

The Case for Cycling: The Economy

Further evidence (1993-2015)

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Notes:

Later research is covered on our main webpage: [The Case for Cycling: the economy](#)

All documents with hyperlinks accessed 16.9.2022.

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1. Cycling's overall value to the economy

2015: research found that if cycle use increased from less than 2% of all journeys (current levels) to 10% by 2025, and 25% by 2050, the cumulative benefits would be worth £248bn between 2015 and 2050 for England – yielding annual benefits in 2050 worth £42bn (in 2015's money). The researchers concluded that the economic benefits were chiefly generated by a physically fitter population, reduced congestion and absenteeism, and improved air quality. Their calculations accounted for the fact that long-term benefits are worth less than those achieved in the shorter term.¹

2013: a German study calculated that a 10% increase in the modal share of walking and cycling in urban areas would mean that the German GDP would go up by 1.11% by 2030, representing €29bn, based on German GDP in 2012.²

2011: an LSE study worked out that occasional, regular and frequent cyclists contributed a 'gross cycling product' of c£3bn to the British economy in 2010. People directly employed in bicycle sales, distribution and the maintenance of cycling infrastructure generated £500m in wages and £100m in taxes.³

2007: SQW economists calculated (conservatively) that a 50% increase in cycle trips would create total savings to the economy of more than £1.3 billion per year in terms of premature deaths (adult), NHS costs (adult), work absence, pollution and congestion.⁴

1993: Cycling UK (the CTC) estimated that a 20% shift in cycle use could save £1.3bn and a 50% shift £4.6bn (in 1993 prices). The factors taken into account included congestion, capital spend on roads, pedestrian and motorist casualties, air pollution, global warming, noise, heart disease and working days lost (general and from coronary heart disease).⁵

2. Value of each individual cyclist

2008: an SQW study suggested that the annual economic benefits produced by each individual regular cyclist were between £540-£640 per year, meaning that every £10,000 invested in encouraging people to cycle only needs to generate one extra cyclist each year over a 30-year period to break even.⁶

¹ Lovelace, R and Crawford, F. [The benefits of getting England cycling](#). Jan 2015.

² Research institutes Fraunhofer, INFRAS and IFEU, commissioned by the German Environmental Agency. [Wirtschaftliche Aspekte nichttechnischer Maßnahmen zur Emissionsminderung im Verkehr](#) ('Economic aspects of non-technical measures to reduce traffic emissions'). 2013.

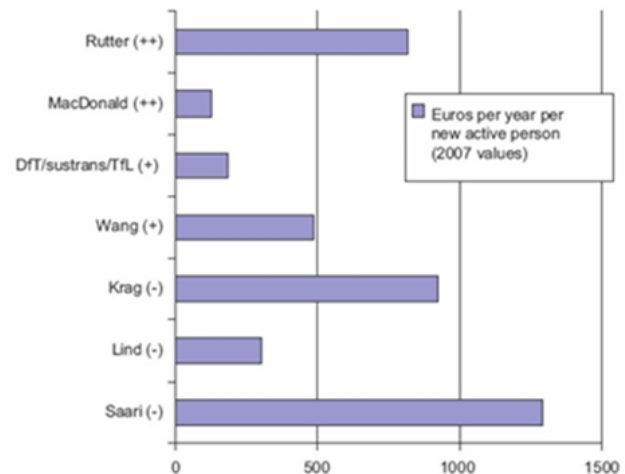
³ Dr Alexander Grous / LSE. [The British Cycling Economy – 'Gross Cycling Product'](#). Commissioned by Sky and British Cycling. Aug 2011.

⁴ SQW for Cycling England. [Valuing the Benefits of Cycling](#). 2007.

⁵ Cycling UK. [Costing the Benefits: The Value of Cycling](#). 1993 (print only). ISBN 0-902237-13-6

⁶ SQW for Cycling England. [Planning for Cycling](#). 2008.

