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EXPLORING A SUITABLE YOUTH FOOTBALL
TRAINING MODEL FOR CHINA:
FROM THE PERSPECTIVE OF CUSTOMER
ENGAGEMENT

ZHENG NANYAN

SINGAPORE MANAGEMENT UNIVERSITY
2022

Exploring A Suitable Youth Football Training Model for China:
From The Perspective of Customer Engagement

Zheng Nanyan

Submitted to Lee Kong Chian School of Business in partial
fulfilment of the requirements for the Degree of Doctor of
Business Administration

Dissertation Committee

Shantanu BHATTACHARYA (Supervisor/Chair)
Professor of Operation Management
Singapore Management University

Zhu Rui (Co-Supervisor)
Professor of Marketing
Cheung Kong Graduate School of Business

David OCON
Assistant Professor of Arts and Cultural Management
Singapore Management University

SINGAPORE MANAGEMENT UNIVERSITY
2022
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I hereby declare that this DBA dissertation is my original work and it has been written by me in its entirety. I have duly acknowledged all of the sources of information which have been used in this DBA dissertation.

This DBA dissertation has also not been submitted for any degree in any university previously

A handwritten signature in black ink, appearing to be 'Zheng Nanyan', written in a cursive style.

Zheng Nanyan

17 October 2022

Exploring a Suitable Youth Football Training Model for China: From the
Perspective of Customer Engagement

Zheng Nanyan

Abstract

As a major sport country, China's football is facing tricky problems of insufficient reserve players and football culture alienation. Improving the quality of youth football training not only can supplement a large number of reserve players, but also shape a sound football culture, which is a good approach to the current problems of China's football. Based on the theory of customer engagement, this dissertation starts from the reality of Chinese youth football training, analyzes the problems existing in current youth football training in depth, and proposes that convenience, interest and empathy can improve the customer engagement of youth trainees. Outland household registration and youth trainee identity at private schools also help strengthen these relationships. In this study, a total of 209 sheets of valid data were collected from a questionnaire survey of football training institutions in Beijing, Guangzhou, Chengdu and Shenzhen. Using the above survey data and OLS regression analysis method, this dissertation has found that convenience, fun and empathy can improve customer engagement of youth trainees, and outland household registration and youth trainee identity in private schools help strengthen the above relationship. In addition, customer engagement plays a partial intermediary role between the youth training characteristics and the youth training performance. This research has important theoretical and practical significance, for it not only enriches the interpretation of customer

engagement in marketing, but also adds to the research on convenience, fun and empathy at the organizational level; it is of important reference value for youth training institutions in optimizing training models and improving training quality, and may also provide reference to the nation for formulating football-related policies.

Keywords: Youth Football Training; Convenience; Fun; Empathy; Customer Engagement

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1. Introduction

1.1 History of China's Football

Football has a long history in China - starting from the Warring States Period, prospering during the Tang Dynasty, and declining since the Song Dynasty. According to the *Appendant Records of Famous Physicians* by Liu Xiang, a historian of the Western Han Dynasty, football was said to be an invention by the emperor, and has been played as early as the Warring States Period (475 BC - 221 BC) when it was called Cuju. The *Records of the Grand Historian: Biography of Su Qin* by Sima Qian, a famous historian in the Western Han Dynasty, said that during the Warring States Period, in the populous and prosperous Linzi Prefecture of the Qi State (Zibo, Shandong, today), football was already a sport popular among the society ("Linzi was a very wealthy place. The people there all enjoyed playing wind, percussion and plucked instruments. Their hobbies also included cock fight and dog race, six-dice-throwing board game and ancient Chinese style football."). A Western Han scholar called Huan Kuan recorded in the *Discourses on Salt and Iron* that in the Western Han Dynasty, after a long time of peace, football became not only popular with the upper class, but also sought after by the public. ("The noble family enjoyed football and cock fight...The common people also played football on open or narrow streets.") By the Tang Dynasty (AD 618 - AD 907), China's feudal society had reached its peak, with ever-increasingly powerful national strength and unprecedented economic and cultural development. So, football also reached its heyday, and the football-making technology witnessed a great leap, even with the invention of inflatable footballs. According to the description in the *On Inflatable Balls* by Zhong Wuyan in the Tang Dynasty: "The inflatable

ball made by sealing air inside is better suitable for kicking in the air. It is empty inside but solid as a whole. Based on delicate gauging, it was changed to a spherical ball from the original cube ball. The cracks were stitched up by hand to make it seamless without any leakage.” According to historical records and archaeological discoveries, there were as many as over a hundred professional football fields in Chang’an (now Xi’an), the capital of the Tang Dynasty, which were fully equipped with goals, spectator seats, etc. (Geng & Ma, 1998).

Historically, the turning point of China’s football was in the Song Dynasty (AD 960 - AD1279). Since the founding of the Song Dynasty, a strategy of governing the state by promoting civil approaches and suppressing military means had been implemented, in order to avoid the threat of forces on the regime. For this reason, the ruler changed the double goals of football to a single goal, thereby reducing the competition of football, which led to the decline of this centuries-old highly competitive sport (Yang & Liu, 2007). The rules of football in the Song Dynasty were adopted in the later Jin, Yuan, and Ming dynasties, accelerating the decline of football. The rulers of the Qing Dynasty (AD 1636 - AD 1912) preferred their own national hobbies over others, and started to promote their national sports such as horseback riding, archery and hunting, and meanwhile resisting the traditional football of the Han nationality, and even changed football to ice football, which eventually led to the decline and disappearance of football (Ai, 2009). The development history of China’s football in the feudal society revealed that football reflected the will of the ruling class in Chinese history and was infused with the mainstream culture and values of the society at that time. The rise and fall of football is highly consistent with the history of China’s feudal society. In a sense, the rise and fall of football also

represents the rise and fall of the Chinese feudal dynasty.

Those having disappeared along with the feudal dynasty also include the backward concepts and rules of football. After the establishment of the Republic of China in 1912, a brand new national football team was developed. In 1913, major Asian countries, such as China, Japan, South Korea, and Iran, launched the Far Eastern Games (predecessor of the Asian Games), where football became one of the important events. From 1913 to 1934, the Far East Games had been held for 10 times. China's football team won the championship for dominantly 9 times, marking its absolute strength in this sport.¹

1.2 Status Quo of China's Football

After the founding of the People's Republic of China, China was still really impoverished, and had little development of sports. Later, due to natural disasters and the Cultural Revolution, Chinese modern football did not emerge until the reform and opening up in 1978. On October 25, 1979, the International Olympic Committee passed the "Nagoya Resolution" to restore China's legitimate seat in the International Olympic Committee, marking China's return to the Olympic family. However, after this return to the Olympics, the National Sports Commission made a decision to "adjust the layout of sports events and concentrate on those events of the Olympics and major international competitions", and thus established the layout of key Olympic events and introduced the strategy of prioritizing and mainly supporting the most economical events, historically known as the "Gold Medal Strategy". The large ball games requiring many players and large-amount fund investments, but vying for few gold medals, were listed as the least economical events. As one

¹ <https://www.huxiu.com/article/328447.html>

of such sports, football was abandoned again (Fan et al., 2001). In 1992, the “Hongshankou Conference” on the national football work specified the professional orientation of China’s football, and put forward a new idea of establishing a professional club system in line with international standards. Since then, China’s football began to change from a specialized system to a professional system. The football professional and market-oriented reform was officially launched. In 1994, China’s Jia-A League was officially unveiled, and China’s modern football ushered in a short booming decade.

However, the professional and market-oriented reform failed to indeed reinvigorate China’s football. Taking the two major representatives of China’s football – the professional league and the national team – as examples, the professional league (Jia-A League founded in 1994 and renamed as Chinese Super League in 2004) has undergone several turbulences of gambling, match-fixing of referees, etc. The quality of the game hasn’t improved after all these years. It was not until recent years when Evergrande brought in top foreign players at high prices, which ushered in a heavy-investment era of the Chinese Super League, that China’s football professional league has slightly changed and emerged in the Asian arena. Yet, without its own reserve teams and training systems, the Chinese Super League is still looking at a unpromising future with a continuing dependence on foreign players. This means that Chinese investment is still used to support foreign players. In contrast, the situation of the national football team of China has gone from bad to worse. Not only is it getting farther from the World Cup, its own situation is also worsening. Even frequent replacement of world-class coaches is of no avail. In this dissertation, the status quo of China’s football is systematically analyzed, and the reasons for

the backwardness of China's football are explored. It is found that the lack of reserve players and the alienation of football culture are the main reasons for the overall backwardness of China's football.

1.2.1 Insufficient Players and Coaches

In the face of the status quo of China's football, a vexed question should be "Why can't a team of 11 players be selected from a huge population of 1.4 billion people?" In order to find out the reasons leading to the status quo of China's football, I firstly sorted the statistics of the historical changes of China's football players in this dissertation.

After the founding of the People's Republic of China, a thousand things waited to be done, and football had slowly recovered. However, the outbreak of the Cultural Revolution ground the upward trend of football to a halt - all levels of football competitions and international exchanges were banned between 1967 and 1970. According to incomplete statistics, 56 provincial, municipal and PLA football training teams were disbanded; 115 full-time coaches, 1,124 outstanding football players and a large number of business cadres were forced to leave the football field. The newly-emerged China's football undertaking was thus ruined.

After the Third Plenary Session of the Eleventh CPC Central Committee in 1978, China's sports undertakings began to flourish. However, due to the characteristics of the planned economy then, China's reserve football player training system was largely based on administrative instructions. Under direct administration by the state, with the National Sports Commission and the Chinese Football Association as the core, and based on the sports commissions and football associations at provincial, municipal, prefectural, and county and

district levels, an organizational leadership system had been formed covering most parts of the country from the central to the local. With such a system, China's football had entered a special development period. On the one hand, this system solved the problem of career development for outstanding athletes, so that they could concentrate on training and competition. During this period, a large-scale reserve football player training system had been established, and maintained a high level in Asia. On the other hand, due to the single investment channel, the survival of the system depends on the government. Once the government's decisions do not conform to the law of football development, the training system will be severely damaged. After China's return to the Olympics, the National Sports Commission made a decision to "adjust the layout of sports events and concentrate on those events of the Olympics and major international competitions", and thus established the layout of key Olympic events and introduced the strategy of prioritizing and mainly supporting the most economical events. The large ball games requiring many players and large-amount fund investments, but vying for few gold medals, were listed as the least economical events. The "Gold Medal Strategy" has gained glorious achievements for the Chinese sports, and also paid a heavy price. The biggest victim should be football. Through the 35 years from 1979 to 1992, the number of outstanding football players decreased by 8.3%. During the 7 years from 1985 to 1992 after the implementation of the "Gold Medal Strategy", the number of outstanding football players decreased by 4.6%. By 1992, the cultivation of reserve football players in China had dropped to the lowest level after the Cultural Revolution (Fan et al., 2001).

In 1992, the "Hongshankou Conference" on the national football work

specified the professional orientation of China's football, and put forward a new idea of establishing a professional club system in line with international standards. Since then, China's football began to change from a specialized system to a professional system. The football professional and market-oriented reform was officially launched. In 1994, China's Jia-A League was officially unveiled, and China's modern football ushered in a short booming decade. Due to unregulated management and unsound systems, Jia-A League suffered from continuous shady deals, which greatly reduced the attractiveness of China's football. The path of professional reform was impeded with many difficulties, and the professionals began to lose again.

In this dissertation, the statistics of China's football players are sorted, as shown in Table 1. As of 2017, there were 84,422 registered football players in China, accounting for 0.0061% of the entire population. In contrast, in 2017, there were 500,000 registered football players in Japan,² accounting for 0.3937% of the total population, which is 65 times that of China. The United States, often regarded as a "soccer desert", had 4.18 million registered soccer players,³ accounting for 1.2667% of the total population, equivalent to 209 times that of China; and France, with one of the best football teams in Europe, has 1.5 million registered football players, accounting for 2.2348% of the total population, about 368 times that of China. Football is a professional sport, requiring its players to have extremely powerful physiques and skills as well as excellent teamwork between players. Therefore, for China, it is not about randomly choosing national football players from a population of 1.4 billion people.

²Sohu Sports, <http://sports.sohu.com/20111025/n323315001.shtml>

³Takung Sports, <http://sports.takungpao.com/topic/buyiyang/2014-06/2543264.html>

Instead, it is a selection from mere 80,000 athletes. So, there is a huge gap with other football powerhouses.

The major professionals in football are football coaches, which are also extremely rare in China: by the end of 2017, China Football Association has 142 professional coaches, 899 A-level coaches, 2027 B-level coaches, 9983 C-level coaches and 27,745 D-level coaches, a total of 40,796⁴, equivalent to one football coach for 30,000 people in China. In comparison, Japan has 411 professional coaches, 1,363 A-level coaches, 4,006 B-level coaches, 28,701 C-level coaches and 42,055 D-level coaches. The total number of coaches at all levels is 76,539⁵, which means that every 1,660 people having a football coach, 20 times that of China.

⁴Chinese Football Association (<http://www.thecfa.cn/>)

⁵Sohu Sports https://www.sohu.com/a/122108975_503597

Table 1-1 Statistics of Registered Chinese Football Players

| Year | Total | Male | Female | Population | Proportion |
|------|-------|-------|--------|------------|------------|
| 2017 | 84422 | 64265 | 20157 | 1390080000 | 0.0061% |
| 2016 | 63307 | 46849 | 16458 | 1382710000 | 0.0046% |
| 2015 | 46235 | 34639 | 11596 | 1374620000 | 0.0034% |
| 2014 | 37700 | 27139 | 10561 | 1367820000 | 0.0028% |
| 2013 | 23825 | 17738 | 6087 | 1360720000 | 0.0018% |
| 2012 | 23452 | 16164 | 7288 | 1354040000 | 0.0017% |
| 2011 | 14518 | 10319 | 4199 | 1347350000 | 0.0011% |
| 2010 | 14394 | 10557 | 3837 | 1340910000 | 0.0011% |
| 2009 | 11095 | 8549 | 2546 | 1334500000 | 0.0008% |
| 2008 | 12318 | 9757 | 2561 | 1328020000 | 0.0009% |
| 2007 | 9473 | 7269 | 2204 | 1321290000 | 0.0007% |
| 2006 | 11584 | 9367 | 2217 | 1314480000 | 0.0009% |
| 2005 | 9966 | 8206 | 1760 | 1307560000 | 0.0008% |
| 2004 | 7961 | 6806 | 1155 | 1292270000 | 0.0006% |

Note: The demographic data are sourced from the National Bureau of Statistics (www.stats.gov.cn). The player registration data are sourced from Chinese Football Association (<http://www.thecfa.cn/>). The data include both male and female football players affiliated to various registered professional clubs, amateur clubs, football schools and other training institutions, and football associations, reported to Chinese Football Association by various local football associations over the years. The vast majority of them have signed professional contracts, training agreements or competition agreements. These are the registration data of Chinese Football Association, excluding those trained abroad.

1.2.2 Alienation of Football Culture

In a striking contrast, in 2017, the number of China's football fans recorded 187 million⁶, accounting for 13.45% of the total population. The number of fans is 2,215 times the number of players, which means for every one player on the field, there are more than 2,000 people watching and assessing the game. Under this circumstance where the audience greatly outnumbers the player, any achievement or fault of the player will be magnified several times, and may thus easily lead to disorientation of China's football in public opinion. Corresponding to the characteristics of a huge audience, another crux of China's football is that there are more ironies, but less research. As non-professionals,

⁶The data are from the World Football 2018 report released by Nielsen Sports, <https://niensports.com>.

most of the audience can only express their likes and dislikes for football, and some even vent their emotions by fighting each other. However, it is difficult for them to propose constructive opinions from a more professional perspective.

1.3 Status Quo of Youth Football Training in China

China's football faces two major problems. The first is that junior football players are in a scarce number, insufficient to support the top-layer demand for football talent. The second is the alienation of football culture, meaning the public place much more criticism on football than expectation, and much more ironies than praises. Youth football training is an important measure to solve these problems, since youth football training can provide a large number of reserve players, and also help to cultivate a sound football culture. Youth football training refers to the training and cultivation of children and adolescents in football, which is aimed at improving both the physical and psychological qualities of these children and adolescents, as well as discovering and developing their sports potential and talent. This helps to narrow the gap between Chinese and foreign children and adolescents in physical and psychological qualities, and serves as a main channel to provide reserve talent for China's football.

There are many reasons for the unsatisfactory performance of China's football, but the problem in youth training is undoubtedly the biggest one (Liu, 2015; Xu, 2017). After the 2018 FIFA World Cup, Zhang Jian, senior vice president and general secretary of Chinese Football Association, summed up the status quo of the comprehensive backwardness of China's football with a pointed remark: "weak foundation, deficient talent, scarcity of fields, poor

system, and stagnant management”.⁷ To his point of view, “the focus of the talent development should be placed on football popularization on campus, the construction of youth training system and the building of football development and business structure”. In recent years, the Chinese youth football training market has made some progress with the support of policies and faculties, but a lot of problems remain.

1.3.1 Status Quo of Youth Football Training

The *Implementation Plan for the National Youth Campus Football Activities* issued in April 2009 unveiled the prelude to the development of youth football on campus. Since then, the State Council and many departments have successively issued a number of policies and measures for the development of campus football activities. From the field of campus football to the sector of professional football, substantial progress has been made in terms of youth football. With the introduction of new policies to encourage football development, timetables for many tasks have been planned, including football popularization and education at the campus, professional team building and goals for the national team. New opportunities have emerged in the youth football training market and its related industries. Capitals and entrepreneurs have been swarming into many football-related fields, ranging from interest-oriented courses for football popularization to elite training, teacher training to institutional management training, traditional football hardware to smart football equipment, business and team management systems and football socialization.

By July 2017, there were 20,218 schools nationwide featuring youth

⁷*Study Times*, July 17, 2018. http://www.sohu.com/a/241633410_161623

campus football (including 10,022 primary schools, 7,111 junior high schools, and 3,085 senior high schools), 102 pilot counties of national youth campus football, and 12 reform experimental areas of national youth campus football. Among all the provinces and regions, Shandong, Henan, Jiangsu, Sichuan and Hebei are the five provinces with the most specialized schools at over 1,000. A multi-dimensional promotion pattern has essentially been established nationwide for campus football, with the four concerted aspects of “specialized schools + high-level football teams + pilot counties (districts) + reform experimental areas”.⁸

The state continues to increase investment of funds, teachers and fields in campus football, which helps to accelerate the development of youth football training market. From 2015 to 2017, the central government has invested a total of RMB 648 million yuan as supportive funds for campus football, and provinces (autonomous regions and municipalities) have invested a total of RMB 19.603 billion yuan of fiscal, sports lottery and social funds for campus football (RMB 4.272 billion yuan in 2015, RMB 8.004 billion yuan in 2016, and RMB 7.327 billion yuan in 2017). As of February 2018, there were 51,054 campus football fields nationwide. During the “Thirteenth Five-Year Plan” period, 38,944 fields were planned to be built and transformed. By 2020, the number of campus football fields nationwide will reach 83,726. According to statistics, a total of 73,298 physical education (PE) teachers have been added in the past three years, and 15,594 of them have professional football-related background. The national and local governments have trained more than

⁸The 2015-2017 Work Development Report on National Youth Campus Football issued by the Ministry of Education

230,000 PE teachers and football coaches over the three years, and trained 840 campus football coaches to hold D-level or above coach certificates issued by the Football Association and the Asian Football Confederation.

1.3.2 Problems in Youth Football Training

Despite some progress, there still a lot of problems with youth football training. Those include non-standard teaching, focus on marketing rather than content, and poor course attractiveness resulting in high mobility of students, low satisfaction of parents, and difficulty in development of youth football training to a larger size.

(1) Lack of leading institutions. At present, there are more than 6,000 domestic youth football training institutions, but over half of them have less than 500 trainees, and only 10 institutions have more than 2,000 trainees. There is no national brand or any uniform industry standard.

(2) Dispersed and sloppy management of youth training institutions. Although youth football training institutions are involved in many businesses, most institutions still have training and summer camp programs as their main business. The expansion of other related businesses requires the institution to develop to a certain stage before it can be effectively carried out. The traditional customer acquisition model is field marketing around supermarkets, campuses and communities, and collaborating with schools, and there are problems of high customer churn rates and high marketing costs.

