Estimating the Holistic Value of Scotland's Mountain Bike Sector

Briefing Paper for

Scottish Enterprise

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Introduction

The purpose of this paper is to provide an estimate of the current total size of the Scottish mountain bike sector, and how large the sector is likely to be in five years' time, based on current trends.

It will look at 8 aspects of the mountain bike sector in turn, namely:

1. mountain bike production
2. parts and accessories production
3. electric bike retail
4. mountain bike retail and distribution
5. parts and accessories retail
6. clothing and footwear
7. sports nutrition
8. mountain bike tourism

Note that, as these figures are based on current trends, they do not take into account the impacts of any future public sector interventions to support the development of these sectors. We will consider one possible alternative scenario, to examine the potential impacts of additional investments in tourism infrastructure, at the end of this paper.

This paper draws evidence from a desk based review of Scottish, UK and European market research papers, a survey of 24 Scottish mountain bike sector businesses, and interviews with 19 key stakeholders who work in the Scottish mountain bike sector.

Mountain bike production

By analysing the UK bike manufacturing base over the last 20 years it is clear that the UK has lost some of its large-scale manufacturing capabilities with a number of factories closing around the start of the 21st Century, most notably Raleigh, which closed its Nottingham plant in 2002.

However, the UK has a growing number of small, niche bike manufacturers who are creating specialist, high value products, including custom made and bespoke bikes.

This is demonstrated in Scotland with emergence of Shand Cycles, whose innovative approach to bike development won them a £48,500 Scottish EDGE award in 2014, echoing their growth potential from their base in Livingston.

Shand (www.shandcycles.com) present an interesting case study in the development of the UK bike industry in their move from being a solely custom made brand to creating a production bike range. Their growth is built on a strong brand and high quality with strong production values.

Elsewhere in the UK the latest entrants to the bike building market include Isla Bikes (www.islabikes.co.uk) and Frog (www.frogbikes.com), both of whom now have a presence in the US, and who sit alongside established UK brands such as Orange (www.orangebikes.co.uk). Brompton Bikes, who turned over £28 million in 2014, are another success story, who illustrate how a high value product can be manufactured in the UK. Their market leading foldable commuter bikes are all made in their new London factory[1]. Pashley are another example of how a high-end UK based manufacturer can enjoy long term sustainability, having been manufacturing in the UK for over 90 years, with a current turnover of £45 million.

[1] https://www.theguardian.com/business/2015/aug/17/brompton-bicycle-factory-expansion

All of the above companies have managed to successfully manufacture in the UK by selling high-value products to customers who are willing to cover the cost of producing them in the UK's high wage economy. However, most other bike companies across the world have their headquarters and design teams in Western countries, but their manufacturing facilities in lower wage countries such as Taiwan and China. The frames are then shipped back to the headquarter location, where the bike is assembled and the value is added, before being transported either to the distributor/retailer or directly to the consumer. As a result of this trend 98% of bikes sold in the UK are now manufactured overseas[2].

However, what is evident by analysing the Scottish and UK bike production market is that those UK companies that have managed to 'buck' the recent UK trend towards outsourcing production have come from areas with a strong engineering heritage. There are strong 'clusters' of activity in traditional manufacturing bases such as Yorkshire, with Orange, Cotic, Genesis Bikes, Whyte Bikes and the steel manufacturer whose work underpins the quality of UK made bikes, Reynolds.

These companies are growing and the market trends suggest there is now once again a movement towards more high-end bikes being built in the UK and Scotland. It will become an important element of any future strategy to support the growth of the industry in Scotland.

There is also a move to have more manufacturing return from the Far East to Europe to be closer to consumer demand and help companies be flexible with supply. Aluminium frame building factories are being set up in Portugal and Romania. However, these will be for low to mid-range bikes and take advantage of the lower wages paid in these economies in comparison to the UK. Manufacturing of bikes in Scotland should focus on the high end of the market, which commands a higher pricing point, as is demonstrated by small boutique hand built manufacturers like Shand.

One of the main sources of data on the number of mountain bikes sold in Europe or the UK, is contained within the Conebi's[3] annual *European Bicycle Market* reports which provide a detailed annual breakdown of the performance of the UK and European bicycle markets as a whole.

According to the most recent edition of this report (2016), which was based upon data from 2015, there were 13.140 million bikes produced across the EU as a whole (excluding electric bikes), with 53,000 of these made in the UK. This means that the UK currently only produces 0.4% of all bikes made in Europe, suggesting that the UK should be able to significantly upscale its bike making capabilities without causing any significant displacement issues for other UK businesses.

