The cost of inequality – putting an economic value on health

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Changing more than a name

Background

- Huge interest in levelling up and reversing the widening trend in inequalities
- But what is meant by levelling up and what it is it exactly we are trying to level up?
- Government target of increasing healthy life expectancy by 5 years by 2035
- This research proposes a simple index of inequality that puts a price on health and the wider economy

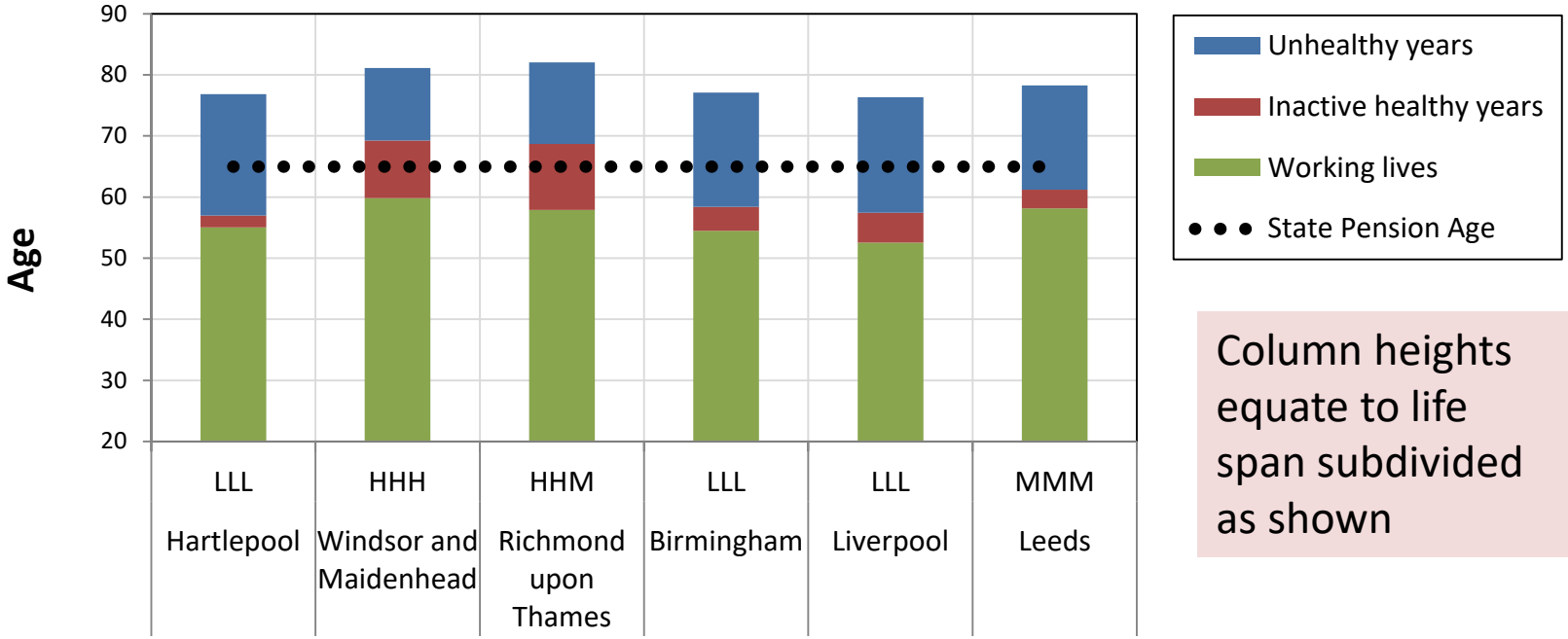
Key ideas

- The key idea is to put health at the centre of the framework
- Health drives life expectancy and also drives working lives
- Do areas and sub-groups with lower health expectancy live shorter lives?
- By how much does poor health curtail working lives?
- What are the consequences of shorter working lives on economic growth and public expenditure?

Steps in creating an inequality index

- For each district compute the health, life and work spans of adults
- Sort into groups based on whether they are high medium or low on each
- Split adult life span into states such as the average number of economically active healthy life years
- Estimate the cost of public expenditure in each state for every district
- Impute a tax rate for each area which is given by public expenditure divided by economic output

Local examples



Column heights equate to life span subdivided as shown

Key: Districts are bar-coded according to whether life, health or working life expectancy is low medium or high. Richmond is HHM – good in life and health with medium working lives. There are 27 different categories of area.

