Bike Life 2017

Data sources and methodologies

November 2017

Where does the data in the 2017 Bike Life reports come from?

The seven 2017 Bike Life reports were produced by Sustrans with the support and co-operation of the authorities named on the report front covers. The seven cities are Belfast, Birmingham, Bristol, Cardiff, Edinburgh, Greater Manchester and Newcastle. They follow equivalent reports for the same seven cities in 2015.

The data contained in the reports is drawn from a set of common data reviewed and agreed by Sustrans and the seven authorities and collected for every one of the cities. There are four categories of data:

- **Settings data**: these are supply-side measures of what is available to help someone riding a bike in the city, and the inputs being made. This includes cycle route lengths, 20mph limits and cycle parking.
- **Behaviour data**: these are demand-side measures of residents' travel behaviours, the types of people owning and riding bikes, how often, how far and to which types of destination.
- **Perception data**: attitudes and perceptions of the public towards bikes and transport more generally. This includes awareness of facilities for cycling, their perception of how good those facilities are locally, their views on safety for all ways of getting around the city, the potential for them to ride a bike more, whether they think use of bikes helps make a better place, and what else should be done to facilitate more and safer cycling. Perceptions, whether accurate or not, substantially determine whether people may ride a bike. For this reason the perceptions of those who don't ride are as important as those that do.
- **Impacts data**: health, economic and environmental benefits from cycle use, including modelled economic benefits, premature deaths prevented, impacts for the NHS and reductions in pollutants where bikes are used instead of cars.

The settings data and some of the behavioural data were supplied by partner authorities. The perception data and the rest of the behavioural data was obtained from an independent survey of a sample of respondents, representative of adults in each city, conducted by ICM Unlimited. The impacts data was calculated by Sustrans' Research and Monitoring Unit from a combination of the behavioural data and the best available evidence.

The survey by ICM Unlimited interviewed a representative sample of 1,100 respondents aged 16 and above in each of the seven cities. Interview quotas were set by gender, age, work status, ward (district for Greater Manchester) and ethnicity to reflect the profile of each city. In addition, booster interviews were conducted to ensure a minimum of 300 interviews with bike riders in each

city (defined as those who have cycled in the last four weeks), to ensure a more statistically robust measure of bike riders' views about facilities.[1] The results of booster interviews are not included in items of data covering the views or behaviours of the whole population. In other words, data on the views and behaviours of the whole population are representative; they do not include a disproportionate number of cyclists.

All interviews were conducted by telephone using random digit dialling combined with quotas to ensure robust data. 2017 fieldwork was carried out between 2nd May and 20th July, and the sample included an 85% landline - 15% mobile split. The average interview length was 15 minutes.

At the analysis stage, the data were weighted by age, gender, working status and ethnicity using mid-year population estimates based on 2011 Census data. In addition, in six of the seven cities, data are weighted by ward, while Greater Manchester data are weighted by unitary/metropolitan council area.

Data for each section of the report came from the sources listed below

Page	Section	Data item	Source and notes
Page 3. This is a summary of data found across the report.	There are substantial benefits to the city from people cycling	Trips made by bike in the past year	See page 8
		Saving to the NHS to pay for nurses	See page 9
		Daily number of cars taken off the roads, equivalent to a tailback	See page 9: "Number of return cycle trips are made daily in city by people that could have used a car"
		Economic benefit to city from people riding bikes for transport and leisure	See page 8
	There is huge potential for more people to ride bikes...	Percentage of residents usually cycling to and from work	See page 5
		(Birmingham only)	See page 5

[1] No cycle boosters were required in Bristol since this was achieved naturally in the main sample.

		Percentage of all trips made by bike	
		Percentage of people living within 125m of a cycle route	See page 5
		Percentage of people who would like to start riding a bike, or could ride their bike more	See page 13
		Percentage of people that think cycling safety is good	See page 12
	...and public support to make that happen	Percentage of people that say their city would be a better place to live and work if more people cycled	See page 13
		Percentage of people who would like to see more money spent on cycling	See page 14
		Percentage of people who would find protected roadside cycle lanes very useful to help them cycle more	See page 14
		Percentage of residents who support building more protected roadside cycle lanes, even when this could mean less space for other road traffic	See page 14
Page 4	Bike ownership in city	Percentage of people living in households with at least one bike (and in 2015)	ICM survey.

