Introductory Module to Economics of Ageing

Gentle Introduction to how to use Economics to influence public policy

Economic Research Institute of Northern Ireland
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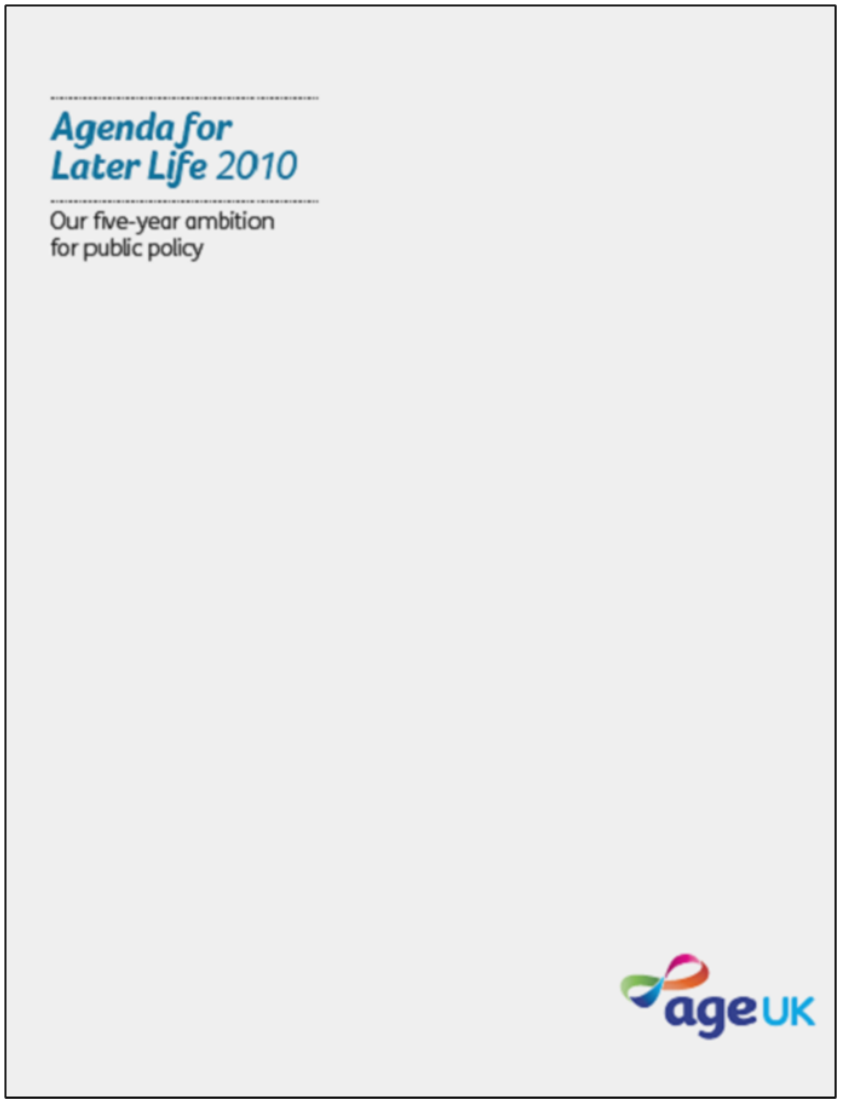
Economics and the Agenda for Later Life strategy



Economics and the Agenda for Later Life strategy

Six challenges and two additional themes:

- Equal respect
- Support to be independent
- Enough money
- Feeling well
- Taking part locally
- Thinking global

- Lifetime neighbourhoods
- Homes for life

Economics can contribute to all these policy areas

Equal respect

Economic analysis of age discrimination, especially in:

- Labour market
- Access to services

Equal respect

We have to banish the ageism in the workplace that costs an estimated up to £31 billion per year due to lost GDP.

(Minister for Women and Equality Harriet Harman, 2010)

This represents around 2% of total UK GDP -equivalent to, for example:

- 68% of the UK Defence budget
- 54% of the UK Education budget
- 3 times the Northern Ireland's block

Equal respect

Economics can also help demolish some myths about older workers

Equal respect

Myth 1: Labour productivity does NOT diminish with age

> *We find that establishment productivity increases with the share of employees until the age of 50-55 and only decreases slightly afterwards. Our findings suggest that previous estimations are biased because they either do not take into account endogeneity, time dependencies, or crucial information correlated with age shares and productivity.*

Source: Age and Productivity - Evidence from Linked Employer Employee Data, Goebel and Zwick, 2009

ZEW - Centre for European Economic Research Discussion Paper No. 09-020

Equal respect

Myth 2: Increased employment rates amongst older workers do NOT crowd out younger individuals from the labour market

> *Even controlling for GDP and its variations, there remains a positive association between employment rates of the old and employment rates of the young. These correlations are not necessarily causal effects. They suggest simply that in the long term in the UK one does not find changes in employment rates of one age group at the expense of the other.*

Source: Releasing Jobs for the Young? Early Retirement and Youth Unemployment in the UK. Banks et al., 2008
In: Social Security Programs and Retirement around the World: The Relationship to Youth Employment
Jonathan Gruber and David A. Wise, editors (p. 319 - 344). National Bureau of Economic Research

Equal respect

Myth 3: Increased early retirement does NOT contribute towards releasing jobs for the young and thus reducing youth unemployment

> *We find no evidence that changes in employment rates of older workers adversely affect the employment rate of the young.*
> *Overall we find no evidence of long-term crowding-out of younger individuals from the labor market by older workers.*

Source: Releasing Jobs for the Young? Early Retirement and Youth Unemployment in the UK. Banks et al., 2008
In: Social Security Programs and Retirement around the World: The Relationship to Youth Employment
Jonathan Gruber and David A. Wise, editors (p. 319 - 344). National Bureau of Economic Research

> *Our empirical analysis does not support the hypothesis that employment of the young and old are substitutes and finds some minor complementarities. This suggests that encouraging later retirement will have no adverse effect on youth employment*

Source: Retirement of older workers and employment of the young

Kalwij et al., 2009

Equal respect

Myth 4: Older workers lag increasingly less behind than younger works regarding years of formal schooling

> *By 2030, a retiring 65-year old will have 13.5 years of schooling, while, if current trends continue, an entering 25-year old might have around 14.0 years, further closing the education gap of just half a year.*
> *The slowdown in growth of educational attainment implies that for the first time in history, new labor force entrants are not substantially more educated than those retiring from the labor force.*

Source: How Longer Work Lives Ease the Crunch of Population Aging. Maestas and Zissimopoulos, 2009.