2008: researchers published the results of a review of studies that had calculated the economic value to society of each new cyclist. See chart. Source: Economic analyses of transport infrastructure and policies including health effects related to cycling and walking: a systematic review. Nick Cavill et al.⁷



3. Benefit to cost ratios (BCR)

2015: a study of the cost benefit analysis used by Copenhagen to decide whether to build new cycling infrastructure, concluded that cars cost society and private individuals six times more than cycling. The impact of the car came in at €0.50 per km and the impact of the bicycle at €0.08 per km. The authors compared cars to bicycles in terms of air pollution, climate change, travel route, noise, road wear, health and congestion. They also found that, looking at the costs/benefits for society alone, one km by car costs €0.15, whereas society earns €0.16 on every km cycled.⁸

2010: a report for the Department of Health concluded: "... the economic justification for investments to facilitate cycling and walking has been undervalued or not even considered in public policy decision-making. Yet almost all of the studies report economic benefits which are highly significant, with benefit to cost ratios averaging 13:1 (UK and non-UK)."⁹

2010: an estimation of returns on the investment in Cycling England's six first Cycling Towns suggested a BCR of 2.6 – 3.5 (over 10 years, in terms of reduced mortality, decongestion, reduced absenteeism, amenity and road casualties).¹⁰

2007: an assessment of the London Cycle Network+ gave it an overall BCR of 3.94, far surpassing most major road or public transport projects.¹¹

2007: the same study found that cycle training offered the highest return: a case study of cycle training in London funded by TfL found that the overall BCR was 7.44 (very high indeed).¹²

⁷ Published in [Transport Policy](#) Volume 15, Issue 5, September 2008, Pages 291–304

⁸ Gossling S & Choi A. [Transport transitions in Copenhagen: Comparing the cost of cars and bicycles](#). Published in *Ecological Economics*. May 2015.

⁹ Davis, Dr Adrian for the Department of Health/Government Office for the South West. [Value for Money: An Economic Assessment of Investment in Walking and Cycling](#). 2010.

¹⁰ DfT. Cycling Demonstration Towns - [Development of Benefit-Cost Ratios](#). Feb 2010

¹¹ SQW for Cycling England. [Valuing the Benefits of Cycling](#). 2007. (Link above)

¹² SQW for Cycling England. [Valuing the Benefits of Cycling](#). 2007. (Link above)

4. Health

2014: research for AstraZeneca reported: “CVD [cardiovascular disease] was responsible for a cost of €18.9billion [over £15bn] in 2014, representing 1.4% of the UK’s GDP. As elsewhere, an increase in the cost from CVD is expected by 2020, to €23.1 billion.”¹³

2012: research published in the medical journal The Lancet concluded that, potentially, increased walking and cycling in urban England and Wales could save the NHS roughly £17bn (2010 prices) within 20 years because of its impact on diseases associated with physical inactivity (type 2 diabetes, dementia, ischaemic heart disease, cerebrovascular disease and cancer).¹⁴

2009: research commissioned by the Department of Health found that, on average, physical inactivity cost each Primary Care Trust (PCT) in England £5 million a year (primary and secondary care costs attributable to physical inactivity, based upon 2006/07).¹⁵

2007: the Foresight report projected that NHS costs attributable to overweight and obesity would double to £10bn per year by 2050, if nothing were done to tackle it. It estimated that the wider costs to society and business would reach £49.9bn per year (2007 prices).¹⁶

5. Vitality of towns & high streets

2015: twelve studies around the world confirm the business case for converting street parking into cycle lanes.¹⁷

2014: when San Francisco reduced car lanes and installed bike lanes and wider sidewalks on Valencia Street, two-thirds of merchants said the increased levels of bicycling and walking improved business. Only 4% said the changes hurt sales.¹⁸

2013: research into shopping in Copenhagen (where cycling levels are high), found that cycling customers spent a total of 2.05 billion € per year whereas car driving customers spent slightly less, at 2.04 billion € per year. In total, walking and cycling customers accounted for 55% of the total revenue of street-level shops and supermarkets. The

¹³ Cebr for AstraZeneca. [The economic cost of cardiovascular disease from 2014-2020 in six European economies](#). Aug 2014.

¹⁴ Jarrett, Dr James (et al). Effect of increasing active travel in urban England and Wales on costs to the National Health Service. Published in The Lancet, Volume 379, Issue 9832, pp 2198 - 2205, 9 June 2012

¹⁵ Dept of Health. [Be Active. Be Healthy: a plan to get the nation moving](#). Feb 2009. p59ff

¹⁶ Foresight. [Tackling Obesities: Future Choices](#). 2007.

¹⁷ Bloomberg UK. [The Complete Business Case for Converting Street Parking into Bike Lanes](#). 2015. Includes studies of: Portland (Oregon), East Village (NY), three major cities in New Zealand, Dublin, Los Angeles, Vancouver, Toronto, San Francisco, Seattle, Davis (California), Bristol (England), Graz (Austria) & Melbourne.