		Percentage of people living in households with children, with at least one child's bike	ICM survey.
		Adult bike ownership	ICM survey. Bicycle ownership figures refer to the percentages of people that live in a household with the given number of cars or bikes. Note that Census data on car ownership is normally reported differently, as the percentage of households with each given number of cars.
		Car and adult bike ownership	ICM survey. Car and bicycle ownership figures refer to the percentages of people that live in a household with the given number of cars or bikes. On the chart, "cars" refers to cars or vans.
	What's available and who's aware?	Miles of cycle routes (and in 2015)	All information supplied by the relevant authority (as shown on the front cover). This includes all surfaced routes where you can legally ride a bike and enjoy some separation from general motor traffic: paths away from roads, shared use footways, cycle lanes on roads, and bus lanes that you can cycle in. It excludes sections of cycle route that are merely signposted along roads without any special facility for cycling.
		Miles of routes physically separated from cars (and in 2015)	Includes on road protected bike lanes, shared footways and paths away from roads.
		(Birmingham only) off-road miles improved since 2014	This is the sum of the 22km of green space routes and 54km of canal tow path routes referred to on pages 6 and 7 as having been improved under the Birmingham Cycle Revolution programme. 22km + 54km = 76km = 47 miles.
		Percentage of people living within 125 metres of a cycle route (and in 2015)	Calculated by the authority, or by Sustrans from data provided by the authority. Based on all routes included in the calculation of total route length and 2011 Census data: • Belfast - Census 2011: Headcount and Household Estimates for Postcodes, NISRA data • Birmingham, Bristol, Cardiff, Greater Manchester, Newcastle - Census 2011: Headcounts and Household Estimates for Postcodes in England and Wales • Edinburgh - Table A1: Census day estimates of usually resident population and households by postcode, 2011
		Percentage of people who	ICM survey. 'Residents' refers to the representative sample of 1,100 residents, aged 16 or above.

		are familiar with the traffic-free routes (and in 2015)	
		Percentage of all streets having a 20mph speed limit (and in 2015)	Data supplied by partner authority. This is the percentage of the total street length to which a 20 mph limit applies, not the percentage of named streets that are 20 mph.
		Number of public bike parking spaces (and in 2015)…	Including all public bike parking available to the general public. Excludes parking at workplaces, educational establishments and railway stations that are for exclusive or preferential use by people at those establishments. Count provided by partner authority. Note that for: • Belfast – count covers city centre area only • Greater Manchester – count is a minimum level only, actual number will exceed this.
		… equivalent to X bike riders per space	This is the number of people saying they had ridden a bike in the four weeks before the survey, scaled up to the whole 16+ population of the city, and divided by the number of public bike parking spaces.
		Railway and metro station parking spaces for bikes	The number of cycle parking spaces available for preferential use by rail passengers, at all stations within the boundary of the area covered by Bike Life, and including stands, lockers and any other types of dedicated cycle parking. It excludes cycle parking that is outside stations, is available for everybody to use and is therefore public parking i.e. to which railway passengers have no preferential access. Within Greater Manchester and Newcastle City Council areas only, Metro stations are included in the calculations.
		Equivalent daily average number of rail passengers for each bike parking space	This is calculated using the sum of the daily average number of passengers using each railway station in the city area covered by Bike Life. Strictly speaking it is the number of passenger movements: if the same person makes two or more trips, each trip counts once. • Each station 'entry' or 'boarding' is counted once. Therefore if the number of spaces per passenger were 1, this would be equivalent to every passenger being able to park a bike at one end of their trip. For people making return journeys to and from stations that are both within the city area, this would allow for parking a bike at both ends. • Typically the source is the annual number of entries to a station listed by the Office of Rail and Road (ORR). • Within Greater Manchester and Newcastle City Council areas only, Metro stations are included in the calculations.
Page 5	Who is cycling?	Percentage of city residents by age band	For age, the division of city residents uses 2015 mid-year population estimates (2016 for Belfast).
		Percentage of bike riders	ICM survey. This is the percentage falling into each age group of people who said they had ridden a bike

