USGA Distance Insights

Analysis of Golf Course and Golfer Playing Lengths

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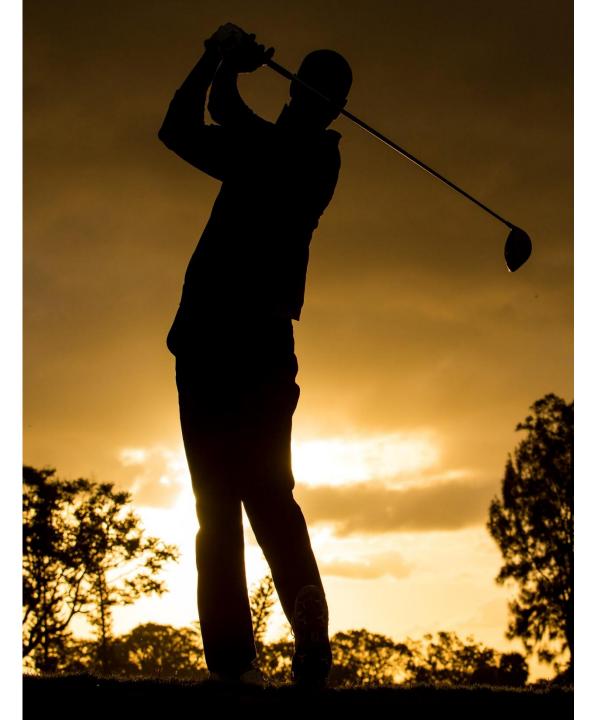
Key Takeaways

- Overall course lengths in the United States are fairly evenly distributed from less than 6000 yards to over 7000 yards while front tee playing lengths are most frequently 4800 – 5200 yards.
- The number of rated tees per course increases from 2 ½ to 6 for male golfers as courses get longer and increases for female golfers from 2 to 4 as front tee lengths get shorter. Male golfers have more rated tees.
- The overall number and average number of postings by male golfers increases as course length increases while the opposite is true for female golfers (postings increase as front tee length decreases).
- The average male plays from 6100-yard tees and the average female plays from 5100-yard tees with playing distance strongly correlated to handicap; on average, better golfers play longer courses.
- The back tee is only the most utilized tee by men for courses shorter than 6000 yards and is used less than 10% of the time on courses more than 6600 yards (only 3% on 7000-yard courses)
- The most forward rated tee for females is utilized the most for courses 4600 yards or longer
- It is not until forward tees are offered shorter than 4200 yards that female golfers appear to have the same flexibility of choice that male golfers enjoy on average (>85% of golfers have a tee shorter and longer than they choose to play)
- When using the Longleaf system to determine recommended playing lengths for golfers, at least 62% of male golfers and at least 80% of female golfers *play too long a course* on a daily basis!

Outline

- I. About the Data
- II. Course Length Characterization
- III. Tee Availability for Golfers
- IV. Course Utilization by Golfers
- V. Golfer Characterization
- VI. Tee Utilization by Golfers
- VII. Assessment of Golfers Playing Length Decisions





About the Data

- Databases Utilized
 - USGA Central Computation Score Posting Data
 - Course Rating Service Data
- Year = January 1 to December 31, 2020
- Timing of Data Access = February 2021
- Scope of Data
 - Full Year USA Only
 - 18-hole postings only (manual postings excluded)
 - Active & Published Tee Sets
- Courses = 13,877 CRS Courses / 100,762 CRS Tee
 Sets in the United States
- Total number of data points ~55 million by ~2 million golfers in the United States
 - Male ~ 47 million scores posted (85%)
 - Female ~ 8 million scores posted (15%)



Course Length Characterization

"Supply"

Distribution of Courses by Overall Length

| Overall Course Length (yds) | # of Courses | % of Courses | |
|--------------------------------|--------------|--------------|--|
| ≤ 6000 | 2,075 | 15% | # of Courses |
| 6001-6200 | 1,222 | 9% | 2,000 |
| 6201-6400 | 1,697 | 12% | 1,500 — |
| 6401-6600 | 2,127 | 15% | 1,000 — |
| 6601-6800 | 2,319 | 17% | 500 |
| 6801-7000 | 2,130 | 15% | 0 ≤ 6000 6001-6200 6201-6400 6401-6600 6601-6800 6801-7000 > 7000 |
| > 7000 | 2,307 | 17% | |
| Total | 13,877 | 100% | |

When using overall length to characterize golf courses, there is a generally even distribution across 200-yard bins

Distribution of Courses by Front Tee Length

| Front Tee Course Length (yds) | # of Courses | % of Courses |
|----------------------------------|--------------|--------------|
| ≤ 4200 | 2,126 | 15% |
| 4201 - 4400 | 757 | 5% |
| 4401 -4600 | 1,126 | 8% |
| 4601-4800 | 1,717 | 12% |
| 4801-5000 | 2,503 | 18% |
| 5001-5200 | 2,727 | 20% |
| 5201-5400 | 1,768 | 13% |
| > 5400 | 1,153 | 8% |
| Total | 13,877 | 100% |

Using the forward tee length, the course inventory distribution peaks about 5000 yards.

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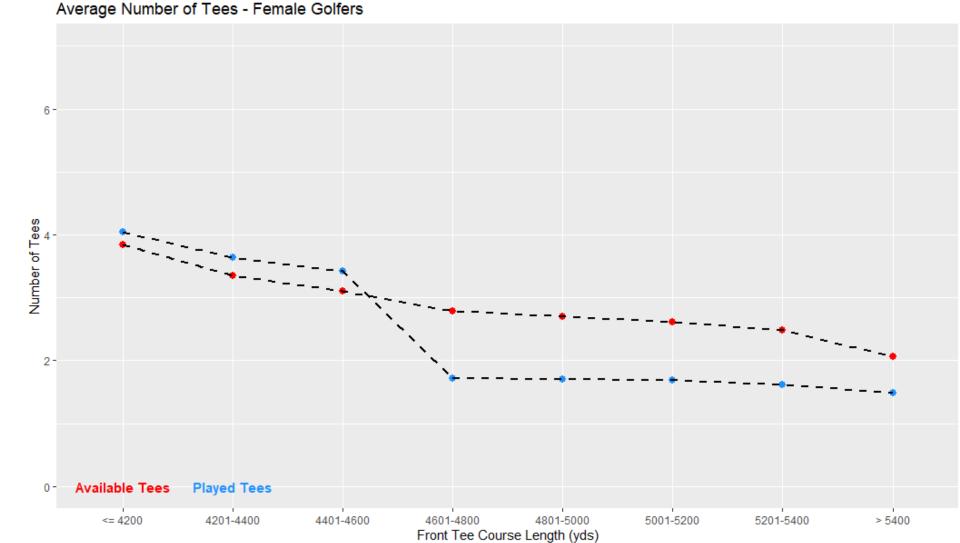