¹⁸ People for Bikes. [Protected Bike Lanes Mean Business: How 21st Century Transportation Networks Help New Urban Economies Boom](#). 2014.

study also concluded that cyclists tend to spend less per shopping trip, but shop more often.¹⁹

2012: in New York, USA, a project to shift space from cars led to significant investment in, for instance, high quality cycle lanes, more space for pedestrians and better bus provision. This has boosted local business overall, but in some areas the return was huge: according to figures published in 2012, on 9th Avenue (Manhattan), where a high-quality cycle lane was rebuilt in late 2008, retail sales increased by up to 49%, compared to 3% borough-wide.²⁰

2011: researchers for TfL (Transport for London), who surveyed shoppers in fifteen town centres in the capital, found that those who arrived by car did not spend all that much more on average than those who arrived by cycle - £226 and £188 respectively per month (walkers spent £373).²¹

2011: research from America reckoned that investments that improve walking, cycling and public transit, when combined with new land use patterns, “support local economies by leveraging public investments and often include a revival in retail activity, private investment, social capital, and tourism. Investments typically increase retail sales by an average of 30 percent and land value from 70 to 300 percent.”²²

2008: in a popular street in Melbourne, Australia, the retail spend generated by one car parking space occupied at all times has been calculated at \$27 per hour. The same space (13m²), occupied by six fully utilised bike stands generated \$97.20 per hour.²³

2006: a study in Bristol found that retailers tend to overestimate their customers’ use of cars and the distances they travel. They thought, for example, that just 12% of customers lived within half a mile, and 40% more than two miles away. In reality, 42% had travelled less than half a mile and 86% less than two miles.²⁴

2002: research suggested that, although cyclists may spend less than car-borne shoppers per trip, their total expenditure is, on average, greater as they tend to visit the shops more often.²⁵

¹⁹ Cycling Embassy of Denmark. Are Cyclists Good Customers? 26/8/2013. No longer online. The article said: “When looking at shops and supermarkets at street level (malls excluded), 58% of all shopping trips in Copenhagen are done by cycling or walking. Cycling is the most frequent means of transport for shopping, with 35% of all shopping trips done by bike and only 20% by car.”

²⁰ New York City Department of Transport (DoT). [Measuring the Street](#). 2012.

²¹ Transport for London. [Town Centre Study](#). Sept 2011.

²² Burden, A & Litman, T. [America Needs Complete Streets](#). Published in Ite Journal. 2011.

²³ Lee, A. [What is the Economic Contribution of Cyclists Compared to Car Drivers in Inner Suburban Melbourne’s Shopping Strips?](#) (Masters Thesis, University of Melbourne).

²⁴ Sustrans. [Shoppers and how they travel](#). (Info sheet LN02). 2006.

²⁵ Krag, Thomas. [Commerce and Bicycles](#). (Paper presented at ‘Trafikdage’ at Aalborg University). 2002. See also www.einkaufen-mit-dem-rad.de/shopping_by_bike.shtml

6. Real estate

2014: a report from America, looking into the value of protected bike lanes, said: for every quarter mile nearer to an off-street bicycle trail, the median home value in Minneapolis-St. Paul increased by \$510; and homes within a half-mile of Indiana's Monon Trail sold for an average of 11% more than similar homes farther away.²⁶

2013: Jair Lynch, founder and CEO of a D.C. real estate development and construction company was quoted in a US magazine saying: "We don't work in places that aren't near bike lanes."²⁷

2011: research from the University of Cincinnati looked at houses along a 12-mile stretch of the Little Miami Scenic Trail (a former rail line that cuts across the northeastern portion of Cincinnati) and found that home buyers were willing to pay a premium of \$9,000 to be within 1,000 feet of access to the trail.²⁸

2008: and again from the US, the League of American Bicyclists reported that the National Association of Realtors (NAR) recognised the importance of considering cycling in every transportation project because it helped sell 'communities' as well as homes.²⁹

2006: yet again from America, a literature review for The State of Delaware Department of Transportation, concluded that "The majority of studies examined indicate that the presence of a bike path/trail either increases property values and ease of sale slightly or has no effect."³⁰

7. Jobs

2014: an ECF (European Cyclists' Federation) study calculated that c655,000 people in the EU worked in the cycling sector (mostly in cycle tourism), and that doubling cycling's modal share would create 400,000 additional jobs. The researchers took multiple cycling-related activities into account, e.g. retail, manufacturing, infrastructure investment & tourism.³¹

The same study also suggested that: cycling has a higher employment intensity per million of turnover than other transport sectors, thus offering a higher job creation potential; and that cycling jobs are more geographically stable than other sectors, benefit local economies, and offer access to the labour market to lowly qualified workers.