(3) Backward operation philosophy. Affected by the concept of elite sports, most youth football training institutions still believe that football is a sport for PE students and school teams to participate in rather than a mass sport. There's a lack of public awareness in football being a mass sport.

(4) Insufficient hardware and software conditions. Playing football requires more professional fields, which is not something that every school has. Most training institutions have the problem of guerrilla-like and mobile teaching. In addition, many institutions lack professional football coaches, and some teachers even teach with emotional abuse, leading to serious consequences (Cushion & Jones, 2006).

1.3.3 Future of Youth Football Training

The introduction of policies on campus football and new regulations on professional club membership boosted the potential market demand for off-campus football training. By the end of 2017, there were more than 21,000 schools specializing in campus football across the country, and this number is expected to increase to 50,000 by 2025. The students who regularly play football on campus will exceed 30 million, and the newly introduced *Procedures of the Chinese Football Association for Professional Club Membership* (Version 2018) stipulated a “grade-linking club registration system”, which requires that the club must have youth teams at different grades (Chinese Super League and China League will have to own teams of five grades, i.e. U19, U17, U15, U14 and U13, and China League Two must have teams of four grades, i.e. U17, U15, U14 and U13), and clearly specifies that the youth training cost of the club should be no less than 15% of its total expenditure (according to this standard, and referring to the season data in 2016, the annual cost of the 16 Chinese Super League teams spent on youth training can be up to RMB 1.65 billion yuan). The foreseeable increase in trainees will lead to explosive market demands for off-campus football training. In recent years, the increasing household consumption capability has obviously driven the update

of ideas on education consumption. Quality education and physical training have become popular choices aside from after-school tutoring of major subjects. The market potential is huge in K12 education, especially in the primary and secondary phase.

1.4 Exploring the Way Out for China's Football

Through research and literature review, the status quo of football has been summarized in this dissertation into two pairs of outnumbering: there are more audience members than players, and there are more ironies than research. The status quo of these two pairs of outnumbering results in two major problems of China's football. The first is scarcity in junior football players, insufficient to support the top-layer demand for football talent; the second is the alienation of football culture, meaning the public places much more criticism than expectation and more ironies than praises on football. To change the status quo of China's football, we need to (1) train a large number of football players; (2) cultivate a sound football culture. How can these two major problems be solved?

Extant researches show that youth football training is one of the main ways to increase reserve players (Liu, 2015; Xu, 2017). Changing the football culture in China while conducting youth football training may be the only way to enhance the real competency of China's football. Exploring the factors affecting youth training is an important way to improve the quality of youth training (Mills, Butt, Maynard & Harwood, 2012). Therefore, this dissertation mainly discusses a suitable youth training model for China can be created based on the status quo of China's football.

This dissertation focuses on the problems from the perspective of customer engagement. In recent years, with the continuous improvement and

development of marketing theory, customers have changed from passive value receivers to active value creators, and participate in innovation together with companies to create competitive advantages (Vargo & Lusch, 2004). Scholars have conducted in-depth exploration of this phenomenon, and put forward the perspective of customer engagement. This dissertation focuses on the problem of customer engagement in the youth football training market. Customer engagement not only helps increase the company's mass base, but also facilitates the forming of a sound cultural atmosphere; and the Chinese football exactly has the problems of weak mass base and football culture alienation. By virtue of customer engagement theory, this dissertation is designed to solve the problems with attempts to fortify the mass base of China's football and build the Chinese football culture. For this reason, beginning with the relevant literature on customer engagement, the research hypotheses are proposed in this dissertation that convenience, fun and empathy will help improve the customer engagement of young trainees; choosing college graduates instead of professional athletes as coaches can strengthen the above positive relationship; outland household registration and youth trainee identity in private schools can also strengthen the above positive relationship; and the view is argued that good customer engagement will help improve the quality of youth football training and the performance of youth football training companies.

In this research, the survey data collected from questionnaires of young football trainees are used to test the above hypotheses. The questionnaire consists of two parts. The basic information part is for collecting the demographic information of the students, such as gender and age. The youth training information part is for the evaluation by young football trainees on

convenience, fun and empathy of the youth football training, as well as their self-evaluation on time, energy and emotion investments in the past semester. The evaluation is based on a 5-point Likert scale. To avoid impact from psychological hints on the accuracy of the questionnaire measurement, and thus on the causal logic of this dissertation, the questionnaire is designed to have the questions of customer engagement first, followed by the evaluation of convenience, fun and empathy. Since a single data source may have problems such as small sample variation and selective bias, 1 youth football training company is randomly selected in Beijing, Chengdu, Guangzhou and Shenzhen in this study, and a total of 210 questionnaires are issued for investigation. A total of 210 questionnaires have been recovered with a recovery rate of 100%, among which 209 are valid. The above hypotheses are supported by using the OLS regression analysis method.

This dissertation is of theoretical and practical significance. First, it enriches the theoretical research related to customer engagement. Second, it is an important reference for youth training companies to adjust their business strategy and to improve youth training quality. Third, it provides important implications for the government to adjust football education related policies.

2. Literature Review

2.1 Summarizing the Youth Football Training Model of Football Powerhouses

Youth football training in Japan, Europe and the United States is of significant reference value. In this dissertation, youth football training models of football powerhouses are systematically summarized from three dimensions of faculty, philosophy and system to identify the gap of youth football training

in China, finding targeted solutions.

2.1.1 Youth Training in Japan - Campus Football

Faculty: According to statistics of FIFA, among a total of 127 million Japanese people, 4.8 million people play football, of which 1.04 million football players have registered in the Japanese Football Association. The number of players under the age of 18 has reached 630,000, representing extremely sufficient reserves. The cultivation of young players cannot be realized without the contribution by junior coaches. Under the training center system of the Japan Football Association, while selecting talent, they are also conducting coach training. In the 2010 budget of Japan Football Association, the expenditure on coach popularization business reached 3.4 billion Japanese yen, second only to the expenditure budget of the Japanese national team on the related business. When excellent foreign players in the J.League retire, the Japan Football Association provides them with the most favorable treatment, allowing them to stay in Japan to guide youth training, so that young players can better imitate and learn techniques.

Philosophy: The most important philosophy of Japan's football instills in children is having fun with sports. In Japan, football is a life enlightenment course. Like going to classes, playing football is a part of the common lifestyle and also a way of education. Parents send their children to play football not for turning them into football stars, but for leading them to learn how to deal with the interpersonal relationship, and to develop a sense of teamwork as well as a firm and tenacious quality from an early age.

System: In 1993, football in Japan underwent professional reforms. A “two-way” approach was adopted: on the one hand, campus football continued

to develop; on the other hand, emphasis was placed on construction of clubs for youth teams at different grades, fortifying the pyramid foundation. Almost every high school in Japan is equipped with its own football club, and the training of these football clubs is also quite intensive. The players would often train until midnight.

Youth training of campus football is closely linked with high school football league. The All Japan High School Soccer Tournament is hosted by the Japan Football Association and the All Japan High School Athletic Federation. 101 tournaments had been held since it was founded in 1917. The teams for the tournament are fixed at 48. With active participation from many TV stations, every game was broadcasted to the whole Japan, and the audience of the final game even reached 45,000 people. The All Japan High School Soccer Tournament has the following characteristics: First, after surviving the cruel preliminaries, the 48 teams participating in the final tournament are generally quite competent. The preliminary and final tournament each year would contribute many classic and wonderful goals, since each game was of high quality; second, both the field and equipment can reach professional level, with each team's jersey design and football equipment no inferior to those of the professional league; third, a large base in football participation continuously can provide young players to high school football teams; fourth, professional football training can help players improve, show their strength in the game, and lay a solid foundation for their future development; fifth, the All Japan High School Soccer Tournament is also a channel for young players leading to professionalism, so many young players with football dreams would do their best in the game to seize the opportunity to enter the professional team. The All

Japan High School Soccer Tournament gathers the most essential elements of Japanese campus football. Many excellent players, such as Keisuke Honda and Shunsuke Nakamura, became successful through high school teams and ended up embarking on the journey of the professional league on this springboard.

The Japan Professional Football League (J.League for short) is the highest-level professional football league system in Japan, hosted by the Japan Football Association and the Japan Professional Football League, managed by the participating clubs of the league. The first league was held in 1993. From the founding of the J.League, the management committee has established strict conditions for the admittance of clubs, and the building of youth training teams at different grades is a necessary condition for admittance. At that time, the chairman of the J.League, with the assistance of the Japanese Football Association, followed the German Football Association to formulate the league membership criteria by a strong hand for the 47 corporate teams of the top-level amateur football league in Japan at the time: “The team must have at least 12 professional players, and a football field holding an audience of 15,000 people which can be used at discretion, and establish a tiered system for player cultivation. Their coaches must hold qualification certificates.” At the same time, the J.League has three age groups of U12, U15 and U18 at the beginning of its founding, which is also one of the characteristics of the J.League. Since 2013, the Japan Football Association has upgraded the above-mentioned membership criteria to an institutional “membership system” with annual verification, forming an initiative exploration and example for the AFC to implement this system in the AFC Champions League. To strengthen the youth training system of the J.League, the cultivation of youth training coaches also

became a focus. In order to transform more amateur youth instructors into professional youth coaches, the J.League worked with the Japanese Football Association to develop a five-range (S/A/B/C/D) coach qualification system. What's more, the J.League regularly sets up training courses for coaches to improve the number and quantity of its youth training coaches. The cultivation of youth training coaches in the J.League is now no less than the training of young players.

The J.League also has its own characteristics in the cultivation for youth football. For every young player member, each club will tailor a suitable training plan for players in different age groups with varying technical characteristics. Since the physical and mental changes of teenagers will be quite obvious every year, the club also pays great attention to the physical and mental changes of young players to develop training that is really suitable for them. These young players are able to see and experience the life and game environment of first-rate players of the club from a young age, which also lays a solid foundation for their football career. Although the development size of youth training of the J.League club is slightly smaller than the school football training system and the football club training center system, the hardware facilities and training quality can be fully guaranteed. The club will also penetrate into the local primary and secondary schools to promote football. The U12 teams of many clubs are local primary school teams.

2.1.2 Youth Football Training in Europe - Professional Football Academy

Faculty: In terms of infrastructure (equipment, medical care, and social contact), each youth academy in Europe has at least 4 fields, 66% of the clubs provide transportation services for their players, 75% of the clubs closely

monitor the physical condition of the players, 50% of the clubs have physical therapists and psychologists to provide advice for the player's mental state; most clubs own two kinds of training fields, including real grass and artificial grass, and will arrange the top team to train with the youth team from time to time so that the youth team could observe the training. An undisturbed training environment is crucial, so most clubs will only open the training for observation to agents and parents at a specific time. The infrastructures of most European clubs are quite similar and comprehensive.

In terms of football technique and teaching, most clubs have their own lineup to keep to, where 4-3-3 (52%) is the mainstream followed by 4-4-2 (28%). Among the clubs, 66% stick to the main purpose of cultivating individual player skills, although a lot of the training is conducted in the team. 75% of the clubs have video analysts, and there are physical trainers to help train the physical fitness of players who reach the age of 14. Different clubs may hold divergent opinions in the cultivation of the players' personal abilities and team improvement. The level and vision of the youth coach is a key factor for the success of youth training. One of the most important things is that the coach must be a player before and have pedagogical knowledge. A good youth coach must properly balance between these two points. In terms of financial situation and talent training rate, 30% of the clubs have invested more than 3 million euros in youth training. On average, a club will have 6 players trained by themselves to play in a team. In the recent three years, 8.6% of youth training players will receive professional contracts, and 50% of the clubs have increased their investment in youth training over the last 5 years. Employee salaries (26%), infrastructure (15%), and player contracts (15%) are the main expenses of the

youth academy. The clubs interviewed can train 30-50 players meeting professional standards every year. Investing in youth training will not only save the club a great deal of money in the transfer market, but also enhance the sense of belonging for the players and develop more loyal fans.

Philosophy: About 75% of the youth academies have developed clear visions and objectives, and they are essentially in line with that of the top teams of the club. About 50% of the youth academies have an objective of “cultivating excellent players to create higher economic income for the club”; 60% of the youth academies believe that income from youth training exceeds the investment. The objective of most clubs is to be able to train professional players to serve as supplements to the top team of the club. About 50% of the clubs cooperate with local amateur football clubs. Cultivating and discovering individual talent is the main objective of each club. They differ in traditions and methods, and those youth academies undertaking well-defined objectives are more likely to succeed. What matters here is the spirit and faith rather than the size.

System: The youth academies of some clubs are closely linked to their top teams, while others are highly independent youth academies. In reality, these two cases are basically half and half. The youth academies of major clubs generally have about 220 players. The youth academies are generally divided into 3-4 age groups. A typical grouping is as follows: group of age 12 and under, group of age 13-15, and group of age 16 and above. The youth training courses of each group are shown in Table 2.

Table 2-1 Curriculum for Youth Football Trainees in Europe

| | Team Training Time | Personal training time | Games |
|----------|--------------------------|------------------------|-----------------------|
| Below 12 | Total practice for 41-42 | Once a week, 30-60 | 22-26 games per year, |

| | | | |
|---------|--|---|---|
| | weeks, 3 times a week, 1-1.5 hours each time | minutes each time | 50-60 minutes each game |
| 13-15 | Total practice for 44 weeks, 5 times a week, 1.5 hours each time | At least twice a week, 90-120 minutes each time | 30 games per year, 70 minutes each game |
| Over 16 | Practice for 5 times a week, 1.5-2 hours each time | At least twice a week, 90-120 minutes each time | 30 official games every year, each lasting 90 minutes |

A successful club must have a discerning scouting department, and these scouts must win over gifted young players to the club before they are discovered by any other club. The scouting department must work closely with the technique center of the club, so as to identify some football talents through details. At the same time, the scouting department should also be familiar with other departments in the same youth academy and attract talented players to join the club by promoting the excellent capabilities of the club in education, social activities and physical training.

2.1.3 Youth Football Training in the United States - Community Football

Faculty: From 2015 to 2022, the Major League Soccer signed a new TV broadcast contract with ESPN, Fox Sports and Univision for US \$90 million per year; the United States sold the broadcasting rights for the 2018 and 2022 World Cup for a record US \$1.1 billion, higher than the price in any other country of the world and 147% higher than the revenues of TV broadcasting rights in 2010 and 2014. The official data of the US Youth Soccer show that, in 2014, the number of registered young soccer players in the United States has reached 3.05 million, while this number in China sits at less than 30,000.

The deeper reason behind the development of American soccer should be accredited to the strength in mass base and talent pool. Americans know that young people serve as the foundation and root system of all sports. In the field of youth football training, their intensive and meticulous cultivation is highly surprising. In 2012, the US Youth Soccer drafted the *US Youth Soccer Player*

Development Model, which is aimed at the club youth training. It is this curriculum that divided American youth soccer into three stages, and the three age groups form a pyramid from bottom up. This “American youth training system pyramid” is also the core reform of the new American soccer path. An introduction to this “pyramid” may also bring certain enlightenment to China’s football which is under reform.

Coach training is as crucial as player training. At the end of 2014, Klinsmann mentioned in the *Report on the US Youth Training Development* made that the U.S. Soccer Federation would add an F level and a technical director level to the four levels of coaching licenses, i.e. A, B, C and D (applicable to both the youth team and the professional team). However, coaches must have an A-level coaching license in order to be eligible to apply for or take the F and technical director license examination. All of the present coaching courses at different levels are also improved, and the U.S. Soccer Federation would raise the threshold for these courses and increase efforts to review those unlicensed coaches. Finally, the U.S. Soccer Federation would invest US \$75 million to build a national coaching center and training base in Kansas City.

The integration of the youth training base with the local community: though the U.S. Soccer Federation does not require top-level clubs to have their own youth training systems, in the 2014 American professional league, all 19 clubs have developed their own youth training systems. Their responsible attitude towards youth training is admirable. A reporter searched on the official website of the U.S. Soccer Federation and found that within 160 kilometers of Indianapolis, where the reporter is located, there were 72 clubs and youth

training bases of different sizes, all of which were formal institutions registered under the U.S. Soccer Federation. The U.S. Soccer Federation has been constantly trying to integrate all the youth training bases across the nation with the local communities so that all people, regardless of age and sex, can participate in and feel the charm of soccer.

Philosophy: The 117-page *US Youth Soccer Player Development Model* divides American youth soccer into U6-U12, U14-U17, and U18+3 stages. Each age group has extremely detailed information on the personality, game composition, training plan and such of the young players. The three age groups are arranged in a pyramid shape from bottom to top. The *Model* also stipulates very detailed requirements for youth football facilities, including the ball sizes and field areas for each age group. There are also specific requirements for the training facilities used in the training, and there are nearly 20 kinds of such facilities. The Player Development Course in the *Model* includes a complete set of theories concerning club philosophy, soccer skills, life skills and psychology, fitness and health. From U6 to U19, tracking detection and evaluation are essential. Failure to keep up with any one stage of development will make the next stage more difficult.

Playing soccer and learning do not go against each other. “The team should employ teachers to tutor the kids in homework”: for a high school age team like the U-18 L.A. Galaxy Academy, a lot of controversy has emerged from putting too much of the players’ energy into training. The U-18 L.A. Galaxy Academy coach Eddie Soto said in an interview that a coach in the youth training system is not only responsible for teaching the players to play, but also for the future of the players. Soto sets very strict requirements for the players. He believes that

the team should hire teachers to tutor the children in homework, since Soto's team trains four times a week, the players can complete their homework every time before coming to the training. In summary, if the youth training camps in China can really formulate a comprehensive training and learning plan for the children, training and learning do not necessarily have to go against each other.

System: Top U18 + age group - The result and the performance of a game are equally important, and the evaluation focuses on clutch shooting: by this stage, since the players have grown up, the U.S. Soccer Federation defines this stage as the player's professional development stage, and most of the players will emerge in the college league, or in semi-professional or even professional teams. For this top stage, the U.S. Soccer Federation believes that the focus should be on the result of the game that players participate in and the performance of the players and their teams. Certainly, the long-term goal of this stage is to deliver elite players to the US national team. Evaluation in this stage should focus on the player's handling and control of the clutch shooting, demanding equal attention on both the result and the performance of the game. The U.S. Soccer Federation makes the following suggestions on the calendar of the U16-U18+ youth training: in a month, 10 days of training + 4 days of restorative training, 4 days of game + 2 days of league, 2 days of special skill training, and 6 days of rest.

Middle level U14-U17 age group - No arbitrary game, and allow the players to show their technique and tactic: at this stage, training is more important than the game. The U.S. Soccer Federation focuses on the team culture of the youth camp and the daily training atmosphere within the team. It emphasizes a deep understanding of the lineup and the game tactics. In this

regard, the U.S. Soccer Federation particularly emphasized that the game should not be held arbitrarily, and should instead be based on specific training content and the practice of such content in the game. Tony Lepore, director of the U15 youth training of the U.S. Soccer Federation, revealed in an interview that the U.S. Soccer Federation had tried to extend the training time of various youth camps and prepared to extend a season to 10 months. Lepore also mentioned that as far as football is concerned, he believed that the players should not spend time or energy in places other than the club to which they belong. The goal of the U.S. Soccer Federation is to learn the management model of the La Masia Youth Camp in Barcelona and to systematize its youth management, so that the children can learn and study in the club while they improve their soccer skills. More importantly, the players can show their technique and tactic developed in their youth training camps.

Bottom U6-U12 age group - Playing down the result of the game, and avoiding the introduction of tactical ideas: because the players in this age group are still very young, the success criteria of the U.S. Soccer Federation for this stage include the understanding of the rules of football games of young players, their understanding of fair play, and their most preliminary learning of technical and tactical awareness. Other than that, the coach should convey a “free football” concept to the players at this stage, avoid introducing tactical ideas to the players in this age group, and encourage players in the team to conduct one-on-one or two-on-two ball control training. To achieve this goal, the coach of the youth camp and the parents must work together and make concerted efforts. That is why the first day of each month in their training calendar set for the coach and parents to meet. At this age, the process of the game is more important than the

result of the game. Children from 4 to 9 years old playing 3v3 to 6v6 games are mainly for entertainment without rankings. Through this simple football environment, they are led to gain an understanding of football skills and games; young players from 10 to 14 years old play 8v8 to 11v11 games, and no qualification trials should be held for players younger than U13. The game result should be played down and the player's performance should be highlighted. The U.S. Soccer Federation makes the following suggestions on the calendar of the U6-U10 youth training: in a month, there will be 6 days of training, 6 days of game, and 16 days of rest (allowing the kids to focus on their school work). The U.S. Soccer Federation suggests that the training calendar for U12-U14 youth training should be 10 days for training, a day of restorative training, 3 days for game, 2 days of league game, and 14 days for rest.