Tee Availability for Golfers to Use

"Supply"

Number of Rated Tees Available - Female

As forward tee length decreases, the average number of rated tees for females nearly doubles. Tee utilization drops above 4600 yards USGA 9

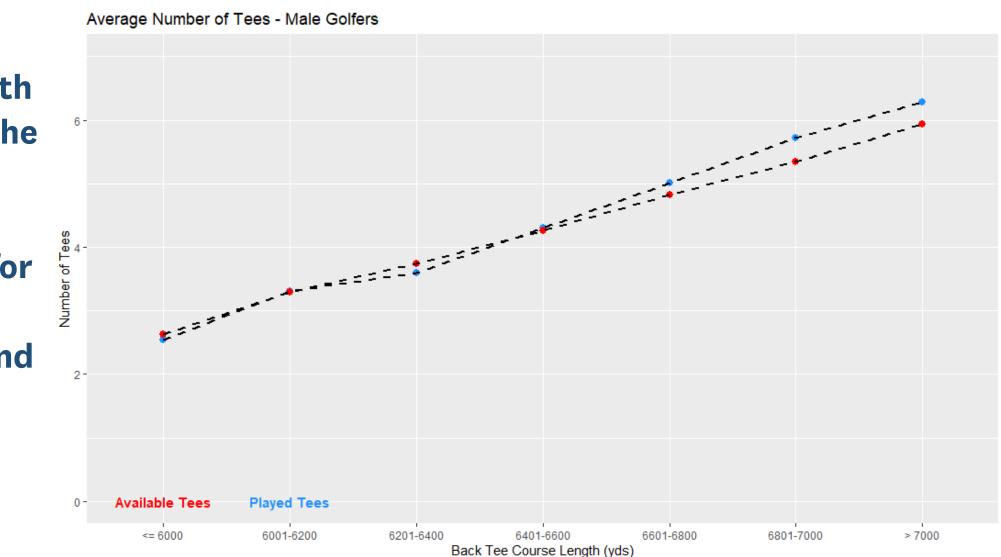


Number of Rated Tees Available - Male

As overall course length increases, the average number of rated tees for males increases and almost all tees are utilized.

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Course Utilization by Golfers Utilizing Handicap Service

"Demand"

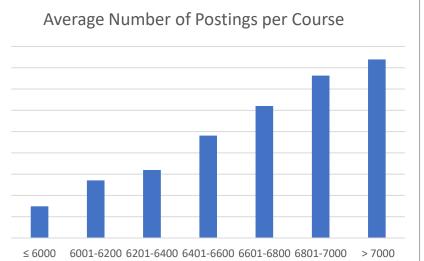
Female Scores Posted by Front Tee Length

| Front Tee Course Length (yds) | Scores Posted | Postings / Course |
|----------------------------------|------------------|----------------------|
| ≤ 4200 | 1,799,884 | 850 |
| 4201 - 4400 | 587,395 | 746 |
| 4401 -4600 | 791,312 | 699 |
| 4601-4800 | 676,323 | 412 |
| 4801-5000 | 987,697 | 394 |
| 5001-5200 | 1,134,335 | 405 |
| 5201-5400 | 670,126 | 345 |
| >5400 | 419,783 | 286 |
| Total | 7,066,855 | Avg = 517 |

As overall front tee length decreases, the average number of USGA postings by female golfers increases

Male Scores Posted by Overall Course Length

| Overall Course Length (yds) | Scores Posted | Postings / Course | |
|--------------------------------|------------------|----------------------|--------------|
| ≤ 6000 | 1,779,759 | 744 | Av |
| 6001-6200 | 1,991,573 | 1,352 | 4500 |
| 6201-6400 | 3,325,687 | 1,597 | 4000 3500 |
| 6401-6600 | 6,446,011 | 2,404 | 3000 2500 |
| 6601-6800 | 8,884,465 | 3,102 | 2000 1500 |
| 6801-7000 | 9,850,648 | 3,817 | 1000 |
| > 7000 | 14,320,464 | 4,195 | 0 ≤ 6000 |
| Total | 46,598,617 | Avg = 2,459 | |



As overall course length increases, the average number of postings by male golfers increases

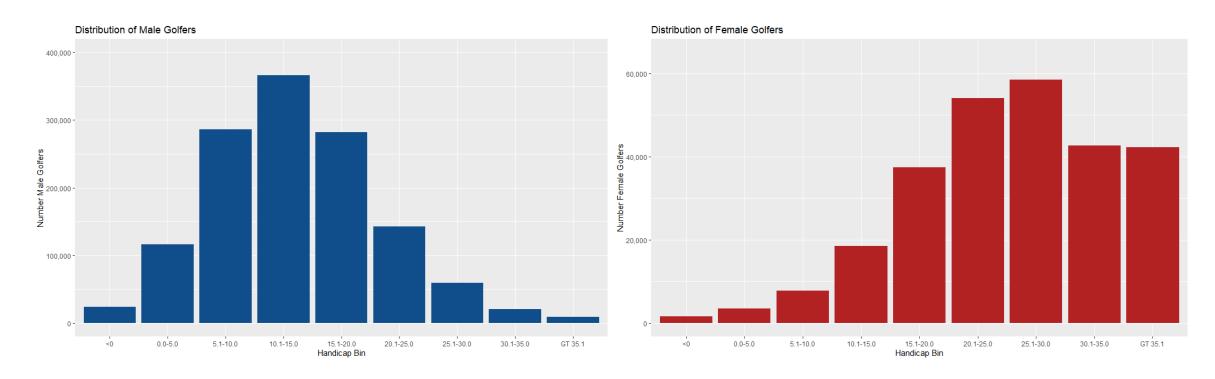


Golfer Characterization:

Handicap and Score Posting

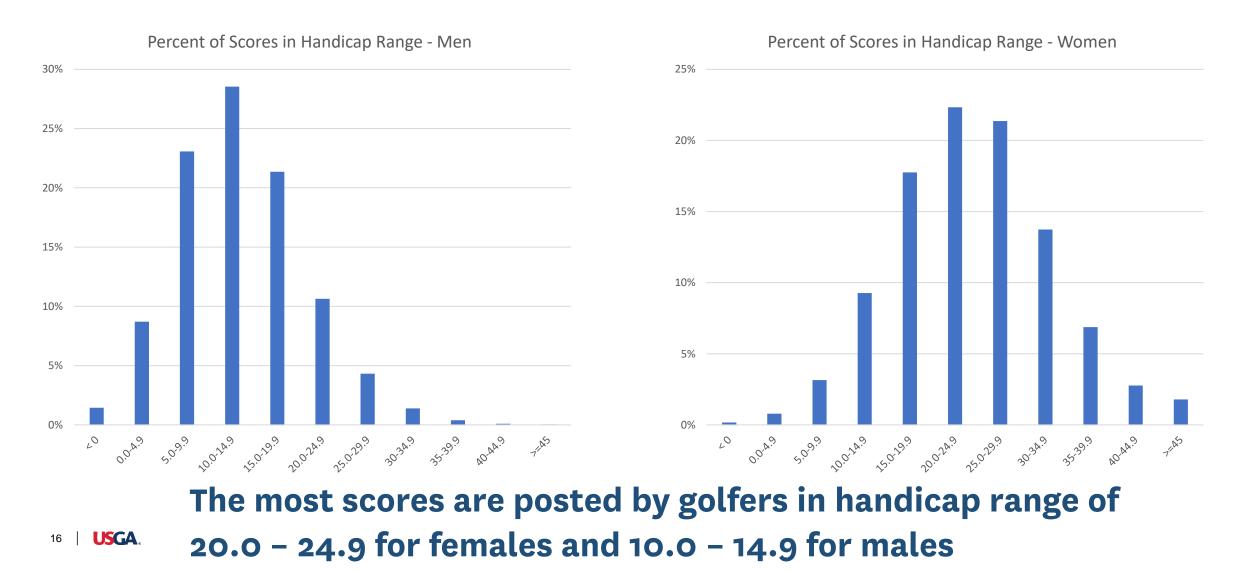


Golfer Distribution by Handicap and Gender



The most common handicap range for female golfers is 25.1 – 30.0 and is 10.1 – 15.0 for male golfers

Score Posted by Handicap Bin and Gender



Posting Frequency by Handicap Bin & Gender

| Handicap Bin | # Male Golfers | # Male Scores Posted | # Scores per Male Golfer | # Female Golfers | # Female Scores Posted | # Scores per Female Golfer |
|--------------|-------------------|-------------------------|-----------------------------|---------------------|---------------------------|----------------------------------|
| < 0 | 24,097 | 767,500 | 31.85 | 1,515 | 22,787 | 15.04 |
| 0.0 - 5.0 | 116,620 | 4,461,904 | 38.26 | 3,507 | 86,048 | 24.54 |
| 5.1 - 10.0 | 286,223 | 11,240,548 | 39.27 | 7,795 | 312,988 | 40.15 |
| 10.1 - 15.0 | 366,087 | 12,877,221 | 35.18 | 18,488 | 842,165 | 45.55 |
| 15.1 – 20.0 | 281,914 | 8,559,100 | 30.36 | 37,454 | 1,557,252 | 42.58 |
| 20.1 – 25.0 | 142,975 | 3,719,132 | 26.01 | 54,086 | 1,854,293 | 34.28 |
| 25.1 - 30.0 | 59,277 | 1,289,243 | 21.75 | 58,406 | 1,538,983 | 26.35 |
| 30.1 - 35.0 | 20,276 | 365,354 | 18.02 | 42,638 | 842,639 | 19.76 |
| > 35.1 | 8,950 | 117,590 | 13.14 | 42,203 | 521,718 | 12.36 |
| Totals | 1,306,419 | 43,397,592 | 33.22 | 220,956 | 5,842,170 | 28.48 |
| | | | | | | |

Females between 10.1 – 20.0 and male golfers with handicaps

¹⁷ | USGA. between 0.0 – 10.0 post most frequently

Scores Posted by Course Length Bin

| Back Tee Course Length | Male Scores Posted | Female Scores Posted | Ratio of Male to Female |
|---------------------------|-----------------------|-------------------------|----------------------------|
| ≤ 6000 | 1,920,192 | 444,191 | 4.32 |
| 6001-6200 | 2,132,170 | 370,871 | 5.75 |
| 6201-6400 | 3,668,857 | 620,278 | 5.92 |
| 6401-6600 | 6,757,182 | 1,185,758 | 5.70 |
| 6601-6800 | 9,227,870 | 1,572,064 | 5.87 |
| 6801-7000 | 10,144,224 | 1,693,738 | 5.99 |
| > 7000 | 12,493,056 | 1,957,839 | 6.38 |

Longer courses have more scores posted by both men and women; however, the ratio of men/women increases as courses get longer (men post at an increasingly higher frequency than women)

Scores Posted by Forward Tee Length Bin

| Forward Tee Length | Male Scores Posted | Female Scores Posted | Ratio of Male to Female |
|-----------------------|-----------------------|-------------------------|----------------------------|
| <4200 | 8,337,218 | 1,858,525 | 4.49 |
| 4201 - 4400 | 2,814,662 | 593,730 | 4.74 |
| 4401 -4600 | 3,668,363 | 790,953 | 4.64 |
| 4601-4800 | 4,853,037 | 860,026 | 5.64 |
| 4801-5000 | 7,727,261 | 1,208,332 | 6.39 |
| 5001-5200 | 9,266,623 | 1,337,988 | 6.93 |
| 5201-5400 | 6,188,915 | 787,726 | 7.86 |
| >5400 | 3,487,572 | 407,459 | 8.56 |

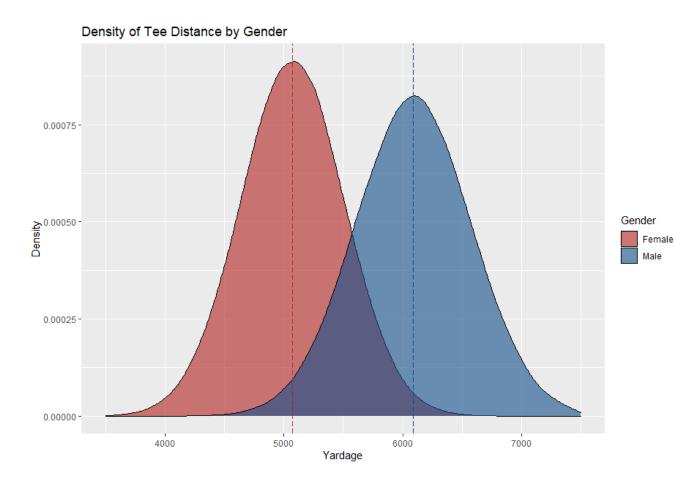
The ratio of men/women decreases as playing options for courses get shorter ¹⁹ | USCA. (women post at an increasingly higher frequency compared to men)



