

SERVICE QUALITY OF FACILITIES MANAGEMENT BASED ON USERS'  
EXPECTATION AND PERCEPTION IN RESIDENTIAL COMMUNITY

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To my beloved parents and my dear friends

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## ABSTRACT

In recent years, the increasing amount of facilities management companies and residential communities has raise together with the complaint rate that concerning the quality of service in facilities management. The same situation occurred in Dragon Spring Residential Community in Shijiazhuang, China. Consequently, this study was conducted to analysis the service quality of facilities management based on the residents' expectation and perception in Dragon Spring Residential Community. The objectives of this study are (1) to identify the service level based on the residents' expectations and their perceptions and (2) to identify the factors which can influence the service quality. Questionnaires were distributed to a residential community in Shijiazhuang of Hebei Province, China. A total of 105 residents from Dragon Spring Residential Community were randomly selected to be the respondents of the study. Five dimensions included 22 items of measure service quality were named: reliability, assurance, empathy, responsiveness and tangible. In this study, the descriptive analysis, gap analysis and Kruskal-Wallis Test were used to analyze the data. This study found that the residents are dissatisfied with the service quality level provided by the FM Company because the entire gap between residents' expectation and perception which is negative, and there is significant positive relationship between service quality, as well as the gender and age factors ( $p < 0.05$ ). At the end of this study, some recommendation was suggested to the FM Company and guided them to improve the service quality.

## ABSTRAK

Sejak kebelakangan ini, jumlah syarikat-syarikat pengurusan kemudahan dan komuniti kediaman semakin meningkat sehubungan dengan kadar aduan kualiti perkhidmatan dalam pengurusan kemudahan yang juga turut meningkat dengan mendadak. Keadaan yang sama berlaku di Dragon Spring Community Kediaman di Shijiazhuang, China. Oleh yang demikian, kajian ini dijalankan untuk menganalisis kualiti perkhidmatan pengurusan kemudahan berdasarkan jangkaan dan persepsi penduduk di Komuniti Kediaman Dragon Spring. Objektif kajian ini adalah (1) untuk mengenal pasti tahap perkhidmatan berdasarkan jangkaan dan persepsi penduduk dan juga (2) untuk mengenal pasti faktor-faktor yang boleh mempengaruhi kualiti perkhidmatan. Borang soal selidik telah diedarkan kepada masyarakat kediaman di Shijiazhuang Hebei Province, China. Seramai 105 penduduk dari Komuniti Kediaman Dragon Spring telah dipilih secara rawak untuk menjadi responden. Lima dimensi yang merangkumi 22 item ukuran kualiti perkhidmatan telah dinamakan: kebolehpercayaan, jaminan, empati, responsif dan nyata. Analisis deskriptif, analisis jurang dan Kruskal-Wallis Ujian telah digunakan untuk menganalisis data. Dapatan kajian mendapati bahawa penduduk tidak berpuas hati dengan tahap kualiti perkhidmatan yang diberikan oleh syarikat FM kerana semua jurang antara harapan dan persepsi penduduk adalah negatif, dan terdapat hubungan positif yang signifikan antara kualiti perkhidmatan dan faktor-faktor yang jantina dan umur ( $p < 0.05$ ). Akhir kajian memberikan beberapa cadangan dan petunjuk kepada syarikat FM untuk meningkatkan kualiti perkhidmatan.

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**LIST OF SYMBOLS**

$\alpha$	Alpha
$d$	Acceptable margin of error for proportion being estimated or 0.05
$n_1$	Required return sample size when $n_0 > 5\%$ of population
$n_0$	Required return sample size based on Cochran's formula
$p$	Maximum possible proportion or 0.5
$P$	Population size
$q$	$(1-p)$ or 0.5
$t$	Value for selected alpha level of 0.05 or 1.96
FM	Facilities Management

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1. Background**

Facilities management (FM) as a concept first came from the United States of America in the 1970s, but in reality it has more than one hundred years of history. In today's society, facilities management has become a social, professional and enterprise industry. It is also a comprehensive industry which involves security, cleaning, landscaping, maintenance and many other different fields in the world. The final objective of facilities management is to keep and increase the value of the facilities to maintain them in a good condition so that they can be used normally. Nowadays, facilities management is also integrated into the real estate industry.

