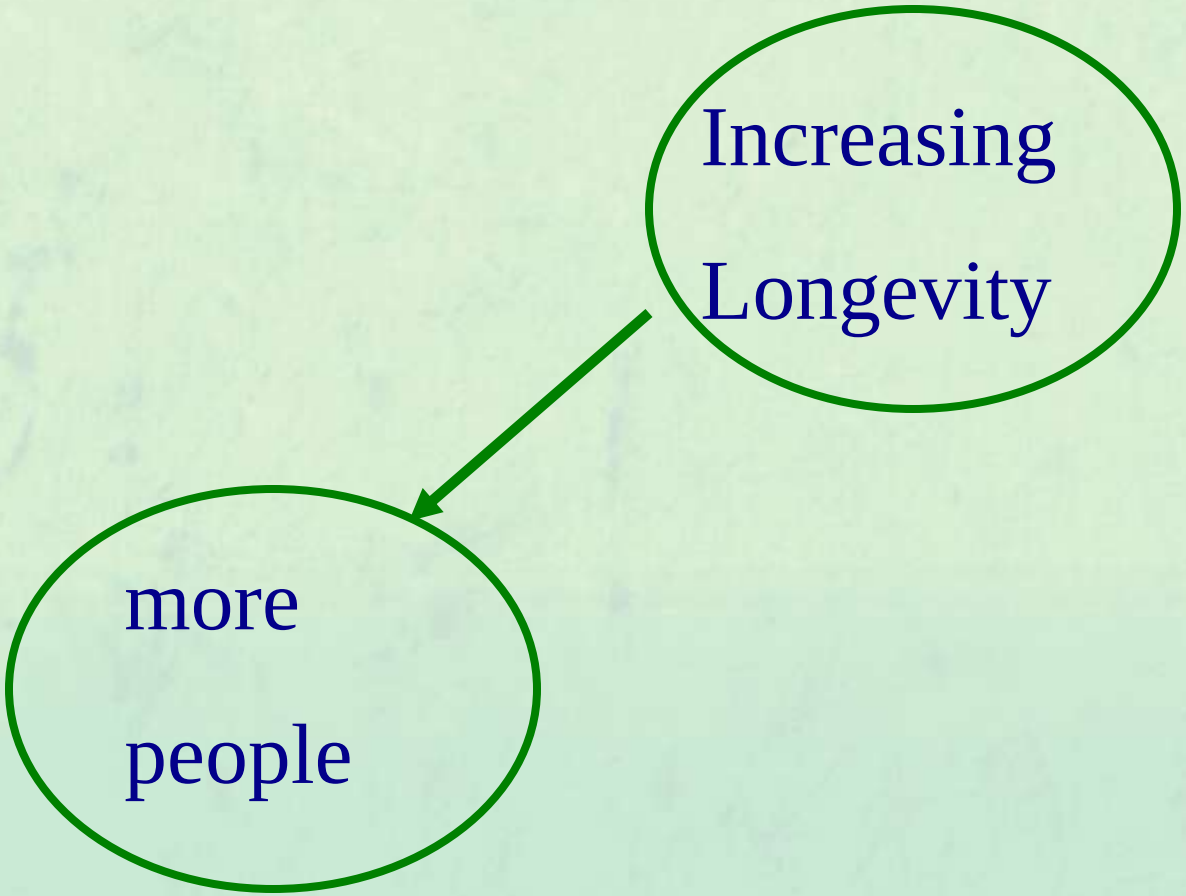
Increase 7-8 years

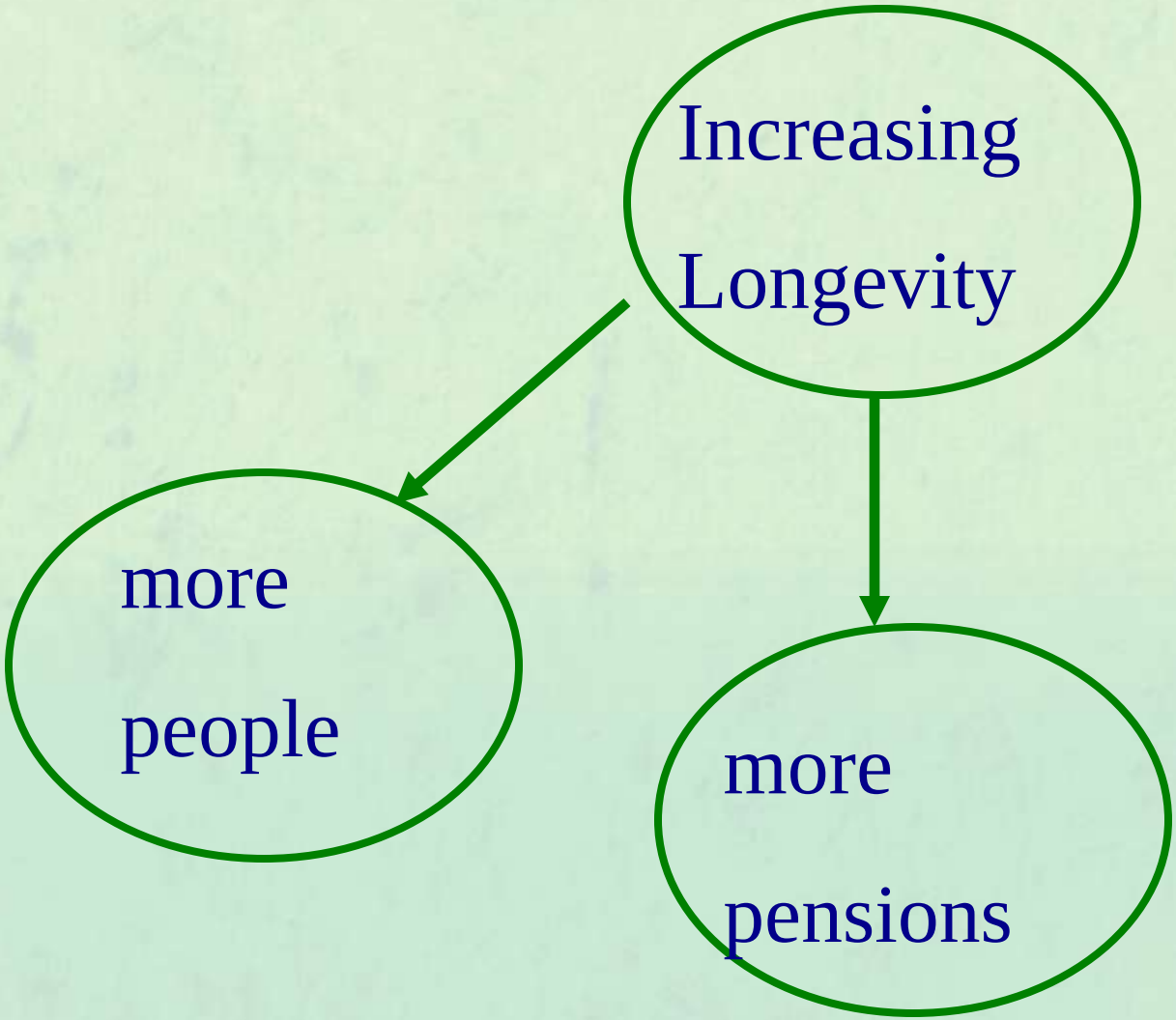
Doubled retirement years

Similar increase expected by 2040

Increasing

Longevity


Increasing
Longevity
more
people


Increasing
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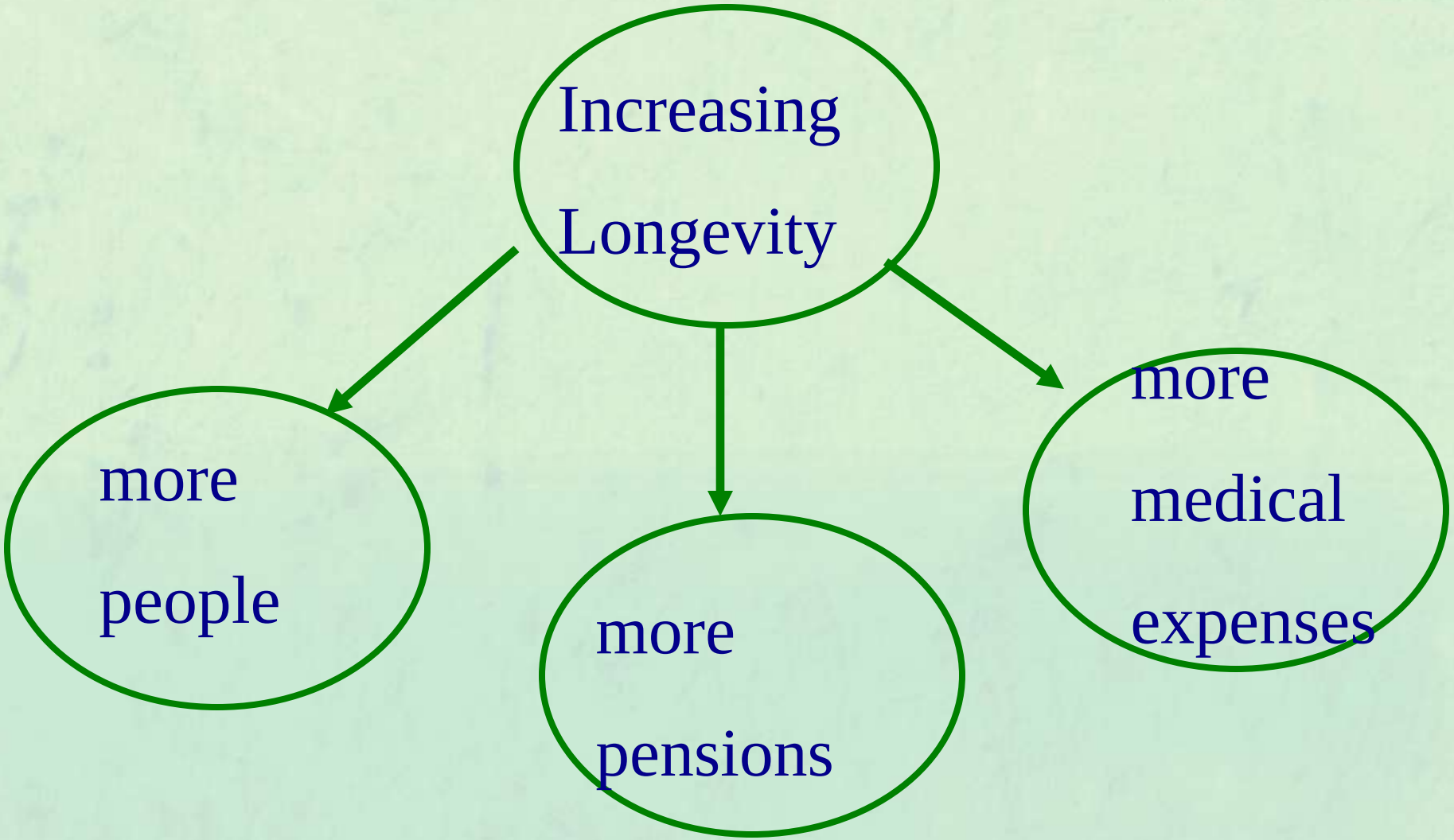
Increasing
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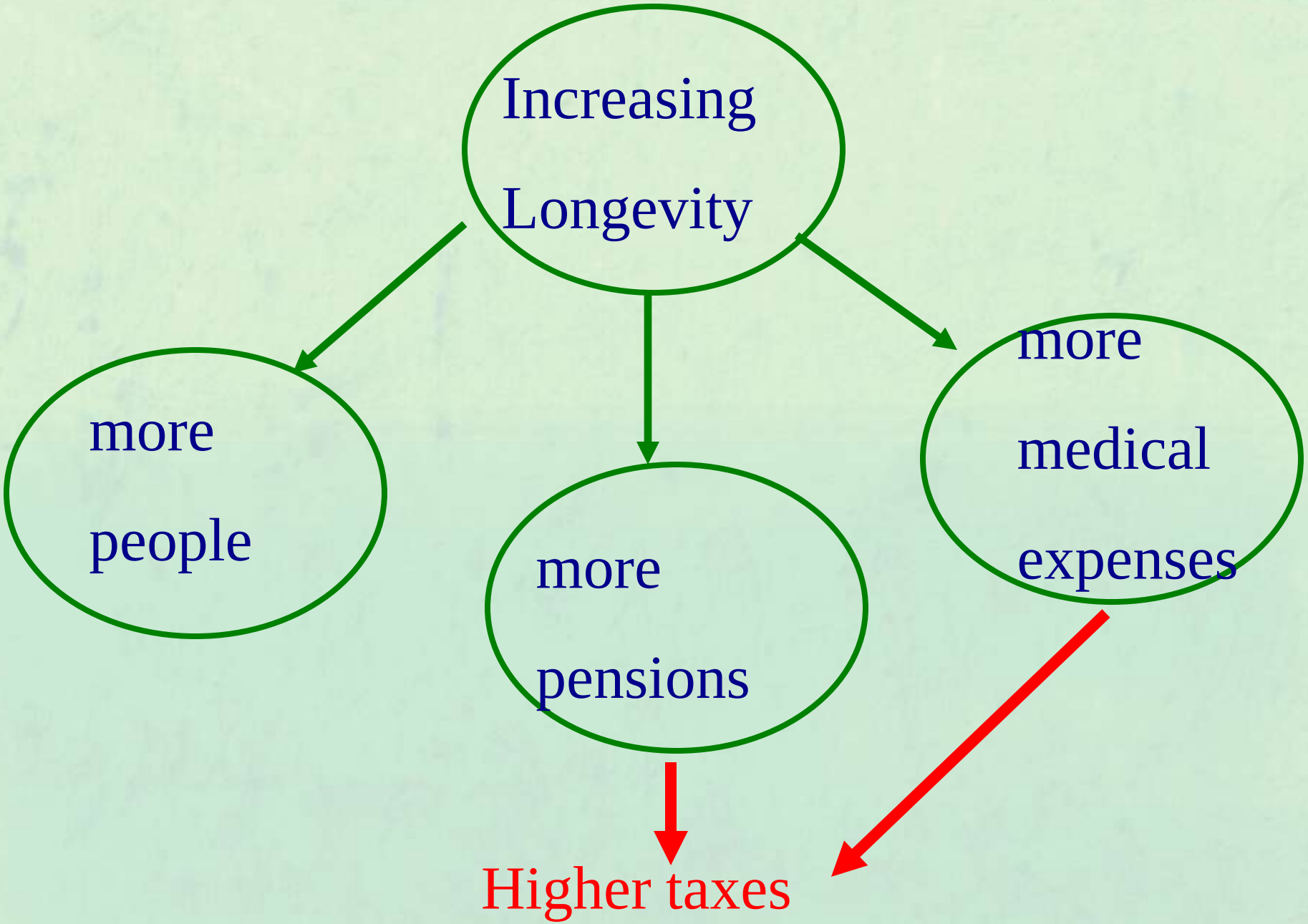
Increasing
Longevity
more
people
more
pensions
more
medical
expenses
Higher taxes

"No government can exist without taxation. This money must necessarily be levied on the people; and the grand art consists of levying so as not to oppress."

Frederick the Great

The contention of this talk is that in a world of increasing longevity, the way we tax ourselves has an unexpected consequence….

…..it lowers home-ownership rates among younger people.

It is possible that most young people, including those on the lowest incomes, would be better off by raising the age they get a pension because it will lower their taxes and make home-ownership easier.

Furthermore

the failure to adjust the taxation of interest income for inflation provides incentives for landlords to invest in residential housing and significantly accentuates the problems for younger households.

Where to begin?

Franco Modigliani

(1918-2003)

Nobel Prize 1985

Where to begin?

