

**THE SERVANT LEADERSHIP AND HOW IT STIMULATES  
EMPLOYEE SERVICE PERFORMANCE  
IN PUBLIC SECTORS**

**Qi Wang**

**A Dissertation Submitted in Partial  
Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy (Management)**

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## ABSTRACT

<b>Title of Dissertation</b>	THE SERVANT LEADERSHIP AND HOW IT STIMULATES EMPLOYEE SERVICE PERFORMANCE IN PUBLIC SECTORS
<b>Author</b>	Qi Wang
<b>Degree</b>	Doctor of Philosophy (Management)
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The purpose of this study was to explore the relationship between servant leadership and employee service performance in public sectors and its internal mechanism. To be specific, the first step was to explore whether servant leadership can predict employee service performance. The second step is to explore the mediating mechanism by which servant leadership influences employee service performance.

Based on social learning theory and relevant literature, this study developed the main effect model of servant leadership positively affecting employee service performance. Based on the AMO (Ability, Motivation and Opportunity) theory and relevant literature, this research developed the mediating effect models in which servant leadership influenced employee service performance through public service self-efficacy, public service motivation and organizational service climate.

This study investigated the public sector employees in Beibei district, Chongqing, China, and obtained 416 valid samples. This study employed descriptive statistics, correlation analysis, main effect test, independent model mediating effect test and integrated model test on sample data in SPSS22 and AMOS22 to obtain a series of important conclusions.

Five conclusions were drawn as follows. Firstly, servant leadership positively affects employee service performance. Secondly, servant leadership positively influences employee public service self-efficacy, and employee public service self-efficacy positively influences employee service performance. Employee public service self-efficacy mediates the positive influence of servant leadership on employee service performance. Thirdly, servant leadership positively influences employee public service motivation, and employee public service motivation positively influences employee

service performance. Employee public service motivation mediates the positive influence of servant leadership on employee service performance. Fourthly, servant leadership positively influences organizational service climate, and organizational service climate positively influences employee service performance. Organizational service climate mediates the positive influence of servant leadership on employee service performance. Finally, public service self-efficacy, public service motivation and organizational service climate together completely mediate the positive influence of servant leadership on employee service performance.

In terms of theoretical contribution, this research enriches the literature of servant leadership and deepens the AMO theory. In terms of management implications, this study suggests that public sectors choose, use, cultivate and retain servant leaders, improve employee public service self-efficacy, arouse employee public service motivation, and shape organizational service climate. It will greatly improve the employee service performance in the public sector and promote the construction of service-oriented government that the people are satisfied with.

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Here it comes April 2019. My dissertation is nearing its end. It is only a post on a long journey, and life is always on the road. In the short time of rest, looking back over the past three years of my doctoral studies, and find my heart still rippling with emotion.

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Temporary stay is to go further! I will live up to their expectations and move on better.

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Qi Wang  
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## TABLE OF CONTENTS

	Page
ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES .....	ix
LIST OF FIGURES .....	xi
ABBREVIATIONS.....	xii
CHAPTER 1 INTRODUCTION .....	1
1.1 Research Background .....	1
1.2 Research Problem .....	3
1.3 Research Purpose .....	4
1.4 Research Objective .....	5
1.5 Research Scope .....	6
1.6 Research Significance.....	7
1.7 Definition of Terms.....	9
CHAPTER 2 LITERATURE REVIEW.....	11
2.1 Theory Literature Review.....	11
2.1.1 Social Learning Theory.....	11
2.1.2 The AMO Theory.....	17
2.2 Variable Literature Review .....	20
2.2.1 Servant Leadership.....	20
2.2.2 Public Service Self-efficacy.....	27
2.2.3 Public Service Motivation.....	33
2.2.4 Organizational Service Climate .....	41
2.2.5 Employee Service Performance.....	52
CHAPTER 3 HYPOTHESES, MODELS AND METHODS.....	62

3.1 Hypotheses and Models .....	62
3.1.1 Servant Leadership and Employee Service Performance .....	62
3.1.2 Servant Leadership, Public Service Self-efficacy and Employee Service Performance .....	64
3.1.3 Servant Leadership, Employees' Public Service Motivation and Employee Service Performance .....	67
3.1.4 Servant Leadership, Organizational Service Climate and Employee Service Performance .....	70
3.1.5 Integration Model.....	74
3.2 Methods .....	75
3.2.1 Sample and Sampling Procedures.....	75
3.2.2 Measures .....	78
3.2.3 Statistical Analysis Strategy.....	81
CHAPTER 4 RESULTS .....	83
4.1 Scale Quality Analysis .....	83
4.1.1 Scale Revision and Optimization.....	83
4.1.2 Scale Reliability and Validity Test .....	85
4.2 Descriptive Statistics and Correlation Analysis.....	90
4.3 Hypothesis Testing .....	91
4.3.1 The Influence Tests of Demographic Variables on Employee Service Performance .....	91
4.3.2 Main Effect Test.....	96
4.3.3 Mediating Effect Test.....	98
4.3.4 Integration Model Test .....	106
CHAPTER 5 DISCUSSION.....	114
5.1 Conclusions .....	114
5.2 Theoretical Contributions and Management Implications .....	116
5.2.1 Theoretical Contributions .....	116
5.2.2 Management Implications.....	118
5.3 Limitations and Future Research .....	122

APPENDICES .....	124
Appendix A: Chinese Scales .....	124
Appendix B: English Scales.....	126
BIBLIOGRAPHY .....	129
BIOGRAPHY .....	149





## LIST OF TABLES

	<b>Page</b>
Table 2.1 Dimensions and Items of Servant Leadership Scales	23
Table 2.2 Studies on the Outcomes of Public Service Motivation <sup>a</sup>	40
Table 2.3 Dimensions and Items of Service Climate Scales	44
Table 3.1 Basic Information of Samples	77
Table 4.1 KMO and Bartlett's Test	83
Table 4.2 Total Variance Explained	84
Table 4.3 Rotated Component Matrix <sup>a</sup>	85
Table 4.4 Reliability of Measurement Model	86
Table 4.5 Measurement Model Fit Summary (N=416)	88
Table 4.6 Mean Value, Standard Deviation, Correlation Coefficient and AVE Value of Variables (N=416)	89
Table 4.7 Descriptive Statistics	93
Table 4.8 Test of Homogeneity of Variances	93
Table 4.9 ANOVA	94
Table 4.10 Main Effect Model Fit Summary (N=416)	96
Table 4.11 Main Effect Test Results (N=416)	97
Table 4.12 Mediating Effect Model Fit Summary (N=416)	100
Table 4.13 The Mediating Effect Test Results (N=416)	101
Table 4.14 Summary of Research Hypothesis Test Results	104
Table 4.15 Integration Model Fit Summary (N=416)	106
Table 4.16 The Test of Integration Model (N=416)	108

Table 4.17	Multi-group Analysis Based on Organization Type (N=416)	109
Table 4.18	Multi-group Analysis Based on Political Status (N=416)	110
Table 4.19	Multi-group Analysis Based on Post Status (N=416)	111



## LIST OF FIGURES

	Page
Figure 2.1     The Relations among Human Behavior (B), Personal Factors (P), and the External Environment (E).	12
Figure 3.1     Hypothesis 1: Servant Leadership in Public Sectors Positively Affect the Employee Service Performance.	64
Figure 3.2     Hypothesis 2a, Hypothesis 2b and Hypothesis 2c	67
Figure 3.3     Hypothesis 3a, Hypothesis 3b and Hypothesis 3c	70
Figure 3.4     Hypothesis 4a, Hypothesis 4b and Hypothesis 4c	73
Figure 3.5     Integration Model	74
Figure 4.1     CFA (SL+PSSE+PSM+SC+ESP)	87
Figure 4.2     The Main Effect Model	96
Figure 4.3     The Diagram of Mediation Model	99
Figure 4.4     The Mediation Model of Public Service Self-efficacy	99
Figure 4.5     The Mediation Model of Public Service Motivation (PSM)	102
Figure 4.6     The Mediation Model of Service Climate	103
Figure 4.7     Integration Model	106

## ABBREVIATIONS

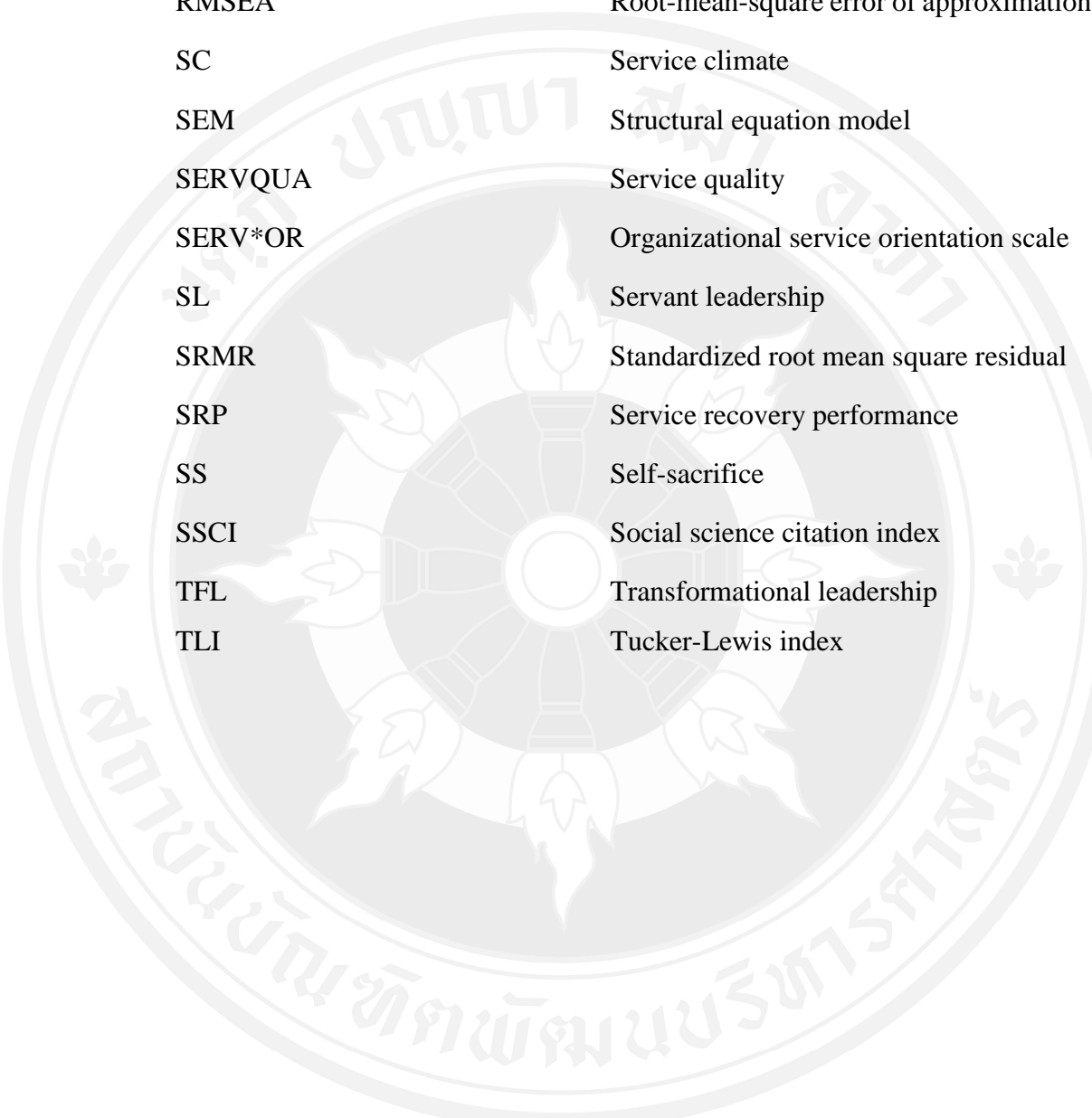
### Abbreviations

### Equivalence

AGFI	Adjusted goodness-of-fit index
AMO	Ability, Motivation and Opportunity
APP	Attraction to public policy making
APS	Attraction to public service
AVE	Average variance extracted
CCHP	Customer complaint handling performance
CDERP	Customer-directed extra-role performance
CFA	Confirmatory factor analysis
CFI	Comparative fit index
COM	Compassion
CPC	Communist Party of China
CPI	Customer purchase intent
CPI	Commitment to the public interest
CPV	Commitment to public values
CR	Composite reliability
CSSES	Community service self-efficacy scale
EFA	Exploratory factor analysis
ERA	Emotion regulation ability
ESP	Employee service performance
GFI	Goodness-of-fit index



HPHRPs	High-performance human resource practices
HPWS	High-performance work system
HRM	Human resource management
HSV	Highest shared variance with other constructs
IFI	Incremental fit index
IRP	In-role performance
LMX	Leader-member exchange
NFI	Normed fit index
NGO	Non-governmental organization
NPSM	Non-profit service motivation
OBSE	Organization- based self-esteem
OCB	Organizational citizenship behavior
OCB-C	Organizational citizenship behaviors toward customers
OCB-I	Organizational citizenship behaviors toward individuals
OCB-O	Organizational citizenship behaviors toward organization
PCSP	Proactive customer service performance
PGFI	Parsimony fit index
PNFI	Parsimony normed fit index
P-O fit	Person-organization fit
POS	Perceived organizational support
PSM	Public service motivation
PSSE	Public service self-efficacy



RFI	Relative fitting index
RISC	Relational-interdependent self- construal
RMR	Root of the mean square residual
RMSEA	Root-mean-square error of approximation
SC	Service climate
SEM	Structural equation model
SERVQUA	Service quality
SERV*OR	Organizational service orientation scale
SL	Servant leadership
SRMR	Standardized root mean square residual
SRP	Service recovery performance
SS	Self-sacrifice
SSCI	Social science citation index
TFL	Transformational leadership
TLI	Tucker-Lewis index

# CHAPTER 1

## INTRODUCTION

This chapter mainly discusses the research background, research problems, research purposes, research objectives, research scope, research significances and definition of terms.

### 1.1 Research Background

**Historical origins.** China has the cultural origins of service government and servant leadership. Confucian culture emphasizes that to a state, the people are the most important thing, the state comes second, and the ruler is the least important. (*Mencius · Jinxin*). It requires leaders manifesting virtue, loving the people, and abiding by the highest good, and ruling the country and making the world peaceful through self-cultivation (*Rites · The Great Learning*). Self-cultivation is the foundation of governing a country and making the world a peaceful place, because when a ruler's behavior is correct, he will be followed without commands. If his behavior is wrong, his government is not effective even with giving orders (*Confucian Analects · Zilu*). On this basis, Mao Zedong further put forward the concept of serving the people. On September 8, 1944, Mao Zedong made a famous speech on serving the people, stating "Our team is completely for the liberation of the people, is completely for the people's interests...Since we serve the people, we are not afraid of criticism if we have shortcomings. Anybody can point it out to us" (Mao Zedong, 1971). On April 24, 1945, at the seventh national congress of the Communist Party of China (CPC), MAO Zedong delivered a political report entitled "On Coalition Government". He pointed out that it was essential to serve the people wholeheartedly and never be separated from the masses for a moment, to proceed in the interests of the people, not in the interests of individuals or small group, and to achieve the consistency in accountability to the people and to the leading organs of the party. He believed that all of these were starting

points. (Mao Zedong, 1945). Since then, the CPC and the Chinese government have made serving the people their mission. In 1985, Deng Xiaoping, in the National Education Work Conference, clearly put forward what leadership is and stated that leadership is service. (Deng Xiaoping, 1985).

**Reality needs.** At present, the construction of service government in China needs the efforts of public sector employees and the promotion of public sector leaders. The development has ushered in a new historical stage in the 21st century, which is embodied in the customer-oriented service economy and the citizen-oriented service government. On February 21, 2004, Wen Jiabao formally issued the call of building a service government in the closing ceremony of the seminar on "Establishing and implementing the scientific outlook on development" for leading cadres at the provincial and ministerial levels in the Central Party School. On March 8, 2004, when listening to the opinions of the Shanxi delegation during the second session of the tenth National People's Congress, Wen Jiabao put forward, "Management is service. We will make the government a service government, serving market players, society and ultimately the people". In October 2006, the sixth plenary session of the 16th central committee of the CPC adopted the decision on a number of major issues concerning the construction of a harmonious socialist society, which further clarified the requirement of building a service government and strengthening the functions of social management and public service. Since then, the service government has been written into the ruling party's guiding document. On October 15, 2007, in his report to the 17th national congress of the CPC, Hu Jintao stressed that accelerating the reform of the administrative system and building a service-oriented government are an important part of the development of a socialist democracy. On November 8, 2012, He said at the 18th national congress of the CPC that the government should build a service government with scientific functions, optimized structure, honesty and efficiency, and people's satisfaction. At the 19th national congress of the CPC on October 18, 2017, Xi Jinping note the need to enhance the credibility and execution of the government and build a service government that satisfies the people. It could be seen that the construction of service government has become the goal and will of China's ruling party and the Chinese government, and it is bound to require the efforts of public sector employees and effective leadership of public sector leaders.



**Theory explorations.** Chinese academia is in urgent need of building a bridge between service government research and servant leadership research. In the west, with emergence of service economy and the development of democratic society, research on service government and servant leadership comes into being. In 2000, American scholars of public administration Janet V. Denhardt and Robert B. Denhardt put forward the theory of New Public Service and emphasized that the primary responsibility of a government was to serve. Robert Greenleaf, another American management scientist, proposed the concept of servant leadership and established the basic theory of servant leadership with three works as early as 1970. However, for a long time, the research on service-oriented government is mainly in the field of public administration, while the research on service-oriented leadership is mainly in the field of organizational behavior and management, and few studies have combined the two. This study then attempts to break down disciplinary barriers and combine the research on service government and servant leadership to explore the relationship between them and their internal mechanism.

## 1.2 Research Problem

The construction of service government ultimately needs public sector employees to succeed by providing high level of employee service performance. In the public sector, as a leadership style, can servant leadership effectively improve the service performance of employees? Based on the practical needs of public administration and the sample data of the public sector in China, the study attempts to explore the relationship between servant leadership and employee service performance in the public sector and its internal mechanism. In accordance with this, the following two issues need to be clarified:

**Research problem 1:** Can servant leadership predict employee service performance in public sectors? According to social learning theory, most behaviors of people are learned through observational learning, and the factors influencing observational learning are from demonstration events, observers, models and observation background (Bandura, 1986). In the public sector, servant leadership has a high status and excellent ability, and their service demonstration events are significantly different from the traditional bureaucratic behavior. Will these remarkable

characteristics attract employees' attention, imitation and learning, so as to show more service behaviors in practice work and ultimately improve their service performance?

**Research problem 2:** If servant leadership can predict employee service performance, what is its internal mechanism? According to the Ability, Motivation, Opportunity (AMO) theory, the three main factors influencing employee performance are as follows: A: ability; M: motivation; and O: opportunity. So, are ability, motivation and opportunity the mediators by which servant leaders influence employee service performance?

### 1.3 Research Purpose

Based on the above problems, the purpose of this study is to explore the relationship and internal mechanism between servant leadership and employee service performance in the public sector, specifically:

**Research purpose 1:** To examine the influence of servant leadership on employees' service performance in public sectors. Based on the Social Learning Theory, the demonstration behavior of servant leadership will be imitated and learned by employees so as to improve their service performance. This study will test this hypothesis by selecting appropriate samples and methods in the specific context of China's public sector.

**Research purpose 2:** To explore the mechanism of servant leadership influencing employee service performance. If the first goal is achieved, that is, the relationship between servant leadership and employee service performance is verified, then it is necessary to explore how servant leadership affects employee service performance. According to the AMO theory, this research hypothesizes that ability, motivation and opportunity are the intermediary transmission mechanisms of servant leadership influencing employee service performance. Then, in the public sector context of China, the research will examine whether AMO play the mediating roles between servant leadership and employees' service performance, as well as the strength and weakness of the mediating effect.

## 1.4 Research Objective

In accordance with the above research purposes, a series of research objectives need to be achieved as follows:

**According to research purpose 1, the following specific objectives need to be achieved:**

One is the measurement of servant leadership. Although Deng Xiaoping has earlier said that "leadership is service" and many typical deeds of servant leadership have emerged in practice, China has not developed the measurement scale of servant leadership. However, the applicability of the servant leadership scale developed under the background of western corporate culture is questionable in China's public sector. Therefore, this study should accurately define servant leadership, select appropriate scales, and complete the reliability and validity tests in the public sector context of China.

Second is the measurement of employee service performance. Performance includes in-task performance and out-task performance. Performance can be measured by behavior or objective data. Performance can be evaluated by employees themselves, by leaders, or by customers. This study needs to define employee service performance in a reasonable and operationalized way according to the specific reality of the public sector in China, and then select appropriate scales for measurement.

The third is to examine the relationship between servant leadership and employee service performance. According to social learning theories and relevant literature, this study assumes that the service behavior of servant leaders will become the model for employees to imitate and learn, thus promoting the employee service performance. Finally, the assumption will be tested through statistical analysis of the survey data.

**According to research purpose 2, the following specific objectives need to be achieved:**

The first is to test the relationships between AMO and employee service performance. According to the AMO theory, this study hypothesizes that ability, motivation and opportunity are the three most important factors affecting employee service performance. Subsequently, study selected the appropriate scale to measure

AMO according to the characteristics of public sectors and examined the relationship between AMO and employee service performance.

The second is to test the relationship between servant leadership and AMO. To explore the relationship between servant leadership and employee service performance, the study needs to understand the relationship between servant leadership and AMO. Therefore, this study needs to assume and test the relationship between servant leadership and AMO.

The third is to test the mediator roles of AMO on the relationship between servant leadership and employee service performance. If all the above assumptions are confirmed, namely, servant leadership affects employee service performance; AMO affect employee service performance; and servant leadership affects AMO. Then, the next step of this research is to test the mediator roles of AMO on the relationships between servant leadership and employee service performance, as well as whether they are complete mediating effects or partial mediating effects.

### 1.5 Research Scope

The research scope mainly includes location, sample and time:

**Location range.** Beibei district, Chongqing City, China. Chongqing is located in the southwest of inland China and the upper reaches of the Yangtze River. Chongqing has 38 districts and counties (26 districts, 8 counties and 4 autonomous counties), covering an area of 82,400 square kilometers. Chongqing has a registered population of 33.92 million, including 30.48 million permanent residents. The urbanization rate is 62.6%. With a GDP of 2,036.32 billion yuan in 2018, Chongqing ranks 17th among the 31 provincial-level administrative divisions in the Chinese mainland (excluding Hong Kong, Macao, and Taiwan) and 5th among cities, only next to Shanghai, Beijing, Shenzhen and Guangzhou. As the only municipality directly under the central government in the central and western regions, Chongqing is currently the largest oversized city with the largest administrative area, the largest population and the largest number of administrative units in China. It has both developed cities and underdeveloped rural areas, representing the stage and pattern of China's social development in a relatively complete way. Beibei district, located at the foot of Jinyun Mountain and the bank of Jialing River, is one of the nine central districts of Chongqing.

Chongqing covers an area of 755 square kilometers and has a permanent population of 796,100. It has jurisdiction over nine streets and eight towns. By the end of 2016, Beibei district had a total registered population of 634,300, including 407,400 urban residents and 226,900 rural residents. Beibei is a relatively remote area in the main urban area of Chongqing, which is composed of both urban and rural areas. It is a good representative of the social development stage of Chongqing and China. Meanwhile, the researcher works in Beibei district, which is convenient for the investigation.

**Sample range.** The samples include public service staff from the district-level organizations in Beibei district, Chongqing, as well as from the town governments/sub-district offices and villages/communities. Since this research is to study the employees' service performance in the public service sectors, the public sectors directly serving the public will be selected for sampling. In Beibei district, Chongqing, the public sectors that meet these requirements include the district-level organizations (e.g. the public security bureau), the town governments, the sub-district offices, the villagers' committees and the residents' committees. This study will mainly investigate the front-line public service personnel in these departments.

**Time range.** This study was divided into two surveys. The pre-survey was conducted in May 2018. Its main tasks were to select the scales, test the reliability and validity of them, and prepare for the subsequent formal research. The formal survey was conducted in June 2018, and its main task was to measure servant leadership, A (public service self-efficacy), M (public service motivation), O (organizational service climate) and employee service performance.

## 1.6 Research Significance

This research has theoretical and practical significance:

**Theory significance.** The theoretical significance of this study is to enrich the literature of service government and servant leadership. It is embodied in the following three points.

Firstly, this study introduced the western servant leadership theory, operationally defined the Chinese public sector servant leadership and found appropriate measurement methods. In China, there have always been political ideas and calls for servant leadership, and many typical representatives and advanced deeds of servant

leadership have emerged. However, due to the lack of operational definition and scientific measurement methods for servant leadership, the research on servant leadership in China is more like art than science, and in-depth research on servant leadership is difficult to achieve. Therefore, by introducing the theories of servant leadership in western organizational management field, this study operationally defined servant leadership in the context of China's public sector and found scientific measurement methods, which would lay a foundation for further research on servant leadership in China's public sector.

Secondly, this study linked the theories of service government and servant leadership. For a long time, service government theory and servant leadership theory have belonged to the disciplines of public administration and organizational management respectively. This study attempted to break down the disciplinary barriers and explored the relationship between servant leadership and employee service performance in public sectors, so as to provide theoretical support for improving the service performance of public sector employees and promoting the construction of service government.

Thirdly, this study revealed the black box mechanism of servant leadership influencing employee service performance. If the hypothesis of the previous stage was confirmed, that was, servant leadership affected the employee service performance, what then was the influence mechanism? By introducing the AMO theory, this study hypothesized that servant leadership influenced employee service performance through AMO. If this hypothesis was proved, it would help to uncover the black box mechanism that service-oriented leadership affected employee service performance.

**Practice significance.** The practical significance of this study is to help identify and cultivate servant leadership, smoothen the intermediary mechanism of servant leadership, improve employee service performance, enhance public satisfaction, and build a service government. The specific expressions are in the following two points.

Firstly, this study helps to identify and cultivate servant leadership. For a long time, the organizational departments of the CPC and the personnel departments of the government have been shouldering the heavy task of selecting outstanding servant leaders for the state and government departments. But what are the criteria for servant leadership? How can it be measured? If these problems are not addressed, they can only

be identified and selected on the bases of experience. Experience certainly has some rationality, but it is not as reliable as science. By operationalizing the definition of servant leadership in China's public sector and finding scientific measurement methods, this study will help the personnel department to identify, select, and cultivate servant leadership.

Secondly, it is conducive to improving the system and mechanism, giving play to the role of servant leadership and building a service government. This study explored the relationship and the intermediary mechanism between servant leadership and employee service performance. The research results will certainly help China's ruling party and government to establish and improve the corresponding system, ensure that servant leadership can play its role, and ultimately improve the service performance of public servants through the effective transmission of intermediary mechanism. In this way, it will certainly promote the construction of service government and improve citizens' satisfaction with the government.

### 1.7 Definition of Terms

At the end of this chapter, a preliminary definition of the core theories and variables involved in this study will be given, and detailed content will be provided in the literature review in Chapter 2.

**Social learning theory.** In 1977, Albert Bandura published the book fitted *Social Learning Theory*, which systematically summarized the theory. In this book, Bandura put forward his theory of triadic reciprocal determinism of human behavior, external environment and personal factors, emphasized the important status of observational learning, pointed out the important role of human cognitive ability in social learning, and drew a clear line with traditional behaviorism learning theory. Exploring the cognitive abilities of people in the process of social learning, especially self-regulation ability and self-efficacy, Albert Bandura developed the social learning theory into the social cognition theory in the mid-1980s and published his findings in *Social Foundations of Thought and Action: A Social Cognitive Theory* in 1986. Social cognition theory and social learning theory are in the same line, which is about the further development and improvement of social learning theory. On the basis of triadic reciprocal determinism, it emphasizes the initiative of a human subject in social

learning, the self-system of people with five basic abilities, and the core role of the self-system in the process of people's environmental adaptation and behavior change.

**AMO theory.** The AMO theory refers to the ability (A), motivation (M) and opportunity (O) theory. According to this theory, the three basic factors influencing employee or organization performance are ability (A), motivation (M), and opportunity (O), which can be expressed as  $\text{performance} = f \{ \text{employees' ability, motivation, and opportunity} \}$  (Pringle & Blumberg, 1982; Bailey, 1993; Appelbaum, Bailey, Berg, & Kalleberg, 2000).

**Servant Leadership.** Servant leadership starts from the individual's expectation to serve and the priority to serve. It focuses on helping employees to develop their full potential, such as task effectiveness, community management, self-motivation and future leadership (Rodriguez, 2014).

**Employee service performance.** Employee service performance can be defined as the behaviors of employees serving and helping customers (Liao & Chuang, 2004).

**Public service self-efficacy.** Albert Bandura (1977a) called self-efficacy as efficacy expectation and defined it as "The conviction that one can successfully execute the behavior required to produce the outcomes". Therefore, the self-efficacy of public service employees refers to their self-cognition and perception of their ability to provide service to the public.

**Public service motivation.** "A particular form of altruism or prosocial motivation that is animated by specific dispositions and values arising from public institutions and missions" (Perry, Hondeghem, & Wise, 2010).

**Service climate.** Service climate can be understood from two levels of individual psychology and organization. The service climate at the individual psychological level is the individual's perception and evaluation of the organization's emphasis on quality service. It is the employees' perception and evaluation of the organization's policies, procedures and behaviors in terms of expectation, support and reward of quality service. Service climate at the organization level is a relatively stable organizational situation or internal environment characteristic formed through the process of organizational activities. It exists independently of the individual's subjective perception (R. Zhang, Liu, & Wang, 2008).



## CHAPTER 2

### LITERATURE REVIEW

This study is based on two theories and involves five variables. Therefore, this chapter is divided into two parts. The first part discusses the theories, including social learning theory and AMO theory. The second part introduces the variables, including servant leadership, public service self-efficacy, public service motivation, organizational service climate, and employee service performance.

#### 2.1 Theory Literature Review

##### 2.1.1 Social Learning Theory

Social learning theory is also called social cognitive theory, and its founder and integrator is American psychologist Albert Bandura. Albert Bandura (1977b, 1986) According to Albert Bandura (1977b, 1986), the human individual, environment and behavior are mutually determined. Human behavior is mainly acquired through observational learning. In social learning, people's cognitive ability plays an important role. It can be seen that social learning theory mainly includes: triadic reciprocal determinism, people's cognitive ability and observational learning.