The EU wide figure for 2015 represents a 7% increase on 2010 production levels, while the UK figure for the same year represents a more significant 130% increase. Assuming that these trends continue into the future, we estimate that the EU will produce 15.1 million bikes by 2025, while the UK will produce 281,000 bikes.

Table 1: Number of bikes produced (thousands of units)

	2010	2015	% change	2020	2025
EU27/28	12,241	13,140	7%	14,105	15,141
UK	23	53	130%	122	281
UK as % of EU	0.2%	0.4%	-	0.9%	1.9%

Sources: European Bicycle Market - 2016 edition, Conebi (2016); and European Bicycle Market - 2011 edition, Colibi (2011). Figures for 2010 exclude Croatia as they were admitted to the EU in 2011. However, the impact of this exclusion is likely to be negligible. Future projections are based on the 28 current EU members, including the UK.

Cenibi report that the average cost of a bicycle in the UK rose from €280 in 2010 to €300 in 2015 (an increase of 7.1%). However, through our consultations we are aware that mountain bikes can often retail for significantly more than this, and that this is particularly likely to be the case for the higher value added bikes that tend to be produced in the UK. For example, in their consultation with us, Shand report that their mountain bikes typically retail for between £2,500 and £4,500, while the Scottish-based

[2] http://www.director.co.uk/6695-cycling-entrepreneurs-interviews-6695/

[3] Formerly known as Colibi

Edinburgh Bike Co-operative sells mountain bikes (including its own Revolution range) from as little at £320 or as much as £6,000. At the time this analysis was undertaken[4], the UK online bicycle retailer Wiggle listed 104 mountain bikes for sale, with the most expensive bike listed at £3,500, the cheapest at £165, and the median priced bike at £999.

We would suggest that this £999 figure represents a conservative estimate of the average price of a mountain bike in the UK, as it doesn't include some of the higher spec and bespoke mountain bikes that are sold directly from the manufacturer to the consumer. As Wiggle sells bikes globally, and gives the user the option to pay in Euros, Danish Krone or Swiss Francs, we have also assumed that £999 (or €1,199) also represents a fair estimate of the average cost of a mountain bike across Europe. Assuming that bike prices continue to grow at the current rate of 5.4% per year, we estimate that they will reach £1,299 by 2020 and £1,689 by 2025.

By using this figure, and by assuming the mountain bike sales represent 26% of total bike sales (Source: Mintel, Bicycles, 2013), we estimate that the total value of mountain bike production in the UK will reach £124 million by 2025.

We have based our estimates of Scotland's share of this UK sector value on evidence from the FAME database, which reports that 8 (4.3%) of the 187 UK businesses in SIC 30920 (Manufacturers of bicycles and invalid carriages) are located in Scotland[5]. Assuming, based on this, that 4.3% of all bikes produced in the UK will be made in Scotland, we estimate that, assuming a continuation of current trends, the total value of mountain bike production in Scotland could reach £5.3 million by 2025 (in 2025 prices).

Table 2: Total value of mountain bike production (£ millions)

	2010	2015	% change	2020	2025
EU27/28	3,179	3,413	7%	4,764	6,649
UK	6.0	14	130%	41	124
UK as % of EU	0.2%	0.4%	-	0.9%	1.9%
Scotland	0.3	0.6	130%	1.8	5.3
Scotland as % of UK	4.3%	4.3%	-	4.3%	4.3%

Source: Mintel - Bicycles (2013) reports that mountain bikes account for 26% of total bike sales. We have applied this % to the numbers above

There is evidence from our stakeholder and business surveys to suggest that consumers are taking a bike purchase more seriously and buying better quality bikes. This bodes well for bike manufacturers in Scotland and the rest of the UK.

The mountain bike manufacturing sector therefore appears to have strong growth potential, and the Mountain Bike Centre of Scotland is well-placed to help businesses target this growing market by providing inspiration, support and specialist advice to current and potential future manufacturers as well as supporting the development of business networks in supporting ancillary sectors, such as product design and engineering.

Another method to measure the potential growth in this sector is to target overseas growth companies to inward invest in Scotland as their manufacturing base. Further analysis of the engineering skills available within Scotland would be a useful initial step, as would be a survey or engagement with potential existing international brands who may be interested in using Scotland to test and launch their products on the back of our trail network and academic expertise in this area, or even in relocating their bike manufacturing to Scotland.