2.1.4 Summary of Youth Training in Football Powerhouses

By systematically sorting out the three dimensions of faculty, philosophy and system, this paper finds that the following features are shared among football powerhouses: in terms of faculty, the football powerhouses generally attach great importance to teachers, having obvious advantages over China on both the order of magnitudes of teachers and the support funds. Football has a significantly higher status and weight in the whole society. In terms of philosophy, soccer powerhouses generally emphasize football for the whole people and regard it as a means of culture and fitness, while China regards football as a strategy to win gold medals. As a result, Chinese football becomes more niche and elitist, which is not conducive to talent selection. In terms of youth training system, most of the football powerhouses have established a complete youth training system from campus to stadium, paving the way for the

selection and training of football talents. See Table 2-2.

Table 2-2 Summary of Youth Training Experience in Football Powerhouses

| | Faculty | Philosophy | System |
|--------|---|---|---|
| Japan | Coaching source: elite retired player Coaching fund: 3.4 billion yen in 2010, accounting for 0.000036% Youth trainee: 630,000, accounting for 0.5% | Happy sports: learn how to deal with the relationship between people, develop a sense of team and tough quality, instead of being a star | Campus football + club |
| U.S. | Coaching source: Level 5 coaching license Coaching fund: 75 million US dollars to build a national coaching center Youth trainee: 3.05 million, accounting for 0.9% | Development Program of American Youth Soccer Players: club philosophy, football skills, life skills and psychology, fitness and health theory | U6-U12: less emphasis on the results and never introduce tactical ideas U14-U17: no bind playing; encourage players to play in a technical and tactical style U18: emphasis on both results and quality performance |
| Europe | Well-established teacher system: venue, equipment, health care, social contact | Cultivate excellent players and increase the economic income of the club | Youth training school + club |
| China | Coaching source: retired players, 40,000 in total Coaching fund: government + market Youth trainee: 80,000, accounting for 0.0061% | Gold medal strategy | Campus football + training institutions |

2.2 Customer Engagement

In recent years, with the continuous improvement and development of marketing theory, customers have changed from passive value receivers to active value creators, participating in innovation together with companies to create competitive advantages (Vargo & Lusch, 2004). Scholars have conducted in-depth exploration of this phenomenon and proposed the perspective of customer engagement. As an effective way for companies to improve innovation and business performance, customer engagement has received more and more attention from scholars and more recognition from the industry. This section summarizes the research status of customer engagement, including the definition of customer engagement and the antecedent and outcome variables, and identifies the shortcomings of the current research.

2.2.1 Definition of Customer Engagement

Scholars began to show interest in the concept of customer engagement and tried to define the meaning and dimensions of customer engagement from different perspectives. They believe that customer engagement is the interaction between customers and companies, representing the degree of customer contribution during service provision. Some scholars believe that customer engagement is a single dimension, while others hold that customer engagement is multi-dimensional (Hollebeek, 2011). A summary of customer engagement in this dissertation leads to the finding that the definition of customer engagement can be divided into three important dimensions: behavior, cognition and emotion.

The behavioral dimension refers to efforts made during the interaction between customers and the brand. For example, the Marketing Science Institute in the United States defines customer engagement as the various behaviors of customers related to the brand or the company beyond the purchase behavior, and holds it as key factors for creating and strengthening customer relationships and ultimately improving corporate performance. Van Doorn et al. (2011) believe that customer engagement behavior goes beyond transaction. It could be defined as customer's behavioral manifestations with a brand or firm focus beyond the purchase behavior resulting from motivational drivers, including "word-of-mouth communication", "writing online reviews", "participating in brand community", etc.; Kumar et al. (2010) agreed that customer engagement is the behavioral manifestation of customer's interaction with companies, but they pointed out that customer engagement behavior included not only non-purchase behavior, but also the purchase behavior itself.

Cognitive dimension refers to the degree of personal care and focus on the brand. For example, Brodie et al. (2011) believe that customer engagement is a psychological state that occurs by virtue of interactive, co-creative customer experiences with a particular focus (such as a brand); Sprott et al. (2009), by combining customer engagement and self-concept, states that customer engagement refers to customer's tendency to regard important brands as self-concepts, which will affect brand preference and loyalty.

Emotional dimension refers to the degree of personal inspiration and pride triggered by the brand. For example, Vivek et al. (2012) define customer engagement as the intensity of personal participation in corporate product improvement or other activities, and the intensity of connection with products or activities. They believe that customer engagement involves not only customer experience and feelings, but also the degree of participation in existing and potential customers.

Table 2-3 Definitions of Customer Engagement Proposed by Representative Scholars

| Definition | Representative scholars |
|---|--------------------------|
| Cognition, emotion and behavior | Hollebeek(2011) |
| Participation effect, form, scope, influence and goal | van Doorn et al(2010) |
| Positivity, conscious participation and interpersonal interaction | Vivek(2009) |
| Time, effort, information supply and co-production | Hsieh & Chang(2016) |
| Attendance, information provision and co-production | Claycomb & Martin (2001) |
| Information sharing, responsible behavior and interpersonal interaction | Ennew & Binks(1999) |
| Loyalty, cooperative behavior and information sharing | Bettencourt(1997) |
| Mental, physical and emotional investments | Silpakit & Fisk(1985) |

This dissertation argues that customer engagement is a multi-dimensional concept. The visible part is customer behavior, which is easy to measure and evaluate; while the invisible part is customer cognition and emotion, which is difficult to measure and evaluate. In addition, the visible and the invisible parts

are consistent in direction and intensity. For example, when a customer is highly engaged in a company/brand, he or she will invest more in behavior, and will highly recognize and praise the company/brand when it comes to cognition and emotion. In the Chinese context, since Chinese consumers are not good at openly expressing emotions because they are sensitive about their reputation and tend to be reserved, customer engagement of Chinese consumers may be more reflected in behavior. Based on the research by the above scholars and the research scenarios of this dissertation, customer engagement in this dissertation is defined as follows: Customer engagement refers to the degree of customer interaction with the company/brand, including visible behavioral investment such as time and energy, and invisible investment such as cognition and emotion. This dissertation focuses on the visible investments.

2.2.2 Causes and Consequences of Customer Engagement

According to the differences at the research level, the antecedent variables of customer engagement include individual, organizational and environmental levels. At the individual level, scholars found that factors such as customer trust, customer identity, consumption goals, customer resources (knowledge, time, money) and others would affect customer engagement (Schau, Muniz & Arnould, 2009). At the organizational level, research found that the brand, reputation and size of organizations could positively affect customer engagement. In addition, the degree of organizational socialization and perceived organizational support of customers have a positive influence on customer engagement (van Bruggen et al., 2010). Environmental factors include political, legal, economic, cultural, technological, and competitive aspects. For example, the political/legal environment affects customer engagement by

promoting or inhibiting the release of information; technological progress drives the universal spread of the Internet, affecting the form and cost of engagement; competitive behavior may prompt customers to understand brand value, price fairness, and fair distribution through engagement; and culture can also have an indirect positive influence on customer engagement through perceived risk as well as internal and external controls (Kumar et al., 2010b). This study explores how youth training institutions innovate business models to improve performance, so this study focuses on antecedent variables at the organizational level.

Customer engagement will affect not only individuals, but also organizations and the environment. Firstly, customer engagement will affect personal attitudes, cognition, emotions and more. For example, customers with a higher degree of engagement will purchase products or services of the company more frequently and give more positive reviews (Borle et al., 2007), helping them to gain a sense of belonging in the customer community and a stronger social identity (Chu & Kim, 2011). Secondly, active customer engagement behaviors like word-of-mouth communication will greatly enhance corporate image and reputation, which helps with attracting more customers and thereby enhancing its competitiveness and financial performance (Kumar et al., 2010a). In the process of interaction with the company, customers will provide suggestions for improvement of the company's products or services, and contribute creatively from their own perspectives, thereby helping the company to improve its products and services (Schau, Muniz & Arnould, 2009). Thirdly, customer engagement will also have an influence on the environment. For example, sound customer engagement will create more economic surplus and

social welfare, as well as new competition rules like winner-take-all. But there are relatively few studies in this category. The research framework for customer engagement is shown in Table 4 below.

This dissertation focuses on the impact of antecedent variables at the organizational level on customer engagement and the impact of customer engagement on youth football training performance. Since youth football training involves the efforts of students in terms of physical strength and energy, this dissertation includes the classic definition of customer engagement made by Silpakit & Fisk (1985), while considering the investment of young trainees in three aspects: spirit, physical strength and emotion. The more the investment, the higher the degree of customer engagement. In summary, customer engagement not only helps to increase the company's mass base, but also facilitates the forming of a sound cultural atmosphere. China's football faces the exact problems of weak mass base and football culture alienation. With the customer engagement theory, this dissertation is designed to solve the problems by exploring the fortification of the mass base of China's football and building a Chinese football culture.

Table 2-4: Research Framework for Customer Engagement

| Antecedent variables | | Customer engagement | Consequence variables |
|----------------------|------------------------|---|-----------------------|
| Individual | Satisfaction | The degree of customer's engagement in the interaction with the company/brand, including visible behavioral investment such as time and energy, and invisible investment such as cognition and emotion. | Cognition |
| | Trust | | Attitude |
| | Identity | | Emotion |
| | Consumption target | | Time |
| | Resource | | Identity |
| Organization | Brand | | Finance |
| | Reputation | | Reputation |
| | Size | | Competition |
| | Information processing | | Customer number |
| Environment | Industry | | Product |
| | Politics | | Customer benefits |
| | Economics | | Economic surplus |
| | Culture | | Social surplus |
| | Technology | | Rule |
| | Competition | | Cross-brand |

Data source: Sorted by the Author of this Dissertation through Literature Review

3. Research Hypothesis

This study focuses on the organizational level to explore the impact of the characteristics of youth training institutions on customer engagement. At present, there are more than 10,000 registered youth football training institutions in China, which have trained millions of youth football players and become an important force to promote the popularization of youth football and the improvement of football skills. However, most of the researches related to youth football training take campus football as the research object (Li et al., 2018; Wang, 2018; Yang et al., 2019), and there are few researches on social youth football training institutions. Campus football is mostly funded by the government, while social youth football training institutions are self-financing entrepreneurial enterprises. Therefore, exploring the antecedent variable of customer engagement in social youth football training institutions from the organizational level can not only make up for the deficiency of current theoretical research, but also provide guidance and reference for the operation practice of tens of thousands of youth football training institutions.

With the rapid development of the youth football training industry, the role of customers has undergone fundamental changes. Under this trend, the youth training company attaches more and more importance to the customer engagement, and desire for interaction and cooperation between young trainees and corporate coaches. This requires the youth training company to innovate in services to create more appeal to more students. In order to maximize the satisfaction of their own needs, young trainees tend to actively engage in all stages operated by the youth training company, and interact with the youth training company by investing emotion, spirit, and physical strength, to drive

service innovation. Moreover, as an important module for the sustainable development of the youth training company, service innovation exerts a great impact on students' consumption experience. In practice, the youth training company provides delicate services to students and enhance their overall experience during the consumption, which is a key factor for making the consumption satisfactory. Customer engagement not only helps to increase the company's mass base, but also is conducive to a sound cultural atmosphere. However, the youth training service is somehow intangible, which makes it difficult for students without professional knowledge to accurately assess the quality of the service, thereby increasing their uncertainty and risk perception of the youth training service and ultimately affecting the youth training performance. It can be seen that youth training service innovation, customer engagement and youth training performance are inextricably linked; how to design a good training model to promote customer engagement in the youth football training process is a thorny problem facing all youth training institutions. How to promote the customer engagement during the youth football training by designing a proper training model is a difficult problem that all youth training institutions are facing.

3.1 Convenience and Customer Engagement

As of February 2018, there were 51,054 campus football fields nationwide. During the "Thirteenth Five-Year Plan" period, 38,944 fields have been planned to be built and transformed. By 2020, the number of campus football fields nationwide will reach 83,726. The absolute number seem to indicate that there are enough football fields in China; however, considering China's huge population and vast land area, there is only one football field per 17,000 people

and every 115 square kilometers of land. Even considering the fact that the population mainly aggregates in the eastern coastal areas, this situation is still not optimistic. In this dissertation, Shanghai, one of the most developed cities in China, will be used as an example to compare with London, an international city at the same level: As of 2014, Shanghai, with a land of 6,340 square kilometers and a population of 24 million people, has only 200 football fields, and most of the fields are closed stadiums in schools. In the same period, London, with a land of 1,577 square kilometers and a population of 8.9 million people, has 3,000 football fields.⁹ The field number per square kilometer of London is 63 times that of Shanghai, and the field number per 10,000 people of London is 42 times that of Shanghai, as shown in Table 3-1.

Table 3-1 Comparison of Field Numbers between Shanghai and London

| | Land area | Population | Field number | Field number per km ² of land | Field number per 10,000 people |
|----------|-----------|------------|--------------|--|--------------------------------|
| London | 1577 | 890 | 3000 | 1.90 | 3.37 |
| Shanghai | 6340 | 2400 | 200 | 0.03 | 0.08 |

There is only one football field per 17,000 people and 115 square kilometers of land in China, which is a huge challenge for youth football training, as most young trainees have to travel dozens of kilometers and even spend several hours trying to reach the training field. Considering traffic jams in the city and parents busy with work, it will cost the young trainees a lot of time and energy outside of training. Without solving the convenience problem in youth training, it is difficult for Chinese youth football training to achieve good results.

Convenience in purchasing and using services is thus becoming more and more important for consumers. In marketing, the concept of convenience was

⁹ <https://sports.sohu.com/20140717/n402375187.shtml>

first proposed in the classification of commodities. Copeland (1923) initially proposed the concept of convenience goods, defined as those distributed centrally and customarily purchased at easily accessible stores costing the least time and energy; subsequent scholars also used the definition, and referred to the time and energy spent to acquire products or services collectively as nonmonetary cost (e.g. Bucklin 1963; Murphy and Enis 1986).

Early scholars focused on emphasizing the cost of time and energy spent on acquiring products or services when defining convenience, but few studies looked into the characteristics of the products or services themselves (Brown, 1989). Berry, Seiders & Grewal (2002) enhanced the concept of convenience from the perspective of product and service characteristics. They believe that convenience should be fully defined in both purchase and consumption. Thus, they proposed five dimensions of convenience, that is, decision, access, transaction, benefit, and postbenefit convenience. This definition has been widely recognized by scholars. In terms of the impact of convenience, scholars mainly focused on product quality and customer satisfaction, arguing the more convenient the products or services, the higher the customer satisfaction (García-Fernández et al., 2018; Srivastava & Kaul, 2014).

Research on convenience has two shortcomings. First, in terms of the research object, the products or services discussed by the scholars are mostly standardized and will be consumed within a short period after purchased. Few have probed into the convenience of non-standardized products or services with a long consumption period, a typical product being training. This lack of research has caused serious problems. On the one hand, training services have emerged in recent years, occupying a large market share. For example, in 2018,

China's education and training market reached RMB 2,177.5 billion yuan¹⁰; on the other hand, training service providers have products of varying quality, so seeking a breakthrough in convenience became an important issue for training service providers to tackle. Second, when exploring the impact of convenience, scholars assumed that customers are only value receivers, ignoring the role of customers in value creation; in fact, with the continuous improvement and development of marketing theory, customers have changed from passive value receivers to active value creators that participate in innovation together with companies to create competitive advantages. However, it is still unclear whether and how the convenience of products or services affects customer engagement.

In order to solve the inconvenience for Chinese youth football and the above-mentioned deficiencies in theoretical research on convenience, this research takes Chinese youth football training as the research object to explore the influence of the convenience of youth football training on the engagement of youth trainees as customers. Service convenience not only includes easy access to service locations and low cost of access to service locations, but also involves considering the content of convenience according to characteristics of the industry. Berry, Seiders & Grewal (2002) improved the concept of convenience from the perspective of product and service characteristics and claimed that convenience should be defined comprehensively from both purchase and consumption. For this reason, they proposed five dimensions of convenience, including Decision Convenience, Access, Transaction, Benefit and Postbenefit. This research adopts the viewpoints of Berry, Seiders & Grewal (2002), and holds that the convenience of youth football training should

¹⁰ <https://www.seoxiehui.cn/article-177969-1.html>

include five dimensions of decision, access, transaction, benefit and postbenefit. The impact of the convenience of these five dimensions on the engagement of youth trainees as customers will be explored hereinafter. In the context of youth football training, customer engagement mainly refers to the involvement of the youth trainees in the interaction with the training institutions, such as the amount of time and energy invested in youth football training.

First of all, in purchasing decision-making, there are nearly 10,000 youth football training institutions in the Chinese market, which differ in size, region and popularity, bringing difficulties to consumers in purchasing decision-making. To be specific, youth football trainees and their parents have little awareness of youth football training institutions. Due to information asymmetry, they need to obtain information such as quality, time, and location of a youth football training institution comprehensively when deciding whether to buy its training services. For non-specialists, access to this information can be costly, especially when making initial purchase decisions. Reducing the geographical distance between participants and institutions helps to reduce information asymmetry. Therefore, proximity to youth football institutions in the community reduces the time and effort spent by consumers in making purchasing decisions, which are ultimately reflected in their satisfaction with youth training services. Community football gives full consideration to the purchase decision of students, and the selection of football training locations near the addresses of the students minimizes the searching time and energy of youth trainees, which helps to improve their customer engagement.

Second, in service acquisition, as one of the highest operating costs for youth football training institutions is the cost of the fields, most of the

institutions, in order to reduce the costs, choose to rent the fields in remote areas, rather than building or renting the fields in youth-trainees-concentrated areas. Although this method reduces the operating costs, it brings great inconvenience to the youth training service. On the one hand, youth trainees are all minors, who often need to be accompanied and picked up by their parents. In order to attend the training on time, they have to spend a lot of time and energy in commuting (for older students with a slightly closer commute, they can travel to and from the youth training venues on their own). On the other hand, the youth trainees who gather at a location from different places are not familiar with each other, and need to get to know each other through more communication, which will also result in certain time cost. People's time and energy are limited. If some students live far away from the youth training field, they will spend more time and energy in commuting and getting familiar with each other, and correspondingly, they will spend less time and energy in youth training. On the contrary, if the training field is close to the addresses of the youth trainees, they will spend less time and energy in commuting and getting to know each other. Accordingly, the time and energy invested in youth training will be increased. That is, if the access to youth training is more convenient, the customer engagement of youth trainees will be improved accordingly. Community football has fully considered the commuting problems of the trainees and chosen the training fields near the addresses of the trainees, which minimizes the time and energy for commuting and for the players to be familiar with each other, and helps to improve the customer engagement of the trainees.

Third, there are a large number of youth football training institutions in the Chinese market, and there are diversified trading methods of youth training

services, such as charging by semester, by class hour, by course module, etc., and the charging time can be subdivided into pre-payment and after-payment. Youth football training is an experiential service and trainees need to experience the courses in depth before they can make a comprehensive evaluation. Therefore, it is common for youth trainees to quit after a period of training, which often leads to the conflict between prepaid youth institutions and youth trainees, bringing inconvenience to both institutions and trainees. In this case, it is of great convenience for youth trainees to take free trial course and make trading decisions after the trial courses. Trial community football fully considers the trainees' course experience and refund problems, minimizes the transaction costs of youth training services, and helps to improve the customer engagement of trainees.

Fourth, the benefit of convenience will also affect the customer engagement of youth trainees. Benefit convenience means that customers can quickly experience the core service after purchasing the consumer service. In youth football training, the core service is football skills training. Experiential community youth football training not only saves a lot of commuting time for youth trainees, but also reduces the cost of getting familiar with each other, helping them to get into the training state quickly and experience core services, and improving the engagement of trainees. In addition, the postbenefit convenience also helps to improve the engagement of trainees: football is a team sport, and trainees in the same community can easily form teams after class, conduct competitive training and competitions, and put more energy and emotion into youth training activities.