( 1 ) **Triadic Reciprocal Determinism.** Triadic Reciprocal Determinism believes that human behavior (B), personal factors (P) and external environment (E) are mutually independent and mutually influenced (Figure 2.1).  $P \leftrightarrow B$  represents the relationship of mutual influence and mutual determination between the personal factors and behaviors. On the one hand, personal factors, such as cognition, thought, emotion, preference and belief, will cause the corresponding behavior of individuals. On the other hand, these personal factors are not generated in a vacuum, but formed under the influence of the consequences of previous behaviors. For example, a person who believes he or she can sing well is more likely to sing at a party. The reason why this person believes that he can sing well is often based on his previous experience of gaining recognition and praise from others.  $P \leftrightarrow E$  represents the relationship of mutual

influence and mutual determination between the personal factors and external environment. On the one hand, personal factors, such as a person's physical, psychological and social factors, will affect and shape the corresponding external environment. On the other hand, the corresponding external environment also affects and determines personal factors such as people's cognition. For example, a leader who is humorous, pleasant and cares about his employees will be welcomed by his employees, thus creating a relaxed and harmonious working climate, which in turn will infect everyone in the environment, including employees and leaders themselves through emotional contagion.  $B \leftrightarrow E$  represents the relationship of mutual influence and mutual determination between the behavior and external environment. On the one hand, the external environment determines what kind of behavior people choose.

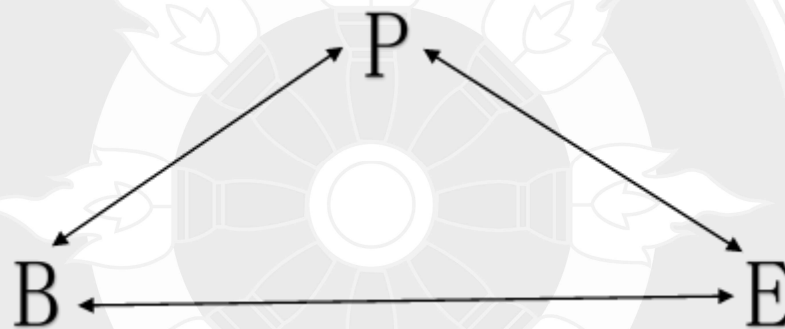


Figure 2.1 The Relations among Human Behavior (B), Personal Factors (P), and the External Environment (E).

Source: Wood & Bandura, 1989

On the other hand, people's behavior activates and shapes the external environment. For example, TV stations provide dozens of programs, which constitute the TV environment for the audience. However, only when the audience choose to watch a certain TV program, can the program be transformed into the reality TV environment of the audience and then have an impact on the audience. In turn, the audience's choice of TV programs will have an impact on audience rating, thus affecting the TV stations' adjustment of TV programs and thus changing the subsequent TV program environment (Bandura, 1986).

It should be pointed out that the influence forces in the above three groups of interactions are not completely symmetrical and equal. That is to say, for different

individuals and different environments, the relative influence exerted by the three groups of interacting factors may be different. When environmental conditions impose strong restrictions on behavior, environment is the decisive factor affecting behavior. When the environment is weak, personal factors will have a decisive impact on behavior (Bandura, 1986). In the public sector, servant leadership constitutes a strong environment compared with ordinary employees due to their special status, ability and power. Therefore, this study will mainly discuss the one-way influence of servant leadership on ordinary employees.

**(2) Personal cognitive ability.** The breakthrough of Bandura's triadic reciprocal determinism theory to traditional learning theory lies in his integration of human cognition and other personal factors into the interaction between behavior and environment. Personal cognition and other individual factors mainly refer to personal cognition factors in addition to the innate factors in the sense of biological heredity. These cognitive factors constitute personal basic abilities, including symbolizing, forethought, vicarious, self-regulatory, and self-reflective capability.

**Symbolizing Capability.** Bandura (1986) believed that although people's various experiences in the process of time evolution were indeed responses to the reality of life, such experiences were transient. However, symbolization can transform the transient and immediate experience into a stable cognitive mode of the reality of life, thus freeing people from the shackles and limitations of perceptual experience. People use symbolizing capability to transform temporary experience into an internal model to guide future actions, and at the same time give meaning, form and continuity to their own experience.

**Forethought Capability.** People are not simply reacting to immediate environmental stimuli, nor are they simply motivated by past experiences. People usually use symbolizing capability to abstract the causal relationship between things based on the past experiences, and then pan-contextualize the causal relationship. When similar situations arise, they use this causal link to predict, set goals, motivate themselves, and direct action.

**Vicarious Capability.** Bandura (1986) believed that some mistakes might have serious or even fatal consequences, so it was not appropriate to learn by trial and error. In fact, any learning phenomenon from direct experience can be replaced by observing

the others' behavior and its consequences. Observational learning enables people to quickly acquire the rules that generate and regulate behavioral patterns, rather than slowly forming them through lengthy trial and error learning.

**Self-regulatory Capability.** Self-regulatory capability is a kind of self-control and feedback system, which includes self-setting of behavior standard, self-observation of actual behavior, and evaluation of the relationship between actual behavior and internal standard, and self-reaction based on this evaluation. People's behavior response usually depends on whether the actual behavior meets the standard of behavior evaluation. If the actual behavior meets or exceeds this standard, people will be satisfied and even set higher standards. If the actual behavior fails to meet this criterion, three typical responses will occur. First, the individual loses confidence in the behavior goal and his ability and becomes depressed. Second, the individual improves his behavior on the basis of reflecting on his behavior so that he achieves the behavior standard set by himself. Third, the individual reduces the behavior standard to conform to the actual behavior (Wenbo & Shenchun, 2000). The way people respond depends largely on their sense of self-efficacy.

**Self-reflective Capability.** The self-reflective capability refers to the ability to rethink one's own experience and thinking process. By reflecting on their own experience and knowledge, people can summarize their own and the world's knowledge. By reflecting on their own thought processes, people can validate, evaluate and correct their own thinking. In the process of self-reflection, self-efficacy perception and evaluation is the most central issue.

In the public sector, employees with forethought and vicarious capabilities can improve their service behavior and performance by observing and learning the service behavior of servant leaders. Meanwhile, the self-regulatory and self-reflective capabilities of public sector employees, especially their perception of self-efficacy, will also directly affect their service behavior and performance.

**(3) Observational Learning.** Observational learning is learning by model. Bandura argued that most human behavior is learned by observing role models. In observational learning, the object of observation is called the model, the subject of observation is called the observer, and the process of the model influencing the observer through the observation activity of the observer is called modeling. Human

observational learning is not a simple imitation of the model, but an abstract and creative one. Abstract refers to the fact that the observer in the process of observing a specific behavior demonstrated by the model abstracts the principle or rules of the behavior and in the corresponding situation presents generatively the behavior in a changed form. Therefore, the behavior is different from the model behavior. observational learning being creative means it does not simply imitate but promotes individual creativity in several aspects. Firstly, the observer acquires the basic knowledge and skills of creative activities from the observation learning process. Secondly, the observer can make a comprehensive analysis from the rich observation activities. Finally, the observer can get corresponding inspiration and guidance from the observation activities. The process of observational learning consists of the following four processes.

**Attentional Processes.** Attention process refers to the process in which the observer focuses his mental resources on the demonstration events. It determines what individuals choose to learn from a lot of model events and details. There are many factors influencing the attention process, some from model events, some from observers, some from models, and some related to the observation background. The more prominent the characteristics of the model event are, the more prominent it is compared with the environmental background, and the higher the identification degree is, the more it can attract the attention of the observer. For example, the excellent ability and helping behavior of servant leadership easily attract the attention of employees. The subjective characteristics of the observer, such as perceptual set and perceptual ability, have significant influence on the attention process. They determine which model events and details the observer chooses to observe, and the degree of detail and the way of construction of observation. The characteristics of models, such as gender, age, appearance, occupation, social status and social identity, are also important factors affecting the attention process. For example, in the public sector, leaders, as the core figures of the organization, are more likely the concern of the members of the organization. Social structural factors, especially the individual's associational network, can also influence the attention selectivity of the observer because the associational network determines the models and model behaviors that the observer can access. In

the public sector, employees are closely related to the leaders, so they have opportunity to notice the model behavior of the leaders.

**Retention Processes.** The observation information obtained in the attention stage is temporary, so it needs to be stored in memory through symbolic representation. The retention process of observational learning mainly includes three stages. The first is to convert the model information into symbols. The model information observed in the attention process is perceptual, fragmentary and transient. Therefore, the observer needs to convert the information into a symbolic form that is easy to remember and stays in the cognitive memory for a long time and provides guidance for future behavior. The second is to represent cognitively the model information. After the model information is encoded and converted into symbols, it is usually stored in memory in two ways, namely imaginal representation or verbal-conceptual representation (Albert Bandura, 1986). However, the long-time memory after coding and representation is not always reliable, so it needs to be confirmed through rehearsal. There are two main types of rehearsal: a physical rehearsal and a cognitive rehearsal. The former refers to the actual performance of the observer. The latter is the actual operation of the demonstrative behavior imagined by the observer in cognition, supplemented by verbal description; or for the behavior of scientific experiments, the whole process of scientific behavior should be strictly calculated in the form of scientific symbols.

**Motor Reproduction Processes.** The processes are the reproduction process of observers' model behaviors, and it is the process of reproducing the abstract concepts encoded and represented in the second stage under the spatial and temporal conditions of reality, namely the conceptual-motor mechanisms. In this process, the observer puts the cognitive representation of the model behavior into action, compares the feedback from the actual action with the representational concept, and then adjusts the behavior according to the comparative information to gradually match the behavior with the concept. Thus, this is not a one-step process, but a process of repeated matching and gradual modification, until the behavior under the guidance of cognitive representation is completely consistent with the concept of cognitive representation. This matching process is influenced not only by the correctness of the cognitive representation, but also by the motor subskills and coordination of the observer.

**Motivational Processes.** An observer may acquire a model behavior through observation but may not perform it in practice. This involves the motivational process of observational learning. Only when there are positive behavioral triggers, the observer quickly translates the observational learning observed into action. In observational learning, there are direct inducement, substitute inducement and self-generating inducement as the main inducement conditions to decide whether the observer performs the model behavior. Direct causation means that the modeling action itself leads to some kind of rewarding outcome, then the observer exhibits this model behavior because of the intrinsic motivation to pursue this rewarding outcome. Vicarious causation refers to the rewarding results of the model's exemplary behavior. It will also become the inducement of the observer's behavior, especially when the observer has the same or similar characteristics with the model. The role of such vicarious causation is more obvious. Self-generating inducement means that the observer's emotional evaluation or value evaluation of the model behavior and its results will also trigger the observer's motivation to perform the model behavior. If the observer is interested in the model behavior and its results, or thinks they are of high value, it will induce the reproduction of the model behavior.

**(4) Brief summary.** To sum up, Bandura's social learning theory clearly and specifically explains how human behavior is generated. According to Bandura's social learning theory, in the public sector, due to the unique status, ability and charm of servant leaders, their service behaviors can easily become the model for employees to learn and imitate, so that employees can show more service behaviors in work and ultimately improve their service performance. Therefore, it is reasonable to assume that servant leadership in the public sector can effectively predict employee service performance.

### **2.1.2 The AMO Theory**

**(1) The development process of AMO theory.** The development of AMO theory has been a long process. Ability (A) has long been believed to be the main predictor of performance. Then, Vroom (1964) puts forward Expectancy Theory, believing that employee performance not only depends on the ability of employees to complete work tasks, but also on the motivation of employees to complete work tasks, i.e., performance = f (ability × motivation). Later, through a large number of literature analysis and field

observation, Pringle and Blumberg (1982) believed that the (ability  $\times$  motivation) provided by Vroom's expectancy theory was not enough to explain employee performance because it neglected a crucial factor, which is opportunity. Therefore, they believe that performance can be influenced by three aspects: capacity to perform, willingness to perform, and opportunity to perform. Moreover, these three factors interact with each other, so they proposed the following model:  $P=f(O \times C \times W)$ . In other words, the three factors influencing employee performance include capacity to perform, willingness to perform and opportunity to perform. They must exist simultaneously and any of them cannot be thought to zero because assuming that any factor is zero, the performance will be zero. Similarly, assuming that any factor is too small, the performance will be significantly low. However, this breakthrough contribution was not highly regarded by scholars at that time. For a long time afterwards, when studying human resources and organizational performance, people still selectively neglected the role of opportunity in employee performance (Boselie, Dietz, & Boon, 2005). Until 11 years later, Bailey (1993) emphasized the important role of opportunity in employee performance through an empirical study of employees in the garment industry, and pointed out that employees' ability (highly skilled), motivation (fully motivated) and job opportunity (employee participation and commitment) jointly promote the improvement of organizational performance. Seven years later, Appelbaum, Bailey, Berg, and Kalleberg (2000) reaffirmed the view that employee performance are the function of ability, motivation and opportunity through in-depth interviews with workers and managers of manufacturing industries and questionnaire survey on employee performance data. This contribution is often considered to be a sign of the formal emergence of AMO theory. Through interviews and questionnaire surveys on managers and employees of 45 enterprises, Bailey, Berg, and Sandy (2001) found that incentives, skills, and opportunity to participate were three important factors influencing employee performance and earnings. In this study, skills are equivalent to ability (A), incentives are equivalent to motivation (M), and opportunity to participate is opportunity (O). Therefore, it can be regarded as an echo of the AMO theory. Since then, the AMO theory has gradually become a classic theory in the field of performance research and strategic human resource management in the early 21st century (Boselie et al., 2005).



**(2) The main contents of the AMO theory.** The AMO theory has three components, namely ability (A), motivation (M), and opportunity (O). According to the theory, the three most important factors influencing employee performance are ability (A), motivation (M) and opportunity (O), which can be expressed as  $\text{Performance} = f\{\text{employees' ability, motivation and opportunity}\}$ . In other words, employee performance mainly depends on the following three factors. Ability (A), that is, employees need to have relevant knowledge and skills required to complete work tasks. Motivation (M), it is not enough for employees to only have the knowledge and ability to complete the task. They also need to have the motivation to perform the responsibility and complete the task, so as to bring their actual ability into play. Opportunity (O), it is not enough to have ability and motivation. From the perspective of strategic human resource management, it is also necessary to provide appropriate opportunities and support for employees to ensure that they can effectively complete their tasks in the organization and work environment.

With the development of the AMO theory, two different views and models have emerged. The first one is represented by a formula, that is  $P = f(A \times M \times O)$ . According to this view, the three factors that influence employee performance, namely ability (A), motivation (M) and opportunity (O), interact with each other and exert influences on employee performance as a whole through their final interaction. In other words, neither ability (A), motivation (M) nor opportunity (O) can independently ensure the performance of employees. In extreme cases, if any of the three factors is absent, that is, if one or two or three factors are zero, employee performance is impossible (Pringle & Blumberg, 1982; Delery, 1998; Lepak, Liao, Chung, & Harden, 2006). The second one is represented by a formula  $P = f(A + M + O)$ . AMO's interactive model has ample theoretical support, but has never been empirically validated (Siemens, Roth, & Balasubramanian, 2008). Therefore, some other scholars believe that any of the three factors can independently influence employee performance, and are not affected by other factors (Cummings, L. L., & Schwab, 1973; Boxall, P., & Purcell, 2003).

**(3) Brief summary.** To sum up, the current academic consensus on the AMO theory is that ability (A), motivation (M) and opportunity (O) are indeed the most important factors affecting employee and organizational performance. But whether these three factors work independently or interactively is debatable. Since there is no

empirical evidence for the interaction model, the independent additive model is adopted in this study, namely the three factors: ability (A), motivation (M) and opportunity (O), all of which have independent influences on performance (P). At the same time, according to the research purpose and the characteristics of the public sector, this study operated ability (A) as public service self-efficacy, motivation (M) as public service motivation, opportunity (O) as organization service climate, performance (P) as employee service performance, and tested the applicability of the AMO theory in China's public sector. Then, this study explored the relationship between servant leadership, public service self-efficacy, public service motivation, organizational service climate and employee service performance, and uncovered the "black box" that showed servant leadership affects employee service performance.

## 2.2 Variable Literature Review

### 2.2.1 Servant Leadership

**(1) The definition of servant leadership.** Service leadership is a concept put forward by Robert Greenleaf in 1970. His three works, *The Servant as Leader* (1970), *The Institution as Servant* (1972a), and *The Trustees as Servants* (1972b), laid the foundation for the study of servant leadership. He defined servant leadership as follows:

“The Servant-Leader is servant first.... It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead.... The best test, and the most difficult to administer is this: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, and more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit, or at least not further be harmed?” (Greenleaf, 1977, P. 22)

It can be seen that the core of servant leadership lies in service. The most fundamental characteristic that distinguishes servant leadership from other leaders is that employees come first. Servant leaders put the interests and development of employees before themselves and support the development and growth of employees. As a result, servant leadership can obtain the willing followers of employees and

ultimately bring about the development of the organization and the overall interests of society. Since then, other scholars' definitions of servant leadership are mostly reinterpreted on this basis (Graham, 1991; Bass, B. M., 2000; Luthans & Avolio, 2003; Stone, Russell, & Patterson, 2004; Reinke, 2004; Liden, Wayne, Zhao, & Henderson, 2008; Liden, Wayne, Liao, & Meuser, 2014; Chen, Zhu, & Zhou, 2015).

**(2) The structure and measurement of servant leadership.** Regarding the structure and measurement of service-oriented leadership, this study mainly introduces the views of Greenleaf (1977), Spears (1995), Laub (1999), Liden et al. (2008), Van Dierendonck and Nuijten (2011), and Liden et al. (2015), and the rest listed in a brief form (Table 2.1).

As the initiator of servant leadership theory, R. K. Greenleaf (1977) believed that servant leadership includes the following 12 abilities: initiative, listening, compromise, imagination, acceptance and empathy, foresight, intuition, awareness, conceptualization, persuasion, healing, and service and building community. On this basis, Spears (1995) extracted 10 basic characteristics of servant leadership: (1) listening, which emphasizes the discovery of the public's will through communication; (2) empathy, thinking from the other person's perspective to understand and accept others; (3) healing, helping others to heal and recover; (4) awareness, keeping clear thinking; (5) persuasion, seeking to influence others by means of argument rather than status; (6) conceptualization, that is macroscopic vision and systematic thinking with details beyond the eyes; (7) foresight, keen intuition and accurate foresight of future results; (8) service: stick to trust and serve others; (9) commitment to the growth of people, cultivating the personality, professionalism and spirituality of others; (10) building community, emphasizing the importance of local community in one's life. Neither Greenleaf nor Spears operationalized these structural dimensions into specific measurement scales, making it difficult to apply them in empirical studies. However, their research laid a good foundation for the scale development of later scholars.

The first servant leadership scale was developed by Laub (1999) in his doctoral dissertation. He used a Delphi survey to develop six characteristic dimensions of servant leadership. They are (1) Values people: trust, value, listen to others and give priority to others; (2) Develops people: providing learning and development opportunities through demonstration and encouragement; (3) Builds community: seek

common ground while reserving differences, strengthening interpersonal relations and work cooperation; (4) Display authenticity: open mind, open to learning, and maintaining integrity; (5) Provides leadership: looking forward to the future, taking the initiative and providing clear goals; (6) Shares leadership: shares power and shares status. As the first servant leadership scale, Laub's contribution was significant, but factor analysis revealed that the scale had only two basic dimensions which focus on organization and leadership respectively. Given the high correlation of average scores across the six dimensions, the scale was questioned.

Based on literature analysis, exploratory factor analysis, and confirmatory factor analysis, R. C. Liden et al. (2008) developed a servant leadership scale (SL-28) with 7 dimensions and 28 items. The seven dimensions are conceptual skills, empowering, putting subordinates first, helping subordinates grow and succeed, emotional healing, behaving ethically, and creating value for the community. In order to simplify the scale, R. C. Liden et al. (2015) developed a single-dimensional seven-item servant leadership scale (SL-7) on the basis of the scale (SL-28). The results of three independent studies based on six samples showed that the correlations of the two scales (SL-7 and SL-28) ranged from 0.78 to 0.97, and the internal consistency reliabilities in all samples exceeded 0.80. Thus, SL-7 scale can better represent SL-28 scale.

Dirk van Dierendonck (2010) extracted six key characteristics of service-oriented leadership based on extensive literature: empowering and developing people, authentic, showing humility, providing direction, accepting people for who they are, and working for the good of all. One year later, Dirk van Dierendonck and Inge Nuijten (2011) developed an 8-dimensional 30-item scale covering these six features. The eight dimensions are: (1) Empowerment, the goal is to promote the exercise and growth of subordinates (Conger, 2000); (2) Accountability, making subordinates accountable for their performance (Conger, 1989); (3) Standing back, giving priority to subordinates, supporting and trusting them; (4) Humility, putting own achievements and talents in perspective (Patterson, 2003); (5) Authenticity, expressing true self, including thoughts and emotions (Harter, 2002); (6) Courage, taking risks and trying new ways to solve problems (R. Greenleaf, 2002)); (7) Interpersonal acceptance, referring to the ability to understand and experience others' feelings (George, 2000); (8) Stewardship, referring

to the willing to take responsibility for the larger institution and serve rather than control and profit (Block, 1993).

Table 2.1 Dimensions and Items of Servant Leadership Scales

Sources	Number of dimensions	Contents of dimensions	Number of items
Laub (1999)	6	<ul style="list-style-type: none"> <li>• Values people</li> <li>• Displays authenticity</li> <li>• Builds community</li> <li>• Develops people</li> <li>• Provides leadership</li> <li>• Shares Leadership</li> </ul>	43
Ehrhart (2004)	7	<ul style="list-style-type: none"> <li>• Forming relationships with subordinates</li> <li>• Empowering subordinates</li> <li>• Putting subordinates first</li> <li>• Helping subordinates grow and succeed</li> <li>• Having conceptual skills</li> <li>• Behaving ethically</li> <li>• Creating value for those outside of the organization</li> </ul>	14
Dennis and Bocarnea (2005)	5	<ul style="list-style-type: none"> <li>• Empowerment</li> <li>• Love</li> <li>• Trust</li> <li>• Humility</li> <li>• Vision</li> </ul>	42
Barbuto and Wheeler (2006)	5	<ul style="list-style-type: none"> <li>• Altruistic calling</li> <li>• Wisdom</li> <li>• Persuasive mapping</li> <li>• Emotional healing</li> <li>• Organizational stewardship</li> </ul>	23
Liden, Wayne, Zhao, &	7	<ul style="list-style-type: none"> <li>• Conceptual skills</li> <li>• Behaving ethically</li> <li>• Empowering</li> </ul>	28

Henderson (2008)		<ul style="list-style-type: none"> <li>• Helping subordinates grow and succeed</li> <li>• Creating value for the community</li> <li>• Putting subordinates first</li> <li>• Emotional healing</li> </ul>	
Sendjaya and Sarros (2008)	6	<ul style="list-style-type: none"> <li>• Authentic self</li> <li>• Voluntary subordination</li> <li>• Responsible morality</li> <li>• Covenantal relationship</li> <li>• Transforming influence</li> <li>• Transcendental spirituality</li> </ul>	35
Van Dierendonck and Nuijten (2011)	8	<ul style="list-style-type: none"> <li>• Standing back</li> <li>• Courage</li> <li>• Forgiveness</li> <li>• Authenticity</li> <li>• Empowerment</li> <li>• Accountability</li> <li>• Stewardship</li> <li>• Humility</li> </ul>	30
Robert C. Liden et al. (2015)	1	<ul style="list-style-type: none"> <li>• Servant leadership</li> </ul>	7
Sen Sendjaya, Eva, Butar Butar, Robin, and Castles (2017)	1	<ul style="list-style-type: none"> <li>• Servant leadership</li> </ul>	6

Source: self-made by the researcher

**(3) Comparison with other leadership theories.** Servant leadership is different from other leadership behaviors. First, servant leadership is different from transformational leadership. Transformational leadership focuses on organizational goals. While servant leadership focus on employees, they create better conditions to enhance employees' happiness, ability and vision, and they believe that employees will work hard for the organization (Gregory Stone et al., 2004). Second, servant leadership

is different from authentic leadership. The core of authentic leadership lies in showing the true self (Donna Ladkin, 2010). Besides emphasizing truth and humility, servant leadership has other connotations. Therefore, servant leadership contains authentic leadership (Dirk van Dierendonck, 2011). The third, servant leadership is different from ethical leadership. Ethical leadership placed more emphasis on standard behavior, while servant leadership placed more emphasis on employee development (Dirk van Dierendonck, 2011). The fourth, servant leadership is different from empowering leadership. Service leadership includes the meaning and dimension of authorization and has other meanings and dimensions that authorization leadership does not have (Dirk van Dierendonck, 2011). The fifth, servant leadership is different from spiritual leadership. Spiritual leadership attaches more importance to organizational culture, while servant leadership attaches more importance to practical leadership behavior (Dirk van Dierendonck, 2011). The sixth, servant leadership is different from self-sacrificing leadership. Self-sacrificing leadership cares about the organization as much as transformational leaders, while servant leadership cares about the employees (Matteson & Irving, 2006).

**(4) Antecedents of servant leadership.** The antecedents of servant leadership mainly include individual characteristics and cultures. Individual characteristics mainly include motivation, self-determination, moral cognitive development, cognitive complexity and some other good personalities. R. K. Greenleaf (1977) argued that service and leadership motivation are the basis of servant leadership theory. Patterson (2003) claimed that servant leadership originated from *agapao*, an unconditional altruistic love. Ng, Koh, and Goh (2008) found that the motivational state of servant leadership focuses on the desire to serve as a leader. Self-determination refers to the feeling of choice people experience when they start or adjust their behaviors (Deci & Ryan, 2000), which is considered as the basic condition of a service-oriented leader (D Van Dierendonck, Nuijten, & Heeren, 2009). Moral cognitive development affirms that people develop their reasoning and values at different stages to promote justice and kindness in social interaction. If a person advances towards a higher stage of moral reasoning, he is more likely to become a servant leader (Kohlberg, 1969). Cognitive complexity refers to a person's ability to perceive social behavior in different styles. The greater this ability, the greater the chance of becoming a servant leader (Bieri,

1955). Agreeableness is one of the big five, meaning generosity and helpfulness. The leaders with agreeableness are more likely to be servant leaders (Washington, Sutton & Field, 2006; Hunter et al., 2013). Dirk van Dierendonck and Patterson (2015) propositioned that a leader's propensity for compassionate love will activate a virtuous attitude in terms of forgiveness, gratitude, humility, and altruism. The virtuous attitude will raise servant leadership behavior in terms of providing direction, authenticity, empowerment, and stewardship.

On the cultural level, the main factors influencing servant leadership are humane orientation, power distance, and power structure. Humane orientation is the degree to which an organization or society encourages and rewards fairness, altruism, kindness, generosity, care for and kindness to others. In this culture, leaders tend to exhibit higher levels of empowerment, interpersonal acceptance, and service (Kabasakal & Bodur, 2004). Power distance is a term used to refer to "the extent to which a community accepts and endorses authority, power differences and status privileges orientation" (Carl, Gupta, & Javidan, 2004, p.513). With the reduction of power distance and the equality between leaders and employees, servant leaders who emphasize the growth of employees are more likely to develop (Davis, Schoorman, & Donaldson, 1997). Liu (2017) believed that servant leadership was embedded in the power structure that includes factors such as race, gender, sexuality, age, and class. This power structure shaped who was a "servant leader" and who was a "servant".

**(5) Consequences of Servant Leadership.** Servant leadership can influence individuals, teams, and organizations. The influences of servant leadership on individual behaviors mainly include job attitudes, individual behaviors, and individual performance. The influences of servant leadership on employees' work attitude mainly include job satisfaction, organizational commitment, and turnover intention. Research shows that servant leadership can improve employee job satisfaction (Barbuto & Wheeler, 2006; Donia, Raja, Panaccio, & Wang, 2016), organizational commitment (Cerit, 2009; Carter & Baghurst, 2014), and negatively affect turnover intention (Jaramillo, Grisaffe, Chonko, & Roberts, 2009; Hunter et al., 2013). The influences of servant leadership on employee behaviors are mainly reflected in organizational citizenship behaviors (OCB), customer-oriented prosocial behaviors, service behaviors, creative behaviors, and voice behaviors. Servant leadership promotes employees'



organizational citizenship behavior (Walumbwa, Hartnell, & Oke, 2010) and prosocial behavior (Chen et al., 2015), especially customer-oriented OCB (Wu, Tse, Fu, Kwan, & Liu, 2013). Ling, Lin, and Wu (2016) verified the trickle-down model of leadership and found that servant leaders at the top improve service behaviors of frontline employees by influencing middle-level leaders. Servant leadership was also found to significantly affect employees' innovative behavior (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008) and advice behavior (Lapointe & Vandenberghe, 2015). The influence of servant leadership on employee performance is mainly reflected in job engagement and work performance. Servant leadership had an important influence on employee engagement (Carter & Baghurst, 2014), and it also presented interactive influences on employee engagement together with humility, action and hierarchical power (Sousa & van Dierendonck, 2017). Servant leadership can affect employees' work performance through the mediating role of employees' public service motivation (G. Schwarz, Newman, Cooper, & Eva, 2016). It can also have an important impact on employee performance by meeting the three basic psychological needs of self-determination (Chiniara & Bentein, 2016a). Additionally, it can ultimately affect work performance by creating a trust climate and improving employees' working attitude (Ling, Liu, & Wu, 2017).

The influences of servant leadership on team and organization are mainly reflected in organizational climate, organizational culture, team cohesion, and team task performance. Servant leadership affects organizational climate and organizational performance (Hunter et al., 2013). Servant leadership creates a service culture and then propagates the service behavior with this culture, which finally positively affects organizational performance (R. Liden et al., 2014). Servant leaders significantly predict team cohesion, team task performance and service organizational citizenship behaviors (OCB) (Chiniara & Bentein, 2016).

### **2.2.2 Public Service Self-efficacy**

Ability can be measured by objective measurement and subjective measurement. In practice, subjective measurement is often adopted, that is, employees report their perception of self-ability, i.e. self-efficacy. For public employees, the most important ability is their ability to provide public service to the public. Therefore, in this study,

ability is operationalized to reflect employees' self-perception of their ability to provide public service, namely public service self-efficacy.

**(1) The definition of self-efficacy.** Bandura had different definitions of self-efficacy at different times. In the 1970s, Albert Bandura (1977a) called self-efficacy "efficacy expectation" and defined it as "The conviction that one can successfully execute the behavior required to produce the outcomes". In the 1980s, Bandura defined self-efficacy as "the perception of self-control over the events that affect you" (Bandura, 1986). In the 1990s, when Bandura made a comprehensive summary of self-efficacy, he referred to it as self-efficacy perception and defined it as "the belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p.3). It can be seen that self-efficacy is an individual's perception, belief or expectation of his ability to complete a task or activity. Effective behavior requires not only skills, but also the efficacy belief to use those skills well. "Perceived self-efficacy is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses" (Bandura, 1997, p.31).

