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You're Fired! The Cause and Effect of Managerial Turnover on Team Performance: A Study of Major League Baseball

Beth Talentowski, '10
Illinois Wesleyan University

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Abstract

This study aims at answering two questions: Why does a manager get fired and what impact does dismissing the field manager of a baseball team have on subsequent team performance? It is hypothesized that a manager will be fired when a team is performing poorly. If this is the case, a new manager should improve performance; however, the fans and chief executives do not recognize the other potential factors that lead to meager performance. Is it realistic to believe that getting rid of a manager will automatically lead to increased winning percentages in a team? The decision to focus on management within sports was made based on the fact that sports foster an environment in which there is a huge cultural, social and economic impact on today's society (Audas et al., 1999). In one-way or another, a majority of the population can relate to the sporting world. In addition, team performance is easily measured in baseball making the data needed for this study accessible.

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I. Introduction

The basic structure of life is that of a ladder and many aspire for the top. Those stationed on the bottom rungs are determined to continue climbing and those at the top will work hard to stay there, but it is not always that easy. All corporations and organizations are based on a large hierarchical structure that separates ownership, power, control, and performance. This composition of power makes top management one of the most scrutinized positions in any organization from large firms to small nonprofit organizations to sporting clubs.

The manager, in sports in particular, is an extremely volatile position that is under constant evaluation by club owners and other officials in the front office. Managers are responsible for making the day-to-day decisions and ensuring the team performs well and gets results. They are subjected to the public eye as all actions taken and decisions made are widely known and analyzed, making them an easy target when things turn sour and performance slumps.

This study aims at answering two questions: Why does a manager get fired and what impact does dismissing the field manager of a baseball team have on subsequent team performance? It is hypothesized that a manager will be fired when a team is performing poorly. If this is the case, a new manager should improve performance; however, the fans and chief executives do not recognize the other potential factors that lead to meager performance. Is it realistic to believe that getting rid of a manager will automatically lead to increased winning percentages in a team? The decision to focus on management within sports was made based on the fact that sports foster an environment in which there is a huge cultural, social and economic impact on today's society (Audas et al., 1999). In one-way or another, a majority of the population can relate to the sporting world. In addition, team performance is easily measured in baseball making the data needed for this study accessible.

It is hypothesized that managers will be dismissed when a team is suffering from poor results. In regards to performance following the said change in management there are a number of competing theories and hypotheses. A reverse human capital theory states that a change in management will cause performance to suffer even more as there is no discernable difference in managerial abilities across current managers and the change simply disrupts the team even more. The human capital theory, on the other hand, hypothesizes that a change in management produces better results and an increase in performance due to the assumption that the new manager coming in is better equipped than the previous. Finally, the scapegoat theory hypothesizes that a change in management has no significant impact on team performance as the manager is fired as a scapegoat and not the true source of problems within the team.

II. Literature Review

There seems to be a general consensus with past research on the effect of performance on managerial turnover: when performance is bad, the manager goes. Managerial retention is highly contingent on firm performance. This relationship is evidenced in a study by Eitzen and Yetman (1972), in which finds that unsuccessful basketball teams experienced more coaching changes as coaches failed to produce a winner were replaced. Other research by Lieberson and O'Connoer (1972), Helmich (1977), and McEachern (1975) all discovered that chief executives at large firms were more likely to change when the firm was experiencing declining profits. The following study expands this research to include more data on sports organizations. Porter and Scully (1982) identified a basic "survival of the fittest" idea in their study in which a manager is responsible for transforming scarce resources into outputs, and failure to do so results in dismissal. They found that managerial skill contributes significantly to the production process through an analysis of managerial marginal revenue product (Maximaino 2006). These findings agree with the others above that suggest poor performance leads to managerial discharge, an idea which is consistent with the human capital theory.

There is not as much unanimous consensus when it comes to the changes in performance, or lack thereof, following a change in management. Grusky (1963, 1964) looked at professional baseball teams and found that managerial turnover was more likely to occur in teams that were doing poorly and once a new manager took over, performance suffered even more. This hypothesis is tested and supported by Carroll (1984) and Brown (1982), who studied newspaper publishers and football coaches, respectively. Both found that instead of improving performance by hiring a new person, it disrupted the flow and set things back even further.