Rand WP 728. Rand Corporation

Equal respect

Myth 5: Older people are not as familiar with IT technology as younger workers; hence, their productivity is smaller in IT-intensive jobs

> *There is no significant interaction between the proportion of older workers and IT intensity, thus, older workers do not obstruct IT-enabled labour productivity.*
> *Moreover, the proportion of older employees working predominantly at a computer is positively and significantly associated with labour productivity.*

Source: Do Older Workers obstruct IT-enabled Productivity? Firm-level Evidence from Germany

Bertschek and Meyer, 2009

Equal respect

With regards to access to services, Economics can contribute with appropriate *direct and indirect costing* of eliminating age discrimination:

> *It is people aged over 65 who are receiving lower cost support packages compared to younger adults.* ***Eliminating age discrimination in mental health services would require extra expenditure of around £2.1 billion.***

Age Discrimination in Mental Health Services. Beecham et al., 2008
PSSRU Discussion Paper 2536. Personal Social Services Research Unit.

> *Older people would on average have a 10% reduced chance of receiving social care services, other things equal, than younger people... levelling up would require around* ***£0.85bn per year.***

The Costs of Addressing Age Discrimination in Social Care.

J. Forder, PSSRU Discussion Paper 2538. Personal Social Services Research Unit. 2008

Support to be independent

Economics can contribute with detailed analysis of:

- Public monies spent on older people
- Efficiency and value for money studies of this spending

Most councils don't know enough about the costs of their ageing population, or the savings from preventive and collaborative action, to take important decisions

Under pressure. Tackling the financial challenge for councils of an ageing population.

Local government report. Audit Commission, 2010

Support to be independent

An example for Northern Ireland:

Public Expenditure on Older People

Policy Area	**(£)**
Social Security Benefits	2,646,865,000
Health	839,000,000
Housing Benefit	22,212,558
Lone Pensioner Allowance	2,687,942
Warm Homes Scheme	9,800,000
Concessionary Fares	14,000,000
Safety	2,250,000
Training	1,900,000
Total Public Expenditure	3,538,715,500

Source: Iparraguirre, 2010

Support to be independent

Econometrics can inform cost-effectiveness analysis:

Table 31: Cost Model

		Main Effects Model - Without Interactions				Interaction Model			
	Variables	Coeff.	Std err	Z	Exp (Coeff)	Coeff.	Std err	Z	Exp (Coeff)
Episode Characteristics	Age in 2003	-0.001	0.002	-0.354	0.999	0.000	0.002	0.271	1.000
	Gender	0.058	0.038	1.544	1.060	0.060	0.037	1.622	1.062
	Lives alone	0.067	0.035	1.945	1.069*	0.004	0.037	0.098	1.004
Descriptors of IC Service	Acute Admission Avoidance Service	-0.069	0.059	-1.158	0.933	-0.130	0.061	-2.139	0.878*
	Type of IC	1.040	0.056	18.603	2.829**	1.035	0.138	7.500	2.815**
	Transferred before end of IC episode	-0.114	0.094	-1.207	0.892	-0.330	0.105	-3.138	0.719**
	Completed IC episode	0.298	0.087	3.427	1.347**	0.283	0.087	3.264	1.327**
	Other IC Outcome	-0.106	0.110	-0.968	0.899	-0.130	0.109	-1.186	0.878
	Patient Died (Reference. Group)								
	Stay duration	0.021	0.001	30.307	1.021**	0.022	0.001	30.022	1.022**
Descriptors of IC-related Services	Referral – Primary	0.089	0.055	1.623	1.093	0.123	0.055	2.239	1.131*
	Referral – Hospital	0.128	0.069	1.847	1.137	0.128	0.069	1.850	1.137
	Referral – Other	0.240	0.115	2.086	1.271*	0.263	0.114	2.314	1.301*
	Referral – Social Workers (Reference Group)								
	Alternative to IC – Other	-0.351	0.042	-8.436	0.704**	-0.421	0.044	-9.672	0.656**
	Alternative to IC - Home	-0.157	0.041	-3.808	0.855**	-0.181	0.041	-4.368	0.834**
	Alternative to IC – Hospital (Reference Group)								

		Type of IC service	
		Admission avoidance	Supported discharge
Base case results (case-study IC costs)	Admit to IC	£3,329	£3,995
	IC not available	£3,614	£3,806
	Difference in cost	-£285	+£189

Source: A National Evaluation of the Costs and Outcomes of Intermediate Care for Older People. Intermediate Care National Evaluation Team, 2006

Support to be independent

Economics can highlight ‘partially hidden’ consequences of public expenditure cuts.
Let’s see this positive report about access to services by older deaf people in Scotland:

> *The primary message from the focus group discussions was a clear one. Specialist services, such as Deaf Connections, provide valuable support to older Deaf people to successfully access and use health and social care services. The support offered by specialist services can empower Deaf older people to be actively involved and participate in the shape and delivery of their own services. Communication and cultural needs are understood and met and in this way, specialist services provide a key link between older Deaf people and health and social care service providers.*

Source: An exploration of access to health and social care services by older deaf people in Scotland

Donaldson and Cook. Royal Bank of Scotland, Centre for the Older Person’s Agenda. Queen Margaret University, 2007

Support to be independent

This year's review identified that two of the risks identified two years ago still remain. They are:

- *Diversification of Services and Funding Streams - The funding for many of our services is based on an annual renewal basis and as such, leads to uncertainty.*
- *Financial Stability - The need to continue working on reducing operating deficits and bring about greater financial controls.*

Source: The Glasgow and West of Scotland Society for the Deaf operating as DEAF CONNECTIONS 2008-9 Annual Report and Financial Ststements

Economics can shed light on the risks the work Deaf Connections (and other similar charities) may face due to across-the-board budget reductions or 'efficiency saving' exercises.

Support to be independent

Economics can do this by designing older-people focused budget scenarios for Government's programmes resulting from alternative fiscal decisions:

Central Government 2010/11-2013/14 Spending Review

Central Government	Resource (Current) DEL					Capital DEL				
	£ million 2010-11 (real terms)	Select average annual % real growth rates	£ million 2013-14	average annual % real growth	% real growth 2010-11 / 2013-14	£ million 2010-11 (real terms)	Select average annual % real growth rates	£ million 2013-14	average annual % real growth	% real growth 2010-11 / 2013-14
Children, Schools and Families	51,300	-0.5	50,534	-0.50	-1.49	6,700	PB Report	3,534	-19.20	-47.25
Health	104,000	0	104,000	0.00	0.00	4,600	PB Report	2,427	-19.20	-47.25
Transport	6,400	PB Report	6,171	-1.21	-3.58	7,300	PB Report	3,851	-19.20	-47.25
Business, Innovation and Skills	19,200	PB Report	18,513	-1.21	-3.58	2,300	PB Report	1,213	-19.20	-47.25
CLG Communities	4,500	PB Report	4,339	-1.21	-3.58	6,400	PB Report	3,376	-19.20	-47.25
CLG Local Government	26,300	PB Report	25,359	-1.21	-3.58	100	PB Report	53	-19.20	-47.25
Home Office	9,800	PB Report	9,449	-1.21	-3.58	800	PB Report	422	-19.20	-47.25
Justice	9,400	PB Report	9,064	-1.21	-3.58	700	PB Report	369	-19.20	-47.25
Law Officers' Departments	700	PB Report	675	-1.21	-3.58	0	PB Report	0	-19.20	0.00
Defence	36,700	PB Report	35,387	-1.21	-3.58	8,800	PB Report	4,642	-19.20	-47.25
Foreign and Commonwealth Office	1,600	PB Report	1,543	-1.21	-3.58	200	PB Report	106	-19.20	-47.25
International Development	6,200	11	8,479	11.00	36.76	1,600	PB Report	844	-19.20	-47.25
Energy and Climate Change	1,100	PB Report	1,061	-1.21	-3.58	2,000	PB Report	1,055	-19.20	-47.25
Environment, Food and Rural Affairs	2,700	PB Report	2,603	-1.21	-3.58	600	PB Report	317	-19.20	-47.25
Culture, Media and Sport	1,700	PB Report	1,639	-1.21	-3.58	600	PB Report	317	-19.20	-47.25
Work and Pensions	9,800	PB Report	9,449	-1.21	-3.58	300	PB Report	158	-19.20	-47.25
Northern Ireland Office	1,200	PB Report	1,157	-1.21	-3.58	100	PB Report	53	-19.20	-47.25
Chancellor's Departments	4,200	PB Report	4,050	-1.21	-3.58	200	PB Report	106	-19.20	-47.25
Cabinet Office	2,400	PB Report	2,314	-1.21	-3.58	400	PB Report	211	-19.20	-47.25
Other[2]	5,400	PB Report	5,207	-1.21	-3.58	2,900	PB Report	1,530	-19.20	-47.25
Total (excl. Devolved Administrations)	304,600		300,992	-0.40	-1.18	46,600		24,582	-19.20	-47.25
	Resource Block		New Resource Block			Capital Block		New Capital Block		
Scotland	26,100		25,997	-0.13	-0.39	3,200		1,890	-16.10	-40.94
Wales	14,000		13,941	-0.14	-0.42	1,800		1,134	-14.27	-36.99
Northern Ireland	8,616		8,594	-0.09	-0.26	1,136		627	-17.95	-44.76

	2010-11	2013-14	Average annual % real growth	% Real growth 2010-11 / 2013-14
Total Northern Ireland Block (£ million - real terms)	9,752	9,221	-1.85	-5.44

Enough money

Economics can be used to analyse

- *spatial distribution*
- *determinants*
- *consequences*
- *interactions of,*

and

- *interventions (including costs) to tackle*

income inequality and poverty amongst older people.

Enough money

How much to leave older people out of poverty? An example from Northern Ireland:

Distributive and Fiscal Impact of Increasing Income of Older People in Relative Poverty

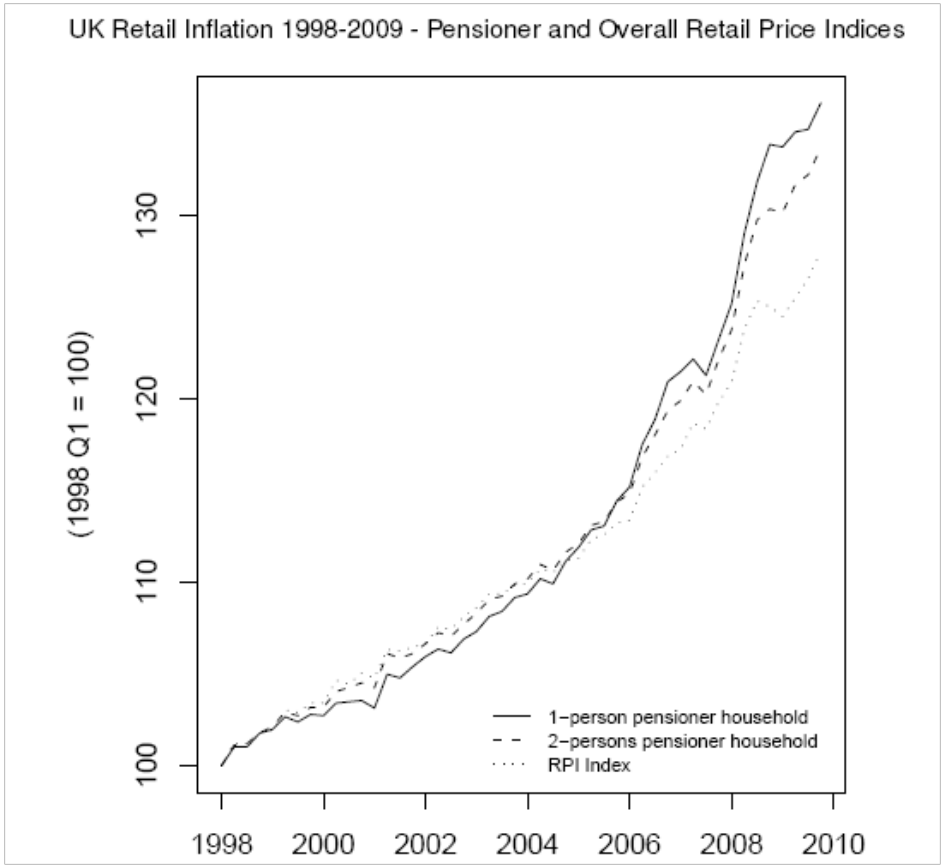
	Older People below Poverty Line	%	Fiscal Impact (£a year)
Currently	59,966	20.45	0
Increase in weekly income			
£5	56,925	19.42	790,660
£10	51,972	17.73	4,156,880
£15	47,397	16.17	9,803,820
£20	43,291	14.77	17,342,000
£25	40,671	13.87	25,083,500
£30	36,717	12.52	36,268,440
£35	33,894	11.56	47,451,040
£40	32,648	11.14	56,821,440
£45	30,951	10.56	67,895,100
£50	28,655	9.77	81,408,600

Source: Family Resource Survey

At the same time, in NI, between £62m and £74m go unclaimed every year in Pension Credit alone...

Enough money

We can also analyse in detail the consequences and spatial differences of the fact that pensioner households have been facing higher inflation than the average UK household...



Enough money

Economics can study particular aspects of poverty, eg food poverty:

Food Poverty (1 in 10 people aged 65+ is at risk of malnutrition in the UK - 1 in 7 in Wales)
The estimated cost of total malnutrition in the UK is £7.4 billion

How much of this is attributable to OP food poverty?
How much would it cost to eradicate this risk?