		by age band	in the past four weeks when the survey was conducted
		Percentage of city residents by gender	For gender, the division of city residents uses 2015 mid-year population estimates (2016 for Belfast).
		Percentage of bike riders by gender	ICM survey. This is the percentage of people who said they had ridden a bike in the past four weeks when the survey was conducted who are each gender.
		Percentage of city residents by ethnicity	For ethnicity, the division of city residents uses the 2011 Census.
		Percentage of bike riders by ethnicity	ICM survey. This is the percentage of people who said they had ridden a bike in the past four weeks when the survey was conducted who are white or BME ethnicity.
	How often are people riding a bike?	Frequency of riding a bike	ICM survey. This is the frequency distribution of riding a bike, from responses to the survey. It shows the percentages of people claiming to cycle at each frequency.
	Where are people cycling?	Number of cycle trips to work	The number of cycle trips for each purpose is estimated using the best available data for each city. For work trips: • For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purpose of 'Commuting' • For Belfast, Birmingham, Bristol, Cardiff and Newcastle, the number of trips is estimated from the responses to the 2017 ICM survey questions, asking respondents who cycle to work how often they cycle to work. This is scaled up for the whole adult population. The calculations include a correction for seasonal variation: using Sustrans' database of average seasonal variation in cycling from a large number of automatic counters over many years, enables us to correct with confidence for the relatively high levels of cycling likely to be exhibited during the survey period of May to July. • For Edinburgh, the number of people who cycle to work is estimated from responses to the 2011 Census, which measured the percentage of working people who cycled to work. The percentage was uplifted to 2017 levels using the change in number of morning peak cycling trips (7am-10am) from 2011 to 2017, measured by automatic counters across the city.
		Number of cycle trips to college or university	The number of cycle trips to college or university is estimated using the best available data for each city: • For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purpose of 'Education' by those aged 17 or older. • For Belfast, Birmingham, Bristol, Cardiff, Edinburgh and Newcastle, the number of trips is estimated from the responses to the 2017 ICM survey questions, asking respondents who cycle to college or university how often they cycle to college or university. This is scaled up for the population. The calculations include a correction for seasonal variation, as above.

		Number of cycle trips to school	The number of cycle trips to school is estimated using the best available data for each city: • For Belfast, the number of trips to school was derived from Continuous Household Survey (CHS) data about the method of travel to/from school by pupils in Belfast, collected across 2015/2016.It was assumed that these pupils cycle to/from school on every school day. • For Birmingham, Modeshift Stars data, supplied by Birmingham City Council, provided the proportion of pupils who usually cycle to school. It was assumed that these pupils cycle to/from school on every school day. • For Bristol, 2016 School Census data, supplied by Bristol City Council, provided the proportion of pupils who cycle to school. It was assumed that these pupils cycle to/from school on every school day. • For Cardiff, 2016 School Census data supplied by City of Cardiff Council provided the proportion of pupils who cycle to school. It was assumed that these pupils cycle to/from school on every school day. • For Edinburgh, 2016 Hands Up Survey Scotland data provided the proportion of pupils who cycle to school. It was assumed that these pupils cycle to/from school on every school day. • For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purpose of 'Education' by those aged 16 or younger. • For Newcastle, 2016/17 Hands Up Survey data, supplied by Newcastle City Council, provided the proportion of pupils who cycle to school. It was assumed that these pupils cycle to/from school on every school day.
		Number of cycle trips for shopping and personal business	The number of cycle trips for shopping and personal business is estimated using the best available data for each city: • For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purposes of 'Business', 'Escort education', 'Escort other', 'Personal business', 'Shopping' and 'Visiting friends'. • For Belfast, Birmingham, Bristol, Cardiff, Edinburgh and Newcastle, the number of trips is estimated from the responses to the 2017 ICM survey questions, asking respondents who cycle for shopping and personal business how often they cycle for shopping and personal business. This is scaled up for the population. The calculations include a correction for seasonal variation, as above.
		Number of cycle trips for leisure	The number of cycle trips for leisure is estimated using the best available data for each city: • For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purpose of 'Holidays and round trips'. Manchester's categories here are different – leisure is split into leisure & tourism, and sport & entertainment,

