



中國信託銀行
CTBC BANK

Social Impact from CTBC's Sponsorship of Professional Baseball

Social Return on Investment Report

December 2018



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Certificate

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Awarded 17 December 2018



Ben Carpenter
Chief Executive Officer
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Summary

CTBC is a naming sponsor of the Brothers professional baseball team, which is one of the original teams created in the Chinese Professional Baseball League (CPBL) and just recently marked its fifth anniversary in its current form as the "Chinatrust Brothers". Since 2014, CTBC have been involved in many innovations and transformations in terms of the resources it devote to baseball teams, players, logistics team members, tangible and intangible services and facilities, and operating strategies and policies. In particular, some of our noteworthy accomplishments include: establishing and improving tangible and intangible facilities and services at the Taichung Intercontinental Baseball Stadium and Pingtung CTBC Charity Park, greatly increasing player salaries and benefits, expanding the size and scope of our logistics team, and helping organize a diverse range of daylong themed events and related merchandise. In addition to its steadfast support for children in rural areas and sponsoring baseball teams, CTBC places a special emphasis on professional baseball players serving as societal role models and has tied the role of professional baseball players into the company's five major strategies for charitable action as part of its commitment to corporate social responsibility. In turn, CTBC has extended the impact of professional baseball league to reach disadvantaged schoolchildren who live in Taiwan's rural areas and who love baseball, underscoring our commitment to "achieving big things through grassroots support".

The present study adopts the Social Return on Investment (SROI) methodology to assess, from the perspective of stakeholders, the social impact of CTBC's sponsorship of the Chinatrust Brothers baseball team during the period from 2014–2017. Through various processes including interviews and questionnaires, we discovered that the company's patronage of professional baseball not only increased players' professional competitiveness and augmented their professional careers, but also yielded various "soft" results such as enhancing their sense of belonging, reducing financial pressures, strengthening family bonds, and more. Results such increased quality of life among coaches and other logistics team members as well as increased sense of accomplishment and self-confidence were also noted. Meanwhile, CTBC's involvement also encouraged baseball fans to become even more passionate about professional baseball and share in various benefits, such as improving interpersonal relationships, reducing stress levels, and engendering a sense of belonging. In addition, students who participate in charitable activities such as the CTBC Youth Baseball Project and the Black Leopard High School Baseball Program are able to learn from professional league players who serve as excellent role models, thus instilling in them positive values and various changes such as gaining a sense of identity.

After compiling all of the results described above and comparing them to the amounts of money invested, we discovered that, in the wake of CTBC assuming sponsorship of the Brothers baseball team, we have been able to produce approximately NT\$17.59 in social value for every NT\$1 spent, with the sensitivity of results falling between 2.08-22.69. We also arranged discussions between executives of CTBC and the baseball team concerning these results and stakeholder feedback gleaned from the study, which we used to formulate directions for improvement and further

optimization. Our hope is to combine the joint efforts of the company's participating units to use professional baseball as a means to create a maximum positive impact not only for baseball in Taiwan, but for society as a whole.

Part 1: Project Background

1.1 How CTBC Got Involved in Sponsoring Professional Baseball

Toward the end of 2013, CTBC Financial Holding Co., Ltd. announced that it would, through its subsidiary CTBC Bank (hereinafter referred to as "CTBC"), support the Brother Elephants professional baseball team, which is ran by Brothers Sports & Entertainment Co. (hereinafter referred to as "Brothers Sports Co."), as a naming a sponsor and via advertising cooperation. At the time, the Brother Elephants team's parent company (Brother Group) had sustained long-term losses and urgently needed another company to take over sponsorship, lest the team be disbanded. CTBC answered the call, and the name of the team was subsequently changed to Chinatrust Brothers¹ (hereinafter referred to as "Brothers Team."). See "Figure 1" in chapter 1.2. for the sponsorship structure of CTBC)

This decision was spurred by a strong sense of yearning among schoolchildren living in Taiwan's rural areas. At the time, when news spread that the Brother Elephants team was facing management difficulties and issues finding a new sponsor, many children in rural areas sent text messages and wrote letters to Mr. Jeffrey Koo Jr., chairman of the CTBC Charity Foundation, which was already committed to providing long-term care and support to disadvantaged children in rural areas. When later asked why CTBC began sponsoring the Chinatrust Brothers, Mr. Koo explained, "The children all told me how deeply they loved the Brother Elephants and said that baseball was their biggest source of pleasure and inspiration in life. This prompted me to encourage the CTBC Group to get involved in supporting baseball."

Baseball is the national pastime of Taiwan and at its height of popularity has had as many as 10 million fans, underscoring its profound and wide-reaching impact in Taiwan. In a sense, baseball symbolizes the collective memory and spirit of the Taiwanese people. As one of the original professional baseball teams formed in Taiwan, and due to the fact that there are only four teams now, the Chinatrust Brothers has a massive following and is an important asset for baseball in Taiwan, and its social significance and value cannot be overstated.

Serving as the Brother Elephants' naming sponsor not only enables CTBC to enhance its corporate image and derive advertising benefits, but also helps the company fulfill its corporate social responsibility. After some gambling scandal happened before, large-scale companies lost faith in sponsoring professional baseball teams due to the potential risk that will harm their reputation and the huge expenses that might bring. CTBC's involvement not only encourage other enterprises to

¹ Due to regulations on holding companies in Taiwan which put limits on total amounts that can be invested in non-financial enterprises, CTBC Holding supports the Brothers baseball team in the form of an advertising sponsorship.

invest in professional baseball, but their strategy and action plans are changing the environment of professional sports industry in Taiwan. E.g., they increase the salary of logistics team in the industry who usually had income lower than the average and had high turnover rate, and pushed other baseball team to do the same to keep talents.

In addition to professional baseball, CTBC has also launched an innovative concept — "sports-based charitable outreach" — including the CTBC Charity Foundation's CTBC Youth Baseball Project², Black Leopard High School Baseball Program³, Taichung Taiwan Life Baseball Team⁴, and outreach through other channels. These efforts allow us to realize our principle of "achieving big things through grassroots support", running the gamut from little league, junior league, senior league, and adult league to professional baseball, demonstrating our intent to have a thorough and lasting impact on the development of baseball in Taiwan (see Table 1: "CTBC's Involvement in Activities That Contribute to the Development of Baseball in Taiwan"). CTBC also conducted the concept by involving professional baseball team players into two charitable activities. The players participated in CTBC Youth Baseball Project Itinerant training and CTBC Cup Black Leopard Road Tour to teach young players in person about not only baseball skills but also positive attitude toward lives.

The present study makes use of the Social Return on Investment (SROI) method to measure the social impact of CTBC's professional baseball sponsorship. Surveys were taken of the professional baseball team itself, outside groups, participants in charitable activities around the time CTBC became involved in 2014, and changes arising between 2014–2017, looking deeper into the impact value created by the policies and direction of strategic improvements from the perspective of stakeholders such as players, fans, and students participating in charitable activities. Our hope is to enable the spirit and impact of baseball to continue onward and further expand outward, thereby creating greater value for Taiwanese society.

Level	Program Title	Content Covered	Initial Year
Little League / Junior League	CTBC Youth Baseball Project	<ul style="list-style-type: none"> Sponsorship to cover costs Itinerant training CTBC Cup National Baseball Tournament 	2014
Senior League	Black Leopard High School Baseball Program	<ul style="list-style-type: none"> CTBC Cup Black Leopard National High School Baseball Tournament 	2015

² For more introduction, please see chapter 1.2.SROI Project Scope

³ For more introduction, please see chapter 1.2.SROI Project Scope

⁴ Taiwan Life Insurance, a subsidiary of CTBC Holding, has supported a Taichung City amateur-league team since 2015 and became the naming sponsor of the team, now called the Taichung Taiwan Life Baseball Team, in 2018.

		<ul style="list-style-type: none"> CTBC Cup Black Leopard Road Tour 	
Adult League	Taichung Taiwan Life Baseball Team	<ul style="list-style-type: none"> Amateur-league team operations and related activities 	2015
Professional (CPBL)	Chinatrust Brothers	<ul style="list-style-type: none"> Professional baseball operations and related activities 	2014

Table 1: CTBC's Involvement in Activities That Contribute to the Development of Baseball in Taiwan

1.2 SROI Project Scope

The purpose of the present study was to measure the social impact of CTBC's professional baseball sponsorship activities. We primarily focused on CTBC's sponsorship of the Chinatrust Brothers baseball team and surveyed the stakeholders and varying levels of impact associated with these sponsorship activities. Through CTBC's involvement in activities that contribute to the development of baseball in Taiwan, we screened and selected things directly and indirectly related to professional baseball and incorporated them into three main activities, namely the Chinatrust Brothers (from an overall perspective including the team itself and its fans), the CTBC Youth Baseball Project (itinerant training), and the Black Leopard High School Baseball Program (road tour).

CTBC Youth Baseball Project is organized by the CTBC Charity Foundation under the CTBC Group, was launched in 2014. The CTBC Charity Foundation maintains a long-term commitment to provide assistance to schoolchildren in Taiwan's rural areas, and over the years it has discovered that many disadvantaged schoolchildren have a natural gift for sports but miss out on their opportunity to achieve their dreams due to lack of stable long-term access to resources. Therefore, by providing financial assistance to elementary school little league teams and junior high school league teams and providing improved facilities and equipment, sports gear subsidies, itinerant training, and organizing the CTBC Cup National Baseball Tournament, the Foundation is giving young players more opportunities to achieve their dreams.

As for high school students, CTBC holds the CTBC Cup Black Leopard National High School Baseball Tournament, which aims to be Taiwan's version of Koshien, giving ordinary high school players the chance to play against and learn from their more advanced counterparts. In addition, CTBC also holds the Black Leopard Road Tour, which arranges for professional baseball players to visit schools to help coach high school players.

However, in the present study, we only contained the Itinerant training of CTBC Youth Baseball Project and CTBC Cup Black Leopard Road Tour for which have participation from Chinatrust Brothers players.

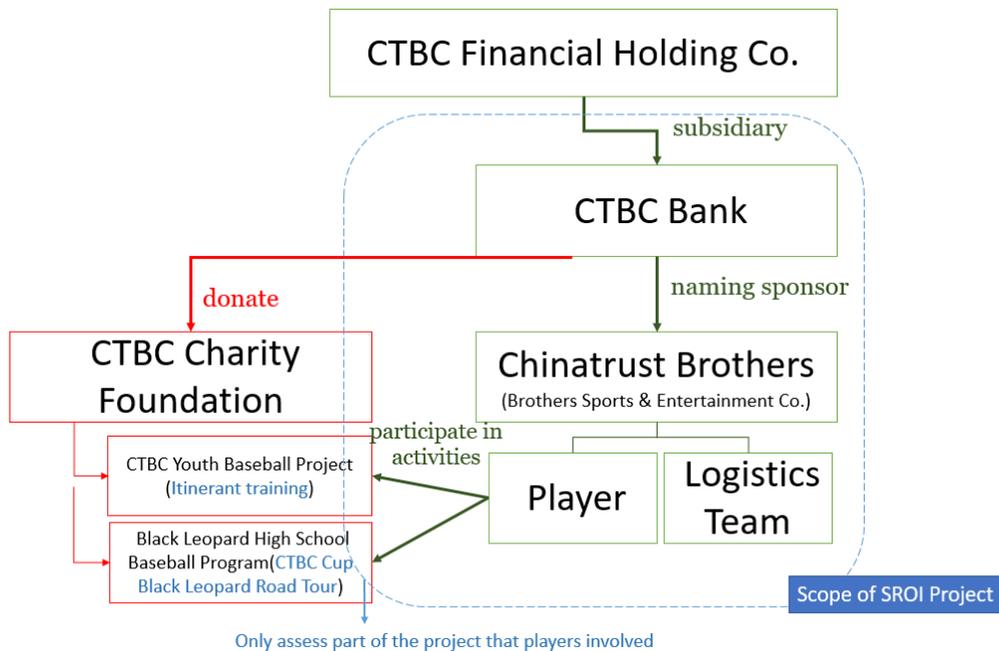


Figure 1: Project Scope

To focus more acutely on social impact activities involving the Chinatrust Brothers, the following activities were not included in the project scope calculations:

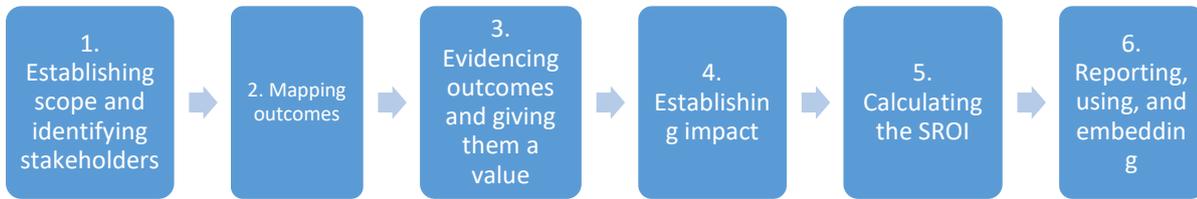
- (1) Commercial and charitable activities not organized by the team in which Chinatrust Brothers players participated in their own name
- (2) Charitable baseball activities which were organized by CTBC Bank but unrelated to professional baseball
- (3) Commercial activities operated by CTBC in the name of the Chinatrust Brothers, including issuance of co-branded cards

1.3 Research Method: The SROI Methodology

The present study adopts the Social Return on Investment (SROI) methodology to carry out the study and measurement processes. A guide to the SROI is issued by the 'Office of the Third Sector' based in the Cabinet Office of the United Kingdom and is used to measure and assess tangible and intangible impacts and changes that corporations and organizations have in terms of various aspects such as social, environmental, and economic factors, and then assigning these impacts with a monetary value, and finally adopting the approach of calculating return on investment (ROI) to demonstrate the overall causal relationship between inputs and outcomes. The analytical processing is divided into six stages which are strictly bound by seven major principles⁵.

1. The Six Stages of SROI

⁵ Refer to "A Guide to Social Return on Investment(2012)"



2. Seven Major Principles

1. Involve stakeholders
2. Understand what changes
3. Value the things that matter
4. Only include what is material
5. Do not over-claim
6. Be transparent
7. Verify the result

Out of the seven major principles, the most important — and most intriguing part of the present methodology — is stakeholder participation. SROI stresses a bottom-up approach to gathering data achieved through methods such as interviews and surveys which facilitate direct interaction and engagement with stakeholders and gaining insight into stakeholders' reactions and ideas. In turn, this allows us to better understand the actual implementation benefits of the project activities and identify areas for improvement, thereby helping us achieve our management goals and further amplify the company's social impact.

1.4 Description of the Study

1. Principles for Determining Materiality of Stakeholder Engagement

The present study has an expansive scope of impact which encompasses a rather large number of group types and numbers of people. In consideration of the limited amount of time and resources available to implement the SROI analysis, and based on our specific management decision-making requirements, we sought to achieve a necessary level of data resolution contingent on the extent of impacts described above.

Impact Level Classification⁶	Management Needs	Materiality	Required Data Resolution
Direct Impactors (Stage 1)	CTBC and Brothers Sports & Entertainment Co., which is sponsored by CTBC, constitute the primary study focus of the present study. Since Brothers Sports & Entertainment Co.	High	High: The stakeholder engagement frequency and sampling ratio

⁶ For classification of stakeholder levels, please refer to 2.1.2 Scope of Stakeholders.

Impact Level Classification⁶	Management Needs	Materiality	Required Data Resolution
	<p>and its employees (i.e., players and logistics team) account for the largest users of the sponsorship resources and also represent the origin of all of the changes generated by the project, it was imperative for us to gain a thorough insight into what they had to say. We believed that optimizing Stage 1 would have a ripple effect that would emanate outwards, hence the Stage 1 Impactors were the most important.</p>		<p>should be at least 2/3 of the total population</p>
Stage 2 Impactors	<p>Outside groups of the baseball team directly impacted by the team's operations, activities, and management policies; changes associated with the impact of this facet are subject to optimization of the baseball team itself, hence the importance were the second.</p>	<p>Medium</p>	<p>Medium: The stakeholder engagement frequency and sampling ratio should have a confidence interval (CI) of 95% or less and an error range of 3% or higher for the standard sample size.</p>
Stage 3 Impactors	<p>Indirect impact extended by the first two impactors. For example: The primary impact on CTBC employees came from CTBC's own operations, while the main source of impact on participants in charitable activities was derived from charitable programs; only "the impact made by professional baseball players as a result of participating in the program" was incorporated for this stage; there were relatively few aspects which could be optimized in terms of the project and charitable activities themselves. Therefore, it was relatively less important.</p>	<p>Low</p>	<p>Low: The stakeholder engagement frequency and sampling ratio should have a confidence interval (CI) of 95% or less and an error range of 6% or higher for the standard sample size.</p>

Based on one of the seven major principles of assessing SROI, namely "Only include what is material", we referred to the accounting principle of materiality to ensure that only information of a reliable nature and which is of important concern to the company's "management decision-making" would be included; hence, varying degrees of materiality and resolution would have a direct impact on the inclusion of the numbers of persons engaged and engagement sample size of stakeholders. Details on the determination criteria are presented under Sections 2.1 "Stakeholders" and 2.3 "Project Outcomes".

2. Limitations of Study Parameters

#	Item	Description	Potential Impact on SROI Results	Response Measures
1	Numbers of Chinatrust Brothers Fans vs non-CTBC fans: Unreliable data sources	Based on the total annual number of attendees at home games (average from 2014–2017) / Average number of entries at home games per individual (data sourced from a questionnaire results) ⁷ .	Overestimated or underestimated	The CPBL primarily relies on actual game attendance figures to calculate numbers of fans. Hence, in the present study, the numbers of fans for each team were also delimited on the basis of the actual numbers of fans in attendance at home games. Details on the determination logic are presented under Sections 2.1 "Stakeholders".
2	The number of fans does not include viewers of television and online broadcasts	As described above.	Underestimated	Television and online broadcast viewership were accounted for when adjusting the sensitivity analysis. Details concerning the determination logic are presented under Sections 2.1 "Stakeholders".

3	Problems involving the preferential choices of fans	In the course of engagement, we observed the effects of the behavioral economics "theory of self-control" ⁸ among certain fans due to their support for a team, which caused these fans to be unable to make a rational assessment with respect to gauging future utility. As a result, a tendency toward optimism was reflected in the factors of valuation and drop-off.	Overestimated	<ul style="list-style-type: none"> ✓ Falls within the normal range of reasonable binding parameters per the statistical methodology. ✓ Increased frequency of engagement with fans and number of questionnaires collected, confined the range of binding parameters and communication with fans and reached a consensus. ✓ Incorporated valuation and drop-off factors into sensitivity analysis
4	Outcomes not directly associated with CTBC	In consideration of management objectives and outside perspectives, outcomes directly associated with CTBC (i.e., the company itself) are not included.	Underestimated	With reference to a research dissertation ⁹ , CTBC outcomes were accounted for when adjusting the sensitivity analysis.
5	Lack of baseline documents	Since it's the first report CTBC conducted after they sponsor Brother's Co, there were no pre-test or document that can be set as baseline except for financial value which were record in their Financial report.	Overestimated or underestimated	In the present project, we can mostly relied on stakeholder`s judgement about their changes before and after CTBC sponsorship with some reference from related essays. And in the future, CTBC will keep optimize their project on the basement of this report.