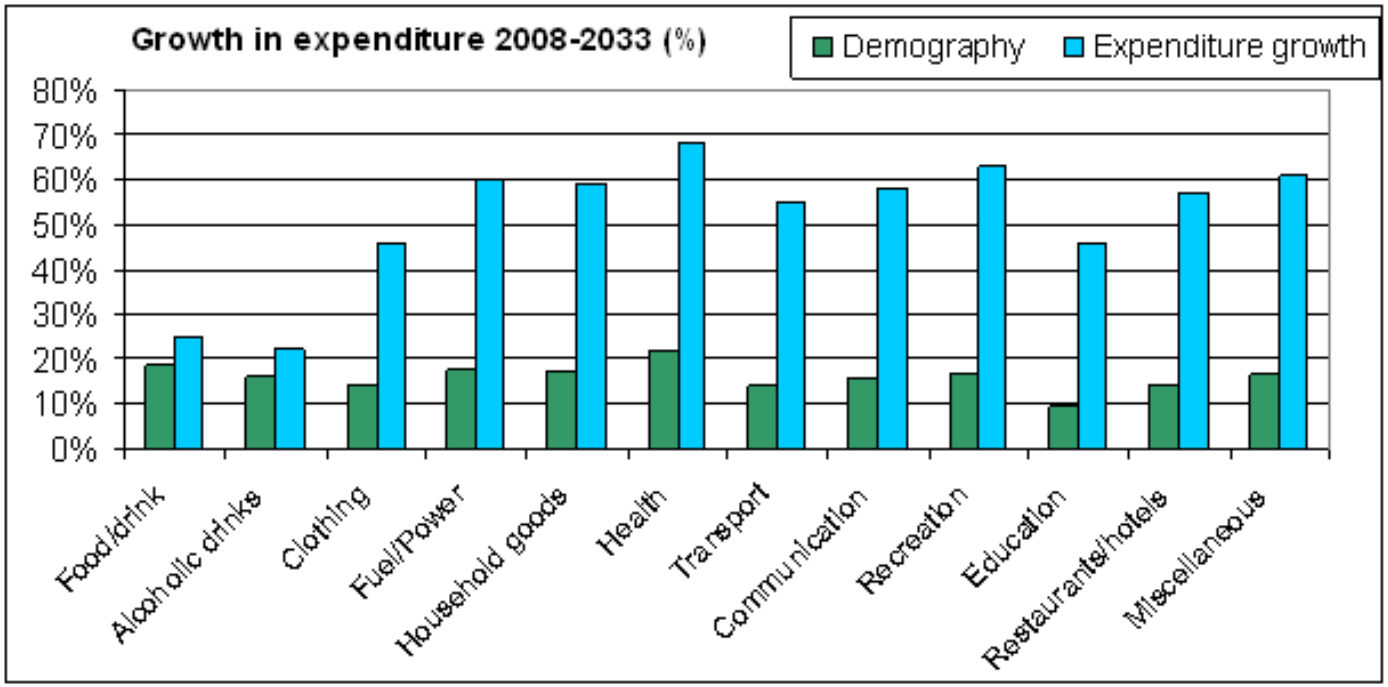
Enough money

...or fuel poverty:

- In Scotland, pensioners account for
  - 56% of the total number of fuel poor households and
  - 57% of the total number of households in extreme fuel poverty,
  - despite only accounting for 32% of all households.
- Economics can analyse the incidence (including distributional) of Winter Fuel Payment benefits

Enough money

There's also the yet untapped 'silver' or 'grey' market...



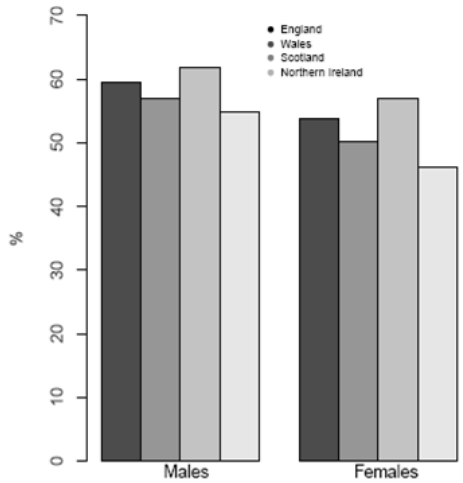
(Source: Is business ready for an ageing nation? Economic opportunities and challenges of ageing: Analytical paper

Department for Business Innovation and Skills, 2010)

Feeling well

Economics can inform the sector towards the attainment of this objective and to relate health with other policy objectives
For example:

Percentage of life expected to be spent free from Disability at 65 by UK Constituent Country and Gender, 2004-2006



With the levels of disability shown, more than three-quarters of the population do have disability-free life expectancy as far as the age of 68. If society wishes to have a healthy population, working until 68 years, it is essential to take action to both raise the general level of health and flatten the social gradient (The Marmot Review, 2009, p. 18)

Feeling well

Another example:

£15.9 million a year is lost income for carers of older people suffering from dementia in Northern Ireland who have to give up employment or cut back their work hours, representing a loss of £2.8 million in taxes paid to the Exchequer

...and the number of people with dementia in NI is expected to increase by 200% by 2051 (against 154% in the UK as a whole)

Feeling well

Economics can provide an added fiscal dimension (on top of the moral, human, policy, etc ones) to reducing health inequalities amongst older people across the UK

For example, a background paper to the Marmot Review of Health Inequalities in England and Wales estimated that halving the existing social disparities would:

- prevent almost 90,000 premature deaths a year
- which represent just over 900,000 saved life years

amongst the 60+ population alone.

The paper does not estimate the economic gains of such achievement by age group, but for the 30+ population the figure is between **£222 billion and £273 billion**, that is, between **12 and 15 per cent of GVA**

Source: The economic benefits of reducing health inequalities in England and Wales. Mazzuco et al., 2010

Background study to the Strategic Review of Health Inequalities in England Post 2010 by Sir Michael Marmot

Feeling well

Economics can also provide cost analysis of alternative treatments available to older people. For example, a study on hip fractures amongst older people with and without dementia estimated substiantial cost savings if 'best practice' in this field becomes the norm:

Table 1. Summary of average expenditure by psychiatric state, £m

	Well (£m)	Dementia (£m)
Base case		
Hospital stay	121	282
Discharge care	502	756
Total	623	1037
Reduction in days to surgery to 24 hours		
Hospital stay	113	271–282
Discharge care	502	756
Total	614	1027–1037
Geriatric orthopaedic rehabilitation unit (GORU)		
Hospital stay	142–145	312–317
Discharge care	502	756
Total	644–647	1068–1072
Geriatric hip fracture programme (GHFP) on an orthopaedic ward		
Hospital stay	79–91	216–231
Discharge care	501	742
Total	581–592	957–973
Psychiatric liaison		
Hospital stay	123–129	270–279
Discharge care	502	756
Total	624–631	1025–1035
Hospital at home (HAH)		
Hospital stay	93	255–270
Discharge care	421	680–721
Total	514	935–991
Integrated care pathways (ICP)		
Hospital stay	115–137	273–300
Discharge care	501–502	748–756
Total	616–638	1029–1048

Maintaining good health for older people with dementia who suffer a neck of femur fracture

Henderson et al., 2007. Personal Social Services Research Unit. London School of Economics and Political Science

Feeling well

Another example of cost saving analysis now about antipsychotic drugs prescription to older people

> *Delivering older people's mental health services to care homes improves quality of life, reduced prescribing of antipsychotic drugs, use of GP time and days spent in hospital... reducing prescribing antipsychotic drugs to people with dementia to clinically indicated levels may save* ***£14 million per year***

Always a Last Resort: inquiry into the prescription of antipsychotic drugs to people with dementia living in care homes.

