

Evolution of Golf Course Lengths Globally

1. Summary

The earliest documented golf course lengths were from the 1880s in the United Kingdom. Meanwhile, golf in the United States started to become significant in the 1890s while it also expanded around the world beyond Great Britain and Ireland. Since the 1880s, golf courses have shown an overall global trend of lengthening (as measured from the back tees). Over this period, golf courses in the U.S., the country with the most amount of data, have increased in length from a median of about 5600 yards to a median of about 6800 yards in the 2010s, an increase of about 1200 yards or 21 percent, and at an average rate of about 10 yards per year. Similarly, the longest golf courses as indicated by the 90th percentile have increased in length from about 5900 yards in the 1880s to about 7200 yards in the 2010s, an increase of about 1300 yards or 22 percent, and at an average rate of about 10 yards per year. While data and summary statistics are presented for four additional countries or regions, there were not enough data available to be able to confidently calculate decade-by-decade rates of change. Analysis also demonstrates that it is not just the longest courses that have been getting longer, but the overall inventory of courses has been lengthening. Lastly for tees other than the back tees, the second-longest tees have also been lengthening while forward tees have been getting shorter.

Contents

- 1. Summary 1
- 2. Methodology..... 2
- 3. Evolution of Golf Course Lengths..... 2
 - 3.1 Evolution of course lengths in the United States..... 2
 - 3.2 Evolution of course lengths in Great Britain and Ireland..... 5
 - 3.3 Evolution of course lengths in Japan 6
 - 3.4 Evolution of course lengths in Canada..... 7
 - 3.5 Evolution of course lengths in Australia/New Zealand..... 8
 - 3.6 Analysis of global golf course lengths 9
 - 3.6.1 Long-term global trend 9
 - 3.6.2 Global comparison of median to 90th percentile..... 10
 - 3.7 Forward tee lengths in the United States 11
 - 3.8 Playing lengths other than the shortest or longest in the United States 14
 - 3.8.1 Second-longest playing lengths/tee set – United States courses..... 14
 - 3.8.2 U.S. trends across “middle tees” as a group..... 15
- 4. Historical Context..... 17
 - 4.1 Early days 17
 - 4.2 Pinehurst case study 18

5 Recent Examples of Golf Course Lengthening Projects	19
Appendix A – List of Figures	22
Appendix B – List of Tables	22

2. Methodology

The USGA Library, housed in the USGA Golf Museum and located in Liberty Corner, New Jersey, has a multitude of global golf course length data sources. These include various almanacs of golf courses, periodicals, scorecards, historical books, travel guides and specific golf club histories. Many of these sources were utilized to build a decade-by-decade database of golf course lengths with the objective of being random and representative. Only 18-hole golf courses were included resulting in a dataset of 7783 course lengths – 4479 from the U.S. and 3331 from the rest of the world.

The data mined from the sources available in the USGA archives were placed into bins by decade as follows: the 1880s represented data from 1880 – 1889; the 1890s from 1890 – 1899; and so on until the 2010s included data from 2010—2019. Overall golf course length is the single reported length or the longest length from the back tees if more than one playing length is available.

3. Evolution of Golf Course Lengths

3.1 Evolution of course lengths in the United States

Table 1 provides data summary statistics for courses in the United States (U.S.).

Table 1 Summary statistics of U.S. golf course lengths (yards)

Decade	Trim Mean (90%)	Median	90th Percentile	Low	Average	High	# of Data Points
1890s	5457	5624	6216	3812	5443	6520	83
1900s	5550	5645	6059	4273	5547	6700	112
1910s	6078	6138	6400	4000	6060	7,140	420
1920s	6163	6206	6506	3073	6122	7600	307
1930s	6251	6300	6600	3063	6230	7250	1659
1940s	6345	6386	6701	5050	6331	6,900	110
1950s	6323	6338	6749	4446	6308	7300	330
1960s	6486	6461	7002	3250	6452	7320	229
1970s	6537	6500	6978	4735	6534	8045	246
1980s	6655	6678	7086	5610	6648	7491	131
1990s	6643	6704	7108	4292	6622	7,532	138
2000s	6678	6761	7190	3080	6645	7618	154
2010s	6758	6801	7225	4412	6740	7800	533

As Table 1 shows, the mean, median and trim mean (which eliminates the longest and shortest 5% of courses or the extremes), all show similar trends. The 90th percentile is presented as it represents trends for the longer courses without going to the extreme end of the distribution. **All four of these statistics show an overall long-term trend of increasing course length in the U.S.** The extremes, as shown in Table 1 by the “low” and the “high”, show significant decade to decade variability and do not show a consistent trend. To display visually, the 90th percentile and the median are plotted in Figure 1 for the U.S.

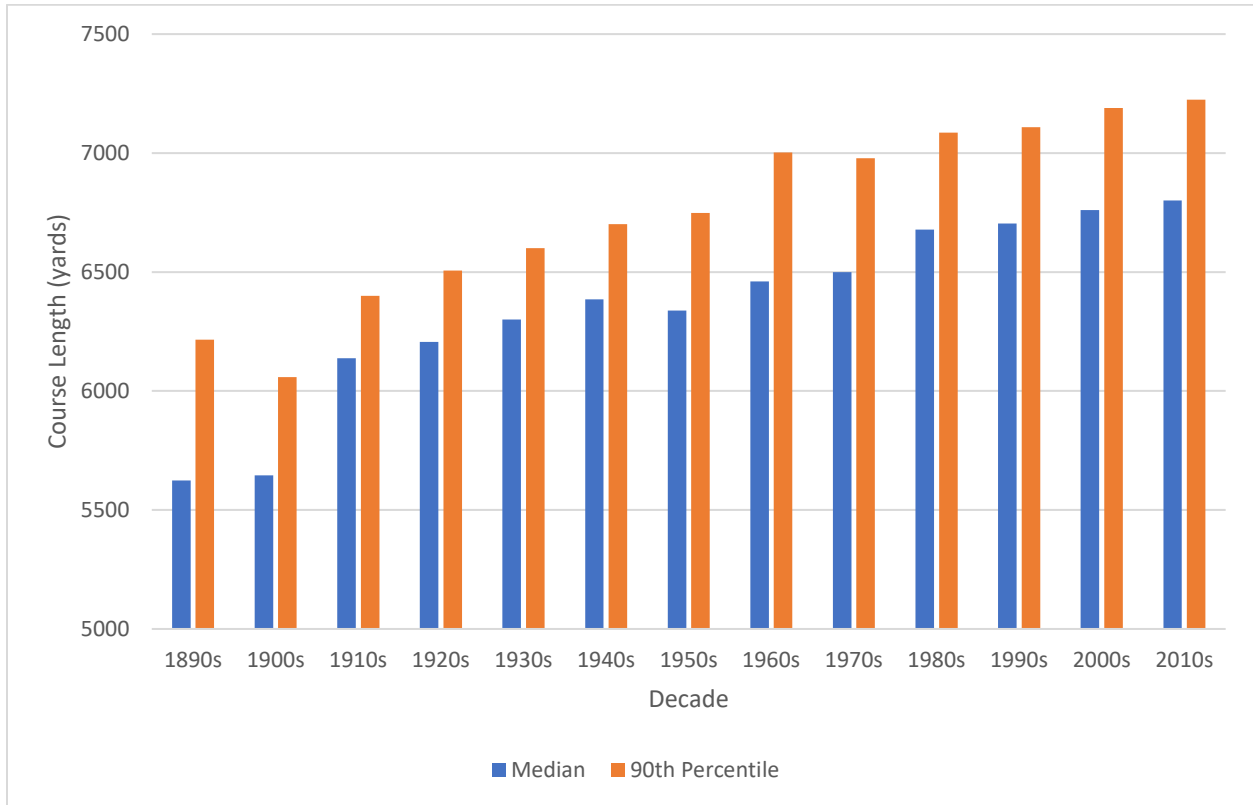


Figure 1 U.S. golf course lengths by decade (yards)

After the early two decades of golf course development, the 1890s and 1900s, there was a step-change in median course length to the 1910s of about 600 yards. Figure 2 shows that after this step-change, there was growth of about 6 yards per year in the median course length and about 9 yards per year in the 90th percentile course length from the 1910s through the 1950s.