⁸ Matthew Rabin "Self Control-Problem" in Behavioral economics

⁹ Refer to "Corporate Sports Sponsorship and Its Branding Benefits in Media: A Case Study from CTBC Financial Holding" (Lin, 2018)

Part 2: Project Process

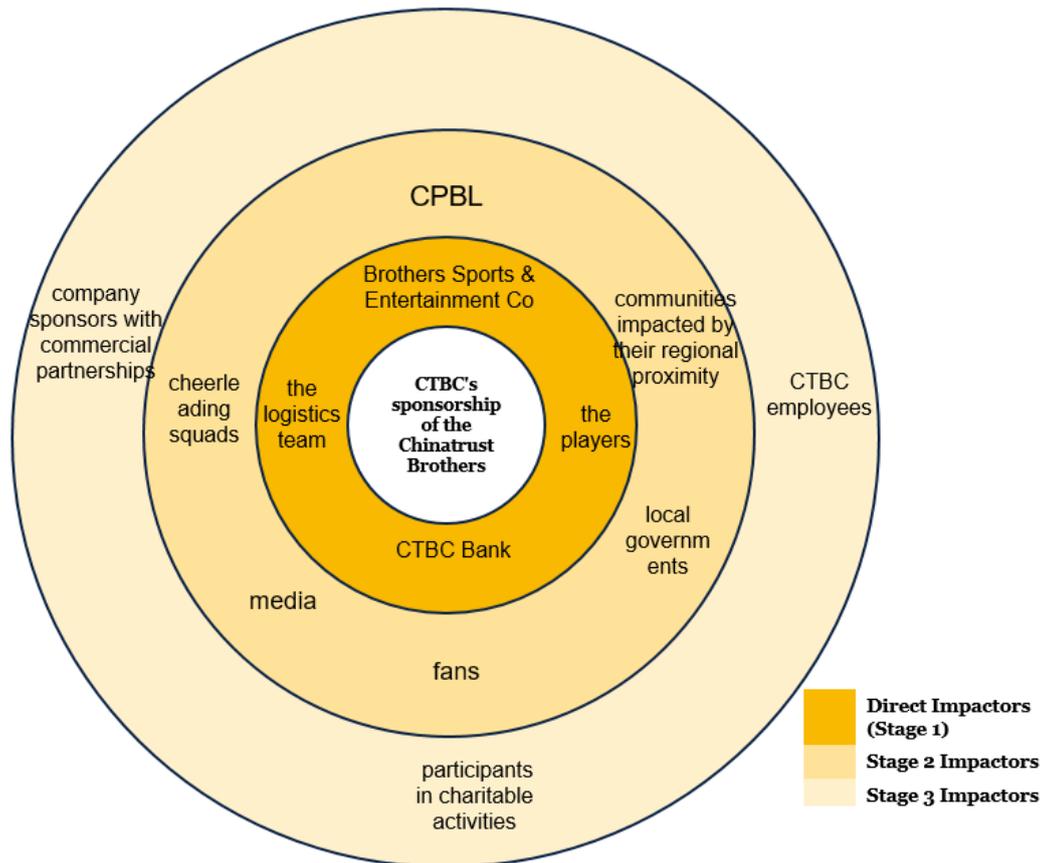
2.1 Stakeholders

2.1.1 Scope of Stakeholders

In terms of the stakeholders who played an important role in deciding our stakeholder groups, in subsequent stages of interviews, we provided a description of the various groups whom we were surveying and then asked them to confirm whether there were any omissions and the extent of impact. Consequently, in the course of conducting the interviews and analyzing relevant research literature¹⁰, we gained insight into the extent of impacts on stakeholders surveyed pursuant to the five main principles and divided up potential impacts on stakeholders based on their particular aspects into three levels:

- **Direct Impactors (Stage 1):** Core users of input resources as well as the sources of resultant changes. Encompasses the Chinatrust Brothers team itself, including the underlying company (Brothers Sports Co. and its employees, collectively referred to herein as "the baseball team" or simply "the team"), its employees (the players and the logistics team), and the naming sponsor (CTBC Bank).
- **Stage 2 Impactors:** Stage 2 Impactors are affected by changes caused by Stage 1 Impactors and comprise persons or organizations affiliated with Stage 1 Impactors. This includes fans, local governments and communities impacted by their regional proximity, company sponsors with commercial partnerships, media, and cheerleading squads.
- **Stage 3 Impactors:** Stage 3 Impactors likewise are affected by Stage 1 Impactors, but their changes are more indirect compared to Stage 2 Impactors, and most changes occur as a result of secondary outside activities. This includes participation by Chinatrust Brothers players in charitable activities organized by CTBC Holding, including the aforementioned CTBC Youth Baseball Project, Black Leopard National High School Baseball Program, as well as other charitable activities (e.g., participants in the Taiwan Dream Project, programs organized by the National Library of Public Information, etc.), and CTBC employees.

¹⁰ Refer to "The Social Impact of the Tour de France: Comparisons of Residents' Pre- and Post-event Perceptions"



In addition, after determining the scope stakeholders, we set out to plan and analyze stakeholder engagement activities. For our primary means of engagement with stakeholders, based on the previously discussed principle of materiality, we mainly made use of in-depth face-to-face interviews with a secondary focus on questionnaires. In terms of implementation, we opted to conduct the interviews on a rolling basis rather than a large, one-off set of interviews. This allowed use to have continuous engagement, which we hoped would help us fine-tune any issues we came across as well as enable us to better understand the activities.

2.1.2 Identification of Stakeholders

The present study is very broad in scope. With the exception of Stage 1 Impactors, for which inclusion was necessary in all cases, the decision to include or exclude stakeholder groups among Stage 2 and Stage 3 Impactors was made on the basis of individual interviews of an exemplary representative nature, reference documents, and management objectives. We referred to the guidelines of the AA1000 Stakeholder Engagement Standard 2015 to serve as the analytical background for stakeholders based on the aims and scope of the project. The guidelines define a stakeholder as any person, group, or organization which affects and/or could be affected by the project. The purpose of engagement, meanwhile, is defined as anything that allows stakeholders to have an impact on the decision-making process of the project activities.



Purpose, Scope and Stakeholders¹¹

Organizational Objectives	Our organizational objective was to use the sport of baseball as a means to fulfill the CTBC Group's core corporate social responsibility strategy, have a positive social impact, and help facilitate greater well-being in society.
Project Purpose	The purpose of the present study was to analyze, while taking into consideration materiality and reliability, the monetary value of the social impact on stakeholders that CTBC has in its capacity as a naming sponsor of the Chinatrust Brothers.
Project Scope	Core operations of the Chinatrust Brothers and related charitable activities during the period from 2014–2017.
Stakeholders	Stakeholders directly and indirectly affected by core operations of the Chinatrust Brothers and related charitable activities during the period from 2014–2017.

According to the guidelines of the AA1000 Stakeholder Engagement Standard (2015), we focused on the five main principles. First of all, we interviewed the administrative head of CTBC Bank (the person primarily responsible for the baseball team sponsorship and charitable activities) and the team captain and general managers of Brothers Sports Co.in order to understand, from their perspective, the historical context, strategic outlook, and impacts on different stakeholder groups arising from CTBC's sponsorship of the Chinatrust Brothers. Secondly, we consulted a research dissertation on large-scale global sports sponsorships¹², which allowed us to more comprehensively,

¹¹ Source: AA1000 Stakeholders engagement standards (2015)

¹² Ref to “The Social Impact of the Tour de France: Comparisons of Residents’ Pre- and Post-event Perceptions”, “Bread or games? Social cost-benefit analysis of the World Cup in the Netherlands”, “Evaluating the Effectiveness of Corporate Sponsorships at a Minor League Baseball Park”

understand and thoroughly survey the potential impacts of the project as well as the ways in which they were impacted. Furthermore, we also interviewed the unit primarily responsible for running professional baseball operations in Taiwan – two CPBL Level 1 Supervisors – to understand, from their perspective, the transformations, current conditions, and potentially involved stakeholder groups associated with the professional baseball industry in Taiwan.

With respect to the stakeholders directly and indirectly affected by the core operations of the Chinatrust Brothers and related charitable activities, we performed the following analysis and determinations based on the five principles for identifying stakeholders set out in the guidelines:

Principle ¹³	Description	Identified Stakeholders
Reliance	Personnel who are reliant on the core operations of the Chinatrust Brothers and related charitable activities for their livelihood, or those upon whom the Chinatrust Brothers is reliant.	Players, logistics team members, media, cheerleading squad Brothers Sports Co. and CTBC
Responsibility	Legal responsibilities borne by the Chinatrust Brothers with respect to such personnel	Players, logistics team members, the CPBL, and company sponsors
Urgency	Persons for whom there exists a higher degree of urgency with respect to core operations of the Chinatrust Brothers and related charitable activities	Players, fans, and the CPBL
Impact	Those impacted materially and psychologically by the core operations of the Chinatrust Brothers	Players, logistics team members, fans, participants in charitable activities, local communities

¹³ AA1000 Stakeholders engagement standards (2015) 3.3.2 Stakeholder Identification(p.17)

	and related charitable activities	
Diverse perspectives	Other potential stakeholders which could be impacted	Local governments, local communities, CTBC employees

2.1.3 Stakeholder Engagement

➤ Engagement process

We divided up the stakeholder engagement process into three main stages: the interview stage, questionnaire stage, and outcome verification stage. In order to conform to the principle of transparency, the present study will undergo an authentication process and will also be publicly disclosed. We hope that this will facilitate more comprehensive communication with stakeholders.

Stage	Action Plan	Purpose
1	Interviews	Interviews are used to help us better understand the extent of changes experienced by stakeholders and are included or excluded according to the principle of materiality.
2	Questionnaires	We designed a questionnaire based on the initial outcomes of interviewees, then distributed questionnaires to more stakeholders in order to verify the occurrence of the outcomes, financial value and impact factors.
3	Verifying Outcomes	Interviews were also conducted to verify whether the calculated results described above (including the outcome chain of events, occurrence of outcomes, financial proxies, outcomes corresponding value, impact factors, etc.) matched the experiences of every group of stakeholders. It was also during this stage that any concerns about the calculation results or conflicting information were analyzed and resolved. For further information please see “3.4 Verification”.

➤ Inclusion and Exclusion of Stakeholders

After concluding the aforementioned engagement process, we conducted further interviews and data collection to understand whether the cross-impacts with the present study were large enough to warrant inclusion into the calculations. A description of the inclusion and exclusion of groups, and the reasons thereof, is set out below:

✧ Included:

Stakeholder	Category	Reason for inclusion
CTBC	Company	According to the interviews with representative from CTBC and Brothers Sports Co., (including players and logistics team), these groups experienced huge changes from CTBC's sponsorship. And their changes also led to other stakeholders' changes. Hence, they are included.
Brothers Sports & Entertainment Co.	Company	
Player	Senior players (joined prior to 2014)	
	General players (joined after 2014)	
Logistics Team	Coaches	
	Professionals (sports-related)	
	Administrative personnel	
Fans	Chinatrust Brothers Fans	Although these groups comprise indirect sources of impacts, fans in particular have a large impact on the operations of the professional baseball industry. And according to the interview, since most of fans watched baseball for a long period and had great passion on it, they experienced huge changes; hence they are included.
	Non CTBC Fans (see note)	
Charitable Activity Participants	CTBC Youth Baseball Project - Itinerant Training Students	According to the interviews with participants and their teachers, they experienced huge changes from the activities. Hence, these groups are included.
	Black Leopard National High School Baseball Program - Road Tour Students	

Note: Since professional baseball is comprised of matches between different teams, the spectator experience and changes in fans are contingent on the joint efforts of all teams. Also, CTBC's sponsorship has brought great changes to professional baseball industry in Taiwan which included other teams. Consequently, the impact of CTBC's sponsorship of the Chinatrust Brothers also extends out to encompass fans of other team.

➤ Number people Engaged and method of engagement

Included stakeholders:

According to the interviews with representative from different group of stakeholders, they all experienced material and lasting changes. Some of them (e.g., players) even contributed to other stakeholders' changes. Hence, we included these stakeholders into the scope. The changes for each stakeholders will be discussed in the following chapter (2.2 Outcome).

Stakeholder	Category	Total engagement (persons) ¹⁴	Total Population	Method of engagement
CTBC (company)	Administrative Head and Vice President of Public Relations (Company Representative)	2	1 (entity)	Face-to-face interview
Brothers Sports & Entertainment Co.	Team Captain and General Managers (Company Representative)	1	1 (entity)	Face-to-face interview
Players	Senior players (joined prior to 2014)	64	62 ¹⁵	Face-to-face interview and questionnaire
	General players (joined after 2014)			
Logistics Team	Local coaches	39	49	Face-to-face interview and questionnaire
	Professionals (sports-related)			
	Administrative personnel			
Fans	Chinatrust Brothers Fans	1,206	141,923	Workshops, Face-to-face and phone interview and questionnaire
	Non CTBC Fans			
Charitable Activity Participants (young players)	CTBC Youth Baseball Project	191	655	Face-to-face interview and questionnaire
	Black Leopard National High School Baseball Tournament			
	Program - Road Tour			

Excluded Stakeholders:

¹⁴ Due to potential overlap between interviewees and survey takers, the sum was not equal to the total number of stakeholders engaged. Since the questionnaire was anonymously distributed to fans, players, and logistics team members, it was difficult to identify whether the interviewees also filled out a questionnaire; hence, total engagement was calculated based on the number of persons.

¹⁵ Due to fluctuations in the number of players over the four-year period, the average number of players from 2014–2017 was calculated for the study. As of the date of writing, the team has a total of 65 players, hence the number of persons engaged appears greater than the population size.

During the first stage, we interviewed almost all groups of stakeholders that were identified in the previous step who might be influenced or influence the projects. For stakeholders who are difficult or cost-high to interview, we interviewed representatives of Brothers Sports Co. and CTBC and other included stakeholders, as well as referring to related essays to understand the changes happened to them. Below is the engagement process and reason of exclusion for each stakeholder.

After the interviews or surveys, we found out though some of them might experience a few changes, they were neither material nor related to the project itself. Hence, we excluded them from the scope of project and confirm the result with stakeholders included in the verify stage (stage3) to make sure there were not material omission.

Stakeholder	Category	Total engagement (persons) ¹⁶	Method of engagement
CTBC employees	General personnel	9	Face-to-face interview of employees from different departments
	Employees of Business Unit	3	Face-to-face and phone interview of employees from both North and South region
Other groups in Brother Baseball Team	Foreign coaches	1	Face-to-face interview
	Cheerleading Squad	Na	Not engaged
Collaborating Institutions	Chinese Professional Baseball League (CPBL)	2	Face-to-face interview of Level1 Supervisors of CPBL
	Co-branding / Sponsoring companies	1	Face-to-face interview of companies' project managers
	Taichung City Government	Na	Not engaged
	Media	Na	Not engaged
Other CTBC's Charitable Activities that involved players	Participants in the Taiwan Dream Project(children and their teachers)	15	Children: Workshops Teachers: face-to-face interviews
	Cooperating units and Participants of Programs Organized by the National Library of Public Information	5	Cooperating units: phone-interview of project manager Participants: telephone Surveys
Local community		41	

¹⁶ Due to potential overlap between interviewees and survey takers, the Stage 3 sum was not equal to the total number of stakeholders engaged. Since the questionnaire was anonymously distributed to fans, players, and logistics team members, it was difficult to identify whether the interviewees also filled out a questionnaire; hence, total engagement was calculated based on the number of persons.

	Local residents near the Taichung Intercontinental Baseball Stadium		Face-to-face interview and questionnaire
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Reason of exclusion

■ **CTBC employees**

General personnel: After randomly sampling employees according to different criteria (including whether they were fans or non-fans and according to different age groups and departments) and interviewing them, we discovered only a minor correlation between the baseball team's affairs and the company's brand and employee benefits, and all of the employees interviewed indicated that a material impact was not present. Hence, general personnel were not included.

Employees of Business Unit: Interviews were conducted by individuals selected by CTBC's Public Relations Department who often have a need for PR vouchers, including business managers at the CTBC headquarters, the branch manager of the Taichung Intercontinental Branch (a themed branch located near the baseball stadium), and Vice President of the Central Taiwan Operations Head Office (the primary operating location for the baseball team). It was discovered that the interviews truly had an impact on customer relations and business promotion, but the extent and quantity of impact was relatively minor and not significant with respect to the present study.

■ **Other groups in Brother Baseball Team**

Foreign coaches: After interviewing the foreign coaches, it was determined that they had not lived in Taiwan for a long period of time and did not have a particularly significant impact. Hence, they are not included.

Cheerleading Squad: The cheerleading squad is operated by an external agency and does not consist of employees of the baseball team. After interviewing the baseball team captain, it was found that the cheerleading squad's job duties would not be affected by CTBC's involvement or non-involvement, and this work is only one notice among the cheerleading squad members. Hence, this group would pose a high cost of engagement (i.e., would require an additional appearance fee to be paid) while having relatively lower degrees of relevance and materiality. Hence, they are not included.

■ **Collaborating Institutions**

Chinese Professional Baseball League (CPBL): As a result of interviewing CPBL Level 1 Supervisors, it was found that CTBC had become a bellwether as a corporate sponsor in the overall professional baseball industry and had helped usher in sweeping changes which are reflected in the baseball teams and fans. The role of the CPBL is more akin to witnessing the occurrence of these changes alongside the baseball team, and not much changed in the organization itself.

Hence, according to the principle of materiality, their feedback was only used for reference purposes and they were not included into the scope of calculation.

Co-branding / Sponsoring companies: There is a high turnover rate among baseball team company sponsors, and prior to and subsequent to CTBC's involvement, there were very few companies which were continuous sponsors; after interviewing one of the companies with the longest sponsorship track record which is also the most well-known among the public, we discovered it did not undergo any major differences, and even if the team did not exist, the company would still be able to sponsor other teams or other sports to obtain the same kind of outcomes; hence the deadweight is nearly 100%. Hence, according to the principle of materiality, their feedback was only used for reference purposes and they were not included into the scope of calculation.

Taichung City Government/Media: After interviewing the team captain, it was determined that the government and media did not have a large impact, and since it is an independent external unit, it would be difficult for it to have much of an impact on the company's management level decision-making. In consideration of engagement difficulty and high sensitivity, this group was not included.

■ **Other CTBC's Charitable Activities that involved players**

Participants in the Taiwan Dream Project (children and their teachers): After interviewing schoolchildren who received extracurricular training from Chinatrust Brothers players and the accompanying superintendent and village head, in terms of schoolchildren who did not come into contact with baseball, we discovered no difference between the players and other volunteers, and one-off activities did not leave a particularly deep impression on them, resulting in a single-year drop-off factor as high as 90%. Therefore, according to the principle of materiality, their feedback was only used for reference purposes and they were not included into the scope of calculation.

Cooperating units and Participants of Programs Organized by the National Library of Public Information: Through interviewing liaisons of cooperating units and other program participants, we discovered that although stakeholders had changes, the process of activities and not leaving enough data behind for tracking records and ways to contact the participants made it difficult to ascertain the scope and quantity of changes experienced by these stakeholders; hence, in accordance with the principle of "do not over-claim", these stakeholders were not included.

■ **Local residents near the Taichung Intercontinental Baseball Stadium**

Neighborhood heads of communities located nearby the baseball stadium were interviewed, and local community residents near the Taichung Intercontinental Branch were randomly selected to take part in interviews. As a result, we discovered that professional baseball games have some

minor impacts on residents, but the impacts are mostly immaterial and are not long-lasting (e.g., vehicle traffic may be an issue during games but is short-lived, only happens during specific times surrounding games, and hence does not constitute a material impact; they might have an additional place for leisure and entertainment but since there are few entertainment facilities, they seldom go there), and improvements were made for some impactors (e.g., a parking lot was established to resolve issues caused by fans taking up too many parking spaces which caused overcrowding for local residents). According to the principle of materiality, their feedback was only used for reference purposes and they were not included into the scope of calculation.

2.2 Outcomes

Outcomes refers to important changes in or impacts on stakeholders (e.g., improved health, earned income) arising from project activities. The present study made use of interviews and questionnaires to understand the occurrence of changes in stakeholders, and we also referred to SROI reports and research dissertations covering similar subjects¹⁷, ensuring there were no omissions with respect to potential materiality and negative outcomes. In addition, we utilized the outcome chain of events (See Appendix 3 for details) to describe the avenues through which the previously mentioned outcomes occurred and to define the outcomes of the process and results of discussions with stakeholders.

