



Analysis of Prize Money and Performance between the Prize Money Ranking (1st to 60th) of Korea Ladies Professional Golf Players

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Abstract

The purpose of this study is to analyze the Prize Money and Performance of top 60 (1 - 20th vs 21 - 40th vs 41 - 60th) for the analysis of the Prize Money and Performance among the prize ranking of Korean Ladies Professional Golfers in 2017 using SPSS 23.0 program descriptive analysis and one-way ANOVA showed that the scoring average and putting average were ①group (21 - 40th) > ②group (1 - 20th) > ③group (41 - 60th). Nonetheless, it is considered that the low prize money ranking is due to the fact that the prize money allocation method is overweighted in the group of 1 to 20th up to about 72%. However, as expected, the average birdie, green in regulation, par save, par break and recovery were as follows: ②group (1 - 20th) > ①group (21 - 40th) > ③group (41 - 60th), the upper group showed higher prize money and good performance. However, it seems that appropriate consideration of the subgroups is necessary for the distribution of prize money. Because these tour professionals are experts we all recognize, they need proper treatment and economic support so that they can concentrate on the tour.

Keywords: Korean Ladies Professional Golfers, Prize Money Ranking, Performance, Scoring Average, Putting Average

1. Introduction

While general sports are usually limited to certain ages, golf is a sport that gives mind and body training and enjoyment to anyone, regardless of age, physical fitness or gender. In addition, the round of golf in nature is being reborn as a living sport because it can escape the complicated city life and can easily relieve stress with nature. Also, the brilliant performance of Korean Ladies Professional Golf players is spreading the width of the base because all the people give pride and possibility. Especially, they report that golfers enjoy an average of five years longer than those who do not play golf. In other words, in a study of 300,000 golfers, golfers reported a 40% lower mortality rate at some point in time than those who did not, which means they could live an average of five years longer [4, 6]. In particular, the lower the handicap, the healthier it was reported. According to the Korea Ladies Golf Association (KLPGA) in 2017, 31 contests were held, one prize less than last year, but the total amount of prize money was 20.9 billion won more than last year. Five major competitions, one more than last year, have been held to show the status and popularity of Korean women's golf. The 2018 competition has already started with the 30th competition with a total prize of 20.7 billion won, and the average prize money per competition is about 690 million won. In addition, a total of 4 competitions will be held overseas to promote the status of golf in Korea. Vietnam (2), China (1) and Southeast Asia (1). The final tournament of this year will be finished with the ADT Caps championship of 600 million won in total prize money in November. On the other hand,

Korean Professional Golf Association (KPGA) Korean tour is 18 tournaments and tour of the second half is about 15 billion won. The Korea Ladies Professional Golf Association (KLPGA) recently announced that it will host the world's top five ladies professional golf tournaments with Ladies Professional Golf Association (LPGA), Japan Ladies Professional Golf Association (JLPGA), Ladies European Tour (LET) is acknowledged. Therefore, I would like to see the detailed performance analysis of these games as an occasion for Korean golf to set a little closer to the world stage.

2. Methods

This study is aimed at 60 players who are ranked top prize (1st - 60th place) among the tour pros who are affiliated with Korea Ladies Professional Golf Association (KLPGA) in 2017. These data were collected from the Korea Ladies Golf Association (KLPGA) website (<https://www.klpga.co.kr>).

The collected data were divided into ①group (1 - 20th), ②group (21 - 40th) and ③group (41 - 60th) to analyze the group performance.

<Table 1> shows the average and standard deviation of the prize money and performance factors such as scoring average, putting average, average birdie, green in regulation, par saves, par break and recovery. Data processing was done by descriptive analysis using SPSS 23.0 program and the mean (M) and standard deviation (SD) were calculated to compare the prize money and performances between the prize ranking groups. One-way

ANOVA and post-test Tukey’s method was used. All statistical levels were verified at .05.

