

# The Path to Success on the LPGA Tour ---- Identifying the Three Important Dimensions in Stroke Play

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## Introduction

Data from the 2014-2018 LPGA tours are used to obtain the three dimensions of stroke play. These are:

- i) Putts per greens hit in regulation (PGHIR).
- ii) Putts per greens missed in regulation (PGMIR).
- iii) Non-putting Strokes per hole (NPTSTRPRHL).

The three variables are standardized for each year (Mean = 0; Std. Dev. = 1). This facilitates comparison to the rest of the field.

## Methodology

1. PGHIR obtained from LPGA site.
2. PGMIR = Total Putts made – PGHIR.
3. NPTSTRPRHL = Total strokes – Total Putts made, divided by holes. This variable has a high negative correlation with greens hit in regulation (> 0.9400).

These variables are used to predict success (money earned per event). Changes in aggregate scores are used to find rising stars.

## Findings

### A. Regression Results

Dependent Variable: Money Earned per Event

Variable	DF	Parameter Estimate	T Stat	Prob. >  t	Std. Beta
Intercept	1	749662	36.46	< 0.0001	0
PGHIR	1	- 194492	- 14.90	< 0.0001	- 0.4080
PGMIR	1	- 51242	- 5.71	< 0.0001	- 0.1512
NPTSTRPRHL	1	- 141597	- 18.48	< 0.0001	- 0.4392

N = 777 (Years 2014 through 2018); R Square: 0.6410; Adj. R Square: 0.6396  
F Statistic: 459.99 (df = 3, 776); Prob. > F : < 0.0001.

### B. Spearman Rank Correlation Coefficients

Between the Standardized Version of two variables: Aggregate of three measures (PGHIR, PGMIR, NPTSTRPRHL) and Money earned per event

Year	Spearman Rank Correlation Coefficient	Prob. >  r	N
2014	- 0.89602	< 0.0001	151
2015	- 0.91190	< 0.0001	144
2016	- 0.94293	< 0.0001	152
2017	- 0.91287	< 0.0001	151
2018	- 0.90843	< 0.0001	157

## Top 3 Movers

Top 3 golfers each year are chosen on the basis of improvements in the aggregate of three measures:

2015: Julieta Granada, Lexi Thompson\* and Jenny Shin.

2016: In Gee Chun\*, Jodi Shadoff and Ariya Jutanugarn\*.

2017: Pavarisa Yoktuan, Jane Park And Michelle Wie\*.

2018: Annie Park, Pannarat Thanapolb and Hannah Green.

\* Denotes players who also ranked within the top 3 in annual changes in earnings per event.

## Future Research

A comparison of clusters based on scores on 3 variables with clusters based on tournament performance and earnings per event.

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