2.2.1 Theory of Change

✓ CTBC and Brothers Sports & Entertainment Co (Brothers Sports Co).

Background

In order to collect the representative and reliable information we collected from stakeholders, interviews with senior management personnel in CTBC and Brothers Sports Co were arranged to understand the impacts that this project had on both companies. For CTBC, we interviewed the Highest Administrative Head in the Charitable Department and the Vice President of the Office of Public Relations. As for Brothers Sports Co., we interviewed the Team Captain also the CEO, and few general managers who had thorough understanding of how the project affected the company and how the company was affected by the project.

Outcome

The Team Captain said that CTBC's sponsorship fulfilled capital shortage in Brothers Sports Co., which directly led to Brothers Sports Co's outcome "Increased financial income". More importantly, the naming sponsor has allowed CTBC to take substantive control over Brothers Sports Co, such as having the power to set strategies, do decision-making, etc. The sponsorship directly resulted in material outcomes for players and logistics teams.

¹⁷ Please refer to Appendix 4: "Reference Information"

Although CTBC itself did benefit from enhancing public relations value through its CSR program, we only include CTBC as a stakeholder and count on its outcomes in the sensitive analysis. It is because CTBC is the project host while the main purpose of this report is to evaluate the “external” impact CTBC had brought through its CSR program.

✓ Players and logistics team

Background

Personnel employed by the baseball team serve as Stage 1 Impactors and have a material potential impact. Hence, in this stage, the number of persons engaged had to be greater than 2/3 of the total population. We engage stakeholders with different levels of seniority, first-string and second-string players, positions, roles (e.g., field position in the case of players, or job position in the case of the logistics team), and so on.

Players’ outcomes are found to be the same in the questionnaires, while their chain of events towards the same outcomes differ from their seniority on the team. In the beginning, in order to meet management objectives and to explore players’ outcomes more precisely, we tried to divide players into two groups – players joining before 2014 and players joining after 2014 - based on their status in 2014 the year in which CTBC got involved in the team. We analyzed other variables through the questionnaire but found no material differences in two categories. Relatively few members joined the team prior to 2014 because of the high turnover of the logistics team members, which is industry-specific characteristics. Therefore, finally, players were not divided into two groups since dividing by year would not have any implications on management and decision-making.

However, the interviews and questionnaires revealed differences between coaches and other logistics team members in terms of their work motivation and patterns, resulting in a significant difference with respect to the extent of the changes that occurred. Meanwhile, among other logistics team members, although similar outcomes were noted between sports-related professional personnel and administrative personnel, a significant discrepancy was found in terms of the course and extent of the changes. Therefore, we decided to further break down the logistics team into three separate categories in the calculation of outcomes number, financial value, duration and impact factors, etc. for more thorough analysis.

Outcomes

Players

- **Reduced financial pressures**

According to senior players, they are older in age and mostly have raised their family. The wage level before 2014 was usually difficult for them to fulfill the financial need. The

increase of salaries enable them to concentrate on training and playing without worrying about living. While, general players said CTBC established a minor league system that released more chances to young players to join professional baseball industry. Some players were confined to making livings through playing baseball for which was the limited skills they had; in addition, some came from underprivileged families. They seemed to have limited opportunities on career. Being professional players raises the wage level and reduces the financial pressure they faced in life.

- **Increased professional competitiveness, Extended professional career**

According to players, CTBC recruited foreign coaches, held overseas spring training, and enhanced both software (support team such as dietitian and athletic trainer) and hardware (facilities, stadiums, diets, etc.). These resources have broadened their horizons and have enhanced their training quality, which could contribute to their professional competitiveness in the future.

Also, players emphasized that advices from athletic trainers and other professional in the support team, as well as higher quality training facilities have been of great help for them to keep their physics in good condition, which significantly avoided the chance of getting hurt posing the biggest threat for a professional players' career. As a result, it has enabled them to stay competitive in the field in the long run.

- **Created a sense of belonging, Strengthened family bonds**

CTBC established private training base and home field for the team, which was unaffordable for Brothers Sports Co. before. This hardware not only reduced their exhaustion from travelling but also gave them sense of belonging. The team also provided high quality dorm for their families and they started to see Taichung and Pingtung (where the home field and training base are located) as their home rather than the worksite. The family dorm also enable them to have more quality time with their wives and children. Hence, it has helped them become closer with their families.

- **Self-confidence and sense of satisfaction**

During the interview with players, they all agreed that a professional player has the responsibility to help the society become better. Most senior players participated in charity such as being the image ambassador for NPOs. CTBC empowered them as well as general players to do more social work. The CTBC's five charity initiatives provides players with the chance to meet young players in remote rural areas, and they could teach them baseball skills and attitudes toward lives. These activities remind players of their passion and gratitude in their childhood and realized how influent they are now. Players become more confident and satisfied after joining the team and charitable activities.

- **Impact on team morale (negative)**

Some player criticized that the relationship between coaches and players and among players become distance after more players joined the team, and young players found out

it took longer time to build up team morale. However, most of them assumed the situation only happened in the first year and become better afterwards

Logistic team

- **Increased quality of life, Increased enthusiasm for work and degree of career stability**

CTBC increased human, hardware resources and remuneration (including salaries, dorm and diet, etc.), which prevented logistic team from overworking and reduced their stress and financial pressure. The resources improved their work-life balance so that they could dedicate more time to their personal vocation. Overall, it has helped them increase their quality of lives, their enthusiasm for work, and degree of career stability.

- **Increased sense of accomplishment and self-confidence, Increased loyalty to the team**

CTBC changed the decision-making model and management approach of the team. Coaches and the management level depend more on professional advices currently. According to interviewees from logistic team, these changes made them feel more respected and important; hence, they trust the team more (increased sense of belonging to the team) and increase sense of accomplishment and self-confidence.

- **Increased competitiveness**

Besides the changes mentioned above, according to interviewees from logistic team, CTBC also provided many training resources and enhanced corporate literacy and efficiency that enable logistic team to advance particular professions and become more competent in their career path.

✓ Fans

Background

Due to the massive size of the fan population and difficulties of setting its scope, the process for determining the numbers of people engaged in the total population is explained as below.

1. Total number of people in the population: There are many sources of data from the professional baseball industry on what constitutes numbers of "fans"; the figure can be as large as the number of likes on Facebook fan pages, television or online broadcasts view counts, or as small as the members-only boosters club; oftentimes, different definitions of fans are adopted depending on different management objectives (e.g., The number of persons in the fan club has a direct impact on merchandising income). Television or online broadcast viewership is inextricably linked to determining the value of broadcasting rights. The number of people who have a co-branded card is an indicator used for measuring business promotion, etc.).

In consideration of the particular accounting qualities involved in the present study, the logic used to determine the number of fans is explained below:

- ✧ Reliability: The large size of the population of fans makes it a very large dimension with respect to SROI results impact; hence we decided to base our approach on the principle of

"do not over-claim" by adopting more reliable and conservative sources of data. Hence, the number of likes on Facebook fan pages are excluded, and only figures derived from official statistics were included.

- ✧ Relevance: Although the industry development trends in professional baseball are increasingly varied, (for example, players have a personal brand, cross-industry partnerships, and so forth), the industry's core still focus on the actual baseball games. Therefore, we decided to use the action of "spectating professional baseball games" as the basic threshold for determining whether someone meets the criteria of being a fan. This excludes the number of persons who have co-branded cards, the number of persons who participate in marketing activities unrelated to games, and so on; thus, the scope was confined to the number of spectators at games or broadcast viewership.
- ✧ Materiality: In contrast to watching a television or online broadcast, people who spectate games in person devote more of their attention span, sensibility, and expend more time and monetary costs, and hence their extent of impact is far greater. Furthermore, the number of spectators (i.e., game attendance) is the only figure for which comprehensive and official statistical data is available. Therefore, we decided to use " Total annual number of attendees at home games (average from 2014–2017) / Average number of entries at home games per individual "¹⁸ as the formula for calculating the fan population. The numbers of persons watching television and online broadcasts (i.e., viewership) were also incorporated into our sensitivity analysis calculations.

2. Total engagement (persons):

According to the definition described above, the total population of fans was calculated to be 141,923 people. Assuming a normal population distribution, a 95% confidence interval, and a sampling error of 3%, this meant that at least 1,059 samples had to be collected. We also incorporated the adjusted extent of outcomes according to the +/- 3% sampling error into the sensitivity analysis.

In addition to configuring the sample size, we also considered different channels, forms of engagement, and selection of criteria to ensure that ¹⁹stakeholders with different characteristics and criteria were incorporated into the engagement process.

- ✧ Characteristics of stakeholders: Gender (M:F = 6:4); age and number of years spent watching baseball; motivation for supporting their team; which team(s) they support; location of residence; etc.
- ✧ Engagement channels: Professional baseball stadiums, Chinatrust Brothers boosters' meetings, amateur baseball tournaments, PTT (an online discussion forum) baseball board and boards for specific teams, unofficial Facebook groups, and the CTBC and PwC internal company network.

¹⁸ Based on the questionnaire result. The number of samples was 969, and the survey range was the average number of entries at home games between 2014 and 2017.

¹⁹ According to the following research dissertations: "Study on CPBL Baseball Fan Relations and Fan Loyalty"; "Study on Local Impacts on Game Management Effects and Team Loyalty of City Residents: A Case Study on the EDA Rhinos"; "Role of identification with a group, arousal, categorization processes, and self-esteem in sport spectator aggression."

- ✧ Engagement method: Organizational workshops (one session each held in northern, central, and southern Taiwan); one-on-one interviews, telephone interviews

Much to our surprise, we also discovered striking similarities between the changes reported by fans. Even before the first half of the Stage 1 interviews were finished being conducted, high degrees of commonality were noted between the outcome chain of events and outcomes, and the scope of the similarity spanned different teams, backgrounds, number of years watching games, and other fan criteria; the same situation was also seen in the questionnaire and Stage 3 interviews. Since the study focused on the Chinatrust Brothers, it was necessary to analyze differences between the fans of the Brothers team and other teams. Hence, according to our management objectives, fans were divided into the two subgroups of "Chinatrust Brothers fans" and "Non CTBC Fans".

Outcome

During the interviews, Chinatrust Brothers Fans stressed that CTBC's sponsorship without changing the entire brand of the team was one of the biggest reasons they continue to support the team. In addition, their efforts on optimizing the games, increasing resources, recruiting more players, and taking good care of them influenced the professional baseball industries, which directly build on better experiences they had when supporting the team. While other fans pointed out that CTBC's sponsorship helped maintain the number of CPBL teams and make better arrangements for game schedule and agreed with the influence they brought to the industries that indirectly affected teams they supported and hence changed their experiences as well. Below are the changes both Chinatrust Brothers Fans and other fans said happened to them over supporting baseball teams.

- **Improved interpersonal relationships**

Fans got chances to meet other fans who supported the same team at the fields; some interviewees even indicated that they met their husbands or wives at the fields. While they also found out it's easier to have conversation with families and new friends if they are both fans of CPBL, and could watch the game together, which helped them become closer with friends and families.

- **Positive values on life and positive daily behaviors**

By watching players' effort and hardworking in the game, fans can foster the spirit of perseverance and team cooperation, and emphasize more on the process instead of result. These attitudes affected their value outlook on life and daily habits and they become more positive.

- **Sense of belonging and self-identity**

During the game, fans cheered up for the team and resonated with other fans. They also bought related products and declared the senses of belonging by wearing team logo. "Being a fan of XX team" and welcomed by other fans not only made them feel safe and happy but also become their self-identity which they regard as an honor. Some fans even cultivated baseball-related or instrumental skills and boosted their confidence through it.

- **Reduced stress, achieved a more fulfilling life**

For most of fans we engaged, baseball has become one of the center of their lives that they spent many time on it. Watching games helped them release stress from work or school and obtain energy from the spirits the players showed. Some interviewees even claimed that the happiness that baseball brought to them let their lives become more fulfilling.

- **Established exercise habits and have become healthier**

Teams provided diverse and entertaining baseball events that triggered more incentives for fans to attend baseball events and increased enthusiasm for baseball and sports, which encouraged them to make exercise a habit and become healthier.

- **Consumer behavior and financial burdens**

Some fans indicated that they spent a lot on tickets and related products. The consumer behavior made them feel satisfied and happy while for some fans who spent too much it might become financial burdens for them in the end.

✓ Charitable Activity Participants(young players)

Background

Young players participated in charitable activities are Stage 3 Impactors. Since charitable activities comprise ancillary activities of this project, and participation by professional baseball players only accounted for part of the CTBC Youth Baseball Project and Black Leopard National High School Baseball Program, such participants had minor implications in terms of management. Consequently, to achieve a 95% confidence interval with a sampling error of 6% or less, at least 190 samples had to be collected.

In addition to configuring the sample size, we collected subjective opinions through interviews with young players, referred to objective opinions of coaches, and selected young players from schools in different regions, with different motivations to play baseball, and of different ages for engagement, thereby ensuring that stakeholders with different characteristics and criteria were incorporated into the engagement process. In the process of engaging stakeholders, we discovered that most participating young players like sports and see their team as the center of school life and a motivation for learning, and there were no differences in their outcomes because of different criteria. Although the content of the activities in the two projects differed slightly, one of their primary focal points was professional baseball players; hence, the changes noted in participants in one program mirrored those of participants in the other program. Hence, the subgroups were not further divided.

Outcomes

- **Increased self-confidence and sense of accomplishment**

During the activities, players from Chinatrust Brothers team coached young players. The encouragement from the professional players enhanced young players' self-confidence, motivated them to practice harder, and developed better skills. The process and the improvement recognized by coaches and teammates also helped them build up sense of accomplishment.

- **Positive values and outlook on life**

During the activities, young players had chances to watch Chinatrust Brothers players demonstrated the baseball skills or even played games in person. Moreover, Chinatrust Brothers players taught them the positive attitudes they usually held during the games or their growing experiences such as humility, perseverance, and endeavor. Young players said they learned a lot from the sharing and tried to emulate Chinatrust Brothers players after the activities.

On the other hand, CTBC Youth Baseball Project held courses that help children strengthen emotion management and communication ability, which, according to the feedback from children, let them, learn how to deal with negative emotions and stay more positive during daily lives.

- **Improved interpersonal relationships, Gaining a sense of belonging and identity**

During the activities, players from Chinatrust Brothers team coached young players. Professional players taught them to understand the importance of cooperation and were more willing to help their teammates or to obey coaches' instruction, which established mutual trust and prevented conflicts with others. Hence, improved their interpersonal relationships as well as the sense of belonging to the team.

The courses held in CTBC Youth Baseball Project also helped children to better control their emotion and reduced the conflicts in their relationship. They were easier to trust on coaches and teammates, and felt safer and welcomed staying in the team.

In addition, a summary of feedback garnered from stakeholders through the interviews and questionnaires is also provided below:

Fans

“With the participation of the enterprises, the fans expect a bright future of the team and players.”

“I started watching CPBL since my childhood, and I still feel deeply disappointed about the previous gambling scandals as well as the dissolution of the team I used to support. Therefore, it's a dilemma for me to support CPBL again. With the participation of the big enterprises, the fans do expect a bright future of the team and players”

“I would no longer support CPBL if Brothers dissolved or changed its name. I'm so grateful for all that CTBC have done. ”

“Although the team dealt badly with the scandal happened last year, I still recognized their efforts and improvement. With the participation of Fubon, CPBL is getting better and better.

“I made some really good friends when watching ball games! Although some of them no longer watch CPBL, we still keep good relationships.”

“My wife is also the fan of Brothers. We met during the ball game.”

“CPBL plays an important role in my life!”

“The performance of XX player fostered my spirit of perseverance!”

“ I am envious of the figures of the players. Therefore, I endeavor to control my diet and daily routine.”

The Players

“We can concentrate more on training and playing with the full support of CTBC!”

“CTBC upgraded the facilities, dorms and diet quality of our home field to make us feel more comfortable.”

“CTBC introduced international resources(recruit foreign coaches, and hold overseas spring training). All of these broadened our horizons.”

“With the increased number of dietitians and athletic trainers, the system of physio therapists and rehabilitation sessions become sounder, helping the extension of professional career and players' fitness.”

“CTBC established a transparent salary review policy to let players abide by, thereby avoiding potential problems and gambling scandals.”

“The ultimate goal of the boss, Jeffrey Koo, is to make the players the role model of children in rural areas. Therefore, we train harder and try to perform better on the field.”

“It's my honor to be one of the members in CPBL's transformation.”

The Logistics Team

"Most of the workers in this field have a certain degree of enthusiasm for baseball. I can feel that CTBC is willing to make the overall environment better, introduce more resources and systems, and therefore I want to work harder."

"In the past, the number of administrators was very small, especially in the minor league. Now, the number of administrators has increased a lot, so that players can play without any worries."

"In the past, the number of athletic trainers was small and there was no professional division of labor. It often caused players to find their own doctors, play with injury, and therefore old injuries often worsen or accumulate. Now, in addition to the increased number of athletic trainers and rehabilitation coaches, players can follow scientific management to improve their body."

"The current team manager and coaches attach greater importance to the opinions of the athletic trainers than before, so that the profession of the athletic trainers can be highlighted. Even if there is pressure, it increases athletic trainers' sense of accomplishment."

"There were resource limitations on things we can do for the team and learn from the work before. Now, there are more resources and there are also budgets for further study and training."

Rural Baseball Team Adoption Subsidy Project-Itinerant training

"I feel that participating in this project has taught me some kind of attitudes. And I also made a lot of friends here and let me feel that I am part of the team."

"Thank you for the care of the staffs of China Trust, and thank you for the opportunity to let me learn what I won't have chance to learn before."

"I feel that attending this event will allow us to learn a lot of knowledge and let us know how to adjust our mood. I hope to participate in this event in the future."

"During these five days, I am very happy to meet the staffs of CTBC. Although it's short, no matter how many setbacks we encounter, you are always by our side."

"I want to thank the CTBC Charity Foundation for giving us the opportunity to play on the baseball field."

"I am really happy to participate in this project. From the first day, I feel very good. There are many courses, and I can also get along and chat with the players. The courses are very meaningful, no matter in sports, psychological or diet aspects. It is very meaningful and precious for the future of us."

CTBC Cup Black Leopard Road Tour

"I am so grateful to CTBC and all the staffs of Black Leopard Cup. They held an amazing cup! It's meaningful for us to play on the field and get coached by the professional baseball players, and I hope that I can join this cup again."(High School Player)

"The professional baseball players have a huge influence on high school players, including the instructions and words. The high school players will acquire certain attitude and skills, and I believe they will always remember."(Coach)

2.2.2 Indicators

The SROI assessment requires one or more indicators to be verified for each outcome in order to verify whether the outcome happened and the number of times the outcome occurred. In the present study, we first consulted international sports-related literature and studies to analyze behavioral indicators which reveal changes in stakeholders. In the discussion with stakeholders in Stage 1, depending on each stakeholder group, we configured indicators suited to their particular characteristics; for Stage 1 Impactors, since they have a relatively greater impact on the project decision-making process, in addition to the subjective reactions of the actual stakeholders themselves, we also referred to the observations of other related parties or other objective data to verify whether the associated outcomes actually occurred. With respect to Stage 2 and Stage 3 Impactors, we made our selections according to their respective characteristics; the suitability of selected indicators was also verified through trial questionnaires and interviews with stakeholders at different stages. For example, we do pre-questionnaire for the fans and ask for their feedback to revise the content before we deliver it formally. During the questionnaire process, the aforementioned indicators were not found to cause any significant invalidity of the questionnaires. During the Stage 3 outcome verification process, we also held discussions with stakeholders on the suitability of the indicators. Moreover, in line with the practices set out in the SROI guidelines, we also endeavored to make sure that objective and subjective indicators were included.