In conclusion, the Decision Convenience, Access, Transaction, Benefit and

Postbenefit of youth football training all help to improve the customer engagement of youth trainees. Therefore, the first hypothesis of this dissertation is hereby proposed:

Hypothesis 1: The convenience of youth football training positively affects customer engagement.

3.2 Fun and Customer Engagement

Both the theoretical and practical worlds are pursuing “fun”, believing that fun is an important motivation for individuals to devote themselves to work or study. For example, Davis (1971, 1986) argued that great theories are great not for their correctness, but because they are interesting. Therefore, developing interesting theories is a necessary condition for theoretical researchers to obtain great titles. Interesting theories negate the existing theories that have been taken for granted, or refute the stereotypical assumptions held by the audience. Compared with boring theories, interesting theories are more likely to subvert the reader’s cognition, thereby attracting their attention to have a deeper understanding of the new theory. This view also applies to the practical world, especially in the field of education. In recent years, many scholars have proposed the viewpoint of interesting teaching, stressing that teachers should be good at breaking routines in the teaching process, change the stereotype of boring and mechanical learning in the classroom that students hold, and ignite the students’ interest in learning (Garn & Cothran, 2006; Oowler, Morrison & Plester, 2010).

Scholars generally recognized the importance of fun in the educational process, but there is no unified view on how to define fun and how to design interesting courses. For example, Hastie (1998) interviewed 35 hockey trainees

and found that they defined fun as skill improvement, participation, playing games, and interacting with peers. Kientzler (1999) found that increasing choices for students, such as choosing teachers or coaches freely, would make the course more interesting. In the survey by Supaporn & Griffin (1998), college students also attributed fun to various factors, such as learning, improving, being challenged, relaxing, socializing, and having a good partner or teammate. Based on the viewpoints of the above scholars, this dissertation defines interesting youth football training as "selecting football coaches with active thoughts for college students, adopting the teaching method of competition promoting training, which is different from the traditional football teaching method, so that the youth trainees can take an active part in football learning with the mentality of exploration and curiosity, and improve personal football skills and team building while enjoying the fun".

First of all, the self-cognition and concepts of football coaches directly affect the perception and evaluation of youth training services. In traditional youth football training, retired athletes are most often chosen as coaches. As coaches, they have excellent professional skills. However, they also face the problem of disinterest due to rigid educational concepts and outdated communication methods. First, these coaches grew up in the earlier football education environment. At a young age, they received plain training and rigid courses. As such, they will also involuntarily pass this training concept to the young trainees, making it easy for students to develop a sense of boredom and rebellion. Second, these retired athletes are generally older, and usually communicate with students as elders rather than friends, so there are many barriers impeding their communication with young students. Therefore, retired

athletes face problems of disinterest with rigid ideology and insufficient communication, and students may thus lack the inspiration to fully devote themselves to training.

Selecting fresh graduates of sports colleges as coaches and imparting them with newly designed interesting teaching concepts can make the youth football training more interesting. First, in the short term, having young college students as coaches will change the perception of young trainees (for most of the coaches are retired athletes), and students are more likely to participate in training with curiosity and the desire of exploration; second, in the long term, young college students have a smaller age gap with the young trainees who have high hopes for college life and will have more in common to talk about. They are more likely to communicate as friends with fewer communication barriers. Third, young college students are not affected by their careers, so they are more likely to accept fresh and interesting teaching concepts and methods and pass the fun to young trainees. In summary, the selection of young sports college graduates as coaches to pass on fresh and interesting training concepts and methods to young trainees will help reduce the sense of resistance and rebellious mentality in students, increase their desire to explore and learn, and thus increase their investment of time, energy and physical strength.

Second, the way of youth football training will affect the engagement of youth trainees. Football training has some unique characteristics. First of all, as a leg-related sport, trainees need to train their leg movements repeatedly so as to build up their muscle memory so that they can make correct responses subconsciously under certain circumstances. For example, the training of shooting is measured in the unit of ten thousand times. These mechanical

repetitions are extremely boring and test everyone's patience and willpower. Second, football training needs a large amount of exercise. The amount of movement of youth trainees is more than 10 kilometers per hour, during which, their will be frequent body confrontation with each other, and the amount of sweating is even as high as one liter. Third, as a popular sport, football features intense competition. To excel in football skills, youth trainees need to ensure at least 20,000 accumulated hours of training. To sum up, youth football training requires students to invest a lot of time, physical strength and energy, and the training process is mechanical and boring. In the process of youth training, trainees may easily tend to be rebellious and evasive, often resulting in falling behind or being sluggish. To adopt the youth training mode of competition promoting training to enhance the competitive nature of youth football training will help reduce the boringness of youth football training. In this dissertation, competition promotion training refers to promote training with competition, rather than replacing training. Repeated practice of a certain football movement will not only cause muscle fatigue, but also lead to psychological fatigue, thus causing the reverse psychology. Competition promotion training can stimulate trainees' competitive spirit and partially offset the psychological fatigue caused by muscle fatigue, so as to enhance the training effect and quickly improve the training performance. And good performance can stimulate the students to invest more energy and physical strength in training and enhance their engagement. To this end, the second hypothesis of this dissertation is hereby proposed:

Hypothesis 2: The fun in youth football training positively affects customer engagement.

3.3 Empathy and Customer Engagement

For a long time, the Chinese public had a deep misunderstanding for sports. On the one hand, the public misunderstood the intelligence of athletes. For example, “most athletes have developed limbs but simple minds”, “only those with poor academic performance in school would become athletes”, etc. These misunderstandings seriously hinder the enthusiasm of students to participate in sports training. On the other hand, the Chinese tend to have the idea of elite sports, believing that athletes should win gold medals, rather than the idea of sports for all. Yao Ming once called for “getting rid of the culture that only winners count in sports” (Chen, 2012). Our misunderstanding in sports brought bad influence. In terms of physical fitness, students rarely participate in physical training, resulting in deteriorating fitness. The relevant data in the *Physical Survey* by the Ministry of Education show that for the past three decades, the physical fitness of Chinese children and adolescents has been declining, with an overall decline in strength, speed, acceleration and endurance. This is now a national and social focus; in terms of psychology, physical exercise helps to cultivate the team spirit and stress resistance in students. Yet, the lack of sports for so long has led Chinese children and adolescents to lag far behind in psychological development, compared with those in the same age groups of Europe and America. The development of sports, especially sports for all, requires the public to abandon the old misunderstandings of sports and truly embrace the inner world of athletes, to reach consensus and feel the same way with them.

The concept of empathy, upon proposed, has been widely discussed in philosophy, sociology, psychology, and other disciplines. Scholars define

empathy from the perspectives of cognition, emotion, and multi-dimensional perspectives. The research on the emotional perspective believe that empathy refers to an emotional response that stems from another's emotional state, and that's congruent with the other's emotional state or situation (Eisenberg & Strayer, 1987). The research on the cognitive perspective argued that empathy was the ability to experience the emotions of others through cognizing their internal emotional states (Hoffman, 2001; Ickes, 1993). Researchers from a multi-dimensional perspective believe that empathy involve two basic components: cognitive empathy and emotional empathy. Cognitive empathy, the main component of empathy, refers to the ability to recognize the emotions and understand the opinions of others; at the same time, while recognizing the emotions of others, one must also resonate with the emotional feelings of others to form emotional empathy (Gladstein, 1983). Emotional empathy can be regarded as the deepening of cognitive empathy, which is empathic emotional response produced after judgment and reasoning of emotional states. At present, the two-component theory of empathy has been accepted by more and more scholars. This dissertation adopts the definition of multi-dimensional perspective, and specifies empathy as "emotional resonance with others based on recognizing the emotions and understanding the opinions of others".

In youth football training, youth training institutions should identify the subtle emotional fluctuations of athletes, understand their emotional state, and resonate with them. For example, we aim to "pave the way to redefine athletes and boost sports for all", promote and practice the philosophy that "football is a sport for elite students, for it requires excellent intelligence and physical strength; football is also a sport for the public, as we not only aim to 'win gold

medals’, but also enjoy the fun of sports”, and focus on training the empathic ability of coaches and other staff. In the context of the service industry, due to the characteristics of simultaneous production and consumption, customers personally participate in the service creation process. The engaged customers will be highly focused on the service production process, and can timely report the problems in the service process to employees. In response to these problems, enterprises can timely make service remedies and make corresponding improvements. The above-mentioned empathic behaviors help to dispel the psychological concerns of young trainees, enabling them to be truly engaged with their coaches and fully devoted to youth football training. To this end, the third hypothesis in this dissertation is proposed:

Hypothesis 3: Empathy of youth football training positively affects customer engagement.

3.4 Boundary Conditions Affecting Customer Engagement by the Characteristics of Youth Football Training

In the above context, this dissertation explores the influence of the convenience, fun and empathy of youth football training on customer engagement. Although many youth training institutions have begun to adopt community football, fun youth training and other training methods, the effects vary largely; so far, few studies have explored this issue. Any mechanism has a specific boundary, so in this part, we will further explore the action boundary of the above causal mechanism.

According to the analysis of this dissertation, the convenience, fun and empathy of youth football training are input factors, whose desired effect depends on whether the coaches can transmit these characteristics to the trainees

and on whether the trainees accept these characteristics. Scholars have found that both the information transmitters and the information recipients have cognitive inertia, and are likely to deliberately select the information they deem appropriate for use, thus generating the effect of information funnel. Therefore, this dissertation analyzes the experience and cognition of two key groups in information transmission and information receiving, and their moderating effect on the relationship between the characteristics of youth training and customer engagement, and discusses the moderating effect of the cognitive inertia of coaches and the engagement motivations and acceptance of students.

3.4.1 Moderating Effect of Coach's Cognitive Inertia

Cognitive inertia refers to the stable psychological characteristics formed by decision-makers through long-term learning, mainly reflected in deep-rooted default assumptions and judgments (Gavetti, 2005). Decision-makers tend to rely on this stable thinking mode to scan and interpret environmental information, and it is difficult to capture or absorb new information when the external environment changes, and they cannot adjust themselves to adapt to the environment in a timely manner. Senior executives judge external information as compatible knowledge, partially compatible knowledge and incompatible knowledge according to their knowledge structure. Compatibility and overlap determine the degree of screening and filtering of the information: knowledge that overlaps with knowledge architecture compatibility is easily accepted; partially compatible knowledge requires individuals to update knowledge structure and resolve cognitive conflicts; incompatible knowledge is difficult to be accepted by individuals, that is, it is filtered and deleted.

Individual knowledge structure is influenced by their own experience, such

as educational background, professional experience, social status and interest relationship (Hambrick & Mason, 1984). Cognitive pattern is the external manifestation of knowledge structure. Knowledge structure reflects inherent physical characteristics, while cognitive model reflects subjective evaluation and has high specificity and variability. Individuals' cognition and interpretation of information is a microscopic interface to perceive the characteristics of internal and external environment, and the construction of the environment affects their attention, information screening and reaction to environmental events.

Attention enables decision-makers to identify important objects and events in the environment, using selective attention to track information while ignoring other information. Bottleneck theory and attentional resource theory both give different explanations for the mechanism of attention filtering information. Conscious attention can make individuals respond quickly and accurately to the stimuli they are interested in using their previous experience under the condition of limited cognitive resources, and process them into memory. The process is purposeful and sequential and governed by consciousness. In addition to conscious attention, individuals also engage in active preconscious processing of information without awareness. Preconscious information refers to stored memories that are not used at a given time but can be recalled at any time on demand. Priming enables stimuli that are identical or similar to preconscious information to receive priority presentation and attention in the brain. Therefore, preconscious processing of attention depends on knowledge structure, and cognitive model scans and screens exogenous information through attention.

Coaches of youth training, as transmitters of youth training, will selectively

transmit youth training contents according to their own experience and knowledge. In traditional youth football training, most retired players are selected as coaches. Although such experienced football coaches have good professional skills, there are still many problems, such as rigid ideas and empiricism. These coaches, who grew up in an earlier football education environment, where they received monotonous training methods and rigid training courses, will unconsciously transfer such training philosophy to the youth football trainees; while the selective filtering of the convenient, fun and empathic youth training contents will easily make the trainees feel boring and rebellious, which will affect the engagement of the trainees. By contrast, inexperienced coaches, not affected by their careers, are more likely to accept new and interesting teaching ideas and methods, and pass the fun on to the youth trainees, so as to improve the engagement of the trainees.

Based on the above analysis, this dissertation proposes the following hypotheses:

Hypothesis 4a: Coach experience elsewhere negatively moderates the positive influence of youth training characteristics on customer engagement.

3.4.2 Moderating effect of students' engagement motivations

Youth trainees, as the receivers of youth training content, also selectively receive youth training content according to their own engagement motivations. Drawing on previous studies, this study uses identity to characterize students' motivations to integrate into local social life. Identity refers to a person's cognition of which group he belongs to, which is an extremely important aspect of self-concept (Deaux, 1993). As an important dimension to measure the social integration process and results of floating population, identity has been involved in social science research at home and abroad. Today's society is a consumer

society. Consumption is becoming more important in people's life. It has been proved by many studies that the consumption behavior of individual's identity will change significantly once it is hoped or changed. For example, Guliz & Per's (1998) research on international immigration shows that when immigrants want to integrate into the mainstream society, they will refer to the consumption standards of local people and manage their self-image through symbolic consumption. Zhou (2004) studied the identity of urban migrant workers who were detained in the city and showed that peasant labor unions who highly recognized the urban culture consciously internalized the urban lifestyle and explicitly converged with citizens. Yu and Pan (2008) studied the subjectivity reconstruction of the "new generation of country girls working in cities" in the consumer society, and found that migrant girls tried to imitate citizens in clothing and other consumer fields, thus obscuring their identity as farmers. Zhao and Liang (2014) discovered that the more migrant workers recognized their citizenship, the higher their requirements for housing quality, and the more they had to spend on housing. In short, the traces of individual identity can be deeply seared into the realm of consumption.

Accepting an identity means accepting specific codes of conduct, role norms and image requirements and internalizing them into conscious actions. Identity, like a framework, restricts the development of individual activities and allows people to allocate resources within this scope (Wang, 2001). Consumption is one of the most important resource allocation activities of human beings, especially in the post-modern society, consumption plays an increasingly important role (Diana, 2001). Therefore, the influence of identity on consumption cannot be ignored. There have been studies on identity and

consumption for a long time. For example, Veblen pointed out in *The Theory of The Leisure Class* that consumption mode is associated with identity, and individuals' "conspicuous consumption" aims to show off and prove their wealth and status. When studying the nature of fashion, Simmel also pointed out that "fashion is the product of class differentiation", that is, fashion shows individual class and social status. In his famous book *Distinction*, Bourdieu argues that distinctions of people are based entirely on taste, with different identities distinguishing themselves from each other through consumption. Baudrillard said the truth, pointing out that "people never consume things for their own sake, but use things as symbols that can stand out, or allow you to join an ideal group, or reference a higher status group to get rid of the group". That is, at a deeper level, people consume the "meaning" of goods. At this point, goods become a symbol representing identity to show individual aesthetic principles, value orientation and life attitude (Ban, 2009).

Consumption is the consumption of identity, while consuming goods, individuals are also consuming "identity". As an intrinsic value, an individual's self-orientation and identification with the group he belongs to directly determine his behavioral orientation, and individual consumption is the external expression of this orientation. At this time, commodities not only have value functions, but also are endowed with symbolic meaning, and become the "raw materials" for the construction of identity, shaping individual external images under the template provided by identity. Entertainment expenditure is a typical symbolic consumption, and there are significant differences between urban residents and migrant workers in cultural entertainment. Urban residents pursue higher spirit and culture, and their cultural and recreational activities present

diversified attitudes, including going to movies, watching artistic performances, singing in KTV, exercising in gyms, visiting museums, traveling and other cultural and recreational activities. For them, entertainment consumption can not only provide spiritual pleasure, but also be an effective means to maintain social networks and expand social relationships. At the same time, most of the farmers' entertainment consumption is manifested as backward concept, low level, poor content and little expenditure. Most of the migrant workers' daily entertainment is mostly limited to watching TV, surfing the Internet, playing cards, chatting with workers and friends, shopping and so on.

China's household registration system is the root cause of the identity problems of floating population in China. The dual urban-rural registered permanent residence system is the product of the planned economy. A large number of farmers and rural community cadres from Anhui, Henan and other provinces migrated into key cities in 1956, resulting in a serious deficiency of urban carrying capacity. In order to prevent the rural population from continuously migrating into the cities, the Chinese government adopted Regulations of the People's Republic of China on Residence Registration in 1958 to “allow neither the blind increase of urban labor forces nor the blind emigration of rural labor forces”, which penetrates into all aspects of urban residents' lives, and virtually gives birth to the dual economic pattern of “mutual separation” between urban and rural areas. After the reform and opening-up, China's registered permanent residence system has been loosened. However, in order to limit the migration of population, some key cities still strictly implement the registered permanent residence system - labor forces can migrate freely, but the change in the registered residence is strictly restricted, so as to

avoid the occupation of urban public resources by migrant population. The registered permanent residence system has become a management tool for some key cities. On the one hand, it attracts cheap labor forces to make contributions to the key cities. On the other hand, it strictly limits the migrant population into urban resources. There exist unique systems of “non-local registered permanent residence” and “local registered permanent residence”: the registered permanent residence has the right to share local public resources, while the non-local registered permanent residence has no such treatment.

The household registration system is a kind of "social shielding" system, which excludes some people from sharing urban resources, thus exacerbating the identity dilemma of floating population, especially rural-urban floating population. The dual household registration system of urban and rural areas in China endows rural-urban floating population with the identity of farmers, which is in deep contradiction with their occupation in the city and their demand for urban household registration, thus making rural-urban floating population have a dilemma for self-identity. To get out of this dilemma, the floating population will try to move closer to the urban population in terms of consumption. For example, parents will provide their children with education and training like urban parents, so that their children can contact with urban children as soon as possible. To integrate into urban society at an early date, parents and children without registered permanent residence in the city invest more time and energy in symbolic education.

Based on the above analysis, this dissertation holds that for those youth trainees without local household registration, they are more eager to truly integrate into the local city, and youth training is an important way for them to

build personal image, broaden personal knowledge and build personal social network without discrimination. Therefore, they will more recognize and accept the educational concepts and knowledge transmitted by the youth training institutions. To sum up, this dissertation believes that outland household registration strengthens the positive impact of youth training characteristics on customer engagement.

Hypothesis 4b: Outland household registration positively moderates the positive influence of youth training characteristics on customer engagement.

3.4.3 Moderating effect of students' acceptance

The youth trainees' acceptance of new knowledge and ideas will have a moderating effect on the relationship between the characteristics of youth training and customer engagement. The students' acceptance level is influenced by the nature of the school. The prevailing public and private schools instill different learning concepts in students, resulting in different levels of acceptance.

First of all, public schools and private schools hold different values. The research of Chubb & Moe (1990) shows that the key factor for school development is autonomy, clear educational responsibility and efficient leadership of the school, which depends on what mechanism controls the school. For a long time, public schools have been in a monopoly position in primary and secondary education. They are not only dominant in scale, but also protected by government policies. The funds for running schools supported by national finance are quite stable. The system is attractive enough for most parents to send their children to public schools in the nearest district, since many parents are unwilling or unable to afford to send their children to private schools

and pay the high tuition themselves. So public schools don't have to worry about source of students at all. This environment makes public schools free from any worries, so they have formed a relatively stable operation mechanism after long-term development. As a result, schools lack external pressure, and internal problems such as rigid management, low efficiency, strong dependence and lack of responsibility arise. There are many reasons why the quality of education in public schools is inferior to that in private schools. The situation of private schools is different. Due to the lack of a large number of students, stable funds for running schools and government policy support, private schools can only attract more families to support them by improving their own management and improving the quality of education, so as to occupy a place in the broad education market. Therefore, private schools are self-financing education enterprises, and their series of measures are implemented around the core of improving students' learning ability and quality. If they fail to run schools successfully, they will be eliminated from the market. Different educational concepts have different influences on students. In contrast, students in private schools are more open and tolerant and good at learning and accepting new things.