Tee Utilization by Golfers

"Demand"

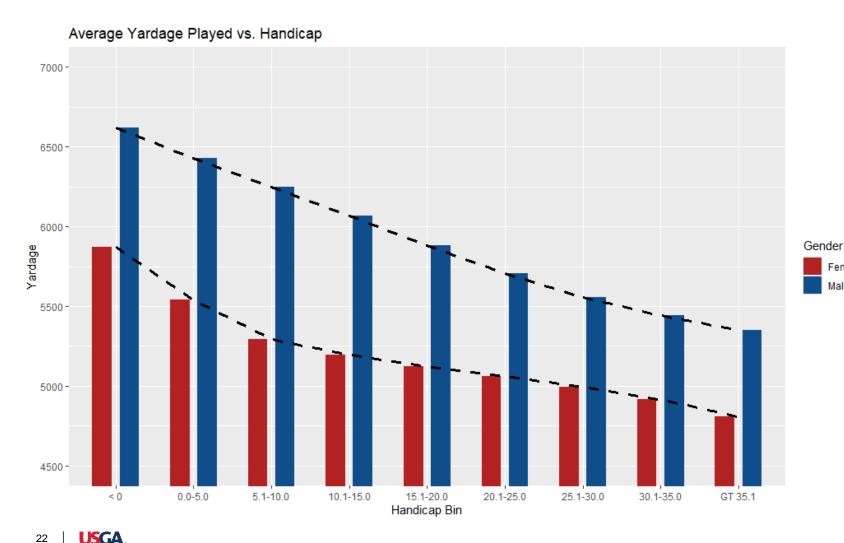
Playing Length by Gender (normalized)



Males play about 1000 yards longer on average than females Dotted lines indicate the means The male distribution is wider, and the peak is shorter indicating that there is a larger range of playing distances used Also shown by greater Std. Dev

| <u>Gender</u> | <u>Mean</u> | <u>Std. Dev.</u> |
|---------------|-------------|------------------|
| Female | 5071 | 435 |
| Male | 6089 | 488 |

Average Playing Length by Handicap Bin



Better golfers play longer tees for both genders

Male slope = -163 yds/handicap bin

Female Male

> Female slope = -115 yds/handicap bin

Two Ways to Look at Golfer Tee Selection

Because there are not equal numbers of rated tees for men and women from course to course, the analysis is not straightforward

Option 1: When there are three or more rated tees, the shortest rated tee is the front tee, the longest rated tee is the back tee and the other(s) are middle tees, regardless if there is only one, or if there are several, middle tees.

Option 2:

For women: Start with the front tee and count back with the third and all longer tees group as "other" For men: Start with the back tee and count forward

Middle Tees Grouped

Option 1: If there are three or more rated tees, the shortest rated tee is the front tee, the longest rated tee is the back tee and the other(s) are middle tees, whether there is only one or if there are several middle tees.

Overall Tee Utilization - Middle Tees Grouped

| Gender | Front Tee Usage | Middle Tee Usage | Back Tee Usage |
|--------|-----------------|------------------|----------------|
| Male | 5% | 85% | 10% |
| Female | 48% | 47% | 5% |

- 85% of male golfers have tee selection flexibility there is an available tee in front and behind the tee they elected to use.
- 47% of female golfers have tee selection flexibility there is an available tee in front and behind the tee they elected to use.

Breakdown of Female Tee Utilization

(Middle Tees Grouped)

| Front Tee Course Length | Back Tee Usage | All Middle Tees Usage | Front Tee Usage |
|-------------------------|----------------|-----------------------|-----------------|
| <4200 | 3% | 86% | 12% |
| 4201 - 4400 | 3% | 74 % | 23% |
| 4401 - 4600 | 5% | 58% | 37% |
| 4601-4800 | 5% | 45% | 50% |
| 4801-5000 | 5% | 33% | 61% |
| 5001-5200 | 6% | 24% | 70% |
| 5201-5400 | 7% | 19% | 75 % |
| > 5400 | 8% | 8% | 84% |

- As front tees get shorter, more female golfers have flexibility to play from desired distance.
- 86% of female golfers have flexibility there is an available tee in front and behind the tee they elected to use when the front tee is less than 4200 yards.
- 8% of female golfers have flexibility there is an available tee in front and behind the tee they
- ²⁶ | USGA. elected to use when the front tee is greater than 5400 yards.

Breakdown of Male Tee Utilization

(Middle Tees Grouped)

| Overall Course Length (yds) | Back Tee Usage | All Middle Tees Usage | Front Tee Usage |
|-----------------------------|----------------|-----------------------|-----------------|
| ≤ 6000 | 45% | 43% | 12% |
| 6001-6200 | 30% | 62% | 8% |
| 6201-6400 | 25% | 68% | 7% |
| 6401-6600 | 14% | 80% | 5% |
| 6601-6800 | 8% | 87% | 5% |
| 6801-7000 | 5% | 91% | 4% |
| > 7000 | 3% | 94 % | 3% |

- As courses get longer, more male golfers have flexibility to play from the distance they desire.
- 91% of male golfers have flexibility there is an available tee in front and behind the tee they elected to use when the overall course length from the back tee is at least 6800 yards.
 - Usage of the back tee drops to 5% or less once the course exceeds 6800 yards.