			because of the categories used in TRADS. • For Belfast, the number of trips was a 2016 mid-year estimate modelled by the Department for Infrastructure of Northern Ireland using data collected by the Travel Survey for Northern Ireland (TSNI). • For Birmingham, Bristol, Cardiff, Edinburgh and Newcastle, the number of trips is estimated from the responses to the 2017 ICM survey questions, asking respondents who cycle exclusively for enjoyment or fitness how often they cycle exclusively for enjoyment or fitness. This is scaled up for the population. The calculations include a correction for seasonal variation, as above. Child leisure trips are estimated from the adult leisure trip estimate using Census 2011 data about the proportion of childless households in each city. • Note that the calculation of leisure trips from ICM survey data has changed since 2015, because a new question was added to the survey to test this behaviour more precisely. This has had the effect of increasing the leisure trips component, compared with the estimates published in 2015. 2015 estimates have been recalculated using the closest possible method to that used in 2017. • Results obtained from different methodologies should not be compared directly.
		Number of cycle trips for sport and entertainment (Greater Manchester only)	For Greater Manchester, Transport for Greater Manchester (TfGM) provided trip estimates modelled from responses to their Travel Diary Survey (TRADS) for the calendar year 2016. This is comprised of the estimated number of cycling trips done for the purpose of 'Holidays and round trips'.
		Percentage of city residents or workers who usually cycle to and from work	• For Belfast, Birmingham, Cardiff, Greater Manchester and Newcastle, percentage of adult residents aged 16+, calculated from responses to ICM survey. • For Bristol, source is Bristol City Council and note that this is a percentage of workers instead of a percentage of the whole adult population. • For Edinburgh, the percentage of commuters who travel to work by bike is estimated from responses to the 2011 Census, which measured the percentage of working people who cycled to work. The percentage was uplifted to 2017 levels using the change in number of morning peak cycling trips (7am-10am) from 2011 to 2017, measured by automatic counters across the city.
Pages 6 and 7	What's happened in the city since 2015	Various data, depending on each individual city report	Additional data provided by partner authority.
Page 8	Many people are cycling in the city	Trips made by bike in the past year	The total number of trips for each city is calculated by summing the number of trips for each journey purpose, as set out in the section "Where are people cycling?" on page 5 (detailed above).
		Miles cycled	Estimated by combining the number of trips for each purpose as described above, with an average (median) trip length for each purpose.