1. Type of Indicators

Stakeholder	Category	Type of Indicators
Fans	Chinatrust Brothers Fans	Subjective: Fan questionnaires (based on the Kirkpatrick Model; a detailed explanation is appended hereto)
	Non CTBC Fans	
Players	Senior players (joined prior to 2014)	Subjective: Surveys filled out by players Objective: Surveys filled out by the logistics team and other reference data (incorporated into the player questionnaires; a detailed explanation is appended hereto)
	General players (joined after 2014)	
Logistics Team	Local coaches	Subjective: Member responses
	Professionals (sports-related)	Objective: Reference data (gathered via interviews, e.g., a reduction in turnover rate)
	Administrative personnel	
Charitable Activity Participants	CTBC Youth Baseball Project	Subjective: Student questionnaires Objective: Interviews with coaches
	Black Leopard National High School Baseball Tournament	
	Program - Road Tour	

A more thorough explanation of the particular indicators used in the present study is presented below; further details on the individual outcome indicators can be found in Appendix 5-1 "Outcome Indicators List".

✧ The Kirkpatrick Model

The massive number of fans and decentralized nature of their distribution makes it difficult to gather relevant data, hence it was necessary to rely on subjective judgments of stakeholders to decide the quantity of outcomes. In the process of conducting the interviews, we discovered many similarities between the outcomes reported by different fans; however, there were also many differences in terms of their reactions and magnitudes thereof which also further influenced how they judged the valuation and impact factors of each particular outcome. If only a single threshold were used to delimit whether an outcome occurred or did not occur, the limitations caused by having only two responses would result in a disparity with the actual circumstances. With this in mind, after concluding multiple stages of interviews and discussions, we decided to defer to the Kirkpatrick Model²⁰ and divided changes in fans into three levels ranging from perfunctory to profound: Reaction (Level 1) --> Behavior or Cognition (Level 2) --> Results (Level 3). The threshold for determining outcomes was likewise configured to ensure that the questionnaire-takers had to have, at a minimum, changes in behavior or results in order for it to be considered that a change occurred. Moreover, since stakeholders who had the same outcome could have different valuations, durations, and so forth for the outcome due to differences in the extent and degree thereof, we further divided them into different categories for statistical purposes based on the extent of the occurrences of the outcomes.

Using the questionnaire given to fans as an example:

Q: Has your support for the team over the past five years also been beneficial to improving your "Positive values on life and positive daily behaviors" as described above, and if so, what was the extent of the change?	
1. None	<input type="radio"/> I haven't perceived or experienced any changes in particular
2. Reaction	<input type="radio"/> I perceived positive information conveyed by the team, but my values and outlook on life weren't impacted.
3. Behavior/Cognition	<input type="radio"/> I perceived positive information conveyed by the team and my values and outlook on life were also impacted (e.g., being more resolute when dealing with frustrating issues, and being humbler)
4. Results	<input type="radio"/> The team has had a positive impact on my values and outlook on life which has in turn changed my life (e.g., I insist on overcoming obstacles in my job and not giving up)

²⁰ The Kirkpatrick Model is a widely used training assessment tool, which divides post-training outcomes into four levels: reaction, learning, behavior, and results.

(1) Threshold configuration (Option 1, Option 2): No reaction was perceived, or only positive value was perceived but it did not have an actual impact on the respondent's own cognition or behavior; these are not considered to be changes and were not included when calculating quantity of outcomes.

→ The number of persons from options 3 and 4 were incorporated to calculate the quantity of outcomes.

(2) Extent of change 1 (Option 3): Not only did the respondent perceive positive value, but it also had an actual impact on their behavior or cognition. The change is considered to have occurred, but the extent of the change is relatively perfunctory.

(3) Extent of change 2 (Option 4): Not only was behavior or cognition impacted in a small proportion of the respondents, but the change also made a difference in their lives. The change is considered to have occurred, and the extent of the change is rather profound.

→ Respondents who selected Option 3 or Option 4 were divided into two categories, and the quantity, financial proxies, duration, and impact factors of the outcomes that occurred were tallied separately. Results for which this distinction was made include the following:

Changes in outcomes	Level2: Cognition/Behavior	Level3: Results
● Positive values on life and positive daily behaviors	(1) Positive values	(2) Established positive day-to-day behavior and habits
● Sense of belonging and self-identity	(1) Gained a sense of belonging	(2) Gained a sense of self-identity
● Reduced stress, achieved a more fulfilling life	(1) Reduced stress	(2) Increased quality of life
● Sense of satisfaction or financial burdens	(1) Emotionally satisfied and happy	(2) Caused financial pressures

✧ Reference Data

In addition to subjective determinations, we also relied on outside observers and objective data as much as possible to support the conclusions of the outcomes. Players' outcomes, for example, involved objectively measurable indicators such as professional competitiveness. Since professional players' physical condition is extremely confidential information in the professional baseball industry, we adopted the use of anonymous questionnaires. Players gave answers on their own accord which provided us with objective indicators which were then cross-referenced against questionnaires filled out by coaches, sports medicine personnel, and other professionals familiar with the players' physical conditions, thereby serving as a baseline for measuring the occurrence of outcomes.

Using the questionnaire given to players as an example:

Q Is having support from professional personnel (e.g., sports medicine personnel, nutritionists, etc.), exclusive training areas and new facilities and equipment, and adequate

replacement players beneficial to helping you make the following changes? (May select more than one)

- My injury rate significantly decreased as compared to the past (a decrease of over 30%)
- My frequency of having to play while injured significantly decreased (a decrease of over 30%)
- My training efficacy has improved considerably compared to the past (an increase of over 30%)
- My physical condition (e.g., BMI, muscle endurance, flexibility, etc.) has improved considerably compared to the past and can be maintained for a game season.
- Other; please specify: _____
- None of the above. I didn't feel that there was any change.

(See Appendix 1 for the full list of survey questions)

2. Quantity of Outcomes

"Quantity of outcomes" is calculated by multiplying the ratio of the number of persons meeting indicators by the population quantity in the questionnaires (stage two engagement). Since the number of Stage 1 Impactors who were engaged reached at least 2/3 of the population, and a significant difference was not observed in the questionnaire results, it signifies that there was a consistent trend in the changes among the baseball team's members. In spite of the relatively smaller sample size for Stage 3 Impactors, a significant difference was likewise not observed.

Due to the massive size of the population of Stage 2 Impactors, a statistical approach was adopted in order to delimit a possible error range, and the quantity of outcomes was adjusted based on the particular error ranges in question and then incorporated into sensitivity analysis (for details, refer to 2.1.2 "Engagement Process").

3. Verification of Results

In the Stage 3 interviews, we asked stakeholders to verify the reason(s) why outcomes did not occur. In most cases, changes were indeed reported, but factors such as age, seniority, drop-off factors, and other characteristics resulted in the extent of the changes not reaching the designated indicator threshold. Open-ended questions were also included in the questionnaire design to enable stakeholders to specify other unique outcomes resulting from the changes. There were no unidentified outcomes gathered or discovered through the interviews and questionnaires.

2.2.3 Duration

The amount of time during which an outcome takes place; each outcome has a different duration. In the present study, the duration of individual outcomes was determined according to stakeholders' subjective predictions and by referring to objective determinations of associated affiliated persons, project scope, and related study literature.

For duration of the input, we calculated all the resources CTBC and Brothers Sports Co. invested in the activities within project scope during 2014-2017. And for the duration and drop-off rate of outcomes, we engaged stakeholders to decide start from the time they joined the activities. During three stages engagement, we asked stakeholders about how long they thought the outcomes might last and the drop off rate. And for outcomes that can be reviewed objectively, we also referred to related essays to confirm the accuracy. While for subject outcomes, we referred to other SROI report and discussed with stakeholders in the 3 stage interview to confirm the accuracy

For more information, please refer to Appendix 5-3: "Impact factors List".

2.2.4 Financial proxies

Refers to each respective financial proxy identified from indicators of each measurement outcome, which are then converted into a monetary value. The steps and method used to determine financial proxies in the present study are set out below.

1. Determining the valuation method: A valuation method best suited for each stakeholder group was selected according to stakeholder feedback garnered through the interview process and extent of sufficiency of gathered information. The suitability of the valuation method was also verified via questionnaire trials and Stage 3 interviews with stakeholders in order to prevent bias arising from differences in valuation methods.

Stakeholders	Category	Valuation Method	Reason for Selection
Fans	Chinatrust Brothers Fans	Value Game ²¹	During the interview process, it was discovered that professional baseball offers a highly unique experience which is very difficult to mimic using substitutes (displacement method). Meanwhile, the diverse nature of the fan groups would be prone to causing bias in the contingent valuation method due to their differing backgrounds. Hence, the Value Game was adopted.
	Non CTBC Fans		
Brothers Sports & Entertainment Co.	Travel Group Leaders (Company Representatives)	Cost method for computing value	After interviewing the team captain, we realized that figures obtained from the

²¹ Please see the "Appendix 5-2. "Financial Proxies List" for the value game process

			baseball team's financial statements could be used to corroborate the outcomes reported by the team; hence the Cost Method for computing value was adopted.
Players	Senior players (joined prior to 2014)	Displacement method	During the interview process, we discovered that stakeholders could specifically explain or identify potential substitutes for outcomes; hence the Displacement method was adopted.
	General players (joined after 2014)		
Logistics Team	Local coaches	Contingent Valuation	During the interview process, sufficient substitutes for outcomes could not be gathered; in order to prevent the design of the questionnaire choices from not according with actual circumstances which would result in bias, and in consideration of the varied characteristics of stakeholder groups, the contingent valuation method is adopted.
	Professionals (sports-related)		
	Administrative personnel		
Charitable Activity Participants(young players)	CTBC Youth Baseball Project	Displacement method	During the interview process, we discovered that stakeholders could specifically explain or identify potential substitutes for outcomes; hence the Displacement method was adopted.
	Black Leopard National High School Baseball Tournament Program - Road Tour		

2. Valuation range: The valuation methods set out in the table above were used to determine the valuation range of each outcome derived from interviews and data collection. The Value Game resulted in a large number of options obtained through the interviews with fans; since

respondents ranked prices from high to low, average numbers could be obtained along with a standard deviation range; after excluding extreme values in excess of the range, all remaining options were incorporated into the questionnaire.

3. **Weighted average:** Questionnaire results obtained via the aforementioned valuation method were tallied and calculated. Aside from the case of the schoolchildren participating in the charitable activities, who had less ability to make sound judgments due to their age, thus making it necessary to combine their viewpoints with those of their coaches to obtain the largest numbers for our calculations, for all other groups, we utilized the surveys filled out by the actual stakeholders themselves and then made our calculations based on a weighted average. Besides, in the questionnaire, we asked each stakeholders to prioritize the outcomes, and used this results to verify the value of financial proxies properly revealed the relative importance among different outcomes.
4. **Result confirmation:** The final calculation results were verified with stakeholders through the Stage 3 interviews. Due to the relatively high valuation of the results from the fans, another certified sports-related SROI report was referred to, and the financial proxies were adjusted and incorporated into the sensitivity analysis.

(For more information concerning how financial proxies were formulated for individual outcomes, please refer to Appendix 5-2: "Financial Proxies List ".)

2.3 Inputs and Outputs

1. **Project inputs:** Resources input by stakeholders in order to make the project activities happen.

Stakeholder	Inputs		
Category	Item	Period	Source
Baseball Team	Operating costs and expenditures ²²	2014~2017	Brothers Sports Co.'s Financial Statements, 2014–2017
CTBC	CTBC Youth Baseball Project Expenditures	2016~2017	CTBC Internal data
	Expenditures for the Black Leopard Road Tour	2015~2017	
Chinatrust Brothers Fans	Time spent spectating games and amounts spent on purchases (Calculated based on income from games and merchandising income)	2014~2017	Brothers Sports Co.'s Financial Statements, 2014–2017

²² CTBC's sponsorship amount is already incorporated into the baseball team's operating costs and expenditures calculation and hence is not included to avoid redundancy. The operating costs and expenditures were calculated according to figures obtained from the Brothers Sports & Entertainment Co. 2014–2017 financial statements.

Non-CTBC fans	Time spent spectating games and amounts spent on purchases (Same as above; imputed according to publicly available information)	2014~2017	Publicly available information (e.g., news reports)
Other	CTBC Youth Baseball Project Itinerant Training - Coaching Time ²³ (Calculated according to coaches' average daily wage)	2016~2017	CTBC Internal data
Total Value of Inputs			\$ 3,402,343,773

Inputs of CTBC, players, and the logistics team are already included in the calculation of the team's operating costs and expenditures in the form of advertisements and salary expenditures and are hence not included to avoid redundancy. Since participants in the charitable activities were still students, even if they did not participate in an activity, they would not have had a productive capacity during that particular time, hence these participants were not included in time cost calculations.

3. Generated by the project: Quantifiable outcomes of project activities (e.g., headcounts, number of times held)

Types of Stakeholders	Item	Quantity (Unit)
Baseball Team	Average number of coaches and players, 2014–2017	74 people
	Annual game attendance, 2014–2017	120 sessions
	Annual number of home games, 2014–2017	60 sessions
	Number of articles appearing in print media, 2014–2017	9,164 ²⁴
	Number of MLB-level foreign coaches retained in 2017	7 people
	Number of charitable activities participated in by Chinatrust Brothers players, 2017	40 sessions
	Number of hours of participation in charitable activities by Chinatrust Brothers players, 2017	150 hours
	Number of daylong themed events held in 2017	10 times
CTBC	CTBC Baseball Charity Park(CTBC Park) ²⁵	1 site

²³ Itinerant training provided through the Rural Baseball Team Adoption Subsidy Project also requires school coaches to participate throughout the entire training process; and, in addition to accompanying schoolchildren, coaches must also receive training. Through the interviews, we also found that outcomes among schoolchildren resulting from the participation of professional baseball players often require coaches to provide subsequent follow-up support and training in order for the outcomes to remain in effect; therefore, the time value of coaches is included.

²⁴ Corporate Sports Sponsorship and Its Branding Benefits in Media: A Case Study from CTBC Financial Holding (Lin, 2018)

²⁵ In 2014, in Pingtung County, CTBC funded the construction of a standard outdoor baseball field, indoor training area, and a dormitory conference room to help meet the need for living quarters and training facilities among second-string Chinatrust Brothers

		(NTD\$130,000,000)
	Number of itinerant training sessions held under the CTBC Youth Baseball Project (2016–2017)	2 sessions
	Number of schools participating in the CTBC Youth Baseball Project itinerant training in 2016	12 schools
	Number of schools participating in the CTBC Youth Baseball Project itinerant training in 2017	29 schools
	Number of sessions held of the Black Leopard Road Tour (2015–2017)	3 sessions
Fans	2014 Home game attendance	4,958 people
	2015 Home game attendance	6,364 people
	2016 Home game attendance	7,142 people
	2017 Home game attendance	5,559 people
	Average total viewership, 2014–2017	734,528 people
	Average total home game attendance, 2014–2017	360,360 people

2.4 Impact Factors

(1) Deadweight:

This refers to an outcome occurring regardless of the existence of a project. In this study, deadweight is assessed individually for each outcome by the stakeholders based on the process of the three stages of engagement, and calculations for inclusion are based on the largest number or average number. In addition, we also referred to SROI reports and research dissertations covering similar subjects, the process and result is revealed in the chapter of sensitivity analysis; in cases where a significant difference was noted, we further verified the circumstances with stakeholders.

One thing should be noticed is that we didn't make the calculation only base on the question of "What is the possibility that enterprises other than CTBC will sponsor Brothers Sports Co.", thought it might be one of the point that our stakeholders might concerned when answering. But we asked them to estimate deadweight rate according to the possibility that "each outcome" might happened without the whole project whether it's related to CTBC's sponsorship or activities held by the Team.

(2) Attribution:

This refers to the probability that stakeholders would have the same outcome due to other factors, regardless of the existence of this project. Unlike Deadweight, Attribution is the probability of an outcome occurring when there is interference from other projects, while Deadweight is the

players and little league teams supported by the CTBC Charity Foundation. A training classroom was also built. These projects can enable the CTBC Charity Foundation to help support disadvantage children and families and provide space for volunteer training and studying.

probability that the outcome will naturally occur. The attribution of this project is assessed individually for each outcome by the stakeholders based on the process of the three stages of engagement, and calculations for inclusion are based on the largest number or average number. In addition, we also referred to SROI reports and research dissertations covering similar subjects; in cases where a significant difference was noted, we further verified the circumstances with stakeholders.

In particular, with respect to Non CTBC Fans, in consideration of stakeholders' ease of understanding and impartiality of the study, the interviews and questionnaires were likewise conducted with a focus on "changes in fans support for specified professional baseball teams", and calculation results were further converted according to a 75% attribution, that is to say, the Chinatrust Brothers' impact accounted for 1/4 of the total impact, which is proportionally equal to that of the other teams (there are currently four teams in the CPBL). The ratio is similar to the result of questionnaires about CTBC's contribution to non-CTBC fans. Consequently, non-CTBC fans had two factors of attribution (Attribution 1: Extent of impact other than the factor of supporting a specified professional baseball team, e.g., work, family, etc.; Attribution 2: Extent of impact of the professional baseball team in question not attributable to CTBC.)

(3) Drop-off:

This refers to the effect of an outcome deteriorating over time. It is observed that the effectiveness of an outcome tends to decrease slowly over a period after. Therefore, when evaluating the benefits of a future outcome, the drop-off must also be estimated. The Drop-off of this project is assessed individually for each outcome by the stakeholders based on the process of the third stage of engagement, and calculations for inclusion are based on the largest number or average number. In addition, we also referred to SROI reports and research dissertations covering similar subjects; in cases where a significant difference was noted, we further verified the circumstances with stakeholders.

In particular, fans' average results for drop-off factors trended toward zero, that is to say fans believed that even if professional baseball were to go away, the outcomes from these changes would still continue to remain in existence and it would not take a toll on their effects, or the extent of the diminution would be very small. Through professional determinations made by consultants and our discussion with the baseball team captain in which he shared his observations from more than a decade of experience in the professional baseball industry, we believe that this is an exaggerated phenomenon which might be due to "fan hysteria". As such, we fine-tuned the figure according to the standard 10% baseline specified in the guidelines, and we also incorporated the adjusted results from the reference literature into our sensitivity analysis.

(4) Displacement:

This factor represents the effects of the target project on other projects or stakeholder factors outside of the project. In the SROI Guide, an example is that a street lighting program implemented in District A reduced the crime rate in this district; however, District B reported an increase in crime, possibly displaced from District A. The SROI Guide also states that not every project contains this particular factor.

During the interview process, a certain amount of opposition was noted between fans; in response, we consulted a relevant research dissertation²⁶ and discovered that this is an unavoidable circumstance resulting from the nature of the sports industry, which is characterized by passionate emotional reactions in sports settings and competitions. After engaging with more than 1,000 fans, we discovered that in the CPBL, the positive outcomes of Chinatrust Brothers fans, due to their larger numbers, frequently resulted in dislike and discomfort among fans of other teams (e.g., some fans' sense of belonging is derived from the overwhelming numbers of people and verbally attacking other teams online); only some interviewees from other teams expressly indicated this, and it was not particularly significant, but since the present study was committed to the principle of "do not over-claim", a 10% estimate of displacement of Chinatrust Brothers fans was used, and a consensus on this was reached after discussing the matter with fans of other teams. Displacement for other stakeholders was also adjusted in the sensitivity analysis in order to test results.

For more information concerning the formulation of impact factors, please refer to Appendix 5-3: "Impact factors List".