[4] July 2016

[5] Data extracted June 2016

A recent example of this is the relocation of manufacturing of Frog Bikes, a high-end children's bicycle company, from East Asia to Wales, thanks, in part, to financial support from the Welsh Government[6].

A further example of this potential for relocation is the Shimano Group, a Japanese manufacturer and worldwide market leader in the development and manufacture of bicycle components. As of 1st January 2017, their European head office will be located at the High Tech Campus (HTC) in Eindhoven. Shimano chose the HTC in view of the growing importance of a global business environment in the Netherlands, the presence of young talent in the cycling industry stemming from here and a strong focus on innovation in the economy overall. The company has cited "a strong cluster of companies and knowledge institutes in the field of sports, technology and design" as their main reason for locating there[7].

The Mountain Bike Centre of Scotland (MTBCoS) and its funders are well placed to offer a similar package to potential investors with a growing cluster of product and supply chain companies, a strong academic presence and close links to economic development channels.

Scotland should ensure it has a clear 'open for business' message so it is considered in any future bike manufacturing relocations. This may need additional resource as the Mountain Bike Centre of Scotland is currently focussed on delivering impacts for Scottish based companies and whilst it has made in-roads in engaging with international brands it would require a greater input for Scotland to be endorsed further with the support of Scottish Development International.

6 http://www.walesonline.co.uk/business/business-news/kids-bike-factory-riding-into-10902236

7 http://blog.hightechcampus.com/build-your-business/shimano-european-head-office-to-high-tech-campus-in-eindhoven

Parts and accessories production

As demand for mountain bikes grows over time, so too will the market for bike parts and accessories.
Scotland has already achieved a number of successes in this market, including companies manufacturing suspension tuning devices (Sussmybike), oils and lubricants (Scotoiler); bike security tools (Veloeye) and bike storage solutions (Elkah, Limits Technology and Joystick Components).

Our approach to estimating the total value of Scotland's mountain bike parts and accessories production market was very similar to the approach taken above to estimate the total value of the mountain bike production market.

We started our analysis by taking Cenibi's estimates of the value of the total EU and UK bike parts and accessories markets, converting these to Sterling[8]. We then:

- estimated what proportion of these would be attributable solely to the Mountain Biking market (based on the same 26% assumption as was used in the previous calculation)
- extrapolated these figures to 2020 and 2025, and
- estimated what proportion of these sales would be attributable to Scotland (based on the same 4.2% assumption as was used in the previous calculation).

Based on this we estimate that, based on current trends and assuming no further targeted investment towards this market, the value of the Scottish mountain bike parts and accessories market is likely to reach £1.7 million by 2025. However, the value of the sector could substantially exceed this should Scottish Enterprise and Scotland Development International choose to pro-actively target this market as a mechanism for utilising Scotland's engineering skills and heritage.

8 *Based on average £ : € exchange rate in 2009 and 2014 (0.89 and 0.80 respectively, source O&A.com). The 2014 exchange rate was also assumed for 2020 and 2025.*

Table 3: Total value of mountain bike parts and accessories production (£ million)

	2010	2015	% change	2020	2025
EU27/28	289.9	350.9	21%	472.4	636.1
UK	3.5	7.3	109%	16.9	39.4
UK as % of EU	1.2%	2.1%	-	3.6%	6.2%
Scotland	0.1	0.3	109%	0.7	1.7
Scotland as % of UK	4.3%	4.3%	-	4.3%	4.3%

Sources: Cenebi (2016) and Colibi (2011)

Electric bike retail

Electric bikes are still a small market relative to traditional bikes, but are growing hugely in popularity. Between 2010 and 2015, the total value of EU electric bike sales grew from €588 million to €1.35 billion, while UK sales grew from €20.0 million to €50 million in 2014[9]. Assuming that these growth rates continue into the future, we estimate that EU residents will spend €7.2 billion on electric bikes by 2025, while UK residents will spend €576 million with global sales of $US25 billion.

