

Social Network and Community Lives of Taipei and New Taipei City, Taiwan

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Introduction

This article is a result from the 2012 joint research project between the National Sun Yat-sen University of Taiwan and Senshu University of Japan. The major goals of the joint research are to explore the social network and community lives of Taipei City and New Taipei City residents. For the purposes, there are five major parts in this article. The first part is the research design. Following the research design will be the discussion on the sampling structure analysis. The third and fourth parts are the in-depth analysis and the results from cross-analysis. And the last is the concluding section in which the article will outline the limitations of this research and suggestions for future inquiries on related researches.

Keywords: SOCIAL CAPITAL, SOCIAL NETWORK, COMMUNITY LIVES, TAIPEI CITY, NEW TAIPEI CITY

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Research Design

The research was conducted regionally, focusing on the districts of Taipei City and New Taipei City, Taiwan. The survey population consisted of the registered residents of Taipei City or New Taipei City who are currently living in Taipei City or New Taipei City and are at or above the age of 18 years, that is, with birthday before December 31, 1993.

This study consisted of survey questionnaires distributed to the above-mentioned sample population. The survey method consisted of in-person interviews. The interviews were conducted by interviewers possessing proper training and skills to conduct actual interviews at assigned administrative districts and townships. In order to allow the sampling structure to be representative, this survey adopted two stages, namely, a first step of stratified Probability Proportional to Size (PPS) methods to sample out interviewees followed by a second step of successfully completing 817 interviews from various districts of Taipei and New Taipei cities.

The stratification standards and sampling stages are described as follows. This project's aim was to survey the residents' social networks and community lives in Taipei and New Taipei cities. However, due to the highly diversified population and industrial structure among districts in these two cities, this survey borrowed Dr. Jieyu Liu's Stratification Indexes to conduct Cluster Analysis as laid out in his 2006 study, "Incorporating Development Stratification of Taiwan Townships into Sampling Design of Large Scale Health Interview Survey," which appeared in the *Journal of Health Management* that year.¹ Dr. Liu's methodology was applied to this study in order to stratify the sampling areas so we could better observe the social activities at different survey areas.

The project utilized the following five indexes to conduct Cluster Analysis, which stratifies Taipei and New Taipei cities into three layers. The indexes included, first, the number of employees in industrial and commercial sectors; second, the percentage of farmers in the area under examination; third, the percentage of population in the area aged 65 years and above; fourth, the percentage of population in the area with an education level higher than junior college; and fifth and finally, the area's population density. The 2006 survey data on the number of employees in industrial and commercial sectors was from Taiwan's Bureau of Budget, Accounting and Statistics.² The 2011 population density data was acquired from Taiwan's Department of Household Registration.³ And the calculation methods for the rest three indexes are as the following:⁴

¹ Jieyu Liu, "Incorporating Development Stratification of Taiwan Townships into Sampling Design of Large Scale Health Interview Survey," *Journal of Health Management*, Vol.4, No.1, 06 2006, pp.1-22.

² Department of Budget, Accounting and Statistics, Executive Yuan, "Report employees in industrial and commercial, 2006," 12 2008, p1, < <http://www.stat.gov.tw/public/Attachment/07301044771.pdf>.>

³ <Department of Household Registration, Accounting and Statistics, Executive Yuan, "Report population density, 2009," 01 2010, p1, < <http://sowf.moi.gov.tw/stat/week/week10102.doc>>.

⁴ The indexes include number of employees in industrial and commercial sectors, percentage of farmers, percentage of population with age of 65 and above, percentage of population with education higher than junior college, and population density. Data is from Taiwan's Department of Household Registration.

$$\text{Percentage of farmers : } \frac{\text{Number of Farmers}}{\text{Total Population}}$$

$$\text{Percentage of population with age of 65 and above : } \frac{\text{Population with Age of 65 and Above}}{\text{Total Population}}$$

$$\text{Percentage of population with education higher than junior college : } \frac{\text{Population with Education Higher than Junior College and Above Age of 15}}{\text{Total Population above Age of 15}}$$

The Cluster Analysis adopted Ward's Minimum Variance Method for stratification in order to calculate the variation for the same variable, and utilized Squared Euclidean Distance to measure intervals. In addition, due to the differences in units of analysis, the analysis used standardized Z Scores to avoid analytical errors. Using these methods, we divided the sampling areas into three distinct stratified layers.

