



THE COMMUTING & WELLBEING STUDY

Understanding the Impact of Commuting on People's Lives

Outline

1. The Commuting & Wellbeing study context
2. Findings 1: Impact on domains of wellbeing
3. Findings 2: Impact on life satisfaction
4. Implications

Commuting – potential impacts

- The journey to and from work is a routine activity
 - Undertaken on 160 days on average by full-time workers
 - Consumes one hour a day on average (two hours for 1 in 7)
- The commute may be stressful/relaxing, it may be wasted/productive
- But there are good reasons for doing it
- How do the benefits balance against the drawbacks?

Wellbeing

- Subjective wellbeing (SWB) refers to an individual's evaluation of how well their life is going
- Defined formally by OECD as "Good mental states, including all of the various evaluations, positive and negative, that people make of their lives, and the affective reactions of people to their experiences"

Evidence needs

- Unclear picture for England of how different commuting behaviours affect different aspects of SWB

The Study & Team

- ESRC Secondary Data Analysis Initiative project (Feb 16 – July 17)
- Researchers at UWE Bristol – Kiron Chatterjee, Ben Clark, Adrian Davis and Deirdre Toher
- Researcher at University of Leeds - Adam Martin
- Project partners
 - Department for Transport
 - Department of Health
 - Department of Communities and Local Government
 - What Works Centre for Wellbeing

Research Questions

1. What specific aspects of wellbeing are affected by commuting?
2. What does this mean for overall life satisfaction?

Data set

- Understanding Society
 - Members of 40,000 households surveyed every year since 2009/10
- Analysis sample
 - Workers living in England ($n \sim 26,000$)
 - Up to six completed interviews from 2009/10 to 2014/15



www.understandingsociety.ac.uk



Measures

Commuting

Commute duration	About how much time does it usually take for you to get to work each day, door to door (in minutes)?
Commute mode	And how do you usually get to your place of work?

Personal wellbeing

Life satisfaction	How dissatisfied or satisfied are you with your life overall?
Job satisfaction	How satisfied or dissatisfied you are with your present job overall?
Leisure time satisfaction	How dissatisfied or satisfied are you with the amount of leisure time you have?
Self reported health	In general would you say your health is [good to poor]?
Mental health	Based on the General Health Questionnaire scale
Strain	Have you recently felt constantly under strain?