Life cycle saving

Aggregation

Mortgage markets

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Lifecycle Saving

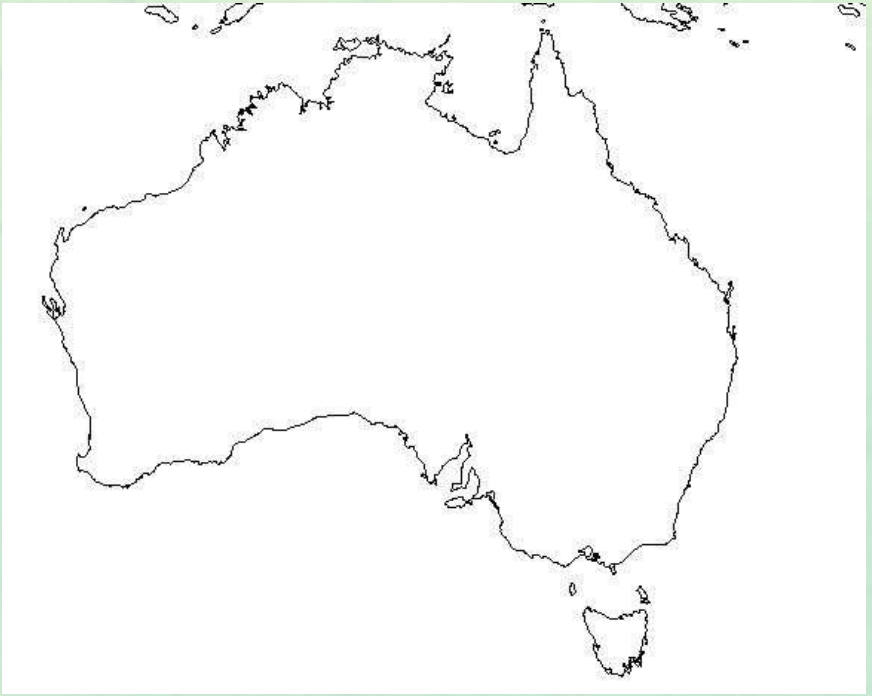
What type of houses do older people (65+) want as life expectancy increases?

"Ageing in place"

Big houses


FreeFoto.com

Example: Australia 65+s



83 percent 60+ live in single detached housing.

33% of those 65+ move in previous 5 years

Of 1000 healthy 65+ in 1994, 20 percent had entered a residential care facility by 2006

83% normal housing

Reasonably shifty

Victorian values

Example: USA 65+s

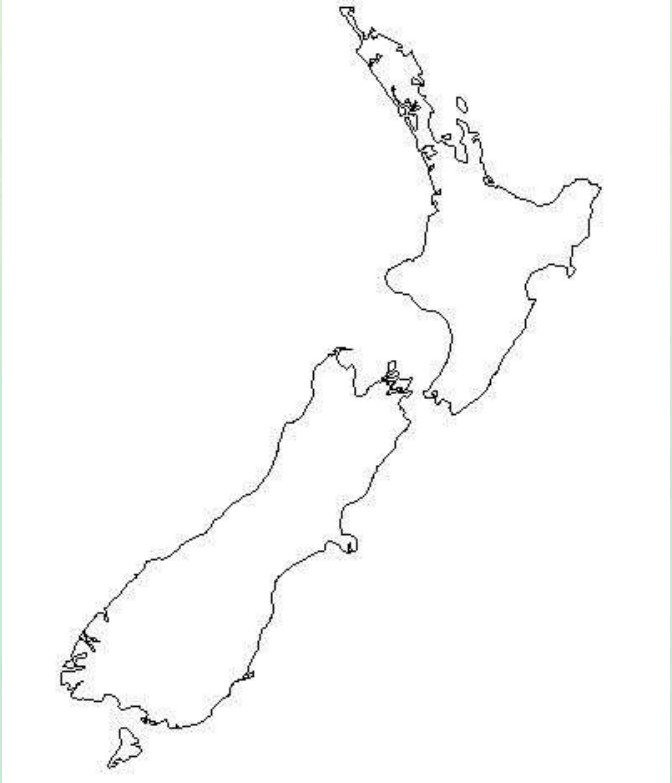
70-85 percent 70+ live in single detached housing.

60% of those over 60 in same house as when 60

70-85% normal housing

Not so shifty

New Zealand



Older people own.

House size is increasing.

Moderately shifty.

90% couples, 80% singles own their homes

9% increase in fraction owning 3bed house, 1996-2006

48% of hh aged 65 in 1991 and alive in 2006 were in same houses

In 1996

59% of 65+ lived in 3+ bedroom houses

In 2006

68% of 65+ lived in 3+ bedroom houses

=> 9% increase living in bigger houses

33% 2 bdrm 1996

26% 2 bdrm 2006

65-84	61=>70%
85+	44=>48%
Couples	67=>77%
Singles	36=>44%

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How does increasing longevity affect younger people?

