Abstract
This study clarifies the relationship between the success factors of the management of the professional sports team based on data and interviews from the viewpoint of business administration and economics, the relation between economic support of local governments and the economic effect to the area. Specifically, this study focuses on the professional baseball team Tohoku Rakuten Golden Eagles based in Sendai City, Miyagi prefecture, the relationship between the success factors of the management of the community-based professional sports team and the economic support of local governments economic effects are analysed. As a result of the analysis, this study finds that lending the stadium at an extremely affordable price and stadium management right from Miyagi prefecture and the CRM via IT technology lead to Rakuten baseball team’s success. It also became clear that the success of the team has produced significant economic effects in the area.

1. Introduction
In recent years, studies have been conducted on the relation between professional sports teams that are closely embedded in the community and their contribution to the local economies. However, there have been very few studies from the viewpoint of business science and economics regarding the relation between the success factors for the management of local sports teams and local governments’ financial support, as well as sports teams’ economic impact on the region. Companies and local governments often do not publish data, and little research based on evidence has been carried out.

The purpose of this study is to clarify the relation between the success factors for the management of professional sports teams and local governments’ financial support, as well as sports teams’ economic impact on the region, by referencing data and interviews from the viewpoint of business science and economics. This study focuses on the professional baseball team Tohoku Rakuten Golden Eagles based in Sendai city, Miyagi Prefecture, and analyses the relation between the success factors for the management of this particular sports team and the local government’s financial support, as well as the team’s economic impact on the region.

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The following three research questions were explored in this study.

RQ1: What are the success factors involving the management of the Tohoku Rakuten Golden Eagles?

RQ2: What kind of support have the Tohoku Rakuten Golden Eagles been receiving from the local government, and what was the impact of such support?

RQ3: What has been the economic effect of the Tohoku Rakuten Golden Eagles on Miyagi Prefecture?

We believe that the results of this study will clarify the relation among the success factors of a professional sports team, the support from the local government and the resulting economic effect. For this reason, this study should help the owners of community-based professional sports teams in framing their management strategy and local governments in making their policy decisions.

This paper is structured as follows. Section 2 reviews previous studies. Section 3 describes the data used in this study. Section 4 discusses the research questions. Section 5 provides the summary.

2. Previous Studies

This section summarises the previous studies by mainly focusing on studies on the management of professional sports teams and their impact on the local economy. The characteristics of management of a professional baseball team have been comprehensively investigated by Szymanski and Zimbalist (2005). They state that baseball has not been popular internationally because it was developed with the goal of attaining reclusive commercial success; however, since it is operated in an uncontrolled monopolistic market, the system makes it easier for the teams to increase their profit. About the regional effect of sports teams, Johnson, Groothuis and Whitehead (2001) have studied the Pittsburgh Penguins of the National Hockey League and analysed the data on the value of public goods produced by major league sports teams. Johnson et al. (2001) state that professional sports teams can produce public goods that are widely consumed, such as the pride of citizens and the spirit of the community, and indicate that the value of the generated public goods can potentially become enormous.

Japanese studies include that by Nakanishi, Matsuoka, Tomita and Kanayama (2005), who state that the four social and economic impacts that professional sports clubs bring to the community are accumulation of social capital, induction of consumption, improvement of community solidarity and improvement of city image. Muto (2013) raises the following benefits that should be considered when local governments decide to transact with a professional sports club: improving the region’s popularity and image, economic effects accompanying attendance of games, fostering solidarity among community residents through the club team, creating health consciousness among residents, promoting participation in sports activities and improving the quality of life. Miyamoto, Han and Taguchi (2007) analysed the economic effects of the professional baseball industry and showed that professional baseball teams have a significant economic impact on their region. In addition, Miyamoto et al. (2007) state that when estimating the economic effect of sports, the financial data of firms that operate a sports team are hardly released, and there are other problems such as confidentiality or inadequacy of data, including low
reliability of numerical values even if they are released. Furthermore, Miyamoto et al. (2007) also state that studies on the sports industry from the viewpoint of economics and business administration are extremely few in comparison with other industrial fields.

Against this background, this study analyses the data obtained from Miyagi Prefecture as well as from Rakuten Baseball, Inc., the management company of the Tohoku Rakuten Golden Eagles. We also conduct an analysis based on interviews with Rakuten Baseball team members and employees of the Miyagi prefectural government. This study uses highly reliable evidence to research the management of professional sports teams and the sports industry, using approaches from economics and business management.