Businesses in Scotland are already targeting this growing market. For example, Electronic Bikes Scotland Ltd in Dundee and EasyGo Electric Bikes Ltd in Linlithgow both specialise in the sales and distribution of electric bikes, while FreeFlow Technologies Ltd has patented, and are in the process of developing, Saltire, the world's lightest, most efficient power to weight e-bike (with £60 million of projected combined road and mountain e- bike sales by 2019)[10]

Following the same assumptions as in our previous calculations we estimate the total value of the electric mountain bike retail sector in 2010, 2015, 2020 and 2025 to be as follows:

Table 4: Total value of electric mountain bike sales (£ million)

	2010 *	2015	% change	2020	2025
EU27/28	136.1	282.3	107%	651.4	1,503.3
UK *	4.6	10.4	125%	47.9	119.7
UK as % of EU	-	3.7%	-	7.4%	8.0%
Scotland	0.4	0.9	125%	4.0	10.1
Scotland as % of UK	8.4%	8.4%	-	8.4%	8.4%

Sources: Cenebi (2015) and Colibi (2010). As no UK level figures were available for 2010, our estimates for the UK and Scotland relate to 2011

Although Scotland undoubtedly has the potential to successfully establish itself as a producer of electric bikes, and Freeflow are currently examining options for establishing a manufacturing base in Scotland, we do not believe that there is sufficient information available at this point to quantify the potential future value of electric bike production in Scotland.

Mountain bike retail and distribution

The increased popularity of mountain biking offers an opportunity to retail and distribution businesses as well as manufacturers, and within Scotland Alpine Bikes, Hotlines and 2Pure are already operating successfully in this market.

The growth in opportunities to re-distribute to the EU market has been evidenced by the growth of 2Pure which has purchased two subsidiary companies from North America and the Far East, both of whom (Joystick and Neil Pryde Cycles) have now relocated to Scotland. These distributors work closely with many international brands, some of whom could potentially be persuaded to establish a presence in Scotland.

Conebi estimate that 20.7 million bikes were sold in the EU in 2015, with 3.5 million (16.9%) of these bought by UK customers. Figures from the National Bike Dealers Association in the USA show that a further 29.9 million bikes were

[9] Cenebi (2015) and Colibi (2012) http://nbda.com/articles/industry-overview-2015-pg34.htm

[10] http://www.freeflowtechnologies.com/, www.bit.ly/29xczgW

sold in the USA in that year[11]. UK bike sales grew strongly, by 7%, over the past 5 years, while EU sales recorded a more modest growth rate of 3%.

Assuming, based on research evidence by Mintel, that mountain bikes account for 26% of total bike sales, and assuming that UK sales are distributed evenly across the population, we estimate that 77,000 mountain bikes were sold in Scotland in 2015. Based on recent trends, we expect this figure to rise to 82,000 by 2025.

Table 5: Number of mountain bikes sold (thousands of units)

	2010	2015	% change	2020	2025
EU27/28	5,320	5,395	1%	5,472	5,549
UK	884	914	3%	944	976
UK as % of EU	16.6%	16.9%	-	17.3%	17.6%
Scotland	74	77	3%	79	82
Scotland as % of UK	8.4%	8.4%	-	8.4%	8.4%

Sources: European Bicycle Market - 2016 edition, Conebi (2016)

Assuming again that the current average retail cost of a mountain bike is currently £999, and that it will rise to £1,689 by 2025, we estimate that Scotland's mountain bike retail sector will be worth £138 million by 2025.

Table 6: Total value of mountain bike sales (£ millions)

	2010	2015	2020	2025
EU27/28	5,315	5,390	7,108	9,373
UK	883	913	1,227	1,648
UK as % of EU	16.6%	16.9%	17.3%	17.6%
Scotland	74	77	103	138
Scotland as % of UK	8.4%	8.4%	8.4%	8.4%

Sources: Cenebi (2016)

[11] http://nbda.com/articles/industry-overview-2015-pg34.htm

Parts and accessory retail

As Cenebi do not provide estimates of the value of the parts and accessories sales in the EU and the UK, we have developed our own estimate for these.

We noted that the EU was a net importer of bicycles, though net imports are projected to fall from 56% in 2015 to an estimated 41% by 2025. Assuming that the EU imports a similar percentage of its bike parts and accessories, we estimate that the total value of parts and accessory sales in the EU was £2.1 billion in 2014, and that it is likely to rise to £3.4 billion by 2025.