²⁶ Refer to "Role of identification with a group, arousal, categorization processes, and self-esteem in sport spectator aggression." (Nyla R., Daniel L.;1992)

Part 3: Project Results

3.1 Calculating the Results

After converting the aforementioned result values according to the discount rate (1.05%) used in this report, which is based on the one-year interest rate for fixed deposits offered by Chunghwa Post as of January 2018, and after comparing these to the amounts of monetary inputs, we found that the social return on investment resulting from CTBC's sponsorship of professional baseball is 17.59:1.

Total Impact	\$59,845,804,079
Total Inputs	\$ 3,402,343,773
Social Return on Investment (SROI)	17.59:1

The calculation results and detailed figures broken down by stakeholder are set out below. The numbers shown in yellow are calculations of average values, revealing the overall circumstances of the outcomes of the stakeholders in question.

Stakeholder	Categories	Total value of impact	Degree of occurrence	Duration	Valuation of outcome	Deadweight Factor	Attribution	Drop-off
Brothers Sports & Entertainment Co.	NA	\$903,511,289	100%	4	\$912,971,052	0%	0%	0%
Players	Senior	\$23,243,334.10	82%	2.68	\$1,042,473	66%	43%	6%
	General	\$33,935,861.55	72%	2.39	\$442,191	56%	43%	3%
Logistics Team	Coaches	\$2,979,779.44	80%	2.20	\$79,575	48%	25%	14%
	Specialists	\$499,859.66	58%	0.80	\$69,733	63%	45%	24%
	Administrative Personnel	\$1,309,672.03	53%	1.20	\$62,732	57%	35%	28%
Fans	Chinatrust Brothers Fans	\$36,562,090,601	35%	4.70	\$372,200	59%	43%	5%

	Non CTBC Fans	\$22,302,101,612	30%	4.40	\$537,965	58%	38%	75%	13%
Charitable Activities	CTBC Youth Baseball Project - Itinerant Training	\$3,469,747.20	99%	2.00	\$19,023	83%	43%		10%
	CTBC Cup Black Leopard Road Tour	\$12,312,789.88	95%	2.00		60%	28%	5%	

3.2 Sensitivity Analysis

SROI measures the monetary value of qualitative, narrative information. Hence, it will inevitably involve many assumptions and estimates. According to A Guide to Social Return on Investment, each analysis report must include a sensitivity analysis and disclose relevant information to ensure that results are objective and verifiable.

Since the present study involves a great deal of hypothetical and subjective information and encompasses a wide-ranging scope, to ensure a rigorous and objective report, we selected situations from feedback from stakeholders in which opinions were relatively inconsistent and further discussed the issues with stakeholders during the Stage 3 outcome verification process. In the end, we decided to make adjustments to the following circumstances for use in testing the sensitivity analysis of the present study, resulting in an SROI sensitivity analysis range between 2.08 and 22.69.

SROI	Adjustment	Details
\$ 16.38	Drop-off	<10% adjusted to 10%
\$ 10.56	Drop-off	Fans: Adjusted according to the reference literature
\$ 16.91	Displacement	0% adjusted to 10%
\$ 13.15	Displacement	0% adjusted to 30%
\$ 18.64	Attribution	Adjusted extent of the impact of CTBC on Non CTBC Fans
\$ 17.67	Attribution	Fans: Adjusted according to the reference literature(SROI report with similar topics and outcomes)
\$ 22.69	Deadweight	Fans: Adjusted according to the reference literature(SROI report with similar topics and outcomes)
\$ 16.72	Duration	Adjusted duration equal to or above 10 years to 5 years.
\$ 17.63	Value of inputs	Excluding other expenditures and other income (e.g., baseball camps)

\$ 15.40	Quantity of stakeholder	Number of fans: Total annual number of attendees at home games/Average number of entries at home games per individual(based on the research dissertations instead of questionnaire)
\$ 14.40	Quantity of stakeholder	Number of fans: Total annual number of attendees at home games /Average number of entries per individual (including home game+ away game)
\$ 19.49	Quantity of stakeholder	Number of fans: Game attendance + TV broadcast viewership
\$ 21.55	Quantity of stakeholder	Number of fans: Game attendance + online broadcast viewership
\$ 18.89	Quantity of the outcome	Increased quantity of fan outcomes by 3% (sampling error range)
\$ 16.29	Quantity of the outcome	Decreased quantity of fan outcomes by 3% (sampling error range)
\$ 11.31	Financial proxies	Some financial proxies of fans were changed to use Displacement method
\$ 2.52	Financial proxies	Fans: In case stakeholders value all of the outcomes instead of valuing each outcome during value game, we used the average number of all financial proxies and value it for all outcomes as a whole.
\$ 2.08	Financial proxies	Fans: In case stakeholders value all of the outcomes instead of valuing each outcome during value game, we used the median number of all financial proxies and value it for all outcomes as a whole.
\$ 19.53	Other	Added into the public relations value obtained by CTBC ²⁷
\$ 18.78	Other	Excluding charitable activities
\$ 17.32	Other	Excluding Brothers Sports Co. and logistic team
\$ 19.35	SROI	Increased by 10%
\$ 15.83	SROI	Decreased by 10%

As shown in the table above. The study had large range of sensitivity analysis result. Both of the highest and lowest result came from the adjustment of fans calculations. Fans were also the biggest risk we analyzed in the study since they had the biggest and most complicated population. Hence, there were ten in total 21 adjustments that we made about fans, and the highest and lowest results were among it.

1. The highest result (\$ 22.69) came out if we adjusted fans' deadweight according to the similar SROI reports and baseball researches. The reason is that fans, unlike beneficiaries from

²⁷ Refer to "Corporate Sports Sponsorship and Its Branding Benefits in Media: A Case Study from CTBC Financial Holding"

charitable projects, are more able to obtain things that made them experience positive outcomes, which made deadweight become higher. Although most of fans we engaged didn't think there were any other thing in the world that can replace all the changes that professional baseball had brought to them at the meantime, if we reviewed each outcome separately, they could still found some replacement to obtain those outcomes. That's why deadweight were higher than other in the similar studies.

2. The lowest rate (\$2.08) came from the adjustment of financial proxies. We used value game to survey on the financial proxies for fans' outcomes, it was the best method we decided according to previous discussion with interviewees, and we conducted it with workshops and ensured the result for several times. Since the value they chose were really high, there were still risks that they couldn't divide value that baseball had brought to them by outcomes, therefore chose the good with price that equal to the total value instead of specific outcome. So we test the result by using average or median number of fan's all current financial proxies and used it to value the whole value for fans' outcomes. And came out with two of the lowest results in the analysis.

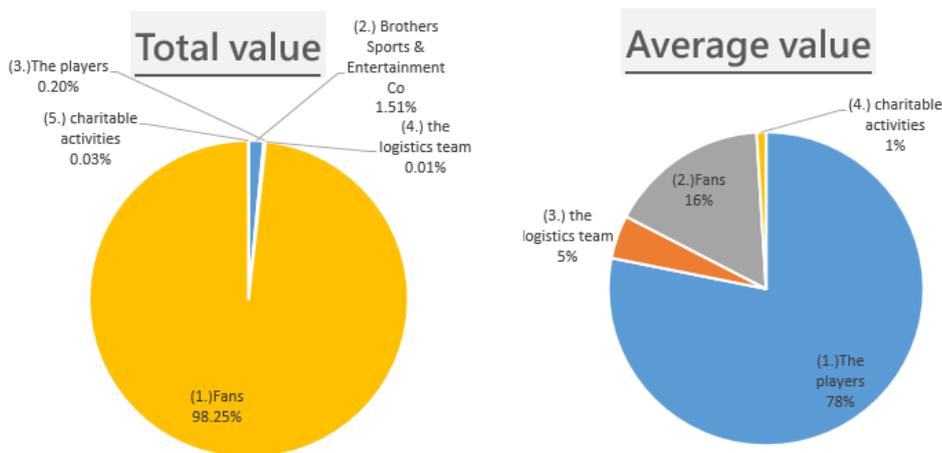
In addition, there were two elements that we thought might have highest risk: the quantities of fans and the tendency of irrational decisions fans made on financial proxies and drop off rates. As for quantities of fans, since there were no official statistic about quantity of fans, and the definition and scope of fans were unclear, also the quantity of fans would hugely influence the result. So we tested the result with different definition scope of fans and found out the number will fall in between 14.40 and 21.55. While for valuation method we used for fans, besides using total value for all outcomes, we also used displacement method instead of value game for the valuation of outcomes, the result reduced to 11.31.

After all the adjustments, there were several reasons we still stick to the original result. Except for the engagement number and process we conducted (Refer to "2.2.1 Theory of Change" p.27-29), for the quantity of fans, we tend to choose the number that has stronger and more reliable resources to make it more rigorous, so we used the total annual number of attendees at home games, collected from official data of CTBC, divided by the average number of entries at home games per individual, collected from three authoritative papers as well as second round survey which came to the similar result. The number was highly underestimated compared to the real amount but was the most reliable one we could get. Also, according to the fans we surveyed, since most of them regard baseball as their center of lives, they must be the core group who were addicted to baseball and would definitely go to the stadium to watch the game. So we made a conclusion that it is possible that fans consider the outcomes in such high values as long as they were just some of the whole groups who participated most and had biggest passion on it. We balanced the effect of overestimated from valuation through limited the scope of fans and underestimated the quantity of them, and resulted in a roughly precise result.

3.3 Results Analysis

1. Total value of impact and average value

Fans made up the largest total impact value, accounting for 98% of the total outcomes. This was due to the large number of fans, high valuation, and low extent of drop-off. If corporate stakeholders are excluded and the total impact value of individual stakeholders (persons) is divided by the average value calculated for the number of people, then the impact value obtained for players was the highest. This was mostly due to the high extent of occurrence, low extent of drop-off, and some financial proxies being relatively higher.



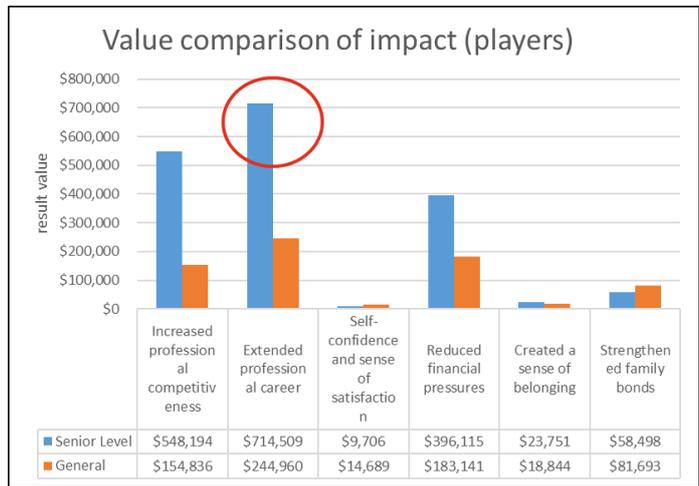
2. Category Analysis

Our findings with respect to the analysis of the results described above are presented below and are organized according to different categories and outcomes. We also discussed stakeholders' feedback derived from the following findings and engagement process with CTBC and Brothers Sports Co. management personnel in the hope that the study results can be used to further optimize management strategies and partnership models and create a bigger social impact.

❖ **Average value of baseball players:**

Senior players > general players

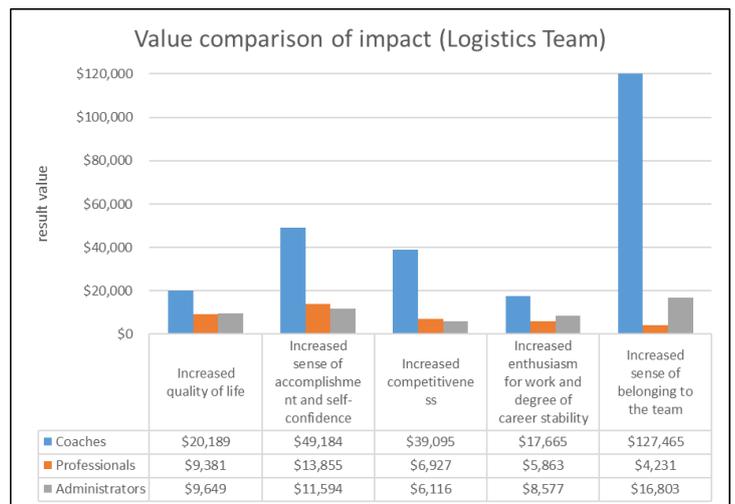
1. Among the outcome values, the greatest discrepancy was noted in "extended professional career"; this was due to senior players having a higher average salary.
2. The incidence proportion, duration, and valuation of outcomes were all higher among senior players



❖ **Average value of the baseball team:**

Coaches > Administrative > Professionals

1. Coaches: Had the highest outcome values in all cases
2. Professional personnel: High valuation of outcomes, but higher in terms of outcome substitutability and other contributing factors
3. Administrative personnel: Lower incidence proportion of outcomes



❖ **Comparison of Fans**

Impact value derived from supporting a professional baseball team:

Chinatrust Brothers Fans > Non CTBC Fans

We compared the result of surveys about “changes in fans' support for specified professional baseball teams”²⁸, and found that the impact value per person of Chinatrust Brothers fans are

²⁸ Since our interviews with and surveys on non-CTBC fans likewise focused on "changes in fans' support for specified professional baseball teams", and due to the conversion of CTBC's proportion of impact (25%), the attribution of

higher than other fans. Among the outcomes, “Positive values on life and positive daily behaviors” and “Sense of belonging and self-identity” are the two that are significant higher; also, drop off of all outcomes are obviously lower compared to other fans. Which shows the united and positive spirit of Chinatrust Brothers fans didn’t declined after the switch of supporting enterprises but keep increasing and flourishing.

And we investigated in reasons of the result above, found out that there are more Chinatrust Brothers fans recognized and agreed with CTBC’s effort of changes on international resources and systems, disciplines management, player’s participation in charity events. The overall experiences that CTBC brought to fans are positive. While the degree the Chinatrust Brothers fans enjoyed baseball games and marketing campaigns are lower than others. How to conduct attractive experiences for fans will be a key element to increase impact value we bring to them in the future. We further analyzed the survey result as well as feedback from interviews and discussed with CTBC to optimize strategy and performance in the future.

◇ **Charitable Activities**

If only inputs and outcomes of charitable activities were calculated, their SROI ratio would be 1.60, and since only the content of activities and stakeholders (participating schoolchildren) with a high degree of correlation with professional baseball were included in the scope of calculations in the present study, and other activities and stakeholders (coaches, schools, workers, etc.) of the two projects were not included, the actual impact would have likely been even higher. This demonstrates that CTBC has a comprehensive impact on the entire baseball industry in Taiwan (encompassing little league, junior league, senior league, and the professional league). Also, since both professional baseball players and children experienced positive outcomes during the activities, it was a win-win strategy and should continue used.

After verifying the calculations and analytical results described above with stakeholders, we discussed them with the administrative head of CTBC Bank (the person primarily responsible for the baseball team sponsorship and charitable activities), Vice President of the Office of Public Relations, and the team captain and general managers of Brothers Sports Co.in order to consult their understanding of and professional judgment on this field so as to verify the reasonableness of the calculation results.

3.4 Verification

In the Stage 3 engagement, we came to the stakeholders, including fans, players and logistic teams, participants of two charitable activities and their coaches, and verified the conclusions we made

Chinatrust Brothers non-fan outcomes was invariably higher than Chinatrust Brothers fans, and hence there was not a consistent basis for comparison. After adjusting the extent of the impacts made by other Chinatrust Brothers non-fans, we ran a comparison focused on "impact value of different teams on their fans"

according to the data and feedback collected and results calculated from the previous stages. The steps we used in this stage are listed below.

1. Chain of event: we printed out the COE and took it to the interviewees. In addition, asked them if there were any words or routes on the COE that were differed from their experiences and how to revise it. Then we used their advices to revise the Chain of Event, as well as to make sure we understood and described the outcomes in a precise way.
2. Calculation result: we brought the value map to them. And explained to them each part of it to ask for their feedback. Especially for duration and financial proxies. We asked them to prioritize the outcomes again to check if it matched the relative values of outcomes we had now. If there were different, we asked them about the reasons how they prioritized one outcome over another one and made sure if we had missed any situation.
3. Suggestion: we had collected some suggestions whether for the project or for CTBC. In this step, we told them what we had heard and asked if they had any different opinions. And recorded it with the conclusion we made.

Overall, we came back to CTBC and team captain of Chinatruster Brother, and shared with them the conclusions and suggestions we made. There were also some discussion about the logic and method we used during the project.

The feedback were all been revised in the present report now. Here is some points we recorded.

- **Chinatruster Brother Fans/Non CTBC Fans:** We engaged with most of fans through phone-interview in this stage. We also sent the files to fans we interviewed before to communicate with them about our findings from their feedback and invited them to respond if there were any questions. Most of interviewees did not share a different view in the three –step verification. While some mentioned they didn't experience some of the outcomes but their friends who were fans as well might had the outcomes, and they agreed all of the outcomes were general and common that would happen on a baseball fan.

Here, we also verified with them about the financial proxies by asking them to value and prioritize every outcome again. There did have some fans giving different prioritization, but overall were similar to what we had. And most of fans still insisted on the high value that professional baseball brought to them, some even asked us to share their gratitude and some suggestions(for example, to strengthen localized operations were one of the suggestion from fans) with CTBC for them.

- **Players and logistic teams:** we interviewed both senior and general players as well as coaches, professional and administrators. Players gave similar prioritization of outcomes that put "Extended professional career" at the first while "Self-confidence and sense of satisfaction" at the last. Some of them even highlighted the specific events in COE that were importance to them.

Interviewees from logistic teams further emphasized that the duration of the outcomes were mainly decided by the strategies and systems the company built, and there were some improvement needed especially on remuneration and promotion system which will be fully explained in the coming chapter.

- **Participants of two charitable activities and their coaches:** we interviewed students and coaches from four different schools. For participants who participated CTBC Youth Baseball Project, since they were too young, we explained the chain of events by narrative instead of showing them the COE itself. And the result of calculation were only checked with their coaches. The coaches shorten the duration of most of the outcomes according to their long-term education experiences, “Children always believe the outcomes obtained from a five-or-one-day activity could last for over ten years, but the truth is you needed to keep reminding them with the same concepts or attitude over and over again for several years until they can really remembered it.” In addition, coaches reminded us of the importance of coaches’ engagement in the activities. Thought Brother Players mean a lot to children and could change them tremendously, one thing CTBC did well was they invited coaches to participate in the activities to and enabled coaches to help the children during and after the activities so the outcomes could last longer and deeper. According to this feedback, we calculated value of time that coaches spent during the activities into input, which were omitted before.
- **Brother Sports Co. and CTBC:** Finally Yet Importantly, we came to Brother Sports Co. and CTBC after interviewed all the other stakeholders and revised their feedback to the result. We interviewed Team Captain of Brother Sports Co. and Administrative Head and Vice President of Public Relations from CTBC, and shared with them all the findings and results we had. They were curious about the value game we played with fans, so we added the explanation into the presentation and told them about the whole process of it. However, the biggest argument aroused was on the quantities of fans. Since there were not any reliable resources of number of fans recorded in headcount and both of the companies thought the quantities we had then were lower than the reality. Therefore, we came back, looked for more researches or essays, and revised the number slightly according to them. The process and logics were recorded in the report from page 27-29. And both companies’ representatives agreed with the number we ended up.

3.5 Suggestion and Conclusion

According to the previous result analysis as well as feedback, we collected from the engagement process. We discussed with CTBC, Brother Sports Co. and each stakeholder group and concluded to the suggestions listed below:

1. **Strengthen Localized operation- Feedback from players, fans, CTBC’s employees and residents nearby.**

More than 60% of the players’ outcomes are related to the localization strategy. According to Players feedback, having a private and fixed training base and home field were significant for professional skills enhancement, quality of life and relationships with family members. For the fans, the optimization of the facilities made them more willing to buy tickets and enjoy the game at the field. The outcome with highest value was “Reduced stress, achieved a more

fulfilling life” which also happened when watching the game. Although not everyone were happy to accept the team choosing Taichung as the home field, most held positive attitude about it and looking forward to seeing the team upgraded the local environment and business district, the marketing activities and the local stadium.