Increasing Longevity

more people

more pensions

more medical expenses

Higher house prices

Higher taxes

More people

Basic Statistics NZ projections 2006 to 2050

Longevity increases from 78/82 (m/f) to 84/88

Population 65+ increasing from 510,000 to 1,350,000

Population <65 is fairly stable: 3,700,000 to 4,100,000

Hence “elderly” fraction increases from 12% to 25%

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More pensions

Treasury NZ projections 2006 to 2050

Pension expenditure increases from 4% – 8% GDP

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More medical expenditure

Treasury NZ projections 2009 to 2050

Medical expenditure increases from 6.9 to 10.7% GDP

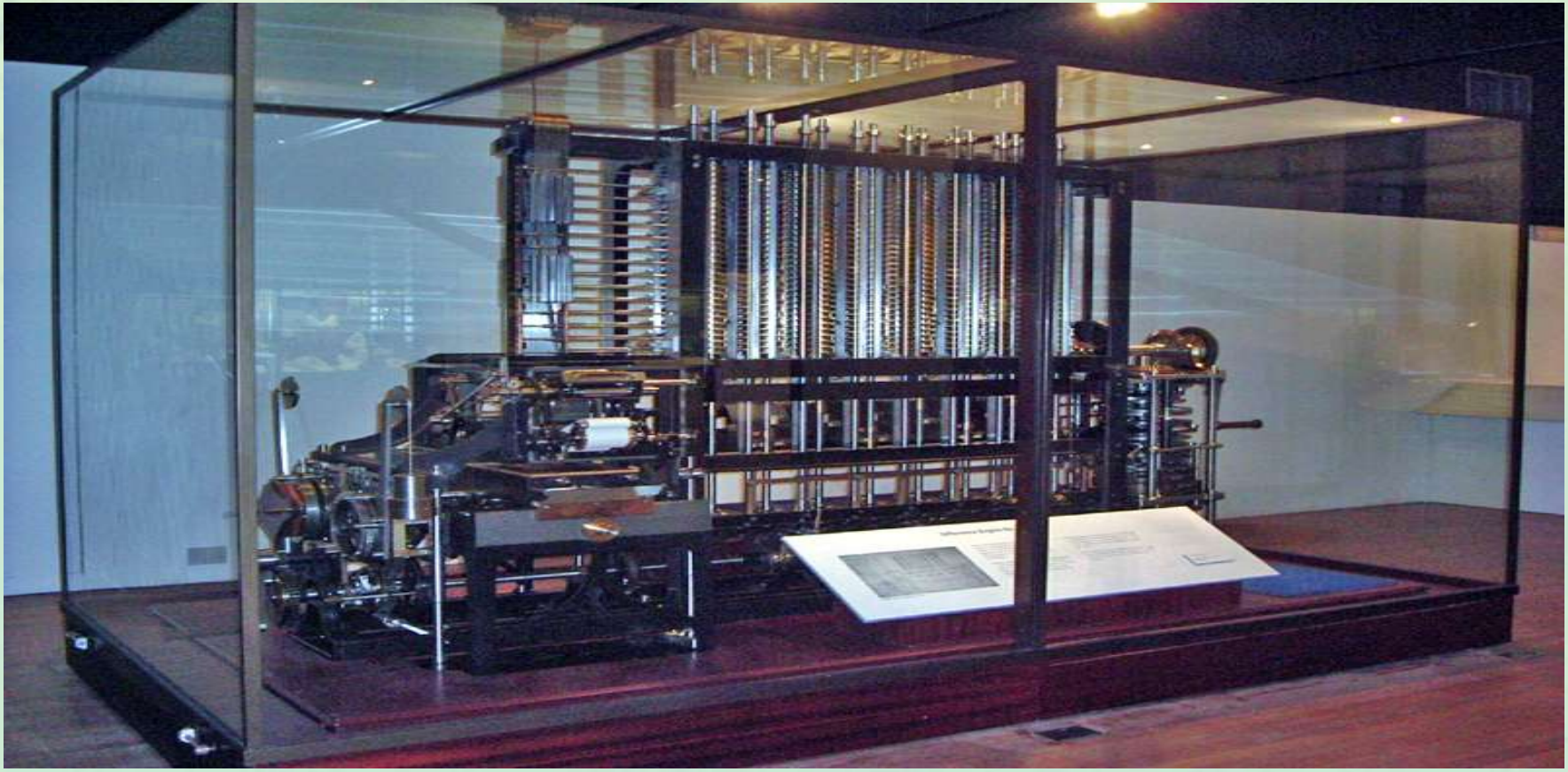
Only small fraction is due to ageing.

So how do can we calculate the effects on the housing market?

- We need to take into account:
  - increasing longevity means a larger total population
  - elderly people are asset rich and live in large houses for longer.
  - increasing longevity may mean higher pension expenditure and taxation of working age people

- Households differ by income, age, and wealth
- Households can rent or buy different sized houses, or live at home
- Households choose housing anticipating future income, and future housing needs.
- They face realistic taxes and borrowing constraints
- Households all interact in a common housing market where prices and rents are determined by supply and demand

We need a computer model to calculate the overall effect of these various competing factors.



The model calculates optimal housing choices for each agent at each stage of their lives, given equilibrium prices (and price appreciation paths)

It then examines how these choices change as life expectancy increases by 10 years.

Based around 4 long term equations

1. Demand for rental housing
2. Total demand for houses (all sizes)
3. Supply of rental housing
4. Supply of houses, normally elastic

Demand to own and demand to rent

Households climb a housing ladder

It can be largely represented by

- the height ultimately attained
- the time spent climbing/ spent at the top
- Any trading down in retirement

The speed of ascent depends on budget constraints

- the steepness of earnings,
- Inflation and interest rates
- Tax incentives
- Availability of credit from banks

Credit constraints are very important

Working age people are "squeezed out" of the housing market as they have less disposable income due to taxes and face competition from

(a) More older people

(b) investor-landlords.

Supply of rental housing

- Competitive landlords enter the market until the after-tax return from housing equals the after tax return from interest earning assets.

- Tax concessions matter

Interest earnings are taxed

Owners don't pay tax

Landlords deduct mortgage payments

Tax paid on rent

No tax on capital gains

Supply of houses

There are two main variations

- Housing supply is perfectly elastic – no increase in prices

- Housing supply has elasticity ~ 1 – prices increase 20%

•Variations with high prices or low prices considered

•Different elasticities for big and small properties

Tax Scenarios

1. real annual pension unchanged, taxes raised to pay more additional old people

2. No new taxes: total pension expenditure is unchanged, so average annual rate falls. People have to save for themselves

Solution

The solution is a set of …..

- rents
- prices for different sized houses
- property appreciation rate

….that equate the market

I use the equilibrium prices to calculate …..