With stratification, the 41 districts of Taipei and New Taipei cities are categorized into three layers. The first stratified sampling layer we termed "Highly urbanized area." It includes 13 districts with the lowest "Percentage of farmers" and "Percentage of population with age of 65 and above" ratios as well as the highest ratios in the other three indexes. This layer occupies about 55.72% of total population of Taipei and New Taipei cities, and it includes residents residing in such places as Songshan District, Da'an District, Hongsha District, Zhongzheng District, and Xinyi District, all located in Taipei City; and Banciao Township, Sanchong Township, Jhonghe Township, and Yonghe Township, all located in New Taipei City, formerly Taipei County.

The second stratified sampling layer termed "Mid urbanized area." It covers 18 districts with intermediate values at all five indexes. It has about 41.69% of the total population. It includes residents residing in such places as Wenshan District, Nangang District, Neihu District, Shilin District, and Beitou District, all located in Taipei City; and, for example, Xindian Township, Shulin Township, Yingge Township, Sanxia Township, and Tamsui Township, all located in New Taipei City, formerly Taipei County.

The third stratified sampling layer termed "Low urbanized area." It consists of 10 districts with the highest "percentage of farmers" and "percentage of population with age of 65 and above" ratios as well as the lowest ratios at the other three indexes. This layer occupies only 2.59% of the total population. It includes residents residing in such places as, for instance, Rueifang Township, Shihding Township, Pinglin Township, Sanjhih Township, Shihmen Township, all located in New Taipei City, formerly Taipei County.

Table 1 Description of Factor Groups

Stratification		Sum of Squares	Degrees of Freedom	Sum of Quadratic Mean	F test	Significance
Number of employees in industrial and commercial sectors	Between groups	18.556	2	9.278	16.441	0.001
	Within groups	203.199	21.444	38	0.564	
	Total	357.000	40.000	40		
Percentage of farmers	Between groups	28.019	2	14.010	44.436	0.001
	Within groups	120.018	11.981	38	0.315	
	Total	357.000	40.000	40		
Percentage of population with age of 65 and above	Between groups	23.912	2	11.956	28.239	0.001
	Within groups	114.627	16.088	38	0.423	
	Total	357.000	40.000	40		
Percentage of population higher than junior college	Between groups	35.354	2	17.677	144.580	0.001
	Within groups	86.396	4.646	38	0.122	
	Total	357.000	40.000	40		
Population density	Between groups	35.354	2	17.677	144.580	0.001
	Within groups	38.231	4.646	38	0.122	
	Total	357.000	40.000	40		

This survey utilized two-stage probability sampling methods. At Stage One, it used the Equal Interval Sampling method to sample townships and districts at each layer. At Stage Two, it also used the same method to sample villages from each township and district, and followed by Convenient Sampling method to look for potential interviewees. In addition, the sampling size at each layer had to match the structural distribution of the total population on these five indexes. In consideration to different numbers of villages at each townships and districts, this survey adjusted the expected total sample size at each layer as the following table:

Table 2 Design of Sampling and Numbers of Samples

Stratification	1	2	3	Total
Population of Age of 18 and Above	2,986,746	2,234,699	139,035	5,360,480
Population Ratio	0.5572	0.4169	0.0259	1
Sample Configuration	450	338	22	810
Total Number of District	13	18	10	41
Extract District	10	12	4	26
The Number of Extract Villages of Each District	4	4	2	
The Number of Villages to Complete	11	7	5	
The Number of Layers to Complete	440	336	40	816

Note: The December 2011 population data is from Taiwan's Department of Household Registration, Ministry of the Interior.