On the contrary, Guest (1962) and Davis-Blake (1986) suggest a positive relationship between new management and performance. These hypotheses stem from the notion that there is a novelty effect that accompanies new management in which new and unique ideas lead to improved performance and the idea that the new management is simply more competent and knowledgeable than its successor.

Many other studies found middle ground results where there was no conclusive significant relationship between managerial succession and performance. In his population ecology theory, Aldrich (1979) claims that organizational performance is based solely on environmental factors, thereby ruling out any impact of internal management. Gamson and Scotch (1964) also conclude there is no significance between management firing and the resulting performance of a team. In terms other than sports, Boeker (1992) finds, in his study of the role of management in a corporation, that when a firm is performing poorly and has a powerful top executive, instead of stepping down or being replaced the high executive will dismiss top management instead as a scapegoat (Boeker, 1999).

In summary, the literature suggests that a manager will be fired when the team they manage fails to perform well. In addition, the literature provides a number of different views when focusing on the effect of dismissal. Some studies suggest a new manager has the ability to turn things around and improve a franchise, while others find that a new manager does nothing but complicate matters more. Due to the lack of consensus in previous literature, this paper is designed to determine which theory and which idea presented in past studies is most valid in professional baseball.

III. Theoretical Review

This paper is set up as a competing theories framework, with a human capital based theory competing with a scapegoating theory. A simple human capital theory is employed to assess productivity of a manager and the probability of turnover. The manager or coach is responsible for transforming the given inputs into wins (Fizel & D'Itri 1997). Essentially, each team is a production function in which certain playing inputs, such as skill, team cohesion and decision making, lead to an output, such as number of wins or ranking. This theory suggests that as long as a manager is utilizing all his inputs efficiently and effectively, the team will perform and he will retain his position. Dawson and Dobson (2002) looked into this idea as well and analyzed the variance among managers based on a human capital framework. Differences are evidenced in areas of shirking, ability and experience. In relation to a human capital model, the higher the ability and experience, the better the performance.

Another theory that explains team performance and branches from the human capital theory is the common-sense one-way causality theory, which focuses on the idea that the field manager of a baseball team is the prime influencer on the performance of his team. For this reason, when a team is not doing well, the manager is consequently fired. This theory supports the fact that the clubs

that have done the worst over the years are the same clubs that have changed their management most frequently. Hopefully by replacing the old manager, a new, more effective manager will take his place and lead the team to a more successful season. As Haveman (1993) found, succession improves performance by reducing conflict and enabling the organization to be more aware of the environmental demands (Haveman, 1993).

In response to the theories above, is it always the manager's fault when a team is not doing well? What about the players and the front office? Maybe teams with high turnover perform worse because the manager is not the issue and attention should be focused elsewhere. A number of conflicting theories attempt to explain this relationship between team performance and management, specifically managerial turnover. These theoretical notions include the idea that turnover leads to improved performance partially due to a novelty effect and in part based on the notion that the successor can avoid the errors his predecessor made. The hypothesis suggested by this human capital argument is that a team's win-loss record will improve with dismissal.

Another possibility that is also consistent with human capital theory is that the opposite will take place and the relationship between turnover and success is actually negative; the higher the turnover rates, the lower probability for success. A new manager will disrupt the team and lead to conflict (Grusky 1963). Haveman (1993) broaches this notion as well arguing that succession diminishes performance because it disrupts routines, interrupts command, and increases employee insecurity (Haveman, 1993). This theory suggests that management change disrupts productivity and hypothesizes a decrease in winning percentage.

Finally, there is the scapegoat theory. Unlike the preceding theories, the scapegoat theory suggests there is not a significant relationship between managerial effectiveness and performance, thus negating any perceived impact of succession on team quality (Gamson and Scotch 1964). In this case, managerial action is more a symbolic act than anything else (Haveman 1993). Forces external to a manager's control substantially effect organizational outcomes; therefore limiting a leader's impact on organizational performance. Decisions made by the field manager have little impact in the realm of the talent he is given to work with. For example, with a different manager, would the New York Yankees not perform as well regardless of the extreme talent throughout the team? Probably not. However, since the field manager is the most publicized official in a sports organization, when a team is not performing up to par, it is easy to get rid of the person making the day to day decisions, not only to focus the blame, but to appease the fans who are looking for some hope for change and improvement for their hometown team.