Commuting

Job
satisfaction

Leisure
time
satisfaction

Self-
reported
health

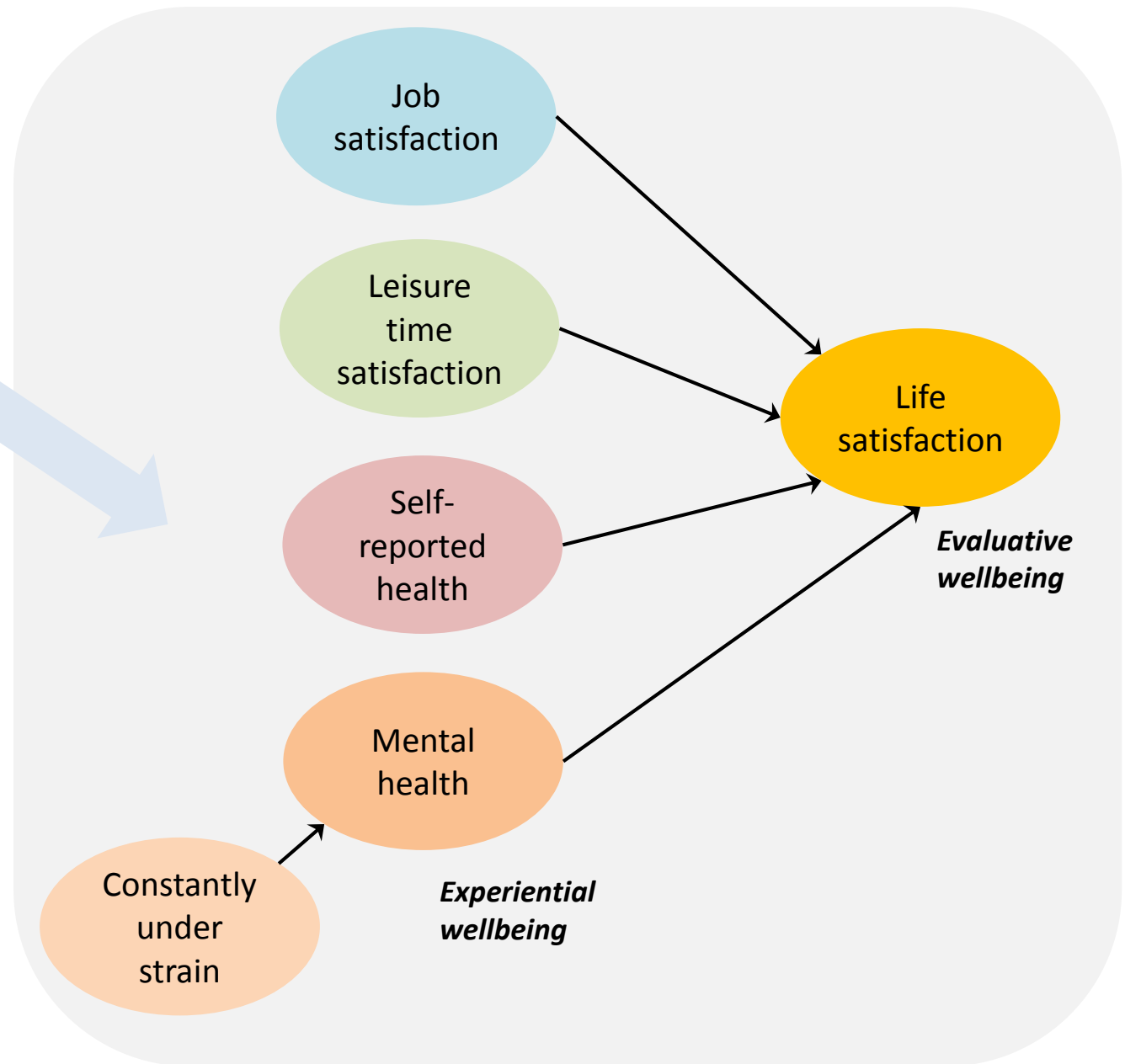
Mental
health

Constantly
under
strain

Life
satisfaction

*Evaluative
wellbeing*

*Experiential
wellbeing*



Outline

1. The Commuting & Wellbeing study
- 2. Findings 1: Impact on domains of wellbeing**
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Domains of wellbeing

1. Job satisfaction
2. Leisure time satisfaction
3. Strain
4. Mental Health / Self-reported health (see report)

Sample characteristics (wave 1)

	Percentage using mode	Mean one-way commute time (mins)
Drive	54	24
Lift from household member	4	19
Lift from someone else	2	25
Motorcycle	1	26
Taxi	0	20
Bus/coach	8	38
Train	5	62
Metro	4	50
Cycle	3	20
Walk	11	14
Work from home	8	0
Total	100	27