Table 1. Analysis of Prize Money and Performance Factors

prize money and performance factors	M±SD
prize money(KRW)	271,337,525.12±209,540,102.61
scoring average(stroke)	71.85±.76
putting average(stroke)	30.60±.54
average birdie(%)	17.25±1.97
green in regulation(%)	72.88±3.33
par save(%)	84.92±2.17
par break(%)	16.97±2.17
recovery(%)	57.27±4.82

3. Results

As shown in <Table 1>, the average prize money on the regular tour organized by Korea Women’s Professional Golf Association in 2017 was 271,337,525 won, but the standard deviation was 209,540,102 won which is similar to the average. The cause of

this showed that the deviation of the prize money is very large. <Table 2> shows the results of the descriptive analysis of the prize money and performance factors of the top 60 Korean women professional golfers in this study. According to the results, the average prize money of Korean women professional golfers was 271 million won. The scoring average was 71.85, average putting was 30.60, average birdie was 17.25%, green in regulation was 72.88%, par save was 84.92%, par break was 16.97%, and the recovery was 57.27%. The scoring average ($t = 80.752, p <.001$), the average putting ($t = 5.422, p <.001$), the average birdie ($t = 45.382, p <.001$) ($p <.001$), par save ($t = 57.924, p <.001$), par break ($t = 45.560, p <.001$) and recovery were statistically significant difference. In particular, the prize money ranking players in @group (1-20th) were higher average birdie ($M = 19.17$), green in regulation ($M = 75.04$), par save ($M = 87.03$), par break ($M = 19.41$) and recovery ($M = 59.93$) except for scoring average ($M = 71.04$) and average putting ($M = 30.29$). On the other hand, the ©group (41-60th) with low prize money ranking has the scoring average ($M = 72.49$), average putting ($M = 30.70$), average birdie ($M = 15.77$), green in regulation ($M = 70.33$), par save ($M = 83.19$), par break ($M = 15.88$) and recovery ($M = 56.64$). Therefore, this is in contrast to the @group (1-20th).

Table 2: Analysis of the factors of performance among the prize money ranking groups

factors	division	N	M±SD	F	Sig	Post-Hoc (Tukey)	
performance factors	scoring average	@ 1-20th	20	71.04±.57	80.752***	.000	b>a© b>c
		b)21-40th	20	69.77±.38			
		c)41-60th	20	72.49±.39			
	putting average	@ 1-20th	20	30.29±.44	5.422***	.000	b>a©
		b)21-40th	20	29.81±.61			
		c)41-60th	20	30.70±.39			
	average birdie	@ 1-20th	20	19.17±1.60	45.382***	.000	a)b>c b>c
		b)21-40th	20	17.68±1.47			
		c)41-60th	20	15.77±.99			
	green in regulation	@ 1-20th	20	75.04±3.00	22.993***	.000	a)b>c a>c
		b)21-40th	20	72.54±2.68			
		c)41-60th	20	70.33±2.44			
	par save	@ 1-20th	20	87.03±1.75	57.924***	.000	a>b© a>c
		b)21-40th	20	83.21±1.25			
		c)41-60th	20	83.19±1.38			
	par break	@ 1-20th	20	19.41±1.60	45.560***	.000	a>b© a>c
		b)21-40th	20	17.89±1.50			
		c)41-60th	20	15.88±1.06			
	recovery	@ 1-20th	20	59.93±4.33	15.346***	.000	a>c©b a>c
		b)21-40th	20	56.37±4.33			
		c)41-60th	20	56.64±4.71			

***p <.001 @group (1-20th) b)group (21-40th) c)group (41-60th)

4. Discussion

We often think of golf as an exercise or amusement. The answer to this is distinguished from those who enjoy golf and those who do not. Even today, the general perception of the effect of golf’s exercise is a negative one. Many of the golfers who started golf for exercise do not exercise much and often stop playing golf. Especially, those who do not increase golf performance as much as they think. However, 18 holes is a very beneficial exercise if you think that it is time to hang out with your partner and hang out with nature while walking more than 6km [3]. The purpose of this study is to contribute to the development of competitions by comparing and analyzing the prize money and performance from the 1st to 60th, which divided into three groups (@group (1 - 20th), b) group (21 - 40th) and ©group (41 - 60th) among the tour professional athletes belonging to the Korea Professional Golf Association (KLPGA) in 2017. The golf statistics record provides a lot of facts and information about the hard to understand results. In particular, professional athletes can