Second, public schools and private schools are managed differently. In public schools, administrative norms play a dominant role in school management, with excessive centralization of power, overstaffed management organizations, and far more administrative staff than teachers. The school lacks decision-making power in teaching, and there is an obvious relationship between the principal and teachers, lacking real communication and exchange. The educational administrative organization above the school seriously restrains

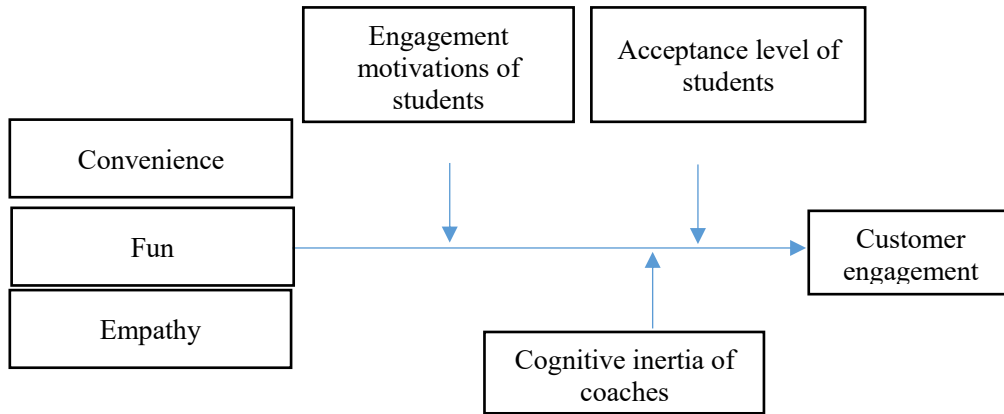
its independent development and the bureaucratic organization and management form leads to the imbalance of educational input and educational output. In contrast, private schools are a non-bureaucratic school organization with full autonomy and relatively loose educational system and policy environment. They will not be directly managed by educational administrative agencies and are less restricted. There is a cooperative relationship between school leaders and teachers. They can exchange ideas about running a school and make suggestions for running a school well together. The limited educational funds are used wisely in three ways: first, to develop the existing education (including the extension of school buildings, the purchase of advanced equipment and equipment, etc.), second, to improve the treatment of teachers, and finally, to provide scholarships to attract and encourage students. In this way, the human, financial and material resources of education can be rationally allocated and utilized, which improves the efficiency of running schools and maximizes the educational output with the minimum educational input. Different management methods will also leave different influences on students. In contrast, students in private schools are more independent and good at active learning (Fu & Liu, 2006).

Based on the above analysis, this dissertation holds that the youth trainees from private schools are influenced by school values and management mode in the learning process of cultural courses, and they have a more independent, inclusive and open learning attitude and have a higher degree of learning and accepting new stuff. Therefore, they will more recognize and accept the educational concepts and knowledge transmitted by the youth training institutions. To sum up, this dissertation believes that private schools strengthen

the positive impact of youth training characteristics on customer engagement.

Hypothesis 4c: Private school positively moderates the positive impact of youth training characteristics on customer engagement.

Fig. 3-1 Research Framework



4. Methodology

Inductive and deductive methods are used in this study, and primary qualitative data are collected to analyze the causal relationship between questions and empirical analysis by means of focus group interview and questionnaire survey.

4.1 Interview of focus group

Although customer engagement is not a new marketing concept, and has been used in many countries and fields of research, and the relevant scale is relatively mature (Silpakit & Fisk, 1985; Vivek, 2009), this concept has not been applied to the research of sports consumption, especially in the field of youth football training. Compared with traditional consumption, youth sports training features high degree of non-standardization, long time required to test consumption value, and dimensions of consumers' attention different from traditional consumption. Therefore, the research on customer engagement in sports youth training is still in its infancy, and there is no measurement scale for reference.

Focus group interview can quickly and directly obtain the views of the subject group on the problem, and can obtain more complete and thorough information than individual interview. Open questionnaire survey can effectively expand the scope of data collection and improve the representativeness and universality of research data and conclusions. Integrating the data collected from the above two aspects can ensure the validity and reliability of research results.

The study began with a focus group interview of 10 people. Considering that the concept of customer engagement is relatively difficult to understand and

interviewees are required to have certain knowledge base and understanding ability of youth training, this study invited 10 students with more than one year experience in youth football training and their parents to interview. According to the research purpose, the interview outline is designed, which mainly includes the following contents: interviewees are asked to recall the youth training service consumption experience that they deeply remember and feel closely connected with themselves, describe the experience and inner feelings, especially their investment in time, emotion, experience and other aspects. Finally, the definition of customer engagement was introduced to the interviewees, and the interviewees were asked to explain their understanding of the concept and the key points of measurement. Attention was paid to the interviewees during the necessary guidance and questioning, but leading words and questions were avoided. After focus group interview and key questions extraction, this study confirmed that the concept of customer engagement was measured from 6 dimensions of time investment, energy investment, emotional investment, communication with coaches, cooperation with teammates, and completion of training tasks. Using the same focus group approach, this study interviewed students and their parents about their perceptions of convenience, fun and empathy.

4.2 Questionnaire Survey

4.2.1 Questionnaire Design

On the basis of focus group interview and combined with relevant literature, this study made the first version of the questionnaire. The questionnaire survey is adopted in this research to collect data. The questionnaire consists of two parts. The basic information part is for collecting

the demographic information of the students, such as gender and age. The youth training information part is for the evaluation by young football trainees on convenience, fun and empathy of the youth football training, as well as their self-evaluation on time, energy and emotion investments in the past semester. The evaluation is based on a 5-point Likert scale. To avoid impact from psychological hints on the accuracy of the questionnaire measurement, and thus on the causal logic of this dissertation, the questionnaire is designed to have the questions of customer engagement first, followed by the evaluation of convenience, fun and empathy.

After completion of designing the first version of questionnaire, in order to guarantee the validity of the questionnaire and readability, 5 management experts, 5 youth football training students and 5 youth football training coaches were tested in this study, their feedbacks were collected, and the ambiguous and difficult parts of the questionnaire were understood and improved until the respondents could fully understand the content and items of the questionnaire and fill them in smoothly. On this basis, the second version of the questionnaire was designed and completed.

In recent years, the Ministry of Education, the National Office of Philosophy and Social Sciences and other central institutions have issued a series of documents emphasizing the importance of ethical protection of research participants in social science research. According to the requirements of Cheung Kong Graduate School of Business and Singapore Management University, this study submitted the completed second version of the questionnaire to the Institutional Review Board for review, and made corresponding modifications to the questionnaire according to the requirements

of the Board. For example, the target of the questionnaire is required to be the parents rather than students, because most of the youth football students are not yet mature. When distributing questionnaires, pay should be avoided. On this basis, the third version of questionnaire was designed and made in this study, and data was collected based on the questionnaire. Please see the attachment for details.

4.2.2 Distribution and Collection of Questionnaires

Choice of the distribution location of the questionnaires. To avoid problems such as small sample variation and selection bias in a single data source, this study chose Beijing, Suzhou, Chengdu, Guangzhou and Shenzhen as the distribution places of questionnaires. (1) The five places are all first-tier cities with high comparability in terms of economic development level, residents' cultural literacy and sports and health training; (2) the five cities are separately located in the north, east, south and west of China. In terms of geographical dimension, the sample has large variation and small selection bias, which can comprehensively reflect the overall situation of China.

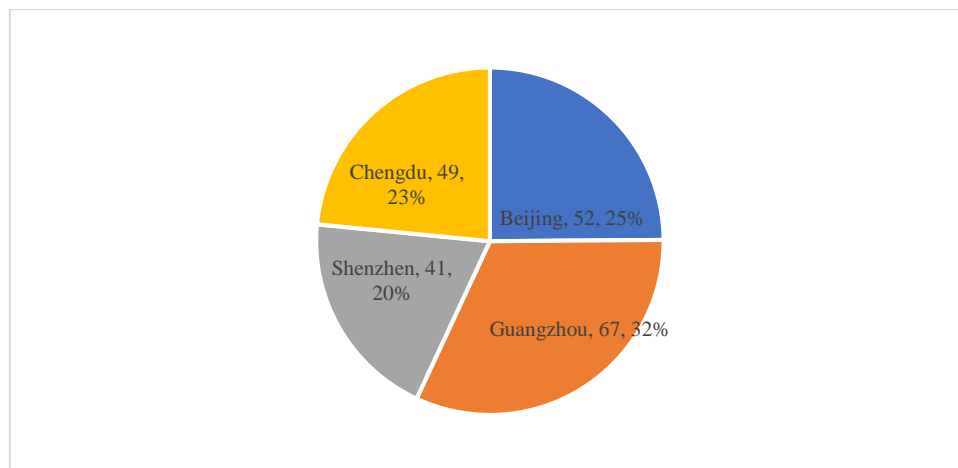
Choice of the time for distributing questionnaires. We originally planned to conduct a questionnaire survey in early 2020, but the sudden outbreak of COVID-19 hindered the development of the research, and the repeated outbreaks of COVID-19 in China caused the government to stop offline sports training business for many times, which brought considerable difficulties to the questionnaire survey. As a result, the study was finally conducted between February 2021 and June 2021.

Choice of questionnaire survey objects. In the ethical review, the Institutional Review Board pointed out that teenagers were not qualified for

questionnaire survey. Therefore, this study adopted offline survey and distributed questionnaires to parents who accompanied students to the youth football training site. The study originally planned to distribute 50 questionnaires in each of the five cities, but the actual number was fine-tuned according to the number of people present. Among them, 67 questionnaires were distributed in Guangzhou, 41 in Shenzhen, 52 in Beijing, 50 in Chengdu and 50 in Suzhou, totaling 260 questionnaires. A total of 260 questionnaires were collected, including 67, 41, 52, 50 and 50, respectively, with a recovery rate of 100%. Due to staff mistakes, the item design of the questionnaire in Suzhou was quite different from that in other places, and it was difficult to re-collect them. In order to avoid contamination of the data for Suzhou, 50 questionnaires collected in Suzhou were not adopted in this study. Therefore, 210 valid questionnaires were collected in this dissertation, among which 1 questionnaire missed important information, which was removed. Finally, 209 valid questionnaires were obtained in this survey, with an effective rate of 80.38%. The source composition of questionnaires is shown in Fig. 4-1.

It should be noted that this questionnaire survey is free.

Fig. 4-1 Source of Questionnaire Survey



4.3 Variables

4.3.1 Dependent Variables

The dependent variables in this dissertation are customer engagement. Customer engagement refers to the degree of customer's engagement in the interaction with the company/brand, including visible behavioral investment such as time and energy, and invisible investment such as cognition and emotion. Although customer engagement is not a new marketing concept, and has been used in many countries and fields of research, and the relevant scale is relatively mature (Silpakit & Fisk, 1985; Vivek, 2009), this concept has not been applied to the research of sports consumption, especially in the field of youth football training. Compared with traditional consumption, youth sports training features high degree of non-standardization, long time required to test consumption value, and dimensions of consumers' attention different from traditional consumption. With the rapid development of the youth football training industry, the role of customers has undergone fundamental changes. Under this trend, the youth training company attaches more and more importance to the customer engagement, and desire for interaction and cooperation between young trainees and corporate coaches. This requires the youth training company to innovate in services to create more appeal to more students. In order to maximize the satisfaction of their own needs, young trainees tend to actively engage in all stages operated by the youth training company by investing emotion, spirit, and physical strength, and interact frequently with coaches and teammates during the process. Therefore, for measuring customer engagement, the measurement methods of Silpakit & Fisk (1985) and Vivek (2009) are employed comprehensively, to measure from six dimensions: time investment, energy

investment, emotional investment, communication with coaches, cooperation with teammates, and completion of training tasks based on the core information extracted from the focus group interview. The questions are as follows:

- (1) I have tried my best to invest time in the training last semester;
- (2) I have tried my best to invest energy in the training last semester;
- (3) I have tried my best to invest emotion in the training last semester;
- (4) I have actively communicated with the coach during the training last semester;
- (5) I have actively cooperated with my teammates during the training last semester;
- (6) I have carefully completed the training task last semester.

4.3.2 Independent Variables

Convenience: Early scholars highlighted the cost of time and energy spent to acquire products or services when defining convenience, but few had studied the characteristics of the products or services themselves (Brown, 1989). Berry, Seiders and Grewal (2002) enhanced the concept of convenience from the perspective of product and service characteristics. They believe that convenience should be fully defined in both purchase and consumption. Thus, they proposed five dimensions of convenience (decision, access, transaction, benefit, and postbenefit). This definition has been widely recognized by scholars. When measuring the convenience of youth training services, the scale of Berry et al. (2002) is employed to measure from the five dimensions of convenience (decision, access, transaction, benefit and postbenefit), based on the core information extracted from the focus group interview. The questions are as follows:

(1) I think the application procedure for youth training of this company is quite simple;

(2) The field of this company is close to my house;

(3) I can apply for the youth training of this company anytime, anywhere;

(4) I can join the training soon after application;

(5) I can quickly fit in the team during training;

Fun: Based on the views of the above scholars, interesting education and training is defined, in this dissertation, as “employing teaching methods that are different from traditional ones, enabling students actively participate in learning with curiosity and the desire to explore, and allowing them to achieve personal progress and team building while they enjoy learning”. When measuring fun, this dissertation includes not only the dimensions of endurance and expectations proposed by Read et al. (2002), but also interesting training content, coaches and peers. The details are as follows:

(1) The youth training of this company is very attractive to me;

(2) I have high expectations for the youth training of this company;

(3) My coach is an interesting person;

(4) My training is very interesting;

(5) It's fun to get along with other teammates in the youth training;

Empathy: Empathy has two basic components: cognitive empathy and emotional empathy. Cognitive empathy, the main component of empathy, refers to the ability to recognize the emotions and understand the opinions of others; while recognizing the emotions of others, one must also resonate with the emotional feelings of others to form emotional empathy (Gladstein, 1983). Emotional empathy can be regarded as the deepening of cognitive empathy,

which is an empathic emotional response produced after judgment and reasoning of emotional states. Since the extant empathy scales are all for self-measurement, while adopting the extant scales to measure the empathic ability of coaches, this research also developed a scale for measurement by others based on the core information extracted from the focus group interview, allowing students to measure the empathic ability of their coaches from perspectives of cognition, emotion, and behavior. The details are as follows:

- (1) During the training, the coach and I tended to reach consensus;
- (2) During the training, the coach could empathize with me;
- (3) During the training, the coach could understand and support my behavior;

4.3.3 Moderating variables

The convenience, fun and empathy of youth football training are the input factors. Whether these input factors can produce the expected effect depends on whether the youth training coaches pass these characteristics to the youth trainees on the one hand, and whether the youth trainees recognize and accept these innovative characteristics on the other hand. Scholars have found that both the information transmitter and the information receiver have experience inertia and are likely to deliberately select the information they think appropriate to use, thus generating information funnel effect. Therefore, this dissertation analyzes the moderating effect of football training experience and cognitive characteristics of two key individuals in information transfer and information reception on the relationship between youth training characteristics and customer engagement. Three important moderating variables are considered in this dissertation, namely, the coach's football coaching experience in other

institutions, the outland household registration identity of the youth trainees and current status of the youth trainees studying in private schools.

Coach's football coaching experience in other institutions. Because in the process of youth football training, the coach of the students is not a fixed one (not 1-to-1 training), but different coaches are responsible for the training of the student, for example, juggling, passing, superhuman movement, shooting, strength, speed, may all are done by different coaches, so the work experience of a single coach with experience elsewhere is not a good reflection of the issues to be explored in this dissertation. For this purpose, this dissertation measures the proportion of coaches' rate with experience elsewhere among all coaches in this training institution: coach's rate with experience elsewhere= Number of coaches with experience elsewhere/total number of coaches.

Outland household registration identity of youth trainee. China's current household registration system divides registered permanent residence into the dual urban-rural registered permanent residence system according to blood inheritance and geographical location. This kind of dual urban and rural household registration system builds a high wall between urban and rural areas, which is an unfair hierarchical definition of citizenship with certain discrimination. The registered permanent residence system is a kind of "social shield" that excludes some people from sharing the city's resources. To get rid of this dilemma, the floating population will try to get closer to the urban population in terms of consumption. For example, parents will provide their children with education and training similar to those of urban parents, so that their children can contact with urban children as soon as possible. To integrate into urban society at an early date, parents and children without registered

permanent residence in the city invest more time and energy in symbolic education. Therefore, this dissertation uses the dichotomous variable outland household registration to measure the household registration of the survey objects. In case of outland household registration, the value is 1; otherwise, it is 0.

Current status of the youth trainees studying in private schools. Public schools are educational institutions set up by the government, and private schools are schools funded by private individuals or private institutions. Public schools emphasize fairness and have less pressure on enrollment and operation. Due to the lack of external pressure, internal problems such as rigid management, low efficiency, strong dependence and lack of responsibility arise in public schools. Private schools are the combination of education and the market, which mainly solves the problem of the efficiency of education. Under the pressure of operation, the education mechanism of private schools is more flexible, and the development of students in moral, intellectual and physical aspects is relatively more comprehensive. The National Assessment of Educational Progress (NAEP) has reported for 30 years that students in private schools outperform those in public schools. Private school students have strong reading ability, mathematics ability, writing ability and scientific knowledge accumulation ability. Private schools can promote students' academic performance and ability development (Fu Songtao, Liu Liangliang, 2006). Therefore, the nature of the school affects students' learning ability, learning attitude and knowledge range, and thus influences their customer engagement. In this dissertation, the fact of whether students attend private schools is controlled. For students who attend private schools, Private School=1,

otherwise, it is 0.

4.3.4 Control variables

The research controls for individual-level and family-level variables. At the individual level, factors such as gender, age, current school nature (public or private) and academic performance of youth trainees were controlled. At the family level, we control for parents' highest educational attainment and annual family income respectively.

Gender: Previous studies have shown that gender is an important factor influencing customers' consumption behavior (Grewal et al., 2003). As proposed by gender schema theory, men and women develop different values, resulting in different decision-making styles (Mason & Mudrack, 1996). Literature shows that males develop tools and task goal-oriented traits during their growth, while females tend to develop social relationship-oriented traits and perceive themselves as being attached to others (Sharma et al., 2012). Therefore, in a service environment, female customers are more influenced by the interaction between sales and service staff. In contrast, men tend to focus more on comfort and utilitarian value in terms of money, time and energy (Sharma et al., 2012). Therefore, this dissertation uses dichotomous variables to control the gender of the research object. If the research object is male, gender=1, otherwise gender=0.

Age: Age is an important demographic variable in marketing research (Ye et al., 2019). Customers of different ages will show unique needs, desires and preferences, resulting in different behaviors (Khan et al., 2019). For example, older people tend to have better emotional control and maturity than younger people, leading to different types of purchases (Carstensen et al., 2011). Young

consumers are more likely to spend a lot of time searching for product-related information and rely less on heuristic processing (Yoon, 1997). Therefore, the age of the research object will have a great influence on its customer engagement behavior. This dissertation controls the age of the research object, age= the research year -- the year of birth.

Academic performance: Academic performance may affect student's customer engagement in youth training in two ways, namely learning ability mechanism and learning substitution mechanism. Students with good academic performance have strong learning ability and can quickly adapt to youth football training and achieve good learning results. The positive feedback mechanism will further strengthen their investment in youth training, such as energy, time and emotion, thus positively affecting customer engagement. On the other hand, students with good academic performance have less concern about entering college, and they may just take youth football training as a kind of leisure and entertainment. Students with poor academic performance are under great pressure to enter college, and they are more likely to take youth football training as a single-plank bridge instead of learning cultural courses, and get the entrance certificate through more emotional and time investment. Therefore, academic performance may negatively affect students' customer engagement. To sum up, this dissertation uses the ordinal, academic performance to control students' academic performance. 1 indicates that students' academic performance is in the top 5% of the class; 2 indicates that the student's academic performance is in the top 5-20% of the class; 3 indicates that the student's academic performance is in the top 20-50% of the class; 4 indicates that the student's academic performance is in the top 50-75% of the class; 5 indicates that the student's

academic performance is in the bottom 25% of the class.