Table 7: Value of EU mountain bike parts and accessory sales (€m)

	2015	2020	2025
EU Mountain Bike Production	3,413	4,764	6,649
EU Mountain Bike Sales	5,315	7,108	9,373
Net mountain bike imports into the EU	56%	49%	41%
EU Parts and accessories production	1,350	1,817	2,446
EU parts and accessories sales	2,102	2,711	3,449

Sources: Cenebi (2016) and Colibi (2011)

As the UK customers' account for 14% of all bike sales in the EU, we have assumed that UK customers will also account for a similar share of total parts and accessories sales. If this is the case, it would mean that the total value of parts and accessory sales in the UK was €356 million in 2015, and that it would rise to €606 million by 2025.

Assuming that 8.4% of these UK sales would be made in Scotland, we estimate that mountain bike parts and accessory sales in Scotland were worth £30 million in 2015, and that this will rise to £51 million by 2025.

Table 8: Value of UK and Scottish mountain bike parts and accessory sales (€m)

	2015	2020	2025
EU parts and accessories sales	2,102	2,711	3,449
UK mountain bicycle sales as % of EU total	16.9%	17.3%	17.6%
estimated UK parts and accessory sales	356	468	606
Scottish mountain bike sales as % of UK	8.4%	8.4%	8.4%
estimates Scottish parts and accessory sales	30	39	51

Sources: *Mintel - Bicycles (2013), Census (2011), OANDA (2016)*

Recent research by Mintel notes some important characteristics of this market that should be considered when seeking to develop this market in Scotland. For example, it notes that:

"The structure of bicycle parts, accessories and clothing retailing in the UK is unusual in today's highly concentrated and consolidated retailing environment, in that the industry is still incredibly fragmented and remains dominated by independent, often single-shop, retailers."

And that:

"The online channel is a major factor in the market, by virtue of the fact the leading operators can stock a huge range of products and brands in all sizes, something physical bricks and mortar retailers are unable to do due to space restrictions"

Clothing and footwear

Over the next decade the growth in the popularity of mountain biking will create new opportunities for clothing and footwear manufacturers. The children and women's clothing markets demonstrate particular growth potential, with Mintel (2013) reporting high levels of latent demand for cycling in these two groups, and with evidence from our business and stakeholder discussions supporting this view.

A number of Scottish businesses have already achieved success in this market, including outdoor clothing manufacturers Trespass; Findra, who specialise in the female clothing market; Shred XS, who specialise in the children's clothing market, and Keela and Endura, who develop products for the male, female and children markets.

Mintel[12] (2011) reports that the UK sports clothing market was worth £3.292 billion in 2011 (equivalent to 8.8% of all UK clothing sales), and that the UK sports footwear market was worth £1.548 billion (17.3% of all UK footwear sales).

By 2016, they project that the UK sports clothing and footwear markets will be worth £3.970 billion and £1.734 billion respectively.

Assuming a linear rate of growth, we have estimated values for the sector for 2020 and 2025 in the table overleaf.

Table 9: Size of UK sports clothing and footwear market (£ million)

	2011	2016	2020	2025
UK sports clothing market	3,292	3,970	4,611	5,560
UK sports footwear market	1,548	1,734	1,900	2,128
Total	4,840	5,704	6,511	7,689

Source: Figures for 2011 and 2016 based on Mintel - Sports Clothing and Footwear, 2011. Other years based on an assumption of a linear rate of growth

[12] Sports Clothing and Footwear, 2011

Mintel also state (in a separate, 2012 report)[13], that 2% of UK sports footwear sales, and 5% of sports clothing sales relate to cycling. Based on this, and our assumption that mountain biking accounts for 26% of the total cycling market, and assuming that these sales are distributed evenly across the UK, we estimate that the total Scottish mountain bike clothing and footwear market could be worth £83 million by 2025.

Table 10: Size of UK and Scottish mountain bike clothing and footwear market (£ million)

	2011	2014	2020	2025
UK mountain bike clothing market	165	184	231	278
UK mountain bike footwear market	31	33	38	43
Total UK market	196	217	269	321
Scottish mountain bike clothing market	43	48	60	72
Scottish mountain bike footwear market	8	9	10	11
Total Scottish market	51	57	70	83

Source: Mintel - Bicycles (2013) reports to mountain bikes account for 26% of total bike sales. We have applied this % to the numbers above

[13] Mintel, Sports Goods Retailing, 2012

Sports nutrition

Research by the Nutrition Group (2015) estimates that the UK sports nutrition market was worth £356 million in 2014, and that this will rise to £527 million by 2019. Mountain bikers are likely to form a key, and distinctive part of this market, and sports nutrition businesses have already sought to target this particular group. For example, Science in Sport, an England based sports nutrition company, have a dedicated section of their website for products suited to the needs of cyclists[14], and develop a range of product bundles specifically for this market; while Edinburgh based effervescent tablet manufacturers Nutrifiz Ltd have recently worked with MTBCoS and the University of the West of Scotland to demonstrate the impact of their product on endurance and performance, and to enable them to market the product to the cycling sector at Eurobike.