All-Party Parliamentary Group on dementia. 2008

Feeling well

A final example, now on substitution between long-term care and hospital utilisation by older people

> *For each additional £1 spent on care homes, hospital expenditure falls by £0.35. Also, £1 additional hospital spend corresponds to just over £0.35 reduction on care home spend.*
> *A transfer of £1 from the health to social care budget would not affect total aggregate public spending. More care home services would mean lower demand on hospitals, but this cost saving (£0.35) would be matched by the increased cost pressure (of £0.35) on social care due to the reduction in hospital services. Overall, social-care utilisation would be higher and hospital utilisation would be lower, but total joint expenditure would be the same. So on just a total public cost-saving basis there is no case for a transfer of resources...*

Feeling well

...However, cost is only part of the story. Changes in utilisation also have impacts on the outcomes of people using services, that is, their health and well-being. A transfer of resources is generally desirable if the marginal gain in outcomes of a small increase in cost-weighted social-care utilisation is greater than the gain in outcomes from the same cost increase in health care use.

Social-care outcomes are being produced at less than £20 000 for extra well-being outcome gain equivalent to one quality-adjusted life year (QALY). If the average marginal effect of hospital care was in the region (or higher) of £20 000 to £30 000 per QALY, commonly regarded as the acceptance threshold by National Institute of Health and Clinical Excellence (NICE), then the people in hospital that could be diverted into social care would likely experience outcomes in hospital at significantly higher cost than this £30 000 threshold.

On balance, it is highly plausible that people in the potential substitution range between health and social care will have better outcomes in the latter setting. In that case, resources ought to be transferred.

Long-term care and hospital utilisation by older people. An analysis of substitution rates.

J. Forder, Health Economics, 18, 1322-1338, 2009.

Taking part locally

Economics can provide evidence on social exclusion among older people
Social exclusion comprises five inter-related dimensions:

- exclusion from financial and material resources;
- exclusion from social relations;
- exclusion from cultural and civic activities;
- exclusion from basic services; and
- neighbourhood exclusion

Taking part locally

Table 3.1 The risk of exclusion by age group

Cell per cent

	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
50-59 years	**9**	**12**	**13**	**5**	**12**	9	**5**	3764
60-69 years	**11**	**10**	**10**	**6**	14	**9**	**6**	3041
70-79 years	**14**	11	**10**	**11**	15	11	**15**	2166
80+ years	**25**	**14**	12	**29**	14	**14**	**33**	930
All older people	*12*	*11*	*12*	*9*	*13*	*10*	*11*	*9901*

Source: The Social Exclusion of Older People: Evidence from the first wave of the English Longitudinal Study of Ageing

Final Report. Social Exclusion Unit. Office of the Deputy Prime Minister. 2006

Taking part locally

However, we know that:

> *Despite publishing 'A Sure Start to Later Life' and promising a lifetime approach to the problem, the government current strategy on tackling social exclusion makes no mention at all of older people*

Source: Age Concern. News Archive. More than a million older people shut out by government warns new report. 15 Feb 2008

Taking part locally

But Economics can be used to *persuade and raise awareness of* policymakers and service providers by producing cost-benefit analyses, scenario planning, sensitivity analysis, etc.

> *The solutions to social exclusion can be simple and relatively inexpensive -repairs around the home, better information and advice, social opportunities, accessible transport. Sometimes the solutions are more technical, like better data sharing and risk profiling. But* ***changes in the mindset of policymakers and service-providers are even more important.***

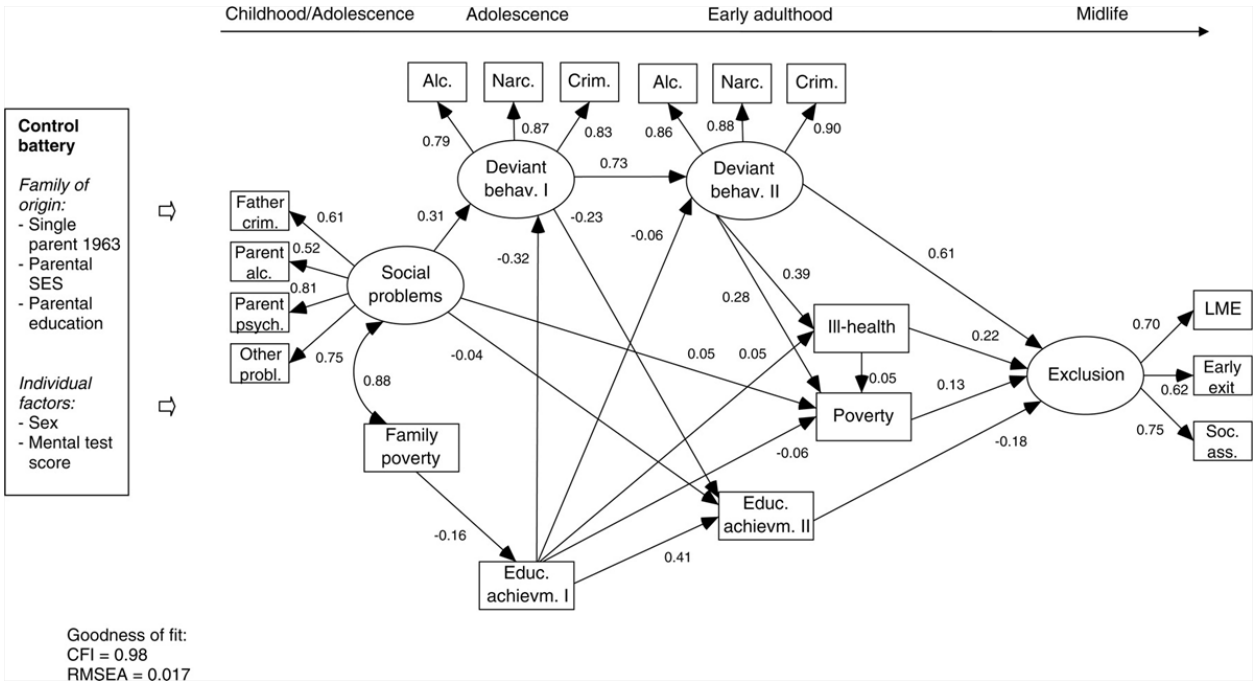
Source: Out of sight, out of mind. Social exclusion behind closed doors. Age Concern. 2008

Taking part locally

And also to analyse the interactions and compound effects of the different dimensions of social exclusion amongst older people