Count back for Women, forward for Men

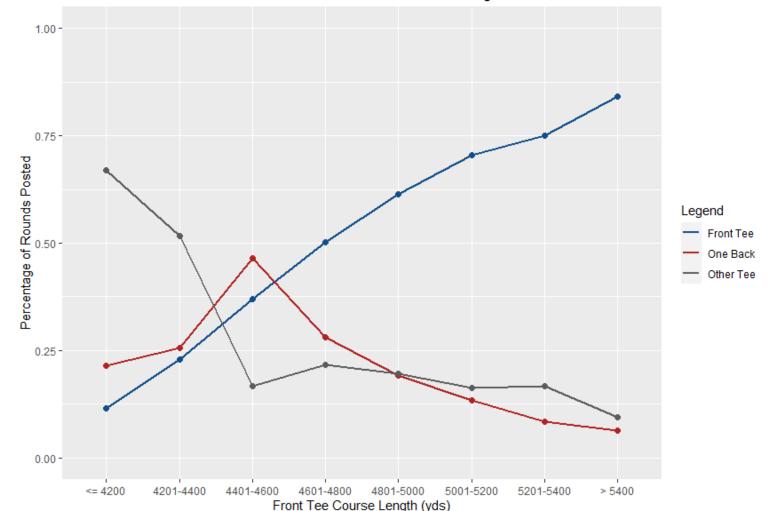
Option 2:

For women: Start with the front tee and count back with the third and all longer tees group as "other" For men: Start with the back tee and count forward

Breakdown of Female Tee Utilization

(Counting back from forward tee)

- As the most forward tee gets longer, it is used increasingly more by women and utilization of longer tees decreases
 - Once the forward tee is more than 4800 yards, it is predominately used (>62%)



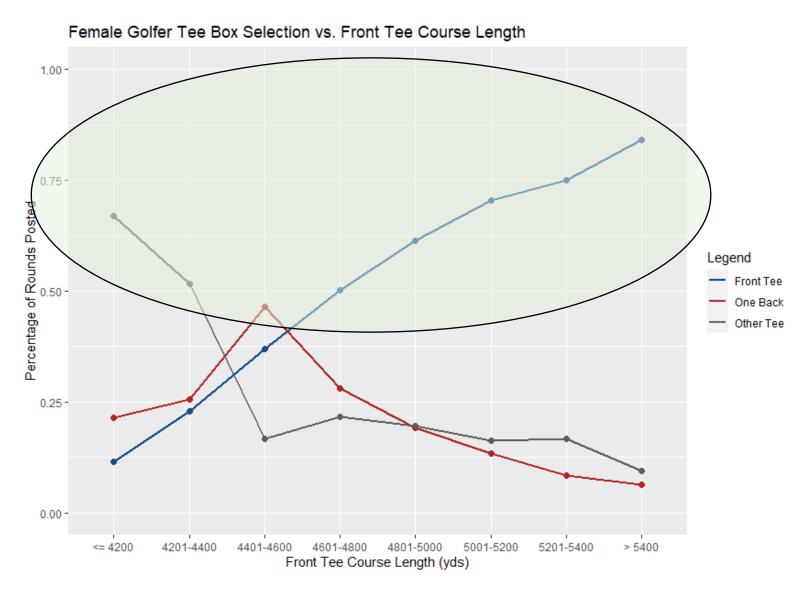
Female Golfer Tee Box Selection vs. Front Tee Course Length

Most Popular Playing Length - Female

(Counting back from forward tee)

This chart also shows that for female golfers who post scores, the most popular tee selected is:

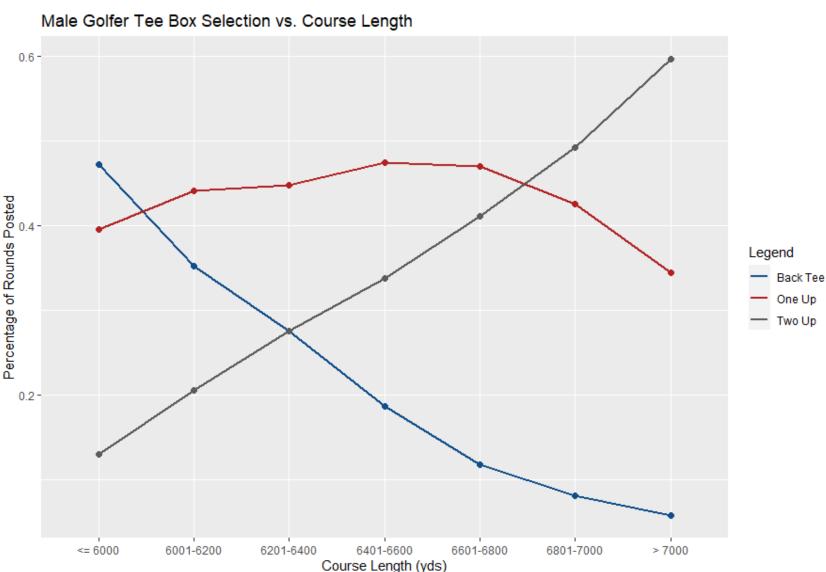
- 3rd (or more) longest for courses with a forward tee shorter than 4400 yds
- 2nd longest option for 4400 4600
- Front tee once courses most forward option is longer than 4600 yds.



Breakdown of Male Tee Utilization

(Counting back from forward tee)

- Back tee is least used for courses over 6400 yards and drops below 10% when the course is longer than 6800 yards
- One-up tee gets consistent usage, regardless of course length
- Two-up tee usage increases as course length increases



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Legend

Back Tee One Up

Two Up

Most Popular Playing Length - Male

<= 6000

6001-6200

6201-6400

Male Golfer Tee Box Selection vs. Course Length

(Counting back from forward tee)

- Back tee is the most used tee for courses less than 6000 yards and drops below 10%
- One-up tee is most used for courses 6000 – 6800 yards long
- Two-up tee becomes the most used above 6800 yards in overall course length

0.6 -Percentage of Rounds Posted 0.2 -

6401-6600

Course Length (yds)

6601-6800

6801-7000

> 7000

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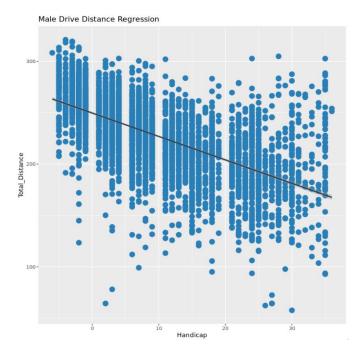


Assessment of Golfers Playing Length Decisions

Methodology to Assess Golfer Behaviors

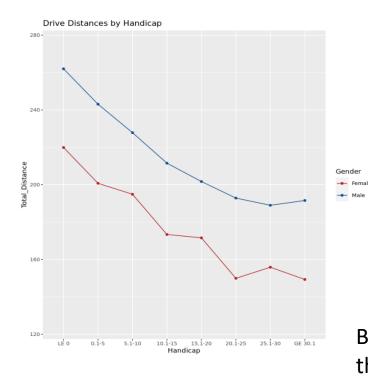
Option 1: Use the mean driving distance for each handicap bin (less conservative approach)
Option 2: Use a driving distance distribution for each handicap bin (more conservative approach)

Both options use the critical assumption (the only option available) that driving distance can be estimated based on handicap and gender. There is a strong correlation, but there is also significant variability around the linear regression. In other words, not all golfers with the same handicap hit their drives the same distance.