One way to show that it is not the effectiveness of the manager that determines success is the mere fact that managers that have been fired by one organization enjoy good perspective employment opportunities as coaches in other clubs. Although one manager may be slightly more effective than another, the variance among talent in managers is so small it is seemingly a constant (Gamson and Scotch 1964). Based on this information, often times it seems as if a change in management reflects an insignificant change in performance, not because of the turnover, but because the decision to hire the manager was made based on scapegoating and the real issues are not addressed. All teams experience a "slump" in performance at some point in the season and firing the field manager has become a "convenient" way to make adjustments in team dynamic even though real improvement needs to stem from long-term organizational decisions. The front office and players can blame the manager for responsibilities that may in actuality fall on their shoulders. Forces external to the leader's control that substantially affect an organization's outcome, thus limiting the manager's overall impact. The scapegoating theory suggests that management change has an insignificant effect on the team's win-loss record.

IV. Empirical Model and Data

This study uses a two-stage analysis; first to determine when or why managers are fired followed by a natural experiment in which winning percentages from teams that experienced mid-season changes in management will be analyzed in order to gauge any increases or decreases in performance. The 13 teams in the American League will be analyzed from 1998-2008. These years were chosen as they contain the most recent data and past studies have not focused on this era. Within these years a total of 30 management changes took place, 17 of which were within season changes. A probit regression will be used to analyze the following:

$$Manager\ Change = B1 + B2WP + B3CWP + B4Salary.$$

WP is the winning percentage in the year in question and CWP is the change in winning percentage from the year in question and the preceding year. For the change variable, the winning percentage from the year t-1 is subtracted from the winning percentage in year t. Therefore, a negative value signifies the winning percentage was greater in year t-1, thus

demonstrating a decline in performance over the two years and vice versa. It is necessary to include both winning percentage and the change in order to take into account teams that have had a slump in performance between the years and those teams that have continuously performed poorly. Teams with consistently poor results would have no significant change in winning percentage, but are still performing subpar, making them a strong candidate for change. Salary has been included to account for expectations. A team with a higher salary cap will have more money to spend on the top players; therefore increasing people's expectations for the season. With higher expectations there is a higher chance they will not be met, leading to disappointing results and the dismissal of the manager. This is a difficult variable to gauge as the reverse could potentially be true as well when expectations are removed from the equation. A higher salary, in general, translates to better players and more wins, decreasing the chance of dismissal. See Table 1 for variable information.

Table 1: Table of Variables

Name	Definition	Expected Sign
MC	Dummy Variable for management change. A value of 1 is yes, 0 is no.	Dependent Variable
WP	The teams winning percentage in year t.	Negative
CWP	The teams change in winning percentage from year t to year t-1 [t-(t-1)]	Negative
Salary	The teams available salary in year t.	Unknown

In the event a management change took place in between years, the change was attributed to the season before change. This is based on the assumption that the performance of the team during that season was subpar so a change was made before the start of the next season. A problem with this model is the time of turnover; within the season or outside of the season. For out of season turnover, factors such as trades and training can impact the performance of the players and team, therefore affecting the winning percentage but having little to do with management. This discrepancy can skew the results showing a favorable increase in performance from one manager to the next.

he first model incorporates all 30 management changes, but only the 18 observations that experienced in season change will be used in the second. To accurately determine the effect of the change itself on performance, a simple comparison of winning percentages before and after a management change took place in teams that experienced mid-season changes will be carried out. Winning percentages from before and after the change will be compared and analyzed to detect any significant improvement or decline in performance. By focusing on teams that changed managers within a single season, other outside factors will be controlled for. No factors, such as salary cap or team composition will have changed. The only factor that can have an impact on the team is the manager, thus any changes in performance can be attributed to the change in management. This first model will help lay the groundwork for determining the effect of a change on the team.

he data for this study comes from Major League Baseball's season statistics. Such websites include The Baseball Almanac and Baseball Reference where player, game, season, and coach statistics are kept dating back to when teams first emerged on the professional baseball scene. Information on manger change and winning percentages comes from the Baseball Almanac. The other variables are from The Encyclopedia of Baseball. Table 2shows the descriptive statistics.

