FOLLOW THE LEADER: ARE WE TEACHING OUR STUDENTS TO BE THINKERS OR FOLLOWERS?

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ABSTRACT

Wellington, Faria and Hutchinson state that "Academics that have used business simulations games in their courses have noted that competing teams will generally attempt to follow the leader in regards to strategic decisions." (344, 2008). While many might agree with this observation, it remains to be seen whether it is actually accurate. The present study attempts to investigate precisely that issue. Do student teams generally use a follow-the-leader (FtL) strategy and if so, do they use it consistently during the rounds (or play) of the simulation and do they use it for key decisions? The results from the present study indicate that indeed many teams do use the FtL strategy. The implications of this are discussed in the paper as well as some suggestions for continuing research in the area. The research questions are not trivial as an extensive use of a FtL strategy challenges the notion of student learning in using a business simulation. "We're following the leader, the leader, the leader, we're following the leader, wherever he may go! Wherever he may go… (Chorus--from Peter Pan)

INTRODUCTION

Robert Fulghum, in his widely-read book, *All I Really Need To Know I Learned in Kindergarten*, advances the charming notion that in many situations most of us would be well-suited if we simply paid attention to what we had learned in kindergarten and proceeded with that as a basis. Perhaps, Fulghum oversimplifies the world, but it might be instructive to take Fulghum's basic premise and extend it to the performance of a competitive team that finds itself engaged in the typical environment of competition in a college business course utilizing a business simulation. To that point it might be particularly informative to observe the behavior of teams that find themselves in a position other than first place. Extending and taking liberties Fulghum's dictum, it would not be unexpected if the team's that found themselves below first place to adopt a follow-the-leader (FtL) strategy. This research endeavor focuses on that issue. Specifically, is the performance of the teams that are not in first place in the play of a standard business simulation simply reactive to the performance of the industry leaders? Put in other words, do teams who find themselves in other than first place demonstrate FtL behaviors? To extend the metaphor, are the runner-up teams in a competitive business simulation inclined to learn no more than what they would have in kindergarten, and simply follow the leader?

LITERATURE REVIEW

In 1995, Green and Faria reported the research on good strategies. In their article they indicate "many simulation administrators have witnessed the use of "copycat" strategies." They describe the "copycat" strategy as one in which the strategies of the more successful competitors in a simulation play are adopted by the trailing teams. They also observe that "while the leading competitors are presumably most in tune with the marketplace, 'copycat' companies are always lagging at least one period behind the successful companies they are emulating" (34). Although they open the discussion of "copycat" strategies, also called FtL strategies, the primary purpose of their research was focused whether successful strategies in one industry also would be successful in another, but similar industry, even if the competition was different. They do suggest that the phenomenon of copycat strategies might be the topic of future research.

Patz (2001) indicates that total enterprise simulations have a built-in bias such that the dominant teams at the end of a competition have established and maintained an early lead. Goosen (2002) extrapolated from Patz's work that "no team…is likely to catch the team that reaches the top spot first unless a follow-the-leader strategy is adopted," (309). Goosen goes on to cynically observe, "if a follow-the-leader strategy is required to close the performance gap, then there is no reason to assume that a closure of the performance gap indicates that learning has taken place," (309). He further states "a follow-the-leader strate-

gy is unlikely to generate the type of simulation involvement that results in learning, (309).

Given the direct challenge of Goosen's conclusions about the lack of learning which the FtL strategies might have on simulation pedagogy, it is surprising that a number of studies were not begun by ABSEL researchers. Unfortunately, the study of FtL behavior lays fallow in the ABSEL literature for a number of years.

In 2007, Michlich simply suggests a FtL strategy as one of several strategy choices. In 2009, Michlich presents the FtL strategy as one of a list of eleven possible strategies. Goosen employs a FtL behavior to speculate about the hypothetical results in his research about price strategies (2008) and considers the FtL strategy again (2009) to study the theoretical impact of such strategy, in terms of hypothetical advertising strategies. Wellington, Faria, and Hutchinson (2008) is a reprise and extension of the earlier work down by Green and Faria (1995), simply refer the tendency of teams in simulation play to employ a FtL strategy.

So, there has been limited theoretical discussion of the existence and impact of Ftl strategies in simulation play and no empirical research focused exclusively on the FtL behavior in the play of computerized simulations by students. Surprisingly, an academic literature search revealed little in terms of research studies on FtL strategies. In terms of actual marketplace practice, one wonders if firms consider the use a FtL strategy as a one of their strategic choices--and if so, why? It could well be that firms use such a strategy or parts of it, but may not want to attest publicly to this option.

As a course of a research study, there seem to be two major questions. First, do teams utilize a FtL strategy and second, why do they choose this strategy? This study focuses primarily on the first question.