Methodology to Assess Golfer Behaviors

Option 1: Use the mean driving distance for each handicap bin



| Handicap Bin | Male Driving Distance (yds) | Female Driving Distance (yds) |
|--------------|-----------------------------|-------------------------------|
| <= 0 | 262 | 219 |
| 0.1 - 5 | 243 | 201 |
| 5.1 - 10 | 228 | 195 |
| 10.1 – 15 | 212 | 173 |
| 15.1 – 20 | 202 | 172 |
| 20.1 – 25 | 193 | 150 |
| 25.1 - 30 | 190 | 156 |
| >= 30.1 | 192 | 149 |

Both male and female hitting distances decrease with increasing handicap until they plateau above handicap of approximately 20

Assessment of Female Golfer Behaviors

Option 1a: Use the mean driving distance for each handicap bin

The basis for determining the recommended driving distance for golfers is based on the Longleaf System

| Female Table | | | | | |
|----------------|-----------------|-------------|-------------|---------------|------------|
| | Appropriate Tee | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % |
| < 0 | 5,355 | 5,855 | 12.9% | 31.4% | 55.7% |
| 0.0-5.0 | 4,880 | 5,380 | 5.2% | 34.1% | 60.7% |
| 5.1-10.0 | 4,722 | 5,222 | 4.0% | 40.8% | 55.2% |
| 10.1-15.0 | 4,141 | 4,641 | 0.9% | 4.2% | 95.0% |
| 15.1-20.0 | 4,114 | 4,614 | 1.3% | 5.8% | 92.9% |
| 20.1-25.0 | 3,534 | 4,034 | 1.0% | 1.0% | 98.1% |
| 25.1-30.0 | 3,692 | 4,192 | 1.9% | 2.4% | 95.8% |
| GT 30 | 3,507 | 4,007 | 3.4% | 2.9% | 93.7% |

- The table shows that scratch or better golfers should play courses from 5355 yards to 5855 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 31% are estimated to play tees in this range. 56% play longer courses and 13% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers playing "too long" a course quickly increases to at least 90% above 10 handicap.

Assessment of Male Golfer Behaviors

Option 1a: Use the mean driving distance for each handicap bin

| The basis for determining the recommended driving distance for golfers is based on the Longleaf System |
|--|
|--|

| Male Table | | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|--|
| | Appropr | iate Tee | | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | | |
| < 0 | 6,490 | 6,990 | 34.2% | 51.1% | 14.8% | | | |
| 0.0-5.0 | 5,989 | 6,489 | 8.7% | 48.6% | 42.7% | | | |
| 5.1-10.0 | 5,593 | 6,093 | 5.1% | 24.2% | 70.7% | | | |
| 10.1-15.0 | 5,170 | 5,670 | 2.8% | 13.0% | 84.2% | | | |
| 15.1-20.0 | 4,906 | 5,406 | 2.9% | 10.8% | 86.3% | | | |
| 20.1-25.0 | 4,669 | 5,169 | 3.2% | 8.9% | 87.9% | | | |
| 25.1-30.0 | 4,590 | 5,090 | 20.6% | 9.4% | 70.0% | | | |
| GT 30 | 4,642 | 5,142 | 3.6% | 7.4% | 89.0% | | | |

- The table shows that scratch or better golfers should play courses from 6490 yards to 6990 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, more than half are estimated to play tees in this range. 15% play longer courses and 34% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers playing "too long" a course quickly increases to at least 70% above 5 handicap.

Assessment of Female Golfer Behaviors

Option 1b: Use the mean driving distance for each handicap bin

| Female Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 5,296 | 5,796 | 10.2% | 29.5% | 60.3% | | |
| 0.0-5.0 | 4,802 | 5,302 | 2.7% | 28.3% | 69.0% | | |
| 5.1-10.0 | 4,638 | 5,138 | 2.6% | 31.8% | 65.5% | | |
| 10.1-15.0 | 4,035 | 4,535 | 1.0% | 2.3% | 97.0% | | |
| 15.1-20.0 | 4,008 | 4,508 | 1.1% | 3.4% | 95.5% | | |
| 20.1-25.0 | 3,405 | 3,905 | 1.0% | 1.0% | 98.4% | | |
| 25.1-30.0 | 3,569 | 4,069 | 1.6% | 1.7% | 96.7% | | |
| GT 30 | 3,378 | 3,878 | 2.6% | 2.5% | 94.9% | | |

- The table shows that scratch or better golfers should play courses from 5296 yards to 5796 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 30% are estimated to play tees in this range. 60% play longer courses and 10% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers playing "too long" a course quickly increases to at least 95% above 10 handicap.

Assessment of Male Golfer Behaviors

Option 1b: Use the mean driving distance for each handicap bin

| Male Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 6,474 | 6,974 | 30.7% | 56.6% | 15.7% | | |
| 0.0-5.0 | 5,953 | 6,453 | 7.2% | 45.3% | 47.5% | | |
| 5.1-10.0 | 5,542 | 6,042 | 4.1% | 20.6% | 75.3% | | |
| 10.1-15.0 | 5,104 | 5,604 | 2.3% | 10.6% | 87.1% | | |
| 15.1-20.0 | 4,830 | 5,330 | 2.4% | 8.0% | 89.6% | | |
| 20.1-25.0 | 4,583 | 5,083 | 3.0% | 6.3% | 90.7% | | |
| 25.1-30.0 | 4,501 | 5,001 | 1.8% | 10.3% | 87.8% | | |
| GT 30 | 4,556 | 5,056 | 3.2% | 5.7% | 91.0% | | |

- The table shows that scratch or better golfers should play courses from 6474 yards to 6974 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, more than half are estimated to play tees in this range. 16% play longer courses and 31% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers playing "too long" a course quickly increases to at least 87% above 10 handicap.