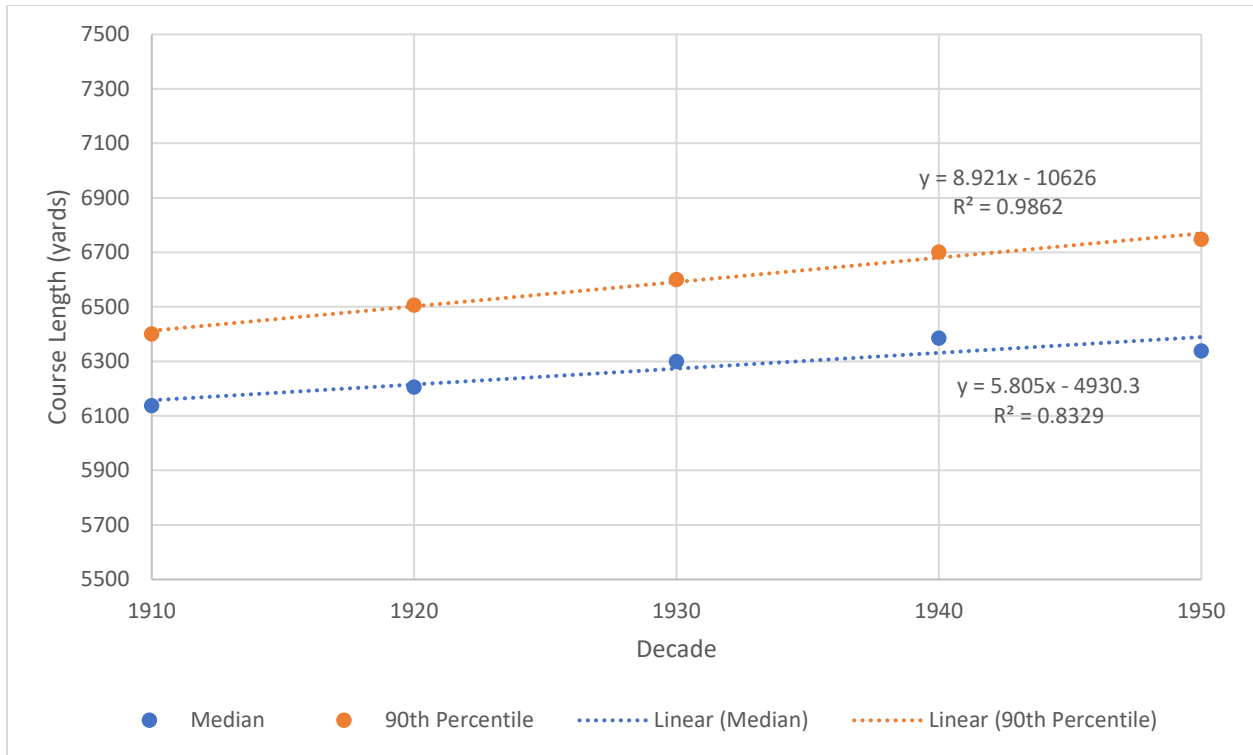


Figure 2 U.S. golf course lengths growth rate 1910s – 1950s (yards)

Then from the 1960 through the 2010s, another period of steady growth has occurred. Figure 3 shows there was steady growth of about 7 yards per year in the median course length and about 5 yards per year in the 90th percentile course length.

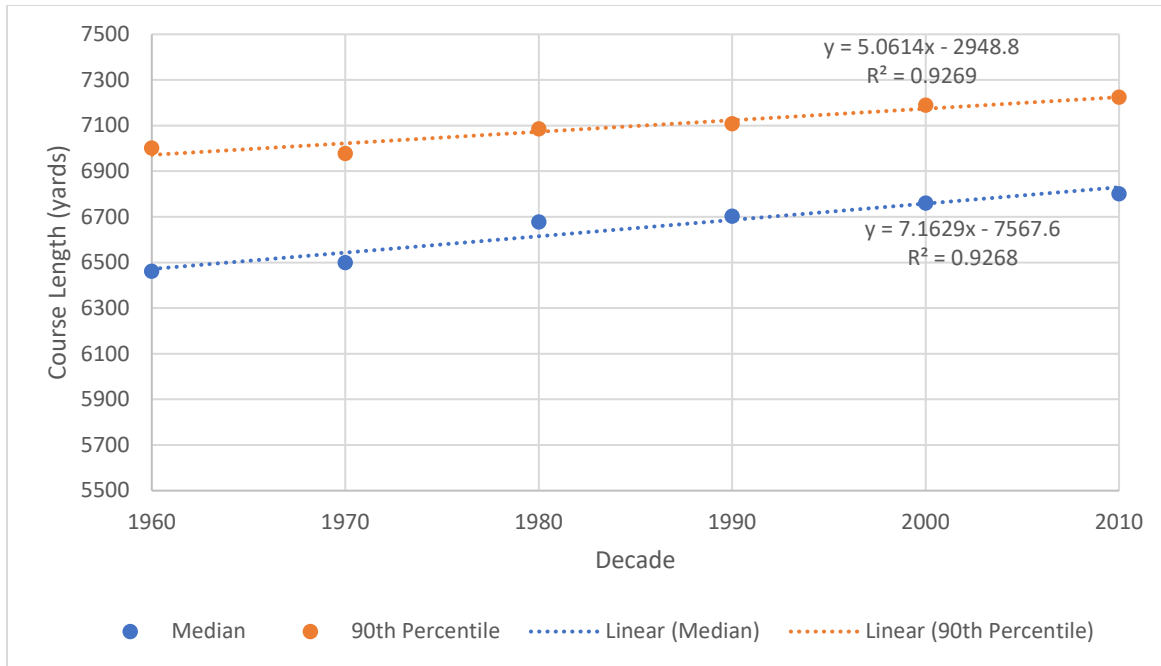


Figure 3 U.S. golf course lengths growth rate for the 1960s – 2010s (yards)

3.2 Evolution of course lengths in Great Britain and Ireland

Table 2 Summary statistics of GB&I golf course lengths (yards) provides data summary statistics for courses in Great Britain and Ireland (GB&I). If there were less than ten data points available for a decade, statistics were not calculated.

Table 2 Summary statistics of GB&I golf course lengths (yards)

Decade	Trim Mean (90%)	Median	90th Percentile	Low	Mean	High	# of Data Points
1890s	5054	5023	6085	1200	5000	6325	82
1900s	5660	5720	6333	4100	5651	6785	51
1910s	5718	5792	6288	3737	5705	6700	236
1920s	5884	5970	6484	4190	5870	6750	179
1930s	6224	6330	6771	4635	6212	7135	53
1940s	5790	5807	6666	3600	5785	7954	227
1950s	6296	6345	6860	4384	6273	7200	44
1960s	5888	5945	6336	4093	5871	6606	62
1970s	6453	6417	6836	5134	6441	7093	55
1980s	6302	6346	6803	4852	6293	7107	75
1990s							0
2000s	6391	6365	6849	5126	6392	7282	145
2010s	6269	6287	6828	4452	6261	7655	296

The 90th percentile and the median are plotted in Figure 4 for GB&I.

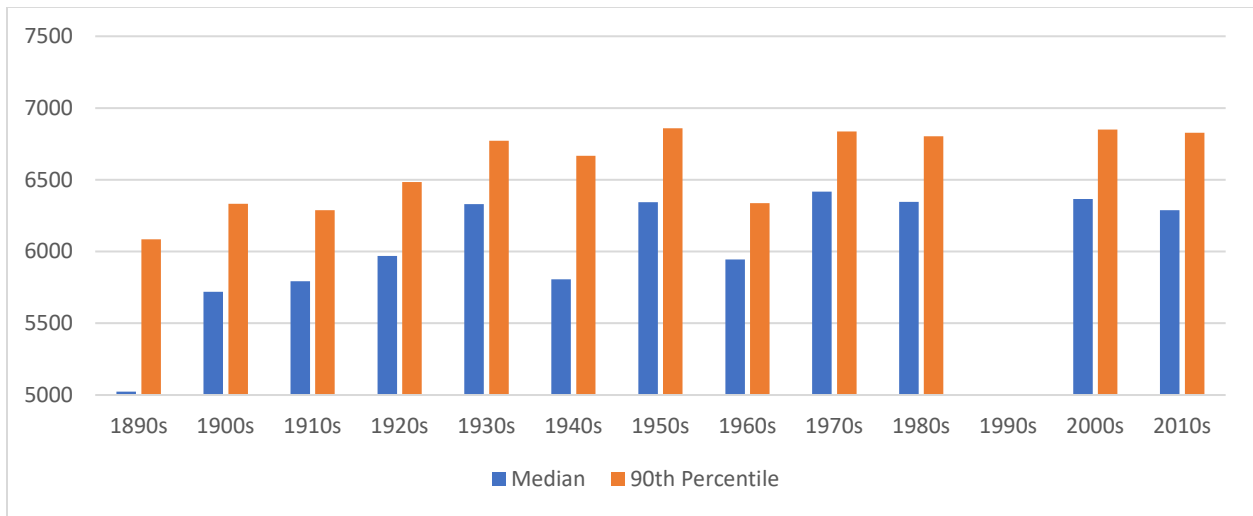


Figure 4 GB&I golf course lengths by decade (yards)

Figure 4 shows that golf courses in GB&I lengthened substantially from the 1890s through the middle of the 20th century. Since the middle of the century, growth has been modest to flat in GB&I.