Analytical approach

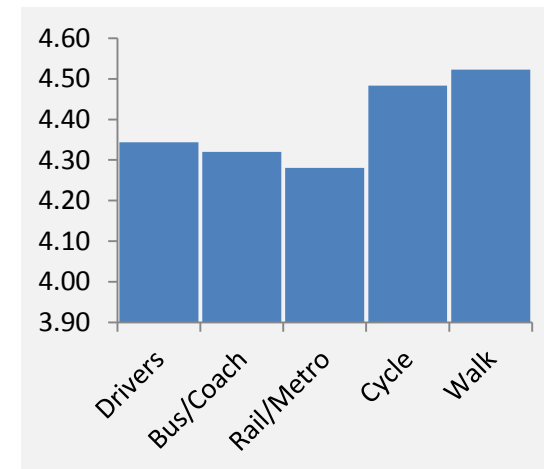
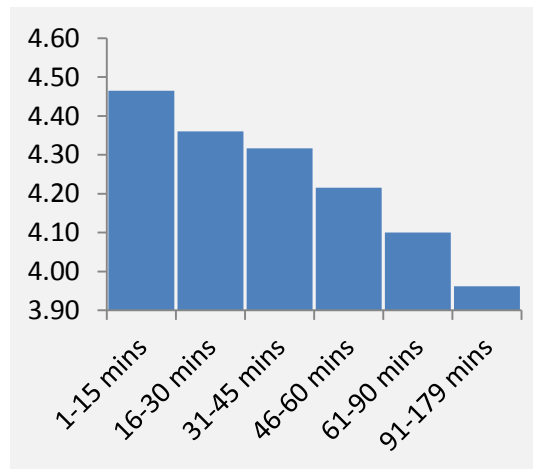
Identification of associations between commuting and wellbeing measure

1. Bar charts (indicate shape of relationship)

- How does wellbeing vary with commuting time and mode?

2. Regression models

- How does wellbeing vary with commuting time and mode **after accounting for other factors**



Between vs within person difference

Advantages of panel data:

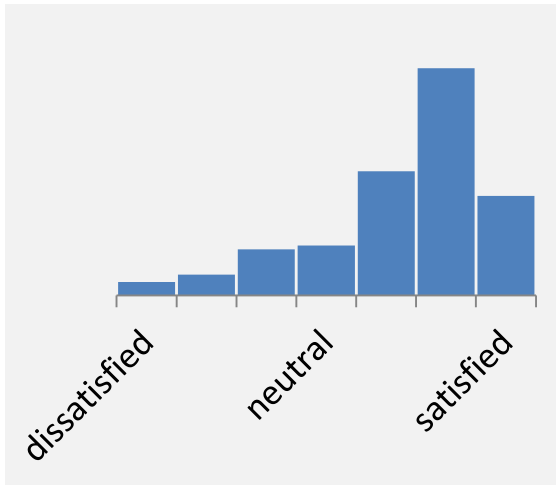
- Sample includes ~26,000 employed people
 - Examine variation in wellbeing scores *between individuals*
- Sample includes up to 6 observations - over 6 time points - for each individual
 - Examine variation in wellbeing scores *within individuals* over 6 observations
 - Eliminates spurious *between individual* associations arising from possible unobserved personal characteristics
- **Greater weight placed on evidence of 'within individual' association**

✓✓✓	✓✓	✓
Very Confident	Confident	Tentative
within individual (99%)	Within individual (95%)	Between individual (95%)