**(2) The Structure and measurement of self-efficacy.** The structure of self-efficacy can be analyzed from three dimensions: scope, level, and belief intensity. The first is scope. Self-efficacy can be divided into three scopes according to the concreteness of tasks, activities, and situations. The first is the self-efficacy of specific tasks, which refers to the belief of completing a specific task. The second is domain self-efficacy, which refers to the self-belief of any task in a certain domain. The third is general self-efficacy, which refers to the self-belief of completing any problem in multiple fields (Bandura, 1997). It is unrealistic to expect personality measures explicate in generalities the contribution of personal factors to psychosocial functioning in diverse task domains and contexts and under different circumstances. So, undifferentiated and contextless measures of personal efficacy have little predictive effect (Bandura, 1997).

Therefore, in this study, the choice of public service self-efficacy is more appropriate than the general self-efficacy. The second is level. The level of self-efficacy refers to the self-belief of individuals in completing tasks and behaviors of different difficulty and complexity. For example, some people are faced with simpler tasks, some

with moderately difficult tasks, and some with highly difficult tasks. Although they all have high self-efficacy perception, such three kinds of self-efficacy are obviously different (Bandura, 1997). The last is belief intensity. Self-efficacy also varies in the intensity level of beliefs. Weak belief strength is easily negated by a failure of practical experience, while people with high belief strength of their own self-efficacy will not give up even after experiencing setbacks and failures (Bandura, 1997).

The measurement of self-efficacy must be based on the above three-dimensional structure of self-efficacy. The first is to determine the scope of self-efficacy to be measured, that is, in what context and what scope (task-specific, domain-wide, or general) to measure self-efficacy. Next, it is necessary to clarify the level of self-efficacy, that is, to determine the difficulty level of the task. Finally, the intensity level of self-efficacy is determined, that is, the degree of the individual's grasp of completing the task. Bandura believed that self-efficacy could be measured in two ways: dual-judgment format and single-judgment format (Bandura, 1997). In the dual-judgement format, individuals first determine whether they can perform a task of a certain degree of difficulty. For tasks judged to be achievable, they further judge the likelihood of completing the task. In the single-judgement format, individuals need to directly give the intensity of efficacy perception. The self-efficacy scale of a certain field usually includes several specific task items. The self-efficacy scores of each task item were obtained by summing the efficiency intensity scores of each task item and divided by the number of task items in the field (Bandura, 1997). The single-judgement format was used in this study.

**(3) Sources of Self-Efficacy.** Self-efficacy mainly comes from four sources: enactive mastery experience, vicarious experience, verbal persuasion and physiological and affective states (Bandura, 1997).

**Enactive mastery experience** refers to the direct experience an individual obtains about his own ability through his own hands-on action. It is the most important source of self-efficacy because it provides the most reliable evidence of whether a person can succeed or not (Bandura, 1997). Usually, successful experiences increase personal self-efficacy, while unsuccessful experiences decrease personal self-efficacy. Although behavioral success is more persuasive, it does not necessarily improve efficacy. Similarly, failure does not necessarily reduce efficacy beliefs. Because the change of

efficacy perception comes from the cognitive diagnosis of the ability, information is transmitted by the behavior performance rather than the behavior performance itself (Bandura, 1997).

**Vicarious experiences** refer to an individual's expectation of his own behavior and its results by observing the behaviors and results of others (models) and obtaining an assessment of his ability to complete corresponding behaviors. The acquisition of vicarious experience is influenced by many factors. The first is modes of modeling influence. The observer can gain vicarious experience through real modeling in real life or through symbolic modeling provided by media such as television. The modeling effect is better if the model is accompanied by cognitive demonstration and skill implementation such as verbal explanation. The second is performance similarity. The successful experience of modeling behavior can improve the efficacy of observers on similar behaviors (Bandura, 1997). The third is attribute similarity. The similarity between the observer's and the model's individual characteristics generally enhances the impact of the modeling (Rosenthal & Bandura, 1978). The fourth is multiplicity and diversity of modeling. The richer and more diverse the modeling, the more representative and persuasive the experience. The fifth is coping versus mastery modeling. It gives the observer the opportunity to learn and imitate, providing the observer with not only skill learning but also spiritual learning. The sixth is model competence. In general, competent role models attract more attention and have a greater educational impact than incompetent ones (Bandura, 1986).

**Physiological and affective states** also affect perceptions of self-efficacy, especially in areas involving sports, health, and stress management (Bandura, 1997). Generally speaking, physical states such as tension, fatigue, pain, discomfort, and so on. and negative emotions may induce inefficacy in individuals. In addition, self-efficacy perception also depends on the individual's cognition and evaluation of these physical and emotional states. The factors that affect individuals' cognition and evaluation of their own physical and emotional conditions mainly include the following aspects. The first is the individual's cognition and attribution of evocative events (Bandura, 1997). If individuals attribute physical and emotional discomfort to external environment, it will not have an impact on self-efficacy. However, if individuals attribute it to personal incompetence, it will bring low self-efficacy. The second is level

of activation. As a general rule, medium arousal encourages high attention and efficient use of skills, while high arousal undermines that (Bandura, 1997). The third is construal biases. Those who tended to interpret arousal as a result of personal inadequacy were more likely to reduce their self-efficacy perception than those who viewed arousal as a normal nervous response that occurs in even the best (Bandura, 1997). The fourth is impact of mood on self-efficacy judgment. A good mood tends to remind people of past achievements and enhance their self-efficacy.

When forming the efficiency judgment, people usually receive the efficiency information from different channels. People should not only process information separately, but also balance and integrate it (Bandura, 1997). People have different rules for the integration of efficiency information from different channels. Some people combine factors related to effectiveness in an additive way, and the more factors, the stronger the perception of efficacy. Some people use the rule of relative weights, which gives different factors different weights. Some people use the multiplicative combination rule, that is, the combined influence of factors is greater than the simple sum of the independent influence of factors. Others apply the rules to be combined configurably, that is, different weights are given to specific factors according to the sources of efficiency information (Bandura, 1997).

**(4) Mediating Processes of Self-Efficacy.** Efficacy beliefs affect human activities mainly through four processes: cognitive processes, motivational processes, affective processes and selective processes. The four processes usually operate in concert, rather than in isolation (Bandura, 1997).

Efficacy beliefs affect **cognitive processes**. Firstly, it affects the personal goal setting. People with higher self-efficacy set higher goals and are more committed to their goals (Bandura & Wood, 1989). Secondly, it affects the individual cognitive constructions. People who are highly effective often see situations as opportunities. They imagine successful scenarios and provide positive guidance for behavior (Bandura, 1997). Third, it affects inferential thinking. The strength of self-efficacy affects individuals' analysis and reasoning of various information in stressful and uncertain situations. Finally, efficacy beliefs influence the generation and use of problem-solving strategies. Among people of equal ability, those with higher self-

efficacy were quicker to drop the wrong cognitive strategies and find better ways to solve problems (Collins, 1985).

Self-efficacy beliefs influence **motivational processes**. People develop beliefs about what they can do, predict the possible positive or negative consequences of different pursuits, set goals for themselves, and plan their behavioral processes to achieve a worthwhile future (Bandura, 1997). According to Attribution Theory, individuals who attribute their success to their own ability, and their failure to their lack of effort, tend to take on difficult tasks and persevere when faced with difficulties. Those who attribute success to situational factors, and those who attribute failure to incompetence, show less effort and tend to give up when faced with difficulties (Bandura, 1997). According to the Expectancy-Value Theory, the higher the value of the expected result of a particular behavior, and the higher the expectation of realizing the result, the stronger the motivation of individuals to engage in the activity. The efficacy belief directly determines the expectation of the individual to achieve the result of the behavior. Based on the Goal Theory, clear and challenging goals can improve motivation. To some extent, what kind of challenging goals people choose, how much effort they put in, and how long they persist in the face of difficulties are based on self-efficacy (Bandura, 1997).

Self-efficacy beliefs affect **affective processes**. First, efficacy beliefs affect people's emotional states of cognitive life events whether mild or disturbing? Second, efficacy beliefs evoke emotions by supporting effective action to change the environment. Third, efficacy belief improves the bad mood. For example, individuals with high self-efficacy will hardly show emotional arousal when facing potential threats, while individuals with low self-efficacy will show obvious emotional arousal (Bandura, 1997).

Self-efficacy beliefs affect people's **selection processes**. By choosing their environment, people partly determine who they want to be. People's choices are influenced by their self-efficacy beliefs. People often choose activities and environments that they can cope with effectively and avoid activities and environments that they cannot cope with (Bandura, 1997). The higher the self-efficacy, the more opportunities people have to choose activities and environments, including more challenging ones. According to the Triadic Reciprocal Determinism Theory, the

environment in which an individual is competent is conducive to cultivating and stimulating the individual's self-efficacy. Therefore, self-efficacy not only determines what kind of activities and environment an individual chooses, but also further determines which potential an individual chooses to develop.

**(5) Empirical research on public service self-efficacy.** In the field of public service, the concept and scale of self-efficacy are mainly community service self-efficacy. It was proposed by Reeb et al. in 1998 and was defined as individual confidence in their ability to contribute to the community through service. Moreover, they developed the Community Service Self-efficacy Scale (CSSSES) and verified it (R.N. Reeb, Katsuyama, Sammon, & Yoder, 1998). Later, Reeb et al. conducted a comprehensive review of community service self-efficacy and compared three measurement scales. They also discussed the community service self-efficacy as dependent, moderator and mediator variables (Roger N. Reeb, Folger, Langsner, Ryan, & Crouse, 2010). Credo et al. found that the self-efficacy generated by creating service opportunities not only increases engagement, but also reduces the impact of negative millennial traits, including entitlement and narcissism (Credo, Lanier, Matherne, & Cox, 2016). Community service self-efficacy also played a moderating role between organizational constraints, role ambiguity and volunteer engagement (Harp, Scherer, & Allen, 2017).

In addition, due to the commonality of services, self-efficacy in the field of business services can also be referred to. Service self-efficacy in the business service field can also be regarded as employees' perception and evaluation of their own service ability. Wang and Xu (2017) developed a four-item employee service self-efficacy scale to measure employees' service ability. The results showed that employee service self-efficacy predicted employee service performance and mediated the effect of service-oriented HPWS on employee service performance.

### **2.2.3 Public Service Motivation**

In accordance with the research problems and purposes, the study operationalized M (Motivation) from the AMO theory as the public service motivation.

**(1) The Concept of Public Service Motivation (PSM).** It is widely known that the idea of PSM was first put forward in the academia by Rainey (1982). The most

famous scholar on PSM, Perry and Wise (1990) put the concept of PSM forward for the first time and understood PSM as a personal inclinations and preferences in public sectors. They made further efforts to review three theories including rational, norm-based, and affective motive that identify a type of motivation related to public service. Rational motives refer to actions issued from maximization of personal interests. Norm-based motives involve actions based on compliance with the rules. Affective motives refer to behavioral motivation based on emotional responses to various social situations. Perry and Hondeghem (2008) further developed the concept of PSM as “individual motives that are largely, but not exclusively, altruistic and are grounded in public institutions”, and a “specific expression of prosocial, other-oriented motives, goals and values. PSM understood either as institutionally unique motives associated with public service, or beliefs and values that transcend self and organizational interests on behalf of a larger political entity, could be conceived as a subset, for instance, of the overarching idea of altruism”. After 2 years, they updated the concept of PSM as “a particular form of altruism or prosocial motivation that is animated by specific dispositions and values arising from public institutions and missions” (Perry et al., 2010).

In the past 20 years, many scholars defined the concept of public service motivation, most of them drawing on Perry’s original contributions (Perry & Wise, 1990; Perry, 1996). Using Gerring's (1999) criteria for concept assessment, Bozeman and Su (2015) reviewed systematically the concepts of PSM. By summarizing previous studies, two key points about the concept of PSM were extracted and purified.

The first one is incidence of PSM. In fact, Perry and Wise (1990) points out that “public service is much more than one’s locus of employment” (p. 368). But for a long time, public service motivation has been related to public sectors and civil servants. Gradually, the concept of PSM has been applied to all organizations and employments that provide public service regardless of workplace, such as police officers, fire-fighters, social workers, nurses, military personnel, teachers, even volunteers, government employees, and students (e.g., Mostafa & Gould-Williams 2015; Esteve, Urbig, Witteloostuijn, & Boyne 2016; and so on). Adrian Ritz et al.(2016) reviewed systematically important literature about PSM from 1990 to 2015, and 48 articles (9.4%) from among all of them compared PSM across employment sectors



(public/private/nonprofit). They found that 16 articles (4.0%) among all of them studied the influence of work place (e.g., comparing public or nonprofit service to other work) on PSM, but only 5 articles reported there were statistically significant positive associations, and the rest, 11 articles, all reported that there were mixed or neutral correlations with PSM.

The second one is that PSM must distinguish itself from other related concepts in terms of service motivation, altruism or prosocial motives. Service motivation includes three kinds of motivation: promoting the organization goals, making a practical contributions, and identifying with the organization missions (Pearce, 1983). Duffy and Raque-Bogdan (2010) defined service motivation as “the desire to serve others through one’s future career” (p.253). Perry, Hondeghem, and Wise (2010) emphasized that PSM is “a peculiar form of altruism or prosocial motivation that is animated by specific dispositions and values arising from public institutions and missions” (p.682). It was not said that PSM exists only in government agencies. In fact, it revealed that the core difference between PSM and service motivation is the purpose of service for the public. There is a distinction between PSM and altruism. Does altruism refer to a core group, a united group, a broad community, or a society as a whole? (West, Griffin, & Gardner, 2007)? Behaviors that are good for one person may be bad for another, but PSM must be altruistic to the public.

To sum up, PSM does not exist only in public sectors. However, because the purpose and function of public sectors is to provide public service, this paper then chose PSM as the operating variable of Motivation (M).

**(2) Dimensions and Measurement scales of PSM.** Perry (1996) developed the first scale of PSM. He proposed six dimensions based on the concept construct: attraction to public policy making, civic duty, commitment to the public interest, self-sacrifice, social justice, and compassion. By confirmatory factor analysis, the original six dimensions were reduced to four, namely compassion, commitment to the public interest, attraction to public policy making, and self-sacrifice. The coefficient alpha for the twenty-four-item PSM scale was 0.90, and the coefficient alphas of the four subscales ranged from 0.69 to 0.74. Subsequently, the other scholars used the four-dimension model in whole or in part in their studies about PSM. Based on the systematic literature review of Adrian Ritz et al. (2016), the most frequently used

dimension was “commitment to the public interest”, followed by “compassion”, “self-sacrifice”, and “attraction to public policy making”. In their sample, there were 8, 19, 42, and 92 studies adopting one to four dimensions of the original scale. Another 64 studies developed some new dimensions such as “democratic governance” (Vandenabeele, 2008; Giauque, Ritz, Varone, Anderfuhren-Biget, & Waldner, 2011).

Whether the concept and structure of PSM proposed by Perry in the context of American culture was suitable for use in different cultures or countries was the subject of various inquiries? In the sample of Adrian Ritz et al. (2016), 123 studies (27.5 percent) were conducted in the U.S., and the remaining 324 studies were conducted in Europe, Asia, and other regions of the world. For example, Kim (2009) examined whether the structure of PSM proposed by Perry can be applicable in Korea. Using two independent samples, confirmatory factor analysis found that the four-factor model of PSM can be generalized in Korean context, but whether APM factor is the effective dimension of PSM is still in doubt. After one year, Kim and Vandenabeele (2010) further studied the appropriateness of PSM concept and scale for international applications. According to their research, PSM is based on self-sacrifice and consists of instrumental, value-based, and identification. The dimensions of PSM include commitment to public values, attraction to public participation, compassion, and self-sacrifice. Kim et al. (2013) combined collaborated with PSM scholars from 12 countries to develop and test a revised PSM scale. As a result, they developed a four-dimensional 16-item measure scale that provided a better basis for the measurement of PSM. Even now, the article still suggests that the exact meaning and measurement of PSM may vary from culture to culture and language to language.

Therefore, foreign PSM scales must be used in the Chinese context with utmost case. It is better to use mature scales developed and tested in the Chinese context or develop a new scale based on the Chinese culture.

**(3) Antecedents of Public Service Motivation.** Antecedents of PSM is the question: “Where does PSM come from?” The development of a PSM construct and measurement scale lays a foundation for the empirical research. Perry (1997) is the first scholar who studied the antecedents of PSM. He investigated the relationships between PSM and five potential related variables: religious socialization, parental socialization, political ideology, professional identification, and individual demographic

characteristics. The results, with a few exceptions, basically confirm these assumptions. Although the modest  $R^2$ s for the five regressions only ranged from .18 to .07, namely the variables studied in the research provided a little comprehensive explanation for the variance in PSM. Nonetheless, the regressions confirmed several factors that significantly influence PSM. Furthermore, Perry predicted the antecedents for further research are educational and bureaucratic socialization on PSM. Perry, Brudney, Coursey, and Littlepage (2008) further studied the relationship between PSM and potential antecedents of volunteer experience, religious activity, and parental socialization. They revealed that religious activity positively affects volunteering, but also emphasized the role of life-changing events.

In addition to Perry, other scholars have several researches on the antecedents of PSM. Using the data from public managers in health and human service institutions, DeHart-D, Marlowe, J, and Pandey (2006) revealed that women scored higher on Perry's compassion subscale and on attraction to policy making. But in terms of public service commitment, gender difference was not statistically significant. Camilleri (2007) examined five categories of antecedents in terms of personal attributes, job characteristics, role states, employee perception of the organization, and employee-leader relations. This study shows that the PSM of public employees is mainly influenced by the organizational environment surrounding them. The context variables of the organizational setting are the most effective predictors of the PSM. Based on a survey on health and human service managers in state government, Moynihan and Pandey (2007) reported that PSM has a strong and positive relation to level of education and membership in professional institutions. The results also revealed the remarkable effects of organizational institutes and indicated that red tape and length of organizational membership negatively influenced PSM; however, hierarchical authority and reform efforts have a positive effect on PSM. Using a sample of 3,506 state civil servants, W. Vandenabeele (2011) revealed that the antecedents (e.g., the organizations for which one works, gender, family, political affiliation, age cohorts, and education) had influences on PSM. Syamsir (2014) studied socio-demographic antecedents affecting the PSM level among the civil servants in Indonesia, especially age, marital status, gender, income, education, and political ideology. The result indicated a significant correlation between some of socio-demographic antecedents and

the level of PSM. By a sample consists of 400 employees working for NGOs in South Korea, Park and Kim (2016) found that training and development were the key factors to lead employees' value congruence and motivation. They also revealed that person-organizational fit related directly to non-profit service motivation (NPSM). Ward (2017) used several antecedents of PSM to forecast participation in AmeriCorps that is a voluntary national service program in the United States. Findings indicated that the antecedents in terms of seeing family members, mentors helping others, and participation in student government, could predict whether one person will join an AmeriCorps program.

Concerning antecedents of PSM, Adrian Ritz et al. (2016) made a systematic statistic based on important articles from 1990 to 2015. Aggregate findings suggest that women have tendencies to show higher levels of PSM than men, and the variables of age, education, job tenure/public sector experience, job grade/management level, and place of work tend to raise levels of PSM. Unfortunately, the results were not always consistent across all studies. The only variable that has a significant effect is employee-leader relations. 12 studies among a total of 15 studies reported that employee-leader relations had a positive effect on PSM, and the other 3 studies revealed that employee-leader relations had no effect or no significant effect on PSM.

**(4) Outcomes of Public Service Motivation.** Using descriptive and multivariate statistics, Crewson (1997), an earlier scholar of PSM, concluded that PSM in the federal sector positively influenced organizational commitment.

Based on a sample of first-year law students and a policy capturing research design, Christensen and Wright (2011) reported that PSM played a more significant role in person-job fit than person-organization fit. Individuals with stronger PSM tend to choose the jobs that emphasize to serve others—whether in private sector, in public sector, or in nonprofit sector. In a survey of certified public management students, Hsieh, Yang, and Fu (2011) reported that PSM is negatively related to surface acting and positively related to deep acting. Among the dimensions of PSM, attraction to policy making is positively related to surface acting; compassion is negatively related to surface acting and positively related to deep acting; and commitment to public interest is not related to surface acting or deep acting.

Based on a survey of civil servants in Korea, Kim (2012) found that PSM directly affects job satisfaction and organizational commitment, and person-organization fit plays a partial mediator role between PSM and job satisfaction, organizational commitment. Based on the data of the National Administrative Studies Project, Coursey, Yang, and Pandey (2012) found that PSM directly and positively affects citizen participation evaluation. The effect is moderated by the perceived importance of the organization citizen participation efforts. Using the same data resource, Wright, Pandey, and Donald (2012) found that PSM affects mission valence, and plays an important mediator role between transformational leadership and mission valence.

Using a field experiment with a sample of nurses at a public hospital in Italy, Belle (2013) reported that baseline PSM plays as a positive moderator between direct contact with beneficiaries and self-persuasion interventions on job performance. PSM plays as a mediator between contact with beneficiaries and self-persuasion interventions on job performance. Similar conclusions were made by Bellé (2014). Based on a survey of employees in a city undergoing a reorganization and reduction in workforce, Wright and Christensen (2013) found that only one dimension of PSM namely self-sacrifice was positively associated with commitment to organizational change.

Using the data from German local government, and based on a needs-supply perspective on supervisors and followers, Kroll and Vogel (2014) concluded that PSM-leadership fit advances the performance of this extra-role behavior. Based on an objective outcome measure namely the students' academic performance in their final examinations, Andersen, Heinesen, and HolmPedersen (2014) explored the relationship between PSM and the performance of Danish teachers. The results revealed that PSM is positively related to examination marks namely performance.

Gould-Williams, Mostafa, and Bottomley (2015) outlined and tested a mediation model about person-organization (P-O) fit by a sample of 671 professionals in the Egyptian higher education and health sectors. The results revealed that PSM positively influenced P-O fit. PSM plays a mediator role between PSM, stress, and quit intentions, but it only explains a low proportion between PSM and OCBs. Using the same data, Mostafa and Gould-Williams (2015) reported that PSM plays a partial mediation effect between high-performance human resource practices (HPHRPs) and employees' affective commitment and OCBs.

Based on a survey from 477 public employees, Wright, Hassan, and Park (2016) reported that leaders with higher PSM are more probable to be perceived as ethical leaders by their employees. Leaders expressing higher ethical leadership are more probable to have employees with higher PSM. Moreover, employees with higher PSM tend to uncover more unethical behavior in their sectors. Using the experimental game about public goods, Esteve et al. (2016) revealed a positive relationship between PSM and prosocial behavior. The behavior of other group members moderates the relationship: people with higher PSM express more prosocial behavior when the other members of the group express prosocial behavior; however, they do not act if other group members are not prosocial.

Table 2.2 Studies on the Outcomes of Public Service Motivation <sup>a</sup>

Outcome	Freq.	% <sup>b</sup>	- <sup>c</sup>	/ <sup>c</sup>	+ <sup>c</sup>
Job satisfaction	39	16.3	0	15	24
Occupation or employment sector choice (private, nonprofit = 0, public = 1)	35	14.6	0	20	15
Individual performance	26	10.9	0	11	15
Organizational commitment	19	7.9	0	6	13
Turnover intentions	11	4.6	4	7	0
Person-organization fit	9	3.8	0	0	9
Organizational citizenship behavior	8	3.3	0	0	8
Organizational performance	8	3.3	0	2	6
Work motivation	6	2.5	0	2	4
Work effort	5	2.1	0	1	4

a. Adapted from Adrian Ritz et al. (2016, p: 420).

b. Percentages are the share of the total outcomes tested.

c. Number of times each predominantly statistically significantly positive, mixed, or neutral (coefficient near zero or not statistically significant) and negative associations with public service motivation were found.

Based on a systematic literature review of PSM from 2001 to 2015, Adrian Ritz et al. (2016) reported on the empirically tested outcomes of PSM. Table 2.2 shows the top 10 studies on the outcomes of PSM. The most frequently studied outcome of PSM is

job satisfaction, followed by occupation or employment sector choice, individual performance, organizational commitment, and turnover intentions. Aggregate results go a step further to reveal that PSM has a positive effect on job satisfaction, occupation or employment choice in a public sector, individual and organizational performance, organizational commitment, person-organization fit, OCB, and work motivation or effort. There is a negative relationship between PSM and turnover intentions. It is particularly important to note that some mixed or neutral results were found in these studies. This means that these studies need to take a closer look at scenarios and boundaries.

#### **2.2.4 Organizational Service Climate**

The “O” (opportunity) in AMO theory means that organizations provide opportunities and help for employees to work hard to improve their performance. These opportunities and help come from various aspects including organizational policies, organizational resources, and leadership and employee relations, which can be called organizational climate. Therefore, in this study, the “O” is operationalized into the organization service climate of the public sector.

**(1) The concept of service climate.** Lewin, Lippitt, and White (1939) first proposed the concept of "climate". They believed that the individuals' overall cognition and individual experience of social environment constituted "social climate". With the development of research, Schneider (1975) believed that organization climate should focus on a certain aspect, indicating which kind of atmosphere, such as service climate or safety climate. With the rise of service economy, Schneider (1980) initiated the research field of "service climate", pointing out that in service organizations, service climate is a key factor affecting the perceived service quality of customers. Based on the literature reviews of service climate, C.Q.Zhang, (2014) found that service climate includes two research perspectives: the level of concept and the subject of perception.

**The perspective of conceptual level.** Service climate can be understood from the individual psychological and organizational levels. The service climate at the individual psychological level is the individual's perception and evaluation of how much the organization attaches importance to quality service, and the employees' perception and

evaluation of the policies, procedures and behaviors of the organization's expectation, support and reward for quality service. The service climate at the organizational level is a relatively stable organizational situation or internal environment characteristic formed through the process of organizational activities, which exists independently of individual subjective perception (R. Zhang et al., 2008).

**The perspective of perception subject.** Service climate can be divided into the service climate perceived by employees and the service climate perceived by customers. The first one is service climate perceived by employees. In order for employees to deliver high-quality services, organizations must create and maintain a service climate for employees (Schneider, 1990). That is, employees deliver high-quality services to customers only when the organization expects and rewards such behavior and establishes practices conducive to service delivery (Schneider, Wheeler, & Cox, 1992). Moreover, the organization's behavior of supporting employees to provide excellent service is meaningful when perceived by employees. Therefore, service climate refers to employees' common perception of which services are most important in the organization (Johnson, 1996). Specifically, when an organization regards quality service as an important belief in internal management and focuses organizational resources on improving service quality, service climate is the common cognition of employees on policies, measures and procedures supporting service work of the organization, and a kind of perception shared by employees collectively (Schneider, White, & Paul, 1998; Borucki & Burke, 1999a; Liao & Chuang, 2004a). The second one is service climate perceived by customers. Service climate perceived by customers refers to their views and evaluations of the service orientation, management measures and procedures of enterprises and the service quality of employees during their contact with enterprises and employees. If customers are satisfied with the products they buy or the services they experience and think that enterprises and employees provide them with high-quality services, they will make a higher evaluation of the service climate of enterprises. On the contrary, if customers are dissatisfied with the products they buy or the services they experience, and think that enterprises and employees have not provided them with high-quality services, they will make a lower evaluation of the service atmosphere of enterprises (Schneider & White, 2004).



**(2) The Dimensions and measurements of service climate.** Through the literature review of service climate, this study found that there are great differences in the dimensional structure of service atmosphere, ranging from four dimensions to eleven dimensions. Among them, Benjamin Schneider and his colleagues are the most cited representative scholars. They have studied the structural dimension of service climate many times, and many later scholars often refer to their research results and scales.

Schneider, Parkington, and Buxton (1980) studied service climate from seven aspects: effort rewarded, managerial functions, personnel support, retain customers, marketing support, central processing support, and equipment/supply support. Five years later, Schneider and Bowen (1985) merged the original 7 dimensions into 4 dimensions through a principal components analysis with orthogonal rotation of the earlier data, forming a questionnaire with 28 items of 4 dimensions. Among them, the branch management dimension includes five items. The system support dimension includes eight items. The customer attention/retention dimension includes six items. And the logistics support dimension includes nine items. Seven years later, Schneider et al. (1992) conducted 97 group interviews with 350 employees of financial service companies. The results of interview content analysis showed that service climate could be measured by 33 questions in 6 dimensions, including environment dimension with two items, coordination dimension with five items, interpersonal relationships dimension with three items, service dimension with five items, human resources dimension with thirteen items, and other resources dimension with 5 items. Six years later, Schneider, White, and Paul (1998a) adopted four subscales with a total of 22 questions to measure service climate. Firstly, the Global Service Climate Scale has 7 questions, which mainly provides a brief overall measurement of the Service climate of an organization. The second one is the Customer Orientation Scale, which consists of 8 items, mainly measuring the degree to which an organization meets customer needs and service quality expectations in various ways. The third one is the Managerial Practices Scale, which has four items, reflecting the behaviors of supporting and rewarding excellent services taken by the direct supervisors of employees. The fourth one is the Customer Feedback Scale, which has three items, evaluating customers'

requirements and feedback on service quality. All or parts of these four scales have been widely cited by many later scholars who have studied service climate.

Besides the scale prepared by Schneider and his colleagues, the organizational service orientation scale (SERV\*OR) prepared by Lytle, Hom, and Mokwa (1998) is also representative. They first put forward a basic dimension of scale based on theories and literatures, and then verified it by multiple samples, multiple informants, multiple states, multiple organizations, and multiple industries strict methods, and finally found that the organizational service orientation scale (SERV\*OR) was a structure with four aspects, ten dimensions and 35 items. Specifically, they are: 1) Customer Treatment, including four questions; 2) Employee Empowerment, containing two items; 3) Service Technology, including three questions; 4) Service Failure Prevention, including three questions; 5) Service Failure Recovery, including four items; 6) Service Standards Communication, including five questions; 7) Service Vision, including three questions; 8) Servant Leadership, including six questions; 9) Service Rewards, including two questions; 10) Service Training, including three questions. In addition, other scholars have developed some scales of service climate. Most of them were affected by the above scales, so the study would not elaborate in detail. Please refer to the following table for the basic information of dimensions and questions.

