

Chapter 3. Research Method

3.1. Research hypotheses

H1: There is significantly difference among the police of different generation on 「 **implementation of performance evaluation system** 」 , 「 **implementation of reward-punishment evaluation system** 」 , 「 **as a motivational concept to measure** 」 .

H2: There is significantly difference among the police of different seniority on 「 **implementation of performance evaluation system** 」 , 「 **implementation of reward-punishment evaluation system** 」 , 「 **as a motivational concept to measure** 」 .

H3: There is significantly difference among the police of different rank position on 「 **implementation of performance evaluation system** 」 , 「 **implementation of reward-punishment evaluation system** 」 , 「 **as a motivational concept to measure** 」 .

3.2. Participants and In-depth Interviews.

This research examined the satisfaction with evaluation system in the Police Departments as a motivational concept in the three metropolises. In order to carry out a meaningful study, a case study approach was adopted and the source of data was survey. In the course of this study, statements of problem and research questions were outlined. Based on these research questions, three hypotheses were tested using Chi-Square³⁰ statistical techniques. A sample of three categories of civil servants

³⁰ Jan Selmer, *International Management in China: Cross-Cultural Issues*, (Singapore Routledge,

namely: Generation, Seniority and Rank Position staffs in the Taipei, Hong Kong and Shanghai City Police Departments(Shanghai City Police Department only permitted for In-depth Interviews³¹) were randomly selected and a total of 256 copies of questionnaires administered and 250 respondents completed and returned their questionnaires. The techniques adopted in the analysis of the data were percentages, averages, and Likert-Scale statistical technique³². The findings reveal that the majority of respondents stated that the motivational strategies adopted by police management has significant effects in enhancing the employees efficiency , the majority of the respondents stated that the evaluation system influences their level of performance. Based on our findings, we recommend that the Taipei, Hong Kong and Shanghai City Police Departments should take the interest of the police into consideration in its corporate planning in terms of allowances and evaluation systems.

3.3. Data analysis method

For this research 206 questionnaires were sent out to the Taipei City Police Department for policemen to complete. In total 204 surveys were returned, two went missing, and 4 were invalid. The response rate was 97.1%.

In the data analyses, the “SPSS for Windows 10.0 Version” was adopted as a software tool to count and analyze. Including two aspects of the analytical method, the first using Descriptive Statistics Analysis -- to describe and prove the items of basic statistical data (times, percentage); the Second used the chi-square³³ test (also

1998) p. 115.

³¹ King W. Chow, Laura Q. Luo, “Contending Approaches and Models for Rationalizing Chinese Public Organizations: The Case of Western China” *Public Organization Review*, Vol. 7, No. 1, (Mar, 2007) pp. 69-91.

³² Colin Silverthorne, “Motivation and Management Styles in the Public and Private Sectors in Taiwan and a Comparison with the United States” *Journal of Applied Social Psychology*, Vol. 26, Issue. 20, (Oct 1996) pp.1827-37.

³³ Priscilla E. Greenwood, Mikhail Stepanovich Nikulin, *A Guide to Chi-squared Testing* (Wiley-Interscience, 1996), PP21-29.

chi-squared or χ^2 test) which is any statistical hypothesis test in which the test statistic has a chi-square distribution when the null hypothesis is true, or any in which the probability distribution of the test statistic (assuming the null hypothesis is true) can be made to approximate a chi-square distribution as closely as desired by making the sample size large enough.

After confirming definition of variable³⁴ items and valid questionnaires, and constructing and examining the structure of research, we used SPSS software to carry out statistical analysis in order to prove hypotheses and suppositions. Finally, the conclusion and suggestions will be made.

To enable the implementation of questionnaires to carry on project analysis (item analysis), and for ensuring questionnaires and results have a high degree of validity, we'll avoid the type of questionnaires that can't determine topics. After confirming the theme, research purpose, relevant documents and materials and structural items, we had worked out questionnaires in advance, in order to understand those topics which are available.

The principles of the questionnaire to allow the collecting of information are as follows:

1. The question topic corresponds to the research purpose,
2. Each question only contains one idea.
3. Each question is brief and to the point.
4. The selected question is defined clearly in the sentence,

³⁴ Wim J. van der Linden, Ronald K. Hambleton, *Handbook of Modern Item Response Theory*, (Taiwan Springer 1997), pp. 76-85.

- 5 The selected question needn't be supposed or guessed.
6. Question is not beyond the respondent's ability to answer.
7. Question does not require implying answers.
8. The language used in question is clear and easy to understand.
9. The question does not involve personal secrets.

A Likert³⁵ scale questionnaire which is formatted according to a typical five-level Likert item is; 「strongly agree, agree, neither agree nor disagree, disagree, strongly disagree」 assigned to a scale of 5 , 4 , 3 , 2 , 1 points. The higher the point chosen by the respondent; the more agreement is shown. The Likert amount form is set up according to two assumptions, which are the same quantity of test distance and the same quality of test theme. At this point, the Likert amount form must have been tested previously, in order to confirm that those results of measure are stable and consistent.

As part of the value analysis, we usually measure the validity as a Cronbach³⁶ α coefficient to understand the degree of consistency among the questionnaires. Generally speaking, the best result falls between 0.7-0.98. At this point, this research adopted the Cronbach α coefficient for analysis to determine the validity of the questionnaire's consistency. The analysis revealed a good consistency result of between 0.7-0.98 (*see fig: 3-1*).

The research dealt with three dimensions: 「**implementation of the police evaluation system**」 , 「**implementation of the police reward-punishment system**」 ,and 「**as a motivational concept to measure**」 . Each dimension showed

³⁵ Susan Jamieson, "Likert scales: how to use them" *Medical Education* , Vol. 38, Issue 12, (Dec 2004) pp. 1217-18.

³⁶ Maarten Gelderman, "The relation between user satisfaction, usage of information systems and performance" *Information & Management*, Vol. 34, Issue. 1, (Aug 1998) pp. 11-18.

more than 0.7 on the Cronbach Alpha coefficient, and according to this result we can judge that the degree of validity is good.

Form3-1

ANALYSIS OF THE QUESTIONNAIRE RESEARCH DIMENSION	QUESTION NUMBER	LIKERT SCALE	CRONBACH'S ALPHA
Implementation of policeman evaluation system	a1-a13	1-5	0.90
implementation of policeman reward-punishment system	b1-b6	1-5	0.79
as a motivational concept to measure	c1-c20	1-5	0.92
Personal Information	1-7	—	—