The meaning of facilities management in real estate area can be summarized as “the housing, services and other means to contribute to a better performance of the main process in changing the overall management and implementation around” (Syed & Hamimah, 2008).



The first company of facilities management in China was built in March 1981 in Shenzhen, Guangdong Province (Ruimin Zhang and Xiaojuan Lv, 2008). To date the company has more than 40 years history, and during these 40 years, the development of facilities management has never stopped in order to improve itself, by which it can be accepted and acknowledged by both customers and society. Although the development of facilities management in China has never stopped, it is still at the initial stage compared to the Western countries.

From the 1920s, facilities management underwent vigorous development in some big cities in the coastal and inland areas of China. Many large and medium-sized cities including Beijing, Shanghai, Wuhan, Guangzhou, Shenyang and Harbin, have built many eight or nine - storey buildings. Only in the case of Shanghai, as the first big city in the east, there are many high-rise buildings. In the old British concession areas, there are many Western-style residences. The prosperity of the real estate industry promoted the development of the facilities management market. A professional company was set up to perform cleaning, sanitation, housing decoration, service management and other professional business which formed the embryonic system of modern Chinese facilities management.

From 1949 after the founding of the People's Republic of China (PRC), the land and real estate of the city gradually transferred to state and collective ownership. Basically the funds of required for residential construction was paid by the government, and the housing was allocated to the workers as welfare. The Interior Affairs Department, City Services Department, Second Department of Commerce, National City Construction Bureau and Built Environment Department became the

functioning mechanism of real estate management in the central authority. However, the local authority in charge of housing management and housing maintenance was constantly changing, sometimes revoked and sometimes acting as part of a coalition. Even if the authority had an independent existence, it could not identify itself as a government agency or otherwise as the management and commercial aspects had been replaced by simple administrative management. Thus, the business activities of the real estate section basically, and the facilities management along with the real estate market disappeared from the scene. What were left were only related departments of the government concerning housing production and maintenance, without any commercial aspect.

In the nineteen eighties, the market economy in China became increasingly animated and the development of city construction also increasing rapidly. Consequently, housing commercialization and housing property privatization as a symbol of real estate management reformation started to gradually reappear. On 18 March 1981, the first commercial residence building management professional company in Shengzhen – Shenzhen Facilities Management Company – was founded. It marked the start point of facilities management in China. However, as a new industry in China, facilities management began in the coastal areas, and was just a subsidiary of real estate development. It was not accepted by the public, nor was it extended over the whole country. After 10 years, the unique function of facilities management gradually attracted people's attention. In 1993, the Ministry of Construction and Real Estate Department held the first session of the national facilities management seminar in Guangzhou and Shenzhen. At the same time the Facilities Management Association of Shenzhen was established which marked a

new period for facilities management in China.

In April 1994, the Ministry of Construction promulgated the first facilities management regulations as a “new residential community management approach in cities”. It established the independent status of facilities management in the real estate industry. On 01 September 2003, the implementation of “facilities management regulations” become another milestone for the Chinese history of facilities management development. It marked the development of China's facilities management, formally fitting in the legal track with significant importance to safeguard the legitimate rights and interests of all housing owners and improve the living and working environment of people and to standardize facilities management. At present, facilities management has become a closely watched industry with thousands of housing owners. It has gained the attention of all departments and people, such that the prospects of facilities management are very bright.

The city of Shijiazhuang has been selected as the study area for this work. See Figure 1.1 for the location of Shijiazhuang as the capital of Hebei Province in China. Shijiazhuang is the political, economic, technology, financial, culture and information centre of Hebei Province. The total area of Shijiazhuang is 15,848 square kilometres, and the number of residents in Shijiazhuang is more than 10.2 million. At the end of 2012, there were 1111 residential communities in the urban area of Shijiazhuang, of which 635 residential communities already practice facilities management. The coverage rate of facilities management is thus 57% (Xin Hua newspaper, 2012). In spite of this, the facilities management industry in China is still at the primary stage.



Figure 1.1 Location of Shijiazhuang

## 1.2. Problem Statement

Communities can be seen as cells of society. The most important part to building a harmonious society is to build a harmonious community. The relationship between community construction and facilities management is one of interdependence and mutual promotion. On the other hand, the development of facilities management can be reflected by the community construction. A perfect community function will increase the personal qualities so that contradiction and dissension among the residents will be reduced.