- Who rents, and shares, by stage of life
- Homeownership rates
- Demand for small and large houses
- Lifetime welfare by income

Results

- Longevity has small effects on peak housing quality
- This reflects the tax incentives to accumulate wealth in housing
- The time spent in peak housing changes as longevity increases

(a) more retired people live in big houses

(b) more young people rent and live in small houses

	Perfectly elastic supply (Prices constant)	Elastic Supply (Prices rise 20%)
No increase in total pensions No new taxes	Young owning: +2% Young large: +1% Old large +29% % new houses large 90%	Young owning: -6% Young large: -4% Old large +32% % new houses large 100%
Pension spending rises New labour taxes	Young owning: -6% Young large: -7% Old large +30% % new houses large 80%	Young owning: -16% Young large: -9% Old large +28% % new houses large 88%

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Summary: in the model increasing longevity

reduces the fraction of young (25-45) households owning by 16 %

reduces the fraction of young households in large houses by 9%

increases the fraction of older households in large houses by 30%

requires 80- 90% of new houses to be large

Approximately half of the effect comes from taxes increase, and half from prices

Why do retired people live in big houses as longevity increases?

1. They lived in big houses in middle age
2. They are healthier for longer (and there are 2 of them)
3. The financial incentive to trade down is smaller.

In Table 6, increasing longevity by 8 years raised fraction living in large houses by 30 %

In NZ data: fraction 65+ living in 3brm houses increased 9% between 1996 and 2006

Why do young people delay buying a big house?

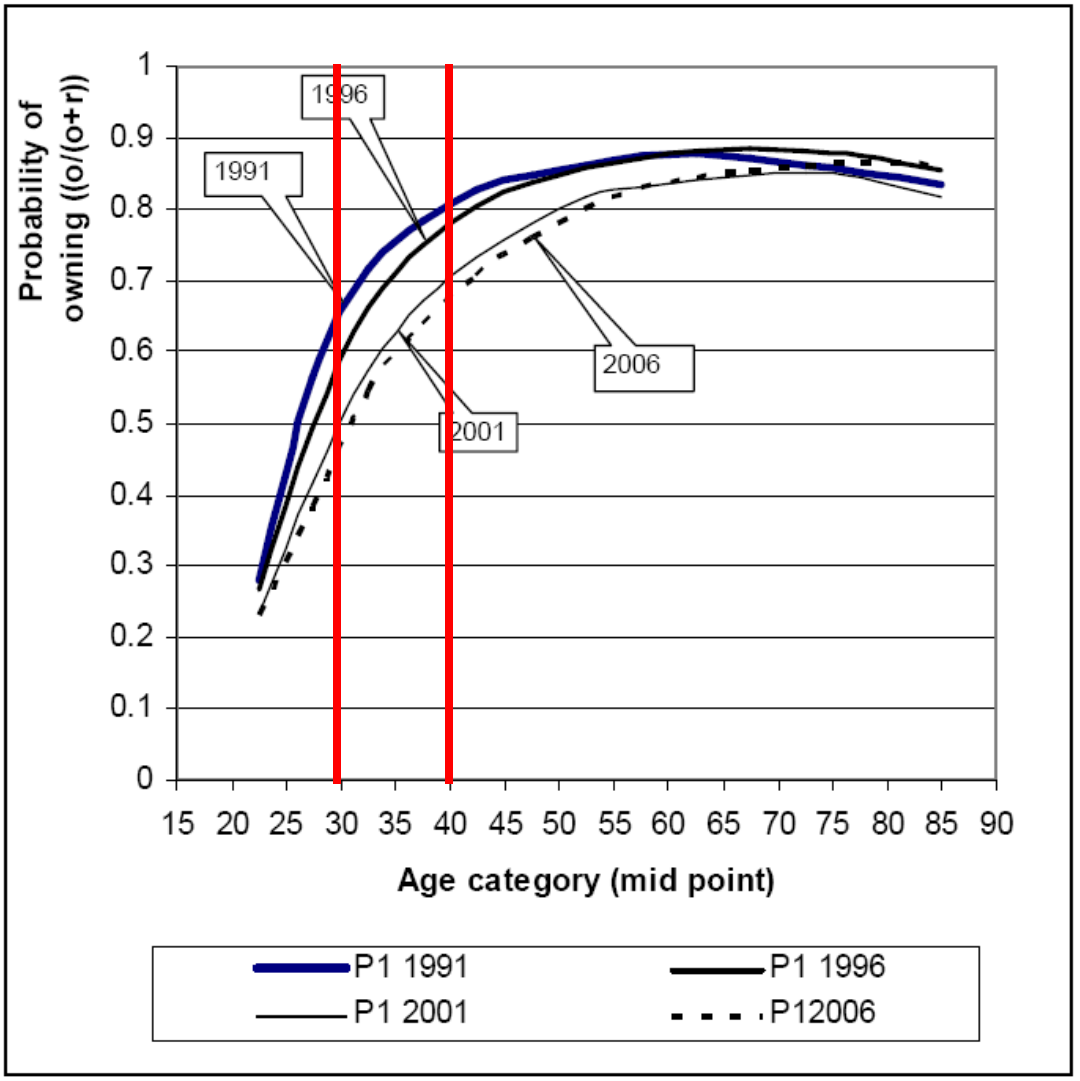
Lower after tax incomes and high house prices

(But in some scenarios the tax incentives to buy large houses as a saving vehicle dominate)