Putting a price on health

Expected remaining life

=

Expected healthy working life

+

Expected unhealthy working life

+

Expected healthy retired life

+

Expected unhealthy retired life

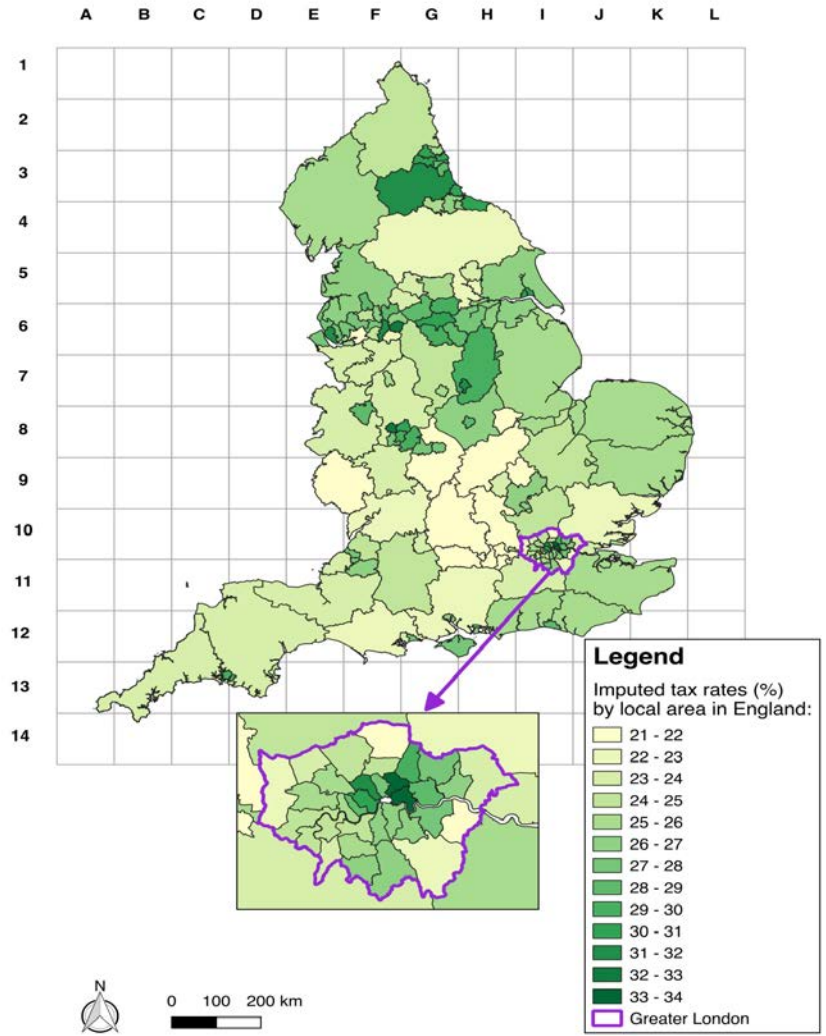
We assign costs to each phase of life in each district. For example the public expenditure for unhealthy retired person would comprise the state pension, plus expected health and welfare costs multiplied by the years spent in that state.

Baseline averages used in illustration

This table shows the baseline values used in the examples that follows and are broadly based on actual averages which rounded. These can be changed to investigate a rage f scenarios as required.

Variable	Value
SPA (state pension age)	65 years
Adult working life (start age)	20 years

Variable	Value £ per annum ('000)
Earnings	25.0
State pension	8.0
Working age disability benefits	10.0
Disability benefits post-SPA	5.0
Health care costs pre-SPA	1.0
Health care costs post- SPA	2.5



Map showing imputed tax rates by local area

Tax rate

=

lifetime consumption of health, welfare and pensions

÷

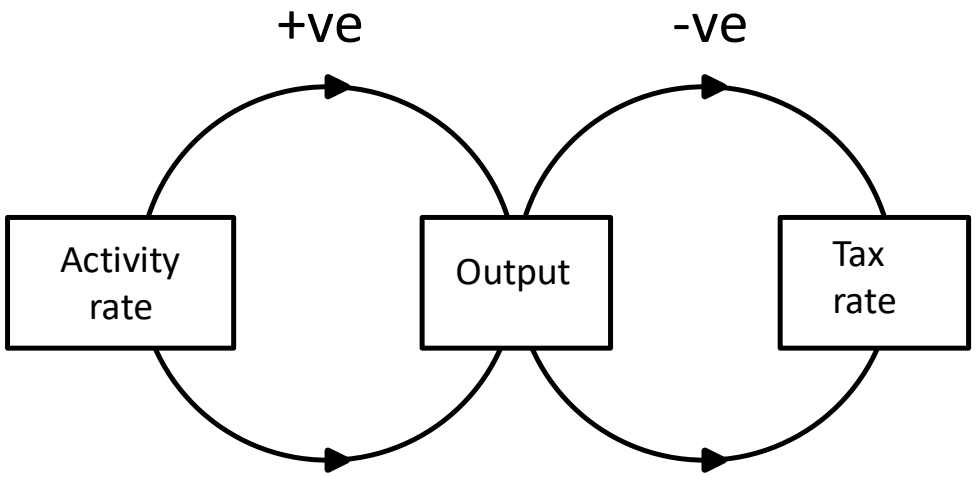
lifetime earnings

Scenarios showing the impact of health improvement

Change in HLE at age 20 (years)	Average age at end of : LE	HLE	WLE	Change in LE from baseline	Change in WLE from baseline	Tax%	Inequality (standard deviation +/- %
-2	78.4	60.7	57.1	-0.8	-0.4	27.67	3.04
-1	78.8	61.7	57.3	-0.4	-0.2	27.03	2.98
Baseline	**79.2**	**62.7**	**57.5**	**0.0**	**0.0**	**26.42**	**2.90**
1	79.6	63.7	57.7	0.4	0.2	25.86	2.80
2	79.9	64.7	57.9	0.8	0.4	25.35	2.69
3	80.3	65.7	58.0	1.1	0.6	24.88	2.59
4	80.7	66.7	58.2	1.5	0.7	24.44	2.49
5	81.1	67.7	58.4	1.9	0.9	24.04	2.40

Table showing the impact of improved health expectancy on life expectancy and working lives and corresponding change in tax rate and inequalities . A one-year increase in HLE equates on average to a 4.5 month increase in LE. and a 3.4 month increase in WLE.

Linking health to GDP



A higher activity rate boosts output and reduces the average tax rate

GDP is the sum total of income generated by UK PLC limited and includes earned income (~50%) and unearned income (rents, dividends etc. (~ 50%).
Current values is about £2.1trillion. Would just increasing GDP solve the inequality problem?

Summary of findings

- We are now able to quantify the effect of an improvement in health on the wider economy
- It confirms that health is an important enabler by increasing working lives and life expectancy
- The dividends include greater clarity as to the effects of an ageing population on society
- The achievement of HLE + 5 by 2035 is hugely important but extremely stretching