3.3 Evolution of course lengths in Japan

Table 3 provides data summary statistics for courses in Japan. If there were less than ten data points available for a decade, statistics were not calculated.

Table 3 Summary statistics of Japanese golf course lengths (yards)

Decade	Trim Mean (90%)	Median	90th Percentile	Low	Average	High	# of Data Points
1930s	6465	6561	6721	6065	6465	6725	10
1940s							3
1950s							0
1960s	6655	6755	7114	4370	6655	7255	25
1970s							0
1980s	6580	6754	6938	5173	6580	7074	11
1990s	6811	6878	7098	5258	6792	7,307	55
2000s							4
2010s	6821	6857	7175	5469	6807	7,407	53

To display visually, the 90th percentile and the median are plotted in Figure 5 for Japan.

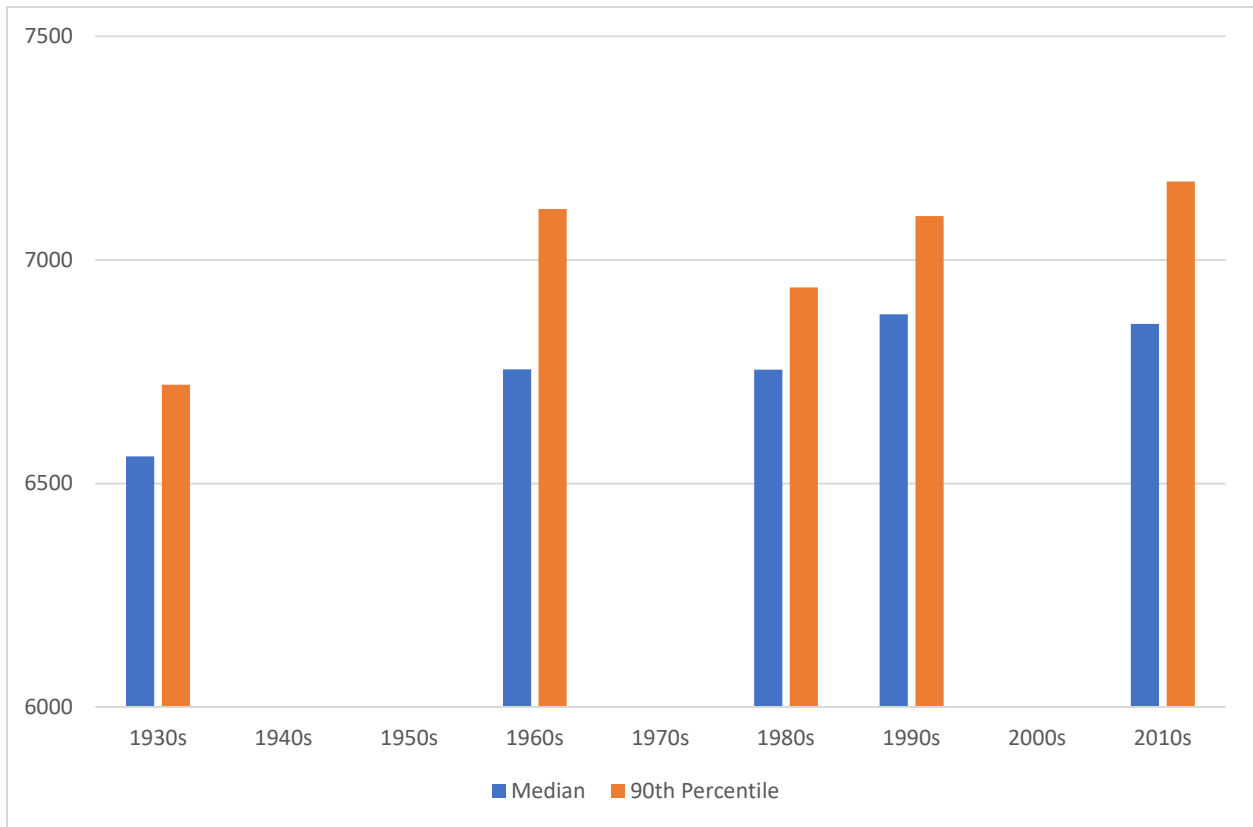


Figure 5 Japan golf course lengths by decade (yards)

Figure 5 shows that golf courses in Japan have lengthened from the 1930s to the 2010s.

3.4 Evolution of course lengths in Canada

Table 1 provides data summary statistics for courses in Canada. If there were less than ten data points available for a decade, statistics were not calculated.

Table 4 Summary statistics of Canadian golf course lengths (yards)

Decade	Trim Mean (90%)	Median	90th Percentile	Low	Average	High	# of Data Points
1910s	5905	6000	6270	4600	5897	6,650	70
1920s	6115	6200	6450	4541	6104	7,012	322
1930s	6123	6223	6554	3902	6089	6640	50
1940s	-	-	-	-	-	-	9
1950s	6278	6332	6620	5280	6278	6750	26
1960s	6405	6405	6685	5367	6409	7640	50
1970s	-	-	-	-	-	-	2
1980s	-	-	-	-	-	-	1

1990s	6738	6716	7096	6015	6732	7200	48
2000s							8
2010s	6800	6844	7151	6052	6800	7367	24

To display visually, the 90th percentile and the median are plotted in Figure 6 for Canada.

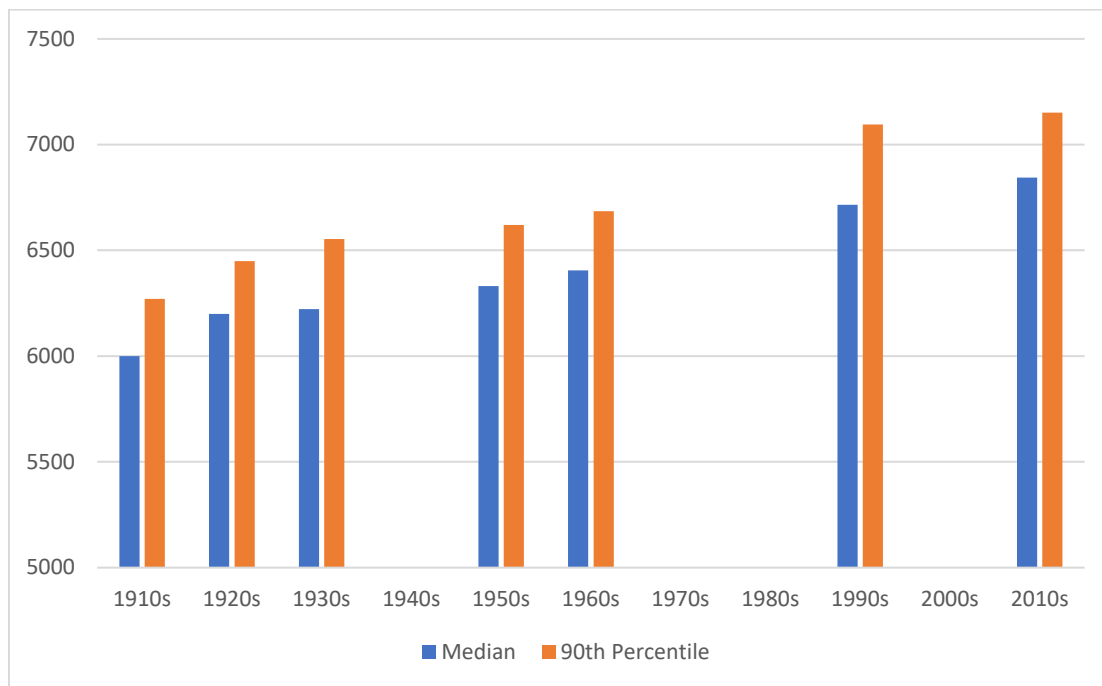


Figure 6 Canadian golf course lengths by decade (yards)

Figure 6 shows that golf courses in Canada have lengthened from the 1910s to the 2010s.

3.5 Evolution of course lengths in Australia/New Zealand

Table 5 provides data summary statistics for courses in Australia/New Zealand (ANZ). If there were less than ten data points available for a decade, statistics were not calculated.