In order to avoid sampling structural errors from concentrating interview activities on weekdays (Monday to Friday) and regular working hours (8:00am to 6:30pm), this survey designed two readjusting mechanisms: (1) Conducting interviews on one weekday and one weekend at the same village. (2) Conducting interview hours to cover 6:30pm to 10:00pm at the same village.

As the common problems from Convenient Sampling method, this survey designed a Sampling Structural Redistribution Table for interviewers to control age and gender structures of interviewees at each village. Take the villages from Layer-1 for examples, interviewers were asked to complete their eleven interviews with mandated ratios: four interviews for age 18-19 and age 20-29, four for age 30-39 and age 40-49, three for age 50-59 and age 60 and above. The Sampling Structural Redistribution was designed to match the target population structure. However, this readjustment significantly increased the difficulties in carrying out actual interviews and interview SOP. Therefore, in order to maintain feasibility and sampling representativeness simultaneously, this survey allowed interviewers to conduct micro-adjustment at actual activities. Each interviewer received their Sampling Structural Redistribution Table for particular village before heading out for interviews.

This survey has successfully completed 817 interview cases from residents with age above 18 and currently living at Taipei City or New Taipei City, with 95% Confidence Interval (CI) and $\pm 3.43\%$ ($n=817$) Standard Error (SE). In order to reflect the true population structure and allow the sampling to be representative, this survey adopted NPAR Chi-square Test to cross-examine the age and gender ratios between sampling size and population. When there is any

outstanding difference, the survey utilized weighting methods to allow sampling cases to match true population structure.

This survey adopted Post-stratification weighting methods. The calculation of each weighting value for stratification layer is as the following:

$$W_i = (N_i / n_i) \times (n / N)$$

W_i : the weighting value of Layer-i, each weighting value is the same in every layer.

N_i : the total population of Layer-i

n_i : the sum of successful cases at Layer-i

n : the sum of total successful cases

N : total population

The weighted Layer-i is based on two variables, i.e. “Gender” and “Age,” within which “Gender” has two groups: male and female, and “Age” has six groups: G1 starting from age 18-19, with every 10 years as interval for G2 to G5, and G6 is above age 60. Therefore, there are totally 12 weighted layers. In order to allow these layers to match the population structure, the survey also adopted “Deviation” weighting methods. The 2011 data on the sampling population structure was from Taiwan’s Department of Household Registration, Ministry of the Interior.⁵

The results from pre- and post-weighted representativeness examinations, which demonstrate the successful cases do not match the structure of target population. However, through the post-stratification weighting, the samples do match the target population structure without significant differences. Even the “Discrimination” part also matched the structure of target population.⁵

⁵ Department of Household Registration, Accounting and Statistics, Executive Yuan, “Report population density, 2011,” 01 2012, p2, <<http://sowf.moi.gov.tw/stat/week/week10202.doc>>.

Table 3 Population, Weighted and Un-weighted Sampling Frame, and Weighted Mean

	Population		Sample		Weighted sample		Weighted value
	N	%	n	%	n	%	
Age between 18-19 male	89,801	1.7	30	3.7	14	3.5	0.456181
Age between 20-29 male	471,258	8.8	102	12.5	70	17.9	0.676551
Age between 30-39 male	542,540	10.1	54	6.6	77	19.8	1.433149
Age between 40-49 male	512,294	9.6	62	7.6	75	19.1	1.187064
Age between 50-69 male	484,364	9.0	43	5.3	76	19.4	1.777047
Age 60 and above male	487,919	9.1	66	8.1	79	20.2	1.263593
Age between 18-19 female	82,335	1.5	34	4.2	12	2.8	0.339832
Age between 20-29 female	455,740	8.5	136	16.6	71	16.7	0.510111
Age between 30-39 female	579,802	10.8	73	8.9	89	20.8	1.215539
Age between 40-49 female	570,031	10.6	89	10.9	85	20	0.965236
Age between 50-59 female	541,905	10.1	76	9.3	85	19.9	1.118337
Age 60 and above female	542,491	10.1	52	6.4	84	19.7	1.747585
	5,360,480	100.0	817	100.0	817	100.0	

Note 1 : The examination result of the representativeness of successful samples : $\chi^2=174.2440$; $df=11$; $p<0.05$; the samples do not match the sampling population structure.