Assessment of Female Golfer Behaviors

Option 1c: Use the mean driving distance for each handicap bin

| Female Table | | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|--|
| | Appropr | iate Tee | | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | | |
| < 0 | 6,168 | 6,668 | 79.8% | 19.5% | 0.8% | | | |
| 0.0-5.0 | 5,661 | 6,161 | 63.6% | 30.2% | 6.2% | | | |
| 5.1-10.0 | 5,491 | 5,991 | 75.0% | 21.4% | 3.6% | | | |
| 10.1-15.0 | 4,871 | 5,371 | 15.2% | 58.7% | 26.2% | | | |
| 15.1-20.0 | 4,843 | 5,343 | 18.4% | 58.8% | 22.7% | | | |
| 20.1-25.0 | 4,222 | 4,722 | 2.7% | 13.2% | 84.1% | | | |
| 25.1-30.0 | 4,392 | 4,892 | 7.4% | 27.5% | 65.1% | | | |
| GT 30 | 4,194 | 4,694 | 8.9% | 19.5% | 71.6% | | | |

- The table shows that scratch or better golfers should play courses from 6168 yards to 6668 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 20% are estimated to play tees in this range. 1% play longer courses and 80% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers playing too long a course increases to at least 65% above 20 handicap.

Assessment of Male Golfer Behaviors

Option 1c: Use the mean driving distance for each handicap bin

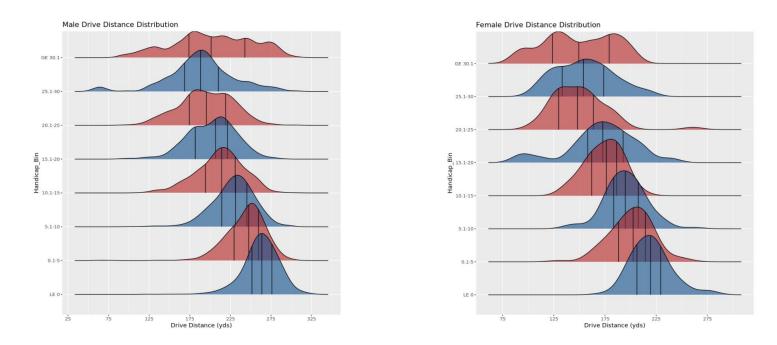
| Male Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 7,381 | 7,881 | 98.9% | 1.1% | 0.0% | | |
| 0.0-5.0 | 6,845 | 7,345 | 91.6% | 8.1% | 0.3% | | |
| 5.1-10.0 | 6,422 | 6,922 | 68.7% | 29.7% | 1.6% | | |
| 10.1-15.0 | 5,971 | 6,471 | 27.0% | 58.9% | 14.1% | | |
| 15.1-20.0 | 5,689 | 6,189 | 30.6% | 42.5% | 26.9% | | |
| 20.1-25.0 | 5,435 | 5,935 | 25.9% | 38.2% | 35.9% | | |
| 25.1-30.0 | 5,350 | 5,850 | 30.3% | 38.7% | 31.1% | | |
| GT 30 | 5,407 | 5,907 | 19.5% | 24.8% | 55.7% | | |

- The table shows that scratch or better golfers have the skill to play courses from 7381 yards to 7881 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, nearly 99% play shorter tees than this..
- The table also shows that as skill level decreases, the number of golfers playing too long a course increases and the "too short" drops to under 30% each above 10 handicap.

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Methodology to Assess Golfer Behaviors

Option 2: Use a driving distance distribution for each handicap bin



The two charts show the shape of the driving distribution for both male and female are normally distributed for lower handicaps and are not normally distributed (bell shaped curve) at higher handicaps.

Assessment of Female Golfer Behaviors

Option 2a: Use the driving distance distribution for each handicap bin

| Female Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 5,355 | 5,855 | 19.2% | 31.3% | 49.5% | | |
| 0.0-5.0 | 4,880 | 5,380 | 16.1% | 24.4% | 59.4% | | |
| 5.1-10.0 | 4,722 | 5,222 | 18.0% | 27.3% | 54.7% | | |
| 10.1-15.0 | 4,141 | 4,641 | 4.0% | 13.8% | 82.2% | | |
| 15.1-20.0 | 4,114 | 4,614 | 12.6% | 15.0% | 72.3% | | |
| 20.1-25.0 | 3,534 | 4,034 | 2.9% | 7.0% | 90.1% | | |
| 25.1-30.0 | 3,692 | 4,192 | 7.0% | 11.2% | 81.8% | | |
| GT 30 | 3,507 | 4,007 | 7.6% | 10.2% | 82.2% | | |

The basis for determining the recommended driving distance for golfers is based on the Longleaf System

- The table shows that scratch or better golfers should play courses from 5355 yards to 5855 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 30% are estimated to play tees in this range. 50% play longer courses and 20% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers above 10 handicap playing "too long a course" quickly increases to 70% 90% and the "within the range" drops to 7 15%.

Assessment of Male Golfer Behaviors

Option 2a: Use the driving distance distribution for each handicap bin

| | Male Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|--|
| | Appropr | iate Tee | | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | | |
| < 0 | 6,490 | 6,990 | 42.4% | 29.0% | 28.7% | | | |
| 0.0-5.0 | 5,989 | 6,489 | 27.3% | 26.1% | 46.6% | | | |
| 5.1-10.0 | 5,593 | 6,093 | 20.5% | 21.7% | 57.8% | | | |
| 10.1-15.0 | 5,170 | 5,670 | 16.5% | 16.8% | 66.7% | | | |
| 15.1-20.0 | 4,906 | 5,406 | 16.4% | 15.3% | 68.3% | | | |
| 20.1-25.0 | 4,669 | 5,169 | 17.8% | 13.8% | 68.4% | | | |
| 25.1-30.0 | 4,590 | 5,090 | 21.5% | 13.2% | 65.3% | | | |
| GT 30 | 4,642 | 5,142 | 30.4% | 12.0% | 57.7% | | | |

The basis for determining the recommended driving distance for golfers is based on the Longleaf System

- The table shows that scratch or better golfers should play courses from 6490 yards to 6990 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, 29% are estimated to play tees in this range. 29% play longer courses and 42% play shorter courses.
- The table also shows that as skill level decreases (above 10 handicap), the number of golfers playing too long
 a course increases to at least 57% and the "within the range" drops to under 17%.