Table 2: Descriptive Statistics

Variable	Observation	Min	Max	Mean	Std. Dev.
MC	154	.1818	.3870	0	1
WP	154	.5038	.0787	.265	.716
CWP	152	-.0005	.0728	-.257	.192
Salary	154	7.05e7	3.71e7	1.58e7	2.09e8

V. Results

The first model is a nonlinear estimation, a marginal effects probit regression, to evaluate the probability of the occurrence of the dependent variable, MC:

Manager Change=B1+B2WP+ B3CWP+B4Salary.

The coefficients can be interpreted as the estimated effect of a one unit change in the independent variable on the probability of a manager change. The results are shown in Table 3.

Table 3: Dprobit Regression

	dF/dX	Std. Err.	Z	P>z	95% CI
MC					
WP	-.79	.47	-1.66	0.096*	-1.70, .13
CWP	-.94	.47	-1.96	0.05**	-1.87, -.01
Salary	4.32e-10	9.26e-10	.47	0.64	-1.4e-9, 2.2e-9

N=154
r-square= .08
*denotes significance at the .1 level **denotes significance at the .05 level

After running the regression, all coefficients emerged with their expected sign. Both winning percentage and change in winning percentage were significant, while salary did not have a significant impact on managerial dismissal. This could be the case because the public may not be aware of a team's exact salary expenditure and therefore do not use it as a means of judging the performance of the team. The coefficient of -0.79 suggests that with a one percent increase in winning percentage, the probability of managerial dismissal decreases by 0.79 percent. Similarly, a one percent increase in change in winning percentage, meaning the team is performing better in the current year relative to the years before, translates to a decrease in chance of removal of 0.94 percent. These findings are consistent with the hypothesis that it is when performance suffers that managers have to worry about being let go.

Now that evidence shows why managers are fired, it is important to look at the effect of this action on team performance. First, the average winning percentage for teams that experienced mid-season change was computed and analyzed against teams that had no change. A comparison of means can be seen in Table 4.

Table 4: Comparison of Means

Variable	Overall Mean	Change in Manager	No Change in Manager
WP	.5038	.4334	.51
CWP	-.0005	-.0431	.01

Data for change, the winning percentage for a team that experiences a change in management, was collected only from teams that experience managerial turnover within a season. Data for no change was only collected from teams that experience no change in management, including a change between years. By doing this it is possible to look at change and no change as two separate entities. It is clear that mean winning percentage decreases in years there is an in season management change for a team. This finding suggests that the new manager did not improve the record for the team in that year. Looking at the table, it is clear there is a large difference in the means corresponding to a change in winning percentage between change in management and no change in management. The negative mean for change suggests that teams performed worse in the year of the change compared to the year before. This value also implies a decline in performance in the year of a management change.

More direct observation produces some unbalanced results. When looking at straight winning percentages for each manager in the season of change, 13 of the 17 observations showed an increase in winning percentage, while only four showed a decrease in winning percentage from the manager who started the season to the manager who finished the season. This statistic proposes an increase in performance on average of 0.05, or five percent. In a season that typically has 162 games, five percent translates to about 8 games, which in most cases is significant. The winning percentages for most teams tend to cluster around 0.500, or 50%. An extra eight games won could move a team up significantly in the standings, especially when the difference between the first and second place teams is usually only a few games. This finding is in accordance with the human capital theory in which the new manager was

better equipped than the previous and was able to help the team. However, the data also contained a few outliers, which skewed the mean upwards. In one case, the initial manager was only in his position for six games and did not win any of them. This caused the increase in winning percentage to be .355, much higher than normal. With this observation excluded, the average increase was only 0.03, or roughly five games. Although five games is still an improvement, it is not enough to drive a last place team into first. In addition, those teams whose performance suffered under new manager, on average, saw a decrease of 0.075 in their winning percentage. This value translates to 11 games which could set a team back significantly. See Table 5 for a numerical representation.