Taking part locally

Longitudinal pathways to social exclusion in Stockholm:



Source: Pathways to social exclusion - a life course study

Backman and Nilsson, European Sociological Review, Forthcoming

Taking part locally

Social exclusion of older people in the EU27 countries:

Age statistically significant

Table 8. Multilevel models 7-12 for economic–structural exclusion (index material deprivation + social rights), 2005[a] (dummy variable: 10% most/90% least excluded, population aged 55+; unstandardised coefficients and z-values)

Model	7		8		9		10		11		12	
	Level 1 + 2 + … GDP		Social protection expenditure		Income inequality		Life expectancy		GDP + Income ineq.+ Life expectancy		Income inequality + Regime type I	
	β	z-value	β	z-value	β	z-value	β	z-value	β	z-value	β	z-value
Intercept	8.00	20.3**	8.10	24.0**	5.12	9.4**	11.21	9.0**	5.98	4.4**	5.62	11.7**
Level 3 variables												
GDP (per capita; EU-27 mean=100; x 10)	-0.09	-3.0**	–	–	–	–	–	–	-0.02	0.7	–	–
Social protection expenditure (per capita, x €1,000)	–	–	-0.18	-4.9**	–	–	–	–	–	–	–	–
Income inequality (20/80)	–	–	–	–	0.40	4.2**	–	–	0.24	2.5*	0.23	2.5*
Life expectancy (in years, males 60+)	–	–	–	–	–	–	-0.21	-3.4**	0.00	0.0	–	–
Regime type I (dummy variables):												
Nordic	–	–	–	–	–	–	–	–	–	–	ref=0	
Continental	–	–	–	–	–	–	–	–	–	–	0.38	1.4
Anglo-Saxon	–	–	–	–	–	–	–	–	–	–	-0.17	0.4
Mediterranean	–	–	–	–	–	–	–	–	–	–	0.57	1.7*
Eastern Europe	–	–	–	–	–	–	–	–	–	–	0.22	0.8
The Netherlands	–	–	–	–	–	–	–	–	–	–	-0.45	0.9
Level 2 variables												
Living alone (1=yes; 0=no)	0.41	12.9**	0.42	13.0**	0.42	13.1**	0.42	12.5**	0.43	13.2**	0.43	13.3**
Household income in PPP (log)	-1.09	37.4**	-1.09	-37.1**	-1.08	38.6**	-1.09	-35.4**	-1.09	-37.3**	-1.09	38.9**
Level 1 variables												
Age 55-64	ref=0	–	ref=0	–	ref=0	–	ref=0	–	ref=0	–	ref=0	–
Age 65-74	-0.25	-7.8**	-0.26	-7.8**	-0.25	7.84**	-0.26	-7.5**	-0.26	-7.9**	-0.26	8.0**
Age 75+	-0.41	-11.0**	-0.41	-11.2**	-0.41	11.3**	-0.41	-10.6**	-0.42	-11.3**	-0.42	11.5**
Gender (1=male; 0=female)	0.03	1.1	0.03	1.2	0.03	1.1	0.03	1.1	0.03	1.2	0.03	1.2
Level of education (1–4)	-0.29	-16.9**	-0.29	-17.3**	-0.29	17.3**	-0.29	-16.6**	-0.30	-17.6**	-0.30	17.5**
Health status (1=very good – 4=(very) bad)	0.49	27.3**	0.49	-26.6**	0.49	27.4**	0.49	25.1**	0.50	-26.7**	0.50	27.7**
Fit indicators												
Intraclass correlation[b] level 3		0.30		0.30		0.30		0.30		0.30		0.30
Intraclass correlation[b] level 2		0.36		0.36		0.36		0.36		0.36		0.36
Residual ICC[c] level 3		0.05		0.04		0.05		0.06		0.04		0.02
Residual ICC[c] level 2		0.17		0.16		0.16		0.23		0.16		0.12
Proportion reduction ICC[d] level 3		0.82		0.87		0.83		0.80		0.88		0.92
Proportion reduction ICC[d] level 2		0.53		0.56		0.56		0.37		0.57		0.67
Proportion of total variance explained		0.30		0.34		0.33		0.29		0.36		0.37
No. of cases												
Level 1 (respondents)		58,397		58,397		58,397		58,397		58,397		58,397
Level 2 (households)		49,754		49,754		49,754		49,754		49,754		49,754
Level 3 (countries)		26		26		26		26		26		26

Source: Social exclusion of the elderly. A comparative study of EU member states

Jehoel-Gijsbers and Vrooman, ENEPRI Research Report 57, European Network of Economic Policy Research Institutes, 2008

Taking part locally

Social connectedness of older people and their area of residence in Belgium:

Table 4A: Multilevel-models based on the 25 neighbourhoods

Independent = SCP

Variables	Model 1		Model 2		Model 3	
	β	p	β	p	β	p
intercept	**5,858*** **	0,000	**7,258*** **	0,000	**6,210*** **	0,000
Women			0,142	0,162	0,139	0,164
Age			**- 0,017*** **	0,000	**- 0,017*** **	0,000
Migrant			- 0,264	0,304	- 0,261	0,304
TV			**- 0,418*** **	0,000	**- 0,415*** **	0,000
Health			**0,315*** **	0,000	**0,316*** **	0,000
Facilities					0,362	0,072
σ^2_{u0}	**0,175***	0,016	**0,106***	0,034	**0,093***	0,044
VPC	3,60%		2,62%		2,31%	

(Note: SCP=socio-cultural participation)

Source: Do Neighbourhoods matter for Social Connectedness? A Belgian Case-study

Lannoo, 2008, Annual Summer meeting of the American Society for Political Methodology. University of Michigan - Ann Arbor

Thinking global

AgeUK strategy states the ambition that the UK Government be a global leader on ageing, and that ageing be of paramount importance when designing and delivering its development policies.
No doubt about it: Economics will be at the centre of the discussions.
An economic approach -close to the Capability approach- could be framed around or informed by the five United Nations Principles for Older Persons adopted in 1991, namely:

- Independence
- Participation
- Care
- Self-fulfilment
- Dignity

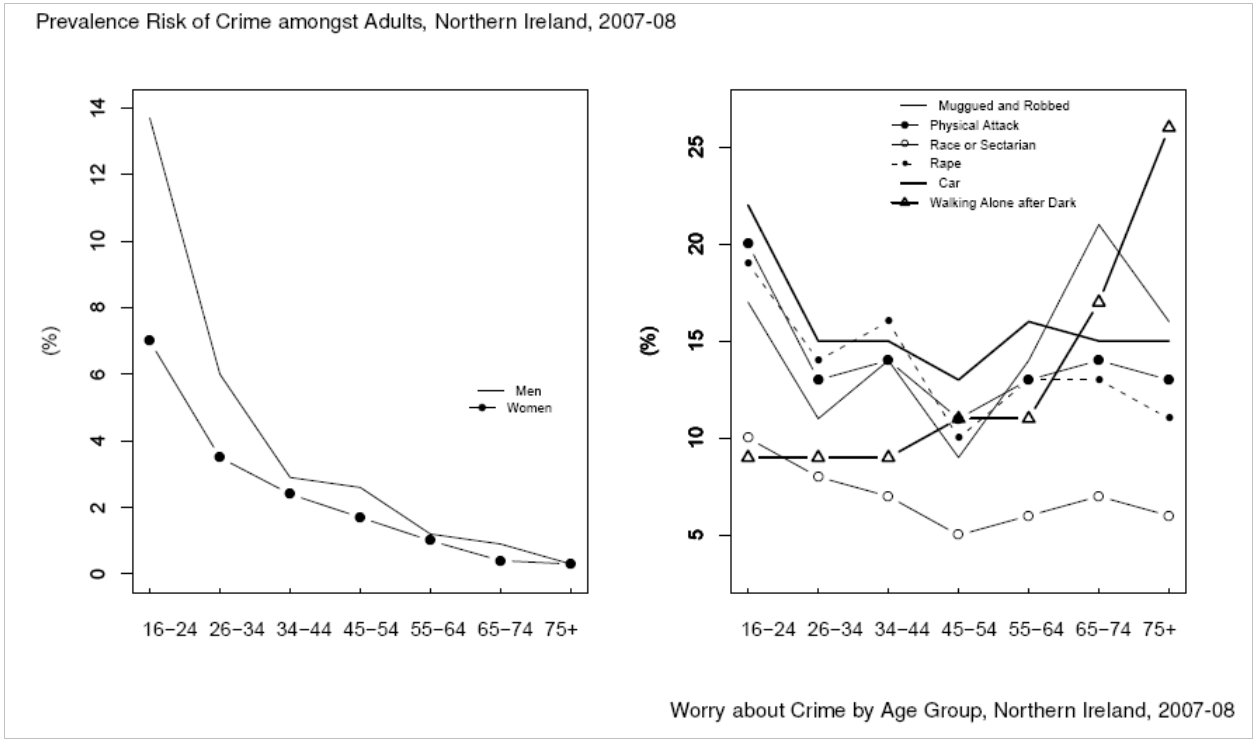
These principles could become the basis of a UN Convention on the Rights of Older Persons

Lifetime neighbourhoods

Apart from the contribution of economics to accessibility, we can briefly touch on economic studies of crime and volunteering.

Lifetime neighbourhoods

Despite the fact that the risk of being a victim of crime diminishes with age older people form the most vulnerable age group to fear of certain crimes, which negatively impacts on their quality of life



Economics can shed light on this vulnerability. A recent paper (Dolan and Peasgood, 2007) estimated the economic cost of fear of crime only due to health loss at between £776.5 million and £2,097 million a year in England and Wales.

Lifetime neighbourhoods

In relation to volunteering, Economics can be used to estimate the monetary contribution of (the mostly older) army of volunteers across the country

- The National Council for Voluntary Organisations estimates that the economic contribution of volunteers in 2007/08 was £22.7 billion.
  Source: The value of volunteering. ESRC Seminar Series. Mapping the public policy landscape
  Economic and Social Research Council, 2009
- A 1997 piece estimated that there was a return of between £2 and £8 for each pound invested by most organisations in their volunteers
  Source: The economic equation of volunteering: a pilot study. Gaskin and Dobson.
  CRSP, Department of Social Sciences, Loughborough University
- The Vale of Glamorgan Council provided £719,000 to the Voluntary Sector by way of grant assistance in 2009. The estimated economic value of volunteering in the area was a staggering £32 million.
  Source: Own estimations from: Economic Value of Volunteering within the Vale of Glamorgan
  Report on the Voluntary Sector, Voluntary Sector Joint Liaison Committee: 29th April 2009. Vale of Glamorgan Council

Homes for life

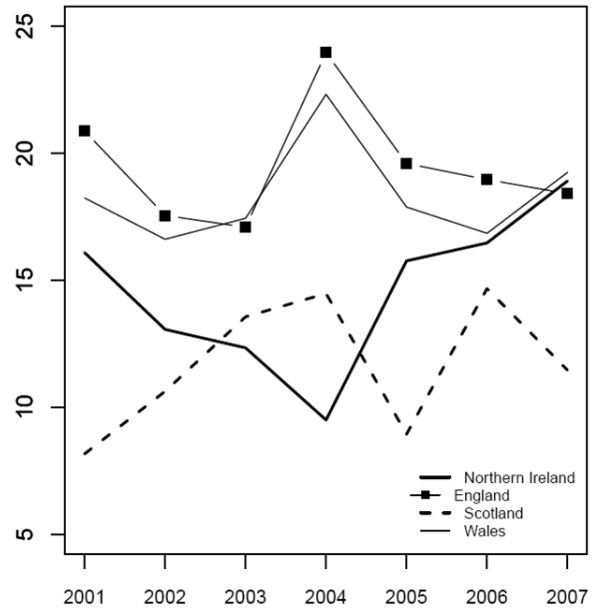
We already mentioned Fuel Poverty. Economy can study its relationship with its most sinister consequence: Excess Winter Deaths

- The United Kingdom records the highest excess winter deaths rates in the European Union.
- Most of the excess is preventable
- More related to *indoor* rather than outdoor temperature
- We know that Fuel Poverty and Income Poverty are related

Source: Cold and poor: An analysis of the link between fuel poverty and low income
Palmer et al., New Policy Institute, 2008