Table 5 Summary statistics of ANZ golf course lengths (yards)

Decade	Trim Mean (90%)	Median	90th Percentile	Low	Average	High	# of Data Points
1910s	5816	5965	6211	5065	5816	6,349	15
1920s	5762	5850	6250	4352	5744	6,407	41
1930s	5724	5878	6293	3697	5724	6757	36
1940s	5849	5920	6508	3850	5824	6,735	45
1950s	6185	6217	6554	5461	6185	6717	17

1960s	6248	6351	6668	4528	6248	6903	36
1970s	6033	6100	6526	5042	6033	6744	14
1980s							1
1990s	6006	5975	6597	4677	6006	6988	34
2000s	6539	6598	6999	5716	6537	7257	79
2010s							6

To display visually, the 90th percentile and the median are plotted in Figure 7 for ANZ.

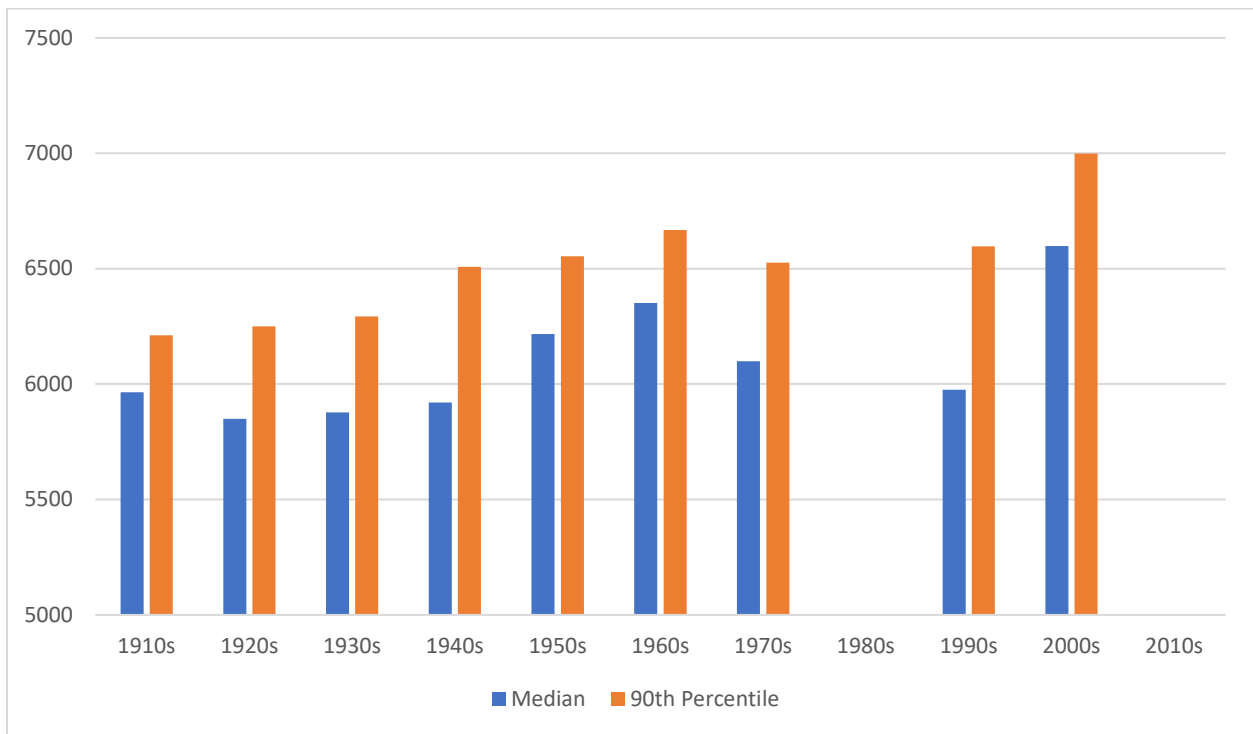


Figure 7 ANZ golf course lengths by decade (yards)

Figure 7 shows that golf courses in ANZ have lengthened from the 1910s to the 2010s.

3.6 Analysis of global golf course lengths

3.6.1 Long-term global trend

Using the data from the previous sections, Figure 8 shows the overall long-term trend. The regression line is calculated using the median for each of the five countries presented in Sections 3.1 to 3.5. As shown in Figure 8, the long-term rate of increase in course length is about 8 ½ yards per year.

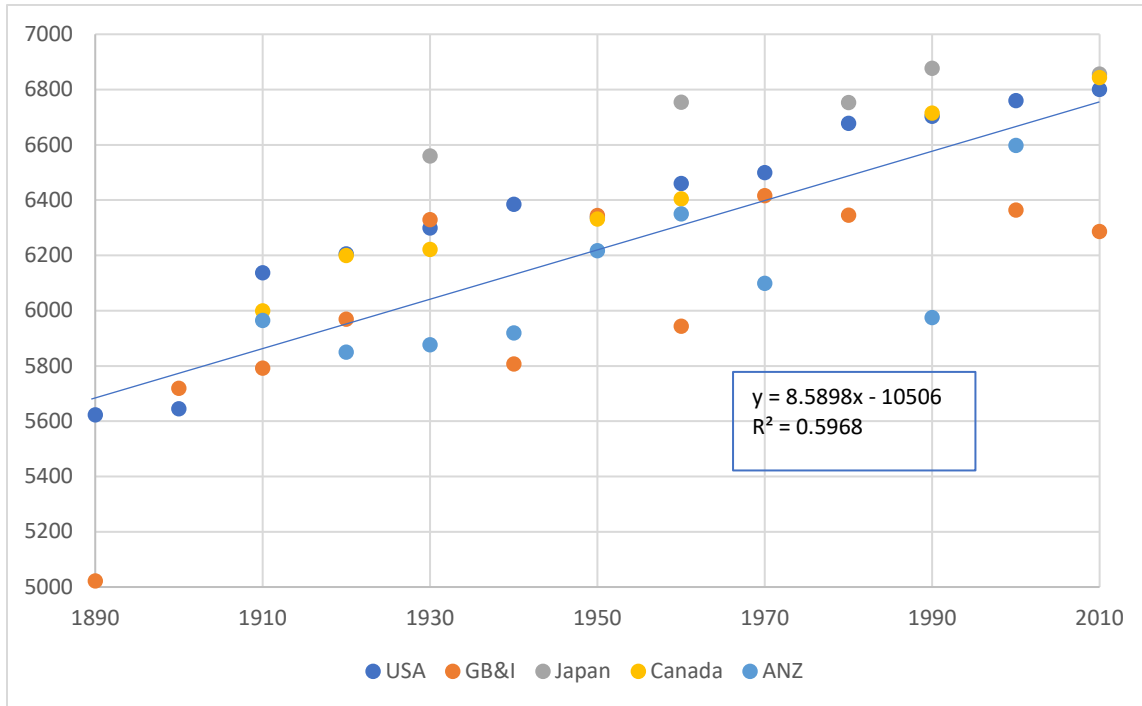


Figure 8 Long-term golf course lengths median trend for the U.S., Great Britain & Ireland, Japan, Canada and Australia/New Zealand (yards)

3.6.2 Global comparison of median to 90th percentile

In order to assess if only the longest courses (90th percentile) are getting longer or if the overall inventory of courses is getting longer, the ratio of the 90th percentile to median is calculated for each decade and region/country for which enough data points are available. Table 6 summarizes these data.

Table 6 Ratio of the 90th percentile golf course lengths to the median by region and decade (yards)

Decade	<u>U.S.</u>	<u>GB&I</u>	<u>Japan</u>	<u>Canada</u>	<u>ANZ</u>
1890s	111%	121%			
1900s	107%	111%			
1910s	104%	109%		105%	104%
1920s	105%	109%		104%	107%
1930s	105%	107%	102%	105%	107%
1940s	105%	115%			110%
1950s	106%	108%		105%	105%
1960s	108%	107%	105%	104%	105%
1970s	107%	107%			107%
1980s	106%	107%	103%		
1990s	106%		103%	106%	110%
2000s	106%	108%			106%
2010s	106%	109%	105%	104%	

100 yr. Mean	106%	108%	104%	105%	107%
100 yr. Range	4%	8%	3%	2%	5%

As shown in Table 6, in the 1890s the longest courses (as measured by the 90th percentile) in the U.S. and GB&I were 11% & 21% longer respectively than the median course length. As golf grew and course design became more standardized, the ratio of longest courses to the median settled into a similar range over time and across countries/regions. This demonstrates that overall, the inventory of courses is getting longer versus only the longest courses getting longer.