A few NZ facts

Homeownership rates for 30 yr olds have declined by 20% since 1991

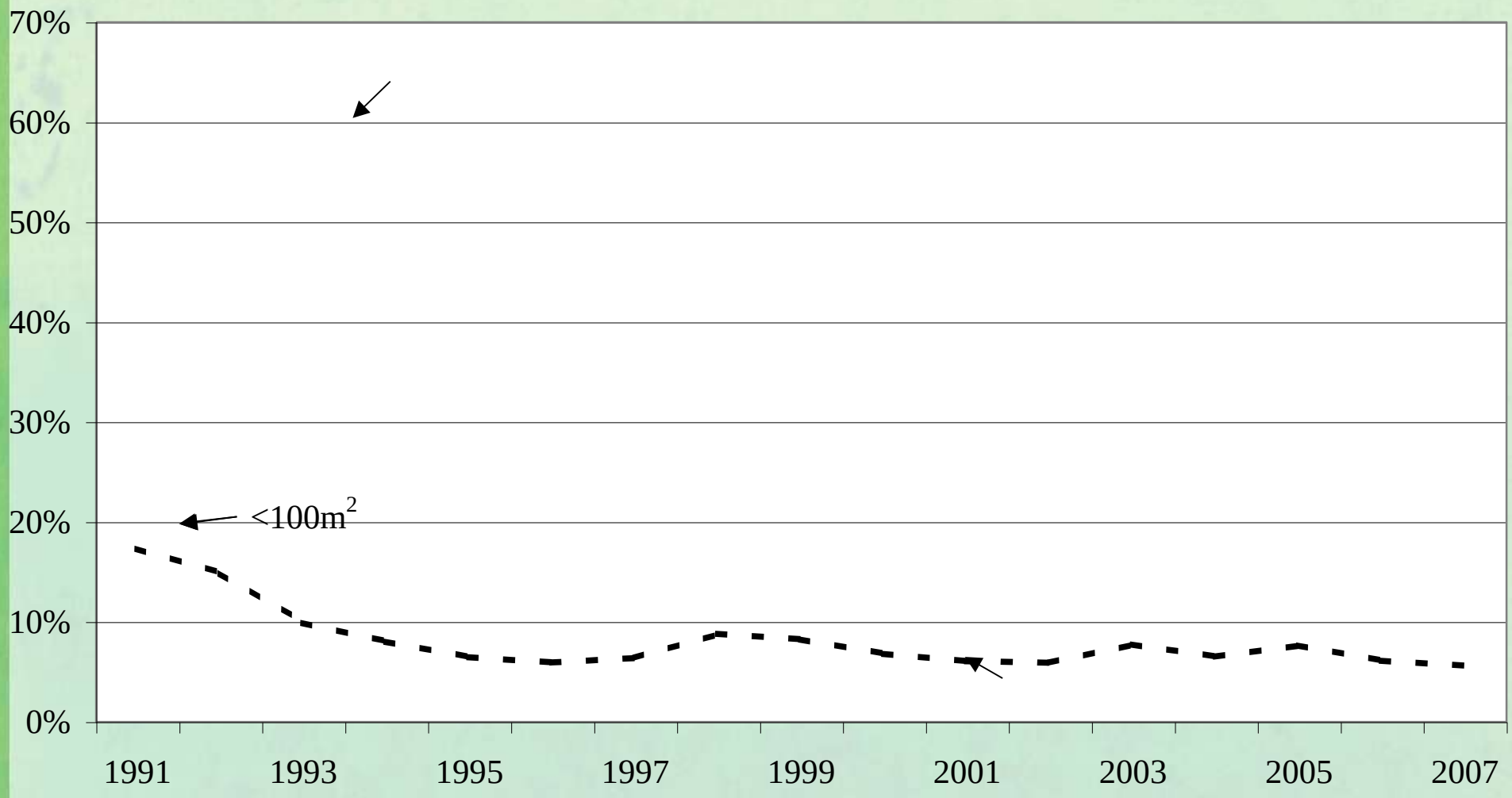
Figure 3. The proportion of home owners by age of the household referen person 1991 to 2006. Upper bound (p_1)



Source: Statistics New Zealand. Special tabulations from the 1991, 1996, 2001 and 2006 censuses of population and dwellings.