As a significant constituent part, the quality of services for facilities management plays an important role in a harmonious community. The quality of services can be directly reflected by the satisfaction and the complaint rate that arises

from the customers who live in the community. Nowadays, the complaint rate from Chinese communities is at a higher level and, the satisfaction of the residents is still at a lower level. The FM service companies in China now are facing a huge challenge after China joined the World Trade Organization, as it is noticed that the FM service companies from overseas have professional management skills. However, the opposite is true for the Chinese companies in this field. Their companies have the obvious advantage of obtaining goods and services at a lower cost and price, however in terms of high service quality in China, the related FM companies offer lower quality but with a high cost and price (Rui Min Zhang and Xiao Juan Lv, 2008). For all that, the number of FM companies is still increasing rapidly. There is another challenge which has arisen, namely the competition between the FM companies.

According to Industry Survey Data, among the 31 provinces in China there are more than 5000 facilities management companies. Among these companies, there are 2965 FM companies incorporated from 2005 to 2008 (State Statistical Bureau, 2009). This phenomenon indicates that most FM companies in China have a good development situation, but at the same time, it also warns that there are many shortages because the settling time is still short (Shi Min Guo and Jian Hua Zhou, 2007). In this study, the researcher discusses several shortages.

Facilities management is a burgeoning industry in China so that the related laws and rules are still hysteric (Xie Xianchun, 2004). In the absence of such laws is easy to touch off conflicts of interest which go against a peaceful and stable society. In pace with the reformation of the housing system, houses owned by

personal and communities become socialized. This phenomenon has become the irresistible trend of history. Merely depending on the common divisor is not enough to standardize and restrict the relationship between owners and owners and a FM company and owners. There must be a stronger system of laws and regulations concerned with facilities management which are mandatory and authoritative, to ensure that the public interest under facilities management is not infringed.

Therefore, it is a serious problem to establish a suitable system for laws and regulations as soon as possible to govern facilities management development (Xie Xianchun, 2004). The framework of a system of laws and regulations concerning facilities management in China has not formed a perfect legal system yet. The structure is not complete. It consists of few industry regulations, local regulations and policies.

Facilities management directly involves the vital interests of housing owners, users and the facilities management company itself. So far, there are two highlighted problems within facilities management, namely (1) the difficulty to collecting the charges and (2) the lack of stand behaviour of what constitutes the charge to be collected. These two points are discussed briefly below.

The difficulty of collecting the facilities management charge arises as a few of house owners and users are unwilling to pay the charge. That is because these owners frequently egress or they simply want to increase the value of the house but do not live in here for a long time. Both of these two causations give rise to the problem.

The lack of standard behaviour of the charge to be collected arises even though the State Planning Commission and the Ministry of Construction have already issued “The Interim Regulations of Facilities Management Charge for City Residential Communities”. These regulations give a clear and definite stipulation of what constitutes a facilities management charge. However, in some regions the relevant Department of Price does not implement the regulations stringently, and some FM companies ignore the lawful rights and interests of owners so that some of the owners are unwilling or refuse to pay the charge.

Nowadays, to obtain a facilities management project mostly is black case work as a fair marketing competition mechanism has not formed yet (Hu Yunquan, 2006). This means normally the developer has the right to manage the community or it has the right to determine which facilities management company will get permission to manage the community.

The management of submitted public bids and the submission of tenders for facilities projects also suffer from a lack of standardization (Hu and Yang, 2008). It would appear that whatever company developed the housing has permission to from the management. This is because after the community is completed, in the initial period there are few owners living in the area, so the developer selects and engages the facilities management company by itself. However in the future when a lot more owners move into the community, they are forced to accept the decision of the developer and cannot choose a different facilities management company which could give them satisfaction.

The development of facilities management services in coastal areas and developed areas in China is faster than in the outlying and backward areas (Hu Yunquan, 2006). In the coastal and developed areas, the operation of a community by facilities management is normality; however in the outlying and backward areas, there is still an insufficient system of facilities management and even some special areas have still not begun to carry out facilities management services. Regional disparity gives rise to a serious imbalance in the development of facilities management which goes against the facilities management enterprise.