Table 2.3 Dimensions and Items of Service Climate Scales

Sources	Number of dimensions	Contents of dimensions	Number of items
Schneider, Parkington, & Buxton (1980)	7	• Managerial functions	-
		• Retain customers	
		• Effort rewarded	
		• Personnel support	
		• Central processing support	
		• Marketing support	
		• Equipment/supply support	
Schneider & Bowen (1985)	4	• Branch management (5)	28
		• Systems support (8)	
		• Customer Attention/Retention (6)	

		<ul style="list-style-type: none"> <li>Logistics Support (9)</li> </ul>	
		<ul style="list-style-type: none"> <li>Environment (2)</li> <li>Coordination (5)</li> </ul>	
Schneider et al. (1992)	6	<ul style="list-style-type: none"> <li>Interpersonal relationships (3)</li> <li>Service (5)</li> <li>Human resources (13)</li> <li>Other resources (5)</li> </ul>	33
Schneider, White, & Paul (1998a)	4	<ul style="list-style-type: none"> <li>Global Service Climate Scale (7)</li> <li>Customer Orientation Scale (8)</li> <li>Managerial Practices Scale (4)</li> <li>Customer Feedback Scale (3)</li> </ul>	22
		<ul style="list-style-type: none"> <li>Customer Treatment (4)</li> <li>Employee Empowerment (2)</li> <li>Service Technology (3)</li> <li>Service Failure Prevention (3)</li> <li>Service Failure Recovery (4)</li> <li>Service Standards Communication (5)</li> <li>Service Vision (3)</li> <li>Servant Leadership (6)</li> <li>Service Rewards (2)</li> <li>Service Training (3)</li> </ul>	
Lytle, Hom, & Mokwa (1998)	10		35
Burke, Borucki, and Hurley (1992); Geehr and Burke (1994); Borucki and Burke (1999b)	Higher-order factor: 2 Lower-order factor: Concern for employees: 6 Concern for customers: 4	<ul style="list-style-type: none"> <li>Concern for employees: Goal emphasis (7), Means emphasis/ general training (3), Means emphasis/ specific training (2), Management support (7), Non-monetary reward orientation (7), Monetary reward orientation (3);</li> <li>Concern for customers: Organizational service orientation (8), Merchandise-related obstacles (8), Employee preparation related</li> </ul>	Total: 52 Concern for employees: 29; Concern for customers: 23.

		obstacles (3), Human resource-related obstacles (4)	
Schneider and Bowen (1995); Yagil and Gal (2002)	3	<ul style="list-style-type: none"> <li>The expression of passion for service in employees' and managers' behavior (4)</li> <li>Inhibit passion for service or attenuate its effects (4)</li> <li>Organizational procedures that enhance passion for service (4)</li> </ul>	12
Mikic Little & Dean (2006)	4	<ul style="list-style-type: none"> <li>Customer orientation (6)</li> <li>Customer feedback (5)</li> <li>Managerial practices (5)</li> <li>Human resource management (12)</li> </ul>	28
Walumbwa, Peterson, Avolio, & Hartnell (2010); Link, Schneider, & Perry (2010)	1	<ul style="list-style-type: none"> <li>developed by Schneider, White, and Paul (1998)</li> </ul>	5
Jiang, Chuang, & Chiao (2015); Jiang, Hu, Hong, Liao, & Liu (2016); Jerger & Wirtz (2017)	1	<ul style="list-style-type: none"> <li>Schneider et al.'s (1998) seven-item scale for global service climate</li> </ul>	7

**Source:** self-made by the researcher

**(3) Antecedents of Service Climate.** Through literature review, it is found that the antecedents of service climate mainly included leaderships and human resource management systems and practices.

**Leaderships.** The personalities and behaviors of leaders are important predictors of service climate. Among them, the core self-evaluations and service orientation of leaders, servant leadership and transformational leadership can significantly predict the service climate.

**Core self-evaluation and service orientation of leaders.** The core self-evaluations of leaders positively influenced the global service climate through the full mediating effect of service quality orientation, even after controlling the dimensions of the Big Five Personality (Salvaggio, Schneider, Nishii, Mayer, & Lyon, 2007). Service orientation means that leaders attach importance to service and service quality. Employee perceptions of the importance of outstanding customer service to top management also positively affected the service climate of an organization (Borucki & Burke, 1999). Another similar study showed that leaders who emphasized the importance of service quality would take a series of measures to form a good service climate (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005).

**Servant leadership and transformational leadership (TFL).** Based on the sample data of 815 employees and 123 direct leaders of 7 multinational companies in Kenya, the results showed that servant leadership directly affected service climate, and service climate played partial mediator between servant leadership and organizational citizenship behavior (Walumbwa, Hartnell, et al., 2010). A meta-analysis showed that servant leadership had a greater impact on service climate than other leaderships (Hong, Liao, Hu, and Jiang, 2013). Based on the data analysis of 569 employees and 142 administrators of shoe retail stores, the results showed that servant leadership positively affected service climate. However, there was a negative interaction between this effect and the effect of high-performance work system on service climate. In other words, when the high-performance work system was low, servant leadership had a greater positive impact on service climate (Jiang et al., 2015). In addition to servant leadership, transformational leadership also affects the service climate. A cross-level study showed that store-level TFL positively affected store-level service climate, and the service climate further strengthened the relationship between individual-level TFL and employee service performance (Liao & Chuang, 2007).

**HRM systems and practices.** Human resource management practice is another important factor affecting service climate. It can directly affect an organization's

service climate, or indirectly affect service climate by selecting and training employees with appropriate personality and ability.

**Direct impact.** Based on the social background theory, Ferris et al. (1998) found that human resource management system has a positive effect on organizational climate, and organizational climate plays median role between human resource management system and organization effectiveness. Based on samples of 351 small enterprises in the same industry, Rogg, Schmit, Shull, and Schmitt (2001) found that human resource practices affect organizational climate, and organizational climate mediates the influence of human resource practice on customer satisfaction. The results support the social context model. Based on data from 133 stores in Taiwan, Chuang and Liao (2010) reproduced similar results. They found that high performance-oriented HRM work practices significantly influenced service climate and then employee service performance. Compared with ordinary high performance HRM practices, service-oriented HRM practices have a greater impact on service climate (Hong et al., 2013). Jiang et al. (2015) further found that service-oriented HPWSs had a positive impact on service climate. However, there was a negative interaction between high performance work system and servant leadership on service climate. In other words

when servant leadership was low, high performance work system had a stronger positive impact on service climate.

**Indirect effects.** Human resource management system and practices cultivated employees with appropriate personalities and abilities through the selection and training of employees, and then to form a service climate (R. Ployhart, Weekley, & Ramsey, 2009; R. E. Ployhart, Van Iddekinge, & MacKenzie, 2011).

**(4) Outcome variables of service climate.** The outcome variables of service climate mainly include employee attitudes and behaviors, customer experiences and organizational performance. Service climate often influences customer experiences and organizational performances by influencing employees' service attitudes, behaviors and performances.

**Employee attitude, behavior and performance.** Organizations with a strong service climate will provide their employees with the resources needed for various service works, support their employees to provide excellent service to customers, and reward their excellent service behaviors. According to the social exchange theory,

employees in organizations with a strong service climate will repay the organization by improving their service willingness, showing active service behavior and striving to improve their service performance.

Based on a survey of 3,464 employees and 31,362 customers in 160 business locations of a securities company, Schmit and Allscheid (1995) found that service climate can positively affect the emotional reaction of employees, and further affect the service intention of employees, service quality perceived by customers and customer satisfaction. Borucki and Burke (1999b) found that service climate could effectively predict the service performance of sales staff through two rounds of surveys on financial data, clerks and customers of a large American retail company. Based on a multi-level study, Liao and Chuang (2004a) found that service climate significantly affected the service performance of employees. Gil Saura, Berenguer Contrí, Cervera Taulet, and Moliner Velázquez (2005) investigated 72 employees of a financial service company in Spain and found that service climate positively affected employees' job satisfaction, and service climate played median role between customer orientation and employees' job satisfaction.

Schneider and colleagues (2005) found that service climate had a direct and positive influence on the organizational citizenship behavior of employees towards customers and an indirect positive impact on customer satisfaction through a survey of employees and customers in 56 supermarket chains in the eastern United States. Paulin, Ferguson, and Bergeron (2006) found that service climate affected the overall job satisfaction of employees and the job satisfaction associated with customers. González and Garazo (2006) investigated the staff and managers of 149 hotels in Spain and found that organizational service climate was significantly positively correlated with employee job satisfaction and employee organizational citizenship behavior. Through a survey of 167 employees of a telecommunications company in Australia, Mikic Little and Dean (2006) found that overall service climate and human resource management measures had a significant positive effect on employees' sense of belonging and service ability, and the sense of belonging of employees mediated the influence of the overall service atmosphere on employees' service ability.

The research results of Walumbwa, Hartnell, and others. (2010) revealed that procedural justice climate and service climate partially played the mediator roles

between servant leadership and organizational citizenship behavior. A cross-level interaction research also showed that procedural justice climate and positive service climate enhanced the relationship between commitment to supervisors and organizational citizenship behavior. Through a survey of 216 hotel employees in the hotel industry of Guangdong, He, Li, and Lai (2011) found that different dimensions of service climate have different influences on employee commitment and customer satisfaction. Among them, customer orientation had a direct positive impact on customer satisfaction, and managerial support and work facilitation had an indirect positive impact on customer satisfaction by promoting employee commitment.

Through a meta-analysis of 58 independent samples, Hong et al. (2013) found that service climate significantly and positively affected employees' job satisfaction and organizational commitment, and partly mediated the influence of human resource practices and leaders on employees' attitude and service performance. Through two scenario-based experimental studies, Jerger and Wirtz (2017) confirmed that when faced with customer complaints, employees expressed more anger in a poor service climate and were more reluctant to compensate low-income customers than high-status customers. On the contrary, in a better service climate, the response of employees was less dependent on the status of customers, less angry and more likely to compensate customers.

**Customer experience.** As early as 1980, Schneider and colleagues (1980) found a significant positive correlation between employees' perceived service climate and customers' perceived service quality through a survey of 263 employees and 1657 customers of a large bank in the United States. Five years later, they confirmed this relationship again (Schneider & Bowen, 1985). Through the investigation of 3,464 employees and 31,362 customers of a large securities company in the United States, Schmit and Allscheid (1995) found that service climate indirectly affected the perceived service quality and satisfaction of customers through the influence employees' emotional response and service intention. Through a survey of 538 employees and 7,944 customers in 57 branches of a large American bank, Johnson (1996) found that the overall service climate perceived by employees was positively correlated with the overall satisfaction of customers. Since then, the positive influence of service climate



perceived by employees on customer satisfaction had been verified for many times (Schneider et al., 1998a).

Rogg and colleagues (2001) investigated 351 small enterprises in the same industry and found that organizational service climate played an almost complete median role between human resource practices and customer satisfaction. Based on a survey of 160 branches of a retail bank, Dietz, Pugh, and Wiley (2004) found that the perception of branch employees on the service climate of the branches was more positively correlated with customer satisfaction than that of the whole bank, and this positive correlation was also positively moderated by the contact frequencies between employees and customers. Based on the survey of 61 boundary-spanning self-managing service teams, Jong, Ruyter, and Lemmink (2004) found that the group-level service climate of self-managed teams at time T1 positively influenced the customers' perceived service quality and customers' sharing at time T2, and negatively influenced sales productivity at time T2.

Through the structural equation model analysis on the data of 342 front-line employees and 1,140 customers, Salanova, Agut, and Peiró (2005a) found that service climate could predict employee performance and customer loyalty. Using 129 samples of supermarket department, Mayer, Ehrhart, and Schneider (2009) found that service climate positively influenced customer satisfaction, and this relationship was moderated by customer contact frequency, service intangibility and service employee interdependence. K. H. Ehrhart and others (2010) found that service climate positively affected customers' perceived service quality, and this relationship was positively moderated by internal service. Based on a field study of service employees and their managers in a hotel, Raub and Liao (2012a) found that the establishment-level initiative climate and individual-level general self-efficacy predicted the employee proactive customer service performance after controlling the general service climate, and they interact in a synergistic manner.

**Organizational performance.** Borucki and Burke (1999b) found that service climate can effectively predict the service performance of sales staff, which in turn can predict the financial performance of stores. Sample data from 56 supermarkets showed that the service focused behavior of leaders ultimately and positively affected customer satisfaction and store sales through the median effect of service climate and customer-

focused organizational citizenship behavior (Schneider et al., 2005). Through a meta-analysis of 58 independent samples, Hong and colleagues (2013) found that service climate had an indirect positive influence on the financial income of the organization. Jiang and others (2015) found that service climate had a positive effect on objective financial outcomes through service performance. In 2016, Jiang and others found that service climate and ethical climate affected business performance respectively by enhancing service behavior and reducing immoral behavior. At the same time, there was a negative interactive effect between service behaviors and unethical behaviors on business performance, which is further enhanced by high market turbulence and competitive intensity.

### **2.2.5 Employee Service Performance**

This study will review the literature on the definitions, measurements, antecedents and consequences of employee service performance.

**(1) Definition of employee service performance.** This section will first review the mainstream employee service performance concepts, and then introduce several concepts related to employee service performance.

**Definition of employee service performance.** Employee performance, usually refers to the behavior that is relevant to the organization's goals and under the control of the employee (Campbell, McCloy, Oppler, & Sager, 1993; Liao & Chuang, 2004). Therefore, the meanings of employee service performance can be understood from the following two aspects.

Firstly, employee service performance refers to behaviors related to organizational goals. In the service industry, the organizational goal is to improve service quality and win customer satisfaction and loyalty. Therefore, customers become an important factor in the definition of employee performance. Service has three features -- intangibility, simultaneous production and consumption, and the customer "coproduction" (Bowen, Siehl, & Schneider, 1989). Consequently, the quality of the interaction between staff and customers is the key factor to customer satisfaction, and employee behavior in shaping the customer's perceived service quality plays a crucial role. Therefore, employee service performance can be defined as the behavior of employee servicing and helping customer (Liao & Chuang, 2004).

Secondly, employee service performance should be the behavior under employees' control. Employee service performance is different from service effectiveness, which refers to the results of an employee's performance such as customer loyalty. Although the service behavior of employees usually leads to the satisfaction and loyalty of employees, there are many factors affecting the satisfaction and loyalty of employees, some of which such as the service behavior of employees are under the control of employees, and others such as the organization and environment are beyond the employees' control. Therefore, it is more accurate to measure employees' service performance by behavior (Campbell, J.P., McCloy, R.A., Oppler, S.H., & Sager, 1993).

**Concepts related to employee service performance.** In some researches, there are some concepts that are not identical with employee service performance but are closely related. The first is proactive customer service performance (PCSP). The proactive customer service employees depend on their own initiative to work rather than the passive motivation of leaders, colleagues, and customers. They are driven by two basic cognitions: one is "can do", which reflects the individual's perception of competency related behavioral abilities; and the other is "reason to", which reflects the individual's desire to adopt relevant behaviors (Raub & Liao, 2012; Yijing et al., 2016; and M. Chen, Lyu, Li, Zhou, & Li, 2017). Another is Employee Service Recovery Performance. This is a special case of service performance, which refers to the crisis management behavior of employees in the face of service failure, so as to minimize the impact of service failure on customers and restore customer information on employees and organizations (Liao, 2007). In addition, some scholars directly use employee performance in the service industry to represent employee service performance. They operationalize employee performance into task performance and organizational citizenship behavior (Prentice, Chen, & King, 2013).

**(2) Dimensions and measurement of employee service performance.** Literature review shows that there is no consensus on the structural dimension and measurement scale of employee service performance, which is mainly from one dimension to four dimensions.

**One-dimension scale.** The unidimensional scale developed and used by scholars contains items ranging from three to seven.

**Three items scale.** Sawyerr, Srinivas, and Wang (2009) used a scale with three items evaluated by supervisors, including accuracy of information provided to customers, ability to solve problems and speed of response to customer request. The items were measured on a seven-point scale. Cronbach's alpha for supervisor service performance was 0.85.

**Four items scale.** Cho, Bonn, Han, and Lee (2016) used a one-dimensional four-item scale called perceived service performance developed by Winsted (1997) with Cronbach's alpha of 0.899.

**Five items scale.** Hur, Moon, and Rhee (2016) adopted the single-dimensional five-item scale excerpted from Low, Cravens, Grant, and Moncrief (2001) such as "I am building effective relationships with customers" and "I make effective presentations to customers and prospects", and Cronbach's alpha was 0.890. Ling et al., (2016) used the one-dimensional five-item soft scale of service attitude quality developed by Driver and Johnston (2001). This scale was mainly used for evaluation of care, helpfulness, communication, commitment, and flexibility of staff services by supervisors of front-line service personnel. For example, "This staff is always ready to help customers," and the coefficient alpha was 0.92. Wang and Xu (2017) modified the seven-item scale of Liao and Chuang (2004) and selected five items to form a one-dimensional scale. The scale items such as "This employee asks good questions and listens attentively to find out what a customer wants", crowns Bach coefficient alpha was 0.92. The items included "This employee asks good questions and listens attentively to find out what a customer wants", etc. And the Cronbach's alpha coefficient of the scale was 0.92.

**Six items scale.** Grandey (2003) and X.-Y. Liu, Kwan, & Chiu (2014) believed that the most important indicator of employee service performance was whether employees had positive emotions during the service process. Therefore, they chose affective delivery to represent employee service performance. The scale consists of 6 items, mainly measuring the sincerity, enthusiasm, warmth, friendliness, and courtesy in the process of staff servicing customers. A 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) was used for measurement. The examples of the items are "This person showed enthusiasm when dealing with customers in the past two weeks"; "This person treats customers with courtesy, respect and politeness in the past two weeks." The internal reliability coefficient is 0.88.

**Seven items scale.** The scale adopted by Liao and Chuang (2004) is derived from Borucki and Burke (1999). They extracted seven questions from 13 questions in the original scale to form a single-dimensional 11-point Likert scale. The scale was measured by employee self-report, with a Cronbach's alpha coefficient of 0.88. Li and Huang (2017) also adopted the above scale, but they adopted the mode of dual measurement of service staff self-report and supervisor rating. Some scholars have also measured respectively the Employee Proactive Customer Service Performance (PCSP) at the individual and organizational levels (Raub & Liao, 2012; Yijing et al., 2016; and M. Chen, Lyu, Li, Zhou, & Li, 2017). Individual PCSP is a 7-point Likert scale containing 7 items ( $\alpha=0.95$ ) modified from Rank, Carsten, Unger, and Spector (2007). Aggregated PCSP takes the mean of individual PCSP in the same institutions.

**Two-dimension scale.** Salanova, Agut, and Peiró (2005) developed a scale with two dimensions of empathy and excellent job performance. The three items of the empathy dimension were drawn from the SERVQUAL Empathy Scale (Parasuraman, A., Zeithaml, V., Berry, 1988). The three items of excellent job performance were drawn from Service Provider Performance Scale (Price, Arnould, & Tierney, 2006). All items were graded using a 7-point Likert scale (1=completely agree to 7=completely disagree). The Cronbach's alpha coefficients of empathy and excellent job performance were respectively 0.89 and 0.88, and the Cronbach's alphas of the whole scale was 0.88. Netemeyer, Maxham, and Pullig (2005) divided employee service performance into two dimensions: service employee in-role performance (IRP) and service employee customer-directed extra-role performance (CDERP).

The scale of employees' IRP based on the Singh Verbeke and Rhoads's (1996) includes three items. The items were rated on a seven-point scale, ranging from "among the worst in the company" to "among the best in the company." The Cronbach's alpha was 0.94. The scale of CDERP based on the Bettencourt and Brown's (1997) includes four items. The items were rated on a seven-point scale, ranging from "never" to "as often as possible." The Cronbach's alpha was 0.95. All items were assessed by the employees' supervisor. Zhang, Liu, Wang and Shen (2011) used a two-dimensional scale included in-role service performance and extra-role performance. The supervisor assessed the employee's performance in service behavior using a seven-point Likert-type scale.

The dimension of in-role service performance based on Bettencourt and Brown (1997) and Liao and Chuang (2004) was composed of 6 items. The Cronbach's alpha was 0.87. The dimension of extra-role performance was also based on Bettencourt and Brown (1997). The coefficient alpha was 0.84. Chan and Lam (2011) used a two-dimensional scale which included Organizational Citizenship Behaviors toward Customers (OCB-C) and Customer Complaint Handling Performance (CCHP). The two subscales were scored by the employee's immediate supervisor. The subscale of CCHP included 3 items. The composite reliability (CR) was 0.98, average variance extracted (AVE) was 0.94, and highest shared variance with other constructs (HSV) was .13. The subscale of OCB-C included 5 factors (Altruism, Courtesy, Conscientiousness, Sportsmanship, and Civic Virtue) composed of 15 items. The CR was 0.91, AVE was 0.67, and HSV was 0.08.

**Three-dimension scale.** Prosocial service behavior includes three dimensions. First, extra-role customer service refers to the service behavior provided by employees for customers beyond their responsibilities. Second, role - prescribed customer service, refers to the clear or implied anticipated service behavior provided to customers by staff with their responsibilities. Third, cooperation refers to the help provided by employees to their team members, which helps improve the service quality of colleagues and teams to customers (Bettencourt & Brown, 1997). Schepers, Nijssen, and van der Heijden (2016) used an objective performance measure. The scale includes three dimensions: Efficiency performance, Quality performance, and First-time right ratio.

**Four-dimension scale.** As a special type of Employee Service Performance, Employee Service Recovery Performance is composed of the following dimensions: being courteous, problem solving, making an apology, and prompt handling (Liao, 2007).

**(3) Antecedents of employee service performance.** Individual characteristics and organizational characteristics as a whole shape the output of individuals and organizations (Kozlowski & Klein, 2000). Therefore, the antecedents of employee service performance come from employee factors, leadership factors and organizational factors.

**The antecedents come from employees.** The influencing factors at the employee level mainly include employees' personalities, emotional labor, service orientation, creativity, role conflict, and so on.

**Personalities.** Sawyerr, Srinivas, and Wang (2009) found that the openness of Big Five Personalities (conscientiousness, openness, agreeableness, extraversion, and neuroticism) has a negative effect on employees' service performance, and openness, conscientiousness, agreeableness and neuroticism have respectively significant positive or negative effects on absenteeism and turnover intention of employees' performance. Liao and Chuang (2004) showed that conscientiousness, extroversion and agreeableness had positive effects on employee service performance, while neuroticism had negative effects on employee service performance.

**Emotional labor.** By investigating employees from several hospitality and tourism organizations in Florida, USA, Prentice and colleagues (2013) found that emotional labor positively influences task performance and occupational commitment moderates the relation between emotional labor and task performance that is enhancing performance outcomes by facilitating emotional labor strategies.

**Service orientation.** Service orientation positively influences consumer perceptions of employee service performance (C. H. J. Wu, Liang, Tung, & Chang, 2008). Service orientation is defined as a communication capability, a pattern of differentiation, and a strategy that provides a range of services to customers. But Liaw, Chi, and Chuang (2010) reported that employee customer orientation had no effect on customer-rated service performance, and this association was moderated by customer relationship.

**Compassion at work.** Hur and others (2016) found that the evaluative perspective of positive work-related identity and the creativity of service employees sequentially mediate the relationship between compassion at work and job performance.

**Conflict and stress.** Work - family conflict and family-work conflict directly and indirectly affect the customer-directed extra-role performance (CDERP) of service employees. Work pressure has a direct impact on in-role performance (IRP) and customer-oriented out-of-role performance of service employees, and the effect on in-role performance is greater than on customer-oriented out-of-role performance (Netemeyer, Maxham, & Pullig, 2005). Role conflict positively influences service

performance through employee's ideas for improvement. However, moderate analysis showed that role conflict has a positive overall effect on service performance only when the employee's learning orientation is consistent with the manager's level of encouragement for improvement. Otherwise, the effect of role conflict on service performance is zero or negative (Schepers et al., 2016).

**The antecedents come from leaderships.** Different leaderships have different influences on employee service performance. Abusive leadership has a negative effect on employee service performance, while transformational and servant leadership have a positive effect.

**Abusive supervision.** Jian, Kwan, Qiu, Liu, & Yim(2012) found organization-based self-esteem (OBSE) mediates the negative effect of abusive supervision on service performance. In addition, relational-interdependent self- construal (RISC) moderates the mediating effect of OBSE on the abusive supervision–service performance relationship such that the mediating effect is weaker when RISC is low rather than high. Yijing and others (2016) found that abusive supervision has a negative effect on service employees' proactive customer service performance (PCSP) through organizational identification. In addition, employees' collectivistic value orientation also enhances the negative relationship between abusive supervision and organizational identification.

**Transformational Leadership.** Using a nationwide survey of government employees in the United States, Caillier (2014) found that transformational leadership and PSM directly and positively affect employee evaluations. They also found that mission valence moderated the positive effect of transformational leadership on performance. However, PSM did not play the same role between transformational leadership and performance.

**Servant leadership.** Using 325 employee-manager dyads data from China, Ling and colleagues (2016) found the trickle-down effect of servant leadership on employee service behaviors and employee service performance. Cross-level moderation analysis indicates service climate plays a moderating role in the relationship between servant leadership and service behaviors, but in an inverse direction.

**The antecedents come from organizations.** There are many factors that influence employee service performance at the organizational level, among which the



most important is the support and climate perception of the organization, as well as the human resource management system and practice of the organization.

**Support and climate perception of the organization.** The support and climate of the organization include the workplace fairness perceptions, workplace incivility, perceived organizational support (POS), customer sexual harassment, maintaining display rules, organizational resources and service climate, and so on. Workplace fairness perceptions can directly and positively affect the three dimensions of employees' pro-social service behaviors, and indirectly and positively affect extra-role customer service of employees' pro-social service behaviors through job satisfaction (Bettencourt & Brown, 1997). Workplace incivility (included supervisor incivility, customer incivility, and co-worker incivility) significantly raises emotional exhaustion and further reduces job service performance. Perceived organizational support (POS) and emotion regulation ability (ERA) significantly moderate the relationships between workplace incivility, emotional exhaustion and perceived service performance (Cho et al., 2016). The difficulty in maintaining display rules plays a mediator role between customer sexual harassment and service performance. In addition, Chinese traditional values weaken the association between customer sexual harassment and difficulty in maintaining display rules, and attenuate the mediating effect of difficulty in maintaining display rules (X. Liu, 2012; X.-Y. Liu et al., 2014).

Organizational resources, work engagement and service climate positively influence employee service performance. Service climate mediates the relation between work engagement and employee service performance (Salanova, Agut, & Peiró, 2005). Service climate positively affect service performance. Moreover, job stress played a negative moderating role between service climate and extra-role performance, while organizational identification played a positive moderating role between climate and performance (Zhang, Liu, Wang, & Shen, 2011). Employee service orientation played a partial mediating role between service climate and service performance. In addition, career aspiration moderated the mediation effect of service orientation between service climate and self-reported service performance. However, what is interesting about it is that the moderating effect was not found when service performance was evaluated by the supervisors (Li & Huang, 2017). Initiative climate at the organizational level and general self-efficacy at the individual level affected employee proactive customer

service performance and interacted in a synergistic way (Raub & Liao, 2012). Servicing empowerment affected significantly task motivation, perceived workload, and customer complaint handling performance (CCHP). Perceived workload and task motivation also affected significantly CCHP. Task motivation and perceived workload play a partial mediating role between servicing empowerment and CCHP (Chan & Lam, 2011). In addition, an accurate and infrequent performance appraisal system and a congruent service goal can help overcome the dysfunctional influence of perceived workload on employee service performance (Chan & Lam, 2011).

**Human resource management system and practice.** Liao & Chuang (2004) reported service climate and human resource practices (employee involvement in decision making, service-related training, and service performance incentives) had a positive relationship with employees' service performance. Based on time-lagged data from 94 hotels in China, M. Chen and others (2017) revealed that high-commitment human resource practices positively affected service employees' PCSP (proactive customer service performance) through perceived organizational support, work-related self-efficacy, and harmonious passion for work. Using survey data from 568 service employees and their managers across 92 divisions of a bank in China and a hierarchical linear modeling, Wang and Xu (2017) found that service-oriented high-performance work systems (HPWS) influenced employee service performance via the mediators that is customer orientation, employees' service ability, and service climate perception. Moreover, the indirect influences of HPWS on service performance through service ability and customer orientation were significant only when service-oriented HPWS consensus was high.

**(4) The consequences of employee service performance.** The most important consequences of employee service performance are customer attitudes (such as customer satisfaction, identification, loyalty, and purchase intention) and employee attitudes.

**Customer satisfaction, loyalty, identification and repurchase intention.** Employees service performance, especially the dimensions of extra-role customer service and role-prescribed customer service had a positive effect on **customer satisfaction** (Bettencourt & Brown, 1997). Raub and Liao (2012) also found that aggregated proactive customer service performance influenced customer service

satisfaction and played a mediator role between initiative climate and customer service satisfaction. Liao and Chuang (2004) aggregated individual-level service performance to store-level service performance and found that store-level service performance is positively related to customer evaluation of service quality, customer satisfaction, and **customer loyalty**. Consumer perceptions of employee service performance have positively influenced **consumer identification** (C. H. J. Wu et al., 2008). Using paired data from service employees, supervisors, and customers, Netemeyer et al. (2005) found that service employee customer-directed extra-role performance (CDERP) affects **customer purchase intent (CPI)** than does service employee in-role performance (IRP). Employee service recovery performance positively affected customer satisfaction and customer repurchase intent via the mediator of customer-perceived justice. In addition, service failure severity and repeated failures reduced the positive effect of some dimensions of service recovery performance (SRP) on customer satisfaction, and customer-perceived justice again mediated these moderated effects (Liao, 2007).

**Employee loyalty.** Salanova and others (2005) revealed that employee service performance positively affected employee loyalty and mediated the relationship between service climate and employee loyalty.

## CHAPTER 3

### HYPOTHESES, MODELS AND METHODS

This chapter will discuss the research hypotheses and conceptual models based on theories and literature, and then describe the research methods.

#### 3.1 Hypotheses and Models

##### 3.1.1 Servant Leadership and Employee Service Performance

Albert Bandura (1971) believed that most human behaviors are learned by observing models. The processes of observational learning include attentional processes, retention processes, motor reproduction processes, and motivational processes. In the stage of attention processes, the characteristics of the models, such as gender, age, appearance, occupation, social status and social identity, are important factors affecting the attention processes. The leaders in the public sector are easy to become models for civil servants to observe and learn because their identities, statuses and powers are at the center of the organization. The modeling events of service behavior and help behavior have significant characteristics and high identification, which are more likely to attract the attention of observers. In the retention processes, servant leaders in the public sector will help employees complete symbol conversion, cognitive representation and rehearsal of modeling information of service behavior through education and practical activities to ensure that civil servants learn the servant behaviors. In the motor reproduction processes, service leaders will require and encourage employees to put the learned service behaviors into practice. In the motivational processes, servant leaders will induce employees to perform servant behaviors by a series of methods such as improving reward and punishment system and service value education. In short, servant leaders will induce and help employees to perform servant behaviors through the four stages of observational learning, so as to improve the public service performance.