METHODOLOGY

The authors have used the Decide Simulation (Pray and Strang, 1980) for several years in a business strategy course and have the recorded results for the play for seven different classes over the course of the years, 2008 to 2011. Decide is a generalized business simulation in which competing teams make key decisions in several of the key areas of management: marketing, production, and finance. Competing teams have the opportunity to determine some of the decisions made by their competitors, most particularly the key marketing decisions of product price, dollars spent on promotion, and dollars spent on research and development. Competitors have significantly less ability to determine the other decisions of their competitors (i.e. production and finance related decisions). Given the availability of the decisions made by the players, the authors decided to review the results of the play for each of the seven semester-long "plays" or rounds of the simulation to see if a pattern of FtL could be discerned. For the sake of clarity, the sev-

en successive class results will be labeled Game Play A, Game Play B, Game Play C, Game Play D, Game Play E, Game Play F, and Game Play G. The authors felt that if students were inclined to adapt a FtL strategy in their play, it would most likely be used by the competitors in their pricing decision. The player manual for Decide indicates that of the three marketing mix decisions that the players make as they play the game, price has the most pronounced impact on potential sales, followed by promotion, which is followed by research and development. So, the authors considered the price decision initially. Table 1 presents the price decisions for the transition between period 1 and period 2 and between period 2 and period 3 of the play of Game Play A.

In Game Play A, five of the trailing teams adopted follow-the-leader strategies as the formulated their decisions for the second period of play. The remaining trailing team, which incidentally found itself in last place at the end of period one, apparently adopted a no change (status quo) pricing policy for period 2. Without seeming to be too harsh, it is not too infrequent in the play of simulations to have a team that can best be described as *clueless*. It is tempting to speculate that team 4, the second from last place team at the end of one period of play, could fall into the clueless category. As one considers transition from period 2 to period 3, there are several notable results. The first observation is that team number 2 remained in first place for both periods. Only one team seemed to adopt a FtL strategy in making period 3 decisions, while a second may have adopted the strategy but overshot the industry leader's former price. Three teams apparently adopted a status quo strategy, one team moved toward the industry leader's price but overshot the mark, and team 3 (the hapless team in last place) decided to set a price that moved away from the industry leader's price. The most notable observation that can be taken from all of this that only one pricing decision of the 12 made by trailing teams moved in opposition to the price strategy of the industry leader. Exactly half of the decisions could be viewed as movement toward the industry leader (i.e., FtL), while the remainder were either status quo or overzealous (i.e. moving toward but overshooting the leader's price) pricing decisions.

The results for Game Plan B are presented in Table 2.

In Game Play B there were five firms in the industry. During period 2 of the play three of the trailing teams adopted a FtL strategy and one firm adopted a status quo strategy. During period 3, again, three teams adopted a FtL strategy and one team adopted a strategy in which they moved away from the industry leader. Unlike Game Play A for which the same team was the industry leader for the two periods of play, for Game Play B the lead team changed for the two periods. It may be worth noting that the team that assumed the lead at the end of period 2 had been in fourth place (second from last) at the end of period 1, and had adopted a pronounced FtL strategy by dropping its price by $3.00. To put the $3.00 price change into perspective, it was the largest price change by any team in Game Play B

Table 1
Game Play A

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	4		30.90	31.05	F
2	1	31.50	31.50	31.65	NA
3	7		35.00	31.00	F
4	6		35.00	35.00	S
5	2		29.99	30.49	F
6	5		29.50	30.00	F
7	3		29.50	30.99	F

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	5		31.05	31.05	S
2	1	31.65	31.65	31.95	NA
3	7		31.00	30.00	A
4	6		35.00	35.00	S
5	2		30.49	30.99	F
6	4		30.00	32.00	T
7	3		30.99	30.99	S

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

for the two periods of play (i.e. periods 2 and 3). In Game Play B, 75% of the decisions made by trailing teams conformed to a FtL price strategy.

The results for Game Plays C, D, E, F and G are presented in Tables 3 through 7, respectively. In Game Play C, 50% of the price decisions conform to a FtL strategy. The percentage of decisions for Game Plays D, E, F, and G are 62.5%, 30%, 20%, and 71.%.

Table 8 presents behaviors for Game Plays A through G for periods 2 and 3.

One can note that overall for seven different plays of a simulation in seven different classes, 51% of the price decisions could be viewed as FtL, while 8% could be described as a price decision pursuing, but overshooting the leader, and 24% were status quo decisions. Only 17% of all the price decisions made by trailing teams represented movement in the opposite direction of the industry leader.