Note 2 : The examination result of the representativeness of post-weighted samples : $\chi^2=1.0786$; $df=11$; $p>0.05$; the samples do match the sampling population structure.

After the verification of original interview data, the project adopted statistical application software such as Excel and SPSS to conduct data calculation and cross-analyses. The details of statistical analyses are as the following.

1 . Percentage Analysis:

To calculate percentage as (x/y) times 100, within which x stands for the frequency of repeating answers on the same questions, y stands for total frequency. In other words, the percentage analysis can demonstrate the percentage of any given answers' occupation of the total sampling population, through which we are able to see the opinion distribution and their importance. There are two occasions when we conduct Percentage Analysis: the first is to explain the ratio of sub-groups within the sampling population, and the second is to conduct cross-year trend analysis on the changes of the same issues in a given period of time.

$$\text{Proportion (p)} = f/n$$

$$\text{Percentage (\%)} = (f/n) \times 100 = p \times 100$$

f = frequency, the accumulated numbers in any given answer category

n= the total sum of the numbers in all answer categories and choice items

2 . Cross-Analysis and Chi-square Test:

Through cross-analyzing the interviewees' background information and their answers toward survey questions, we are able to establish the relevance between these two variables. Chi-square test is then utilized to explore the relations between "Type" (including nominal and sequential) variables. Each statistical data was verified through careful examination. When there is not any estimation on obvious relevance, the report clearly states no clear difference statistically between the two variables.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - e_{ij})^2}{e_{ij}} \sim \chi_{(r-1)(c-1)}^2$$

O_{ij} =the observing frequency from Line-i and Row-j at the Cross Table

e_{ij} =under independent hypothesis, the expecting frequency from Line-I and Row-j

χ_n^2 shows n DOF under Chi-square Distribution

Under the sustainability of independent hypothesis, the estimation of e_{ij} :

e_{ij} =the sum of Line-i \times the sum of Row-j / sampling population.

Sampling Structure Analysis

The distribution among stratified districts is as the following: "Highly urbanized area" has the highest ratio of 55.7%; "Moderately urbanized area" occupies 41.7%; and "Low urbanized area" is 2.6%. "Female" ratio (52.1%) is higher than "Male" (47.9%). The distribution among different age groups is fairly average, the group of "Age 30-39" has highest ratio of 20.3%; "Age 60 and above" occupies 19.9%; "Age between 50-59" has 19.7%; "Age between 40-49" has 19.6%; "Age between 20-29" has 17.3%; and "Age between 18-19" is 3.1%.

The distribution among different education groups of the interviewees is as the following: the group of "College degree" has the highest ratio of 20.9%; "Doctoral degree" has the lowest ratio of 0.2%; "Senior high school" and "Vocational high school" both occupy 15.8%; "Primary school" has 14.7%; "Junior high school" has 14.0%; "Technology college" has 12.2%; and "Can't read or illiterate" is 1.7%. The distribution among different occupations of the interviewees is as the following: the group of "Service sector" has the highest ratio of 32.2%;

“Housewife” occupies 14.0%; “Business owner” has 8.8%; “Clerks or office personnel” has 8.3%; “Student” has 6.5%; “Technician” has 5.9%; “Other-retirement” occupies 5.8%; and other answers are lower than 4.0%.