In addition to the above theories, there are some empirical studies supporting the relationship between servant leadership and employee service performance. Using data

from 325 employee-supervisor dyads in 9 star-level hotels in China, Ling and colleagues (2016) found the trickle-down effect of servant leadership on frontline employee service behaviors and performance. In addition, service performance includes external service performance (to customers) and internal service performance (to colleagues).

Meanwhile, some researches directly equate employee performance in service-oriented organizations with service performance, and employee performance can be divided into in-role performance and out-of-role performance (organizational citizenship behavior or helping behavior). Therefore, the literature on the effects of servant leadership on employee performance in service organizations (including in-role performance and out-role performance), service performance (to customers) and organizational citizenship behavior (to colleagues) can be used as evidence of the relationship between servant leadership and employee service performance.

According to Graham (1995), servant leadership positively affects OCB because it encourages a higher level of moral reasoning in followers. The multilevel study of Ehrhart (2004) showed that servant leadership has a direct effect on conscientiousness OCB and helping OCB. Neubert, Kacmar, Carlson, Chonko, and Roberts (2008) found that servant leadership was significantly related to both helping and creative behaviors. Walumbwa, Hartnell, and Oke (2010) revealed from a sample of 815 employees and 123 immediate supervisors that servant leadership significantly predicted OCB. Using a multilevel, multi-source model, Hunter and others (2013) reported that store-level servant leadership positively affected coworker task-focused OCB-I for follower-rated helping behavior aggregated to the store-level. They also found that store-level servant leadership affect person-focused OCB-I, but it was not related to task-focused OCB-I. Wu, Tse, Fu, Kwan, and Liu (2013) reported that servant leadership positively influenced customer-oriented OCB. Based on a sample of 446 supervisor-subordinate dyads, Schwarz and Sendjaya (2015) found that servant leadership leads followers to engage in OCB by enhancing LMX rather than their psychological empowerment. Based on the above theories and literature, the following hypotheses were proposed:

**Hypothesis 1 (H1):** Servant leadership in public sectors positively affect the employee service performance.

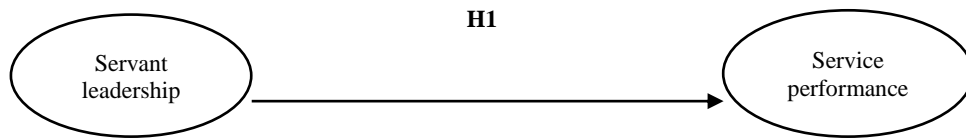


Figure 3.1 Hypothesis 1: Servant Leadership in Public Sectors Positively Affect the Employee Service Performance.

### 3.1.2 Servant Leadership, Public Service Self-efficacy and Employee Service Performance

**(1) The relationship between public service self-efficacy and employee service performance.** Ability has long been considered the most important predictor of employee performance. According to expectation theory (Vroom, 1964) and AMO theory (Pringle & Blumberg, 1982; Bailey, 1993; Appelbaum et al., 2000; Bailey et al., 2001), employee ability is also regarded as an important factor influencing employee performance. However, according to the theory of self-efficacy, effective functioning requires not only the skills but also the efficacy beliefs of using them well. “Perceived self-efficacy is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses” (Bandura, 1997, p.31). Therefore, scholars often use self-efficacy instead of ability to study. Whatever other factors may operate as guides and motivators, they are rooted in the core belief that one has the power to produce effects by one’s actions (Bandura, 1999,). “Perceived self-efficacy influences thought processes, the level and persistency of motivation, and affective states, all of which are important contributors to the types of performances that are realized” (Bandura, 1997, p.39).

Self-efficacy can be divided into three levels according to the concreteness of tasks, activities and situations. The first is the self-efficacy of specific tasks, which refers to the belief of completing a specific task. The second is domain self-efficacy, which refers to the self-belief of any task in a domain. The third is general self-belief, which refers to the self-belief of completing any problem in multiple fields (Bandura, 1997). It is unrealistic to expect personality measures explicate in generalities the contribution of personal factors to psychosocial functioning in diverse task domains and contexts and under different circumstances (Bandura, 1997). So, undifferentiated and

contextless measures of personal efficacy have little predictive effect. Situational self-efficacy has more predictive effect than general self-efficacy. Therefore, when examining the public service performance of employees in the public sector, the employees' public service self-efficacy is more predictive than the general self-efficacy. Wang and Xu (2017) also empirically verified that employees' self-perception of service ability is an effective variable to predict service performance. Based on the above analysis, the following hypothesis was proposed:

**Hypothesis 2b (H2b):** Public service self-efficacy positively affects employee service performance.

**(2) The relationship between servant leadership and public service self-efficacy.** According to the theory of self-efficacy, self-efficacy beliefs are constructed from four main sources: enactive mastery experiences; vicarious experiences; verbal persuasion and allied types of social influences; and physiological and affective states (Albert Bandura, 1997). Service leadership influence employees' public service self-efficacy by influencing these four sources.

The first source is enactive mastery experiences. It refers to the direct experience of the individual about his own ability through his own action. Enactive mastery experiences are the most important source of efficacy information because they provide the most authentic evidence of whether one person can succeed (Albert Bandura, 1997). One of the most important characteristics of servant leadership is to help employees grow and succeed (Laub, 1999; M. G. Ehrhart, 2004; R. C. Liden et al., 2008; R. C. Liden et al., 2015). In the public service sector, such growth and success mainly refer to helping subordinates effectively provide public services and win the favor and praise of the public. These successful experiences will contribute to employees' public service self-efficacy.

The second source is vicarious experiences. Vicarious experience means that individuals form expectations of their own behaviors and results by observing the models' behaviors and results and obtain the assessments of their abilities to complete corresponding behaviors. Servant leadership advocate serving and helping subordinates, giving back to society, and have conceptual skills (R. K. Greenleaf, 1977; Laub, 1999; M. G. Ehrhart, 2004; R. C. Liden et al., 2008; R. C. Liden et al., 2015). In general, competent models attract more attention and have a greater educational impact than

incompetent ones (Bandura, 1986). Therefore, the helpful, altruistic and public-welfare modeling behaviors of servant leadership are easy for employees to learn and imitate. Meanwhile, the successful experience of servant leadership and the respect they gain can also help improve the employees' public service self-efficacy.

The third source is verbal persuasion. Verbal persuasion refers to convincing the observers that they have the belief to complete the tasks through persuasive means such as encouragements and affirmations. When others, especially those who have important influence on the individual, affirm their abilities to complete the tasks, it is beneficial to improve the self-efficacy of the individual to complete the tasks, especially when the individuals face difficulties (Bandura, 1997). Servant leadership helps subordinates grow and succeed through a series of ways such as verbal encouragement, trust and authorization (M. G. Ehrhart, 2004; R. C. Liden et al., 2008; R. C. Liden et al., 2015). These encouraging behaviors are bound to increase employees' public service self-efficacy. The fourth source is physiological and affective states. People rely to some extent on physical information conveyed by physical and emotional states to judge their abilities, especially in areas of sports, health and stress response (Bandura, 1997). Servant leadership focuses on building harmonious relationship between leaders and employees by means of emotional comfort to employees (M. G. Ehrhart, 2004; R. C. Liden et al., 2008; J. C. S. and J. C. S. Sen Sendjaya, 2008; R. C. Liden et al., 2015). Good physical and emotional states can improve employees' self-efficacy. Based on the above analysis, the following hypothesis was proposed:

**Hypothesis 2a (H2a) :** Servant leadership positively affects employees' public service self-efficacy.

**(3) The relationships between servant leadership, employees' public service self-efficacy and employee service performance.** The above analyses indicated that servant leadership may positively affect the employee service performance through their public service self-efficacy. This implication is supported by some empirical researches. Using a sample of 238 hairstylists and 470 of their customers, Chen and others (2015) found that hair stylists' self-efficacy and group identification played a partial mediating role between salon managers' servant leadership and stylists' service performance, measured as service quality, customer-focused citizenship behavior, and customer-oriented prosocial behavior, as rated by the customers. Using the autonomous



motivational framework of Self-Determination Theory (SDT), Chiniara and Bentein (2016a) found that competence need satisfaction mediated effect of servant leadership on task performance only. Based on the above analyses, the following hypothesis was proposed:

**Hypothesis 2c (H2c):** Employee's public service self-efficacy mediates the positive influence of servant leadership on employee service performance.

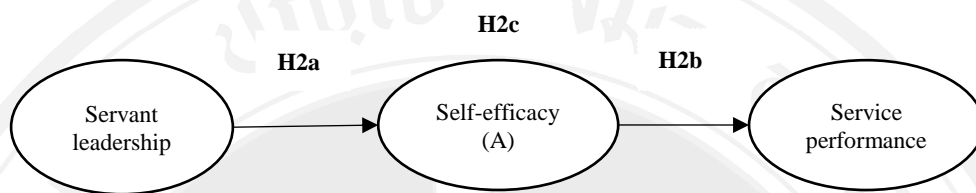


Figure 3.2 Hypothesis 2a, Hypothesis 2b and Hypothesis 2c

### 3.1.3 Servant Leadership, Employees' Public Service Motivation and Employee Service Performance

**(1) The relationship between employees' public service motivation and their service performance.** According to the AMO theory, any of the three factors including ability (A), motivation (M) and opportunity (O) can independently influence employee performance (Cummings, L. L., & Schwab, 1973; Boxall, P., & Purcell, 2003). Therefore, it can be expected that employees' public service motivation can affect their public service performance in the public sectors.

In addition to theory, there are some empirical literature supporting the relationship between PSM and employee service performance. Using a field experiment with a sample of nurses at a public hospital in Italy, Belle (2013) reported that baseline PSM influences job performance. Similar conclusions were found by Bellé (2014). Based on an objective outcome measure namely the students' final examination marks, Andersen, Heinesen, and HolmPedersen (2014) revealed that PSM positively affects examination marks namely performance. Using a nationwide survey to civil servants in the United States, Caillier (2014) found that transformational leadership and PSM directly and positively influence employee evaluation. Mostafa and Gould-Williams (2015) reported that PSM plays a partial mediation effect between high-performance human resource practices (HPHRPs) and employee affective commitment and OCBs.

Using the experimental setting of the public goods game, Esteve and colleagues (2016) found a positive relationship between PSM and prosocial behavior. The behavior of other group members moderates the relationship: people with higher PSM act more prosocial behavior when the other group members express prosocial behavior, however, they do not do so if other members of the group are not prosocial. Based on a systematic literature review of PSM from 2001 to 2015, Adrian Ritz and others (2016) reported the empirically tested outcomes of PSM. Among them, individual performance ranked third with 26 articles (10.9 percent), 15 of which showed that PSM positively affect personal performance, while the remaining 11 had no or no significant impact. Based on the above literature analyses, the following hypothesis was proposed:

**Hypothesis 3b (H3b)** : Employees' public service motivation positively affects employee service performance.

**(2) The relationship between service leadership and employees' public service motivation.** According to social learning theory (Bandura, 1977b; Albert Bandura, 1986), employees acquire knowledge and behaviors mainly through enactive learning and observational learning. In both cases, servant leadership can influence employees' motivation.

The fourth process of observational learning is motivational processes. An observer may acquire a model behavior through observational learning. However, he may not necessarily perform it in practice. The observer translates the learned results into action only when there is a positive behavioral trigger. In observational learning, there are direct incentives, substitution incentives and self-generated incentives to determine whether the observer performs modeling behaviors (Bandura, 1977b; Bandura, 1986). The direct inducement is that the modeling behavior itself leads to some kind of rewarding outcome, and the observer performs the modeling behavior because of the intrinsic motivation to pursue such a reward. In the public sector, leaders and organizations reward public service behaviors through the design of reward system, and employees' pursuit of such reward will induce service motivation. The substitution incentive is that the rewarding outcome of the modeling behavior of the model is also an incentive for the observer's behavior. The effect of substitution incentive was especially pronounced when the observer had the same or similar characteristics as the model. The service behaviors of servant leaders will contribute to their achievement

promotion and career development, which will in turn stimulate employees' service motivation. Self-generating inducement means that the observer's emotional evaluation or value evaluation of the modeling behavior and its results will also trigger the observer's motivation to perform the service behavior. If the observer is interested in or thinks highly of the modeling behavior and its results, the reproduction of the modeling behavior will be induced. Servant leaders spread the service spirit and values advocated by the society and the organization to employees through words and deeds (M. G. Ehrhart, 2004; R. C. Liden et al., 2008; R. C. Liden et al., 2015). With the recognition of employees, it is bound to help improve their service motivation.

The cognition of employees also has motivational function in the enactive learning. Bandura argued that people not only respond to behavior and observe its consequences but also have the symbolizing capability. Therefore, people can abstract the causality between behavior and result from the previous behavior response and behavior result. Through the symbolizing memory of the causal relationship between behavior and result, individuals will form the belief and expectation that certain behavior will lead to certain results. When an individual expects an outcome, he first matches it with the symbolic system stored in his memory. When similar result symbols and matching behaviors are found, the individual will believe that the desired results will be obtained just such behaviors are taken. Thus, individuals will be motivated to act accordingly (Bandura, 1977a; Bandura, 1986). Servant leaders are committed to helping employees grow and succeed (M. G. Ehrhart, 2004; R. C. Liden et al., 2008; R. C. Liden et al., 2015). Employees will gradually establish a causal link between servant behaviors and successful outcomes. When they expect further growth and success, the service motivation will be stimulated.

In addition, there are empirical studies on the relationship between service leadership and employee service motivation. Based on a survey of 477 employees working in large state-owned institutions, Wright, Hassan, and Park (2016) reported that managers with higher PSM are more probable to be perceived as ethical leaders by their employees. Managers expressing higher ethical leadership are more probable to have employees with higher PSM. Based on the above literature analysis, the following hypothesis was proposed:

**Hypothesis 3a (H3a):** Servant leadership positively affects employees' public service motivation.

**(3) The relationship between servant leadership, employee' public service motivation and employee service performance.**

Based on the above theoretical literature, this study can further assume that servant leadership affects the employee service performance via their public service motivation. There is some empirical literature supporting this hypothesis. By a multilevel analysis of multi-source data of a Chinese government institution, G. Schwarz, Newman, Cooper, and Eva (2016) revealed that followers' public service motivation (PSM) positively mediated servant leadership and followers' job performance. Based on the above analyses, the following hypothesis was proposed:

**Hypothesis 3c (H3c):** Employees' public service motivation mediates the positive influence of servant leadership on employee service performance.

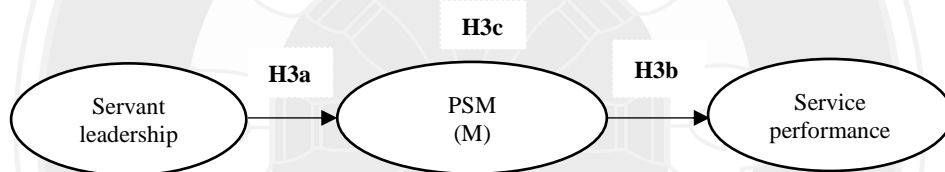


Figure 3.3 Hypothesis 3a, Hypothesis 3b and Hypothesis 3c

**3.1.4 Servant Leadership, Organizational Service Climate and Employee Service Performance**

**(1) The relationship between organizational service climate and employee service performance.** According to the AMO theory, any of the three factors including ability (A), motivation (M) and opportunity (O) can independently influence employee performance (Cummings, L. L., & Schwab, 1973; Boxall, P., & Purcell, 2003). Therefore, it can be expected that the organizational service climate in the public sector can predict the service performance of employees. Organizations with a strong service climate will provide their employees with resources needed for various service work, support their employees to provide quality service to customers, and reward their excellent service behaviors. According to the social exchange theory, employees in organizations with a strong service climate will definitely repay the organization by

enhancing their service willingness, showing active service behaviors and improving their service performances.

In addition, there are some empirical studies on the relationship between organizational service climate and employee service performance. Through a survey of 3,464 employees and 31,362 customers of a securities company in the United States, Schmit and Allscheid (1995) found that service climate positively affects employees' emotional reactions, and then their service intentions, customer-perceived service quality and customer satisfaction. Borucki and Burke (1999b) found that service atmosphere could effectively predict the service performance of sales staff through two rounds of surveys on financial data, clerks and customers of 594 stores of a large American retail company. Based on a multilevel study of managers, employees and customers, Liao and Chuang (2004a) found that service climate significantly affected the service performance of employees. Schneider and others (2005) revealed that service climate directly and positively affects the employees' OCB-C and indirectly and positively affects customer satisfaction through a survey of employees and customers in 56 supermarket chains in eastern United States. The organizational citizenship behaviors of employees towards customers are mostly related to their service performance. Using the dyad data and SEM, Salanova, Agut, and Peiró (2005) reported that organizational resources, work engagement and service climate have a positive effect on service climate. Taking 368 front-line employees and 45 managers of five Chinese Banks as samples, Zhang, Liu, Wang, and Shen (2011) revealed that service climate positively affects service performance. Raub and Liao (2012) reported that initiative climate at the organizational level and general self-efficacy at the individual level affect employee proactive customer service performance and interacted in a synergistic way. Jiang and others (2015) found that service climate positively affected employee service performance. Based on data from a survey of 500 front-line service employees at 10 restaurants of a Chinese hotel chain, Li and Huang (2017) found that service climate affects service performance (included self-reported and supervisor-reported). Based on the above literature analysis, the following hypothesis was proposed:

**Hypothesis 4b (H4b):** Organizational service climate positively affects employee service performance.

**(2) The relationship between servant leadership and organizational service climate.** According to the Triadic Reciprocal Determinism in social learning theory, the three factors, subjective cognition, behavioral display, and external environment, affect and determine each other. Moreover, the relative influence of the three interacting factors may be different for different individuals and environments (Bandura, 1986). In the public sector, servant leaders have special status, power and ability, and occupy the central position in the organization. Therefore, it can be reasonably assumed that servant leaders affect organizational climate. Is the theoretical hypothesis supported by empirical literature?

Servant leadership emphasizes the importance of service quality and is always service-oriented. At the store-level of analysis, the findings revealed that the importance of service to management positively influences service climate (Borucki & Burke, 1999). Another similar study (Schneider et al., 2005) indicated that leaders who emphasize the importance of service quality will be especially likely to do the imperative things to foster and sustain a service climate. Salvaggio and others (2007) found that service quality orientation played a full mediator role between personality and global service climate. By a meta-analysis of 58 independent samples, Hong, Liao, Hu, and Jiang (2013) revealed that servant leadership have stronger effects to service climate than general human resource practices and leadership. These different leadership forms may contribute differently to service climate, and there is a proximally important relation with service climate when they were combined with the service-focused leadership. Based on the data from 142 managers and 569 employees in footwear retail stores, Jiang and others (2015) revealed that servant leadership positively influences service climate, and there is a negative interaction between the influences of servant leadership and HPWS on service climate, that is, when the HPWS is lower, the positive effect of service leadership on service climate is greater. Based on the above theories and literature, the following hypothesis was proposed:

**Hypothesis 4a (H4a):** Servant leadership positively affects the organizational service climate.

**(3) The relationship between servant leadership, organizational service climate and employee service performance.** Based on the above analysis, can it be further assumed that servant leadership affects employee service performance through

organizational service climate? Some empirical literature supporting this hypothesis has been found.

Using a sample of 815 employees and 123 immediate supervisor in seven multinationals companies operating in Kenya, Walumbwa, Hartnell, and others (2010) revealed that servant leadership directly influenced service climate and service climate played a partial mediator role between servant leadership and OCB. By meta-analysis of 58 independent, Hong and others (2013) found that service climate was significantly and positively related to employee job satisfaction and organizational commitment, and partially mediated the effect of human resource practices and leadership on employee attitudes and service performance. Hunter and others (2013) reported that service climate mediated the impact of store-level servant leadership on followers' turnover intentions, helping behavior, and sales behavior. However, contrary to their predictions, the relationship between servant leadership and store sales performance was not mediated by service climate; they had a direct relation only when regional managers reported on both servant leadership and store performance.

Another study discussed the mediator role of service culture. Although service culture is not exactly the same as service climate, they are very close in many aspects. Based on a survey data of 961 restaurant employees, R. Liden and others (2014) revealed that servant leaders created a serving culture to propagate servant leadership behaviors among followers. The serving culture acted as a mediator between servant leadership and its outcomes, that is, it positively influenced employee creativity and job performance, restaurant performance, and customer service behaviors. Based on the above literature review, the following hypothesis was proposed:

**Hypothesis 4c (H4c):** Organizational service climate mediates the positive influence of servant leadership on employee service performance.

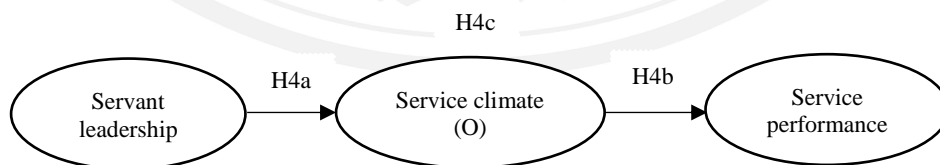


Figure 3.4 Hypothesis 4a, Hypothesis 4b and Hypothesis 4c

### 3.1.5 Integration Model

To sum up, according to the theory of social learning, servant leaders in public sectors become models for employees due to their special roles and status. As a result of learning and practicing more public service behaviors, employees will have higher service performance (H1). According to the AMO theory, A (Ability), M (Motivation) and O (Opportunity) are three important factors influencing employee performance. Based on relevant literature and facts, this study operationalized A as public service self-efficacy, operationalized M as public service motivation, and operationalized O as organizational service climate. Based on relevant literature, it is assumed that public service self-efficacy, public service motivation and organizational service climate can effectively predict employee service performance (H2b, H3b, and H4b). According to relevant literature on servant leadership, self-efficacy, public service motivation and service climate, the positive effects of servant leadership on public service self-efficacy, public service motivation and organizational service climate are assumed respectively (H2a, H3a, and H4a). Finally, mediating effect models (H2c, H3c, and H4c) of public service self-efficacy, public service motivation and organizational service climate on the relationships between servant leadership and employee service performance are constructed.

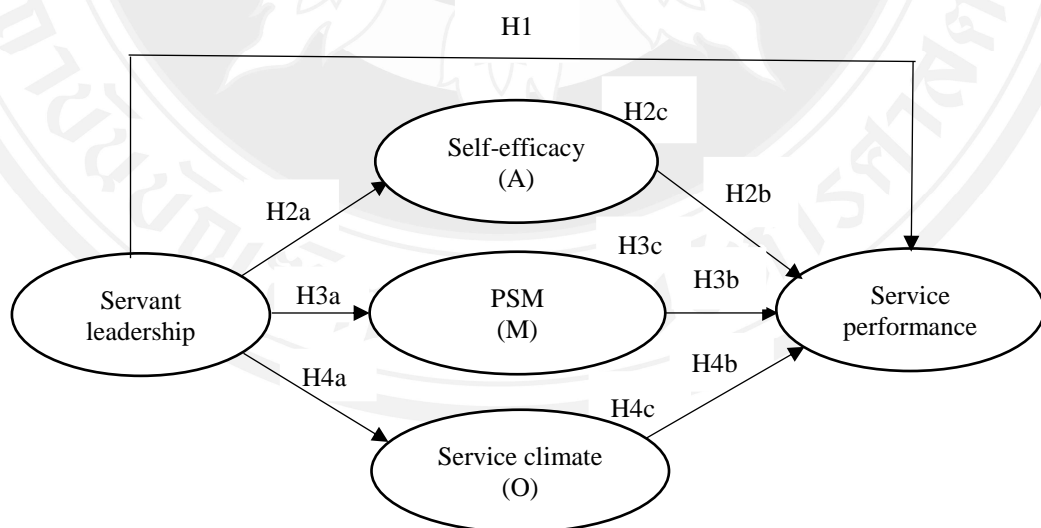


Figure 3.5 Integration Model



## 3.2 Methods

### 3.2.1 Sample and Sampling Procedures

Because this study mainly discusses the relationships between latent variables, structural equation model is chosen for analysis. According to Kline and Santor (1999), the sample size requirement of structural equation model is affected by the complexity of the model, the distribution state of variables, the quality of scale, the missing value of questionnaire and other factors, and there is no absolute standard. Bentler and Chou (1987) proposed a simple rule of thumb: the sample number  $N$  should be at least 5 times of the estimated parameter  $q$  to ensure the reliability of the estimated parameter value, and at least 10 times of the estimated parameter  $q$  to ensure the validity of the significance test. Jackson (2003) called it the  $N:q$  rule, where  $N$  is the number of samples and  $q$  is the number of parameters to be estimated in the model. In addition, Barrett (2007) also suggested that the sample size should not be less than 200, except there is a strict quantitative limit on the study overall. Public service employees in Beibei district of Chongqing were selected for this research. The public sectors include district offices, town governments/sub-district offices and villagers/residents' committees. The survey subjects were public service employees who provided public services directly to the public. In the study, data were obtained through preliminary survey and formal survey.

**Preliminary survey.** The purpose of the preliminary survey was to determine the reporting methods and items of the questionnaire.

**Determining the reporting method of the questionnaire.** The reporting methods of the questionnaire mainly included self-reporting and pairing. This paper chose self-reported questionnaire. According to the preliminary survey, department leaders may not have a true and complete understanding of employees' service behaviors and performances, so leader-employee matching questionnaire was not suitable. As the service objects of employees are uncertain, it is difficult for researchers to find enough customers to evaluate the service performance of employees, so it was not suitable to use the customer-employee matching questionnaire. The matching questionnaire requires real name or code, but employees are reluctant to fill in the questionnaire or do not fill in the questionnaire truthfully. The anonymous self-reported questionnaire is

more popular because it relieves employees' worries. The procedure to determine the items of the questionnaire was first to find 10 public service employees from different departments to fill in the questionnaire. Then, the questionnaire was discussed one by one in a symposium. The contents discussed included the volume of the questionnaire, the difficulty of the questions, the clarity of the expression, the way of expression, the suitability of the scene and the cultural connotation. Finally, some items of the questionnaire were modified according to the results of the preliminary survey. Some suggestions were put forward. For example, the number of questionnaire items should be limited to fifty. The staffing situation was relatively complex, which could be divided into civil servants, reference civil servant management personnel, career personnel, workers, temporary employees and other personnel, and could be roughly divided into formal staffing personnel (including civil servants, reference to civil servant management personnel and career personnel) and no formal staffing personnel. In the servant leadership scale, the “community” in “my leader emphasizes the importance of giving back to the community” was modified to “society”, etc.

**Formal survey.** Formal survey includes determining survey methods, survey objects, and conducting survey.

**Determining the survey methods and survey objects.** The paper questionnaire, E-mail questionnaire and mobile WeChat questionnaire can be used for survey. After consultation with the organization department of Beibei district party committee and 10 sample units, the researcher decided to use paper questionnaire for survey. According to the research requirements, the organization department of Beibei district party committee provided a list of public departments and their public service employees, and then randomly selected research units from these departments. These units include district-level organizations such as public security bureau, urban management bureau, transportation bureau and environmental protection bureau, sub-district offices such as Beiwenquan sub-district office, Xiema sub-district office and Tiansheng sub-district office, town governments such as Tongjiayi town government and Shijialiang town government, and village/community organizations such as Tongxing villagers' committee and Zhuangyuanbei residents' committee.

**Carrying out the survey.** Under the assistance of the organization department of Beibei district, the researcher contacts the investigated units and explains the

investigation situation to them in detail, so as to obtain their understanding and support. With the help of receptionists in each department, each department conducted simple random sampling according to the list of public service personnel. A total of 520 questionnaires were distributed in all units. After all questionnaires were completed, they were collected on the spot and put into the envelope for sealing. In order to motivate the respondents to fill in the questionnaire, a small gift was prepared for each respondent and receptionist. 513 questionnaires were collected, with a recovery rate of 98.7%. After the questionnaires were collected, the following invalid questionnaires were deleted: Incomplete information with missing values. The working time of the respondents in the department was less than 3 months, and they lacked enough knowledge and information to complete the questionnaire. There was obvious regularity in questionnaire filling. The questionnaire was filled out arbitrarily and against common sense. Finally, 416 valid questionnaires were obtained, with an effective rate of 81.1%. The basic information of effective questionnaire respondents is shown in Table 3.1.

Table 3.1 Basic Information of Samples

	Covariance items	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	167	40.1	40.1	40.1
	Female	249	59.9	59.9	100.0
	Total	416	100.0	100.0	
Age	18-24 years old	14	3.4	3.4	3.4
	25-34 years old	164	39.4	39.4	42.8
	35-44 years old	133	32.0	32.0	74.8
	45-54 years old	82	19.7	19.7	94.5
	More than 55 years old	23	5.5	5.5	100.0
	Total	416	100.0	100.0	
Education	Below junior college	51	12.3	12.3	12.3
	Junior college	141	33.9	33.9	46.2
	Bachelor' degree	200	48.1	48.1	94.2
	Postgraduate	24	5.8	5.8	100.0
	Total	416	100.0	100.0	
Political affiliation	Member of the Communist Party of China	270	64.9	64.9	64.9
	Non-members of the Communist Party of China	146	35.1	35.1	100.0

	Total	416	100.0	100.0	
Type of organization	Department of the district organization	219	52.6	52.6	52.6
	Town government/sub-district office	92	22.1	22.1	74.8
	Villagers/ residents committee	105	25.2	25.2	100.0
	Total	416	100.0	100.0	
Posts status	Budget posts	244	58.7	58.7	58.7
	Non budget posts	172	41.3	41.3	100.0
	Total	416	100.0	100.0	
Lengths of public service work	3 months -3 years	88	21.2	21.2	21.2
	4-10 years	181	43.5	43.5	64.7
	11-20 years	86	20.7	20.7	85.3
	21-30 years	38	9.1	9.1	94.5
	More than 30 years	23	5.5	5.5	100.0
	Total	416	100.0	100.0	
Length of service in this organization	3 months -3 years	115	27.6	27.6	27.6
	4-10 years	199	47.8	47.8	75.5
	11-20 years	60	14.4	14.4	89.9
	21-30 years	27	6.5	6.5	96.4
	More than 30 years	15	3.6	3.6	100.0
	Total	416	100.0	100.0	

### 3.2.2 Measures

Since the original scale was derived from English literature and the survey was conducted in China, this study adopted the translation-back translation method suggested by Brislin (1980) to translate the original scale. Two management scholars who are proficient in both Chinese and English and often publish papers in SSCI journals were invited to help. First, one of the scholars translated the original English scale into Chinese, and then another scholar translated them into English to see if there was any difference from the original scale. If there are differences in the translation process, the two scholars will discuss and seek consensus. In this study, the 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree) was used to measure the public service self-efficacy, public service motivation and organizational service climate, which is widely used in the fields of social science and behavioral science (Spector, 1992). The variance of the common method can be reduced by using Likert

scales with different numbers of anchor points to evaluate variables assessed by common sources (Podsakoff, Whiting, Welsh, & Mai, 2013). Therefore, this study used the 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) to measure servant leadership and employee service performance.