3.7 Forward tee lengths in the United States

Availability of a scorecard archive at the USGA for courses in the United States gave the opportunity to examine additional playing lengths options for golfers through history. The earliest mention of forward tees found was at Baltusrol Country Club in 1899 which were 5128 yards compared to 6000 yards for the back tees. This is the only data point found until the 1910s. The analysis presented in this section will start in the 1920s when more than a single data point per decade exists.

Table 7 presents summary statistics of total playing lengths from the most forward tees, i.e. the shortest tees available at a given course. It is possible that even shorter tees are available at some courses for kids or beginners indicated by tee markers placed in the fairways. If those playing lengths are on the scorecard and rated for play, they are included in the database. Otherwise they are excluded. For the decades of the 1920s through the 1950s, forward tees had a median length over 6000 yards. Figure 9 shows the overall trend across 13 decades. Starting in the 1960s, forward tee playing lengths have been getting shorter.

Table 7 Summary statistics of U.S. golf course playing lengths – total playing lengths from most forward tee (yards)

Decade	Median	Low	Mean	High	# of Data Points
1920s	6112	1893	5738	6300	12
1930s	6119	5747	6132	6432	16
1940s	6190	5428	6139	6600	33
1950s	6191	5000	6149	6521	34
1960s	5961	5029	6005	6700	36
1970s	5781	4836	5753	6600	40
1980s	5566	4425	5570	6736	122
1990s	5359	3344	5361	6940	138
2000s	5348	2627	5371	6817	99
2010s	5267	1992	5241	6522	250

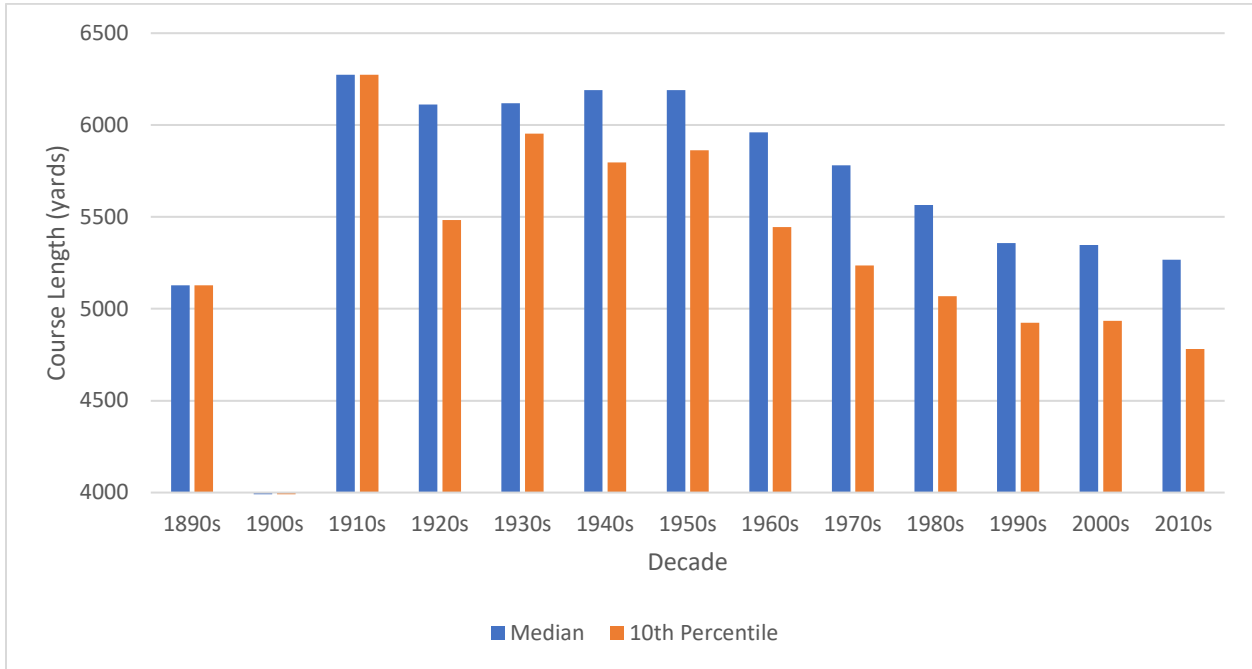


Figure 9 U.S. golf course playing lengths by decade – most forward tee (yards)

Figure 10 shows that the median forward tee length grew slowly during the 1920s to 1950s at about 3 yards per year with the 10th percentile growing even faster at about 10 yards per year.

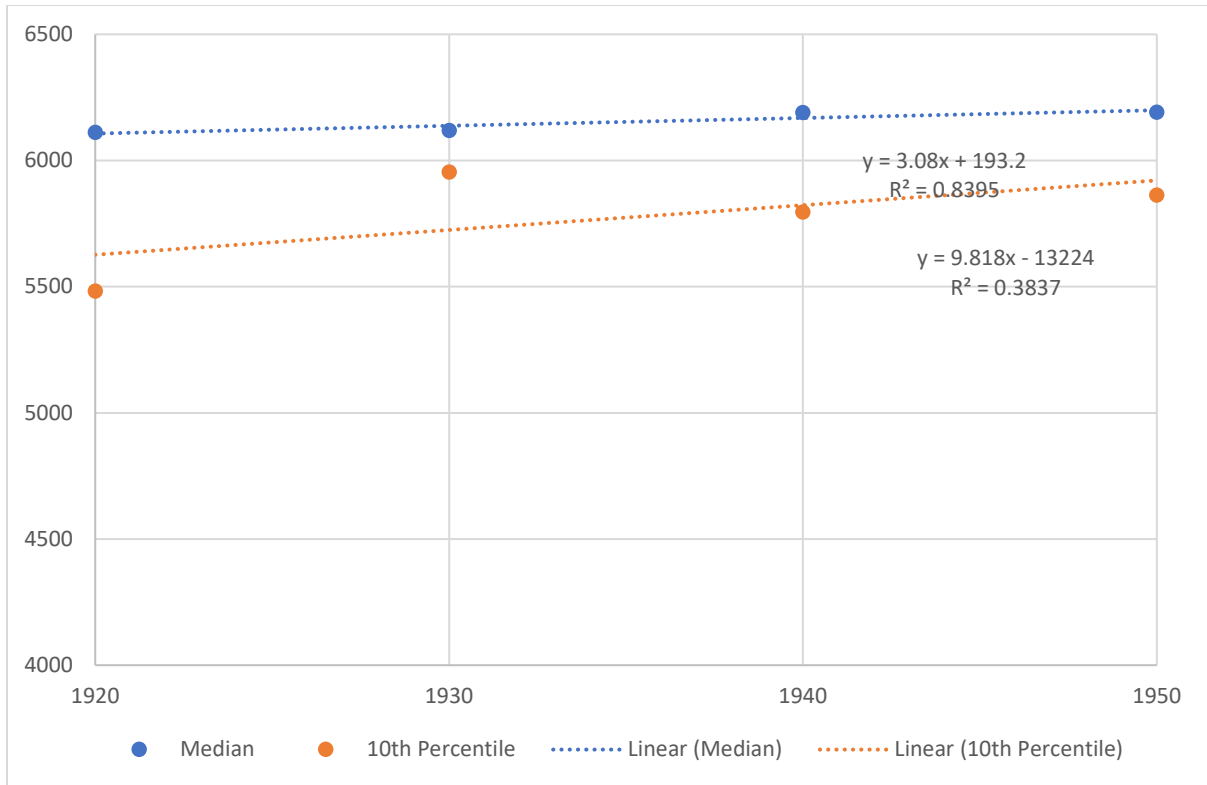


Figure 10 U.S. forward tee playing lengths growth rate 1920s – 1950s (yards)

Figure 11 shows from the 1950s through today, forward tees have been getting shorter by about 16 yards per year as indicated by both the median and the 10th percentile.