²⁶ People for Bikes. [Protected Bike Lanes Mean Business](#): How 21st Century Transportation Networks Help New Urban Economies Boom. 2014.

²⁷ Yes! [How Bicycling Is Transforming Business](#). By Jay Walljasper. 1 Jan 2013.

²⁸ University of Cincinnati. [New Research Finds that Homeowners and City Planners Should 'Hit the Trail' When Considering Property Values](#). 10/11/2011.

²⁹ League of American Bicyclists. [The Economic Benefits of Bicycle Infrastructure](#) by Darren Flusche.

³⁰ Racca, David P. and Dhanju Amardeep. [Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas](#). Project report prepared for Delaware Center For Transportation and The State of Delaware Department of Transportation. Nov 2006.

³¹ ECF. [Cycling Works: Jobs and Job Creation in the Cycling Economy](#). Nov 2014.

2010: around 23,000 people were employed directly in bicycle sales, distribution and the maintenance of cycling infrastructure.³²

2007: a report on the 7Stanes mountain bike trails found that the project helped create 205 full time equivalent jobs in southern Scotland.³³

8. Employers, employees & productivity

2012: the BHF's coronary heart disease statistics reported that production losses due to mortality and morbidity associated with CVD cost the UK over £6bn, with c21% of this cost due to death and 13% due to illness in those of working age.³⁴

2010: Dutch research that surveyed 1,236 employees found that cycle commuting reduced a worker's time off sick by more than one day per year on average, compared with non-cyclists.³⁵

2009: another study found that if those who cycle less than once a week took up regular cycling (three times a week or more), the Netherlands could save €27m through reduced absenteeism.³⁶

2006: a TfL guide to workplace cycle parking said that providing one workplace car parking space per year could cost up to £2,000.³⁷ (A guide published a couple of years later reckoned that one open Sheffield cycle parking stand cost around £100).³⁸

9. Tourism

2013: a Transform Scotland report estimated that, combined, mountain biking and leisure cycle tourism contributed between £236.2m and £358m per year to the Scottish economy, with a cumulative gross value added (GVA) of £129m.³⁹

2007: 7Stanes mountain bike trails in Scotland brought in over £9 million in visitor spend in 2007.⁴⁰

³² Dr Alexander Grous / LSE. The British Cycling Economy – 'Gross Cycling Product'. Commissioned by Sky and British Cycling. Aug 2011. (Link above).

³³ EKOS for the Forestry Commission Scotland. [7 Stanes Phase 2 Evaluation](#). October 2007.

³⁴ BHF. [Coronary Heart Disease Statistics](#). 2012.

³⁵ Hendrikson, IJM (et al). [The association between commuter cycling and sickness absence](#). 2010.

³⁶ TNO Quality of Life. [Reduced sickness absence in regular commuter cyclists can save employers 27 million euros](#). Feb 2009.

³⁷ TfL. Workplace Cycle Parking Guide. 2006. (GlaxoSmithKline Case Study, p.4). No longer online. The guide said: "When the choice came down to providing car parking at a cost of £2,000 per space per year at its worldwide headquarters in Brentford, or supporting those who were willing to give up their cars and cycle to work at the cost of £400 per annum, GSK found that there was no decision to make."

³⁸ Cambridge Cycling Campaign [Cycle Parking Guide](#).

³⁹ Transform Scotland. [The Value of Cycle Tourism](#). (Commissioned by Sustrans Scotland). June 2013.

⁴⁰ EKOS for the Forestry Commission Scotland. 7 Stanes Phase 2 Evaluation. October 2007. (Link above).

10. Efficient use of road space

- 1991: a study estimated that each lane of a typical urban road can accommodate 2,000 cars per hour, or 14,000 cycles.⁴¹

11. Economic costs of ‘transport harm’

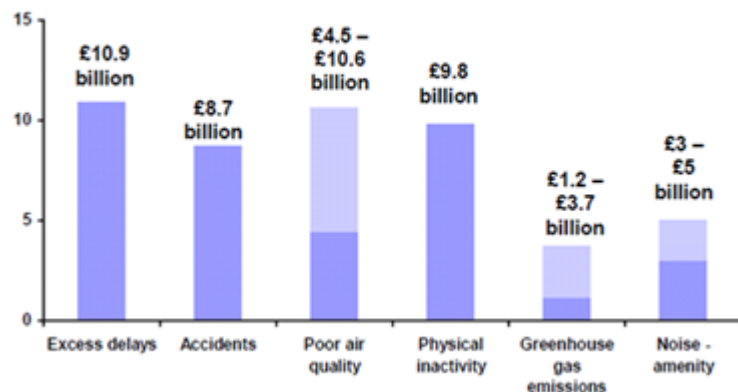
2012: a UK study that looked at tax imposed on motorists concluded that “there are also many costs which are difficult to estimate and for which robust figures are not currently available, including severance of communities, [...] loss of tranquility, degradation of landscape and countryside, the opportunity cost of land used for roads and parking, waste disposal (cars, tyres, used oil), diffuse water pollution from oil runoff, and wildlife casualties. These are not trivial costs.”⁴²