Parental education background: Generally, the more educated the parents are, the more educated the children are. Born in a scholar-gentry family, children who are influenced by what they hear and see will also receive "true inheritance" from their parents. Domestic and foreign research literature has basically confirmed that parents' educational background has a significant positive impact on children's education. Scholars give explanations from the aspects of investment capacity of human capital (Plug & Vijverberg, 2005), investment efficiency (Guryan et al., 2008) and investment concept (Kirchsteiger & Sebald, 2009), and believe that: first, parents with higher education background have higher income and can provide better nutritional conditions and learning environment for their children; second, highly educated parents have a higher degree of participation in their children's education, pay closer attention to cultivating their children's interests and hobbies, invest a lot of time in teaching their children to read, care about their children's mental health, adopt a gentle way of education, less corporal punishment, and have a higher education efficiency; third, highly educated parents not only pay attention to education investment, but also attach importance to the concept and fine tradition of education, and promote the all-round development of students in moral, intellectual and physical aspects. Therefore, parents' education background will have an impact on children's youth training. In this dissertation, the ordinals (parentedu) are used to control the highest education level of parents: 1 primary school and below; 2 junior high school; 3 senior high school or technical secondary school; 4 junior college; 5 bachelor degree; 6 master degree; 7 doctoral degree.

Family income: There is a Chinese saying, "A dragon give birth to a dragon, a phoenix gives birth to a phoenix, and a rat's son can make a hole." Although it is a bit absolute, it illustrates the importance of the intergenerational transmission of human capital. Family income not only affects children's investment in education, but also affects children's educational philosophy. Huang (2013) empirically studied the intergenerational transmission of education from the perspective of family economic sources and property. The study found that family wealth increased the correlation between parents and the number of years a boy spent in school. Correspondingly, many studies have shown that children inherit their parents' socioeconomic status to a large extent (Checchi, 2013). Children's human capital not only depends on parents' intergenerational investment in their education and health, but also on parents' passing on their own knowledge, literacy and ability to their children through their words and deeds (Qin et al., 2016). Therefore, the economic status of the family will have an impact on the customer engagement of children's youth football training education. For this reason, this dissertation uses a sequential variable to control the annual family income. 1 means that the family income in the previous year is 100,000 yuan or less. 2 indicates that the family income of the previous year is between 100,000 and 300,000 yuan; 3 indicates that the family income in the previous year is 300,000 to 500,000 yuan; 4 indicates that the family income of the previous year is 500,000 to 1,000,000; 5 indicates that the family income of the previous year is more than 1 million yuan.

5. Findings

5.1 Factor Analysis

Since the scale used in this dissertation is constructed based on literature and focus group interviews, it is impossible to guarantee that the items of the

measured variables can accurately reflect the contents of the variables. In this case, some scholars simply sum and average multiple items of a variable to get the variable value of the whole (Zhang et al., 2017). This method is easily operated, but it ignores the weight of different items, which will bring serious errors. Therefore, this dissertation first uses the factor analysis method to further test the stability and validity of the scale, and further defines the weight of each item.

5.1.1 Correlation Test

The premise of factor analysis is that the original variables are correlated. Multiple measurement items of the same variable have high correlation, indicating that they reflect the content of the same dimension, which can be subject to dimensionality reduction

Bartlett Test of Sphericity and KMO test are used to test the correlation between variables. Bartlett Test of Sphericity is used to check whether the correlation matrix is identity matrix, that is, whether the variables are independent. It starts from the correlation coefficient matrix of variables. The null hypothesis of Bartlett Test of Sphericity: the correlation coefficient matrix is an identity matrix. If the statistical value of Bartlett Test of Sphericity is large and the corresponding conjoint probability value is smaller than the significance level given by the user, the null hypothesis should be rejected. Otherwise, the null hypothesis cannot be rejected and the correlation coefficient matrix may be an identity matrix, which is not suitable for factor analysis. If the hypothesis cannot be negated, it indicates that these variables may provide some information independently and lack common factors. In general empirical studies, if the p value is less than 0.05, it can proceed. KMO statistics judge the

correlation between variables by comparing the size of simple correlation coefficient and partial correlation coefficient between variables. When the correlation is strong, the partial correlation coefficient is much smaller than the simple correlation coefficient, and the KMO value is close to 1. In general, if $KMO > 0.9$, it means it is very suitable for factor analysis; if $0.8 < KMO < 0.9$, it means it is suitable; if it is above 0.7, it means the effect is poor; if it is below 0.5, it is not suitable for factor analysis.

In this dissertation, statistical analysis software Stata 15.0 is used to conduct Bartlett Test of Sphericity and KMO test on four variables of customer engagement, convenience, fund and empathy. The test results are shown in Table 5-1, 5-2, 5-3 and 5-4. The result of Bartlett Test of Sphericity showed that the statistical values in the four tables were all large, and the corresponding concomitant probability values were all smaller than the significance level given by users ($p=0.000$). The results show that the null hypothesis should be rejected, that is, the correlation coefficient matrix of each variable and item is not an identity matrix, which is suitable for factor analysis. KMO test showed that the KMO statistical value of each variable was greater than 0.77, indicating that the data was suitable for factor analysis.

Table 5-1 Bartlett Test of Sphericity and KMO Test -- Customer Engagement

| | |
|---|------------|
| Determinant of the correlation matrix | |
| Det | = 0.002 |
| Bartlett test of sphericity | |
| Chi-square | = 1300.893 |
| Degrees of freedom | = 21 |
| p-value | = 0.000 |
| H0: variables are not intercorrelated | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | |
| KMO | = 0.907 |

Table 5-2 Bartlett Test of Sphericity and KMO Test -- Convenience

| | |
|---|-----------|
| Determinant of the correlation matrix | |
| Det | = 0.074 |
| Bartlett test of sphericity | |
| Chi-square | = 533.743 |
| Degrees of freedom | = 10 |
| p-value | = 0.000 |
| H0: variables are not intercorrelated | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | |
| KMO | = 0.825 |

Table 5-3 Bartlett Test of Sphericity and KMO Test -- Fun

| | |
|---|------------|
| Determinant of the correlation matrix | |
| Det | = 0.004 |
| Bartlett test of sphericity | |
| Chi-square | = 1131.255 |
| Degrees of freedom | = 10 |
| p-value | = 0.000 |
| H0: variables are not intercorrelated | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | |
| KMO | = 0.878 |

Table 5-4 Bartlett Test of Sphericity and KMO Test -- Empathy

| | |
|---|-----------|
| Determinant of the correlation matrix | |
| Det | = 0.037 |
| Bartlett test of sphericity | |
| Chi-square | = 681.112 |
| Degrees of freedom | = 3 |
| p-value | = 0.000 |
| H0: variables are not intercorrelated | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | |
| KMO | = 0.774 |

5.1.2 Principal Component Analysis

After determining that the items of each variable have a high correlation, it is then necessary to determine which factors to choose to explain the original variable and how strongly to explain it.

5.1.2.1 Customer Engagement

In this dissertation, stata15.0 statistical analysis software was used to conduct principal component analysis on customer engagement, and dimensionality reduction was carried out when the variable had 7 items. The results of principal component analysis are shown in Fig. 5-5 below. The results of principal component analysis show that only the Eigenvalue of the first factor is greater than 1, which can explain 73.78% of the original variable. Therefore, the retained factors are 1. This result also indicates that the 7 items used to measure customer engagement in this dissertation reflect the same factor, which is reasonable and valid.

Table 5-5 Factor Analysis -- Customer Engagement

| Factor analysis/correlation | | Number of obs | = | 209 |
|--|------------|------------------|------------|------------|
| Method: principal-component factors | | Retained factors | = | 1 |
| Rotation: (unrotated) | | Number of params | = | 7 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 5.1648 | 4.5851 | 0.7378 | 0.7378 |
| Factor 2 | 0.5798 | 0.1611 | 0.0828 | 0.8207 |
| Factor 3 | 0.4187 | 0.1083 | 0.0598 | 0.8805 |
| Factor 4 | 0.3104 | 0.0681 | 0.0443 | 0.9248 |
| Factor 5 | 0.2424 | 0.0597 | 0.0346 | 0.9594 |
| Factor 6 | 0.1826 | 0.0813 | 0.0261 | 0.9855 |
| Factor 7 | 0.1013 | . | 0.0145 | 1.0000 |
| LR test: independent vs. saturated: $\chi^2(21) = 1307.24$ Prob> $\chi^2 = 0.0000$ | | | | |

Table 5-6 shows the factor loading of 7 items, that is, the explanatory power of the only retained factor to each item. This dissertation takes this as the weight and makes a weighted summary of all measurement items of customer engagement to obtain the overall customer engagement variable.

Table 5-6 Factor Loading -- Customer Engagement

| Factor loadings (pattern matrix) and unique variances | | |
|--|---------|------------|
| Variable | Factor1 | Uniqueness |
| Children put in as much time as he could in training last semester | 0.8464 | 0.2835 |
| Children put all his energy into the training last semester | 0.8964 | 0.1965 |
| Children tried his best to be emotionally involved in training last semester | 0.9207 | 0.1524 |
| Children took the initiative to communicate with the coach in training last semester | 0.7992 | 0.3612 |
| Children did good in cooperating with his teammates in training last semester | 0.8431 | 0.2892 |
| Children completed the training task carefully in training last semester | 0.8909 | 0.2063 |
| Children loves the youth football training institution he is in | 0.8087 | 0.3460 |

5.1.2.2 Convenience

In this dissertation, stata15.0 statistical analysis software was used to conduct principal component analysis on convenience, and dimensionality reduction was carried out when the variable had 5 items. The results of principal component analysis are shown in Fig. 5-7 below. The results of principal component analysis show that only the Eigenvalue of the first factor is greater than 1, and this factor can explain 66.35% of the original variable. Therefore, the number of retained factors is 1. This result also indicates that the 5 items measuring convenience reflect the same factor, which is reasonable and valid.

Table 5-7 Factor Analysis -- Convenience

| Factor analysis/correlation | | Number of obs | = | 209 |
|---|------------|------------------|------------|------------|
| Method: principal-component factors | | Retained factors | = | 1 |
| Rotation: (unrotated) | | Number of params | = | 5 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 3.3176 | 2.6603 | 0.6635 | 0.6635 |
| Factor 2 | 0.6574 | 0.1725 | 0.1315 | 0.7950 |
| Factor 3 | 0.4849 | 0.1648 | 0.0970 | 0.8920 |
| Factor 4 | 0.3201 | 0.1001 | 0.0640 | 0.9560 |
| Factor 5 | 0.2200 | . | 0.0440 | 1.0000 |
| LR test: independent vs. saturated: $\chi^2(10) = 536.34$ Prob> $\chi^2 = 0.0000$ | | | | |

Table 5-8 shows the factor loading of the 5 items, that is, the explanatory power of the unique factor to each item. This dissertation takes this as the weight and makes a weighted summary of all the measuring items of convenience to obtain the overall convenience.

Table 5-8 Factor Loading -- Convenience

| Factor loadings (pattern matrix) and unique variances | | |
|--|----------|------------|
| Variable | Factor 1 | Uniqueness |
| Children think the company's youth training registration procedure is simple | 0.8169 | 0.3326 |
| The company's premises are very close to my home | 0.6856 | 0.5300 |
| We can sign up for the company's youth training program anytime, anywhere | 0.8608 | 0.2589 |
| We can join the training soon after we sign up | 0.8798 | 0.2260 |
| We get into the group very quickly when we train | 0.8156 | 0.3348 |

5.1.2.3 Fun

In this dissertation, stata15.0 statistical analysis software was used to conduct principal component analysis on fun, and dimensionality reduction was carried out when this variable had 5 items. The results of principal component analysis were shown in Fig. 5-9 below. The results of principal component analysis show that only the Eigenvalue of the first factor is greater than 1, which can explain 84.80% of the information in the original variable. Therefore, the number of retained factors is 1. This result also indicates that the 5 items of measuring fun reflect the same factor, which is reasonable and valid.

Table 5-9 Factor Analysis -- Fun

| | | | | |
|---|------------|------------------|------------|------------|
| Factor analysis/correlation | | Number of obs | = | 209 |
| Method: principal-component factors | | Retained factors | = | 1 |
| Rotation: (unrotated) | | Number of params | = | 5 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 4.2398 | 3.9270 | 0.8480 | 0.8480 |
| Factor 2 | 0.3127 | 0.1294 | 0.0625 | 0.9105 |
| Factor 3 | 0.1833 | 0.0245 | 0.0367 | 0.9472 |
| Factor 4 | 0.1588 | 0.0535 | 0.0318 | 0.9789 |
| Factor 5 | 0.1053 | . | 0.0211 | 1.0000 |
| LR test: independent vs. saturated: chi2(10) = 1136.76 Prob>chi2 = 0.0000 | | | | |

Table 5-10 shows the factor loading of 5 items, that is, the explanatory

power of the unique factor to each item. This dissertation takes this as the weight and makes a weighted summary of all the measuring items of convenience to obtain the overall convenience.

Table 5-10 Factor Loading -- Fun

| Factor loadings (pattern matrix) and unique variances | | |
|---|---------|------------|
| Variable | Factor1 | Uniqueness |
| The company's youth training has a strong appeal to children | 0.9059 | 0.1793 |
| Children think they can gain a lot in this youth training institution | 0.9147 | 0.1633 |
| Children's coach is an interesting guy | 0.9339 | 0.1278 |
| Children's training content is very interesting | 0.9308 | 0.1336 |
| It's been fun with the other youth trainees | 0.9185 | 0.1563 |

5.1.2.4 Empathy

In this dissertation, stata15.0 statistical analysis software was used to conduct principal component analysis on empathy, and dimensionality reduction was carried out when this variable had three items. The results of principal component analysis are shown in Fig. 5-11 below. The results of principal component analysis show that only the Eigenvalue of the first factor is greater than 1, which can explain 92.16% of the original variable. Therefore, the number of retained factors is 1. This result also indicates that the 3 items of empathy in this dissertation reflect the same factor, which is reasonable and valid.

Table 5-11 Factor Analysis -- Empathy

| | | | | |
|--|------------|------------------|------------|------------|
| Factor analysis/correlation | | Number of obs | = | 209 |
| Method: principal-component factors | | Retained factors | = | 1 |
| Rotation: (unrotated) | | Number of params | = | 3 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 2.7648 | 2.6240 | 0.9216 | 0.9216 |
| Factor 2 | 0.1408 | 0.0464 | 0.0469 | 0.9685 |
| Factor 3 | 0.0944 | . | 0.0315 | 1.0000 |
| LR test: independent vs. saturated: $\chi^2(3) = 684.42$ Prob> $\chi^2 = 0.0000$ | | | | |

Table 5-12 shows the factor loading of the 3 items, that is, the explanatory

power of the unique factor to each item. In this dissertation, all items of convenience are weighted and summarized to obtain the overall convenience variable.

Table 5-12 Factor Loading -- Empathy

| Factor loadings (pattern matrix) and unique variances | | |
|--|---------|------------|
| Variable | Factor1 | Uniqueness |
| In the training, the views on the world, life, and values of coaches and children are consistent | 0.9515 | 0.0947 |
| In the training, coaches can empathize with children | 0.9647 | 0.0694 |
| In the training, coaches understand and support children's behaviors | 0.9638 | 0.0712 |

5.2 Descriptive Statistics

Table 5-13 lists the descriptive statistics of variables.

Among the 209 valid samples, the average age of youth football students is 7.30 years old, with the youngest 3.5 years old and the oldest 12 years old. This is another example of the Institutional Review Board's point that adolescents are not eligible for the survey and need their parents (guardians) to fill out the questionnaire on their behalf. 95% of all youth trainees are male, and the game's confrontational nature is in keeping with the quiet nature of Chinese girls. 33% of youth trainees attend private schools, a figure that reflects the significant market share of private schools and the growing acceptance of private education. The average academic performance of youth trainees is 2.41 (1: top 5% of class; 2: top 5-20%; 3: top 20-50%; 4: top 50-75%; 5: top 25%). This shows that students who participate in youth training generally have better academic performance, which also overturns the social view that "students with poor academic performance participate in sports training to find alternative plans for further study". Students with good academic performance increasingly pursue all-round development, and the concept of quality-oriented education is

gradually rooted in the hearts of people. 16% of the students are outland residents, and they may have moved to the new city with their parents, which indirectly indicates the high proportion of immigrants in first-tier cities as China's urbanization accelerates.

In terms of family background, the average educational level of parents was 5.38 (1 primary school or below; 2 middle school; 3 senior high school or technical secondary school; 4 college; 5 bachelor degree; 6 master degree; 7 doctoral degree). This shows that most of the students' parents have received undergraduate education, their educational level is relatively high, and the education concept is more advanced. The average annual family income is 3.12 (1:100,000 and below; 2:100,000-300,000; 3:300,000-500,000; 4:500,000-1 million; 5: more than 5,000,000). This shows that the average annual income of most families is more than 300,000 yuan, which has reached the level of moderate prosperity.

It should be noted that the four variables in Table 5-13, customer engagement, convenience, fun and empathy, are generated according to the weight of the item after principal component analysis, and these variables have a high degree of variation and alienation, indicating that the sample distribution is good and suitable for empirical research.

Table 5-13 Descriptive Statistics of Variables

| Variable | Obs | Mean | S.D. | Min | Max |
|----------------------|-----|-------|------|------|-------|
| Customer engagement | 209 | 25.48 | 4.49 | 6.01 | 30.03 |
| Male | 209 | 0.95 | 0.21 | 0.00 | 1.00 |
| Age | 209 | 7.30 | 2.07 | 3.50 | 12.00 |
| Private school | 209 | 0.33 | 0.47 | 0.00 | 1.00 |
| Academic performance | 209 | 2.41 | 0.93 | 1.00 | 5.00 |
| Parent education | 209 | 5.38 | 0.77 | 3.00 | 7.00 |
| Family income | 209 | 3.12 | 0.98 | 1.00 | 7.00 |
| Coach experience | 209 | 0.71 | 0.29 | 0.33 | 1.00 |
| Outland | 209 | 0.16 | 0.37 | 0.00 | 1.00 |

| Variable | Obs | Mean | S.D. | Min | Max |
|-------------|-----|-------|------|------|-------|
| Convenience | 209 | 17.09 | 3.20 | 4.06 | 20.29 |
| Interest | 209 | 20.25 | 3.55 | 4.60 | 23.02 |
| Empathy | 209 | 12.70 | 2.44 | 2.88 | 14.40 |

5.3 Correlation Analysis

After preliminary descriptive statistics, this dissertation further conducted correlation analysis on variables, as shown in Table 5-14. There are high positive correlations between convenience, fun and empathy and customer engagement, indicating that these three variables have a positive impact on customer engagement, which is consistent with the hypothesis of this dissertation. In addition, the correlation coefficients between the control variables are small (all less than 0.4), indicating that there is no high collinearity among the variables used in this dissertation. In this study, variance inflation factor (VIF) test is further carried out, and it is found that there is no serious collinearity problem in the regression model.

Table 5-14 Descriptive Statistics of Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|
| Customer engagement | 1.00 | | | | | | | | | | | |
| Convenience | 0.74 | 1.00 | | | | | | | | | | |
| Interest | 0.81 | 0.79 | 1.00 | | | | | | | | | |
| Empathy | 0.79 | 0.76 | 0.89 | 1.00 | | | | | | | | |
| Male | -0.02 | -0.01 | 0.00 | 0.01 | 1.00 | | | | | | | |
| Age | -0.12 | -0.08 | -0.12 | -0.16 | 0.14 | 1.00 | | | | | | |
| Private school | 0.00 | 0.01 | 0.00 | -0.01 | 0.01 | -0.13 | 1.00 | | | | | |
| Academic performance | -0.15 | -0.05 | -0.10 | -0.08 | 0.05 | -0.16 | 0.05 | 1.00 | | | | |
| Parent education | -0.01 | 0.03 | -0.02 | -0.01 | 0.02 | 0.08 | -0.04 | -0.25 | 1.00 | | | |
| Family income | -0.10 | -0.07 | -0.10 | -0.03 | -0.09 | 0.03 | 0.00 | -0.10 | 0.35 | 1.00 | | |
| Coach experience | -0.10 | -0.05 | 0.02 | 0.04 | 0.15 | 0.39 | 0.02 | -0.05 | 0.06 | -0.12 | 1.00 | |
| Outland | -0.01 | 0.00 | 0.02 | -0.04 | 0.10 | 0.22 | 0.31 | -0.23 | 0.10 | -0.03 | 0.18 | 1.00 |

5.4 Regression Analysis

As the dependent variable used in this dissertation is integrated into continuous variables, OLS regression method is adopted in this dissertation. Control variables (including moderating variables) are first added into the model, and the results are shown in model M1. In model M1, students with good academic performance come with a higher degree of customer engagement, which is consistent with the inference of this dissertation, that is, students with good academic performance, who are better learners, can quickly adapt to youth football training and achieve better learning results, and the positive feedback mechanism will further strengthen their input of energy, time and emotion in the training, thus positively affecting customer engagement (in this dissertation, we use a ordinal variable to measure academic performance, with 1 indicating the best performance and 5 indicating the worst, so the negative coefficient of academic performance indicates that students with good performance have a higher degree of customer engagement). In addition, family income negatively affects customer engagement. On the basis of model M1, independent variables such as convenience, fun and empathy are added, and the results are shown in models M2, M3 and M4. Model M2 shows that convenience positively affects customer engagement ($b=1.02$, $P < 0.001$), so hypothesis 1 is supported. Model M3 shows that fun positively affected customer engagement ($b=1.02$, $P < 0.001$), so hypothesis 2 is supported. Model M4 shows that empathy positively affected customer engagement ($b=1.47$, $P < 0.001$), so hypothesis 3 is supported. The full model M5 shows that when all independent variables are added into the model at the same time, convenience, fun and empathy still have a positive and significant impact on customer engagement, indicating that the aforementioned

conclusion is robust. Therefore, hypothesis 1, 2 and 3 of this dissertation are supported. This dissertation further examines the effect boundary of youth training characteristics on customer engagement.