At present, the knowledge skills among the practitioners of facilities management in China are insufficient (Hu and Yang, 2008). The service level of facilities management is limited and the comprehensive quality of the facilities managers is low. Facilities managers play a vital role in a facilities management company. The disposition level of each facilities manager not only influences the service quality of facilities management but also affects the long-term sustainable development of enterprises.

So far, facilities management in China does not have a professional system. The Chinese facilities industry still belongs in the category of labour-intensive industries and with the expansion of management scale, the number of servants is increasing as well (Xie Xianchun, 2004). Unfortunately, most of the servants are from laid-off transfers and seriously lack any high-quality talent for the job. At the same time, because of the weakness of the economic base of a service enterprise, such that the service quality is still at a lower level and service consciousness



becomes bogged down, this causes the grade of professionalism of enterprise to be at a lower level than desired by the community.

## Service quality of FM service in Shijiazhuang

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><span style="color: blue;">■</span> Bad sanitary conditions</li> <li><span style="color: green;">■</span> Inconvenient and unsafe parking</li> <li><span style="color: cyan;">■</span> Poor public security</li> <li><span style="color: lightblue;">■</span> Dissatisfaction charge</li> <li><span style="color: lightgreen;">■</span> Unable to solve emergencies</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: red;">■</span> Useless entrance guard and monitor</li> <li><span style="color: purple;">■</span> Bad attitude of desk clerk</li> <li><span style="color: orange;">■</span> Unattractive community activities</li> <li><span style="color: pink;">■</span> Poor maintenance of infrastructure</li> <li><span style="color: lavender;">■</span> No complains</li> </ul> |
|---|--|

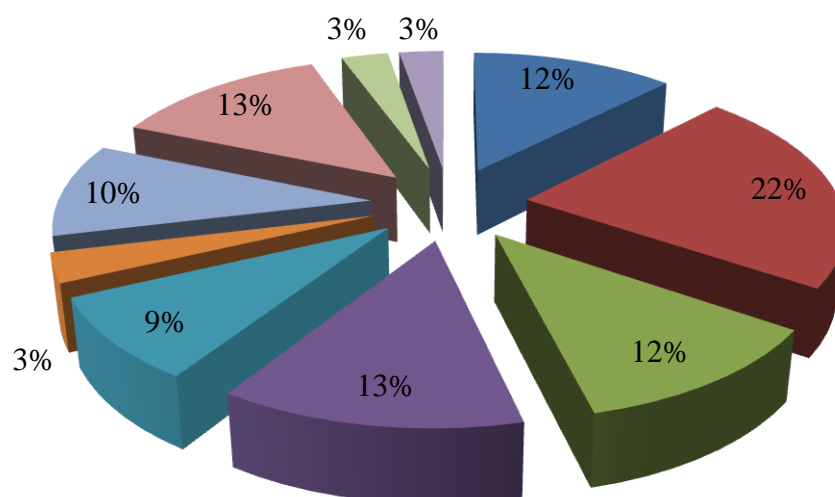


Figure 1.2 Service quality of FM service in Shijiazhuang ( Report of FM service quality in Shijiazhuang, Magazine of Real Estate Forum, No. 6, 2012)

In recent years, accompanied by the increasing amount of facilities management companies and residential communities, the complaint rate concerning the quality of service in facilities management is increasing as well as. These complaints involve a lot of aspects such as security, maintenance, cleaning and so on as illustrated in Figure 1.2.

This study is focused on one community named Dragon Spring Residential Community which is located in the city of Shijiazhuang, China. This community was established in 2003 by the Di Hua Real Estate Company Limited. Its location is at the edge of Shijiazhuang, as being far from the city centre the surrounding environment of this community is better than for other communities which are in the city centre. That is why a lot of people are attracted to live in there. Even though the environment is better, the quality of the facilities service in this community is still worrying. Much feedback from the residents involves security and the attributes of the facilities manager. Some of residents have complained about that lack of security guards inside the community, especially as some residents have suffered items being stolen by thieves. Other residents have complained about the bad attitude of the desk clerk, who appears not to be able to solve problems immediately and cannot give a clear answer when questioned. In addition, there are lots of complaints involved with poor cleaning. The reason of this phenomenon is the different sexuality and age influence their expectation and perception but lack of service quality (Stafford, 1966; Snipes et al., 2006).