The localization operation might play important role for those stakeholders with no significant changes to experience more changes. CTBC’ employees at the Taichung headquarter and the branches near the stadium observed that although the team has set the base in Taichung for a while, there were no provision for the general public recreation around the stadium, which led to the need to rely on the original loyal fans to come from different cities and not to establish a new local community. The same advices were also obtained from interviews with nearby residents, who said that although there were no negative impacts (such as noise and traffic flow) in the vicinity from the stadiums, they did not experienced positive, engaging experiences or changes. Therefore, in the future, strengthening the connection with local culture and the environment might be one of the main strategy to work on.

2. Combine baseball activities with the operation of Bank-Feedback from CTBC employees

When interviewing the general employees of CTBC, we found that the company’s sponsorship for the Brothers Team didn’t make significant changes to them, regardless of whether they were fans or not. According to the literature, the, we read of the possible benefits to employees from the company that sponsored large-scale sports activities such as increasing loyalty and job satisfaction, etc. Nevertheless, we didn’t find the same outcomes on CTBC’s employees in this project. Employees pointed out that at present, there were events such as the broadcasted the final game live or a few discounts on the surrounding products, while they expected that there would have more opportunities for integration between CTBC and professional baseball. For example, company's family day with Brothers players participated or reserve the whole field for employees in specific games, not only to increase the base of fans, but also to enhance the company's coherence and employees’ loyalty.

The business unit said that a lot of resources and opportunities from the sponsorship could be used to manage customer relationship, such as cooperating with the Brothers Teams to organize customer welfare activities, increasing the combination of bank access and Team propaganda, strengthening the combination of team image and company brand, etc. Sponsorship could not only gain public relations benefits in media exposure, but also plays a role in deepening customer relationships and strengthening public interests in CTBC.

3. Establish more transparent and clear system for logistic team.

According to Logistician’s feedback, although the salary level, working environment and resources have improved, the promotion and remuneration system still needs to be optimized and became more transparent. The logistics team of the baseball industry often faces the difficulties in high working hours, intense labor, and low salary level, which will force employees to leave due to the decline of physical strength and economic pressure when they need to raise

families, even if they entered the industries with high enthusiasm and motivation. Members we engaged expected CTBC to play a more active role and as a leader in the industry who gives logistics team a better remuneration and welfare system. In addition, because the training of professionals required the accumulation of experience and time, CTBC should establish a clearer and more transparent promotion and salary adjustment system, so that new employees can have rules to follow, and reduce the high turnover rate.

In addition, when administrators arrange meals, accommodation and transportations, etc. for players, the executives were bound to encounter unsatisfactory situations. At this time, they need to be trusted from the management team and had the opportunity to insist on doing right things. And their performance should not have been affected by specific player feedback. At the same time, some logisticians said that sometimes it is worthwhile only if they heard the feedback and thanks from the players. Therefore, if the appropriate feedback mechanism can be established, it is believed that the enthusiasm, sense of accomplishment and loyalty of the logistics team can be effectively improved. .

4. Further estimate charitable activities social impact

This study only included parts of the two charitable projects that involved professional baseball players, while there were actually more content and activities of two projects excluded in the scope of this study. During the process of interviewing participants and coaches, we found that they also got many changes from other activities in the project. Due to the restrictions of this study, we did not have the opportunity to engage other indirectly affected stakeholders, which made the study difficult to reflect the company's complete efforts and impact in these two projects. As the results, it is recommended that the company can pull out the two projects separately for measurement in the future, and look forward to taking a more complete impact and to optimizing the projects or strategies to exert greater social influence.

Also, optimization and improvement strategies were formulated for the study findings in the hope that the results of the study could be used to provide a more representative basis of reference reflecting stakeholders' actual desires which can be utilized in future management decision-making for CTBC and Brothers Sports Co. The results of this study will also be publicly disclosed in the form of a report in the hope of serving as another channel of communication with stakeholders.

Appendix 1: Synopsis of Interviews and Questionnaires

Outline of the Interview Process (partial)

Item /Stakeholders	Chinatrust Brothers (players, logistics team, and fans)	Charitable Activities (students participating in the CTBC Youth Baseball Project and/or Black Leopard Baseball Program)
Outcomes	(1) After CTBC took over sponsorship of the Chinatrust Brothers, what changes did you notice with respect to you personally, the organization you represent, and/or people and circumstances around you (e.g., ideas, behavior, cognition, mood, etc.)? Were there any negative changes?	(1) After participating in the present project (CTBC Youth Baseball Project and/or Black Leopard Baseball Program), what changes did you notice with respect to you personally, the organization you represent, and/or people and circumstances around you (e.g., ideas, behavior, cognition, mood, etc.)?
Deadweight	(2) Had CTBC not taken over sponsorship of the Chinatrust Brothers, is it possible that the changes described above could have still occurred?	(2) If you did not participate in the present project, is it possible that the changes described above could have still occurred?
Attribution	(3) Were there any other factors that facilitated the changes described above?	(3) Were there any other factors that facilitated the changes described above?

Drop-off / Duration	(4) How long have these changes lasted? Will their effects decrease over time?	(4) How long have these changes lasted? Will their effects lessen over time?
Importance	(5) From your own perspective, please rank the changes described above in the order of their importance.	(5) From your own perspective, please rank the changes described above in the order of their importance.
Valuation	(6) If money was of no concern, which of the five items would you want to receive the most? (Please write them in the order of their price, from high to low) Which item do you believe is most comparable to the value of the most important change in the above list?	(6) Are there any other channels which could compare to the changes caused by the present project? About how much money would have to be paid for these channels?

Questionnaire (partial)

✓ **Baseball Team**

Item / Stakeholder	Logistics Team	Players
Basic information	Onboard Time, reason to choose this job, seniority, function in Brothers Sports & Entertainment Co, etc.	
Results indicators	<p><u>Selected Example: (C) "Steady source of income"</u> After CTBC Holding took over sponsorship of the team / got involved with the Chinatrust Brothers, was your quality of life and stressors impacted? Please select the descriptions which match the changes you experienced. (May select more than one)</p> <p><input type="checkbox"/> My financial income increased which significantly reduced my financial stress</p> <p><input type="checkbox"/> My working environment improved (e.g., dormitory) which improved my quality of life</p> <p><input type="checkbox"/> The baseball team's staff was increased which reduced my work-related stress</p> <p><input type="checkbox"/> I feel more at ease and can continue to perform work that interests me</p> <p><input type="checkbox"/> Other; please specify: _____</p> <p><input type="checkbox"/> I have not perceived any changes in my quality of life or stress levels</p>	<p><u>Selected Example: (C) "Changes in self-confidence and sense of satisfaction"</u> Was the process of participating in a charitable activity helpful to you in achieving any of the following changes? (May select more than one)</p> <p><input type="checkbox"/> I am more reassured about the positive impact I have on others</p> <p><input type="checkbox"/> I demand more from myself and want to be a role model for kids</p> <p><input type="checkbox"/> I am more content with my current lot in life</p> <p><input type="checkbox"/> I am willing to devote more time to activities that help people or give back to society</p> <p><input type="checkbox"/> I derive a greater sense of accomplishment from my work</p> <p>Other; please specify: _____</p>

Attribution	In addition to the changes which occurred as a result of CTBC taking over sponsorship of the team, were any other factors involved in causing the same changes? If so, how much of an impact did these other factors have?				
	100% (The changes were entirely due to the team's impact. No other factors had an impact on me.)	75% (The changes were mostly due to the team's impacts. Only a few other factors had an impact on me.)	50% (About half of the changes were due to the team's impacts, and the rest were due to other factors.)	25% (The changes had little to do with the team's impacts. Most were due to other factors.)	0% (The changes had nothing to do with the team's impacts and were entirely due to other factors.)
Deadweight	Had CTBC Holding not taken over sponsorship of the team and/or gotten involved with the Chinatrust Brothers, what would you say the likelihood would be that the same results could have been achieved through other means?				
	Extremely likely	Somewhat likely	Somewhat unlikely	Extremely unlikely	
Duration	How long do you think the outcomes from these changes will be sustained?				
	3 years	2 years	1 year	6 months	3 months
Drop-off	<p>Will the changes become less prominent as time goes by?</p> <p>a. Yes, it will gradually decrease by 10% per year</p> <p>b. Yes, it will gradually decrease by 30% per year</p> <p>c. No decrease</p> <p>d. Will increase instead of decrease</p>				
Importance	How important are these changes to you? Please rate the following from 1 to 10 (where 10 is the most important, and 1 is the least important)				
Value Assessment	Had CTBC Holding not taken over sponsorship of the team and/or gotten involved with the Chinatrust Brothers, if budget limitations were not a factor, how much money do you			With respect to self-confidence and sense of satisfaction derived as a result of participating in charitable activities, about how much money do you believe that would be	

	think you'd have to put in "annually" in order to achieve the outcomes of these changes?				equivalent to in terms of a one-year donation in support of charitable activities to achieve the same result? <input type="radio"/> NT\$10,000/month <input type="radio"/> NT\$5,000/month <input type="radio"/> NT\$1,000/month <input type="radio"/> NT\$500/month <input type="radio"/> Other; please specify: _____
	More than NT\$100,000	NT\$50,000 to NT\$100,000	NT\$10,000 to NT\$50,000	NT\$5,000 to NT\$10,000	

✓ **Fans and students participating in charitable activities**

Item / Stakeholder	Fans	Students participating in charitable activities
Basic information	Ages, gender, how long you have been watching CPBL game, the team you support and the reason, etc.	Ages, gender, where you come from, how long you have been participating in the activities, have you joined similar activities before, etc.
Results indicators	<p>(A) "Supporting the team has made it easier to break the ice with people and make new friends, meet many like-minded individuals and friends during games, forge emotional ties through baseball, and watch and enjoy games together with my boyfriend/girlfriend, family and children, and friends, thereby improving our interpersonal relationships." Has your support for the team over the past five years also been beneficial to improving your interpersonal relationships, and if so, what was the extent of the change?</p> <input type="radio"/> I haven't perceived or experienced any particular changes	<p>Did participating in this program enable you to "establish positive values and attitude"?</p> <input type="radio"/> Strongly agree <input type="radio"/> Somewhat agree <input type="radio"/> Somewhat disagree <input type="radio"/> Strongly disagree

	<ul style="list-style-type: none"> ○ I agree with this sentiment, but it hasn't actually applied to my own life (e.g., I've had chances to invite family members to watch games together but have not done so yet.) ○ I agree with this sentiment, and it has actually applied to my own life (e.g., I've used my support for the team as a topic to break the ice and make new friends, gone to see games together with family, etc.) ○ Not only has this actually applied to my own life, it has truly improved my interpersonal relationships with others (e.g., has enabled me to be closer to family members and reduced conflict) ○ I have experienced changes in my interpersonal relationships, but not in the ways described above. I experienced the following change(s) _____ 				
Attribution	Aside from supporting this team and/or participating in this program, did any other channels or methods help you achieve the changes listed below? How great of an impact did these factors have on the change in question?				
100% Credit is entirely due to supporting the team and/or participating in the program.	75% It was mostly due to supporting the team and/or participating in the program.	50% About half of the credit is due to supporting the team and/or participating in the program.	25% Most of the credit is due to other factors.	0% The changes had nothing to do with supporting the team and/or participating in the program.	
Deadweight	If you did not support the team and/or participate in the program, how high was the possibility that you'd have had a chance to achieve the same extent of changes through other means?				
100% I wouldn't have had many means to	75% I could have also achieved the same kinds of changes	50% Other means accounted for about half of the	25% The other available means were also good but wouldn't	0% These changes are irreplaceable.	

		achieve the same kinds of changes.	through other means.	opportunity to achieve the changes.	have resulted in the same kinds of changes.		
Duration	If the team were to disband, or upon conclusion of the program, how long do you think the effects of the changes achieved would be able to continue?						
		More than 10 years	5 to 10 years	3 to 5 years	1 to 3 years	1 year or less	
Drop-off	<p>Will the changes become less prominent as time goes by?</p> <p>a. Yes, it will gradually decrease by 10% per year</p> <p>b. Yes, it will gradually decrease by 30% per year</p> <p>c. No decrease</p> <p>d. Will increase instead of decrease</p>						
Importance	How important are these changes to you? Please rate the following from 1 to 10 (where 10 is the most important, and 1 is the least important)						
Value Assessment	<p>The questions listed above will help us better understand the changes and extent of impact arising from your support of the team. Next, we will present two story-based scenarios to help us gain insight into the importance you place on these changes.</p> <p>(1) From the following list of items, please select what you would want to obtain as a gift the most (you would only be able to have it for one year and it would not be redeemable for cash).</p> <p>(2) You will be able to receive a complimentary gift so long as you do not give up on a change. Please select a gift that you would be willing to accept in exchange for a change.</p>				<p>If you are unable to participate in the CTBC Youth Baseball Project, were there any other means that also allowed you to "establish positive values and attitude"?</p> <ul style="list-style-type: none"> ○ Participating in psychological growth classes or educational classes ○ Listening to a lecture and learning positive values from a speaker ○ Reading an inspiring book and learning how to have a positive attitude from it 		

	Ultimate Fantasy Prizes	First Tier Prizes	Second Tier Prizes	Third Tier Prizes	<input type="radio"/> Other; please specify: <hr/>
	Brand new apartment in the city (NT\$5 million)	Independent travel fund to any location in the world (market value of NT\$500,000)	Brand new iPhone X (market value of NT\$40,000)	Starbucks gift card (market value of NT\$2,000)	
	Brand new vehicle including paid parking space (market value of NT\$2 million)	Large 3D LED HD Flat Screen TV (market value of NT\$200,000)	Costco gift card (market value of NT\$10,000)	Season tickets to Vieshow Cinemas (market value of NT\$1,000)	
	Advanced education tuition subsidy (NT\$1 million)	Round trip airfare to any destination (market value of NT\$100,000)	Two tickets to an artistic/cultural event of your choosing (including a concert) (market value of NT\$4,000)	Complimentary EasyCard value NT\$500	

Appendix 2 Stakeholder Engagement

Stakeholder	Category	Stage 1 (No. of interviewees)	Stage 2 (Number of questionnaires)	Stage 3 (No. of interviewees)	Total engagement (persons) ²⁹	Total Population
CTBC	Administrative Head and Vice President of Public Relations (Company Representative)	1	NA	2	2	1
Brothers Sports & Entertainment Co.	Team Captain and General Managers (Company Representative)	1	NA	1	1	1
Players	Senior players (joined prior to 2014)	5	56	3	64	62 ³⁰
	General players (joined after 2014)	3		2		
Logistics Team	Local coaches	2	10	1	39	49

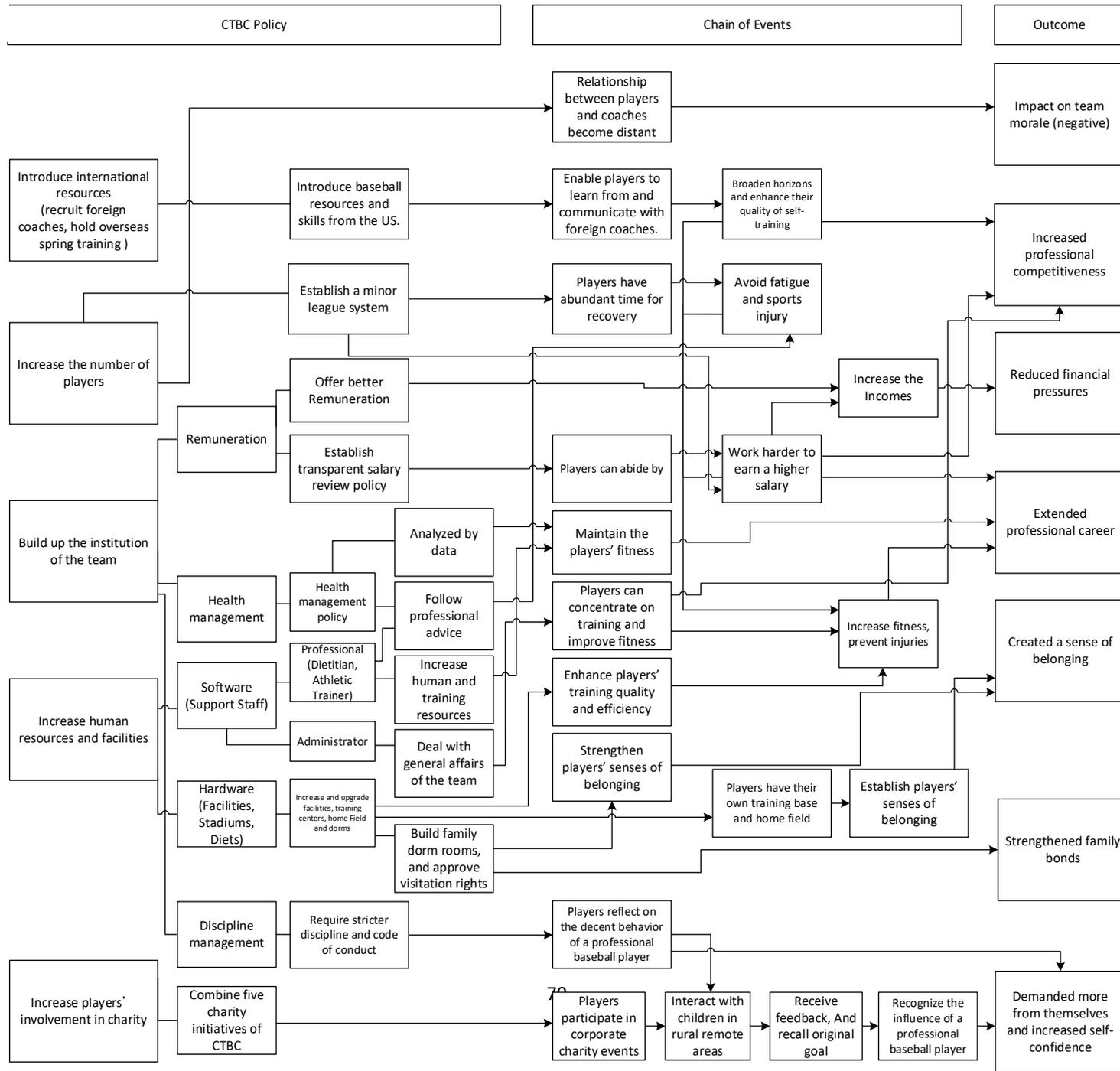
²⁹ Due to potential overlap between interviewees and survey takers, the Stage 3 sum was not equal to the total number of stakeholders engaged. Since the questionnaire was anonymously distributed to fans, players, and logistics team members, it was difficult to identify whether the interviewees also filled out a questionnaire; hence, total engagement was calculated based on the number of persons.

³⁰ Due to fluctuations in the number of players over the four-year period, the average number of players from 2014–2017 was calculated for the study. As of the date of writing, the team has a total of 65 players, hence the number of persons engaged appears greater than the population size.