First of all, this dissertation tests the moderating effect of coach's work experience in other places on the relationship between youth training characteristics and customer engagement, as shown in models M6, M7 and M8 in Table 5-16. The results show that the interaction items are not significant, indicating that the coach's work experience in other places had no significant moderating effect on the relationship between youth training characteristics and customer engagement, so hypothesis 4A is not supported. In the process of youth football training, there is not a fixed coach for students, but several coaches are responsible for the training of students. For example, the links such as juggling, passing, superhuman movement, shooting, strength, speed may all be completed by different coaches. Therefore, the experience measured by this dissertation does not well reflect a coach's reception of innovative youth training ideas, which is also one of the deficiencies of this dissertation.

Secondly, this dissertation tests the moderating effect of students' out-of-town household registration on the relationship between youth training characteristics and customer engagement, as shown in models M9, M10 and M11 in Table 5-17. In Model M9, the coefficient of interaction term between convenience of youth training and outland household registration is positive and significant ($b=0.29$, $P < 0.1$), indicating that for students with outland household registration, convenience of youth training has a higher positive impact on customer engagement. In model M10, the coefficient of interaction between youth training fun and outland household registration is positive and significant

($b=0.21$, $P<0.1$), indicating that for students with outland household registration, youth training fun has a higher positive impact on customer engagement. In Model M11, the coefficient of empathy and outland household registration interaction is not significant, indicating that there is no significant moderating effect. In summary, hypothesis 4b of this dissertation is partially supported.

Finally, this dissertation tests the moderating effect of private schools on the relationship between youth training characteristics and customer engagement, and the results are shown in models M12, M13 and M14 in Table 5-18. In Model M12, the coefficient of interaction term between private schools and youth training convenience is positive and significant ($b=0.23$, $P<0.1$), indicating that for students in private schools, youth training convenience plays a greater role in promoting customer engagement. In Model M13, the coefficient of interaction between private schools and youth training fun is positive and significant ($b=0.22$, $P<0.01$), indicating that for students in private schools, youth training fun has a more significant positive impact on customer engagement. In model M14, the coefficient of interaction terms between private schools and empathy is positive and significant ($b=0.26$, $P<0.1$), indicating that for students in private schools, youth empathy has a more significant positive impact on customer engagement. Therefore, hypothesis 4C of this dissertation is supported.

In Model M12 - M14, private schools for customers into the influence of the variable itself is not significant, but their interaction is very significant. Here are the possible reasons: private schools have more lively and independent atmosphere, students can freely express preferences, they value more characteristic and differentiated teaching and are more sensitive to convenience,

interest and empathy; the atmosphere of public schools is more solemn and strict, students' autonomy is lower, their individual needs are suppressed, and their response to differentiated teaching content is not obvious. Another possibility is that for children in private schools, they may regard football more as a hobby, so they like the fun way, but for children in public schools, they may be more purposeful, so they may prefer the traditional and strict training method. The specific reasons for the differences between corporate schools and private schools can be further explored in future studies.

Table 5-15 Convenience, Fun and Empathy of Youth Training

| Variables | Customer engagement OLS model | | | | |
|----------------------|----------------------------------|--------------------|--------------------|---------------------|--------------------|
| | M1 | M2 | M3 | M4 | M5 |
| Male | 0.24 (0.16) | 0.24 (0.24) | 0.04 (0.05) | -0.33 (-0.38) | -0.08 (-0.09) |
| Age | -0.25 (-1.48) | -0.13 (-1.11) | 0.06 (0.63) | 0.14 (1.32) | 0.08 (0.83) |
| Private school | 0.06 (0.09) | 0.04 (0.08) | 0.28 (0.67) | 0.26 (0.60) | 0.23 (0.60) |
| Academic performance | -0.93 (-2.63)** | -0.72 (-3.04)** | -0.41 (-1.98)* | -0.46 (-2.16)* | -0.45 (-2.31)* |
| Parent edu | 0.03 (0.06) | -0.22 (-0.75) | 0.07 (0.27) | 0.14 (0.52) | 0.02 (0.09) |
| Family income | -0.58 (1.70) † | -0.25 (-1.07) | -0.23 (-1.16) | -0.52 (-2.55)* | -0.31 (-1.62) |
| Coach experience | -1.23 (-1.04) | -0.82 (-1.03) | -2.08 (-3.03)** | -2.67 (-3.77)*** | -2.08 (-3.15)** |
| Outland | -0.24 (0.25) | -0.26 (-0.40) | -0.45 (-0.81) | 0.06 (0.11) | -0.22 (-0.42) |
| Convenience | | 1.02 (15.55)*** | | | 0.28 (3.12)** |
| Interest | | | 1.02 (19.81)*** | | 0.47 (4.05)*** |
| Empathy | | | | 1.47 (18.99)*** | 0.58 (3.64)*** |
| _cons | 31.89 (10.42)*** | 13.13 (5.49)*** | 7.06 (3.24)** | 9.98 (4.62)*** | 6.79 (3.32)** |
| R ² | 0.06 | 0.58 | 0.69 | 0.67 | 0.73 |
| N | 209 | 209 | 209 | 209 | 209 |

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

Table 5-16 Moderating Effect of coaching experience elsewhere

| Variables | Customer engagement OLS model | | |
|-----------|----------------------------------|------|-------|
| | M6 | M7 | M8 |
| Male | 0.23 | 0.05 | -0.33 |

| | | | |
|-------------------------------|-----------|-----------|-----------|
| | (0.23) | (0.06) | (0.38) |
| Age | -0.14 | 0.07 | 0.13 |
| | (1.20) | (0.67) | (1.20) |
| Private school | -0.03 | 0.29 | 0.23 |
| | (0.05) | (0.70) | (0.54) |
| Academic performance | -0.72 | -0.40 | -0.47 |
| | (2.99)** | (1.92) † | (2.20)* |
| Parentedu | -0.19 | 0.06 | 0.15 |
| | (0.64) | (0.25) | (0.55) |
| Family income | -0.23 | -0.23 | -0.52 |
| | (1.01) | (1.17) | (2.52)* |
| Coach experience | -4.11 | -1.02 | -4.29 |
| | (0.99) | (0.27) | (1.20) |
| Outland | -0.26 | -0.46 | 0.08 |
| | (0.40) | (0.81) | (0.13) |
| Convenience | 0.87 | | |
| | (4.66)*** | | |
| Interest | | 1.06 | |
| | | (7.00)*** | |
| Empathy | | | 1.37 |
| | | | (6.07)*** |
| Convenience* Coach experience | 0.20 | | |
| | (0.81) | | |
| Interest* Coach experience | | -0.05 | |
| | | (0.29) | |
| Empathy* Coach experience | | | 0.13 |
| | | | (0.46) |
| _cons | 15.41 | 6.22 | 11.24 |
| | (4.16)*** | (1.70) † | (3.25)** |
| R^2 | 0.58 | 0.69 | 0.67 |
| N | 209 | 209 | 209 |

†p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

Table 5-17 Moderating Effect of Outland Household Registration

| Variables | Customer engagement | | |
|----------------------|---------------------|--------------------|--------------------|
| | OLS model | | |
| | M9 | M10 | M11 |
| Male | 0.21 (0.21) | 0.01 (0.01) | -0.36 (0.40) |
| Age | -0.12 (1.01) | 0.07 (0.67) | 0.14 (1.33) |
| Private school | 0.06 (0.12) | 0.37 (0.89) | 0.32 (0.75) |
| Academic performance | -0.70 (2.98)** | -0.41 (1.97)* | -0.46 (2.16)* |
| Parentedu | -0.19 (0.65) | 0.08 (0.30) | 0.14 (0.54) |
| Family income | -0.23 (1.02) | -0.22 (1.12) | -0.52 (2.55)* |
| Coach experience | -0.93 (1.18) | -2.12 (3.11)** | -2.68 (3.78)*** |
| Outland | -5.09 (1.76) † | -4.51 (1.74) † | -1.59 (0.65) |
| Convenience | 0.96 (13.26)*** | | |
| Interest | | 0.98 (17.04)*** | |
| Empathy | | | 1.44 (16.79)*** |
| Convenience* Outland | 0.29 (1.77) † | | |
| Interest* Outland | | 0.21 (1.68) † | |
| Empathy* Outland | | | 0.14 (0.75) |
| _cons | 13.82 (5.73)*** | 7.84 (3.53)*** | 10.28 (4.69)*** |
| R^2 | 0.58 | 0.69 | 0.67 |
| N | 209 | 209 | 209 |

† $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; T values in parentheses.

Table 5-18 Moderating Effect of Private Schools

| Variables | Customer engagement OLS model | | |
|-----------------------------|----------------------------------|--------------------|--------------------|
| | M12 | M13 | M14 |
| Male | 0.19 (0.19) | 0.06 (0.07) | -0.34 (0.39) |
| Age | -0.12 (1.07) | 0.07 (0.66) | 0.13 (1.28) |
| Private school | -3.77 (1.63) | -4.09 (1.95) † | -2.97 (1.47) |
| Academic performance | -0.72 (3.04)** | -0.43 (2.11)* | -0.48 (2.28)* |
| Parentedu | -0.19 (0.64) | 0.07 (0.28) | 0.15 (0.57) |
| Family income | -0.24 (1.06) | -0.22 (1.11) | -0.51 (2.51)* |
| Coach experience | -1.03 (1.29) | -2.20 (3.23)** | -2.74 (3.89)*** |
| Outland | -0.17 (0.28) | -0.29 (0.54) | 0.20 (0.36) |
| Convenience | 0.92 (10.77)*** | | |
| Interest | | 0.93 (14.07)*** | |
| Empathy | | | 1.37 (14.17)*** |
| Convenience* Private school | 0.23 (1.71) † | | |
| Interest* Private school | | 0.22 (2.16)* | |
| Empathy* Private school | | | 0.26 (1.66) † |
| _cons | 14.67 (5.76)*** | 8.91 (3.83)*** | 11.21 (4.94)*** |
| R^2 | 0.58 | 0.69 | 0.67 |
| N | 209 | 209 | 209 |

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

5.5 Further Inspection

This dissertation believes that the convenience, interest and empathy of youth football training can significantly improve customer engagement. The further research issue is whether customer engagement can help improve the training performance of students. Therefore, this dissertation empirically explores this issue.

In the questionnaire, this dissertation sets up three questions to measure students' football training performance, which are:

- (1) The child has made obvious progress in the training in the past year;
- (2) Parents will continue to buy the company's youth training services for their children;
- (3) Children will recommend the company's youth training service to their friends;

In this dissertation, principal component analysis was used to reduce dimension of 3 items of youth training performance, and then the stepwise inspection method of Baron & Kenny (1986) was adopted to empirically test the relationship between youth training characteristics -- customer engagement -- training performance. The results are shown in Table 5-19.

As shown in Model M16, the correlation coefficient between customer engagement and youth training performance is positive and significant ($b=0.31$, $P < 0.001$), indicating that customer engagement significantly improves youth training performance.

As shown in Model M17-M19, when convenience, fun and empathy are added respectively, convenience, fun and empathy have a significant positive impact on youth training performance. In addition, the positive impact of

customer engagement on youth training performance still exists and is significant, indicating that customer engagement plays a partial intermediary role between youth training characteristics and youth training performance.

In the Full Model M20, when all variables are added at the same time, youth training characteristics and customer engagement still have a positive and significant impact on youth training performance, indicating that part of the mediating effect of customer engagement between youth training characteristics and youth training performance is stable, that is, convenience, fun and empathy improve youth training performance by improving customer engagement level.

Table 5-19 Youth Training Characteristics, Customer Engagement and Youth Training Performance

| Variables | Training performance OLS model | | | | | |
|----------------------|-----------------------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
| | M15 | M16 | M17 | M18 | M19 | M20 |
| Male | 0.02 (0.03) | -0.04 (0.11) | -0.01 (0.03) | -0.06 (0.19) | -0.15 (0.48) | -0.07 (0.25) |
| Age | -0.14 (2.04)* | -0.06 (1.37) | -0.06 (1.64) | -0.01 (0.42) | 0.00 (0.02) | -0.01 (0.40) |
| Private school | -0.05 (0.17) | -0.11 (0.61) | -0.11 (0.68) | -0.02 (0.16) | -0.04 (0.29) | -0.04 (0.26) |
| Academic performance | -0.12 (0.86) | 0.16 (1.80) † | 0.09 (1.12) | 0.13 (1.81) † | 0.12 (1.62) | 0.10 (1.36) |
| Parentedu | -0.03 (0.20) | -0.04 (0.37) | -0.10 (0.99) | -0.02 (0.25) | -0.01 (0.08) | -0.05 (0.54) |
| Family income | -0.19 (1.42) | -0.01 (0.17) | -0.01 (0.15) | -0.03 (0.35) | -0.10 (1.31) | -0.05 (0.71) |
| Coach experience | 0.50 (1.08) | 0.89 (3.05)** | 0.83 (3.21)** | 0.40 (1.60) | 0.31 (1.18) | 0.37 (1.52) |
| Outland | 0.46 (1.23) | 0.42 (1.82) † | 0.39 (1.89) † | 0.33 (1.73) † | 0.46 (2.30)* | 0.37 (2.00)* |
| Customer engagement | | 0.31 (17.52)*** | 0.18 (7.71)*** | 0.11 (4.44)*** | 0.14 (5.44)*** | 0.07 (2.71)** |
| Convenience | | | 0.24 (7.63)*** | | | 0.12 (3.71)*** |
| Interest | | | | 0.30 (9.63)*** | | 0.17 (4.02)*** |
| Empathy | | | | | 0.38 (8.25)*** | 0.14 (2.35)* |
| _cons | 12.08 (10.00)*** | 2.28 (2.41)* | 1.97 (2.37)* | 1.19 (1.50) | 1.93 (2.37)* | 1.38 (1.83) † |
| R ² | 0.04 | 0.62 | 0.71 | 0.74 | 0.72 | 0.77 |
| N | 209 | 209 | 209 | 209 | 209 | 209 |

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

5.6 Robustness Test

5.6.1 Sub-sample Test

Samples from Guangzhou, Shenzhen, Beijing and Chengdu are used in this study, with sample sizes of 67, 41, 52 and 49, respectively. In the regression analysis, samples from different regions are put together for testing, which may cover the influence of regional characteristics on youth training performance. To test the robustness of this conclusion, four local samples are analyzed separately in this study, and the conclusions are shown in Table 5-20 below. Regression results show that the main effect is robust. Nonetheless, the samples from different cities differed significantly in terms of regression coefficients, with the Shenzhen sample in particular being at the lowest of the three regression coefficients for convenience, fun and empathy. The authors would like to thank the professor for his insight and further explores the source of the specificity of the samples from Shenzhen.

This dissertation has also identified the particularities in the Shenzhen sample during the course of the study, which may be caused by the particularities of Shenzhen. First, compared to the other three cities, Shenzhen is the smallest in terms of area, and therefore Shenzhen may have the lowest commuting pressure, which leads to Shenzhen parents and students placing the lowest importance on the convenience of youth training; second, compared to the other cities, Shenzhen has the shortest history and the least cultural heritage, which leads to the lowest fun in this, and Shenzhen parents and students have adapted to this environment and place the less importance on youth training; third, Shenzhen is a city of immigrants, where the residents share each other's joys and sorrows and have adapted to a high level of empathy and therefore

place less importance on empathy in youth training.

In order to test these conjectures, the author collected data that represent the convenience, fun and empathy of a city for robustness test. In terms of convenience, based on the 2021 Congestion Ranking List of the Top 100 Cities¹¹ published by Baidu Maps, this dissertation found that Shenzhen has the lowest level of congestion compared to the other three cities (Guangzhou, Shenzhen, Chengdu and Beijing ranked 5, 31, 6 and 1 respectively), which indirectly suggests that the coefficient calculated in this dissertation that the convenience of youth training in Shenzhen has the smallest effect on customer engagement is reasonable. In addition, the ranking of the coefficient of convenience affecting customer engagement for the four cities derived from this dissertation is fully consistent with the ranking of congestion in each city (as shown in Table 5-20), further demonstrating the credibility of the findings of this study.

In terms of fun, based on the 2021 Ranking List of China's Cities in Tourist attraction Happiness Index¹² jointly published by the China Tourist Attractions Association and the OCT Innovation & Research Institute, this dissertation found that Shenzhen has the lowest happiness index compared to other cities (Guangzhou, Shenzhen, Chengdu and Beijing ranked 5, 16, 4 and 2 respectively), which indirectly suggests that the coefficient calculated in this dissertation that the fun of youth training in Shenzhen has the smallest effect on customer engagement is reasonable. In addition, the ranking of the coefficient of fun affecting customer engagement for the four cities derived from this dissertation is fully consistent with the ranking of happiness in each city (as

¹¹ 2021 Congestion Ranking List of the Top 100 Cities:
<https://cj.sina.com.cn/articles/view/5182171545/134e1a99902001abmw>

¹² 2021 Ranking List of China's Cities in Tourist attraction Happiness Index
https://travel.sohu.com/a/577671825_121128314

shown in Table 5-20), further demonstrating the credibility of the findings of this study.

In terms of empathy, due to data availability limitations, based on the 2016 Whitepaper of Happy China¹³ published by Tsinghua Happiness Technology Lab (as empathy factors such as care and investment are important indicators for measuring the happiness of cities in this Whitepaper), this dissertation found that Shenzhen has the highest happiness index compared to other cities (Guangzhou, Shenzhen, Chengdu and Beijing ranked 155, 111, 245 and 273 respectively), which indirectly suggests that the coefficient calculated in this dissertation that the empathy of youth training in Shenzhen has the smallest effect on customer engagement is reasonable. In addition, the ranking of the coefficient of empathy affecting customer engagement for the four cities derived from this dissertation is fully consistent with the ranking of happiness in each city (as shown in Table 5-20), further demonstrating the credibility of the findings of this study.

In summary, the particularities of the Shenzhen data are due to the particularities of the city. Although this study has fully demonstrated the particularity of each city with other data, future studies should more fully consider and control the particularities of cities.

¹³ 2016 Whitepaper of Happy China: https://www.sohu.com/a/168889414_483389

Table 5-20 Convenience, Fun and Empathy of Youth Training (by region)

| Variables | Customer engagement | | | | | | | | | | | |
|----------------------------------|------------------------|------------------------|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Guangzhou | | | Shenzhen | | | Chengdu | | | Beijing | | |
| | M21 | M22 | M23 | M24 | M25 | M26 | M27 | M28 | M29 | M30 | M31 | M32 |
| Controls | Y | Y | Y | Y | Y | Y | Y | Y | Y | YY | Y | Y |
| Convenience | 1.02 (10.85)** * | | | 0.66 (4.76)*** | | | 0.91 (5.75)*** | | | 1.26 (7.17)*** | | |
| Interest | | 1.08 (14.14)** * | | | 0.80 (7.51)*** | | | 0.97 (7.02)*** | | | 1.04 (8.96)*** | |
| Empathy | | | 1.41 (12.08)** * | | | 1.09 (5.81)*** | | | 1.58 (7.74)*** | | | 1.48 (8.57)*** |
| <i>N</i> | 67 | 67 | 67 | 41 | 41 | 41 | 49 | 49 | 49 | 52 | 52 | 52 |
| Ranking of cities in convenience | 5 | | | 31 | | | 6 | | | 1 | | |
| Ranking of cities in fun | | 5 | | | 16 | | | 4 | | | 2 | |
| Ranking of cities in empathy | | | 155 | | | 111 | | | 245 | | | 273 |

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

5.6.2 Variable Aggregation Test

This dissertation explores the impact of convenience, fun and empathy on customer engagement. Can these three variables be aggregated into one variable to reflect the unique attractiveness of a club? Such a change is defined as attractiveness of the club in this study. Stata15.0 statistical analysis software was used to conduct principal component analysis on the attractiveness of youth training institutions, and dimensionality reduction was carried out when this variable had three items. The results of principal component analysis are shown in Table 5-21 below. The results of principal component analysis show that only the Eigenvalue of the first factor is greater than 1, which can explain all the information in the original variable. Therefore, the retained factors are 1. This result also indicates that the 3 questions used in this dissertation to measure the attractiveness of youth training institutions reflect the same factor, which is reasonable and valid.