The authors did look for evidence of FtL behavior past the third period of play. This analysis was a little problematic because the game administrators had played the games for differing numbers of periods during their actual class-room play. For example, in Game Plays C and D, the administrators only played the game for four periods while for Game Play A the game was played for seven periods. Regardless, to the extent that any pattern emerged, in general, the percentage of teams that exhibited FtL behavior appeared to decline as more periods of play occurred. There are several plausible explanations for that pattern and, as a consequence the result of less FtL behavior as the games progressed through several periods was not surprising or unexpected. Perhaps, some of the trailing teams had given up trying to formulate a price strategy to move up in the rankings and simply left the price unchanged, or perhaps some of the trailing teams had employed a FtL strategy early in the game, but due to lack of success with the strategy had forsaken the strategy. Suffice it to say, FtL strategies for price were more pronounced in the early periods of play than the latter.

In the play of the DECIDE Game, a second element of a firm's marketing mix strategy is the firm's expenditure on promotion. The authors felt that if a team were inclined to adopt a FtL strategy the team would more likely focus on

Table 2
Game Play B

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	4		29.50	26.50	F
2	3		27.49	27.49	S
3	5		29.50	27.50	F
4	2		27.99	26.49	F
5	1	27.25	27.25	27.00	NA

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	1	26.50	26.50	26.37	NA
2	3		27.49	26.99	F
3	5		27.50	26.75	F
4	2		26.49	25.40	A
5	4		27.00	25.75	F

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

the price decision than the promotion decision. Since the data were readily available the authors decided to take a less extensive look for patterns suggesting a FtL strategy in terms of promotion decisions. To limit the focus the authors decided to consider only the transition between period 1 and 2.

Table 9 presents the behaviors exhibited by the trailing teams for the transition from period 1 to period 2 for the seven Game Plays (i.e. Game Plays A through G).

The divergence of behaviors with respect to the incidence of FtL strategies from game play to game play (literally from class to class) is more pronounced for the promotion than for price. For example, in Game Play C, all of the trailing teams exhibited FtL behavior in establishing their promotion strategy, while in Game Play E, none of the teams exhibited FtL behavior with respect to promotion decisions. It is noteworthy that overall for all seven game plays 53% of the promotion decisions could be described as FtL. The comparable number for FtL strategies for the price decision for period 2 decisions was 58%, while as was reported above, the follow the leader for price for periods 2 and 2 was 51%.

DISCUSSION

An interesting question then is, do student teams tacitly know that a FtL strategy is better than some other strategy or no strategy? As Goosen has demonstrated in his experimental testing and analysis of various advertising strategies, "The Follow the Leader Strategy is more likely than not to result in a first place finish given that the simulation is basically simple" (74, 2009). He goes on to suggest that an experiment should be set up whereby certain selected student teams agree to use only an FtL strategy.

A second question is implicit and is raised by Wellington, et. al., when they indicate that the FtL or 'copycat' strategy "are at least one period behind in their strategic adjustments." Here, the question is: Do students who use the FtL strategy believe that this is the most effective strategy for the first couple of moves (a sort of watch what the top performer is doing) and then they can try to hone that strategy and eventually move into first place? Finally, do student know about the FtL strategy and/or do they know how to use if effectively? These are important questions to

Table 3

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	3		29.99	30.99	A
2	6		23.99	27.99	F
3	1	30.50	30.50	30.50	NA
4	4		30.99	30.99	S
5	2		29.99	29.98	F
6	5		30.99	30.99	S

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	3		30.99	30.99	S
2	5		27.99	28.49	F
3	1	30.50	30.50	30.99	NA
4	4		30.99	31.50	A
5	2		29.98	30.48	F
6	6		30.99	30.95	F

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

Table 4
Game Play D

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	1	26	26.00	26.25	NA
2	5		31.00	28.50	F
3	3		29.50	29.50	S
4	2		28.50	29.00	A
5	4		29.53	27.00	F

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	1	26.50	26.50	26.37	NA
2	3		27.49	26.99	F
3	5		27.50	26.75	F
4	2		26.49	25.40	A
5	4		27.00	25.75	F

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

Table 5
Game Play E

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	5		28.50	24.00	T
2	6		32.00	42.00	A
3	1	25.00	25.00	25.00	NA
4	2		24.50	24.50	S
5	3		25.00	24.00	A
6	4		28.50	28.00	F

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	3		24.00	25.00	F
2	6		42.00	36.00	F
3	1	25.00	25.00	25.00	NA
4	5		24.50	25.99	T
5	4		24.00	24.00	S
6	2		28.00	28.00	S

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

Table 6
Game Play F

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	2		26.50	27.50	F
2	1	27.50	27.50	26.75	NA
3	4		24.00	24.00	S
4	3		30.00	30.00	S
5	5		28.50	27.90	F
6	6		26.00	26.00	S