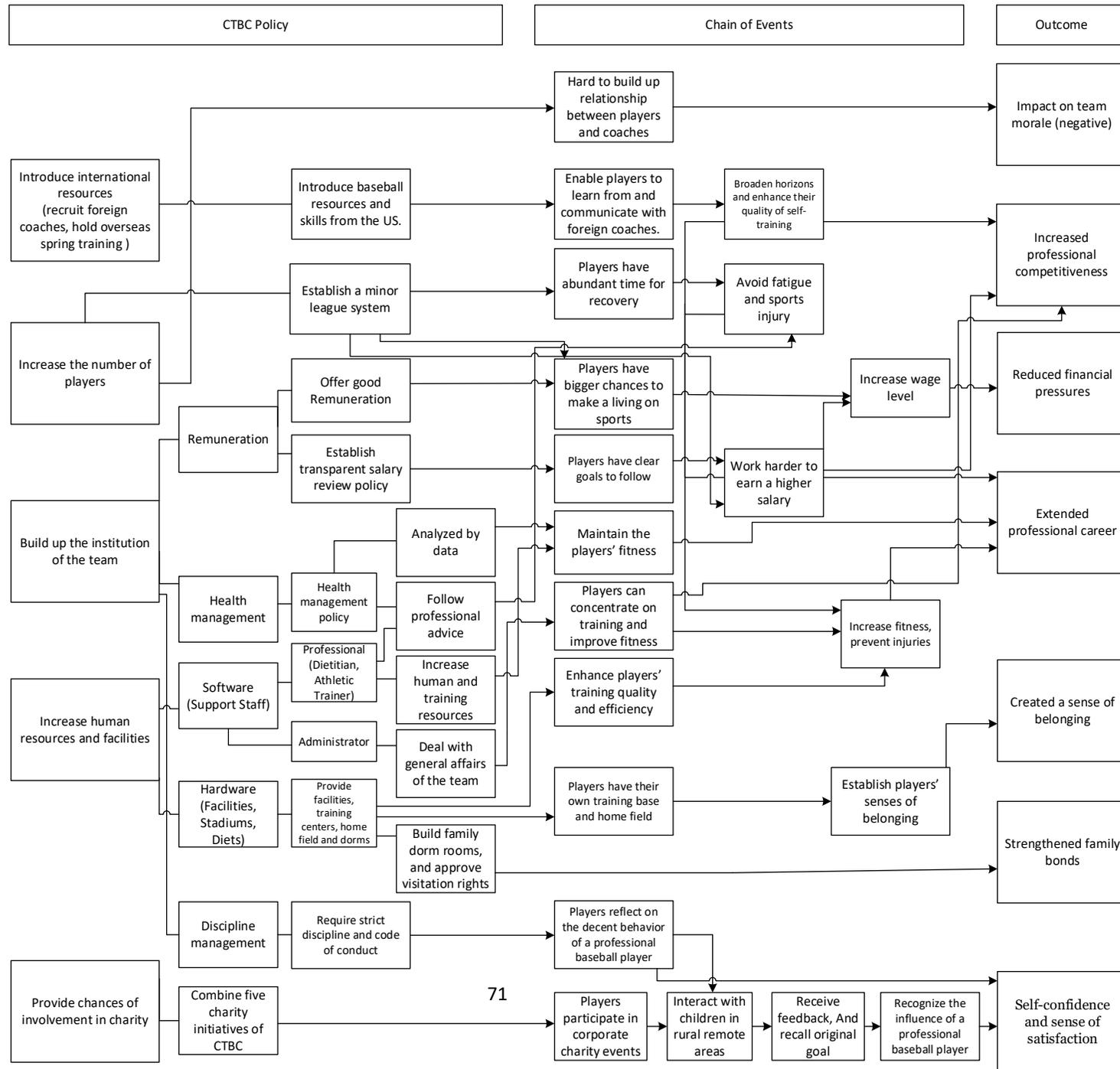
	Professionals (sports-related)	3	24	3		
	Administrative personnel					
Fans	Chinatrust Brothers Fans	34	1,069	45	1,206	141,923
	Non CTBC Fans	33		21		
Charitable Activity Participants(young players)	CTBC Youth Baseball Project	30	90	29	191	655
	Black Leopard National High School Baseball Tournament Program - Road Tour	2	35	5		

Appendix 3 Chain of Events

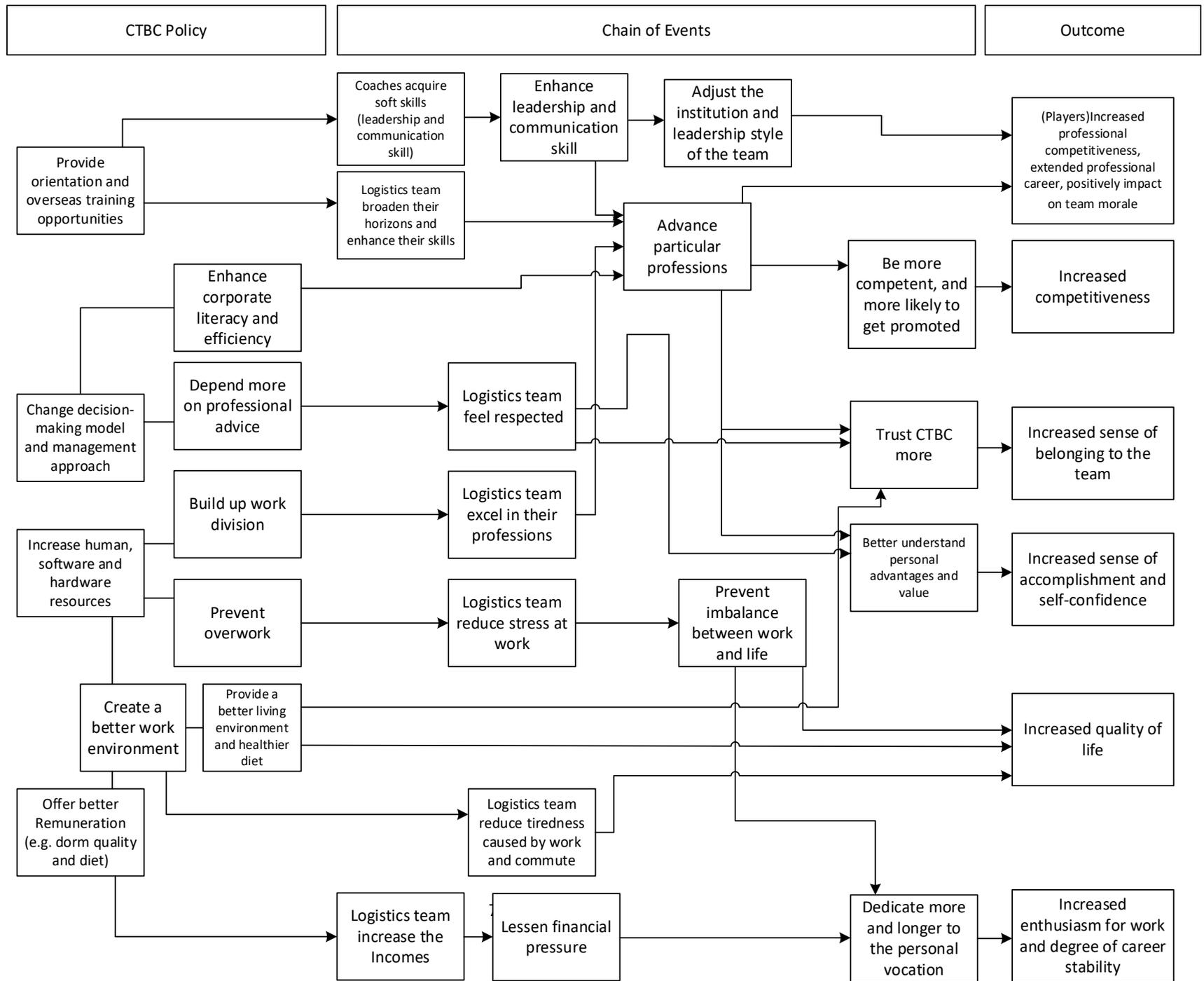
【Senior Players】



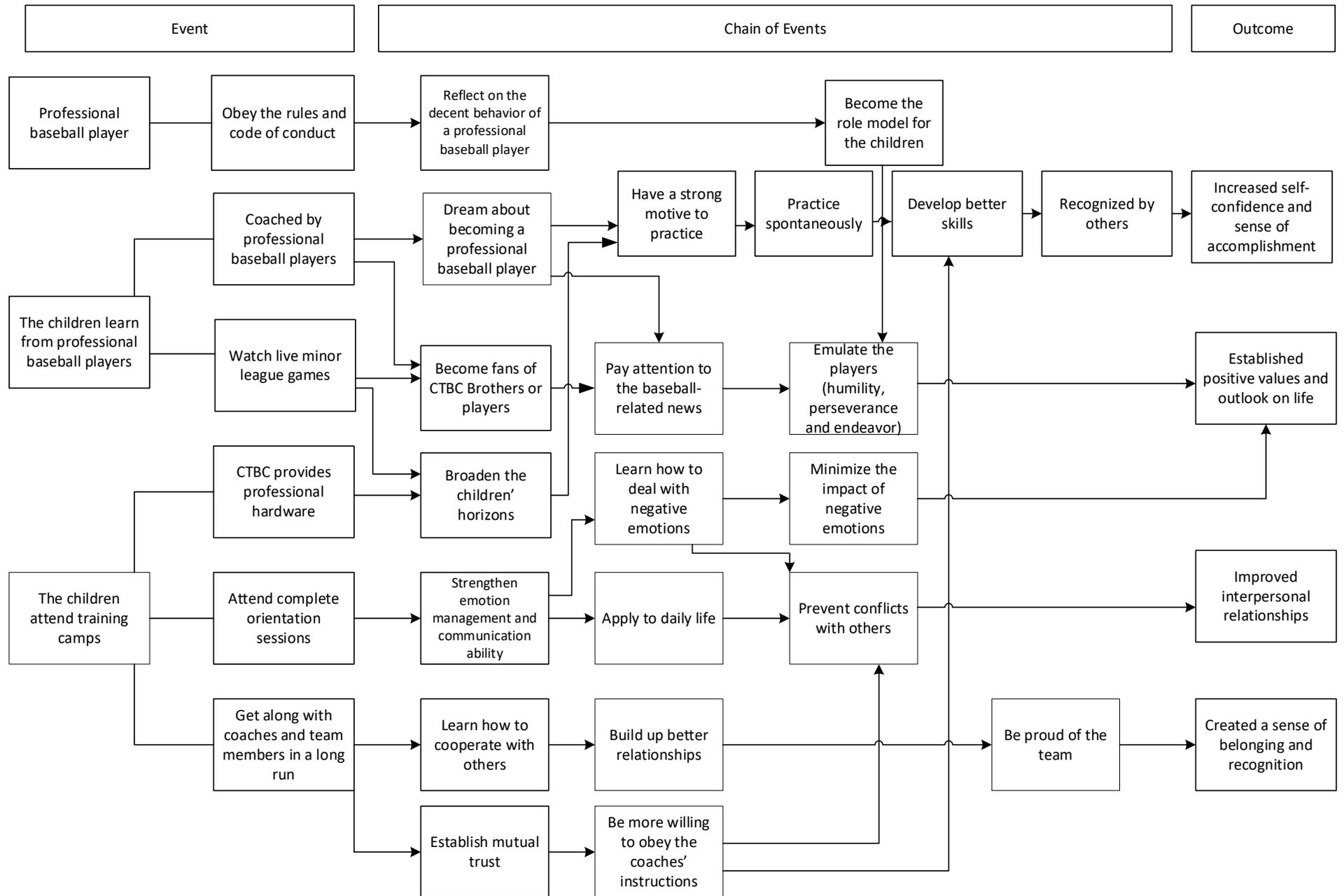
【General Players】



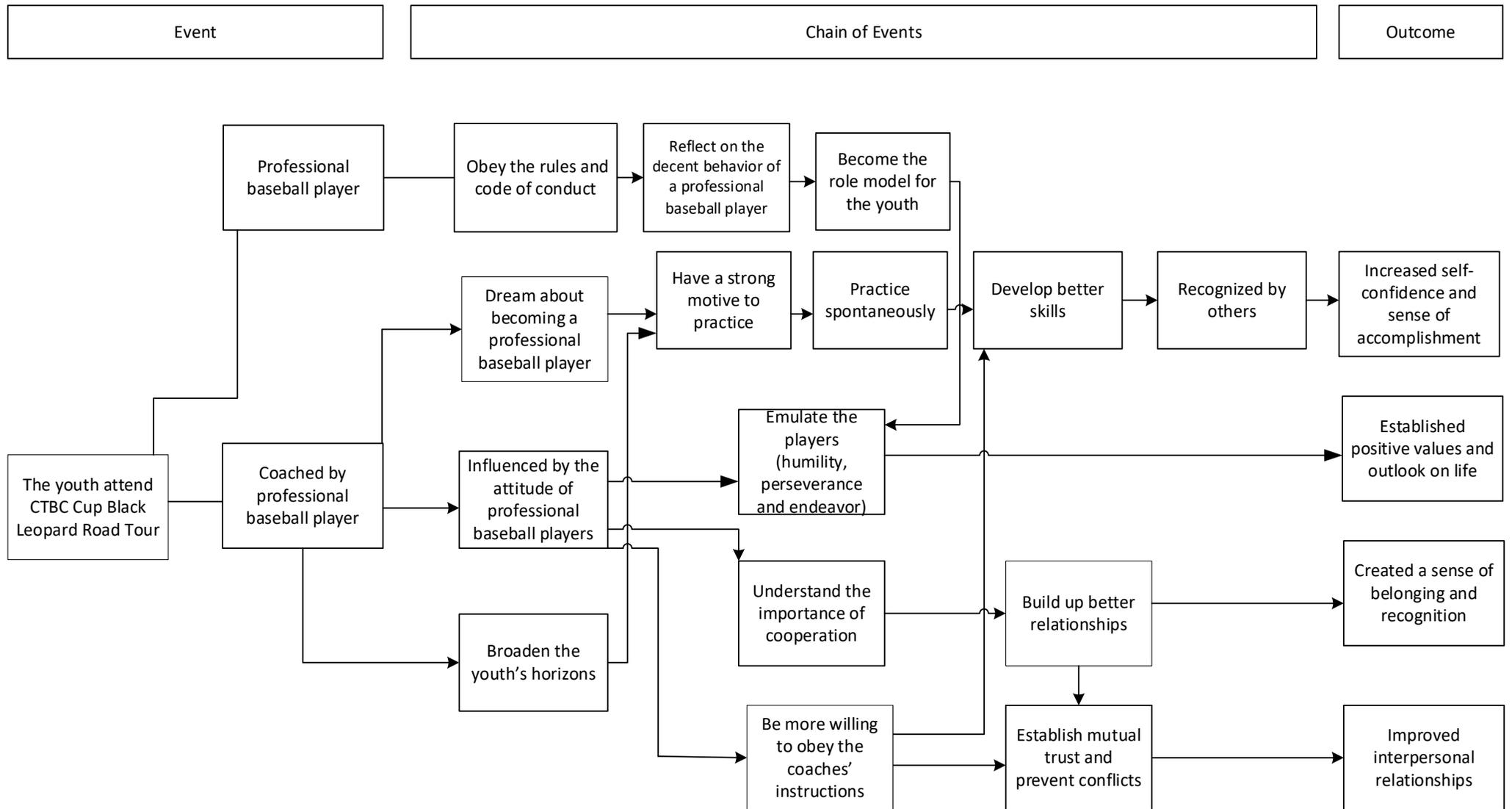
【Logistic Team】



【Charitable Activity Participants: Rural Baseball Team Adoption Subsidy Project】



【Charitable Activity Participants: Itinerant Training CTBC Cup Black Leopard Road Tour】



Appendix 4 Reference Information

Name	Source
A Guide to Social Return on Investment(2012)	Principle from Social Value International
Standard on Applying Principle 1: Involve Stakeholders(2018 draft)	Principle from Social Value International
AA1000 Stakeholders engagement standards (2015)	Principle from AccountAbility
North Yorkshire Sport SROI Evaluation	SROI Report
Social value of developing coaches to deliver high quality coaching sessions	
Social Impact of National Rugby League	Impact Report (SROI Method)
Value of a Community Football Club	
The Social Impact of the Tour de France: Comparisons of Residents'Pre- and Post-event Perceptions	Impact Report
Bread or games? Social cost-benefit analysis of the World Cup in the Netherlands	Cost-Benefit Analysis
Evaluating the Effectiveness of Corporate Sponsorships at a Minor League Baseball Park	Research Report
Role of identification with a group, arousal, categorization processes, and self-esteem in sport spectator aggression	Essay
Creating social impact with sport events	Essay
Impacts and strategic outcomes from non-mega sport events for local communities	Essay
Impacts of Hosting a Sport Event in Tourism High Season	Essay
The Impact of Hosting Major International Sports Events on a Country	Essay
The impact of the broadcasting of sports events on the image and awareness of host cities abroad	Essay

<u>A Study on Chinese Professional Baseball League Spectators' Participation and Satisfaction with Baseball Stadium: The Case of the Sinjhuang Baseball Stadium</u>	Sports Journal
<u>How a financial sponsor managed its baseball sponsorships - In the case of E-Sun Financial Holding Corporation</u>	Sports Journal
<u>Management of a Professional Baseball Team by a Private Enterprise: A Benefit Analysis of Taiwan's Brother Elephants</u>	NTNU Journal
<u>A Research of the Influence of the Professional Baseball Franchise and team identification of Chinese Professional Baseball League's Sport Marketing-Take Taoyuan County as an example</u>	Essay
<u>Effects of Place Attachment on Franchise Marketing and Team Loyalty in Local Residents - the Case of EDA Rhinos</u>	Essay
<u>A Study of the Relationship among Recreation Motivation, Recreation Specialization, Experience Quality and Behavior Intention of Chinese Professional Baseball League Audience</u>	
<u>A Study of the Relationship among Corporate Social Responsibility, Team Identification and Purchase Intention- A Case Study of a Professional Baseball Team in Taiwan</u>	Essay
Corporate Sports Sponsorship and Its Branding Benefits in Media: A Case Study from CTBC Financial Holding)	Essay(Unpublished , provided by CTBC)

Appendix 5 Impact Map

1. Outcome Indicators List

Stakeholder	Category	Outcome	Indicator	Source
Brothers Sports & Entertainment Co.	na	Financial Income	Brothers Sports Co.2014-2017 Financial Statements	Financial Statement
Players	Senior Level (Joined prior to 2014), General (joined after 2014)	Increased professional competitiveness	1.Surveys filled out by players: Number of players who broadened their horizons and enhanced their skills 2.Surveys filled out by the logistics team: number of the logistics team members who responded an enhancement in professions, self-training abilities, fitness and skills>50%	Questionnaire
		Extended professional career	1.Surveys filled out by players: At least one of the following changes[Reference Data] <input type="checkbox"/> My injury rate significantly decreased as compared to the past (a decrease of over 30%) <input type="checkbox"/> My frequency of having to play while injured significantly decreased (a decrease of over 30%) <input type="checkbox"/> My training efficacy has improved considerably compared to the past (an increase of over 30%)	Questionnaire

			<input type="checkbox"/> My physical condition (e.g., BMI, muscle endurance, flexibility, etc.) has improved considerably compared to the past and can be maintained for a game season. 2. Surveys filled out by the logistics team: Numbers of years players extended their professional career, mostly 3-5 years	
		Self-confidence and sense of satisfaction	Surveys filled out by players: Replied to those which comply with the following conditions: a. Paid more attention to and had more opportunities to participate in charitable activities and b. Resulted in one of the following choices <input type="checkbox"/> I am more reassured about the positive impact I have on others <input type="checkbox"/> I demand more from myself and want to be a role model for kids <input type="checkbox"/> I am more content with my current lot in life <input type="checkbox"/> I am willing to devote more time to activities that help people or give back to society <input type="checkbox"/> I derive a greater sense of accomplishment from my work	Questionnaire
		Reduced financial pressure	Surveys filled out by players: Replied to those which comply with the following conditions: 1. Increased financial income and 2. Reduced financial pressure	Questionnaire
		Created a sense of belonging	Surveys filled out by players: Replied to the number of people who started to establish a sense of belonging to the local area, which have become their second home due to the Taichung Baseball Stadium or the Pingtung Training Base.	Questionnaire
		Strengthened family bonds	Surveys filled out by players: Replied to the number of people who strengthened their family bonds due to the CTBC policies	Questionnaire