complement their deficiencies by analyzing their own records and can determine their own strengths and weaknesses and determine the direction of training. In addition, the Korean Ladies Professional Golf Association (KLPGA), which is in charge of this, can establish criteria related to overall tour management such as distribution of prize money and retention of membership based on various statistical records. Therefore, it is very important to record statistics on golf because it can increase interest of golf fans by providing rich contents through various data to various media. As mentioned in the results, the average and the standard deviation are almost the same, and they have problems in distributing the prize. In particular, the biggest problem is that the total prize money is biased in the top group (1-10th). In addition, if you expand to 1-20th, about two-thirds of the total prize money is concentrated. Eventually, the remaining 1/3 should be eaten by the subgroup players. For example, Oh Ji-hyun who won the Hanwha Classic (total prize 1.4 billion won), which was held in August 2017, received 350,000,000 won, while Kim Bo-bae, who had the lowest prize money, received 3,640,000 won. This difference was 96 times the difference. For this reason, players will play a challenging and aggressive game to raise their rank in

the third and fourth rounds. Especially, if you go down to the 10th or 20th place, you may have to play very dangerous gambling in the last round. Golf is exercises that can expect good results if you have to be conscientious, but you have to gamble in the actual game. As noted in previous studies, there is a pronounced inequality in the prize income of professional golfers. In particular, the top athletes of KLPGA have accumulated enormous wealth such as corporate sponsorship and advertising revenue in addition to prize money, and have also improved competitiveness by recruiting competent leaders, caddies and trainers. However, it is a fact that the low-income athletes are suffering from relative difficulties by training in poor conditions without the support of competent leaders or caddies due to economic burden. Therefore, it is considered necessary to consider subgroup players to be able to tour with confidence and pride as a professional athlete [9, 12].

In the case of @group (1 - 20th), the scoring average ($M = 71.04$) was 1.27 more than the scoring average ($M = 69.77$) of ⓑgroup (21 - 40th). These results are in contrast to previous studies. According to the previous studies, the most crucial performance factor of the tour score (prize money ranking) is the scoring average. In addition, previous studies have shown that green in regulation and putting average have the greatest impact on factors affecting scoring average [2, 8, 13]. Moreover, the scoring average ($M = 69.77$) in the ⓑgroup (21 - 40th) was 2.72 lower than that in the scoring average ($M = 72.49$) in the ⓒgroup (41 - 60th). In addition, the scoring average in the group ⓑgroup (21 - 40th) is 2.08 less than the total scoring average 71.15 in <table 1>. The superiority of this average is also related to the average putting. An excellent average putting is directly related to a decrease in the scoring average. In addition, the putting average ($M=29.81$) of ⓑgroup (21 - 40th), which is lower than 0.30 in the @group (1 - 20th), and 0.89 in the ⓒgroup (41 - 60th). There was the smallest difference among the seven factors among the groups. Nonetheless, the reason why the @group (1 - 20th) ranked higher than the ⓑgroup (21 - 40th) is due to the prize allocation method. Currently, the prize distribution method of the Korea Ladies Professional Golf Association (KLPGA) is 'The rich get richer and the poor get poorer'. In other words, 71.96% (11 - 20th up to 10.96%) of total prize money is distributed to 1st - 20th place. Especially, in the 1st to 10th, 61% of the prize money is concentrated, so it is preferable to win or to be too aggressive for the 'Top 10', or to be overly passive. For example, the prize allocation method is about 60 - 96 times difference between the winning percentage of 25% (300 million) and the ranking of 60th place (0.46%) (5 million), so the improvement of the self-esteem and economic burden of the bottom tour professional players. It seems to be necessary. A player who has won a professional men and women golf tournament in Korea usually receives 20 - 25% of the total prize money. Currently, the distribution of prize money, which is being conducted by the Korea Women's Golf Association, is being conducted in two ways. If it is over 1.2 billion won, 25% (300 million won) will be given to the first winner and about 60% will be paid about 0.4% (5 million). If the total prize money is less than 1.2 billion won, 20% will be given to the winner and 0.4% will be paid to the 60th place [11]. For example, if the prize money is 700 million won, 140 million won will be given to the first prize and 3 million won will be paid to the 60th prize. Of course this is known to the players in advance. In fact, in the BMW Ladies Championship (total prize money of 1.2 billion won), which was held in September, 2017, the winner of the first prize (Ko Jin-Yong) was 300 million won, while the 64th (Lee Na-Kyeong) ranked winner was awarded 5,280,000 won. This showed a difference of 57 times. According to the total prize money in 2017, Lee Jeon-Eun earned 1,149,052,534 won for 1st place, Na Da-Yea who made 60th place earned 104,147,398 won,