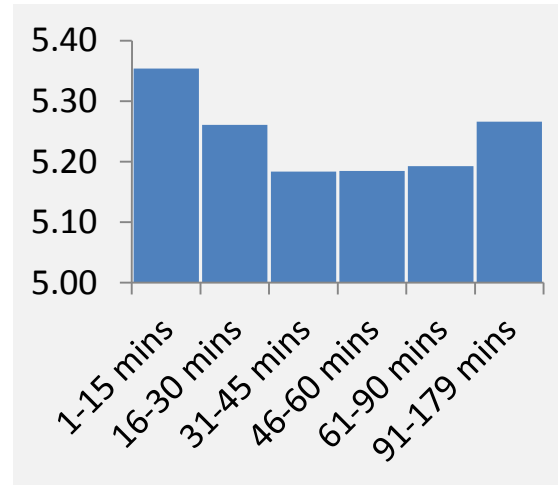
Findings sequence

1. Job satisfaction
2. Leisure time satisfaction
3. Strain

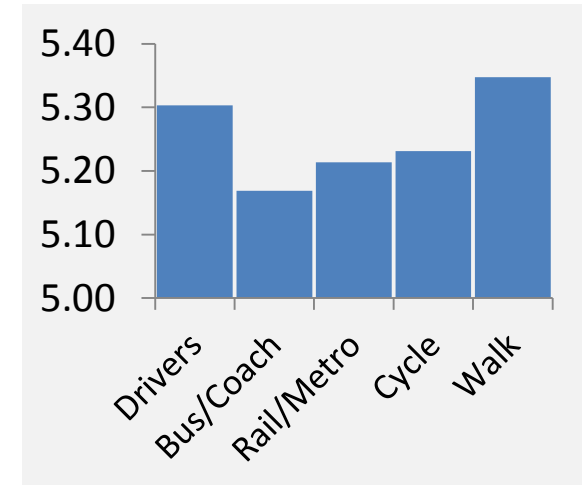
How dissatisfied or satisfied are you with your job?



78% mostly to completely satisfied



declines with commute time



higher for drivers and walkers

Commute time and job satisfaction

Insight

Confidence

**Longer commute times reduce job satisfaction
(larger effect for bus commutes)**



gender

larger effect
for women



age

does not apply to
16-29 year olds



income

larger effect
for higher earners



Very Confident

within individual (99%)



Confident

Within individual (95%)



Tentative

Between individual (95%)

Magnitude of effect

Sensitivity of commute time relative to personal income

On average, the effect on **job satisfaction** of
a 10 minute increase in one-way commute time
is equivalent to:

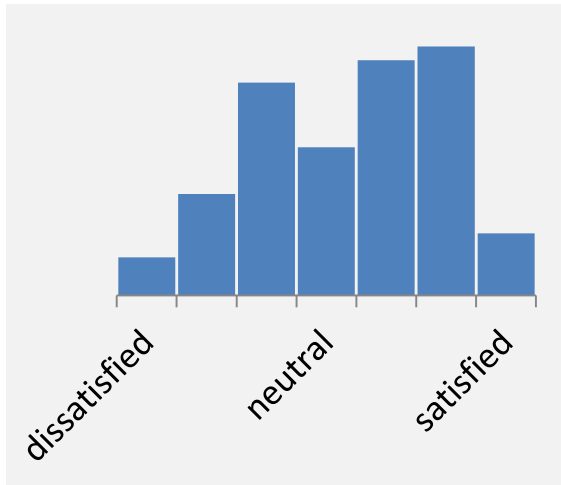
a 19% decrease in gross monthly personal income

Effect of commute mode / WFH

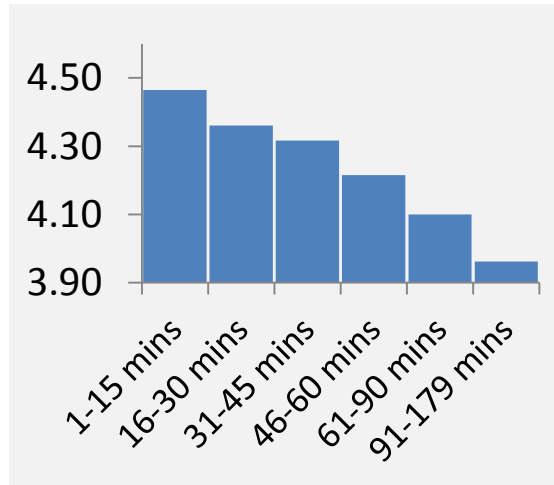
Insight	Confidence
Working from home increases job satisfaction	✓✓✓
Walking is associated with higher job satisfaction	✓

✓✓✓	✓✓	✓
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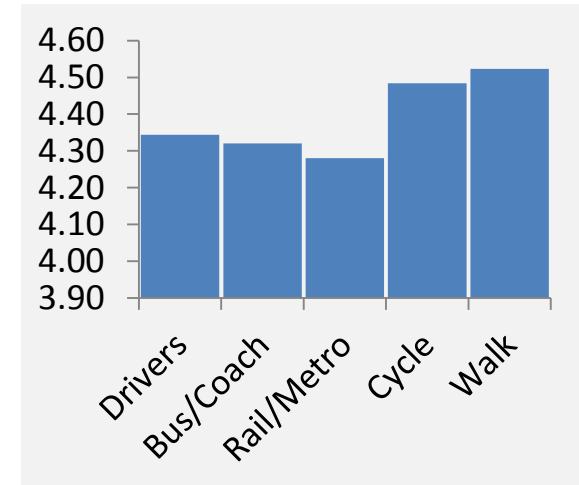
How dissatisfied or satisfied are you with the amount of leisure time you have?