3. Data

3.1 Overview of Rakuten Baseball

Rakuten Baseball, Inc. was founded on 29 October 2004. It mainly operates the professional sports team known as the Tohoku Rakuten Golden Eagles. The company has a capitalisation of 100 million yen, 124 employees (as of November 2017) and its head office in Sendai city, Miyagi Prefecture. Our overview of Rakuten Baseball includes details about the parent company, the history of establishment of the Tohoku Rakuten Golden Eagles, the business contents of Rakuten Baseball and the Tohoku Rakuten Golden Eagles’ endeavour to make full use of information technology.

3.1.1 Parent Company

Rakuten Baseball is a wholly owned subsidiary of Rakuten Co., Ltd. (hereinafter, Rakuten). Rakuten was founded in February 1997 and has sales of 781,916 million yen on a consolidated basis as of December 2016. It has 14,134 employees. Rakuten’s main business is e-commerce, and the company operates an online shopping mall called the Rakuten Market.

In addition to e-commerce, the company provides various other Internet services such as those related to advertisement, media, travel, digital content, communication and energy; it also provides settlement services, including credit card and electronic money; financial services, including bank, securities, insurance and electronic money, and services in a wide range of other fields such as professional sports. Recently, the company started a new service called Rakuten Mobile, a virtual mobile communication (MVNO) service. It currently provides at least 70 different services.

3.1.2 History of the Establishment of the Tohoku Rakuten Golden Eagles

Since 1958, Japanese professional baseball had consisted of six teams in the Central League and in the Pacific League. Kinki Nippon Railroad (hereinafter, Kintetsu), the management company of the professional baseball team Kintetsu Buffaloes, was proceeding with the disposal of bad loans in the first half of the 2000s following a failed expansion push during the economic bubble period. The sale of the Kintetsu Buffaloes was being considered because the team had an annual deficit of 4 billion yen. Hence, in 2004, Kintetsu announced a merger with Orix BlueWave, who played in the same Pacific League as the Kintetsu Buffaloes. Although a merger, Orix simply absorbed Kintetsu and carried out the management of

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3 The following is based on interviews with Rakuten Baseball.
The merger of Kintetsu and Orix created an imbalance of five teams in the Pacific League and six teams in the Central League. Furthermore, the professional baseball industry as a whole was in a state of confusion due to a significant shift in the professional baseball environment. The owner of another baseball team, for example, was reported in the media as saying that he wanted to reorganise the baseball industry and switch to a single league system. Meanwhile, the Japan Professional Baseball Players Association submitted a resolution opposing the merger of Kintetsu and Orix and proposed a plan to improve the teams’ management. The association also requested a discussion with the team owners. The teams, which wanted to merge, held a meeting with the players, who opposed the merger. In the end, the merger between Kintetsu Buffaloes and Orix BlueWave was officially decided. In response, the Japan Professional Baseball Players Association decided to hold a strike and cancelled 12 games over the course of two days to stop the merger. This was the first time that a strike was held in the history of Japanese professional baseball.

Later, the association continued to hold talks with the teams and successfully prevented a shift to a single league system. Meanwhile, some team owners began to express their willingness to allow new entrants, with the result that IT companies such as Livedoor and Rakuten announced their entry. A hearing was conducted to investigate the vision of the team, the business plan and the details of the management of these two firms. Rakuten, which had a stable scale of business, was approved to formally enter the sphere at a conference held among the team owners. With this, the Tohoku Rakuten Golden Eagles was born in the Tohoku area as a new professional baseball team. This was the first time in 50 years that a new professional baseball team was formed.

### 3.1.3 Business of Rakuten Baseball

The corporate philosophy of Rakuten Baseball is ‘THE BASEBALL ENTERTAINMENT COMPANY - A group that inspires people and makes dreams a reality through baseball’. The main business of Rakuten Baseball is the management of the Tohoku Rakuten Golden Eagles and related businesses. Specifically, the company’s main tasks include team formation, such as selecting players and supervisors, securing practice fields for fall and spring and determining the headquarter farm; its tasks also include ball stadium refurbishments, such as determining the detailed specifications of the stadium; hiring constructors; managing the facility; sales and public relations activities, such as acquiring sponsors; selling TV broadcasting rights and marketing and selling tickets and goods.

The breakdown of sales and expenses of Rakuten Baseball in 2014 is illustrated in Figs. 1 and 2, respectively. Advertisement, sponsorship and annual seat tickets account for at least 60% of its sales. Costs associated with players and stadium operations, such as staffing of players and coaches, team operation and rental of stadium from the prefectural government, account for half of the total expenses.