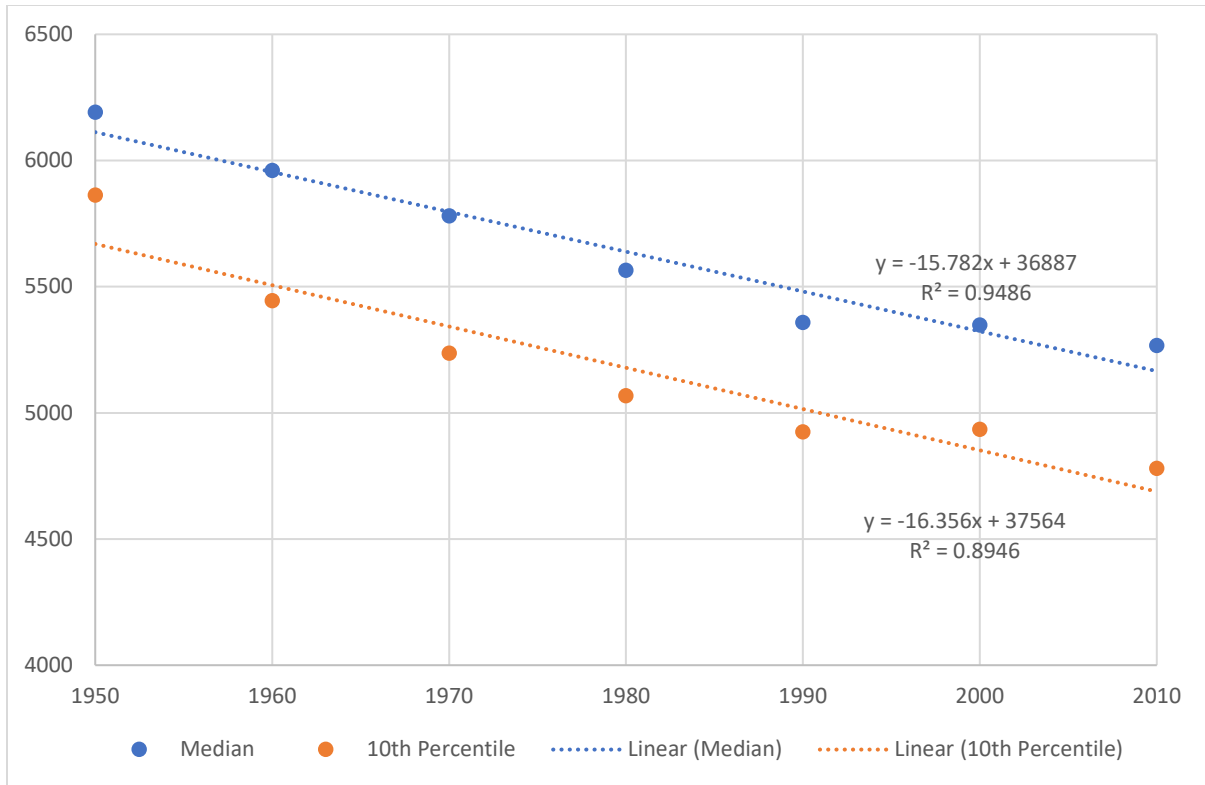


Figure 11 U.S. forward tee playing lengths growth rate 1950s – 2010s (yards)

3.8 Playing lengths other than the shortest or longest in the United States

The analysis of playing lengths other than either the shortest or longest tee sets needs careful explanation because some courses may have three tee options, but many others have 4, 5, 6 or even more playing lengths on their scorecard. In many cases, playing lengths do not equate to teeing area locations as a single teeing area can be used for more than 1 tee marker while other teeing areas may go unused. Also, it is not uncommon for playing lengths to be created by “blending” two (or more) sets of tee markers to create a different playing experience. Finally, when new teeing areas are added to existing courses, some might be installed to add length and challenge, but others might be added for other reasons. While requiring careful explanation, tees other than the shortest or longest are utilized by many golfers, so it is important to present the available data and attempt to explain their nuances. Please note that this data extracted is from scorecards for U.S. golf courses.

3.8.1 Second-longest playing lengths/tee set – United States courses

Figure 12 shows both the median and the 90th percentile for the second-longest playing length by decade from the 1950s to the 2010s. As shown in Figure 12, the median length is increasing over this period at a rate of increase of about ¼ yard per year. Using the same data set, the 90th percentile regression indicates that the second-longest course lengths are increasing at a rate of about 4 ½ yards per year.

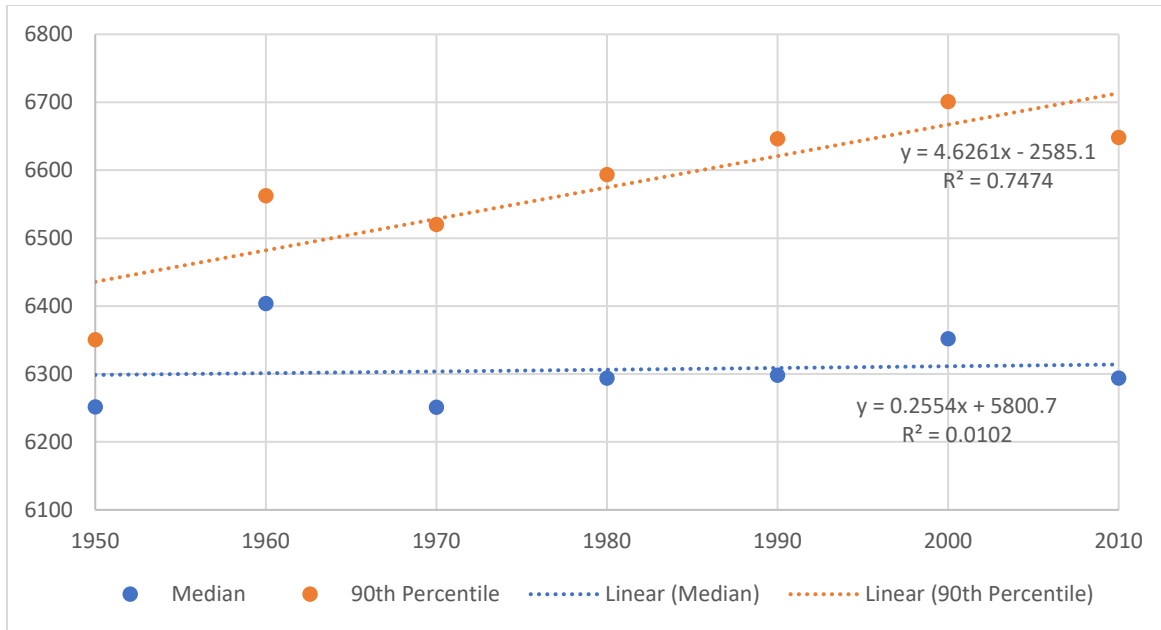


Figure 12 U.S. golf courses second-longest playing lengths growth rate 1950s – 2010s (yards)

3.8.2 U.S. trends across “middle tees” as a group

“Middle tees” as a group is defined for this analysis as a set of playing lengths offered that are between the forward and back tees. Tee sets for various playing lengths accommodate the demand of golfers that do not play from either the shortest or longest tees. As a group, these tee sets represent what courses supply to satisfy the playing preferences of a significant segment of the golfing population.

If there is either one or two sets of tees, the course is not considered to have middle tees. If a course has 3 tee sets, the middle tee is tee 2. If a course has 4 sets of tees, an average of tee 2 & 3 is used. If a course has 5 sets of tees, the middle tee is tee 3. If a course has 6 sets of tees, an average of tee 3 & 4 is used. Therefore, the data presented in Table 8, Figure 13 and Figure 14 is a “composite” playing length representation of the middle tees. Table 8 summarizes the middle tee composite playing lengths data.

Table 8 Summary statistics of U.S. golf course playing lengths – total playing lengths from middle tees (yards)

Decade	Median	Mean	# of Data Points
1920s	6204	6204	1
1930s	6253	6253	2
1940s	6544	6544	2
1950s	6252	6138	8
1960s	6365	6371	12
1970s	6149	6163	21
1980s	6279	6213	94
1990s	6202	6166	107
2000s	6160	6153	29

The oldest middle tee in the dataset is from The Country Club of Fairfield (Connecticut) at 6204 yards. This was the only middle tee found in the decade of the 1920s in the USGA library scorecard collection. Similarly, for the 1930s and 1940s only two scorecards containing middle tees were found. Therefore, although presented in Table 5, the decades of the 1920s-1940s are not used for analysis due to insufficient data.

Figure 13 plots the median playing lengths for each decade for U.S. courses.