Evenly spread:
52% reported being
satisfied with leisure
time availability



A clear downward
trend as commute
time increases



higher for cyclists and
walkers

Commute time and leisure time sat.

Insight	Confidence
Longer commute times reduce leisure time sat.	✓✓✓



gender
no different
(but women
have lower
scores)



age
no different



income
smaller effect for
mid-income earners

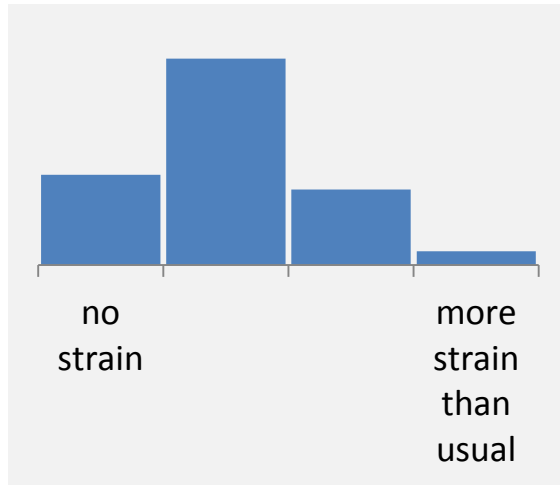
✓✓✓	✓✓	✓
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Effect of commute mode / WFH

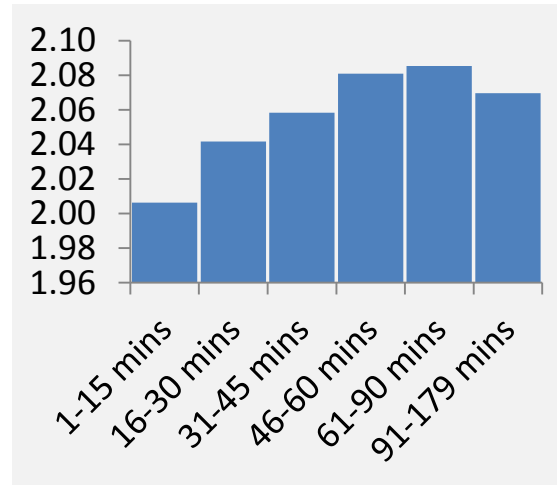
Insight	Confidence
WFH increases leisure time sat.	✓✓✓
Walking / cycling increases leisure time sat. (larger effect for women)	✓✓

✓✓✓	✓✓	✓
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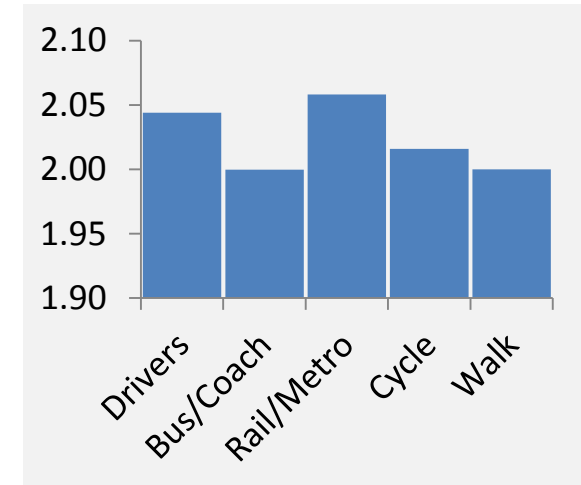
Have you recently felt constantly under strain?