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	3		27.50	27.50	S
2	2		26.75	26.50	A
3	4		24.00	25.00	T
4	5		30.00	45.00	A
5	1	27.90	27.90	28.25	NA
6	6		26.00	23.50	A

Legend for behaviors:

        F = follow the leader's price

        T = move toward and beyond leader's price

        S = status quo (i.e. no price change)

        A = set a price away from leader's price

        NA = not applicable since industry leader

Table 7
Game Play G

Price Decisions for Periods 1 and 2

Team number	Ranking at end of period 1	Price of first place team during period 1	Prices for each team, respectively for period 1	Prices for each team, respectively for period 2	Behaviors
1	5		27.75	29.25	F
2	8		28.49	28.99	F
3	7		31.99	28.99	T
4	4		26.95	29.95	F
5	2		28.50	28.75	F
6	6		26.00	27.50	F
7	3		26.50	26.75	F
8	1	30.51	30.51	30.51	NA

Price Decisions for Periods 2 and 3

Team number	Ranking at end of period 2	Price of first place team during period 2	Prices for each team, respectively for period 2	Prices for each team, respectively for period 3	Behaviors
1	5		29.25	28.99	A
2	8		28.99	29.99	F
3	6		28.99	29.99	F
4	2		29.95	30.99	T
5	3		28.75	28.75	S
6	7		27.50	28.25	F
7	4		26.75	28.50	F
8	1	30.51	30.51	30.51	NA

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

Table 8
Behaviors Exhibited for Game Plays A through G during periods 2 and 3

	F	T	S	A	NA
A	6	1	4	1	2
B	6	0	1	1	2
C	5	0	3	2	2
D	5	0	1	2	2
E	3	2	3	2	2
F	2	1	4	3	2
G	10	2	1	1	2
Total	37	6	17	12	
%	51	8	24	17	

Legend for behaviors:

F = follow the leader's price

T = move toward and beyond leader's price

S = status quo (i.e. no price change)

A = set a price away from leader's price

NA = not applicable since industry leader

Table 9
Promotion behaviors exhibited for Game Plays A through G during period 2

	F	T	S	A	NA
A	5	0	1	0	1
B	1	0	1	2	1
C	5	0	0	0	1
D	1	0	0	3	1
E	0	0	2	4	1
F	1	0	2	1	1
G	6	0	0	1	1
Total	19	0	6	11	
%	53	0	17	31	

Legend for behaviors:

F = follow the leader's promotion decision

T = move toward and beyond leader's promotion decision

S = status quo (i.e. no change in promotion)

A = set a promotion decision away from leader's promotion

NA = not applicable since industry leader

be asked if one is to have a sense of what students are learning from using simulations.

CONCLUSIONS

While this study is preliminary, it does contain some interesting findings about the FtL strategy in simulation play. First, in terms of price decisions, more than half the decisions teams make seem to be based, at least to some extent, upon a FtL strategy. In many simulations, it is often that the price decision is a key indicator of simulation success as the simulation progresses.

Second, the FtL strategy appears to be less significant as the game progresses, although this may be a result of teams "giving up" if they begin to think that they will not be able to make significant progress toward achieving a first place position. Third, a FtL strategy also exists for teams in terms of the promotion decisions, although this is less pronounced. Fourth, it appears that teams are slightly more likely to utilize a FtL strategy to make price decisions instead of promotion decisions. One might hypothesize that teams believe that the promotion decision has less bearing on the overall success of the simulation (at least, when compared to the price decision).

Despite these finding, the authors acknowledge the preliminary nature of this research. The database is small and limited to using one simulation. Further, there is obviously a challenge for researchers studying the pervasiveness of FtL strategies due limited degrees of freedom in the data. It took seven class experiences to generate the data for this study. The authors feel that a meta-analysis involving teams of researchers in different universities would shed more light on this issue. Another issue is whether teams using a FtL strategy do so based on competitor information. That is, do the teams wait to see what the top team is doing and then mimic (the 'copycat' strategy) that team. To focus on this issue the researcher would want to first know if teams are gathering competitor information and then consider what they are doing with that information.

If one accepts Goosen's observation that teams using the FtL strategy are simply not "learning," the time seems to be right for an empirical study focusing on the existence, use and rationale (or lack thereof) by students of Ftl behavior in simulation play. If we are doing little more in our use of simulations than to train our students to use the FtL strategy, how much credence can we put into the statement that students are "learning" as a result of using business simulations? Thus, a second—or perhaps a series of studies—is in order to determine the extent to which teams use the Ftl strategy and why.

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