Assuming, based on figures from Mintel, that 49.5% of the UK population exercise regularly, that 5.9% of the total population (or 11.9% of regular exercisers) cycle, that 26% of these product sales are bought by mountain bikers, and that UK sales are evenly distributed across the population, we estimate that the total value of the Scottish mountain biking sports nutrition market was £926,000 in 2014, and that this will rise to £2.2 million by 2025.

Table 11: Size of Scotland's mountain bike sports nutrition market (£ million)

	2014	2020	2025
Total UK sales	356	570.0	843.7
UK cycling related sales	42	67.8	100.4
UK mountain bike related sales	11	17.6	26.1
Scotland mountain bike related sales	0.9	1.5	2.2

[14] http://www.scienceinsport.com/shop-by-sport/cycling

Mountain bike tourism

Mountain biking represents an important component of the Scottish tourist market and, as a result, businesses which position themselves to meet the needs of this market stand to benefit from doing so.

Figures from Mintel[15] suggest that there is a large population of active cyclists living in the UK. They report that 30% of people aged 16 or above in the UK cycle at least once a month which, when extrapolated across the full Scottish and UK populations above this age, equate to 15.7 million active adult cyclists in the UK, and 1.3 million in Scotland.

The report also shows a high latent demand for cycling, with 33% of respondents reporting that they have ridden in the past, and would consider doing so again. A figure which is equivalent to 17.3 million UK adults and 1.5 million Scottish adults. This suggests that there is scope to grow the market further.

Table 12: Frequency of riding a bicycle in the UK

Frequency of cycling	% of survey respondents	UK market size	Scottish market size
Most days	6%	3.1	0.3
At least 2 or 3 times a week	8%	4.2	0.4
At least once a week	8%	4.2	0.4
At least once a fortnight	4%	2.1	0.2
At least once a month	4%	2.1	0.2
Sub-total	**30%**	**15.7**	**1.3**
Less often than once a month	11%	5.8	0.5
I have ridden in the past and would consider doing so again	**33%**	**17.3**	**1.5**
I have ridden in the past but would not consider doing so again	18%	9.4	0.8
I have never ridden a bicycle but would consider doing so in the future	2%	1.0	0.1
I have never ridden a bicycle and would not consider doing so in the future	7%	3.7	0.3

Source: Mintel, 2013. Figures relate to people aged 16 and over. Assumes a Scottish 16+ population of 4,460,738 (NRS, 2015) and a UK 16+ population of 52,295,903 (ONS, 2015).

These high levels of cycling participation have also led to significant numbers of UK and international cycling tourists visiting Scotland. For example, figures from the 2014 Great Britain Tourism Survey, a survey of overnight stays by UK residents, found that:

- 191,000 overnight visitors to Scotland participated in mountain biking in 2014, equivalent to 1.5% of all tourist visits
- these visitors cumulatively stayed for 652,000 nights (1.6% of total tourist visitor nights) and spend £45 million during the course of their visits (1.6% of total tourist spend)
- the average length of stay for mountain bike visitors was 3.4 nights., compared to 3.3 nights across all tourist groups
- the average expenditure per night was £69.02, compared to £69.21 across all tourist groups

[15] Mintel (2013), Bicycles

- 25% of mountain bike visitors were under 34, and 80% were under 44, compared to 28% and 48% respectively for all tourist groups
- 83% of mountain bike visitors were male and 13% were from a Black or Minority Ethnic (BME) group, compared to 51% and 4% respectively for all tourist groups
- 73% of mountain bike cyclists visited outside of the peak tourism months of June, July and August, compared to 69% for all tourist groups

In addition to this UK tourism market, Scotland has a potential to attract further tourists from outside of the UK. For example, EKOS[16] found that 42% of all mountain bike tourism visitors who book through tour operators live overseas, while data from the International Passenger Survey suggests that 2% of all international visitors to Scotland take part in some form of cycling during the course of their visit[17].

In 2009, a study into the economic value of mountain bike tourism in Scotland estimated that it generated £46.5 million of net visitor sales in that year. When applying the 'supplier effect', the total impact of mountain biking in Scotland is £130m per annum.