Homes for life

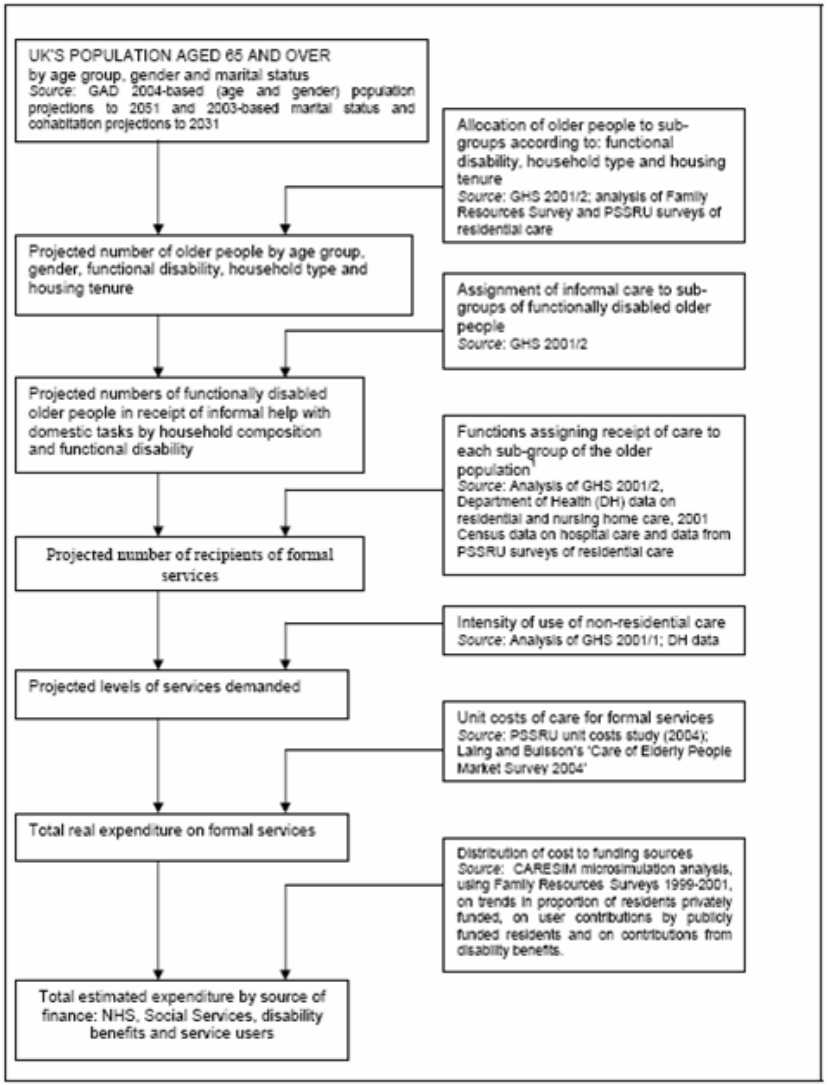
Figure 4.7: Excess Winter Mortality for Older People Aged 75 and Over, UK Constituent Countries 2001-2008



Economics could respond to the question:
How much could it cost to **eliminate** fuel poverty or at the very least the excess winter deaths directly attributable to fuel poverty?

Models for Policy Making and Analysis

An example: the PSSRU microsimulation model for the UK



Models for Policy Making and Analysis

An example: the PSSRU microsimulation model for the UK (cont.)

Table 7: Projected public and private expenditure on long-term care for three alternative future scenarios as a percentage of GDP, 2002-2051, UK

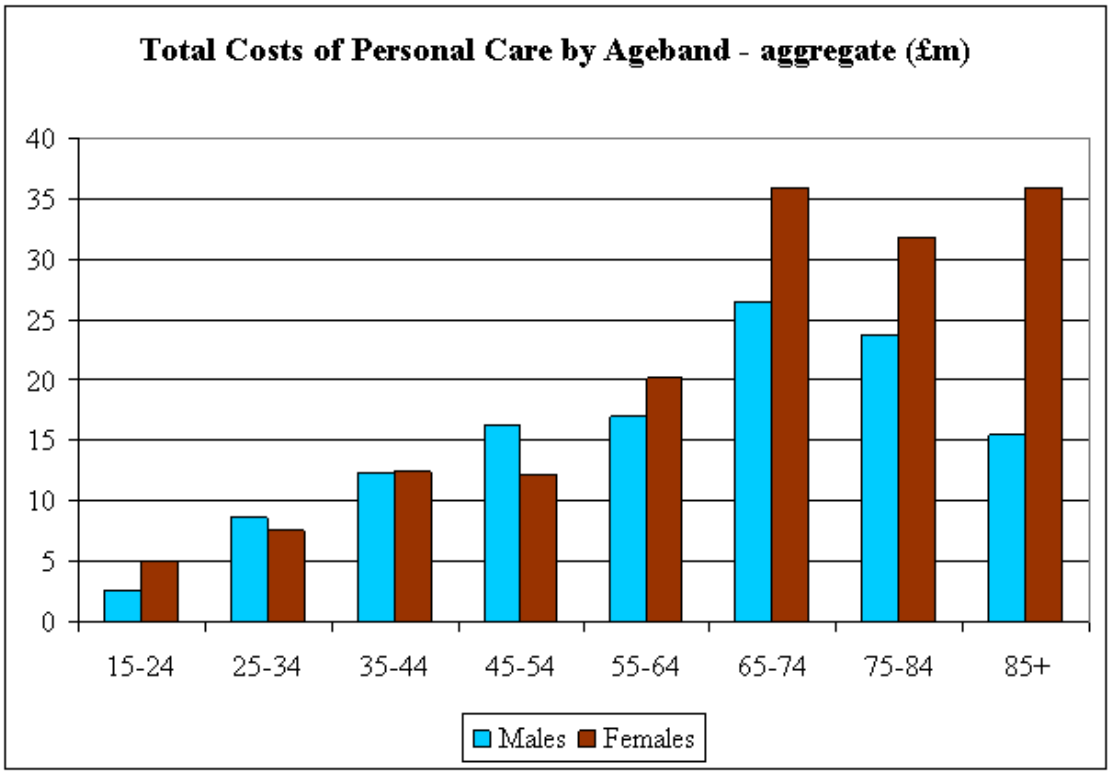
	2002	2012	2022	2031	2041	2051
Low base case assumptions						
Public expenditure	0.96	0.93	1.02	1.17	1.25	1.27
Private expenditure	0.52	0.52	0.59	0.69	0.73	0.73
All long-term care expenditure	1.49	1.45	1.61	1.86	1.98	2.00
Central base case assumptions						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.14
High base case assumptions						
Public expenditure	0.96	1.06	1.34	1.80	2.36	2.99
Private expenditure	0.52	0.58	0. 77	1.04	1.37	1.76
All long-term care expenditure	1.49	1.65	2.11	2.84	3.73	4.75

Paying for Long-Term Care for Older People in the UK: Modelling the Costs and Distributional Effects of a Range of Options

Hancock et al., PSSRU Discussion Paper 2336/2, Personal Social Services Research Unit, 2007

Models for Policy Making and Analysis

Second example: the OPERA microsimulation model for Scotland
OPERA: Older PEople's Resource Allocation model (Prof. David Bell, U of Stirling)



Microsimulation in a Cold Climate

Bell, University of Stirling, 2009

Models for Policy Making and Analysis

Final example: a conclusion from a computable general equilibrium model to estimate impact of ageing on labour supply and fiscal sustainability of pensions in Norway

> *The combined effects of population ageing and economic growth require an increase in the flat tax rate of approximately 5 percentage points from 1995 to 2050.*

R. Aaberge et al., Population Ageing and Fiscal Sustainability: Integrating Detailed Labour Supply Models with CGE Models, in:

Harding and Gupta, eds. Modeling our future. Population ageing, social security and taxation. International Symposia in Economic Theory and Econometrics. Vol 15. Ch. 10. Elsevier

The purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists.

Joan Robinson, 1955

We can hope at least that economics is one of the inputs that helps to make us human.

Kenneth Boulding, 1969

Thank you very much.

Introductory Module to Economics of Ageing

Gentle Introduction to how to use Economics to influence public policy

Economic Research Institute of Northern Ireland
Jose Luis Iparraguirre

April 2010