Changes in the numbers attending Tohoku Rakuten Golden Eagles games are illustrated in Fig. 3. The annual number of visitors for the 2015 season was the highest in history at 1.52 million people. The trends in sales and operating profit of Rakuten Baseball are illustrated in Fig. 4. In the fiscal year ending December 2013, the company posted an operating profit of slightly less than 200 million yen. This was the first operating profit since December 2005, when there were special factors that reduced player
contract-related expenses because the team had just been instituted. In the 2013 season, the team had the largest number of visitors to its sponsored games during the regular season and saw an increase in the sale of goods such as hats and uniforms. Thus, the company’s earnings improved from the deficit of over 900 million in 2012.\(^4\)

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\(^4\) Data from Fig. 1 to Fig. 4 were obtained from an interview with Rakuten Baseball.
3.1.4 The Use of CRM via IT by the Tohoku Rakuten Golden Eagles

The Tohoku Rakuten Golden Eagles started a points programme centralised on the fan club database in 2011. Points are automatically accumulated by attending games, by purchasing goods or food and drinks and through team victories, among other things, and the accumulated points can be exchanged for commodities at the stadium (Fig. 5).

With the introduction of the fan club points programme, Rakuten Baseball was able to accumulate behavioural data on how many fan club members attended the games, what their behaviours at the stadium were and so on. By collecting and analysing their customer data, the company classifies the
customers into segments and renovates the stadium accordingly (by placing premium seats, family seats, corporate seats, etc.). Behavioural data, such as purchases made by fans, are used when considering what kind of goods to produce, which players to promote and how to market them.

Introduction of the points programme allowed the segmentation of members and the taking of actions (exchanging gifts, etc.) based on member segments. For example, on a specific day that features a particular player, push notifications are emailed via a mail magazine to members who have registered for that particular player in the ‘EAGLES MyHERO’ service.

Customer relationship management (CRM) is realised by using information technology. This has increased the number of visits per member. Prior to its introduction, about 26%-27% of the total visitors were fan club members, but depending on the circumstance of visitor gifts, this can now reach as high as 50%. The number of visitors to regular season games has been revising the record since the 2013 season, allowing the company to maintain an operating profit by increasing sales of related goods.

3.2 Support from Miyagi Prefecture
This section summarises the support provided to Rakuten Baseball by Miyagi Prefecture.\(^5\)

3.2.1 The History of the Establishment of Rakuten Baseball in Miyagi Prefecture
It was in fact Rakuten Baseball that wanted to base itself in Miyagi Prefecture, and the prefecture itself did not lure the team in any way. Therefore, the prefecture was passive in the establishment of a team headquarter. In the 1970s, the Chiba Lotte Marines held official games in Sendai city, Miyagi Prefecture, but these were unsuccessful. Hence, there was a concern that people of this region probably had a weak desire for a team to be established there.

3.2.2 Miyagi Prefecture’s Support of Rakuten Baseball
Rakuten Baseball has been supported by Miyagi Prefecture, for example, via a ‘long-term professional baseball institutionalisation grant’ of 14.4 million yen during the team’s inception in 2005. This was the

\(^5\) An interview with the Miyagi prefectural government was conducted for this section.
first time a local government provided funds to a professional baseball team.

In addition, Miyagi Prefecture, the owner of Miyagi Stadium (now Rakuten Seimei Park Miyagi), agreed to conclude a lease agreement with Rakuten Baseball at an extremely affordable price of 50 million yen per year in exchange for shouldering the renovation cost of the stadium in full. Furthermore, the prefecture agreed that all the proceeds from the sales of advertisements/rights, goods, food, drinks and so on within the stadium would go to the team.

Originally, Miyagi Prefecture was the main support body of Rakuten Baseball; however, as of now, the Rakuten Eagle My Team Council of the Sendai Chamber of Commerce and Industry is serving as the main support body. Therefore, Miyagi Prefecture is currently limited to supporting the team through the council. Specifically, the prefecture provides consultation services regarding which children from which earthquake-affected areas are to be invited to the game, as well as introducing the children to the team.

In addition, the association between the Miyagi prefectural government and Rakuten Baseball has also changed during the 10 years of the team’s establishment. The prefecture’s support is not comprehensive but takes the form of individual appointments with a particular government division. For example, the Tourism Division conducts the negotiations that include consultation on campgrounds and PR activities in Miyagi Prefecture. Miyagi Prefecture intends to continue providing support in the form of consultation services through the council. However, Miyagi Prefecture is not planning to provide any new type of support in particular in the future.

### 3.2.3 Economic Effect in Miyagi Prefecture

The estimated economic effect as a result of the Tohoku Rakuten Golden Eagles in Miyagi Prefecture is shown in Fig. 6. The economic effect and the number of jobs created are almost the same. The economic effect especially rose when they won the Japan Series in 2013.