		Impact on team morale (negative)	Surveys filled out by players: Replied to the number of people who were influenced by negative team morale due to the increased number of players	Questionnaire
Logistics Team	Coaches	Increased quality of life	Surveys filled out by the logistics team: At least one of the following changes: <input type="checkbox"/> My financial income increased which significantly reduced my financial stress <input type="checkbox"/> My working environment improved (e.g., dormitory) which improved my quality of life <input type="checkbox"/> The baseball team's staff was increased which reduced my work-related stress <input type="checkbox"/> I feel more at ease and can continue to perform work that interests me	Questionnaire
		Increased sense of accomplishment and self-confidence	Surveys filled out by the logistics team: Replied to those which comply with the following conditions a. Increased professional competitiveness and b. Increased sense of accomplishment and self-confidence	Questionnaire
	Professionals	Increased professional competitiveness	Surveys filled out by the logistics team: Replied to those which comply with the following conditions a. Increased professional competitiveness and b. Increased the competitiveness of future promotion or job search	Questionnaire
		Administrators	Increased enthusiasm for	Surveys filled out by the logistics team: Replied to those which comply with the following conditions: a. Increased professional competitiveness

		work and degree of career stability	and b. Let them be competent for their current job, gained stable income/ Dedicate more and longer to the personal vocation	
		Increased loyalty	[Questionnaire]Replied to those which comply with the following conditions: a. Increased professional competitiveness and b. Gained a sense of accomplishment and self-confidence	Questionnaire
Fans	Chinatrust Brothers Fans, Non CTBC Fans	Improved interpersonal relationships	Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who improved interpersonal relationships because they support the team[level 3 Results]	Questionnaire
		Positive values on life and positive daily behaviors	(1) Positive values and outlook on life: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who changed their values and outlook on life because they support the team: Number of people who changed their values and outlook on life because they support the team[level 2 Behavior or Cognition]	Questionnaire
			(2) Establish positive daily behaviors and habits: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who changed their values and outlook on life because they support the team[level 3 Results]	
		Improved interpersonal relationships	(1) Sense of belonging: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who had a sense of belonging because they support the team[level 2 Behavior or Cognition]	Questionnaire
			Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who	

			<p>a. Because I support the team, I feel very proud and very relieved, which makes me more positive and recognize myself.</p> <p>or</p> <p>b. Because I support the team, I have developed different skills and practically used in life, which makes me more confident in myself.</p> <p>[level 3 Results]</p>	
		Reduced stress, achieved a more fulfilling life	(1) Reduced stress, achieved a more fulfilling life: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who increased recreational activities, reduced stress, achieved a more fulfilling life because they support the team[level 2 Behavior or Cognition]	Questionnaire
			(2) Increased quality of life: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who reduced stress, achieved a more fulfilling life, and increased quality of life because they support the team[level 3 Results]	
		Established exercise habits and have become healthier	Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who established exercise habits and have become healthier because they support the team[level 3 Results]	Questionnaire
		Sense of satisfaction or financial burdens	(1) Created a sense of satisfaction: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who cost a large amount of money while feeling at ease because they support the team[level 3 Results]	Questionnaire
			(2) Caused financial burdens: Based on the Kirkpatrick Model, Fan Questionnaire: Number of people who cost a large amount of money	

			and caused financial burdens because they support the team[level 3 Results]	
Charitable Activities	Participants in CTBC Youth Baseball Project - Itinerant Training, Participants in CTBC Cup Black Leopard Road Tour	Increased sense of accomplishment and self-confidence	1.Student questionnaires: Number of people who increased sense of accomplishment and self-confidence due to CTBC Youth Baseball Project - Itinerant Training 2.Interviews with coaches: Confirmed that the number of students meets more than 50%	Questionnaire
		Established positive values and outlook on life	1.Student questionnaires: Number of people who established positive values and outlook on life due to CTBC Youth Baseball Project - Itinerant Training 2.Interviews with coaches: Confirmed that the number of students meets more than 50%	Questionnaire
		Improved interpersonal relationships	1.Student questionnaires: Number of people who improved interpersonal relationships due to CTBC Youth Baseball Project - Itinerant Training 2.Interviews with coaches: Confirmed that the number of students meets more than 50%	Questionnaire
		Gained sense of belonging and identity	1.Student questionnaires: Number of people who had sense of belonging and identity due to CTBC Youth Baseball Project - Itinerant Training 2.Interviews with coaches: Confirmed that the number of students meets more than 50%	Questionnaire

2. Financial Proxies List

Stakeholder	Outcome	Category	Financial Proxy	Value in currency(unit)	Source
Brothers Sports & Entertainment Co.	Financial Income	na	2014~2017 net operational revenues	\$912,971,052	Brothers Sports Co.2014-2017 Financial Statements
Players	Increased professional competitiveness	Senior Level	Foreign sports course training costs	\$2,450,000	Player interview
		General	Itinerant Training expenses	\$ 885,217	Calculation from the team's press release
	Extended professional career	Senior Level	Average salary of senior level players	\$ 2,903,000	Players Union Press
		General	Average salary of general players	\$ 1,328,182	
	Self-confidence and sense of satisfaction	Senior Level	Amount of money the players are willing to donate in charitable activities (years)	\$ 41,500	Surveys filled out by players
		General		\$ 41,122	
	Reduced financial pressure	Senior Level	Average salary of players after CTBC took charge of the team(total amount for 4 year)	\$1,715,409	Players Union Press

		General	Average salary of general players-Per Capita National Income(total amount for 4 year)	\$684,251	1. Players Union Press 2. Statistics from DGBAS, Executive Yuan
	Created a sense of belonging	Senior Level	Training base local (Taichung or Pingtung) rental fees	\$ 120,000	Surveys filled out by players
		General		\$ 104,730	
	Strengthened family bonds	Senior Level	Family activity expenses	\$ 93,182	Surveys filled out by players
		General		\$ 85,147	
	Impact on team morale (negative)	Senior Level	Team's foreign travel expenses	-\$ 25,778	Surveys filled out by players
		General		-\$ 33,313	
Logistics Team	Increased quality of life	Coaches	Amount of budget the individual needs to invest in to achieve the same change(per year)	\$85,000	Questionnaire
		Professionals		\$75,833	
		Administrators		\$57,778	
	Increased sense of accomplishment and self-confidence	Coaches		\$76,250	
		Professionals		\$70,000	
		Administrators		\$69,423	
	Increased professional competitiveness	Coaches		\$78,500	
		Professionals		\$70,000	
		Administrators		\$70,625	
	Increased enthusiasm for work and degree of career stability	Coaches		\$85,000	
		Professionals		\$75,833	
		Administrators		\$57,778	
	Increased loyalty	Coaches		\$73,125	
		Professionals		\$57,000	
		Administrators		\$58,056	

Fans	Improved interpersonal relationships		Chinatrust Brothers Fans	(Value Game) The value that the individual is willing to replace to achieve the same change(per year)	\$632,929	Questionnaire
	Positive values on life and positive daily behaviors	Positive values and outlook on life			\$441,152	
		Establish positive daily behaviors and habits			\$140,330	
	Sense of belonging and self-identity	Sense of belonging			\$153,840	
		self-identity			\$581,791	
	Reduced stress, achieved a more fulfilling life	Reduced stress			\$330,708	
		Increased quality of life			\$346,576	
	Established exercise habits and have become healthier				\$318,460	
	Sense of satisfaction	Created a sense of satisfaction			\$688,580	

	or financial burdens	Caused financial burdens			\$87,635	
	Improved interpersonal relationships		Non CTBC Fans	(Value Game) The value that the individual is willing to replace to achieve the same change(per year)	\$646,297	Questionnaire
Positive values on life and positive daily behaviors	Positive values and outlook on life				\$443,775	
	Establish positive daily behaviors and habits				\$168,597	
Sense of belonging and self-identity	Sense of belonging				\$321,493	
	self-identity				\$359,780	
Reduced stress, achieved a more fulfilling life	Reduced stress				\$366,907	
	Increased quality of life				\$346,636	
Established exercise habits and have become healthier					\$137,342	

	Sense of satisfaction or financial burdens	Created a sense of satisfaction			\$1,038,639	
		Caused financial burdens			\$1,550,182	
Charitable Activity Participants	Increased sense of accomplishment and self-confidence	CTBC Youth Baseball Project	Psychological growth class or course fee	\$7,500	Questionnaire	
		CTBC Cup Black Leopard	Baseball summer camp expenses	\$3,000		
	Established positive values and outlook on life	CTBC Youth Baseball Project	Accommodation costs	\$7,500		
		CTBC Cup Black Leopard	Baseball summer camp expenses	\$2,000		
	Improved interpersonal relationships	CTBC Youth Baseball Project	Lecture Hourly-Pay	\$7,500		
		CTBC Cup Black Leopard	Graduation trip expenses	\$7,500		
	Gained sense of belonging and identity	CTBC Youth Baseball Project	Accommodation costs	\$4,500		
		CTBC Cup Black Leopard	Psychological growth class or course fee	\$2,000		

Value Game Process for Fans

1. The first stage-interview: The interviewees are asked to list the valuables wish list. After the extreme value are excluded by statistical methods, the remaining items are included in the final wish list for the questionnaire.
2. The second stage-questionnaire: The interviewees are asked to select an item from the wish list, and select from the list of items selected by the individual, "Which item will be used to replace the change obtained by the professional baseball team?"

List: New urban suite (50 million), A new car comes with a one-year parking space (2 million), One year professional training expenses (1 million), Unlimited location travel fund (500,000), LED, 3D high-definition TV (200,000), Unlimited air ticket (100,000), New iPhone X (40,000), Costco Voucher (10,000), 2 tickets for your favorite art activities (including concerts) (4,000), Starbucks Voucher (2,000). Movie ticket package (1,000), Deposit 500 dollars in Easy card.

3. The third stage-interview: The results of the questionnaire are confirmed with the interviewees.

3. Impact factors List

Stakeholder	Outcome	Category	Duration (year)	Drop off %	Source (Duration, Drop off %)	Deadweigh t%	Attribution %	Source (Deadweight%, Attribution%)
Players	Extended professional career	Senior Level	2	0%	Description 1	75%	50%	Description 4
		General	1	0%		60%	50%	
	Increased professional competitiveness	Senior Level	2	0%		75%	50%	
		General	1	0%		60%	50%	
	Reduced financial pressure	Senior Level	1	30%		60%	0%	
		General	1	10%		30%	0%	
		Senior Level	1	0%		60%	50%	

	Created a sense of belonging	General	1	0%	Description 2	60%	50%
	Self-confidence and sense of satisfaction	Senior Level	1.75	10%		75%	50%
		General	1.75	10%		60%	50%
	Strengthened family bonds	Senior Level	10	30%		60%	50%
		General	10	10%	60%	50%	
	Impact on team morale (negative)	Senior Level	1	0%	Description 3	60%	50%
		General	1	0%		60%	50%

Description:

1. According to the players, the outcomes happened from the increase of resources will last at the same level as long as resources invested, but in other words, will stop as the resources stop inputted, so “Reduced financial proxies” won’t last if CTBC stopped the sponsorship and cut the salary, the same thing happened with “Sense of belonging”. But the effectiveness on career or competitive might last longer since the fitness of bodies and professional skills could last for a period after stop training especially for senior players who already have good capacity and body power.
2. “Strengthened family bonds” will only become more intense, and since both senior and general players started their own families not a long time ago, and was still at the stage of building foundation and imagination for the relationship, once they could build it steady and strong, the effectiveness could last for a long time. While Self-confidence and sense of satisfaction were easier to influence by other factors such as performance in games, as a result can last shorter and decrease by time.
3. According to the players, the situation only happened in the first year CTBC start to sponsor the team or the first year they join, and become better after the first season of the game.
4. For most of the senior players, since they were already in the industries and gained higher influence and statue in it. It might be easier for them to change the environment or systems. In addition, some indicated that since Chinatrust Brother Team is an old team with high reputation, they thought there might have bigger chances that other large-scale enterprise will sponsor the team and create same changes. In addition, senior players already learned to find resources by themselves before CTBC’s involvement; hence, their deadweight on most of outcomes are higher than general players. As for general players, CTBC’s sponsorship increased the number of players recruited and opened

the opportunities for them, their outcomes were more relied on the fact that CTBC had done. On the other hand, since both the senior and general players were in the same work environment and had similar resources now, their attribution were similar too. The 50% contribution that not belong to the project were relied on the support of their families and their own effort at private time.

Stakeholder	Outcome	Category	Duration (year)	Drop off %	Source(Duration, Drop off %)	Deadweight%	Attribution%	Source(Deadweight%, Attribution%)
Logistics Team	Increased quality of life	Coaches	1	10%	Description 1	60%	25%	Description 2 Description 3
		Professionals	1	60%		60%	38%	
		Administrators	1	60%		60%	25%	
	Increased sense of accomplishment and self-confidence	Coaches	3	30%		60%	25%	
		Professionals	0.5	10%		60%	50%	
		Administrators	1	10%		60%	25%	
	Increased professional competitiveness	Coaches	3	10%		60%	25%	
		Professionals	0.75	10%		60%	50%	
		Administrators	1	30%		60%	50%	
	Increased enthusiasm for work and degree of career stability	Coaches	3	10%		60%	25%	
		Professionals	0.5	30%		75%	38%	
		Administrators	1	30%		60%	25%	
	Increased loyalty	Coaches	3	10%		0%	25%	
		Professionals	0.75	10%		60%	50%	
		Administrators	2	10%		45%	50%	

Description

1. Except for the outcome “Increased quality of life” which would only exist while the resources were inputted, during the interviews, we found out that most of the coaches joined the industries due to their passion on baseball, some of them were even players before. Since they had stronger motivation and expected to stay longer in the industries, most of their outcomes could last for longer time according to their

subjective judgement. While administrators who had similar motivation to coaches and some were players before too, ranked in second place for the passion and expected career time, so their duration decreased slightly and ranked in the second as well. As for professionals, they did have passion on baseball, but their professional ability enabled them to have more choices on career and made them expect that outcomes won't last for too long. The hardworking and long-hour job of professionals also shorten the duration of outcomes even during the sponsorship. Hence, they experience shortest duration comparing to other two groups.

On the other hand, since administrative and professionals had similar work environment and work on a similar basis, their drop off rate were similar too and were higher than coaches especially on outcomes related to work environment and quality of life.

2. Most of deadweight were similar. Except for "Increased enthusiasm for work and degree of career stability" and "Increased loyalty". For professionals, they had higher deadweight rate on "Increased enthusiasm for work and degree of career stability" outcome, since they could obtain it during their daily work especially from the feedback of players no matter there were sponsorship or resources or not. And for "Increased loyalty" outcome of coaches and administrative, their work were highly related to the operation of the team, their loyalty won't be easy to build if the team didn't change the strategies or facilities.
3. Attribution for the logistic team's outcomes were equal to or lower than 50%. And professionals and administrative also had higher rate than coaches. There were the weighted average amount calculated from the result of questionnaire. During the verify stage, the interviewees pointed out that these outcomes were highly related to their work, and since their spent almost 80% time on work, the outcomes were mostly attributed by the changes that CTBC brought.

Stakeholder	Outcome	Duration (year)	Drop off %	Source (Duration, Drop off %)	Deadweight%	Attribution%	Source (Deadweight%, Attribution%)	Displacement%	
Chinatrust Brothers Fans	Improved interpersonal relationships	2	2%	Description 1	75%	75%	Description 2	10%	
	Positive values on life and positive daily behaviors	Positive values and outlook on life	4		3%	50%			50%
		Establish positive daily behaviors and habits	10		3%	50%			25%
	Sense of belonging and self-identity	Sense of belonging	10		2%	75%			50%
		Self-identity	4		10%	63%			25%
	Reduced stress, achieved a more fulfilling life	Reduced stress	4		2%	50%			25%
		Increased quality of life	4		2%	75%			25%
	Established exercise habits and have become healthier		4		10%	50%			50%

	Sense of satisfaction or financial burdens	Created a sense of satisfaction	1	7%
		Caused financial burdens	4	7%

50%	50%
50%	50%

Stakeholder	Outcome	Duration (year)	Drop off %	Source(Duration, Drop off %)	Deadweight%	Attribution%		Source(Deadweight%, Attribution%)	
Non CTBC Fans	Improved interpersonal relationships	2	15%	Description 1	75%	75%	75%	Description 2	
	Positive values on life and positive daily behaviors	Positive values and outlook on life	4		17%	50%	50%		75%
		Establish positive daily behaviors and habits	10		17%	75%	25%		75%
	Sense of belonging and self-identity	Sense of belonging	4		10%	50%	50%		75%
		Self-identity	4		6%	50%	25%		75%
	Reduced stress, achieved a more fulfilling life	Reduced stress	4		7%	50%	25%		75%
		Increased quality of life	4		7%	50%	25%		75%
	Established exercise habits and have become healthier		10		20%	75%	25%		75%

	Sense of satisfaction or financial burdens	Created a sense of satisfaction	1	18%		50%	50%	75%
		Caused financial burdens	1	15%		50%	25%	75%

Description

1. To our surprises, the drop off rate were really low and stayed consistent during the three stages of engagement. According to the interviewees, most of them watched CPBL game since their childhood, and baseball has become the center of their lives that accompanied them walked through different stages of lives. Hence, the influence of it could stayed a long period even after the game stopped and won't dropped much during the time passed. And since Brother Team is one of the origin team and has longer history, most of Chinatrust Brothers Fans also supported the Team for a longer period and regarded baseball more important than other fans. So the degree of outcome might be stronger that could last longer without decreasing.
2. According to the interviewee, they didn't think there were any other thing in the world that can replace all the changes that professional baseball had brought to them. But if we reviewed each outcome separately, they could still found some replacement to obtain those outcomes. For example, they might spent the time they used to spent in baseball game on other sport game or outside activities and build up friendship through that, but it wouldn't be easy if they wanted to know new friends and established positive attitude and also establish exercise habits at the same time. So the deadweight were high. While for attribution, they pointed out that since baseball was the activities they could only participate in their leisure time and the game season only last for half year. There were still many other reasons that contributed to their changes.

Stakeholder	Outcome	Duration(year)	Drop off %	Deadweight%	Attribution%	Source(Deadweight%, Attribution%)
Participants in CTBC Youth Baseball Project - Itinerant Training	Increased sense of accomplishment and self-confidence	2	10%	60%	30%	Description 1
	Established positive values and outlook on life	2	10%	90%	50%	
	Improved interpersonal relationships	2	10%	90%	40%	
	Gained sense of belonging and identity	2	10%	90%	50%	
Participants in CTBC Cup Black Leopard Road Tour	Increased sense of accomplishment and self-confidence	3	10%	60%	0%	
	Established positive values and outlook on life	3	10%	60%	38%	
	Improved interpersonal relationships	1	0%	60%	25%	
	Gained sense of belonging and identity	1	0%	60%	50%	

Description 1:

We calculated duration, drop-off, deadweight and attribution by young players' interviews and questionnaires and adjusted it according to the interview with coaches. Young players and coaches said that the experience to meet and receive advices from professional players were so unique that could leave a strong impression on them and hence were not easy to decrease during time. However, coaches mentioned that due to the young ages of these student players, they were easily influenced by other factors and people around them, so the duration won't be long especially

for participants in CTBC Youth Baseball Project whose ages were from 7 to 12. The same reason came to the deadweight. Since they were still in the growing stage and might build up the related outcomes through other channels such as school or parents or other experience in their lives. As for attribution, young players said that teachers and parents also contributed to their changes, but since professional players were their idols and they were more willing to listen to and learn from them. Like one of the coach share, "One word from Brothers players has bigger effect on children than thousands words from teachers or coaches." Hence, most of the attribution rate were low.

