Performance Evaluation of Teams in Chinese Professional Baseball League

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ABSTRACT

In this article, a performance evaluation of the Chinese Professional Baseball League (CPBL) was conducted from a human resources (HR) perspective. Two important aspects were included: (1) a comprehensive evaluation of the competition performance of the professional baseball teams in international games and regular season games; and (2) the data envelopment analysis (DEA) and “two-stage” methodologies, which were employed to process truncated data to resolve the factors that affect the efficiency of the decision-making unit (DMU). By applying DEA and truncated regression analysis with bootstrapping, the performances of CPBL teams in games of different intensities were investigated. The number of foreign coaches and native players both were the key factors to affect the competitive efficiency of CPBL teams, and the Uni President 7-ELEVEN Lions had the best performance efficiency team. This interdisciplinary investigation provided the most appropriate references and recommendations for professional baseball teams on HR management so that baseball fans’ expectations are met.

KEYWORDS

Asia Series, Bootstrapping, Foreign Coaches, Native Baseball Players, Truncated Regression

INTRODUCTION

Baseball in Taiwan

Baseball is one of the most popular sports in Taiwan; indeed, to call it the national sport would not be an exaggeration, judging from its popularity. The performance of the national team in international competitions directly affects the prosperity of grassroots baseball. However, in recent international competitions, the performance of the Chinese Taipei national baseball team has not been satisfactory, and to date, the professional baseball team, which represents the highest level in the nation in the sport, has not won the Asia Series championship, which represents the highest level of Asian baseball, leaving a large gap in people’s expectations. Also, around the international competitions, the “Chinese Taipei” is the name for the Republic of China (ROC), commonly known as Taiwan, designated in the Nagoya Resolution whereby the ROC and the People’s Republic of China recognize each other when it comes to the activities of the International Olympic Committee. The ROC participates under
this name in various international organizations and events, including the Olympics and Paralympics, Asian Games and Asian Para Games, Universiade, FIFA World Cup, Miss Universe, Overwatch World Cup 2017 and the World Health Organization (Chinese Taipei, 2017).

To revitalize the sport, the former Sports Commission of the Executive Yuan (currently the Sports Department of the Ministry of Education) proposed the “General scheme of baseball sport revitalization” in 2010-2014 (Executive Yuan, 2010) under the close watch of the President and the Executive Yuan, with the high expectations of the entire nation. The scheme advanced a comprehensive training system for the bottom-up development of the sport tailored to Taiwan’s baseball because only after grassroots efforts are promoted and implemented can the training of baseball talent and competitive strength be fostered to lay a solid foundation for reviving the “baseball kingdom”. Lin, Tung, Chen, and Chen (2011) have used decision-making science and the scientific concept of performance assessment to construct a model for the screening and training of pitchers for the Chinese Taipei national baseball team while investigating the performance of the players to provide effective implications and correct rankings for the Chinese Taipei Baseball Association (CTBA) and the Chinese Professional Baseball League (CPBL), which serve as the task force of the Chinese Taipei national baseball team. Thus, the present study investigates whether the actual competition performance of the professional baseball teams in regular season games, the playoffs, and mega events has met the expectations of baseball fans and has been recognized. Only by implementing scientific management to elevate the competition performance and the overall future development of baseball is there some positive meaning.

History of Asia Series

The impact of the development and trend of mega sporting events is great and far-reaching, and it has attracted much international attention. In general, the influence can be divided into economic influence and non-economic influence. Sponsoring mega sporting events has wide and diverse benefits, including political, economic, social, cultural, leisure and entertainment, and tourism benefits. Kim and Walker (2012) focus on Super Bowl XLIII to discuss the impact of mega sporting events on shaping the image and the development strategies of a city or a region from the perspective of sports. International sporting events such as the Olympic Games, the FIFA World Cup, and the Commonwealth Games have become important factors that affect the urban tourism industry and tourism products from the tourist perspective (Minnaert, 2012). From the perspective of transportation or the geographical region, a city’s infrastructure development has become one of the most important aspects of the city when under consideration as a host (Horne, & Manzenreiter, 2006; Malhado, Araujo, & Ladle, 2013). In addition, from the perspective of the economical scale of the sporting event, smaller international sporting events, e.g., the Winter Olympics, the Rugby World Cup, the Cricket World Cup, and the British / Irish Lions Tour, often attract relatively less attention, but their importance is still indispensable (Fourie & Santana-Gallego, 2011).

The international mega event most attended by the CPBL is the Asia Series, which is the official international competition of the baseball league in each Asian country. Its first tournament was held in the Tokyo Dome baseball stadium on November 10, 2005, with the participation of the respective single professional championship team from the Republic of China (Taiwan), Japan, and South Korea professional baseball leagues and the national team of China, consisting of members of the first team (from 4th Asia Series on, with the participation of the championship team of China league). First, single round robin preliminaries were held, from which the top two teams advanced to the final for the title of “Asia’s No. 1” team. In 2009, the tournament was skipped (replaced by the Japan-Korea Baseball Championship Match in Japan in 2009). In 2010, the tournament was again cancelled because the Asian Games were also being held, and it was decided that the 2011 Asia Series would be held in Taiwan (in 2011, given that Japan continued to sponsor the Japan-Korea Baseball Championship Match in 2010, Taiwan also decided to hold the Taiwan-Korea Baseball Championship Match), which represented the first Asia Series that was hosted outside Japan. However, because the China
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