Table 5: Comparison of Winning Percentages

WP Manager 1	WP Manager 2	Change in WP
.476	.418	-.058
.420	.430	.010
.551	.395	-.156
.453	.467	.014
.384	.462	.078
.000	.355	.355
.348	.385	.037
.242	.294	.052
.577	.512	-.065
.347	.400	.053
.286	.392	.106
.383	.655	.272
.393	.463	.070
.423	.400	-.023
.473	.580	.107
.385	.389	.004
.294	.384	.090

The table above shows the winning percentage of each team that experienced a management change under both managers. A negative value for change in WP shows a decline in performance with the new manager. By looking at the table it is clear that performance increased on more occasions with a new manager. However, closer analysis shows that teams that did better won an average of five more games, while those who suffered lost an average of 11 more games under new management. This varied data makes it difficult to ascertain if the impact of a new manager is positive or negative. There is not enough confidence in either direction, showing that a change in management has no overall, consistent, impact on team performance. A team may win more or lose more games under new supervision, but it is not significant enough to state that a manager has certain, concrete effects on team performance. Although not proven, these findings open up the possibility of the scapegoat theory.

VI. Conclusion

Based on the results of the multiple regressions and analyses described above, it is clear that on average a manager is fired when his team is performing poorly. It is not as clear; however, what the impact of this change is on performance. The average comparison of mean winning percentages across teams that experienced a within season change compared to those who completed a whole season with one manager implies that a new manager is ineffective in boosting winning percentage in the year they took over. On the other hand, when comparing the winning percentage of a new manager to its predecessor, it seems as if the manager is able to increase performance, even if only a few games. Although this data shows more teams saw improved performance, those who suffered did so by a much larger margin than those who saw increases in winning percentage. In order to fully interpret this finding, it is imperative to determine what number of extra wins is significant.

Overall, the change in winning percentage, whether positive of negative, is seemingly inconsequential showing that a change in management has no significant impact on team performance. Without knowing the inner workings of a baseball organization it is impossible to know the exact reason someone was let go and therefore assume an act of scapegoating; however, this study shows that there is indeed a possibility this theory is correct

given the lack of substantial improvement in a team once a new manager replaces the "problematic" one.

To expand on this idea in the future and improve upon this research, future research should consider, the winning percentage in the seasons following dismissal seasons Although this brings in some confounding factors, it would be interesting to see how the new manager does over time and how performance changes. It is entirely possible that a team performs well initially with the new manager due to a novelty effect, but after some time the same unsolved problems emerge and performance once again begins to slump.

It would also be beneficial to look at other factors that influence team performance. Initially a third model was under consideration to assess which variable has the greatest impact on winning percentage. The additional variables under consideration are variables that are out of the manager's control yet are vital aspects of a sporting organization, such as salary cap, draft picks, slugging percentage, etc. The human capital theory suggests that proper use of inputs is enough for success, but what if the inputs are sub par? If the scapegoating hypothesis is correct, the other factors would be found to be stronger than management, proving that in times of distress and poor play managers are let go due to scapegoating. The problem with this model, given the time constraints, is the inability to determine a measure for management. The MC variable used previously could not be used in this case because it was not the change in management under consideration, but the effect of the manager in general.

Another important variable that could add considerably to this study is a measurement of managerial effectiveness. It has been said that there is a very small variance between managerial abilities, but the ability to account for these difference could impact the results substantially.

Many implications arise from this research for teams, managers, and franchises. It is clear that a manager is fired when a team is performing poorly, but a new manager is not necessarily capable of fixing this. It is unreasonable to continuously replace manager after manager until a suitable one is found. The baseball industry as a whole needs to start exploring other options. Different trainers and training techniques can be brought in and sport psychologists can help improve team morale when play is suffering. Multiple fires and hires are financially straining on any organization. Finding out root causes for failure can prove to me cost effective in the long run. The ideas presented in this paper can also be generalized to businesses and corporations. By implementing new practices and exploring the causes of problems, businesses can save money and better reach their goals.

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