**(1) Servant Leadership.** According to the literature review on servant leadership in Chapter 2, four scales of servant leadership are widely used by scholars. They are SL-14 scale with 7 dimensions and 14 items developed by M. G. Ehrhart (2004); SL-28 scale with 7 dimensions and 28 items developed by R. C. Liden et al. (2008); SL-30 scale with 8 dimensions and 30 items developed by Dirk van Dierendonck and Inge Nuijten (2011); and SL-7 developed by R. C. Liden et al. (2015) from SL-28 scale. R. C. Liden et al. (2015) compared the four scales and found that SL-30 is successively better than SL-28, SL14 and SL7, which conforms to the general rule that more questions are more accurate, but the validity difference of the four scales is very small. All the 7 items in SL-7 scale were extracted from SL-28, and each item represented one of the dimensions. SL-7 scale succinctly and completely contains all the connotations and dimensions of servant leadership. Therefore, the study chose SL-7 scale to measure servant leadership. The scale includes seven measurement items, such as " my leader makes my career development a priority."

**(2) Public Service Self-efficacy.** According to the literature review on self-efficacy in Chapter 2, self-efficacy can be divided into three levels: specific task self-efficacy, domain self-efficacy and general self-efficacy (Bandura, 1997). Public service self-efficacy is a kind of domain self-efficacy. Because different fields have different capability requirements, the self-efficacy of specific fields has a better prediction effect on the performance of the field (Bandura, 1997). Therefore, public service self-efficacy was selected as the operational variable in this study. Public service self-efficacy refers to the self-perception of public service employees about their ability to provide public services. In this study, the one-dimensional four-item self-reporting scale developed by Wang and Xu (2017) was selected to measure the public service self-efficacy. The scale includes four measurement items, such as " I am able to deliver satisfactory services to customers."

**(3) Public Service Motivation.** According to the literature review on public service motivation in Chapter 2, Perry (1996) developed the first measurement scale of

public service motivation, PSM-24. This scale includes 4 dimensions and 24 items. The four dimensions include attraction to public policy making (APP), commitment to the public interest (CPI), compassion (COM) and self-sacrifice (SS). Later scholars of public service motivation mostly adopted this scale directly, selected several dimensions or modified it appropriately. Kim and colleagues (2013) believed that public service motivation is a construct greatly influenced by political system and culture. The scale developed by Perry (1996) based on the cultural and social background of the United States may not be globally applicable. Therefore, together with scholars from 12 countries including China, they developed a new four-dimensional 16-item public service motivation scale PSM-16. The four dimensions of the scale are attraction to public service (APS), commitment to public values (CPV), compassion (COM), and self-sacrifice (SS). Based on the sample data of China, Bao and Li (2016) selected the two items with the largest load in each dimension of PSM-16 from Kim et al. (2013) to form the simplified public service motivation scale PSM-8, which has good reliability and validity. Based on the principle of balance between simplification and effectiveness, this study chose PSM-8 developed by Bao and Li (2016) to measure the public service motivation. The scale includes eight measurement items, such as "meaningful public service is very important to me."

**(4) Organization Service Climate.** Based on the literature review of service climate in Chapter 2, the Global Service Climate scale in Climate for Service Scales developed by Schneider et al. (1998a) was selected in this study. The scale includes 7 items in one dimension, which is a high generalization of the service climate including customer orientation, management practice and customer feedback. The scale asks employees to answer 7 questions based on their observation and perception of their organization. This scale has been widely adopted by other scholars (Jiang et al., 2015; Jiang et al., 2016; Jerger & Wirtz, 2017), so this study also chose it to measure organization service climate. The scale includes seven measurement items, such as "organize efforts to measure and track the quality of the work and service."

**(5) Employees Service Performance.** Based on the literature review on employee service performance in Chapter 2, the service performance scale (SP-7) developed by Liao and Chuang (2004a) can be considered as concise and effective, which perfectly reflects the core characteristics of service performance and has been widely cited by

later scholars (Li & Huang, 2017; Wang & Xu, 2017). Therefore, the scale (SP-7) was selected to measure employee service performance, and the relevant items were modified according to the characteristics of the public sector. The scale includes seven measurement items, such as "Being friendly and helpful to customers."

**(6) Control variable.** In addition, this study also selected working sector, gender, age, education background, political status, staffing situation, time engaged in public service, and time working in the current department as control variables. All control variables are treated as dummy variables. Gender is divided into male and female, represented by 1 and 2 respectively. The age ranges from "18-24 years old" to "over 55 years old", which is represented by 1-5 successively. Educational background from "below junior college" to "postgraduate" is represented by 1-4 successively. Political status is divided into "CPC member" and "Non-CPC member", and the establishment situation is divided into "formal establishment" and "no formal establishment", which are expressed by 1 and 2 respectively. The time engaged in public service and the time worked in the unit are divided into 6 levels from "less than 3 months" to "more than 30 years", which are expressed by 1-6 successively.

### 3.2.3 Statistical Analysis Strategy

In this study, descriptive statistics, one-way analysis of variance, exploratory factor analysis, reliability analysis, confirmatory factor analysis and structural equation model were used for statistical analysis.

**(1) Descriptive statistics.** This study mainly used SPSS22 software to conduct descriptive statistics of samples. The statistical variables include demographic characteristics variables (working department, gender, age, educational background, political status, establishment status, time engaged in public service, time worked in the unit), servant leadership, public service self-efficacy, public service motivation, organizational service climate and employee service performance. The purpose of descriptive statistics is to grasp the basic statistical information of samples and discover the correlation between variables. And the T-test or One-way analysis was used to explore the influence of demographic characteristics variances on the dependent variable employee service performance.

**(2) Reliability and validity test of the scales.** The scales can be used for follow-up research only after passing the reliability and validity test. In this study, the reliability analysis and exploratory factor analysis of the scale were first carried out by using SPSS22 software. Then the confirmatory factor analysis of the scales was carried out using AMOS22 software.

**(3) Hypotheses test.** Since the main variables in this paper are latent variables, the structural equation model was used to analyze the relationships between these latent variables in AMOS22 software. This study mainly examined the relationship between servant leadership and employee service performance, the relationships between servant leadership and AMO, the relationships between AMO and employee service performance, and whether AMO mediated the relationships between servant leadership and employee service performance. All mediating effect tests adopted the five-step process of mediating effect test recommended by Wen and Ye (2014). Finally, the multi-group analysis program in AMOS22 software was used to analyze the moderating effect of control variables.



## CHAPTER 4

### RESULTS

This chapter will first analyze the quality of the scales, then conduct descriptive statistics of the data, and finally test the hypotheses one by one.

#### 4.1 Scale Quality Analysis

This study first revised and optimized the scale through exploratory factor analysis, and then tested the reliability and validity of the revised scale through reliability analysis and confirmatory factor analysis.

##### 4.1.1 Scale Revision and Optimization

In this study, five variables including servant leadership, public service self-efficacy, public service motivation, organizational service climate, and employee service performance were taken as an integral questionnaire to conduct exploratory factor analysis. The results of KMO and Bartlett's Test are shown in Table 4.1. The KMO value was 0.971, the Chi-Square value of Bartlett's Test of Sphericity was 9615.682, and the  $p$  value was less than 0.001, indicating that the questionnaire was suitable for factor analysis.

Table 4.1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.971
Bartlett's Test of Sphericity	Approx. Chi-Square	9615.682
	df	528
	Sig.	0.000

Since this study involves five variables, the number of extraction factors is set as 5 in exploratory factor analysis. The results are shown in Table 4.2. The initial eigenvalues of the five factors are between 0.840-15.66, and the cumulative extraction

sums of squared loadings reaches 66.797%, indicating that all of the items are well explained, and the questionnaire is appropriate to extract the five factors.

**Table 4.2 Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.666	47.473	47.473	15.666	47.473	47.473	5.459	16.542	16.542
2	2.837	8.596	56.069	2.837	8.596	56.069	5.347	16.203	32.745
3	1.585	4.803	60.872	1.585	4.803	60.872	4.168	12.630	45.375
4	1.115	3.380	64.253	1.115	3.380	64.253	3.796	11.502	56.877
5	.840	2.544	66.797	.840	2.544	66.797	3.273	9.920	66.797

Table 4.3 shows the factor analysis results with the loads lower than 0.4 cancelled after rotating by Varimax. According to the suggestion of Straub (1989), items with load value lower than 0.5 for all factors or greater than 0.5 for multiple factors should be excluded, so PSM2 and ESP1 were deleted. Although the coefficient of PSM1 on factor 5 was 0.527, it was also deleted due to lack of literature support. Finally, the questionnaire consists of 5 factors and 30 questions. Factor 1 includes SL1 to SL7 with coefficients ranging from 0.705 to 0.833 and is named as servant leadership. Factor 2 includes SC1 to SC7 with coefficients ranging from 0.616 to 0.737 and is named as organizational service climate. Factor 3 includes ESP2 to ESP7 with coefficients ranging from 0.600 to 0.741 and is named as employee service performance. Factor 4 includes PSM3 to PSM8 with coefficients ranging from 0.568 to 0.684 and is named as public service motivation. Factor 5 includes PSSE1 to PSSE4 with coefficients ranging from 0.603 to 0.733 and is named as public service self-efficacy. Wu Minglong (2003) believed that "If common factors can be extracted effectively in exploratory factor analysis and these factors are close to the theoretical structure, the measurement tool can be considered to have constructive validity". Therefore, the measurement scale in this study has good construction validity.

Table 4.3 Rotated Component Matrix <sup>a</sup>

	Component				
	1	2	3	4	5
SL1	.705				
SL2	.833				
SL3	.754				
SL4	.742				
SL5	.773				
SL6	.769				
SL7	.781				
PSSE1					.733
PSSE2					.710
PSSE3					.634
PSSE4	.439				.603
PSM1					.527
PSM2					.435
PSM3				.576	
PSM4				.654	
PSM5				.684	
PSM6				.664	
PSM7		.427		.596	
PSM8				.568	
SC1		.692			
SC2		.661			
SC3		.616			
SC4		.731			
SC5		.737			
SC6		.712			
SC7		.721			
ESP1		.517	.525		
ESP2			.610		
ESP3			.666		
ESP4			.685		
ESP5			.741		
ESP6			.627		
ESP7			.600		

**Notes:** Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 6 iterations.

#### 4.1.2 Scale Reliability and Validity Test

According to the suggestion of Wu Minglong (2009), the reliability of the scale is mainly judged by the Cronbach Alpha coefficient, factor load  $\lambda$ , reliability coefficient

$\lambda^2$ , measurement error  $1-\lambda^2$ , and composite reliability CR. The Cronbach Alpha coefficients of the scales were analyzed with the reliability analysis program of SPSS22, and the results are shown in Table 4.4. The Cronbach Alpha coefficient of the whole measurement model was 0.956, and the Alpha coefficients of the five subscales were between 0.868 and 0.924, all meeting the criteria of being greater than or equal to 0.70.

Table 4.4 Reliability of Measurement Model

Scale	Item	Cronbach's alpha $\alpha \geq 0.7$	Factor load $\lambda \geq 0.7$ & $p < 0.05$	Reliability coefficient $\lambda^2 \geq 0.5$	Measurement error $1 - \lambda^2 < 0.5$	Composite reliability $CR \geq 0.6$
SL	SL1	.924	.746	.557	.443	0.927
	SL2		.796***	.634	.366	
	SL3		.785***	.616	.384	
	SL4		.804***	.646	.354	
	SL5		.840***	.706	.294	
	SL6		.800***	.640	.360	
	SL7		.836***	.699	.301	
PSSE	PSSE1	.868	.769	.591	.409	0.869
	PSSE2		.806***	.650	.350	
	PSSE3		.772***	.596	.404	
	PSSE4		.813***	.661	.339	
PSM	PSM3	.956 .885	.813	.661	.339	0.886
	PSM4		.770***	.593	.407	
	PSM5		.709***	.503	.497	
	PSM6		.702***	.493	.507	
	PSM7		.771***	.594	.406	
	PSM8		.741***	.549	.451	
SC	SC1	.917	.750	.563	.437	0.918
	SC2		.730***	.533	.467	
	SC3		.749***	.561	.439	
	SC4		.787***	.619	.381	
	SC5		.783***	.613	.387	
	SC6		.835***	.697	.303	
	SC7		.854***	.729	.271	
ESP	ESP2	.889	.743	.552	.448	0.889
	ESP3		.825***	.681	.319	
	ESP4		.774***	.599	.401	

ESP5	.734***	.539	.461
ESP6	.724***	.524	.476
ESP7	.744***	.554	.446

**Notes:** SL=Servant leadership, PSSE=Public service self-efficacy, PSM= Public service motivation, SC= Organizational service climate, ESP= Employee service performance; \*\*\*P<0.001, \*\*P<0.01, \*P<0.05.

The factor load  $\lambda$  is obtained by confirmatory factor analysis in AMOS22 (Figure4.1). The reliability coefficients  $\lambda^2$ , measurement error  $1 - \lambda^2$ , and composite reliability CR are calculated on this basis. The calculation results are shown in Table 4.4. The factor loads  $\lambda$  of the measurement model are between 0.70 and 0.89, and the  $p$ -value is less than 0.05, meeting the standard of  $\lambda \geq 0.70$  &  $p < 0.05$ . The reliability coefficients  $\lambda^2$  with between 0.70 and 0.89 basically meet the standard of  $\lambda^2 \geq 0.5$ . The measurement errors  $1 - \lambda^2$  with between 0.21 and 0.51 basically meet the standard of  $1 - \lambda^2 < 0.5$ . Composite reliability, also known as structural reliability, is mainly used to evaluate the degree of consistency among a group of measurement indicators. Its calculation formula is  $CR = (\sum \lambda)^2 / [(\sum \lambda)^2 + \sum \theta]$ . Lambda  $\lambda$  is the factor load, theta  $\theta$  is the error of measurement. The results with  $0.869 \leq CR \leq 0.927$  meet the standard of  $CR \geq 0.6$ . The analysis results show that all the reliability indicators meet the standards, indicating that the measurement scale in this study has a satisfactory reliability.

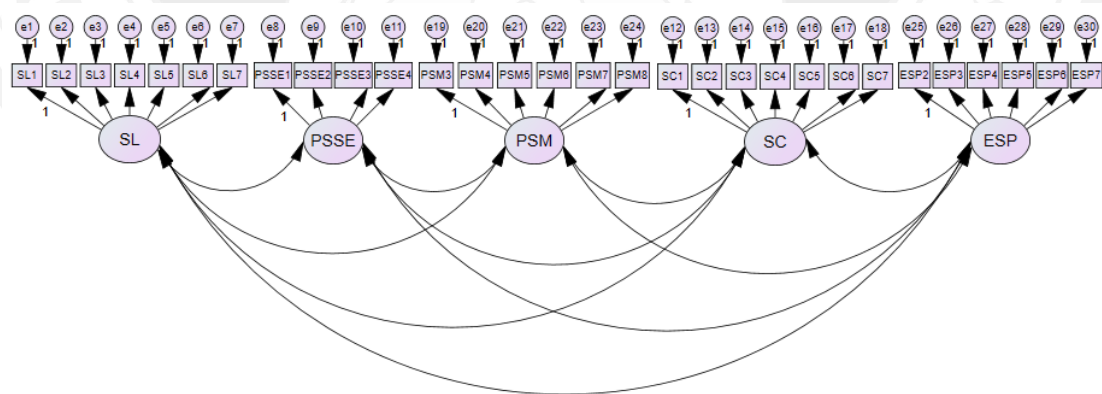


Figure 4.1 CFA(SL + PSSE + PSM + SC + ESP)

Figure 4.1 CFA (SL+PSSE+PSM+SC+ESP)

The fitting degree index of the measurement model is shown in Table 4.5. Chi-square value is 666.161,  $p < 0.05$ . According to Wu Minglong (2009), in the case of

large samples, the chi-square value of the model is usually large, and the  $p$  value is often greater than the critical value of 0.05, so it is necessary to refer to other fitting indexes. Among the other indicators, GFI is 0.899 and AGFI is 0.881, which are very close to the standard of 0.9, while all the other indicators meet the standard of excellent fitting degree. After comprehensive consideration, the fitting degree of the measurement model is acceptable.

Table 4.5 Measurement Model Fit Summary (N=416)

Absolute fit index	Value	Standard	Incremental fit index	Value	Standard	Comprehensive fit index	Value	Standard
CMIN	666.161	the smaller the better	NFI	0.925	>0.9	PGFI	0.764	>0.5
$p$ value	0.000	<0.05	RFI	0.917	>0.9	PNFI	0.840	>0.5
GFI	0.899	>0.9	IFI	0.968	>0.9	CMIN/DF	1.686	1-3
AGFI	0.881	>0.9	TLI	0.965	>0.9	CN	276	>200
RMR	0.029	<0.05	CFI	0.968	>0.9			
SRMR	0.035	<0.05						
RMSEA	0.041	<0.08						

Wu Minglong (2009) believes that the validity of the measurement model refers to the degree to which the measurement tool can correctly measure the traits to be measured, including three types: content validity, criterion validity and structure validity. Content validity is mainly judged qualitatively by researchers and experts, criterion validity needs to find recognized calibration criteria for comparison, and structure validity includes convergence validity and discriminant validity.

Convergent validity refers to the latent variables which are measured effectively on every measurement item and can be determined by standardized loads of the items on latent variable and Average Variance extract (AVE value). The calculation formula of AVE value is:  $AVE = (\sum \lambda^2) / [(\sum \lambda^2) + \sum \theta]$ . Lambda ( $\lambda$ ) is the factor load, theta is the error of measurement. The AVE value represents the comprehensive interpretation ability of latent variables for all measure variables. The larger the AVE value, the stronger the ability of the latent variable to simultaneously explain the corresponding items, and the stronger the ability of the items to show the latent variable (converge to a point). It means that the convergent validity of the scale is better. The AVE values of

the five measurement scales in this study are shown in Table 4.6. The AVE value ranges from 0.564 to 0.645, all of which meet the criteria of greater than 0.5 recommended by Fornell and Larcker (1981), indicating that the convergence validity of the five scales of the questionnaire is very good. Discriminant validity shows that there are significant differences between the traits represented by this latent variable and those represented by other latent variables.

Table 4.6 Mean Value, Standard Deviation, Correlation Coefficient and AVE Value of Variables (N=416)

Variables	Mean	Std. Deviation	SL	PSSE	PSM	SC	ESP
SL	5.481	1.053	(.645)				
PSSE	3.960	.585	.518**	(.625)			
PSM	4.173	.550	.539**	.632**	(.564)		
SC	4.194	.607	.565**	.540**	.697**	(.615)	
ESP	5.958	.672	.521**	.603**	.729**	.742**	(.571)

Note: SL= service leadership; PSSE=public service self-efficacy; PSM=public service motivation; SC=service climate; ESP=employee service performance; SL and ESP are 7-point Likert scales, PSSE, PSM and SC are 5-point Likert scales. The number in brackets is the AVE value of the variable; \*\*. Correlation is significant at the 0.01 level (2-tailed).

Discriminant validity can be distinguished by comparing the square root of the AVE value of a certain dimension with the correlation coefficient between different dimensions. If the arithmetic square root of AVE value is greater than the absolute value of correlation coefficient between latent variables, it indicates that the internal correlation is greater than the external correlation and there is a high discriminant validity (Fornell & Larcker, 1981). Table 4.6 shows that the AVE values of the five factors in this study are between 0.564 and 0.645, with the minimum value of 0.564. The correlation coefficient between factors is between 0.518 and 0.742, so the maximum square value of the correlation coefficient between factors is 0.551 ( $0.742 \times 0.742$ ), which is less than the minimum AVE value 0.564. The AVE values of all factors are greater than the square values of correlation coefficients between factors, so it is reasonable to believe that the measurement model in this study has discriminant validity.

To sum up, the measurement model and data fit well, and the reliability and validity of the scales are very good, which lay a good foundation for the later analysis.

## 4.2 Descriptive Statistics and Correlation Analysis

In this study, descriptive statistics and correlation analysis were conducted for each research variable to understand the mean and standard deviation of each variable, and whether the correlation between the variables was consistent with the trend predicted by the hypothesis. The mean and standard deviation of each variable, and the correlation coefficient between variables are shown in Table 4.6.

The descriptive statistical results show that the servant leadership and employee service performance (7-point Likert scale) have an average value of 5.481 and 5.958, and a standard deviation of 1.053 and 0.672. The mean values of public service self-efficacy, public service motivation and organizational service climate (5-point Likert scale) are 3.960, 4.173 and 4.194 respectively, and the standard deviation is 0.585, 0.550 and 0.607 respectively.

The results of correlation analysis show that there is a positive correlation between servant leadership and employee service performance. Hypothesis 1 is preliminarily verified: servant leadership positively affects employee service performance. Servant leadership is positively correlated with public service self-efficacy, public service motivation and organizational service climate. They are preliminarily verified that H2a: servant leadership positively influences employees' public service self-efficacy, H3a: servant leadership positively influences employees' public service motivation, and H4a: servant leadership positively influences organizational service climate. Public service self-efficacy is positively correlated with employee service performance, which preliminarily verifies that H2b: employee public service self-efficacy positively affects employee service performance. Public service motivation is positively correlated with employee service performance, which preliminarily verifies H3b: employee public service motivation positively affects employee service performance. Organizational service climate is positively correlated with employee service performance, which preliminarily verifies that H4b: organizational service climate positively influences employee service performance.



### 4.3 Hypothesis Testing

This part will firstly test the control effect of demographic characteristic variables, then test the main effect and mediating effects of the research model, and finally test the moderating effects through the multi-group analysis of the model.

#### 4.3.1 The Influence Tests of Demographic Variables on Employee Service Performance

In this study, ANOVA was used to determine whether the influences of different demographic characteristic variables on employee service performance were significantly different between groups.

**(1) The influence of gender on employee service performance.** As shown in Table 4.7, the samples of this study include male and female, the frequency is 167 and 249 respectively, and the mean of employee service performance in the two groups is 5.9159 and 5.9511 respectively. According to Table 4.8, the  $p$  value of Levene Statistic is 0.674, meaning the variance is homogeneous and ANOVA can be performed. According to Table 4.9, the results of ANOVA show that the  $p$  value of differences between groups is 0.801 ( $> 0.05$ ). It means that the gender of respondents has no influence on the employee service performance at 95% confidence interval.

**(2) The influence of organization type on employee service performance.** According to Table 4.7, the samples of this study are from two organization types, namely governments and communities respectively, with frequencies of 311 and 105, and mean of employee service performance is 5.9681 and 6.0825 respectively. According to Table 4.8, the  $p$  value of Levene Statistic is 0.431, meaning the variance is homogeneous and ANOVA can be performed. According to Table 4.9, the results of ANOVA show that the  $p$  value of differences between groups is 0.028 ( $< 0.05$ ). It means that the organization type of respondents has significantly different influence on the employee service performance at 95% confidence interval. The mean of employee service performance of communities (6.0825) is significantly higher than that of governments (5.9159).

**(3) The influence of educational level on employee service performance.** According to Table 4.7, the educational levels of the samples in this study are divided

into below junior college, junior college, university and graduate, with frequencies of 51, 141, 200 and 24 respectively, and the means of employee service performance is 6.0621, 6.0142, 5.9050 and 5.8472 respectively. According to Table 4.8, the  $p$  value of Levene Statistic is 0.178, meaning the variance is homogeneous and ANOVA can be performed. According to Table 4.9, the results of ANOVA show that the  $p$  value of differences between groups is 0.250 ( $> 0.05$ ). It means that the educational level of respondents has no different influence on the employee service performance at 95% confidence interval.

**(4) The influence of post status on employee service performance.** According to Table 4.7, the post status of the samples is divided into budget posts and non-budget posts, with frequency of 244 and 172 respectively, and the mean of employee service performance is 5.8887 and 6.0562 respectively. According to Table 4.8, the  $p$  value of Levene Statistic is 0.287, meaning the variance is homogeneous. According to Table 4.9, the results of ANOVA show that the  $p$  value of differences between groups is 0.012 ( $< 0.05$ ). It means that the post status of respondents has significantly different influence on the employee service performance at 95% confidence interval. The mean of employee service performance of non-budget posts (6.0562) is significantly higher than that of budget posts (5.8887).

**(5) The influence of political status on employee service performance.** According to Table 4.7, the political status of the samples is divided into CPC members and Non-CPC members, with the frequency of 270 and 146 respectively, and the mean of employee service performance is 5.8969 and 6.0708 respectively. According to Table 4.8, the  $p$  value of Levene Statistic is 0.7, meaning the variance is homogeneous and ANOVA can be performed. According to Table 4.9, the results of ANOVA show that the  $p$  value of differences between groups is 0.012 ( $< 0.05$ ). It means that the political status of respondents has significantly different influence on the employee service performance at 95% confidence interval. The mean of employee service performance of Non-CPC members (6.0708) is significantly higher than that of CPC members (5.8969).

Table 4.7 Descriptive Statistics

**Dependent variable:** employee service performance (mean)

Factor	Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Gender	male	167	5.9681	.68911	.05333	5.8628	6.0733	1.50	6.83
	female	249	5.9511	.66107	.04189	5.8686	6.0336	3.00	6.83
	Total	416	5.9579	.67169	.03293	5.8932	6.0227	1.50	6.83
Organization type	government	311	5.9159	.69752	.03955	5.8380	5.9937	1.50	6.83
	community	105	6.0825	.57370	.05599	5.9715	6.1936	4.33	6.83
	Total	416	5.9579	.67169	.03293	5.8932	6.0227	1.50	6.83
Educational level	below junior college	51	6.0621	.56170	.07865	5.9041	6.2201	4.33	6.83
	junior college	141	6.0142	.59943	.05048	5.9144	6.1140	3.00	6.83
	university	200	5.9050	.75216	.05319	5.8001	6.0099	1.50	6.83
	graduate	24	5.8472	.54043	.11032	5.6190	6.0754	4.83	6.67
	Total	416	5.9579	.67169	.03293	5.8932	6.0227	1.50	6.83
Post status	budget post	244	5.8887	.72594	.04647	5.7971	5.9802	1.50	6.83
	non-budget post	172	6.0562	.57403	.04377	5.9698	6.1426	4.33	6.83
	Total	416	5.9579	.67169	.03293	5.8932	6.0227	1.50	6.83
Political status	CPC member	270	5.8969	.70048	.04263	5.8130	5.9808	1.50	6.83
	Non-CPC member	146	6.0708	.60103	.04974	5.9725	6.1691	4.00	6.83
	Total	416	5.9579	.67169	.03293	5.8932	6.0227	1.50	6.83

Table 4.8 Test of Homogeneity of Variances

**Dependent variable:** employee service performance (mean)

Factor	Levene Statistic	df1	df2	Sig.
Gender	.177	1	414	.674
Organization type	.621	1	414	.431
Educational level	1.647	3	412	.178
Post status	1.139	1	414	.287
Political status	.149	1	414	.700

Table 4.9 ANOVA

**Dependent variable:** employee service performance (mean)

Factor		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	.029	1	.029	.063	.801
	Within Groups	187.207	414	.452		
	Total	187.236	415			
Organization type	Between Groups	2.181	1	2.181	4.879	<b>.028</b>
	Within Groups	1185.055	414	.447		
	Total	187.236	415			
Educational level	Between Groups	1.854	3	.618	1.373	.250
	Within Groups	185.382	412	.450		
	Total	187.236	415			
Post status	Between Groups	2.832	1	2.832	6.358	<b>.012</b>
	Within Groups	184.404	414	.445		
	Total	187.236	415			
Political status	Between Groups	2.864	1	2.864	6.432	<b>.012</b>
	Within Groups	184.372	414	.445		
	Total	187.236	415			

**(6) Interpretation and discussion.** First, there is no significant difference between male and female employees' service performance, indicating that gender has no significant impact on employee service performance. For the public, they are concerned about whether public employees provide quality public services for themselves, and do not care whether the employees who provide services for themselves are male or female. For public sector employees, whether they provide quality public services depends on their ability and willingness to provide public services, but nothing to do with their gender.

Secondly, the service performance of community employees is significantly higher than that of government agencies. In accordance with article 111 of the Constitution of the People's Republic of China, article 2 of the organic law of the urban residents' committees of the People's Republic of China and the organic law of the villagers' committees of the People's Republic of China, residents' committees and villagers' committees are grass-roots mass autonomous organizations that residents and

villagers manage, educate and serve themselves, and practice democratic elections, decision-making, management and supervision. The resident and villager committees set up sub-committees, such as people's mediation, public security and public health. They deal with the public affairs and public welfare in their residential areas, mediate civil disputes, assist in maintaining public order, reflect the opinions, demands and suggestions of the masses to the people's government, and take charge of and report on the work to the residents/villagers' meeting and the residents/villagers' representative meeting. Therefore, community employees are not civil servants, nor do they consider themselves or be considered "officials" by others, but rather workers providing community public services. They can only win elections if they are recognized by the public by providing higher public services. In contrast, government employees are more likely to think of themselves and be treated as officials by the public. They have less pressure and motivation to provide public services, so their employee service performance is lower than that of the community employees.

Third, there is no significant difference in the mean of employee service performance between different educational levels, indicating that educational level has no significant effect on the employee service performance. Educational level is only a basic reflection of employees' educational level in a certain professional field, and has no direct relationship with public service, nor can it reflect employees' ability and motivation of public service. According to the expectancy theory of Vroom (1994), only motivation and ability are the most important individual factors affecting performance. Therefore, educational level has no significant influence on employee service performance.

Fourth, post status has a significant influence on employee service performance, and employee service performance of non-budget post group is significantly higher than that of budget post group. Under the current system, employees with budget post can stay on for long periods of time if they have done nothing seriously wrong. They need not worry about being disciplined or even fired for poor employee service performance. However, employees with non-budget posts must strive for the good evaluation of the organizations and the public by providing higher public service performance, so as to retain the job opportunities. Therefore, the employee service performance of non-budget post group is significantly higher than that of budget post group.

Fifth, political status has a significant influence on employee service performance, and the service performance of non-CPC group is significantly higher than that of CPC group. The general outline of the Constitution of the Communist Party of China stipulates that party construction must insist on serving the people wholeheartedly, so it seems that the employee service performance of the CPC member should be higher than or at least not lower than that of the Non-CPC member. So how did the opposite happen? Through correlation analysis of political status and post status, it is found that Pearson Correlation between them is as high as 0.231, with a significant positive correlation at the level of 0.01. Therefore, this result actually reflects that the employee service performance of budget post group is significantly lower than that of non-budget post group.