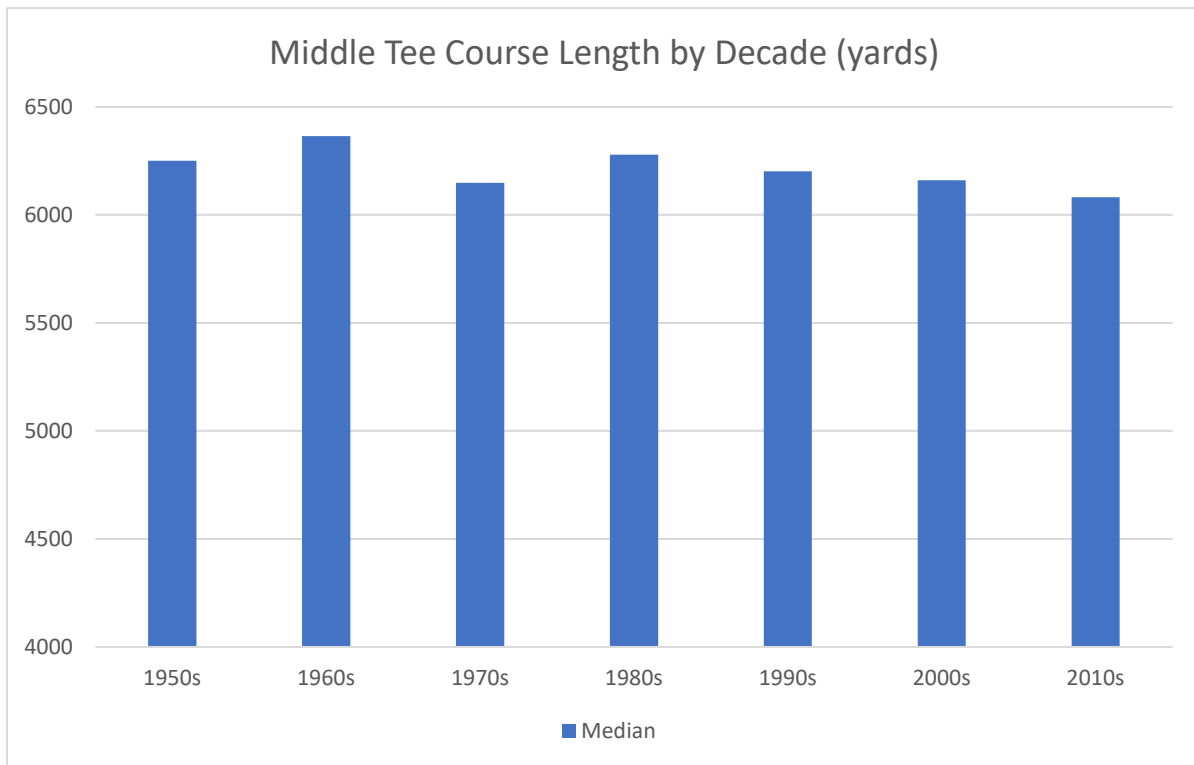


Figure 13 U.S. golf courses playing lengths by decade – middle tees (yards)

Figure 14 shows that the median middle tee length in the U.S. decreased during the 1950s to 2010s by about 3 yards per year.

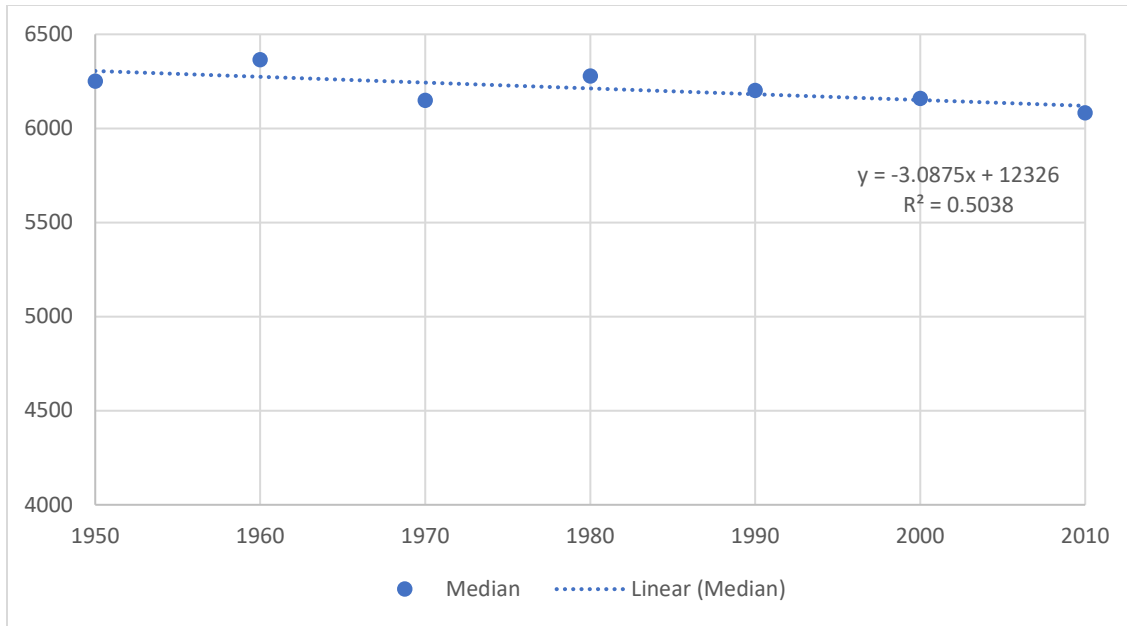



Figure 14 U.S. golf courses middle tee playing lengths growth rate 1950s – 2010s (yards)

Therefore, the selection of playing lengths including the addition of new teeing areas over the decades is providing alternative playing lengths for golfers which on average are shorter for the “middle tees” as defined in this analysis.

4. Historical Context

4.1 Early days

An historical reference was provided by The R&A about St Andrews’ Old Course which demonstrates why course lengths only began to be published in the late 1800s.



Early changes to the Old Course were always somewhat serendipitous. Golf was an adventure then. If the length of a hole varied by 20, 30, or 60 yards from one day to the next it was inconsequential to golfers playing a match. In fact, the length of holes and the course were never recorded in the earliest days, and it was only towards the end of the nineteenth century with the growing popularity of stroke play that the length of the championship course at St Andrews was measured accurately at all.

Figure 15 An excerpt from a Historical Record of The Old Course

4.2 Pinehurst case study

A study using available reference materials and scorecards from the USGA Museum (Liberty Corner, NJ) and the Tufts Archives (Pinehurst, NC) provided historical course and playing lengths of the Pinehurst Resort golf courses over time. Golf at Pinehurst began in 1898 with the opening of a 9-hole course, #1, having a course length of 2561 yards. By 1900, #1 expanded to 18-holes with a course length of 5176 yards. By 1907, #1 had been lengthened to 5604 yards, and by 1916, to 5919 yards.

Similarly, #2 opened as a 9-hole course in 1901 at a length of only 1275 yards. The 9 holes were lengthened to 2750 yards by 1903 and finally the course was expanded to 18-holes in 1907. When re-opened in 1907, the course length of #2 was 5680-5770 yards.

Following the established pattern, #3 opened as a 9-hole course in 1907 and #4 as a 9-hole course in 1916.

During these early years, only the overall course length was recorded – it may have been the only course length available for play. The first data found of more than one playing length was for #2 in 1936 with three playing lengths of 6246 yards (forward tee), 6597 yards (middle tee) and 6879 yards (back tee) playing to par 72.

Figure 16 plots all the playing and course length data. Course #1 increased in length to over 7000 yards until the 1970s and then for a variety of reasons, began shortening. Similarly, course #3 peaked in length in the 1920s. The other six courses have all lengthened over the decades.

Figure 16 also shows that both the middle and forward tees have shortened over time from their 1936 debut.