Table 5-21 Factor Analysis -- Attractiveness of the Club

| Factor analysis/correlation | | Number of obs | = | 209 |
|--|------------|------------------|------------|------------|
| Method: principal-component factors | | Retained factors | = | 1 |
| Rotation: (unrotated) | | Number of params | = | 3 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 2.38986 | 2.43033 | 1.0545 | 1.0545 |
| Factor 2 | -0.04047 | 0.04258 | -0.0179 | 1.0366 |
| Factor 3 | -0.08305 | . | -0.0366 | 1.0000 |
| LR test: independent vs. saturated: $\chi^2(3) = 538.41$ Prob> $\chi^2 = 0.0000$ | | | | |

Table 5-22 shows the factor loading of the 3 questions, that is, the explanatory power of the only retained factor to each question. In this dissertation, all the measurement items of attractiveness of youth training institutions are weighted and summarized to obtain the overall attractiveness variables of youth training institutions.

Table 5-22 Factor Loading -- Attractiveness of the Club

| Factor loadings (pattern matrix) and unique variances | | | |
|---|---------|------------|--|
| Variable | Factor1 | Uniqueness | |
| Convenience | 0.8203 | 0.3272 | |
| Fun | 0.9369 | 0.1222 | |
| Empathy | 0.9161 | 0.1607 | |

When the three dimensions are aggregated into attractiveness of the club as IV, the regression results are shown in Table 5-23. The regression results show that the attractiveness of the club has a significant impact on customer engagement, and the results of interaction items are basically consistent with section 5.4 of this study, indicating that the research conclusions are robust.

Table 5-23 Attractiveness of the Club and Customer Engagement

| Variables | Customer engagement OLS model | | | |
|--|----------------------------------|-----------------------|------------------------|------------------------|
| | M21 | M22 | M23 | M24 |
| Controls | Y | Y | Y | Y |
| attractiveness of the club | 0.48 (21.74)*** | 0.46 (7.06) *** | 0.47 (18.85) *** | 0.46 (15.72) *** |
| attractiveness of the club * coach experience | | 0.03 (0.42) | | |
| attractiveness of the club * outland | | | 0.09 (1.65) † | |
| attractiveness of the club * Private school | | | | 0.06 (1.61) † |

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001; T values in parentheses.

6. Conclusion and Discussion

6.1 Conclusion

6.1.1 Findings

Existing studies show that youth football training is the main means to increase reserve players (Liu, 2015; Xu, 2017), and the only way to improve the hard power of Chinese football is to change Chinese football culture while improving youth football training. Exploring factors that influence youth training is an important way to improve the quality of youth development (Mills, Butt, Maynard & Harwood, 2012). Therefore, it is the main research issue of this dissertation to explore how to create a youth training model suitable for China according to the current situation of Chinese football.

This dissertation focuses on the problems from the perspective of customer engagement. In recent years, with the continuous improvement and development of marketing theory, customers have changed from passive value receivers to active value creators, and participate in innovation together with companies to create competitive advantages (Vargo & Lusch, 2004). Scholars have conducted in-depth exploration of this phenomenon, and put forward the perspective of customer engagement. This dissertation focuses on the problem of customer engagement in the youth football training market. Customer engagement not only helps increase the company's mass base, but also facilitates the forming of a sound cultural atmosphere; and the Chinese football exactly has the problems of weak mass base and football culture alienation. By virtue of customer engagement theory, this dissertation is designed to solve the problems with attempts to fortify the mass base of China's football and build the Chinese football culture. For this reason, beginning with the relevant

literature on customer engagement, the research hypotheses are proposed in this dissertation that convenience, fun and empathy will help improve the customer engagement of young trainees; choosing college graduates instead of professional athletes as coaches can strengthen the above positive relationship; outland household registration and youth trainee identity in private schools can also strengthen the above positive relationship; and the view is argued that good customer engagement will help improve the quality of youth football training and the performance of youth football training companies.

In this research, the survey data collected from questionnaires of young football trainees are used to test the above hypotheses. The questionnaire consists of two parts. The basic information part is for collecting the demographic information of the students, such as gender and age. The youth training information part is for the evaluation by young football trainees on convenience, fun and empathy of the youth football training, as well as their self-evaluation on time, energy and emotion investments in the past semester. The evaluation is based on a 5-point Likert scale. To avoid impact from psychological hints on the accuracy of the questionnaire measurement, and thus on the causal logic of this dissertation, the questionnaire is designed to have the questions of customer engagement first, followed by the evaluation of convenience, fun and empathy. Since a single data source may have problems such as small sample variation and selective bias, 1 youth football training company is randomly selected in Beijing, Chengdu, Guangzhou and Shenzhen in this study, and a total of 210 questionnaires are issued for investigation. A total of 210 questionnaires have been recovered with a recovery rate of 100%, among which 209 are valid. The above hypotheses are supported by using the

OLS regression analysis method. In addition, customer engagement plays a partial intermediary role between the youth training characteristics and the youth training performance.

6.1.2 Theoretical Significance

This study has enriched the understanding of customer engagement in marketing, as well as the research on convenience, interest and empathy at the organizational level. At present, few researches on customer engagement in the field of marketing involve in the field of sports training, and little is known about the antecedent variables of customer engagement in the field of sports training. This study has not only refined and tested the impact of convenience, fun and empathy on customer engagement of youth training institutions, but also found that these characteristics would further affect corporate performance.

6.1.3 Practical Significance

The author of this dissertation has founded MY FUTUREWOOD, which is engaged in youth football training. This study has an important guiding role in optimizing the training model and improving the quality of training of MY FUTUREWOOD. Founded in 2017, MY FUTUREWOOD is a football training institution that focuses on quality training for young children aged 4-13. Based on the professional youth football training courses of professional football clubs such as OGC Nice in France and Phoenix Rising Football Club in the USA, MY FUTUREWOOD designs the course training system in combination with the European and American quality training concepts and the physical and mental development characteristics of Chinese youths. The findings of this study will be of great help to MY FUTUREWOOD in selecting and training youth coaches, designing youth training curriculum system and improving the quality of

training. Up to now, few youth training institutions in China have systematically researched the characteristics that improve the effectiveness of youth training for their students, but this study found that convenience, fun and empathy can improve customer engagement and therefore youth training performance.

Based on the findings of this dissertation, MY FUTUREWOOD has innovated in the selection of youth training venues and the design of youth training courses, etc., highlighting more the convenience, fun and empathy of youth training. First, in terms of the convenience of youth training, MY FUTUREWOOD pioneered the idea of locating youth training sites directly in the community through numerous small stadiums, improving the convenience of youth training participation; innovative the charging mode of youth training, where students can be refunded at any time and can stop classes immediately, lowering the threshold of payment and improving the convenience of youth training transactions. Second, in terms of the fun of youth training, MY FUTUREWOOD upgraded the youth training course from a single technical training course to three complementary courses - technical, thematic and competition courses - to keep students interested in the classes. Third, in terms of the empathy of youth training, MY FUTUREWOOD has upgraded the youth training from a single strict output in traditional sports to a two-way empathy-based coach side output and student side reception, thus improving the overall quality of the students, allowing the children to grow more comprehensively and increasing the empathy between the coach, students and parents. In the selection of coaches, MY FUTUREWOOD no longer chooses retired athletes, but young university graduates with a sporting background, to avoid the cognitive inertia of the former that affects the implementation of MY

FUTUREWOOD's empathic training philosophy, an innovation that has been well received by the youth trainees. The author has used the findings of this dissertation to guide MY FUTUREWOOD's youth training practice with remarkable results, even during the two years of the epidemic, which saw an expansion from three to eight pitches, an annual growth rate of 160%.

This study has important reference value for youth training institutions to optimize training mode and improve training quality, and also has reference significance for the formulation of soccer-related policies. At present, there are more than 10,000 youth football training institutions in China, but less than half of them are profitable, and some of them even cannot continue to operate. One of the important reasons lies in the lack of service innovation. This study has found that innovation in convenience, fun and empathy of youth training institutions can significantly improve customer engagement, which has important reference significance for the operation practice of more than 10,000 youth football training institutions.

6.2 Deficiencies and future outlook

This study has some areas for improvement.

First, the characteristics of youth training. The author is grateful to Professor Zhu Rui for suggesting that convenience is mainly reflected in parents, while fun and empathy are more reflected in students. To this end, this dissertation further explores whether the variables of fun and empathy can be aggregated into a single variable that captures the characteristics of youth training institutions for their students. Stata15.0 statistical analysis software was used to conduct principal component analysis on the fun and empathy of youth training institutions, and dimensionality reduction was carried out when the

variable had 8 items. The results of principal component analysis are shown in Fig. 5-24 below. The results of principal component analysis show that only the Eigenvalue of two factors is greater than 2, therefore, the retained factors are 2. This result also indicates that the 5 items used to measure fun of youth training and the 3 items used to measure empathy in this dissertation do not reflect the same factor and therefore cannot be aggregated into one variable.

It should be added that there is a wide variation in the age of the students that the football youth training is aimed at, for example the youngest student in the sample was three and a half years old and the oldest was 12 years old. Generally speaking, students under the age of eight need to be picked up by their parents to and from the youth training institutions, while students over the age of eight, who have a closer commute, can travel to and from the institutions by themselves. Thus for younger students the convenience is mainly reflected in parents; for older students the convenience is mainly reflected in students. Although the empirical tests show that the data on fun and empathy do not support aggregation, the dimensions embodied in convenience, fun and empathy do vary somewhat and future research will need to define the dimensions of research rigorously.

Table 5-24 Factor Analysis - Attractiveness of Youth Training Institutions

| Factor analysis/correlation | | Number of obs | = | 209 |
|--|------------|------------------|------------|------------|
| Method: principal-component factors | | Retained factors | = | 2 |
| Rotation: (unrotated) | | Number of params | = | 15 |
| Factor | Eigenvalue | Difference | Proportion | Cumulative |
| Factor 1 | 4.26 | 2.96 | 0.53 | 0.53 |
| Factor 2 | 1.30 | 0.38 | 0.16 | 0.70 |
| Factor 3 | 0.92 | 0.15 | 0.12 | 0.81 |
| Factor 4 | 0.77 | 0.47 | 0.10 | 0.91 |
| Factor 5 | 0.30 | 0.13 | 0.04 | 0.94 |
| Factor 6 | 0.18 | 0.02 | 0.02 | 0.97 |
| Factor 7 | 0.16 | 0.05 | 0.02 | 0.99 |
| Factor 8 | 0.10 | . | 0.01 | 1.00 |
| LR test: independent vs. saturated: $\chi^2(28) = 1158.91$ Prob> $\chi^2 = 0.0000$ | | | | |

Second, sample data volume related issues. To avoid problems such as small sample variation and selection bias in a single data source, this study chose Beijing, Suzhou, Chengdu, Guangzhou and Shenzhen as the distribution places of questionnaires. The research was originally planned to conduct a questionnaire survey in early 2020, but the sudden outbreak of COVID-19 hindered the development of the research, and the repeated outbreaks of COVID-19 in China caused the government to stop offline sports training business for many times, which brought considerable difficulties to the questionnaire survey. The research was finally carried out from February 2021 to June 2021, and 67, 41, 52, 50 and 50 questionnaires were distributed in Guangzhou, Shenzhen, Beijing, Chengdu and Suzhou respectively, with a total of 260 questionnaires. A total of 260 questionnaires were collected, including 67, 41, 52, 50 and 50, respectively, with a recovery rate of 100%. Due to staff mistakes, the item design of Suzhou questionnaire WAS quite different from that of other regions, and it was difficult to do this survey again. To avoid data contamination by the questionnaires collected in Suzhou, 50 questionnaires collected in Suzhou were not adopted in this study. Therefore, a total of 210 valid questionnaires were collected in this dissertation, among which 1

questionnaire missed important information, which was removed. Therefore, a total of 209 valid questionnaires were obtained in this survey. Although the author verified most of the hypotheses in this dissertation by using these 209 data sets, the small sample size is still one of the shortcomings of this dissertation, which can be expanded in the future research and empirically tested by using large samples.

Third, individual variables are not measured accurately. The expected results of coach's experience elsewhere are inconsistent with the test results, indicating that coach's experience is not necessarily negative. This dissertation believes that the possible reason is that there are problems in the measurement of coach's experience elsewhere: "Coach's football coaching experience in other institutions: in youth football training, the coach of the students is not a fixed one (not 1-to-1 training), but different coaches are responsible for the training of the students, for example, juggling, passing, superhuman movement, shooting, strength, speed, may all are done by different coaches. Therefore, the work experience of a single coach elsewhere is not a good reflection of the issues to be explored in this dissertation. To this end, this dissertation measured the proportion of coaches' rate with experience elsewhere among all the coaches in this training institution. Coach's rate with experience elsewhere = number of coaches with experience elsewhere/total number of coaches". This measure of the coach's experience elsewhere does not well reflect a coach's reception of innovative youth ideas,¹⁴ which is also one of the deficiencies of this dissertation. Future research should focus on the influence of coaches' working experience elsewhere on customer engagement and youth performance. In terms

¹⁴ The author thanks Professor Shantanu for his comments

of variable measurement, the composition of each student's coach can be measured more accurately (including age, detailed work history and other coach's information), and even the composition of coaches at different stages can be measured more accurately.

Fourth, there are shortcomings in the causality test. First of all, the golden standard for testing football youth training interventions is the randomized controlled trial (RCT), in which youth training students are randomly grouped and different interventions are implemented for different groups to control for differences in effects, for example, increasing convenience for some of these groups and controlling for differences in customer engagement between convenience groups. Randomized controlled trials can minimize various possible biases in empirical studies, balance out confounding factors and improve the validity of statistical tests, which is a future direction of improvement for this study. Secondly, the time span of questionnaire survey is insufficient for the test of causality. Based on the focus group interviews and combined with relevant literature, this study made the first version of the questionnaire by using the questionnaire survey method to collect data. The questionnaire consists of two parts. In the basic information part, students' gender, age and other demographic information are collected. In the youth training part, students' comments on the convenience, fun and empathy of youth football training are collected, and students are asked to evaluate their input in time, energy and emotion in the past semester. A 5-point Likert scale was used for evaluation. To avoid psychological implication affecting the accuracy of questionnaire measurement, thus affecting the causal logic of this dissertation, when designing the questionnaire, this dissertation puts customer engagement

before convenience, interest and empathy. Nevertheless, it is more scientific and reasonable to first collect the information about the convenience, interest and empathy of youth training through questionnaire survey, and then the information about the customer engagement of youth trainees after a period of time (such as three months). But sporadic outbreaks of COVID-19 have hampered such studies over a longer period of time. Future research can be targeted to make up for this deficiency.

Fifth, the moderating effect needs to be further improved. The logic behind this dissertation's use of engagement motivation to characterize students' motivation to integrate into local life and thus recognize and accept youth training, measured by household registration, is that the four cities (Guangzhou, Shenzhen, Beijing and Chengdu) mentioned in this study are all first-tier or quasi-first-tier cities, which are more attractive to the population of other non-first-tier cities, and therefore the foreign population has a stronger motivation to integrate into the local communities. However, a question that should not be overlooked is whether there is still a strong motivation to integrate if students come from other cities at a higher tier. This is a direction that future research needs to focus on.

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Annex

Questionnaire

Dear parents:

We are the youth football training research group of Cheung Kong Graduate School of Business. To have a comprehensive understanding of the current situation of your children's youth training and to improve the quality of youth training, the following investigation is made.

This survey is for academic research only, and the information collected will be treated in strict confidence. Please evaluate your children's training last semester in the table below. There is no right or wrong answer.

You can withdraw from the survey at any time. Thank you for your support!

Part I Information of Children

1. Gender_____;
2. Age_____;
3. Grade_____;
4. Local household registration or not_____;
5. Nature of the current school (public or private)_____;
6. Academic performance (top 5%, top 5-20%, top 20-50%, top 50-75%, bottom 25%)_____;
7. Total training time of children in this youth training institution___month(s);
8. In the past year, the number of times that children released information about the youth training information on "We Media"_____times;
9. In the past year, how many friends and classmates did your children recommend to apply for the youth training institution_____(number);

Part II Information of Family

1. Parents' highest education background_____;
2. Parents' occupation (government, enterprises, public institutions, non-profit organizations and others)_____;
3. Annual family income (100,000 yuan or less, 100,000-300,000 yuan, 300,000-500,000 yuan, 500,000-1,000,000 yuan, more than 1,000,000 yuan)_____;
4. The distance from my home to the youth training institution____kilometers;
5. How long does it take to commute from my home to the youth training institution for training____Min.

Part III Children's Evaluation of Youth Training (if the child is too little, parents can fill in this part instead according to the actual situation of the children)

| No. | Content | 1-Completely untruthful | 2-Basically untruthful | 3-Uncertain | 4-Basically truthful | 5-Completely truthful |
|-----|--|----------------------------|---------------------------|-------------|-------------------------|--------------------------|
| 1 | Children put in as much time as he could in training last semester | | | | | |
| 2 | Children put all his energy into the training last semester | | | | | |
| 3 | Children tried his best to be emotionally involved in training last semester | | | | | |
| 4 | Children took the initiative to communicate with the coach in training last semester | | | | | |
| 5 | Children did good in cooperating with his teammates in training last semester | | | | | |
| 6 | Children completed the training task carefully in training last semester | | | | | |
| 7 | Children loves the youth football training institution he is in | | | | | |
| 8 | Children think the company's youth training registration procedure is simple | | | | | |
| 9 | The company's premises are very close to my home | | | | | |
| 10 | We can sign up for the company's youth training program anytime, anywhere | | | | | |
| 11 | We can join the training soon after we sign up | | | | | |
| 12 | We get into the group very quickly when we train | | | | | |
| 13 | The company's youth training has a strong appeal to children | | | | | |
| 14 | Children think they can gain a lot in this youth training institution | | | | | |
| 15 | Children's coach is an interesting guy | | | | | |
| 16 | Children's training content is very interesting | | | | | |
| 17 | It's been fun with the other youth trainees | | | | | |

| No. | Content | 1-Completely untruthful | 2-Basically untruthful | 3-Uncertain | 4-Basically truthful | 5-Completely truthful |
|-----|--|----------------------------|---------------------------|-------------|-------------------------|--------------------------|
| 18 | In the training, the views on the world, life, and values of coaches and children are consistent | | | | | |
| 19 | In the training, coaches can empathize with children | | | | | |
| 20 | In the training, coaches understand and support children's behaviors | | | | | |
| 21 | My children are making remarkable progress in training | | | | | |
| 22 | Parents will continue to buy the company's youth training services for their children | | | | | |
| 23 | How likely are your children to recommend the company's youth training service to a friend | | | | | |
| 24 | How did the coach grade my children last semester (out of 100 scores) | | | | | |
| | | | | | | |

Scoring system

1. There are 7 items on customer engagement, presented as a 5-point scale (1-5 points). The higher the score, the higher the degree of customer engagement;
2. There are 5 items on convenience, presented as a 5-point scale (1-5 points). The higher the score, the higher the degree of convenience;
3. There are 5 items on fun, presented as a 5-point scale (1-5 points). The higher the score, the higher the degree of fun;
4. There are 3 items on empathy, namely cognition, emotion and behavior, presented as a 5-point scale (1-5 points). The higher the score, the higher the degree of empathy;