#### 4.3.2 Main Effect Test



Figure 4.2 The Main Effect Model

(1) **Main effect test.** According to the hypotheses and models in Chapter 3, the section will examine the main effect model of servant leadership's influence on employee service performance (Figure 4.2).

Table 4.10 Main Effect Model Fit Summary (N=416)

Absolute fit index	Standard	value	Incremental fit index	Standard	value	Comprehensive fit index	Standard	value
CMIN	the smaller the better	135.458	NFI	>0.9	0.960	PGFI	>0.5	0.670
<i>p</i>	>0.05	0.000	RFI	>0.9	0.952	PNFI	>0.5	0.788
GFI	>0.9	0.952	IFI	>0.9	0.979	CMIN/DF	1-3	2.117
AGFI	>0.9	0.932	TLI	>0.9	0.974	CN	>200	257
RMR	<0.05	0.039	CFI	>0.9	0.979			
SRMR	<0.05	0.034						
RMSEA	<0.08	0.052						

The fitting degree indexes of the main effect model are shown in Table 4.10. Except the chi-square value and P value which are easily affected by the number of samples, all the other fitting degree indexes meet the excellent standard. Therefore, the model and data fit well (Wu Minglong, 2009). Structural equation model analysis results are shown in Table 4.11. The standardized regression coefficient of the independent variable "servant leadership" on the dependent variable "employee service performance" is 0.573, which is significantly correlated at 0.001 level. **Hypothesis 1 (H1) is verified**, that is, servant leadership significantly affects employee service performance.

Table 4.11 Main Effect Test Results (N=416)

Hypothetical path	Regression Weights	Standardized Regression Weights	C.R.	p	Whether or not to support the hypothesis
H1:SL→ESP	0.383	0.573	0.794	***	Support

**Notes:** SL= service leadership, ESP=employee service performance; \*\*\*P<0.001, \*\*P<0.01, \*P<0.05; Two Tailed Significance.

**(2) Interpretation and discussion.** The main effect (hypothesis 1) was verified, that is, servant leadership significantly positively affected employee service performance. According to the social learning theory (Bandura, 1971), leaders occupy a prominent position in the public sector, and leadership behaviors have a strong demonstration effect on employees. Different leadership behaviors have distinct influences on employees. The help and service behaviors of servant leaders in the public sector will serve as a model to arouse observation, imitation and learning of employees and put them into their own public service practice, which will certainly improve the employee service performance. The verification of the empirical research to the theoretical hypothesis has important guiding significance to the practice of public sector management. The public sector should reform the systems of selection, assessment and training of leaders to select and train more servant leaders for the public sector. It will help improve the service performance of public sector employees and ultimately help build a service-oriented government that is satisfactory to the people.

### 4.3.3 Mediating Effect Test

**(1) Mediating effect test procedure.** In simple terms, where X affects Y, and X affects Y through an intermediate variable M, M is the mediating variable (as shown in Figure 4.3). Traditional testing methods of mediating effects include causal steps, products of coefficients and difference in coefficients. Wen Zhonglin, Chang Lei, Hau Kit-Tai, and Liu Hongyun (2004) proposed a new test procedure based on the procedure designed by Reuben M. Baron and David A. Kenny (1986). This test procedure controls type I and type II errors with small probabilities and can also test partial and complete mediating effects. Later, Wen and Ye (2014) further improved it and proposed the following five-step procedure for mediating effect test. Step 1: To test the main effect (c) of independent variable X on dependent variable Y. If significant, it will be considered according to the mediating effect, or be considered according to the suppressing effect. Suppressing effect is a common phenomenon in the mediation model (D. P. MacKinnon, Krull, & Lockwood, 2000). The appearance of suppressing effect means that there are mediating variables with larger effect between independent variables and dependent variables (Kenny, Korchmaros, & Bolger, 2003; D. MacKinnon, 2012). Whether the main effect is significant or not, it should be further tested. Step 2: To test the direct effect (a) of independent variable X on mediating variable M and the direct effect (b) of mediating variable M on dependent variable Y successively. If both are significant, the indirect effects are significant, and then move on to step 4. If at least one is not significant, proceed to step 3. Step 3: To directly test  $H_0: ab = 0$  by Bootstrap method. If significant, reject  $H_0$ , which means that neither a nor b is equal to 0, and the indirect effect is significant, proceed to step 4. Otherwise, if the indirect effect is not significant, stop the analysis. Step 4: To test the direct effect (c') of independent variable X on dependent variable Y. If not significant, it is a complete mediating effect. If significant, proceed to the fifth step. Step 5: To compare the signs of ab and c'. If both signs are the same, it is a partial mediating effect, and to report the proportion of mediating effect to the total effect (ab/c). If the two signs are different, it is a suppressing effect, and to report the absolute value of the ratio of indirect effect to direct effect ( $|ab/c'|$ ).



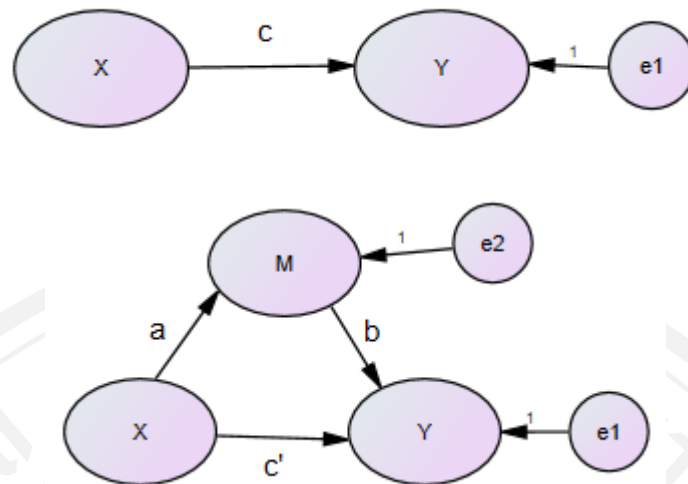


Figure 4.3 The Diagram of Mediation Model

**(2) The mediating effect test of public service self-efficacy on the relationship between servant leadership and employee service performance.** In the study, the five-step process of mediating effect test suggested by Wen and Ye (2014) was used to test the mediating effect of public service self-efficacy on the relationship between servant leadership and employee service performance by using bootstrap method with bias correction (self-sampling sample size was set at 5000 and confidence level was set at 95%) in AMOS22 software (Figure 4.4).

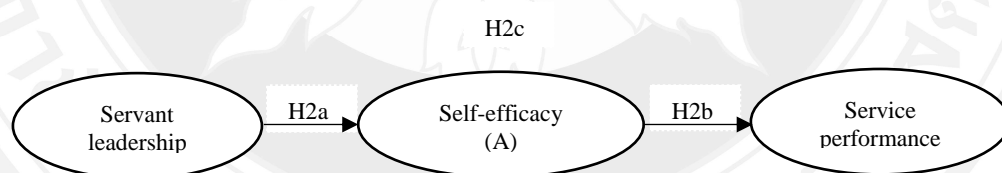


Figure 4.4 The Mediation Model of Public Service Self-efficacy

The public service self-efficacy mediating effect model converges after 8 iterations, and the fitting degree index is shown in Table 4.12. Besides the chi-square value and  $p$  value which are easily affected by the sample size, the other fitting indexes all meet the excellent standard (Wu Minglong, 2009). On the whole, the mediating effect model of public service self-efficacy fits well.

Table 4.12 Mediating Effect Model Fit Summary (N=416)

Indicator	Standard	Self-efficacy mediation model	Service motivation mediation model	Service climate mediation model
<b>Absolute fit index</b>				
CMIN	The smaller the better	229.219	277.978	296.481
P	>0.05	0.000	0.000	0.000
GFI	>0.9	0.938	0.934	0.931
AGFI	>0.9	0.918	0.915	0.913
RMR	<0.05	0.036	0.034	0.033
SRMR	<0.05	0.034	0.034	0.034
RMSEA	<0.08	0.048	0.046	0.043
<b>Incremental fit index</b>				
NFI	>0.9	0.950	0.945	0.948
RFI	>0.9	0.942	0.937	0.941
IFI	>0.9	0.975	0.974	0.977
TLI	>0.9	0.970	0.970	0.973
CFI	>0.9	0.975	0.974	0.977
<b>Comprehensive fit index</b>				
PGFI	>0.5	0.711	0.732	0.740
PNFI	>0.5	0.811	0.824	0.833
CMIN/DF	1-3	1.976	1.866	1.775
CN	>200	258	267	278

The mediating effect test results of public service self-efficacy are shown in Table 4.13. Step 1: The total standardized effect (c) of servant leadership on employee service performance is 0.573, which is significant at the level of 0.01. Step 2: The direct effect (a) of servant leadership on public service self-efficacy is 0.747, which is significant at the level of 0.01. **Hypothesis H2a is established.** The direct effect (b) of public service self-efficacy on employee service performance is 0.607, which is significant at the level of 0.01. **Hypothesis H2b is established.** Both a and b are significant, which means that the mediating effect is significant and **Hypothesis H2c is true**, then go to step 4. Step 4: The direct effect (c') of servant leadership on employee service performance is 0.119 and *p* value is 0.242, which is not significant at the level of 0.05. It shows that public

service self-efficacy **plays a complete mediating role** in the relationship between servant leadership and employee service performance.

Table 4.13 The Mediating Effect Test Results (N=416)

Effect	Code	Path	Effect value	Support Hypothesis
<b>The mediation model of PSSE</b>		<b>SL→PSSE→ESP</b>		
Standardized Total Effect	c	SL→ESP	0.573**	H1
	a	SL→PSM	0.747**	H2a
Standardized Direct Effect	b	PSM→ESP	0.607**	H2b
	c'	SL→ESP	0.119 (p=0.242)	H2c ( completed mediation effects )
<b>The mediation model of PSM</b>		<b>SL→PSM→ESP</b>		
Standardized Total Effect	c	SL→ESP	0.573**	H1
	a	SL→PSM	0.602***	H3a
Standardized Direct Effect	b	PSM→ESP	0.745***	H3b
	c'	SL→ESP	0.124*	H3c ( Partial mediation effect )
Standardized Indirect Effect	ab	SL→(PSM)→ESP	0.449***	
Standardized Indirect Effects/ Total Effect	ab/c		78.4%	
<b>The mediation model of SC</b>		<b>SL→SC→ESP</b>		
Standardized Total Effect	c	SL→ESP	0.573**	H1
	a	SL→SC	0.588**	H4a
Standardized Direct Effect	b	SC→ESP	0.744***	H4b
	c'	SL→ESP	0.135*	H4c ( Partial mediation effect )
Standardized Indirect Effect	ab	SL→(SC)→ESP	0.438***	
Standardized Indirect Effects/ Total Effect	ab/c		76.4%	

**Notes:** SL= service leadership, PSSE=public service self-efficacy, PSM=public service motivation, SC=service climate, ESP=employee service performance; \*\*\* P<0.001, \*\* P<0.01, \* P<0.05; Two Tailed Significance.

**(3) The mediating effect test of public service motivation on the relationship between servant leadership and employee service performance.** In the study, the five-step process of mediating effect test suggested by Wen and Ye (2014) was used to test the mediating effect of public service motivation on the relationship between servant leadership and employee service performance by using bootstrap method with

bias correction (self-sampling sample size was set at 5000 and confidence level was set at 95%) in AMOS22 software (Figure 4.5).

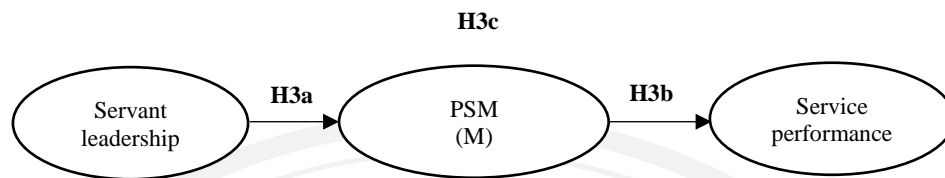


Figure 4.5 The Mediation Model of Public Service Motivation (PSM)

The public service motivation mediating effect model converges after 8 iterations, and the fitting degree index is shown in Table 4.12. Besides the chi-square value and  $p$  value which are easily affected by the sample size, the other fitting indexes all meet the excellent standard (Wu Minglong, 2009). On the whole, the mediating effect model of public service motivation fits well. The mediating effect test results of public service motivation are shown in Table 4.13. Step 1: The total effect (c) of servant leadership on employee service performance is 0.573, which is significant at the level of 0.01. It can be considered in terms of mediating effect. Step 2: The direct effect (a) of servant leadership on public service motivation is 0.602, and it is significant at 0.001 level. **Hypothesis 3a is true.** The direct effect b of public service motivation on employee service performance is 0.745, which is significant at 0.001 level. **Hypothesis 3b is verified.** Since both direct effects a and b are significant, the mediating effect is significant. **Hypothesis 3c is verified**, then go to step 4. Step 4: The direct effect (c') of servant leadership on employee service performance is 0.124, which is significant at the level of 0.05. Step 5, the mediating effect value (ab) is 0.449, which is the same as the symbol of c', indicating that public service motivation **plays a partial mediating effect** between servant leadership and employee service performance. The mediating effect accounted for 78.4% of the total effect.

**(4) The mediating effect test of organizational service climate on the relationship between servant leadership and employee service performance.** In the section, the five-step process of mediating effect test suggested by Wen and Ye (2014) was used to test the mediating effect of organizational service climate on the relationship between servant leadership and employee service performance by using

bootstrap method with bias correction (self-sampling sample size was set at 5000 and confidence level was set at 95%) in AMOS22 software (Figure 4.6).

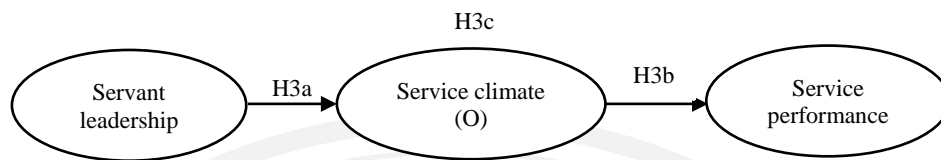


Figure 4.6 The Mediation Model of Service Climate

The mediating effect model of organizational service climate converges after 9 iterations, and the fitting index is shown in Table 4.12. Besides the chi-square value and  $p$  value which are easily affected by the sample size, the other fitting indexes all meet the excellent standard (Wu Minglong, 2009). According to comprehensive judgment, the mediating effect model of organizational service climate fits well. The mediating effect test results of organizational service climate are shown in Table 4.13. Step 1: The total effect (c) of servant leadership on employee service performance is 0.573, which is significant at the level of 0.01. It can be considered in terms of mediating effect. Step 2: The direct effect (a) of servant leadership on the organizational service climate is 0.588, which is significant at the level of 0.01. **Hypothesis 4a is verified.** The direct effect (b) of organizational service climate on employee service performance is 0.744, which is significant at the level of 0.001. **Hypothesis 4b is verified.** Since both direct effects a and b are significant, the mediating effect is significant. **Hypothesis 4c is verified**, then go to step 4. Step 4: The direct effect (c') of servant leadership on employee service performance is 0.135, which is significant at the level of 0.05. Step 5: The mediating effect value (ab) is 0.438, which is the same as the symbol c', indicating that organizational service climate **plays a partial mediating effect** between servant leadership and employee service performance. The mediating effect accounted for 76.4% of the total effect.

In summary, all hypotheses H1, H2a, H2b, H2c, H3a, H3b, H3c, H4a, H4b and H4c in this study have been verified (Table 4.14).

Table 4.14 Summary of Research Hypothesis Test Results

Hypothesis	Hypothetical content	Whether it is verified or not	Completely or partially mediated
H1	Servant leadership has a significant positive effect on employee service performance.	verified	
H2a	Servant leadership has a significant positive effect on public service self-efficacy.	verified	
H2b	Public service self-efficacy has a significant positive effect on employee service performance.	verified	
H2	Public service self-efficacy mediates the positive influence of servant leadership on employee service performance.	verified	completely mediating
H3a	Servant leadership has a significant positive effect on employees' public service motivation.	verified	
H3b	Public service motivation has a significant positive effect on employee service performance.	verified	
H3	Public service motivation mediates the positive influence of servant leadership on employee service performance.	verified	partial mediating
H4a	Servant leadership significantly positively affects the organizational service climate.	verified	
H4b	Organizational service climate significantly positively affects employee service performance.	verified	
H4	Organizational service climate mediates the positive influence of servant leadership on employee service performance.	verified	partial mediating

**(5) Interpretation and discussion.** This study examined the mediating effects of three mediating variables, namely, public service self-efficacy, public service motivation and organizational service climate, between servant leadership and employee service performance. Firstly, public service self-efficacy mediating model is constructed by putting public service self-efficacy into the main effect model of servant leadership and employee service performance. The results show that servant leadership

positively affects public service self-efficacy, public service self-efficacy positively affects employee service performance, and the direct effect of servant leadership on employee service performance is no longer significant. It means that public service self-efficacy plays a completely mediating role between servant leadership and employee service performance. It reveals the first mechanism that servant leadership affects employee service performance. That is to say, servant leaders have strong ability and willingness to help improve the public service ability of employees. After recognizing their service ability, employees provide better public services to the public, thus bringing higher employee service performance.

Secondly, the mediating effect model of public service motivation is constructed by putting public service motivation into the main effect model of servant leadership and employee service performance. The results showed that servant leadership positively affected public service motivation, public service motivation positively affected employee service performance, and the direct effect of servant leadership on employee service performance was still significant. It means that public service motivation plays a partial mediating role between servant leadership and employee service performance. It reveals the second mechanism that servant leadership affects employee service performance. That is to say, servant leaders train and awaken the public service motivation of employees by inculcating and modeling, and promoting employees to actively provide public services, thus bringing higher employee service performance.

Thirdly, the mediating effect model of organizational service climate is constructed by putting organizational service climate into the main effect model of servant leadership and employee service performance. The results showed that servant leadership positively affected organizational service climate, organizational service climate positively affected employee service performance, and the direct effect of servant leadership on the employee service performance was still significant. It means that organizational service climate plays a partial mediating role between servant leadership and employee service performance. It reveals the third mechanism that servant leadership affects employee service performance. That is to say, servant leaders with strong ability and willingness to reform and shape organizational service climate,

edify and support employees to provide better public services to the public, and thus bring higher employee service performance.

#### 4.3.4 Integration Model Test

**(1) Integration model test.** In the previous studies, the main effect model and three independent mediating models were tested respectively. Next, three mediating variables were put into the main effect model to build an integrated model (Figure 4.7). In this study, Bootstrap method based on deviation correction (self-sampling sample size was set at 5000 and confidence level was set at 95%) was used in Amos22 software for structural equation model analysis.

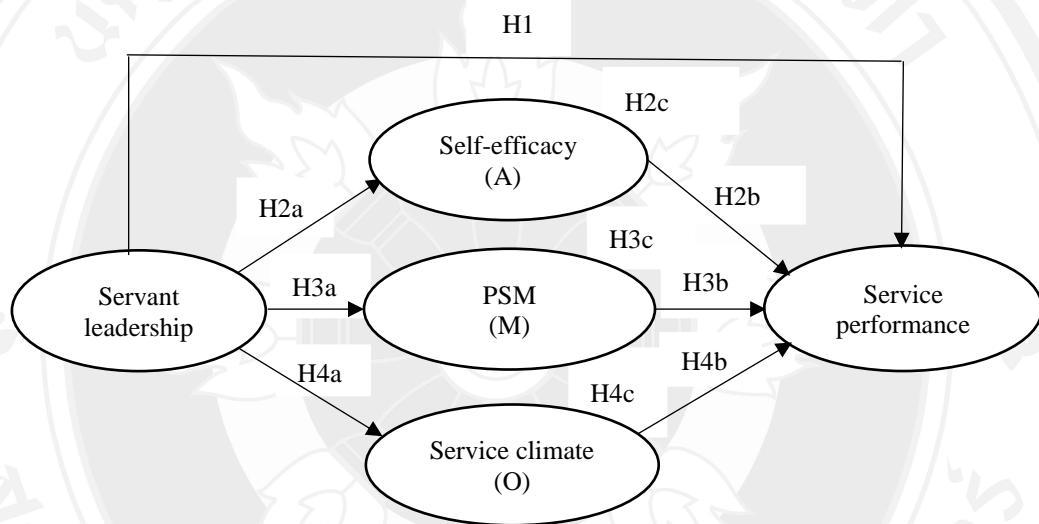


Figure 4.7 Integration Model

Table 4.15 Integration Model Fit Summary (N=416)

Absolute fit index	Standard	Value	Incremental fit index	Standard	Value	Comprehensive fit index	Standard	Value
CMIN	The small the better	945.359	NFI	>0.9	0.893	PGFI	>0.5	0.738
<i>p value</i>	>0.05	0.000	RFI	>0.9	0.883	PNFI	>0.5	0.817
GFI	>0.9	0.862	IFI	>0.9	0.935	CMIN/DF	1-3	2.375
AGFI	>0.9	0.839	TLI	>0.9	0.929	CN	>200	196
RMR	<0.05	0.060	CFI	>0.9	0.935			
SRMR	<0.05	0.096						
RMSEA	<0.08	0.058						



The integration model converges after nine iterations, and the fit summary is shown in Table 4.15. Although the fitting degree of the integrated model is slightly lower than that of the main effect model and the independent mediating effect models, most indexes including RMSEA, IFI and CMIN/DF still meet excellent standards (Wu Minglong, 2009). Therefore, according to comprehensive judgment, the fitting degree of the integrated model is within the acceptable range.

The analysis results of the integrated model are shown in Table 4.16. The total standardized effect  $c$  of servant leadership on employee service performance is 0.667, which is significant at the 0.001 level. Therefore, **hypothesis 1 (H1) is supported**. The direct effect  $a_1$  of servant leadership on public service self-efficacy was 0.788, which was significant at 0.001 level. Therefore, **hypothesis 2a (H2a) is supported**. The direct effect  $b_1$  of public service self-efficacy on employee service performance is 0.151, which is not significant at the level of 0.05. Therefore, **hypothesis 2b (H2b) is not supported**. The mediating effect of public service self-efficacy between servant leadership and employee service performance  $a_1b_1$  is 0.119, which is significant at the level of 0.01. Therefore, **hypothesis 2c (H2c) is supported**. The direct effect of servant leadership on public service motivation  $a_2$  was 0.670, which was significant at 0.001 level. Therefore, **hypothesis 3a (H3a) is supported**. The direct effect of public service motivation on employee service performance  $b_2$  is 0.422, which is significant at 0.001 level. Therefore, **hypothesis 3b (H3b) is supported**. The mediating effect of public service motivation between servant leadership and employee service performance  $a_2b_2$  is 0.283, which is significant at 0.001 level. Therefore, **hypothesis 3c (H3c) is supported**. The direct effect of servant leadership on organizational service climate is 0.639, which is significant at 0.001 level. Therefore, **hypothesis 4a (H4a) is supported**. The direct effect of organizational service climate on employee service performance  $b_3$  is 0.538, which is significant at 0.001 level. Therefore, **hypothesis 4b (H4b) is supported**. The mediating effect of organizational service climate between servant leadership and employee service performance is 0.344, which is significant at the level of 0.01. Therefore, **hypothesis 4c (H4c) is supported**. The direct effect of servant leadership on employee service performance  $c'$  is -0.079, and the  $p$  value is 0.345, which is not significant at the 0.05 level, indicating that public service self-efficacy, public

service motivation and organizational service climate **together completely mediate** the influence of servant leadership on employee service performance.

Table 4.16 The Test of Integration Model (N=416)

Effect	Code	Path	Effect Value	Support Hypothesis
Standardized Total Effect	c	SL→ESP	0.667***	H1
	a1	SL→PSSE	0.788***	H2a
	a2	SL→PSM	0.670***	H3a
	a3	SL→SC	0.639***	H4a
Standardized Direct Effect	b1	PSSE→ESP	0.151(p=0.111)	H2b (nonsupport)
	b2	PSM→ESP	0.422***	H3b
	b3	SC→ESP	0.538***	H4b
	c'	SL→ESP	-0.079 (p=0.345)	
	a1b1	SL→(PSSE)→ESP	0.119**	H2c
	a2b2	SL→(PSM)→ESP	0.283***	H3c
	a3b3	SL→(SC)→ESP	0.344**	H4c
Standardized Indirect Effect	a1b1 + a2b2 + a3b3	SL→(PSSE/PSM/SC)→ESP	0.746***	
	a1b1- a2b2		-0.164*	
	a1b1- a3b3		-0.225**	
	a2b2- a3b3		-0.061 (p=0.363)	
Indirect Effects/ Total Effect	a1b1/c		17.8%	
	a2b2/c		42.4%	
	a3b3/c		51.6%	

**Notes:** SL= service leadership, PSSE=public service self-efficacy, PSM=public service motivation, SC=service climate, ESP=employee service performance; \*\*\*P<0.001, \*\*P<0.01, \*P<0.05; Two Tailed Significance (Bootstrap).

This study also compared the mediating effects of public service self-efficacy, public service motivation and organizational service climate (Table 4.16). The mediating effect difference between public service self-efficacy and public service motivation (a1b1-a2b2) is -0.164, which is significant at the level of 0.05, indicating that the mediating effect of public service motivation is significantly stronger than that of public service self-efficacy (a2b2 > a1b1). The mediating effect difference between public service self-efficacy and organizational service climate (a1b1-a3b3) is -0.225, which is significant at 0.01 level, indicating that the mediating effect of organizational

service climate is significantly greater than that of public service self-efficacy ( $a3b3 > a1b1$ ). The mediating effect difference between public service motivation and organizational service climate ( $a2b2-a3b3$ ) is -0.061, and the  $p$  value is 0.363, which is not significant at the level of 0.05, indicating that there is no significant difference between the mediating effect of public service motivation and organizational service climate. To sum up, there is no significant difference between the mediating effects of public service motivation and organizational service climate on the relationship between servant leadership and employee service performance, and the mediating effects of both of them significantly exceed that of public service self-efficacy.

**(2) Multi-group analysis.** Based on the ANOVA results of demographic variables, this study further included “organization type”, “political status” and “post status” as control variables into the integration model for multi-group analysis. In this study, the multi-group analysis program in AMOS22 software and Group Differences program in Stats Tools Package software were performed to examine the differences between “unit type”, “political status” and “compilation status” in the integration model.

Table 4.17 Multi-group Analysis Based on Organization Type (N=416)

Path			Organization type				z-score
			Government (n=311)		Community (n=105)		
			Estimate	p	Estimate	p	
PSSE	<---	SL	0.575	0.000	0.544	0.000	-0.315
PSM	<---	SL	0.461	0.000	0.291	0.000	-2.249**
SC	<---	SL	0.424	0.000	0.315	0.000	-1.357
ESP	<---	PSSE	0.105	0.128	0.187	0.069	0.664
ESP	<---	PSM	0.445	0.000	0.388	0.000	-0.445
ESP	<---	SC	0.506	0.000	0.585	0.000	0.573
ESP	<---	SL	-0.026	0.695	-0.098	0.223	-0.692

**Notes:** SL= service leadership, PSSE=public service self-efficacy, PSM=public service motivation, SC=service climate, ESP=employee service performance; \*\*\* p-value < 0.01, \*\* p-value < 0.05, \* p-value < 0.10.

In this study, the samples were divided into two groups according to organization types: “government” and “community”. There were 311 people in government organizations and 105 in community organizations, accounting for 74.8% and 25.2%

respectively. The results of multi-group analysis based on organization type are shown in Table 4.17. In the seven paths of the integration model, only the path of servant leadership to public service motivation is significantly different between different groups at the level of 0.05. This result indicates that the organization type has a moderating effect on the influence of servant leadership on public service motivation, and the servant leadership in government organizations has a greater influence on the employee service performance than that in community organizations.

Table 4.18 Multi-group Analysis Based on Political Status (N=416)

Path			Political status				z-score
			CPC Members (n=270)		Non-CPC members (n=146)		
			Estimate	p	Estimate	p	
PSSE	<---	SL	0.544	0.000	0.618	0.000	0.767
PSM	<---	SL	0.394	0.000	0.489	0.000	1.183
SC	<---	SL	0.397	0.000	0.406	0.000	0.117
ESP	<---	PSSE	0.134	0.032	0.030	0.815	-0.733
ESP	<---	PSM	0.375	0.000	0.591	0.000	1.652*
ESP	<---	SC	0.532	0.000	0.509	0.000	-0.171
ESP	<---	SL	-0.031	0.578	-0.047	0.697	-0.115

**Notes:** SL= service leadership, PSSE=public service self-efficacy, PSM=public service motivation, SC=service climate, ESP=employee service performance; \*\*\* p-value < 0.01, \*\* p-value < 0.05, \* p-value < 0.10.

In this study, the samples were divided into two groups of “CPC members” and “non-CPC members” according to their political status. Among them, there were 270 CPC members and 146 non-CPC members, accounting for 64.9% and 35.1% respectively. The results of multi-group analysis based on political status are shown in Table 4.18. In the seven paths of the integration model, the differences of all paths between the two groups of CPC members and non-CPC members are not significant at the level of 0.05, and the only path of public service motivation on employee service performance is significant at the level of 0.10. The results show that political status has no moderating effect on the seven paths of the integration model.

In this study, the samples were divided into two groups of “budget post” and “non-budget post” according to post status. Among them, there were 244 employees with budget post and 172 employees with non-budget post, accounting for 58.7% and 41.3%

respectively. The results of multi-group analysis based on post status are shown in Table 4.19. In the seven paths of the integration model, the difference between the two groups with budget post and non-budget post is not significant at the level of 0.05, indicating that post status has no moderating effect on the seven paths of the integration model.