and 220th place Lee Ji-Young earned 1,560,000 won. What is more fortunate is that there are nearly 60 players with a prize of more than 100 million won. This is because it is generally believed that only about 100 million won will be enough to concentrate on golf without any cost burden. In the case of a man (KPGA), Kim Seung-Hyuk earned 631,779,810 won, while Kim Bong-Sup, 60th, earned 62,435,000 won. Kim Min-gyun, the last 184th player, earned 909,090 won. The difference in the amount of money between men and women is directly linked to the difference in popularity. Women's Golf (KLPGA) can see a lot of galleries and live broadcasts at the competition, but men's golf (KPGA) is difficult. Therefore, KPGA will have to find a way to do with gallery and broadcasting. By the way, this is much more than the case of American men and women golf tournaments. The men's professional (PGA) receives 18% of the prize money and the female professional (LPGA) receives the prize money of 15% [1, 5]. In other words, domestic tour pros win more prize money than American golf tour. As a result, foreign famous professional athletes often attend the games held domestically. At the 2017 Hanhwa Classic, there are a lot of players currently playing in Japan and the United States. However, this prize allocation structure should be improved urgently for lower group. The rest of the performance factors were consistent with previous studies. In other words, the average birdie, green in regulation, par save, par break and recovery are higher in order of @group (1 - 20th), ⓑgroup (21 - 40th) and ⓒgroup (41 - 60th) appear. Particularly, in comparison of @group (1 - 20th) and ⓑgroup (21 - 40th), there was a more difference in comparison of ⓑgroup (21 - 40th) and ⓒgroup (41 - 60th). For example, in par save, the difference between @group (1 - 20th) and ⓑgroup (21 - 40th) is 87.03 and 83.21 with 3.82, while ⓑgroup (21 - 40th) and ⓒgroup 60th), there is a difference of 0.02 between 83.21 and 83.19, respectively. In recovery, @group (1 - 20th) and ⓑgroup (21 - 40th) are 59.93 and 56.37 with 3.56, while ⓑgroup (21 - 40th) and ⓒgroup (41 - 60th) are 56.37 and 56.64 with 0.27, respectively.

5. Conclusion

Some golfers say they want to concentrate on golf without any worries in the interview. Most golfers have to take lessons for students or the public to survive. Therefore, it is considered that the distribution method in which the current prize allocation is favored to the upper group should be improved to be distributed evenly to the lower group. If they are evenly distributed to the subgroups, their self-esteem and performance will also improve. Among the golf performance factors, the scoring average and the putting average showed the best result in the middle group (ⓑgroup (21 - 40th), which means that in the 3rd and 4th rounds after the 1st and 2nd round cut passes, It seems to be the result of an aggressive approach and bold putting into the upper level entry. This is because the prize money ranking of professional players is determined by the prize money. Therefore, in order to earn more prizes, it is more advantageous to raise the prize ranking by more getting birdies than the average middle class player steadily entering the upper level and recording a good score in a particular competition and winning in the 5th place. Therefore, it is expected that the players should play with aggressive play rather than a stable score. The rest of the athletic performances were the same in the upper group as in the previous study, and showed similar performance between the middle and lower groups. Therefore, it seems to be quite useful to play boldly in psychological stability, as a way to survive in competition between players with similar competencies. In conclusion, physical performance is also important in the exercise of golf, but it is sometimes considered to be a very important exercise that is bold and calm.

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