			• For Belfast, Birmingham, Bristol, Cardiff, Greater Manchester and Newcastle, average trip distance was obtained from questions in the ICM survey covering each trip purpose separately. • For Edinburgh, a single average cycling trip distance for all purposes was obtained from the Scottish Household Survey.
		Equivalent number of times around the world	This is the total trip length each day divided by the distance round the world and rounded to an appropriate level.
	Benefiting individuals and the local economy	Net benefit for each mile cycled instead of driven	This is the difference between the total cost per mile of driving a car and the total cost per mile of riding a bike. The costs of both include costs and benefits to the individual and to society as a whole. The calculation includes figures for the operating costs of bike and car, travel time of both, traffic congestion and health benefits (the main factors), and also infrastructure, local air quality, noise, greenhouse gases, taxation and absenteeism (lesser factors). The figure for each factor is based on best available evidence in the UK, including data taken from the Government's standard Transport Analysis Guidance (WebTAG). This methodology is based upon that used for the Copenhagen Bicycle Account, which has been established for 20 years and was one of the main inspirations for Bike Life.
		Annual benefit to city from people with a car choosing to cycle for transport	What this amounts to in each city is calculated by multiplying the per mile figure, as calculated above, by the estimated total pedalled distance that could have been driven across the year. Note that where this figure amounts to less than the figure for the value of early deaths prevented, this is because the figure for early deaths prevented covers all cycling, including leisure cycling journeys that would never have been driven.
		Benefit to city from all trips made by bicycle	This is comprised of three parts: • the annual benefit to the city from people with a car choosing to cycle for transport, plus • the value of similarly purposeful trips but cycled by people without access to a car, plus • the value of leisure cycle trips made by everyone
Page 9	Unlocking significant health benefits in the city	Number of early deaths prevented annually	Calculated using the widely recognised World Health Organisation (WHO) /Europe Health Economic Assessment Tool (HEAT). This estimates the number of premature deaths prevented by specified amounts of cycling.
		Value of early deaths prevented annually	Also calculated using the WHO HEAT tool, which subsequently estimates the value of the reduced mortality. This is based on contingent valuation studies that test the amounts people would be prepared to pay to increase their chances of survival.
		Number of serious long term health conditions averted annually	This is calculated using the Sport England MOVES tool which shows the return on investment for health of sport and physical activity. Physical activity protects against many illnesses. MOVES uses the latest research to estimate the number of eight specific conditions that are likely to be prevented:

			• Type 2 Diabetes • Ischaemic Heart Disease • Cardiovascular Disease (Stroke) • Dementia • Depression • Breast Cancer • Colon Cancer • Hip Fracture Note this is the reduction in incidence of these conditions i.e. the reduction in the number of new cases likely to arise in a year.
		Saving to the NHS	This is also calculated using the MOVES tool and is the annual saving in health care costs arising from the number of conditions averted.
		Equivalent number of average nurse's salary	This is the estimated saving to the NHS divided by the average salary of a nurse (£23,319) http://www.payscale.com/research/UK/Job=Registered_Nurse_(RN)/Salary
	Keeping your city moving	Transport capacity of a 4m wide lane per hour	Source: Litman, 2017. Evaluating Transportation Land Use Impacts Considering the Impacts, Benefits and Costs of Different Land Use Development Patterns. Based upon Eric Bruun and Vuchic, 1995. The Time-Area Concept: Development, Meaning and Applications. This is one of several similar studies and graphics showing that fewer people can be carried by cars than by other modes of transport in a typical traffic lane.
		Number of return cycle trips are made daily in city by people that could have used a car.	This is calculated from the relevant responses to the ICM survey. It includes purposeful cycle trips for transport made by people living in households with a car. It excludes trips made by people without a car, and excludes all leisure trips.
		Number of cars taken off the road	The number of return cycle trips made by people that could have used a car is considered to be same as the daily number of cars taken off the roads.
		Length of equivalent traffic jam/tailback	This is the space that would be taken by the cars taken off the road (as above), lined end-to-end. It assumes that in a stationary queue a car would take up the space of a standard car parking space.
		Space occupied by displaced cars, expressed in relation to a well-known local open space	This is the space that would be taken to park the number of cars taken off the road. It assumes parking spaces of average size (2.4m width x 4.8m length = 11.52m^2) and is related to different well-known local open spaces in each report.
	More people riding bikes has environmental	Tonnes of greenhouse gas emissions saved annually	The total distance cycled was calculated as above (page 8), and the part of this distance that could have been driven was estimated on the basis of all purposeful cycle journeys done by respondents who said they had a car in their household. This gives a total annual distance that could have been driven instead. The greenhouse gas emissions saved are calculated as the CO_2 that would have been emitted by an