2012: a study from Germany calculated that:⁴³

- On average, every car in Europe produced external costs equivalent to €1,600 p.a. in noise, air pollution, greenhouse gas emissions and accidents not covered by liability insurance.
- 41% of these external costs were due to accidents and 37% to climate change. The remaining 22% were due to air pollution, noise and other effects.
- For the EU-27, uncovered costs related to car use amounted overall to €373bn p.a., the equivalent of roughly 3% of the EU’s GDP or the GDP of Belgium.
- On average, every EU citizen paid €750 p.a. of subsidies towards the external costs of cars.

2009: the Cabinet Office Strategy Unit calculated that the ‘costs of transport harm in English urban areas’ were between £38-49 billion per year. While transport planners have traditionally regarded congestion as the main economic disbenefit of our transport system, the Strategy Unit report found that the annual costs of physical inactivity, road casualties and air pollution were all of a similar magnitude – around £10bn. Other costs include greenhouse gas emissions, noise and low enjoyment of space.⁴⁴

Comparison of the wider cost of transport in English urban areas (£ billion per annum, 2009 prices and values)



⁴¹ Botma H & Papendrecht H. [Traffic operation of bicycle traffic](#). TU-Delft, 1991.

⁴² Hopkinson, Lisa. [The War on Motoring: Myth or Reality?](#) Aug 2012.

⁴³ Becker, Prof J, University of Dresden. [The true costs of automobility: External costs of cars](#). Oct 2012.

⁴⁴ Cabinet Office Strategy Unit. [An analysis of urban transport](#). 2009.

2008: a Danish study suggested that the average costs to society of every km cycled was DKK 0.60 (Danish Krone, 2008 prices); whilst every km by car cost on average DKK 3.74.⁴⁵

1996: in Blueprint 5, The True Costs of Road Transport (1996), economists estimated that motor transport in the UK paid only a third of the cost it caused to the environment.⁴⁶

12. The economy & major road construction projects

2013: in January 2013, 32 transport professors from around the UK wrote an open letter to the then Secretary of State for Transport Right Hon Patrick McLoughlin MP, expressing their considered doubts about the ability of new, major investment in transport projects (e.g., road building) to make a positive contribution to the economy and employment. They suggested that it is more sensible to make the best use of existing infrastructure and pointed out that: “There is substantial recent evidence [...] on the success of travel behaviour change programmes, underscoring demand management potential.”⁴⁷

2006: Sir Rod Eddington, commissioned by the Treasury and the DfT to advise on the long-term impact of transport decisions on the UK's productivity, stability and growth, noted that investment in walking and cycling provided excellent value for money and that Britain's economy was not hampered by a lack of transport links.⁴⁸

1999: SACTRA (the Standing Advisory Committee on Trunk Road Appraisal) reported that it was far from convinced that public investment in road construction had any worthwhile impact on economic performance. The authors said: “... we are provided with a strong theoretical expectation that all or part of a successfully achieved transport cost reduction may subsequently be converted into a range of different wider economic impacts. This, in principle, provides for the possibility of improved economic performance. Empirical evidence of the scale and significance of such linkages is, however, weak and disputed. We conclude that the theoretical effects listed can exist in reality, but that none of them is guaranteed.”⁴⁹

⁴⁵ Quoted in [Collection of Cycle Concepts 2012](#). Cycling Embassy of Denmark (p17).

⁴⁶ Maddison, D; Pearce, D. Blueprint 5: The True Costs of Road Transport. 1996. Kogan Page, London.

⁴⁷ [Open letter](#) signed by 32 transport professors, in association with the Town Planning Society. Published by TPS. 22/1/2013.

⁴⁸ Eddington, Sir Rod. [The Eddington Transport Study](#). 2006.

⁴⁹ Standing Advisory Committee on Trunk Road Appraisal (SACTRA). [Transport and the Economy: full report](#). 1999.