

## **Methodology used in statistical analysis of survey of Third Sector**

### ***Sampling frame***

All researchers prepare a list of organizations in their individual sub-sectors and send them to the Principal Investigators (five in total for the whole study). The Principal Investigators will go through the lists to delete obvious non-Third Sector organizations before sending to a central data-processing unit. In this study, CPU has engaged the data processing service of the Computer Assisted Survey Team (CAST), Centre for Social Policy Studies, Department of Applied Social Sciences, The Hong Kong Polytechnic University.

After CAST received all the input from Principal Investigators, it consolidated all the information into one database and designed a computer programme to check for duplicates. In the event, due to language complications, the study encountered duplications as some names were given only in English while the Chinese names of the same organizations were submitted by other Principal Investigators. Extra time had to be spent on deleting duplications.

As there was no other centralized database which would contain the information of all Third Sector organizations in Hong Kong, and as the IRD would not release the addresses and telephone numbers of the tax-exempted “charities”, this sampling frame constituted the first database of Third Sector organizations in Hong Kong.

This research encountered a unique problem of uncertain sampling frame. As the initial sampling frame contained the names of all non-duplicated organizations which researchers thought were Third Sector organizations, some names had to be deleted as survey responses were received which indicated that those organizations were indeed profit-making in nature. Undertaking a sampling without a perfect sampling frame caused the project confusion at times. Nonetheless, at the end of the study, a clean sampling frame was prepared, and this frame would constitute the first “clean” and comprehensive database of all Third Sector organizations in Hong Kong.

### ***Random sampling***

#### ***Sampling fraction***

With the advice of Senior Statistician of CPU, three sampling fractions were finalized on 17 October 2002 to be applied to the 14 sub-sectors, with a total sample size of 3057. They are summarized below:

(1) 100% random sampling, i.e. questionnaires to be sent to all organizations on the list

Code	Sub-sector	Population size	Sample size
H1	Health	14	14
W1	Welfare	25	25
EN	Environmental	66	66
AC1	Arts and culture Gp.1	143	143
AV	Civic and advocacy	122	122
ER1	Education-University	8	8
IN	International	151	151
LL	Law and legal services	49	49
PL	Politics	11	11
Total		802	802

(2) 20% random sampling, i.e. questionnaires to be sent to 20% of organizations on the list

Code	Sub-sector	Population size	Sample size
AC2	Arts and culture Gp.2	1802	306
DC	District- and community-based	3344	669
ER2	Education – excluding University	849	170
H2	Health	101	20
PB	Industry/business, trade unions	1308	262
RG	Religion	338	68
SP	Sports	441	88
W2	Welfare	231	46
PH	Philanthropic intermediaries	817	163
Total		9231	1846

(3) 6% random sampling, i.e. questionnaires to be sent to 6% of organizations on the list:

Code	Sub-sector	Population size	Sample size
OI	Owners incorporated organizations	6810	409

### *Questionnaire design*

In parallel with the preparation of the sampling frame, a questionnaire was circulated for comments by the CPU Advisory Panel on the Third Sector study. It included all the questions from which CPU wished to collect information about the Third Sector. The sample copy is attached at Annex I to this Report.

After the sampling frame was finalized, the questionnaire was sent by post to the organizations in the sampling frame.

### In-survey adjustments

	Pre-survey	Post-survey
Population size	17056	16646
Sample size	3270	2860

During the survey period, interviews and focus groups discussions were carried out by all researchers. Duplications were still found, and invalid organizations (e.g. profit-making, already defunct) were discovered. They were all adjusted for in the sampling frame, resulting in a final total population size of 16646, and a total sample size of 2860.

### *Ensuring responses through follow-up telephone calls*

CAST contracted with CPU that for every organization which did not send in a reply by a specified period (two weeks in the first instance), a telephone call for follow-up would be made. A total of three telephone calls would be made before a replacement would be made for the sample.

### *Tabulation of responses*

As non-profit organizations in Hong Kong may not necessarily understand the meaning of the Third Sector, and many may not agree with the JHU classification used in this study, some organizations indicated a different sub-sector than first assigned by researchers. After much discussion, it was decided that for consistency, the study would adopt the pre-survey classification to tabulate the responses received.

### *Grossing up*

After responses were all verified for consistency and input into the central database, CAST undertook a procedure known as “grossing up” to make projections on the whole population based on the sample returns. The “grossing up” factor is called “F” and is calculated as follows:

$$F = \text{Population} / (\text{No. of responses which answer ("Yes" to non-profit making in purpose} + \text{"No" to Non-3}^{\text{rd}} \text{ sector} + \text{Unspecified})$$

A summary of the calculation of return rate and the growing-up factors by sampling fractions is as follows:

		No. of responses	Population size	F	Sample size	Return rate (%)
100% sampling fraction						
H1	Health	5	5	1.000	5	100.0
W1	Welfare	16	25	1.563	25	64.0
EN	Environmental	35	66	1.886	66	53.0
AC1	Arts and culture Gp.1	36	143	3.972	143	25.2
AV	Civic and advocacy	41	122	2.976	122	33.6
ER1	Education-University	6	6	1.000	6	100.0
IN	International	43	151	3.512	151	28.5
LL	Law and legal services	11	49	4.455	49	22.4
PL	Politics	5	11	2.2	11	45.5
BO		14	n.a.	n.a. <sup>1</sup>	n.a.	n.a.
<b>Total</b>		<b>212</b>	<b>578</b>		<b>578</b>	<b>36.7</b>
20% sampling fraction						
AC2	Arts and culture Gp.2	79	1802	22.18	360	21.9
DC	District- and community-based	57	3344	58.667	669	8.5
ER2	Education – excluding University	68	853	12.544	174	39.1
H2	Health	31	115	3.710	34	91.2
PB	Industry/business, trade unions	104	1312	12.615	266	39.1
RG	Religion	19	342	18.000	72	26.4
SP	Sports	27	441	16.333	88	30.7
W2	Welfare	28	231	8.250	46	60.9
PH	Philanthropic intermediaries	25	818	32.720	164	15.2
<b>Total</b>		<b>438</b>	<b>9258<sup>2</sup></b>		<b>1873</b>	<b>23.4</b>
6% sampling fraction						
OI	Owners incorporation	42	6810	n.a. <sup>3</sup>	409	10.3
<b>Total</b>		<b>42</b>	<b>6810</b>	<b>n.a.</b>	<b>409</b>	<b>10.3</b>
<b>Grand Total</b>		<b>692</b>			<b>2860</b>	<b>24.2</b>

Notes:

- 1 The 9 BO's (14 returns) do not have F for later tabulation.
- 2 Since 27 BO's have been re-classified as non-BO's (20% sampling fraction) after clarification of certain information, the total population size of the latter (i.e. 20% sampling fraction) has been increased subsequently from 9231 to 9258.
- 3 The 42 returns for OI do not have F for later tabulation.