	benefits		average car driven this distance.
		Equivalent carbon footprint	This is the CO_2 emissions as calculated above, divided by the carbon footprint in CO_2 equivalent of an average UK citizen. Carbon footprint includes emissions from all activities and of all greenhouse gases.
		kg of NOx and kg of particulates saved annually	These are calculated from the distance and trips cycled that could have been driven annually. It is based on the emissions that an average car (diesel or petrol) would produce. The calculation takes into account the average per trip emissions from a cold-start, emissions per km at optimum catalytic convertor temperature, and emissions per km arising from brake wear and road abrasion.
		Early adult deaths occurring each year where long-term exposure to air pollution (PM2.5) is deemed to be a contributory factor.	This is based upon Public Health England, 2014: Estimating Local Mortality Burdens associated with Particulate Air Pollution, for Adults = 25 years+.
Pages 10 and 11		"Stories from our city"	Local photographic events and interviews for Bike Life held in summer 2017. Where items of data are included, these are the opinion of interviewees.
Page 12	Safety and security continue to be a significant concern	Percentages of people that feel safe during the day, when using each mode of transport	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Frequency of injuries occurring in relation to the number of miles pedalled around city	The number of miles cycled in the city was estimated as above (page 8). This was then divided by the number of people on bikes reported as being injured in the city for the latest available year of data. This only includes injuries that were reported to the police.
		Percentage of people who think their city is a good place to ride a bike overall	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Percentage of people who think cycling safety in their city is good	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Percentage of people who think that the safety of children's cycling is good	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Reported bike thefts	Reported bike theft figures are provided by the partner authority.
		Percentage chance of a bike rider having their	The reported number of bike thefts as above is divided by the number of bike riders; the percentage of respondents to the ICM survey saying they had ridden a bike in the previous four weeks, scaled up for the

		bicycle stolen in the past year	whole adult population of the city.
		Percentage of people who think that the security of bicycle parking in their city is good	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
	How do residents rate the city's cycle routes?	Percentage of people who think that the amount, directness, condition and signposting of cycle routes in their city is good	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
Page 13	How do people see themselves when it comes to riding a bike?	How people see themselves when it comes to riding a bike	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Percentage of people who would like to start riding a bike, or could ride their bike more	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM. This includes those who do not ride but would like to, those new or returning to cycling, and those cycling occasionally.
	Perceptions of cycling are positive	Perceptions of cycling	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
Page 14	Prioritising investment in cycling and walking	Percentages of people who think that more space for: • cycling and walking • public transport, or • cars are the best ways to • keep the city moving • improve people's health • reduce air pollution • make streets more attractive	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Percentage of residents	The percentage of respondents giving these answers to the relevant question in the survey conducted by

		would like to see more investment in cycling in city	ICM.
	Improved safety and space for cycling	Percentage of people that think safety needs to be improved, for each mode of transport	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		What people would find very useful to start cycling/cycle more	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
		Percentage of residents that support building more protected cycle lanes, even when this can mean less room for other road traffic	The percentage of respondents giving these answers to the relevant question in the survey conducted by ICM.
Page 15	Bike to the future	Various data, depending on each individual city report	All information supplied by the relevant authority, as shown on the front cover Additional data provided by partner authority

Comparisons with 2015 data

Settings – data is actual numbers (not a sample) and direct comparisons can usually be made, unless there has been a change of methodology since 2015. As data is not sample based, significance testing is not applied.

Behaviours, perception and impacts data are derived directly or indirectly from sampling, and therefore significance testing may be applied provided that comparable methodologies were used in 2015 and 2017. Significance testing can produce two results: a significant change or no significant change. Significance is ascertained by calculating the probability that the change observed in the data is a result of sampling error. If this probability is below a certain level, in this case below 1%, then it is determined that the change observed in the data is sufficiently likely to represent 'real change'. If the probability that the observed change is a result of sampling error is greater than 1%, then it is not possible to confidently state that the observed change indicates a change 'on the ground'.

So we have four possibilities:

- Significance testing not required – shown as actual change in the key
- Significance testing not applicable – in these cases we have not included 2015 data
- Significance testing shows that the probability of a ‘false positive’ – that the change between 2015 and 2017 is simply a result of sampling error – is less than 1%.
- Significance testing shows that the probability of a ‘false positive’ is greater than 1%