### **1.3. Purpose of the Study**

In this study, the main purpose is to identify the service quality level based on the users' expectations and their perceptions. This study also aims to identify the variance between gender, age and service quality of facilities management in Dragon Spring Residential Community. This will help residents to reflect their feeling to the facilities management department so that lead them solve problem effective and

construct a harmonious community together with the facilities management department. Meanwhile, by analyzing the opinions and feelings of the respondents, the researcher may be able to determine the relationship between gender, age of respondents and service quality of FM in this community.

#### **1.4. Research Questions**

The research questions of this study are as follow:

- i. What are the expectations of the residents and their perceptions of FM service quality in Dragon Spring Residential Community?
- ii. What are the factors that influence FM service quality in a residential community?

#### **1.5. Research Objectives**

The research objectives of this study are:

- i. To identify the service quality level based on the residents' expectations and their perceptions by using Gap analysis.

- ii. To identify the factors (gender and age) that influence FM service quality in a residential community.

### **1.6. Significance of the Study**

This research can provide feedback concerning facilities management which arises from the residents who live in the Dargon Spring Residential Community. This feedback can help the facilities manager of Dragon Spring Residential Community to provide a high quality of service for the residents.

This research can also aid other researchers to identify the main factors which will influence the service quality. Further, the research focuses on the perceptions of the residents and their expectations of facilities management in a community coupled with the relationship between several factors and service quality. Therefore, this research can be relevant in the future to help other FM companies provide good service in other communities.

### **1.7. Scope of the Study**

This study focus on the residents who live in the Dragon Spring Residential Community. This is because the complaint rate in this community is higher than in

other communities. In addition, this community has already attracted many people due to its good environment. However, the complaint rate still high.

The data for this research has been collected via a set of questionnaires that were distributed to the residents in a residential community named Dragon Spring. The total number of respondents in this study is 105.

## **1.8. Structure of the Study**

This research divide into 5 chapters, which are Chapter 1 Introduction, Chapter 2 Literature Review, Chapter 3 Research Methodology, Chapter 4 Data analysis and finding, Chapter 5 Conclusion and Recommendation. At the end of the study, there will identify the service quality of Dragon Spring Residential Community based on their residents' expectation and perception. In addition, this study will also identify the relationship between the service quality and some factors such as gender and age by analyze the data which collected through the set of questionnaires.

### **1.8.1. Chapter 1 Introduction**

Chapter 1 introduces the background and physical location of this study area, the ponderance of this problem and some important factors which can influence this

problem. Furthermore, this chapter also includes the research questions and research objectives based on this research. This chapter mentioned the significance and scope of this study at the end of this chapter.

### **1.8.2. Literature Review**

Chapter 2 will include some previous study which can support this research, in this chapter, there will more detail physical definition throughout the whole research which related to this study like facilities management and service quality. In addition, another main part of this chapter is the measurement of service quality and some related relationships between the factors and service quality.

### **1.8.3. Research Methodology**

Chapter 3 is research methodology, this chapter will introduce that do this research step by step. In this chapter, there is very detail methodology of this research; it includes the data collection, sample size of the respondents, and the analysis methods, some analysis compatible also will be included in this chapter. This chapter also introduces the research instrument that is a set of questionnaire; it also introduces each section of the questionnaire.

#### **1.8.4. Chapter 4 Data Analysis and Finding**

Chapter 4 is the most important chapter during this research, in this chapter there will be a lot of data analysis. During the a lot of data analysis, it will use a lot of tables and explanation to indicate the analysis result. In this chapter there will be used three methods to analyze the data, after these analyzes some findings will be found at the end of this chapter. These findings will be used in the next chapter.

#### **1.8.5. Chapter 5 Conclusion and Recommendation**

Chapter 5 is the last chapter during this research, this chapter main to indicate the final finding of the whole research. This chapter also is the important chapter during this research that is because all of the analysis result will be mentioned in this chapter. Thus, this chapter can be regarded as contribution for whole research. Furthermore, there will have some recommendation at the end of this chapter to provide the relevant for the future research.

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