77% of responses -
'no strain' or 'no more
strain than usual'



increases with
commute time



higher for drivers and
rail users

Commute time and strain

Insight

Confidence

Longer commute times increase strain (larger effect for men)



Apart from for rail commutes:

Longer commutes by rail are less strenuous than shorter rail commutes



Very Confident

within individual (99%)



Confident

Within individual (95%)



Tentative

Between individual (95%)

Effect of commute mode / WFH

Insight

Confidence

Walking to work reduces strain

✓✓✓

✓✓✓

Very Confident

within individual (99%)

✓✓

Confident

Within individual (95%)

✓

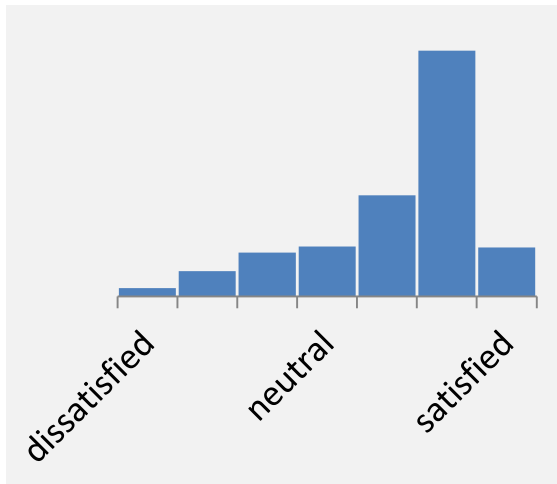
Tentative

Between individual (95%)

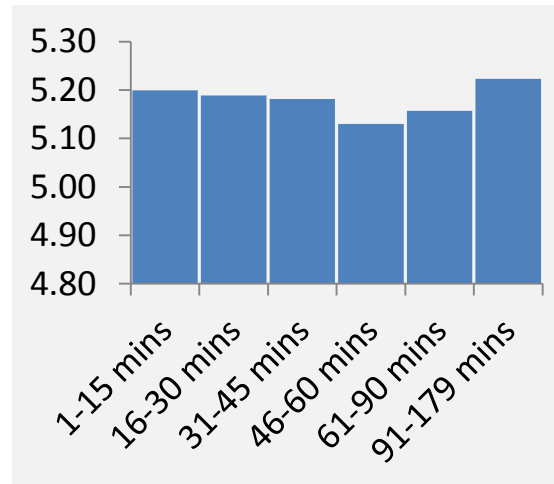
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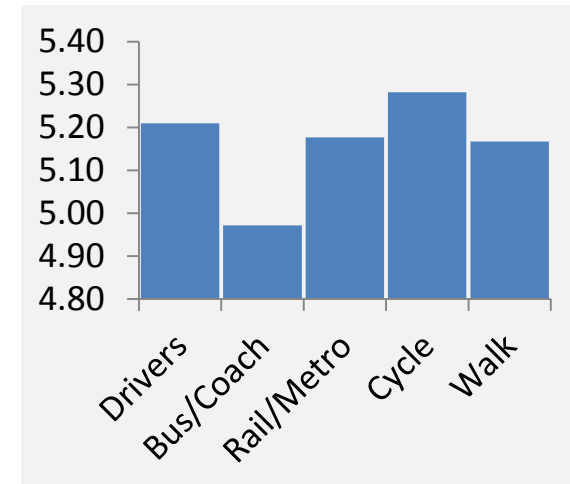
How dissatisfied or satisfied are you with your life overall?