Table 4.19 Multi-group Analysis Based on Post Status (N=416)

Path			Posts status				z-score
			Budget posts (n=244)		Non-budget posts (n=172)		
			Estimate	p	Estimate	p	
PSSE	<---	SL	0.584	0.000	0.553	0.000	-0.359
PSM	<---	SL	0.446	0.000	0.367	0.000	-1.097
SC	<---	SL	0.419	0.000	0.359	0.000	-0.817
ESP	<---	PSSE	0.133	0.074	0.121	0.167	-0.102
ESP	<---	PSM	0.394	0.000	0.520	0.000	1.056
ESP	<---	SC	0.532	0.000	0.517	0.000	-0.125
ESP	<---	SL	-0.026	0.713	-0.084	0.270	-0.553

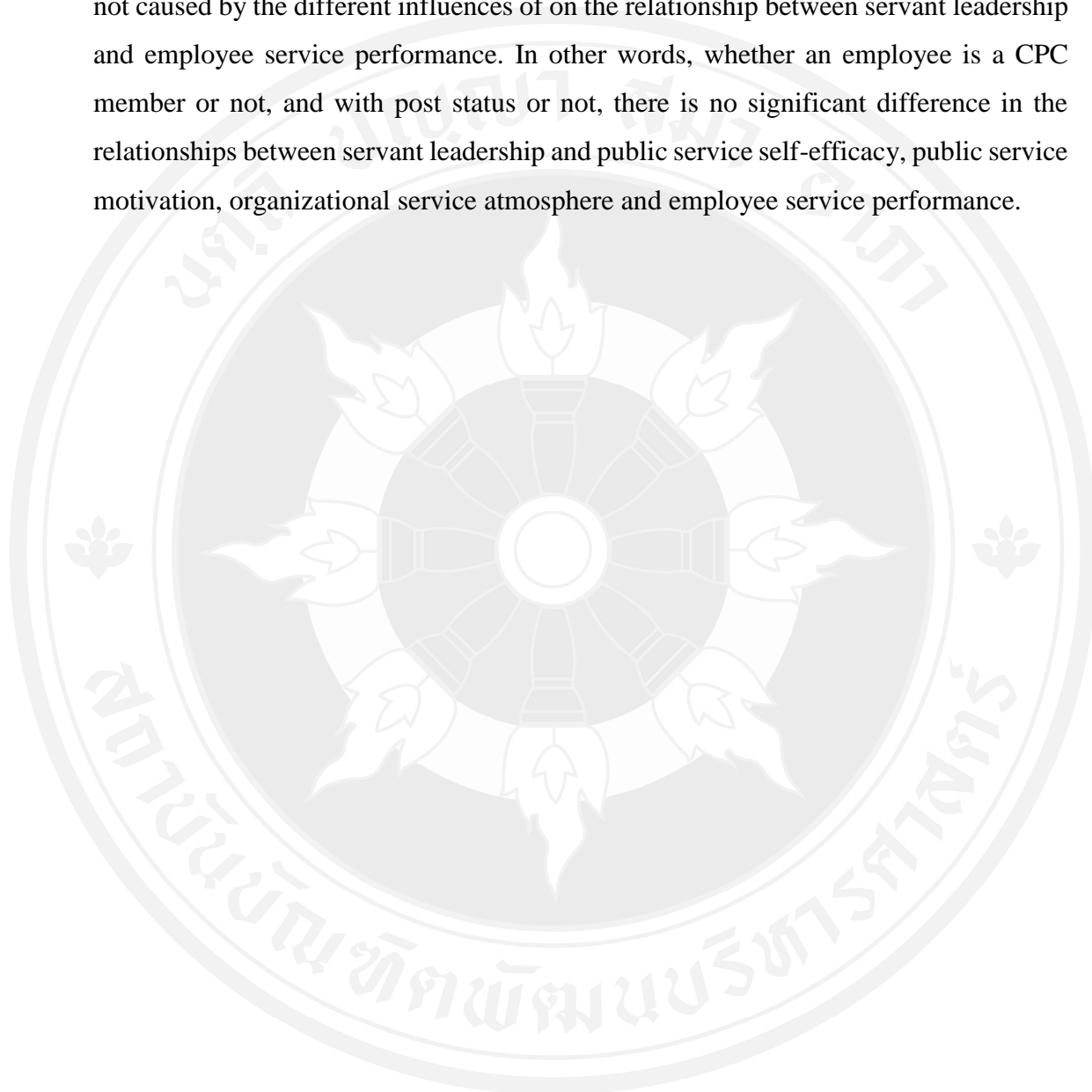
**Notes:** SL= service leadership, PSSE=public service self-efficacy, PSM=public service motivation, SC=service climate, ESP=employee service performance; \*\*\* p-value < 0.01, \*\* p-value < 0.05, \* p-value < 0.10.

**(3) Interpretation and discussion.** In this study, three mediating variables, namely public service self-efficacy, public service motivation and organizational service climate, were put into the main effect model to construct an integration model. The results show that the overall effect of servant leadership on employee service performance is significant, indicating that servant leadership has a significant positive effect on employee service performance. The results of mediating effect test in the integration model show that public service self-efficacy, public service motivation and employee service performance all play mediating roles between servant leadership and employee service performance, and they together completely mediate the influence of servant leadership on employee service performance. The results reveal the internal mechanism of servant leadership influencing employee service performance. That is to say, servant leadership improves employee service performance by improving employee' ability and confidence of public service, arousing employee public service motivation and shaping the organizational climate of public service.

Further comparison shows that there is no significant difference between the mediating effect of public service motivation and organizational service climate, and both of them are significantly stronger than the mediating effect of public service self-efficacy. At the same time, the effect of public service self-efficacy on employee service performance is not significant. How to explain it? Through the correlation analysis between public service self-efficacy and public service motivation, it is found that the Pearson correlation coefficient of the two is as high as 0.632, and the correlation is significant when the confidence (double measurement) is 0.01. According to the Expectancy-Value Theory, the higher the value of the expected result of a particular behavior, and the higher the expectation of realizing the result, the stronger the motivation of individuals to engage in the activity. Since self-efficacy directly determines the individual's expectation to achieve the result of the behavior, self-efficacy can predict motivation (Bandura, 1997). Therefore, a reasonable explanation is that public service self-efficacy is highly correlated with public service motivation and has a positive influence. When public service motivation and public service self-efficacy are put together in the model, the influence of public service self-efficacy on employee service performance is partially replaced by public service motivation.

The results of multi-group analysis show that only one of the seven paths of the structural equation model has significant difference between the group of "government organizations" and the group of "community organizations". That is to say, compared with community organizations, servant leadership in government organizations has a significantly stronger effect on public service motivation. The reason is that the government is a bureaucratic organization compared with the communities belonging to autonomous organizations. There is a rigid hierarchy between superiors and subordinates, with a large power distance, and the influence of leaders on employees is greater. Therefore, when "superior" leaders become servant leaders who show great concern for employees, the employees are more likely to be moved and arouse public service motivation. There is no significant difference between the groups of "CPC members" and "non-CPC members" in the seven paths of the structural equation model, and there is no significant difference between the groups with "budget post" and "non-budget post" in the seven paths of the structural equation. This means that employees' political status and post status have no moderating effect on the seven paths of the

structural equation model. There is no significant difference in the path coefficients of structural equations model regardless of political status and post status. Combined with the ANOVA above, it can be seen that although political status and post status have different influences on employee service performances, such different influences are not caused by the different influences of on the relationship between servant leadership and employee service performance. In other words, whether an employee is a CPC member or not, and with post status or not, there is no significant difference in the relationships between servant leadership and public service self-efficacy, public service motivation, organizational service atmosphere and employee service performance.



## CHAPTER 5

### DISCUSSION

#### 5.1 Conclusions

Based on the goal of building "service-oriented government with people's satisfaction", this study chose employee service performance in the public sector as the research topic from the micro perspective of organizational behavior. Based on social learning theory and AMO theory, this study constructed a theoretical model of service leadership influencing employee service performance through AMO. Through statistical analyses of the sample data of public sector employees in Beibei district of Chongqing in SPSS22 and AMOS22, the following conclusions were obtained.

**(1) Servant leadership has a significant positive effect on employee service performance.** The "service-oriented government with people's satisfaction" needs to be implemented by the public sector employees. Therefore, this study chose the employee service performance of public sector as the dependent variable. According to leadership theory, the traits and behaviors of leaders have important influences on employee behavior and performance, and different leadership styles have different influences on employee behavior and performance. According to the social learning theory, people tend to imitate and learn from model behaviors (Bandura, 1977). Therefore, this research assumes that public employees will take servant leaders as their role models to imitate and learn from, and constantly copy and reproduce these service behaviors in the process of public services, resulting in producing higher employee service performance. The data analysis of 416 effective samples in Beibei district of Chongqing, confirms the hypothesis of this study, namely, servant leadership significantly positively influences employee service performance.

**(2) Employees' public service self-efficacy mediates the positive influence of servant leadership on employee service performance.** Based on the social learning theory (Bandura, 1977), this study argues that servant leadership is helpful to improve employees' public service self-efficacy. Based on the AMO theory (Pringle &



Blumberg, 1982; Boxall, P., & Purcell, 2003) and self-efficacy theory (Bandura, 1977a; Bandura, 1997), the study suggests that employees with high public service self-efficacy will have higher employee service performance. Therefore, the study assumes that employees' public service self-efficacy plays a mediating role between servant leadership and employee service performance. Based on the statistical analysis of 416 valid samples in Beibei district, Chongqing, the results support the hypothesis of this study. That is, servant leadership has a significant positive effect on public service self-efficacy, and public service self-efficacy has a significant positive effect on employee service performance. Public service self-efficacy plays a complete mediating role between servant leadership and employee service performance.

**(3) Public service motivation completely mediates the positive influence of servant leadership on employee service performance.** Based on the social learning theory (Bandura, 1977), this study believes that the modeling behavior of servant leadership can help awaken employees' public service motivation. Based on the AMO theory (Pringle & Blumberg, 1982; Boxall, P., & Purcell, 2003), this study argues that public service motivation induces public service behavior and improves employee service performance. Therefore, this study assumes that employees' public service motivation plays a mediating role between servant leadership and employee service performance. Based on the statistical analysis of 416 valid samples in Beibei district, Chongqing, the results support the hypothesis of this study. That is, servant leadership significantly positively affects employees' public service motivation, public service motivation significantly positively affects employees' service performance, and public service motivation plays a partial mediating role between servant leadership and employee service performance.

**(4) Organizational service climate mediates the positive influence of servant leadership on employee service performance.** Based on the triadic reciprocal determinism of social learning theory (Bandura, 1977), this study argues that servant leadership is conducive to shaping organization service climate. Based on the AMO theory (Pringle & Blumberg, 1982; Boxall, P., & Purcell, 2003), this study believes that organizational service climate contributes to employee service behavior and service performance. Therefore, this study assumes that the organizational service climate in the public sector plays a mediating role between servant leadership and employee

service performance. Based on the statistical analysis of 416 valid samples in Beibei district, Chongqing, the results support the hypothesis of this study. That is, servant leadership significantly positively affects organization service climate, organization service climate significantly positively affects employee service performance, and organization service climate plays a partial mediating role between servant leadership and employee service performance.

**(5) Public service self-efficacy, public service motivation and organizational service climate together completely mediate the influence of servant leadership on employee service performance.** When public service self-efficacy, public service motivation and organizational service climate are put into the model as mediating variables, the results show that all three can mediate the influence of servant leadership on employee service performance, and the three together completely mediate the positive influence of servant leadership on employee service performance. Among them, there is no significant difference between the mediating effect of public service motivation and organizational service climate, and they are significantly higher than the mediating effect of public service self-efficacy.

**(6) Some demographic variables have a significant effect on employee service performance, and even have a moderating effect.** One-way ANOVA shows that gender and educational level in demographic variables have no influence on employee service performance, while organization type, post status and political status all have significant influence on employee service performance. Among them, the employee service performance of community organizations is significantly higher than that of those government organizations. The employee service performance of those with non-budget post is significantly higher than that of with budget post. The employee service performance of non-CPC members is significantly higher than that of CPC members. At the same time, organization type also plays a moderating effect on the effect of servant leadership on public service motivation, that is, compared with community organizations, servant leadership in government organizations has a greater effect on employees' public service motivation.

## **5.2 Theoretical Contributions and Management Implications**

### **5.2.1 Theoretical Contributions**

**(1) This study verifies the positive effect of servant leadership on employee service performance in public sectors and enriches the theory of servant leadership.** In the Chinese journals on leadership, the most paid attention to by residences are transformational leadership, paternalistic leadership, empowering leadership, transactional leadership, and abusive leadership (Z.-X. Zhang, Shi, & Liu, 2016). This did not match the position that the party and the government advocated, which is servant leadership and emphasized that "leadership means service" (Deng Xiaoping, 1985). In the research on servant leadership in western countries, the leadership effectiveness of servant leadership on employees' attitudes and behaviors has been verified (Barbuto & Wheeler, 2006; Neubert et al., 2008), and supported in Chinese enterprises (Z. Chen et al., 2015). However, the relationship between servant leadership and employee service performance in the context of China's public sectors has been neglected by most researchers. This study takes the Chinese public sector employees as its research focus and social learning theory as its theoretical tool to deeply discuss the impact of servant leadership on employee service performance and verify its effectiveness on employee service performance, which promotes research on the effectiveness of servant leadership.

**(2) This research also further discusses the influence mechanisms of servant leadership on employee service performance.** In the researches on mediating mechanisms, most scholars choose only one mediating variable, but in fact, there are maybe more than one transmission mechanisms between servant leadership and employee service performance. Therefore, if only one mediating variable is adopted, although it simplifies the study, it is easy to cause one-sidedness (Jie et al., 2014). Based on the AMO theory and the sample data on public sector employees in China, this study found that employees' public service self-efficacy, public service motivation and organizational service climate can respectively fully mediate the influence of servant leadership on employee service performance. The conclusion reveals the mediating transmission mechanism of servant leadership on employee service performance and enriches the theory of servant leadership.

**(3) This research contributes to the verification and improvement of the AMO theory.** As a cutting-edge theory of strategic human resource management, the AMO theory has not been perfected yet, and the mechanism of three major factors -- capability,

motivation and opportunity -- on employee performance is still controversial (Boxall, Peter & Purcell, 2003). The contribution of this research to the AMO theory lies in that it first verifies that ability, motivation, and opportunity can independently affect employee service performance, and play an independent mediating role between servant leadership and employee service performance. Secondly, this study found that when ability, motivation, and opportunity were all incorporated into the model, the three mediating roles were still valid, and together they completely mediated the influence of servant leadership on employee service performance. This study further compared the mediating effects between the three variables and found that the mediating effects of motivation and opportunity were significantly higher than that of ability, revealing that the mediating effect of ability may be partially replaced by motivation.

**(4) The study of control variables further clarifies the boundary and conditions of the model.** In this study, demographic variables were included into the research horizon. Through one-way ANOVA, it was revealed that gender and educational level had no influence on employee service performance, while organization type, post status and political status all had significant influence on employee service performance. Through multi-group analysis of structural equation model, it was found that organization type also plays a moderating role on the relationship between servant leadership and public service motivation. It further clarified the boundary conditions under which servant leadership influence employee service performance through AMO.

### 5.2.2 Management Implications

**(1) Reforming the management mechanism of leaders, selecting, using, cultivating and retaining servant leaders.** According to the social learning theory (Bandura, 1977), employees imitate and learn leadership behaviors. Therefore, different leadership behaviors will influence and shape different employee behavioral performance. At present, the party and the government propose to build a service-oriented government that the people are satisfied with. The achievement of this goal depends on the high level of public sector employee service performance. The study has proved that servant leadership has a significant predictive effect on employee

service performance. Therefore, it is necessary to reform the management mechanism of public sector leaders to select, use, cultivate, and retain servant leaders. The first is to reform the selection mechanism of leaders and select servant leaders to public service management positions. The premise of scientific selection is accurate identification. The servant leadership scale adopted in this study has been proven to be of high reliability and validity, which can be used as a reference standard for the public sector to identify and select servant leadership. The second is to reform the assessment mechanism of leaders and add the requirements of servant leaders into the assessment criteria. The third is to reform the training mechanism of leaders. China's civil service system clearly stipulates the training system for leaders. The leaders to be promoted should be trained for no less than 3 months. Party committees at all levels, their organizational departments and training institutions, may include relevant requirements for servant leaders in the training programs and courses. The fourth is to improve the export mechanisms of leaders, clear out the leaders that do not meet the requirements of servant leadership through the exchange system, resignation system, dismissal system, and other mechanisms, and ensure that qualified servant leaders stay in the public service leadership posts.

**(2) Helping employees learn and grow, and then improve their public service self-efficacy.** Employee ability is a direct predictor of employee behavior and performance. This study has confirmed that public service self-efficacy of public sector employees significantly predicts employee service performance and plays a mediating role between servant leadership and employee service performance. Therefore, firstly, public sector leaders should transform into servant leaders and create conditions to improve employees' public service self-efficacy. Specifically, it can start from the four sources of self-efficacy summarized by Albert Bandura (1997). First, starting from the enactive mastery experience of employees. Through improving employees' abilities, empowering employees, encouraging employees to devote themselves to the practice of public service, servant leadership enables them to gain self-efficacy from successful practice. Second, starting from vicarious experience. Servant leaders in the public sector regard themselves and excellent employees as models to employees, and their successful experiences can also improve employees' public service self-efficacy. Third, starting from word persuasion. Servant leadership can educate employees to believe

that they should and can provide better public services through public service value education. Fourth, starting from physiological and affective states. Servant leaders exert moderate pressure on employees and soothe their emotions, so that employees are always in the best activation level, which is conducive to improving employees' public service self-efficacy. Secondly, public sector leaders should reform the human resource management system, improve the employee metabolism mechanism, select the employees with high public service self-efficacy, and transfer the employees with low public service self-efficacy.

**(3) Strengthening employee education and guidance, arousing their public service motivation.** This study verified that public service motivation positively affects employee service performance and plays a mediating role between servant leadership and employee service performance. Therefore, it is necessary to strengthen the education and guidance of employees and arouse their public service motivation. Firstly, public sector leaders should actively transform themselves into servant leaders to enhance employees' public service motivation. According to the social learning theory, only when there are positive behavioral incentives, employees will quickly transform the observed learning into action. These incentive conditions include direct incentives, alternative incentives and self-generated incentives (Bandura, 1977). First, leaders of public sectors should empower employees to match their posts and provide necessary help and support for employees' public service activities. It will help employees to successfully complete public service work, obtain the joy of success and generate the motivation to continue to engage in public service. Second, servant leaders should improve the reward system, and commend and reward people and things that perform well in public service as models, so that employees will be motivated by "I want it too". Third, servant leaders provide emotional inspiration and value education of public service to employees through "teaching by example and teaching by words", so that employees can identify with and accept public service emotionally and value it, thus awakening their public service motivation from the bottom of their hearts. Secondly, reform the human resource management in the public sector to select, use, educate and retain employees with high public service motivation. With regard to job analysis, public sectors should conduct scientific job analysis of public service posts, draw up detailed job descriptions, and clarify the requirements and conditions of public service

motivation. In the link of personnel recruitment and assessment, public sectors should reflect the requirements of public service motivation in the examination content and assessment index system. With regard to personnel training, the public sectors should scientifically set up the content, methods and mentors of the course, in order to enhance the employees' public service motivation. With regard to rewards and punishments, public sectors should set scientific rewards for those with high public service motivation. With regard to personnel turnover, public sectors should reasonably use the means such as exchange, dismissal and employment, so that employees with high public service motivation stay in public service posts, while employees with low public service motivation go out by appropriate means.

**(4) Attaching importance to the development and construction of the organization and shaping the service climate that permeates the organization.** This study verified that organizational service climate can predict employee service performance and can mediate the positive effect of servant leadership on employee service performance. Therefore, it is necessary to attach importance to the development and construction of the organization and shape the public service climate pervading the organization. Firstly, public sector leaders should transform themselves into servant leaders. They should demand themselves and employees with high moral principles, set an example to help others and give back to the society, and guide employees to participate in social public services. They also should serve employees, listen to them, communicate with them, and provide necessary policy support, technical assistance and humanistic care for their public service work. Secondly, public sector leaders should reform the public sectors and create an environment and mechanism conducive to organizational service climate. At the spiritual and cultural level, they should shape the organizational core values of serving the public and employees. At the organizational process level, they should improve the service-oriented organizational support system. Gradually they should realize the promotion of service value, the training of service culture, the setting of service standards, and the control of service quality, and finally form realistic mechanism and strong climate of organization supporting service.

**(5) Abandoning gender and educational bias and reforming bureaucracy and staffing systems.** This study found that gender and education level have no significant effect on employee service performance. Therefore, the public sector should focus on

employees' public service self-efficacy, public service motivation and organizational service climate, insist on equality between men and women and abandon the theory of only learning. This study also found that employee service performance in community autonomous organizations was significantly higher than that of employees in government agencies, the employee service performance of those with non-budget post was significantly higher than that of those with budget post, and the employee service performance of non-CPC members was significantly higher than that of CPC members. Since there is a strong correlation between these three factors, the above conclusion can be simplified as follows: the employee service performance in autonomous organizations is higher than that of bureaucratic organizations, and the employee service performance of those with non-budget post is higher than that of those with budget post. Therefore, it is necessary to reform the bureaucratic organization and personnel post system, break the high stability of the bureaucratic organization and the permanent tenure system of the employees. It is also important to reform the personnel assessment system, include employee service performance and public evaluation into the assessment mechanism, and link the assessment results with rewards and punishments.

### **5.3 Limitations and Future Research**

**(1) About the samples.** The samples in this study were from the district government, the township government/street office and the villagers' committee/residents' committee in Beibei District of Chongqing. A total of 520 questionnaires were issued and 513 were recovered, among which 416 were valid questionnaires. It involved the main public service sectors in Beibei District, which is quite representative. However, there are 34 provincial-level administrative regions in China, and there are 38 districts and counties in Chongqing. Beibei District is one of the 38 districts and counties in Chongqing. Therefore, it is necessary to further expand the sample scope in the future and gradually include other districts and counties in Chongqing and even other provincial divisions.

**(2) About the variables.** The two variables involved in this study, servant leadership and organizational service climate, can be regarded as individual level variables or organizational level variables. In this study, both of them were treated as



individual variables. In the future, they can be considered as an organizational level variable to conduct cross-level research with HLM or MPLUS software.

**(3) About the data.** This study used cross-sectional self-reported data from public service employees, which was the result of multiple trade-offs, and all scales also passed the common method deviation test and reliability and validity tests. Nevertheless, self-reported data cannot be completely objective and accurate due to social desirability and other reasons; single source data cannot completely avoid homologous errors due to lack of mutual verification; cross-sectional data may be biased due to the influence of the status of the respondents at that time. Therefore, future studies can explore ways to minimize homologous bias by using multi-source and longitudinal paired data, and by combining subjective data with objective data.

## APPENDICES

### Appendix A: Chinese Scales

量表	编码	测量题目
服务型领导 (SLS-7) Source: R. C. Liden et al. (2015).	SL1	我的领导能判断出与工作有关的事情是否出了问题。
	SL2	我的领导把我的事业发展作为优先事项。
	SL3	如果我有个人问题，我会向我的领导寻求帮助。
	SL4	我的领导强调回馈社会的重要性。
	SL5	我的领导把我的最大利益放在他/她的利益之上。
	SL6	我的领导给了我以我认为最好的方式处理困难情况的自由。
	SL7	我的领导不会为了取得成功而违背道德原则。
公共服务自我 效能 (PSSES- 4) Source: Wang & Xu, (2017).	PSSE1	我能够为顾客提供满意的服务。
	PSSE2	我知道为顾客提供满意服务的有效方法。
	PSSE3	我善于解决顾客遇到的各种困难。
	PSSE4	对于我来说，为顾客提供满意的服务是很容易的。
公共服务动机 (PSMS-8) Source: Bao & Li (2016), extracted in Kim et al. (2013).	PSM1	有意义的公共服务对我很重要。
	PSM2	对我而言，为社会公益做贡献很重要。
	PSM3	我认为，公民机会均等很重要。
	PSM4	公务人员的行为一定要符合伦理规则。
	PSM5	当看到他人遇到困难时，我会很难受。
	PSM6	当看到他人遭到不公正对待时，我会很气愤。
	PSM7	我愿意为社会公益付出个人努力。

	PSM8	我愿意为了社会公益而牺牲自身的利益。
组织服务氛围 (SCS-7) Source: Schneider, White, and Paul (1998).	SC1	组织员工拥有提供高质量工作和服务的知识和技能。
	SC2	组织努力监测和控制“工作与服务的质量”。
	SC3	员工因提供优质工作和服务而获得组织的认可和奖励。
	SC4	组织提供高质量的公共服务。
	SC5	组织的管理层展现出支持服务质量方面的领导能力。
	SC6	组织与员工及群众有着良好的沟通。
	SC7	组织为员工提供了工具、技术和其他资源，以支持其提供优质服务。
员工服务绩效 (ESPS-7) Source: Liao & Chuang (2004a).	ESP1	对服务对象友好、乐于助人。
	ESP2	快速接近服务对象。
	ESP3	善于提问并且倾听，以便发现服务对象的需求。
	ESP4	服务对象需要时，能帮助他们。
	ESP5	指出服务项目的特色，并与服务对象的需求结合起来。
	ESP6	推荐给服务对象可能喜欢但是没有想到的服务项目。
	ESP7	解释服务项目的特色和好处，以便克服服务对象的反对。

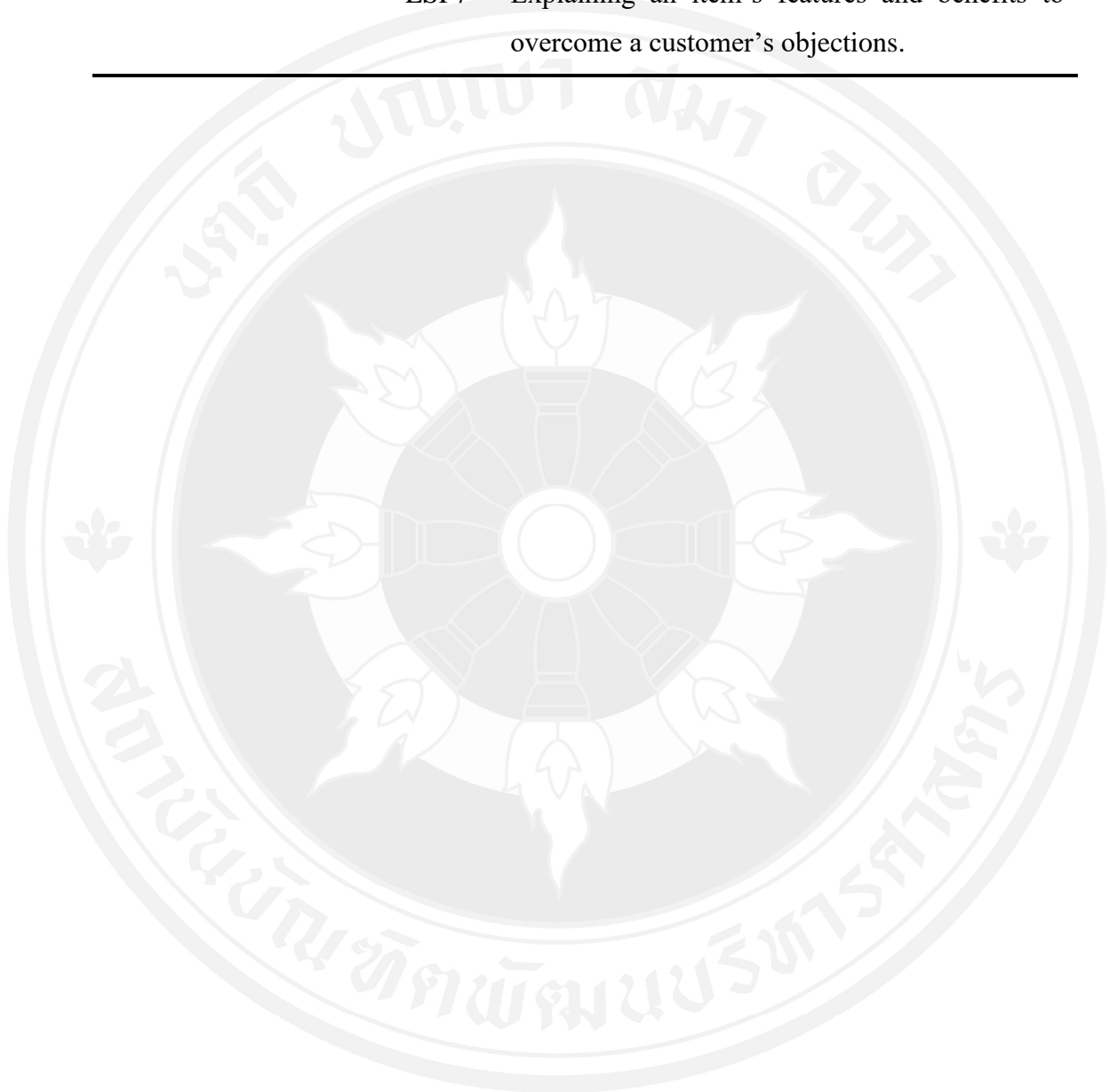
### Appendix B: English Scales

Scales	Codes	Items
Servant leadership (SL-7) Source: R. C. Liden et al. (2015)	SL1	My leader can tell if something work-related is going wrong.
	SL2	My leader makes my career development a priority.
	SL3	I would seek help from my leader if I had a personal problem.
	SL4	My leader emphasizes the importance of giving back to the society.
	SL5	My leader puts my best interests ahead of his/her own.
	SL6	My leader gives me the freedom to handle difficult situations in the way that I feel is best.
	SL7	My leader would NOT compromise ethical principles in order to achieve success.
Public Service Self-efficacy (PSSE-4) Source: Wang & Xu, (2017)	PSSE1	I am able to deliver satisfactory services to customers.
	PSSE2	I know effective ways to provide customers with satisfactory services.
	PSSE3	I am good at solving all kinds of difficulties which customers encounter.
	PSSE4	It is very easy for me to deliver satisfactory services to customers.
Public Service Motivation (PSM-8) Source: Bao & Li (2016) extracted from Kim et al. (2013)	PSM1	Meaningful public service is very important to me.
	PSM2	It is important for me to contribute to the common good.
	PSM3	I think equal opportunities for citizens are very important.

	PSM4	To act ethically is essential for public servants.
	PSM5	I empathize with other people who face difficulties.
	PSM6	I get very upset when I see other people being treated unfairly.
	PSM7	I am willing to risk personal loss to help society.
	PSM8	I am prepared to make sacrifices for the good of society.
Organization Service Climate (OSC-7) Source: Schneider et al. (1998a)	SC1	Organization employees have the job knowledge and skills to deliver superior quality work and service.
	SC2	Organize efforts to measure and track the quality of the work and service.
	SC3	Employees are recognized and rewarded by the organization for the delivery of superior work and service.
	SC4	My organization provides overall quality of service.
	SC5	My organization's management shows leadership in supporting the service quality effort.
	SC6	Our communications efforts to both employees and customers are effective.
	SC7	My organization provides the tools, technology, and other resources to employees to support the delivery of superior quality service.
Employee Service Performance (ESP-7)	ESP1	Being friendly and helpful to customers.
	ESP2	Approaching customers quickly.
	ESP3	Asking good questions and listening to find out what a customer wants.
	ESP4	Being able to help customers when needed.

Source: Liao & Chuang (2004a)	ESP5	Pointing out and relating item features to a customer's needs.
	ESP6	Suggesting items customers might like but did not think of.
	ESP7	Explaining an item's features and benefits to overcome a customer's objections.

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