Recent research conducted internally by Developing Mountain Biking in Scotland (DMBinS) indicates that, by 2015, this figure had risen to £90.1 million net of supplier effects, or £141.4 million including supplier effects.

Assuming that the sector continues to grow at its current rate, we estimate that the total value of the sector will reach £102 million by 2020 and £117 million by 2025.

[16] EKOS (2009), Economic Value of Mountain Biking in Scotland

[17] https://www.visitbritain.org/activities-undertaken-britain

IDBR – an alternative approach to measurement

An alternative approach for measuring the economic value of the sector is to use data from the Inter Departmental Business Register (IDBR) to estimate the combined economic employment, turnover and GVA levels across all of the businesses that have received support from MTBCoS to date.

In September 2016, MTBoS and Scottish Enterprise together drew up a list of 292 businesses that have received MTBoS support, 183 of whom had an IDBR listing[18]. They then jointly agreed a set of assumptions for the percentage of turnover in each of these businesses that should be attributed to the mountain bike sector.

Statisticians from the Scottish Government's Business Enterprise and Statistics team then estimated the combined value of these business's mountain bike activities between 2011 and 2014 as being equal to the following:

Table 13: Total economic contribution of Scotland's mountain bike sector

	2011	2012	2013	2014
Number of units	160	173	180	194
Employment ('000s)	1.07	1.252	1.278	1.415
Turnover (£m)	106.56	127.7	154.04	144.94
GVA contribution (£ million)	35.33	48.31	58.25	57.52
GVA per head (£)	32,228	37,479	44,659	40,136

[18] The remainder of the identified businesses were either no longer trading, or, due to their small size, have neither registered for Pay as You Earn Tax or Value Added Tax

Summary

We summarise, and aggregate together, all of the impacts from this section in the table below. Based on this, we estimate that, based on current trends, the combined sector sales were worth up to £257 million in 2015, and could potentially be worth £408 million by 2025, equivalent to an increase of 59%. This figure will only be realised if Scotland's public sector agencies continue to deliver the same range of support to mountain bike companies as they do at present, though it could be even greater should Scottish Enterprise take new measures to pro-actively support the development of the sector in future (see sensitivity test overleaf).

However, we would caution that there may be some scope for double counting in these figures. For example, if a Scottish resident were to buy a bike that was manufactured in Scotland, then this sale would appear in both the bike production and bike retail figures. Similarly, if a visitor were to buy an item of clothing or footwear, a sports nutrition product or a bike accessory during a visit to a Scottish mountain bike trail, then this will appear both under that item and in the tourism figure.

Table 14: Total economic contribution of Scotland's mountain bike sector (Turnover)

Area of expenditure	2015	2020	2025
Bike production	0.6	1.8	5.3
Parts and accessories production	0.3	0.7	1.7
Electric Bike retail	0.9	4.0	10.1
Parts and accessories retail	77	103	138
Non-Electric Bike retail	30	39	51
Clothing and footwear	57	70	83
Sports nutrition	0.9	1.5	2.2
Tourism	90	102	117
Total mountain bike market value	**257**	**322**	**408**

Source: Frontline, 2016

[19] We base our projections on the future performance of the Scottish economy as a whole on the Fraser of Allander Institute's June 2016 forecast, which was the most recently available projection at the time of writing.

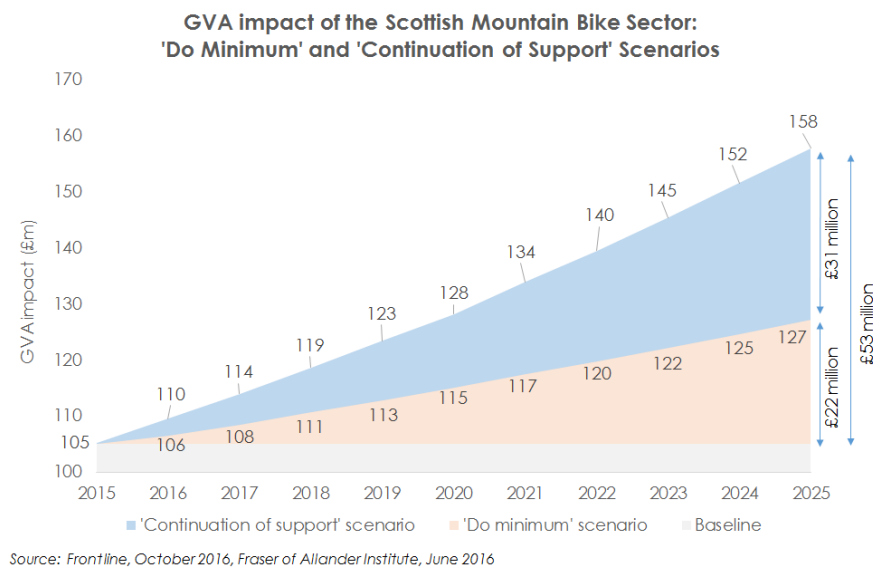
Converting these figures into GVA estimates, based on GVA to turnover ratios by industry division reported in the most recent Scottish Annual Business Statistics yields the following impacts:

Table 15: Total economic contribution of Scotland's mountain bike sector (GVA)

Area of expenditure	2015	2020	2025
Bike production	0.2	0.5	1.4
Parts and accessories production	0.2	0.4	0.9
Electric Bike retail	0.2	1.0	2.6
Parts and accessories retail	20	27	36
Non-Electric Bike retail	8	10	13
Clothing and footwear	23	28	33
Sports nutrition	0.2	0.4	0.6
Tourism	54	61	70
Total mountain bike market value	**105**	**128**	**158**

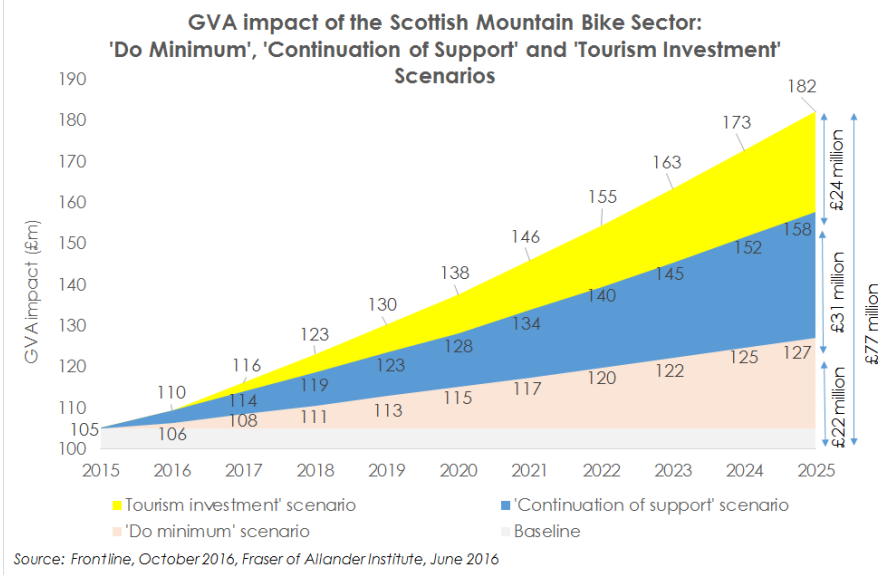
Again, these figures would be realised if Scotland's public sector agencies continue to deliver the same range of support to mountain bike companies as they do at present. If this future funding does not occur, then we would anticipate that the industry would still continue to grow, but this growth rate would only manage to keep pace with the performance of the Scottish economy as a whole[19]. This would mean that the GVA contribution of the sector would only reach £127 million by 2025. In other words, we anticipate that, if Scotland's public sector agencies were to continue their support for the sector, then this would generate £31 million of additional GVA by 2025. This is shown in the figure overleaf.

Figure 1



Source: Frontline, October 2016, Fraser of Allander Institute, June 2016

Figure 2



Source: Frontline, October 2016, Fraser of Allander Institute, June 2016

Findings from 'tourism boost' sensitivity test

To help understand the potential economic impact of any future investment in Scotland's mountain bike tourism offer (for example through the DMBinS strategy activities), we added a 'tourism investment' scenario to our impact model

We used this to test what would happen if the number of mountain bike visits to trails in the South of Scotland were to grow by a further 60% over the course of the next 10 years. This scenario assumes that the mix of visitors (e.g. local v. non-local), the average length of stay, and the average spend of each visitor remain unchanged.

This analysis shows that any such increase in visitor numbers would add a further £24 million to Scottish investment by 2025, and a cumulative GVA impact of £88.4 million (PV) over the next ten years.

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