There are also the following four economic effects that are not included in this estimate. Professional baseball is highly capable of information dissemination to the whole country and promotes the effect of city popularisation such that public recognition of that region is improved through mass media, such as television and newspaper. In addition, there is also the consumer effect within Miyagi Prefecture, such as via baseball farm games, business activities other than that of home games (i.e. ball park conceptualisation of attracting visitors, selling goods and advertisements) and stadium management. There is also the consumer effect from players and staff members of the visitor team coming to the prefecture as well as consumption of food, drinks, accommodation, etc., by members of the media. There are other consumer effects as well, including the relocation of high-income players to the prefecture.

### 4. Discussion

This section discusses RQ1 through RQ3.

### 4.1 Success Factors of the Tohoku Rakuten Golden Eagles

In response to RQ1, there are several factors for the success of the Tohoku Rakuten Golden Eagles. First, the team was able to receive special assistance from Miyagi Prefecture and a long-term professional baseball institutionalisation grant. By renovating the stadium, the Tohoku Rakuten Golden Eagles were
able to rent a stadium at an extremely affordable price of 50 million yen a year. All of these factors helped the company post an operating profit when it launched the team.

The company has been posting an operating profit since 2013 by analysing customer behaviours using information technology, segregating customers into segments and taking that data to plan the renovations of stadiums and freely sell goods at the stadium. If the company had not been granted the stadium operation rights, it would have not been able to renovate the stadium or freely sell goods. That would have hindered the team’s revenue. Therefore, we believe that support measures by the local government in terms of entrusting the management and operation rights of the stadium to the team are effective for both the team and the local government. For example, the Hokkaido Nippon Ham Fighters, who have not been given the right to operate the stadium, are planning to relocate to a new stadium. Locations other than Sapporo city are also being considered.

In this case, the number of professional sports teams will be reduced, and the local government will lose resources for promoting tourism. From the aforementioned points, it can be said that the relation between Rakuten and Miyagi Prefecture, the owner of the stadium, is a model case for success.

4.2 Support from the Local Government

Regarding the support from the local government with respect to RQ2, the team received direct assistance in the form of a long-term professional baseball institutionalisation grant of 14 million yen. The government has also lent the stadium at an extremely affordable price in exchange for shouldering the stadium repair costs and has even granted them the stadium operation rights. This resulted in incentivising Rakuten Baseball to make the stadium more attractive to visitors, and it also probably had a greater impact than direct financial support. Because the financial burden for the local government is small, such form of support may be effective for the supporter.

4.3 Economic Effect

The economic effect in regard to RQ3 is shown in Fig. 6. The cumulative economic effect up to 2016 was 190.2 billion yen, and a total of 17,892 jobs were created. This can be said to be a very significant economic effect that is created by the establishment and induction of a new sports team.

Besides the economic effects, other benefits were obtained from promoting the Tohoku Rakuten Golden Eagles. Attracting tourists from other Tohoku regions besides Miyagi Prefecture to watch the game has greatly contributed to the region. Although there are other professional sports teams such as for soccer in each prefecture, the fact that there is only one baseball team in Miyagi Prefecture has made it possible to capture the fans of Rakuten and Miyagi Prefecture throughout the Tohoku area.

Attachment to the local community is increasing due to Rakuten Baseball’s support given to elementary school students. In particular, the number of game watchers of Rakuten in Tohoku is growing. Moreover, campaigns to expel anti-social organisations through public relations activities have also proved to be effective.
5. Conclusion

This study clarified the relation between the success factors for the management of professional sports teams and the financial support of local governments, as well as sports teams’ economic impact on the region, by referencing data and interviews from the viewpoint of business science and economics. Specifically, the study focused on the professional baseball team Tohoku Rakuten Golden Eagles based in Sendai city, Miyagi Prefecture, and analysed the relation between the success factors of the local sports team’s management and the financial support of the local government, as well as the team’s economic effect on the region.

As a result of the analysis, we found that Miyagi Prefecture’s offer to lend the stadium at an extremely affordable price and grant the stadium operation rights to the team, as well as the team’s CRM taking full advantage of information technology led to the success of Rakuten Baseball. It also became clear that the success of the team has induced great economic effects in the area.

The limitation of this study is that only data from 2005 to 2016 were used. In future studies, we believe that it will be necessary to further investigate the relation between the long-term success of the team and support from the local governments. Another problem is that this study only takes into account Rakuten Baseball. It can be said that a platform for success was already present because the professional baseball industry already had a good number of loyal fans. In future studies, it will be necessary to conduct similar analyses of other sports teams besides professional baseball to analyse the relation between the successes of sports teams in general and the economic support from local governments.

Despite these restrictions, this study analysed the relation between the success of a professional sports team and the support from the local government, which should prove to be very useful for operators of professional sports teams and local governments that aim to revitalise their region through the benefits brought about by professional sports teams.
References

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