Three quarters reported being somewhat to completely satisfied



Decreases *slightly* as commute duration increases



Scores are lowest amongst bus users. Cyclists have the highest scores

Major determinants of life satisfaction



Effect of time spent commuting

Insight

Confidence

Longer commute times are associated with lower life satisfaction



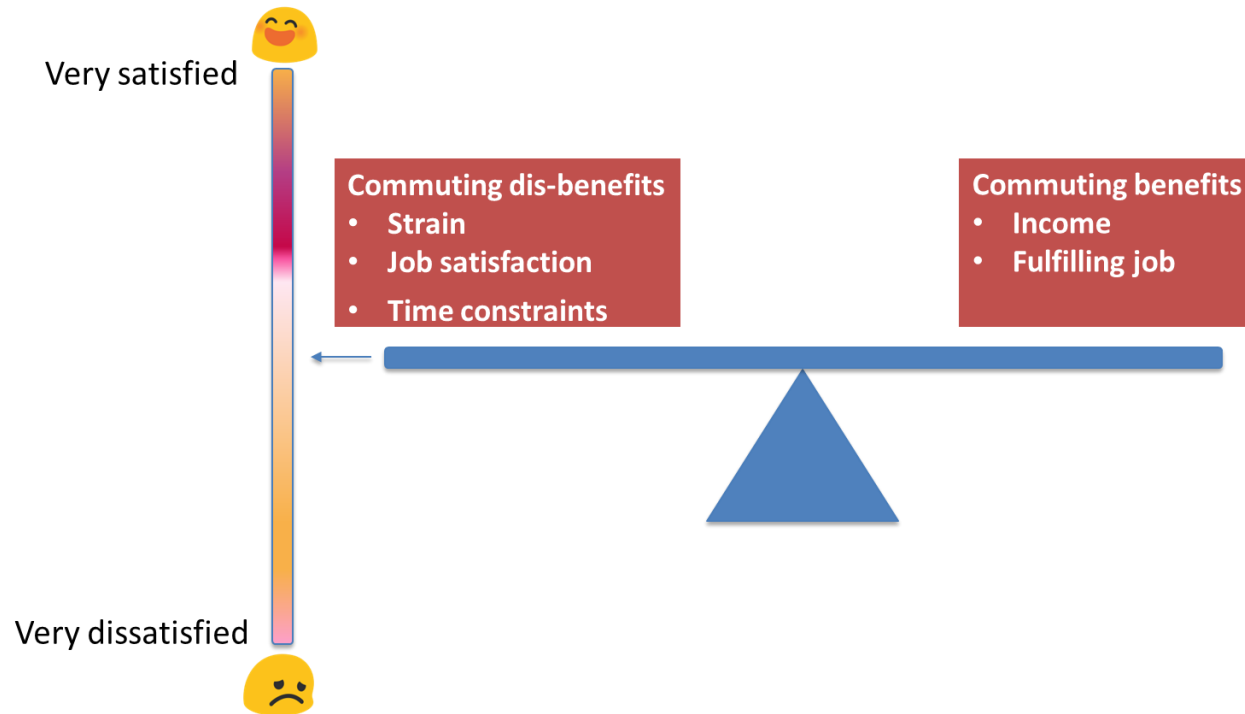
A 'between individual' association only

- Comparing individuals, longer commutes are associated with lower life satisfaction
- But we did not find that life satisfaction scores reduce for individuals when their commute time increases

✓✓✓	✓✓	✓
Very Confident	Confident	Tentative
within individual (99%)	Within individual (95%)	Between individual (95%)

Life satisfaction: Conclusion

People are generally successful in trading-off the drawbacks of a longer commute journey against the benefits that they bring



Key Insights

Benefits of shorter commute times:

- Increase job satisfaction
- Increase leisure time satisfaction
- Reduce strain (apart from for rail)
- Indirectly contribute to a more satisfying life (if benefits of commuting can be maintained)

Benefits of active commuting

- Walking and cycling
 - Increase leisure time satisfaction (especially for women)
- Walking
 - Decreases strain
 - Increases job satisfaction

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How can we use this research evidence?

1. Make employees/employers aware of what are positive commutes for people's wellbeing.
2. Identify what steps can be taken to encourage positive commutes.
 - i. Investments in transport alternatives
 - ii. Employer supported initiatives
 - iii. One-to-one support for employees