Assessment of Female Golfer Behaviors

Option 2b: Use the driving distance distribution for each handicap bin

| Female Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 5,296 | 5,796 | 10.1% | 35.2% | 54.7% | | |
| 0.0-5.0 | 4,802 | 5,302 | 6.9% | 24.8% | 68.3% | | |
| 5.1-10.0 | 4,638 | 5,138 | 7.0% | 29.2% | 63.8% | | |
| 10.1-15.0 | 4,035 | 4,535 | 0.3% | 5.5% | 94.2% | | |
| 15.1-20.0 | 4,008 | 4,508 | 4.9% | 12.7% | 82.4% | | |
| 20.1-25.0 | 3,405 | 3,905 | 0.3% | 2.4% | 97.3% | | |
| 25.1-30.0 | 3,569 | 4,069 | 1.9% | 7.0% | 91.2% | | |
| GT 30 | 3,378 | 3,878 | 2.5% | 6.8% | 90.7% | | |

- The table shows that scratch or better golfers should play courses from 5296 yards to 5796 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 35% are estimated to play tees in this range. 55% play longer courses and 10% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers above 10 handicap playing "too long a course" quickly increases to 82% 97% and the "within the range" drops to 2 13%.

Assessment of Male Golfer Behaviors

Option 2b: Use the driving distance distribution for each handicap bin

| Male Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 6,474 | 6,974 | 38.1% | 39.2% | 22.7% | | |
| 0.0-5.0 | 5,953 | 6,453 | 18.3% | 33.7% | 48.0% | | |
| 5.1-10.0 | 5,542 | 6,042 | 11.6% | 24.7% | 63.7% | | |
| 10.1-15.0 | 5,104 | 5,604 | 8.9% | 16.9% | 74.2% | | |
| 15.1-20.0 | 4,830 | 5,330 | 9.3% | 15.1% | 75.6% | | |
| 20.1-25.0 | 4,583 | 5,083 | 11.2% | 13.8% | 75.0% | | |
| 25.1-30.0 | 4,501 | 5,001 | 15.4% | 13.7% | 70.9% | | |
| GT 30 | 4,556 | 5,056 | 25.7% | 13.1% | 61.2% | | |

- The table shows that scratch or better golfers should play courses from 6474 yards to 6974 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, 39% are estimated to play tees in this range. 23% play longer courses and 38% play shorter courses.
- The table also shows that as skill level decreases (above 10 handicap), the number of golfers playing too long
 a course increases to at least 61% and the "within the range" drops to under 17%.

Assessment of Female Golfer Behaviors

Option 2c: Use the driving distance distribution for each handicap bin

| Female Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 6,168 | 6,668 | 38.3% | 34.8% | 26.9% | | |
| 0.0-5.0 | 5,661 | 6,161 | 28.9% | 29.4% | 41.7% | | |
| 5.1-10.0 | 5,491 | 5,991 | 31.9% | 31.6% | 36.5% | | |
| 10.1-15.0 | 4,871 | 5,371 | 8.4% | 21.5% | 70.2% | | |
| 15.1-20.0 | 4,843 | 5,343 | 19.1% | 18.2% | 62.7% | | |
| 20.1-25.0 | 4,222 | 4,722 | 4.8% | 9.9% | 85.2% | | |
| 25.1-30.0 | 4,392 | 4,892 | 10.9% | 14.4% | 74.7% | | |
| GT 30 | 4,194 | 4,694 | 11.1% | 12.6% | 76.3% | | |

- The table shows that scratch or better golfers should play courses from 6168 yards to 6668 yards. This range is
 defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, about 35% are
 estimated to play tees in this range. 27% play longer courses and 38% play shorter courses.
- The table also shows that as skill level decreases, the number of golfers above 10 handicap playing "too long a course" quickly increases to 63% 85% and the "within the range" drops to 10 22%.

Assessment of Male Golfer Behaviors

Option 2c: Use the driving distance distribution for each handicap bin

| Male Table | | | | | | | |
|----------------|-------------|-------------|-------------|---------------|------------|--|--|
| | Appropr | iate Tee | | | | | |
| Handicap Range | Lower Bound | Upper Bound | Too Short % | Approp. Tee % | Too Long % | | |
| < 0 | 7,381 | 7,881 | 66.6% | 21.9% | 11.5% | | |
| 0.0-5.0 | 6,845 | 7,345 | 46.3% | 26.5% | 27.2% | | |
| 5.1-10.0 | 6,422 | 6,922 | 34.7% | 24.7% | 40.6% | | |
| 10.1-15.0 | 5,971 | 6,471 | 26.4% | 20.0% | 53.6% | | |
| 15.1-20.0 | 5,689 | 6,189 | 24.9% | 18.0% | 57.1% | | |
| 20.1-25.0 | 5,435 | 5,935 | 25.3% | 15.7% | 58.9% | | |
| 25.1-30.0 | 5,350 | 5,850 | 28.7% | 14.4% | 56.8% | | |
| GT 30 | 5,407 | 5,907 | 37.2% | 12.2% | 50.5% | | |

- The table shows that scratch or better golfers should play courses from 7381 yards to 7881 yards. This range is defined as a 500-yard window around the midpoint. Of the golfers in this skill level range, 11% are estimated to play tees in this range. 22% play longer courses and 67% play shorter courses.
- The table also shows that as skill level decreases (above 10 handicap), the number of golfers playing too long
 a course increases to at least 50% and the "within the range" drops to 20% or under.

Overall Assessment of Golfer Behaviors Comparing All Three Systems Using Both Methods

Method

1

2

Longleaf System

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 5.09% | 18.86% | 76.05% |
| Female | 1.88% | 5.11% | 93.02% |

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 19.91% | 18.28% | 61.79% |
| Female | 7.53% | 11.96% | 80.49% |

Tee It Forward

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 3.82% | 16.23% | 79.95% |
| Female | 1.56% | 3.75% | 94.82% |

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 12.28% | 20.02% | 67.69% |
| Female | 2.36% | 8.06% | 89.56% |

Setting up for Success

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 45.35% | 38.56% | 16.09% |
| Female | 13.38% | 32.25% | 54.37% |

| | Population | | |
|--------|------------|-------------|----------|
| | Too Short | Appropriate | Too Long |
| Male | 31.36% | 20.59% | 48.04% |
| Female | 12.02% | 15.53% | 72.44% |

- The results show that regardless of the system used, male golfers play too long a course using the analysis Method 2 (more conservative) 48% 68% of the time and female golfers play too long a course 72% 90% of the time.
- From the previous slides, we know that:
 - higher handicap golfers are more prone to playing too long a course compared to lower handicap golfers.
 - Low handicap golfers have the skill to play longer courses, but typically don't. They like birdie opportunities!

Questions?

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