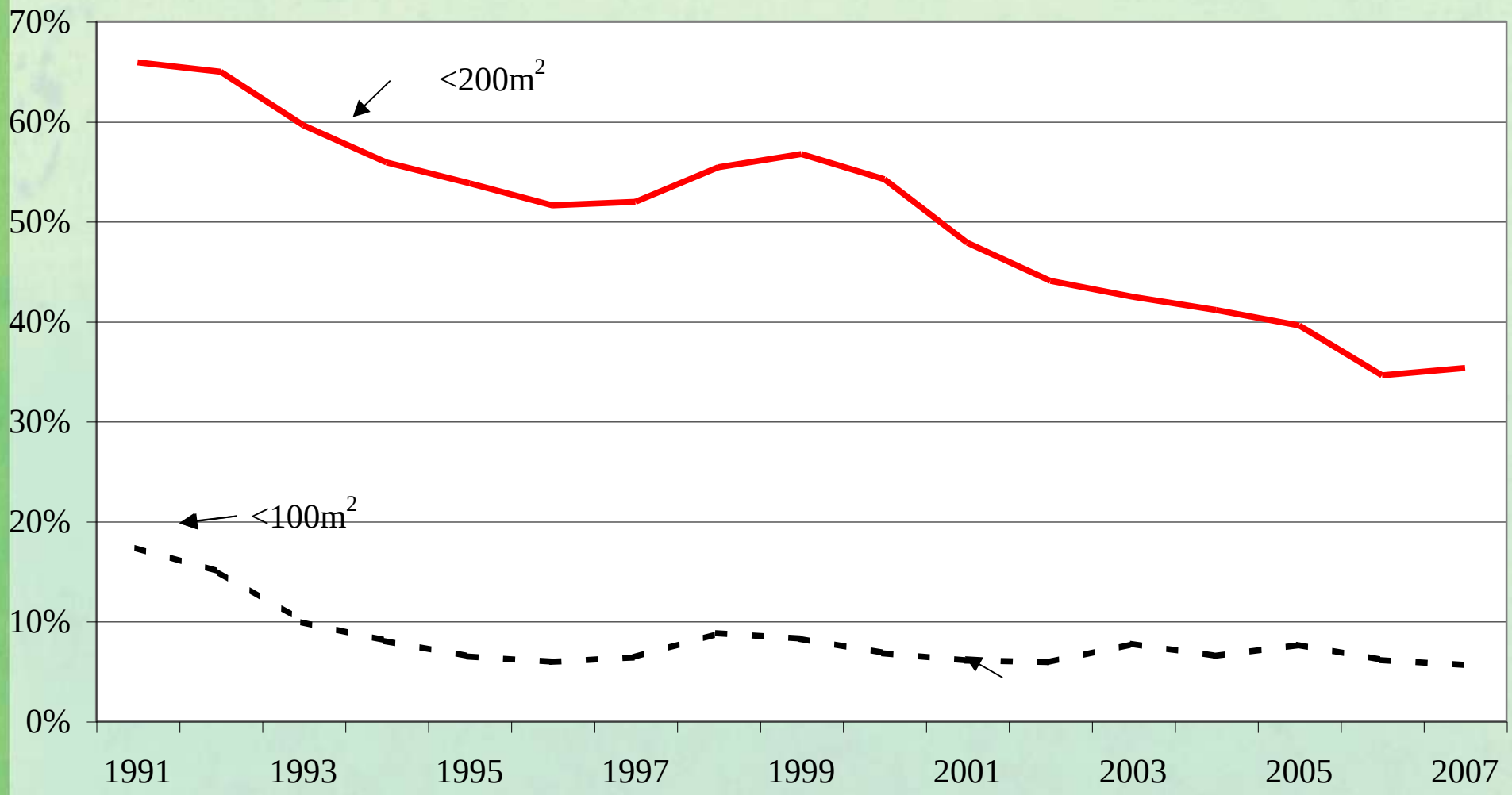
40 yr old down 14%

Most new houses are big houses



Most new houses are big houses

Floor size of new residential construction in NZ 1991 - 2007



Will higher taxes/ longer pensions make people better off?

The model suggests all households have higher lifetime welfare if pensions and taxes are not increased and they save for their own retirement

Low income: higher taxes hurt a lot when they have very low incomes while young

Middle income: higher taxes delay the time until they can buy a house

High income: they pay more in tax than they get in pensions.

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How does the tax system affect housing?

Inflation, interest rates, tax

The inflation component of interest earnings is not income

•This paper is about an arcane topic: the way the inflation component of interest rate payments and receipts should be treated.

•If you lend money and there is inflation, your money is worth less when it is returned than when it was lent.


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7% interest


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2% inflation

The inflation component of interest payments is saving as it reduces real debt.

7% interest


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2% inflation

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5% interest

2% inflation

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saving

5% interest

2% inflation

Inflation distorts the measurement of

Saving

The current account

Housing affordability

The average fixed mortgage is $133000

inflation rate has been 3%

=>$4000 of average annual mortgage payment is saving.

In 2007, total mortgages were $145 billion

⇒$4.35 billion not counted as saving!

⇒Netting out savers, this is 2% GDP

The New Zealand government taxes nominal interest earnings even though part of these are compensation for inflation (the widow's tax.)

This penalises those who save by lending money.

Tax rates on real interest are 70% higher than the statutory rates.

When inflation increases, nominal interest earnings increase but real after tax returns decrease.

This may cause people to save less prior to retirement because after tax real interest rates are low.

It also causes them to substitute towards tax-advantaged investments, which in NZ include capital-gain tax free residential property.

This reduces home ownership rates among young households who borrow to buy houses.

1. They face more intense competition from higher income middle aged households who wish to buy property to avoid the tax on the inflation component of interest income.

2. These landlords raise prices or lower rents

=>They have an incentive to delay home purchase until much later in life.

Income tax (Jacob Viner, Martin Feldstein)

"No acceptable concept of income will include as income the rise in monetary value of a capital asset which represents merely the fall on value of the monetary unit and is not indicative of increased purchasing power in general" (1923)

The model suggests…

A 1% increase in inflation can lower young household's home ownership rates by 8%

…..if real interest rates are under 5%.

The real problem is the "widow's tax" – the tax on the inflation component of interest income.

The interest component of mortgage payments should not be tax-deductible

By exempting the inflation component of interest from tax, ….

Grandma would not be excessively taxed

Much less incentive for middle aged to become landlords

homeownership rates would be less affected by inflation

(The tax raises very little due to excessive mortgage deductions)

Solving the excessive taxation of savers/subsidy to landlords will reduce the tax distortions on the housing market.

Solution similar to capital gains tax, but doesn't excessively tax savers for inflation

But increasing longevity will still cause a decline in homeownership rates.

Conclusions

(a) An unintended consequence of our pay-as-you-go tax/pension system be its effect on young people's homeownership rates as longevity increases.

(b) Younger cohorts of all incomes may prefer lower taxes and lower pensions/ higher age of entitlement to avoid delaying home ownership.

(c) The effects on homeownership rates - and on savers - could be alleviated by eliminating the tax on the inflation component of interest income.

Summary Haiku

"The young pay taxes

So the old live in mansions

They wanted when young".