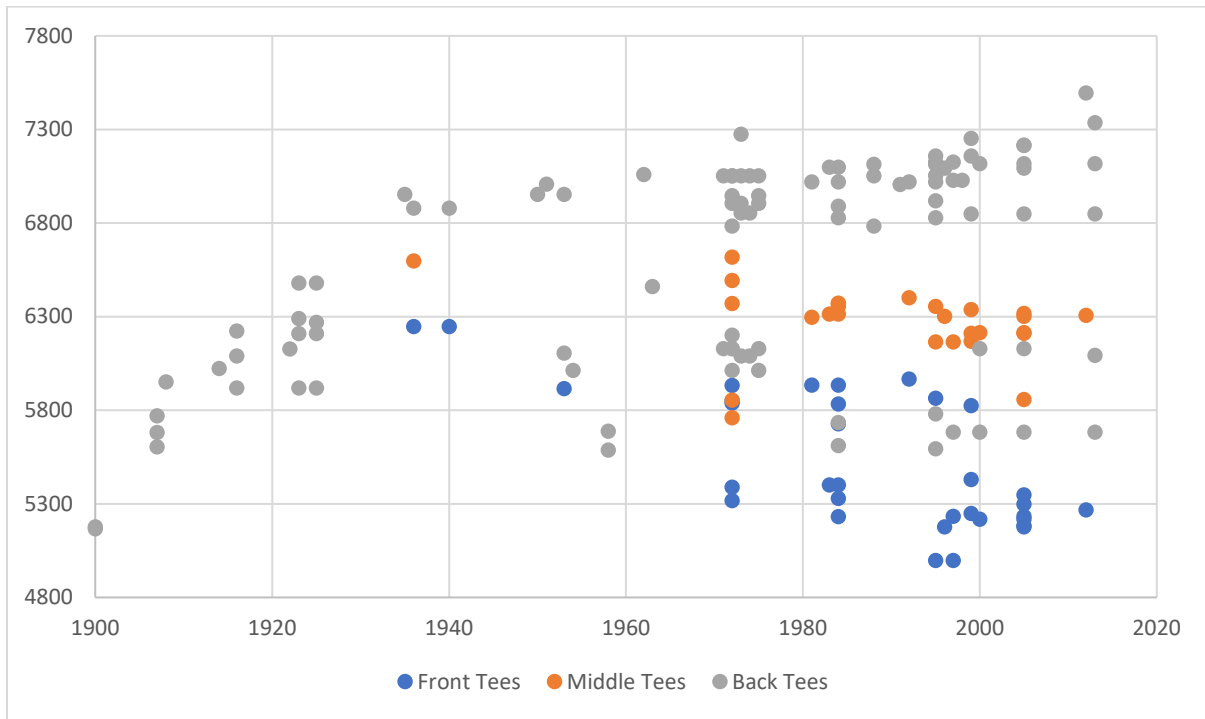


Figure 16 Pinehurst golf course lengths - only 18-hole courses (yards)

5 Recent Examples of Golf Course Lengthening Projects

A search of online sources was completed to identify and describe recent golf course lengthening projects. The purpose of this effort was not to develop a comprehensive list of recent projects, but rather to identify projects that are representative of current and continuing trends in golf course lengthening.

Projects to lengthen golf courses (typically described in online sources as “renovation,” “remodeling” or “master planning” efforts) that have been recently completed or are underway in many countries around the world are listed below. Typically, these projects include the construction of new tees to lengthen courses, noting one example of a course that has been lengthened to more than 8,000 yards (Renegade Course at Desert Mountain) and to reposition bunkers further from the tees. It should also be noted that there is variation in the amount of length that was added to a golf course, ranging from less than 100 yards (e.g., Keowee Golf and Country Club) to more than 600 yards (e.g., Fort Lauderdale Country Club).

Among the projects listed below are golf courses that are being lengthened to host professional men’s events (e.g., Detroit Golf Club); a course being lengthened to host collegiate events (e.g., Trysting Tree Golf Course); courses at private clubs being lengthened for member play (e.g., Columbus Country Club); and municipal courses being lengthened for public play (e.g., Sunset Valley Golf Course). The list also

includes one course that is not being lengthened, but rather is being modified through the repositioning of bunkers closer to the greens in order to better challenge longer hitters (Kinloch Golf Club).

Partial List of Course Lengthening Projects 2018-present:

- 1) Adare Manor Golf Club, Adare, Co. Limerick, Ireland
Course changes: Lengthened from 7,453 yards to 7,509 yards
Date of project: Reopened 2018
Architect: Fazio Design

- 2) Columbus Country Club, Columbus, Ohio, USA
Course changes: Lengthened from 6,968 yards to more than 7,200 yards
Date of project: Opened May 2018
Architect: Kevin Hargrave

- 3) Congressional Country Club, Bethesda, MD, USA
Course changes: Lengthening from 7,574 yards to approximately 7,770 yards
Date of project: Starting in 2020
Architect: Andrew Green

- 4) Detroit Golf Club, Detroit, MI, USA
Course changes: Lengthened from 7,013 yards to 7,300 yards
Date of project: Underway Summer 2019
Architect: Tom Doak and Bruce Hepner

- 5) Earl Grey Golf Club, Calgary, Alberta, Canada
Course changes: Lengthened from 7,041 yards to more than 7,200 yards
Date of project: Opened August 2019
Architect: Wayne Carleton

- 6) Fort Lauderdale Country Club, Plantation, FL, USA
Course changes: Lengthened from 6,594 yards to 7,200 yards
Date of project: Reopened December 2019
Architect: Kip Schulties

- 7) Inverness Club, Toledo, OH, USA
Course changes: Lengthened to 7,559 yards (and as long as 7,700 yards)
Date of project: Reopened May 2018
Architect: Andrew Green

- 8) Keowee Golf and Country Club, Salem, VA, USA
Course changes: Lengthened from 6,426 yards to 6,477 yards
Date of project: Reopened August 2019
Architect: Richard Mandell

- 9) Kinloch Golf Club, Richmond, VA, USA
Course changes: Relocation of bunkers closer to green to challenge longer hitters
Date of project: Underway Summer 2019
Architect: Lester George
- 10) Muirfield Village Golf Club, Dublin, OH, USA
Course changes: Lengthening to 7,462 yards
Date of project: First phase 2019; second phase 2020
Architect: Jack Nicklaus/Nicklaus Design
- 11) Plantation Course, Kapalua Resort, Maui, HI, USA
Course changes: Lengthening two holes
Date of project: Underway in 2019
Architect: Bill Coore and Ben Crenshaw
- 12) Renegade Course, Desert Mountain Club, Scottsdale, AZ, USA
Course changes: Lengthened from 7,524 yards to more than 8,000 yards
Date: Opened June 2019
Architect: Jack Nicklaus and Chris Cochran/Nicklaus Design
- 13) Soweto Country Club, Pimville, South Africa
Course changes: Lengthening of multiple holes
Date of project: Reopened March 2019
Architect: Gary Player/Black Knight Design
- 14) Sunset Valley Golf Course, Highland Park, IL, USA
Course changes: Lengthened from 6,484 yards to 6,726 yards
Date of project: Reopened August 2018
Architect: Rick Jacobson
- 15) Texas Rangers Golf Club, Arlington, TX, USA
Course changes: Lengthened from 6,712 yards to 7,010 yards
Date of project: Opened May 2019
Architect: John Colligan and Trey Kemp
- 16) Ticonderoga Golf Course, Ticonderoga, NY, USA
Course changes: Lengthening of multiple holes
Date of Project: Initiated in 2017 and still underway
Architect: Owner
- 17) TPC Twin Cities, Blaine, MN, USA

Course changes: Lengthened from 7,000 yards to 7,450 yards
 Date of project: Underway Fall 2018
 Architect: Arnold Palmer Design Company and Tom Lehman

- 18) Course: Trysting Tree Golf Course, Corvallis, WA, USA
 Course changes: Lengthened by 400 yards to more than 7,400 yards
 Date of project: Opened Spring 2018
 Architect: Dan Hixson Golf Design

Appendix A – List of Figures

Figure 1 U.S. golf course lengths by decade (yards)	3
Figure 2 U.S. golf course lengths growth rate 1910s – 1950s (yards).....	4
Figure 3 U.S. golf course lengths growth rate for the 1960s – 2010s (yards).....	5
Figure 4 GB&I golf course lengths by decade (yards)	6
Figure 5 Japan golf course lengths by decade (yards)	7
Figure 6 Canadian golf course lengths by decade (yards)	8
Figure 7 ANZ golf course lengths by decade (yards).....	9
Figure 8 Long-term golf course lengths median trend for the U.S., Great Britain & Ireland, Japan, Canada and Australia/New Zealand (yards)	10
Figure 9 U.S. golf course playing lengths by decade – most forward tee (yards).....	12
Figure 10 U.S. forward tee playing lengths growth rate 1920s – 1950s (yards).....	13
Figure 11 U.S. forward tee playing lengths growth rate 1950s – 2010s (yards).....	14
Figure 12 U.S. golf courses second-longest playing lengths growth rate 1950s – 2010s (yards)	15
Figure 13 U.S. golf courses playing lengths by decade – middle tees (yards)	16
Figure 14 U.S. golf courses middle tee playing lengths growth rate 1950s – 2010s (yards)	17
Figure 15 An excerpt from a Historical Record of The Old Course	18
Figure 16 Pinehurst golf course lengths - only 18-hole courses (yards)	19

Appendix B – List of Tables

Table 1 Summary statistics of U.S. golf course lengths (yards)	2
Table 2 Summary statistics of GB&I golf course lengths (yards)	5
Table 3 Summary statistics of Japanese golf course lengths (yards).....	6
Table 4 Summary statistics of Canadian golf course lengths (yards).....	7
Table 5 Summary statistics of ANZ golf course lengths (yards).....	8
Table 6 Ratio of the 90th percentile golf course lengths to the median by region and decade (yards)	10
Table 7 Summary statistics of U.S. golf course playing lengths – total playing lengths from most forward tee (yards)	11

Table 8 Summary statistics of U.S. golf course playing lengths – total playing lengths from middle tees (yards) 15