The distribution among different housing types of the interviewees is as the following: the group of “Self-owned residence” has the highest ratio of 59.8%; “Live with others, boarding” has the lowest ratio of 0.5%; “Rental” has 20.2%; “Family-owned residence” has 18.8%; and “Public rental housing” has 0.7%. The distribution among different sources of household drinking water of the interviewees is as the following: the group of “Public tap water” has the highest ratio of 94.8%; “Sharing well water” has the lowest ratio of 0.4%; “Purchasing drinking water” has 3.4%; and “Underground water” has 1.4%. The distribution among different disposal of garbage/waste water of the interviewees is as the following: the group of “Dispose or recycle privately” has the highest ratio of 72.7%; “Public trash collection” occupies 26.9%; “Do not dispose personally” has 0.4%; and “Don’t know” is 0.1%.

The distribution among different residences period of the interviewees is as the following: the group of “More than 20 years” has the highest ratio of 55.4%; “Less than 2 years” has the lowest ratio of 2.8%; “10-20 years” has 21.5%; “5-10 years” has 11.6%; “2-5 years” has 8.0%; and “Don’t know/Refuse to answer” has 0.6%. The distribution among different religions of the interviewees is as the following: the group of “Buddhism” has the highest ratio of 46.2%; “Islam” has the lowest ratio of 0.0%⁶; “Taoism” has 21.9%; “No particular religion or atheist” has 21.8%; “Christian” has 4.9%; and other answers are lower than 3.0%.

The distribution among different marriage statuses of the interviewees is as the following: the group of “Married” has the highest ratio of 62.0%; “Divorced” has the lowest ratio of 4.3%; “Single” has 29.0%; “Widowed” has 4.5%; additionally “Refuse to answer” is 0.2%. Overall, ownership of various household appliances are over 70%, with the “Refrigerator” has the highest ratio of 99.3%, and the lowest ratio of 70.4% in owning “Car.” On the most often used transportation, the group of “Motorcycle” has the highest ratio of 52.1%; “Bus” has 16.9%; “Train (TRA/THSR/MRT)” occupies 11.8%; “Private vehicle” has 9.5%; “Bicycle” is 5.4%; “Taxi” has 2.3%; and “On foot” (no usual used vehicles) is 2.1%.

On the distribution of source of household income, the group of “Myself” has the highest ratio of 69.4%; “Grandmother” has the lowest ratio of 0.3%; “Spouse” has 37.3%; “Son or son-in-law” has 26.4%; “Father” has 22.7%; “Mother” has 18.4%; “Daughter or daughter-in-law” has 16.0%; “Brother(s) and/or Sister(s)” has 11.6%; and other answers are lower than 2.0%. The distribution among household main sponsor of the interviewees is as the following: The group of “Myself” has the highest ratio of 39.6%; “Grandfather” has the lowest ratio of 0.0%; “Spouse” has 22.7%; “Father” has 16.2%; “Son or son-in-law” has 11.8%; “Mother” has 3.5%; “Brother(s) and/or Sister(s)” has 2.7%; “Daughter or daughter-in-law” has

⁶ There is only one interviewee answered “Islam.” After weighted, the number is 0.361363779276958, and it came to 0 after round-off.

1.9%; and other answers are lower than 1.0%. The distribution among different annual household income of the interviewees is as the following: the group of “Less than 300 thousand (in NTD)” is the highest ratio of 28.2%, and “More than 1,200 thousand” has the lowest ratio of 8.4%; “300~500 thousand” has 18.0%; “500~700 thousand” has 17.2%; “700~900 thousand” has 12.3%; “900~1,200 thousand” has 10.0%; “Don’t know” occupies 4.8% and “Refuse to answer” has 1.1%.

In-depth Analysis

Socio-economic Introduction of Survey Area

Taipei City has been the capital of Taiwan since 1949. It is located at Taipei Basin and surrounded by New Taipei City. The size of Taipei City is 271 square kilometers with a total population of 2.62 million which ranks number four in Taiwan. However, its population density is the highest in Taiwan. Taipei Metropolitan, with Taipei City and its surrounding cities and towns, is the largest metropolitan and the center of politics, culture, commerce, entertainment, and media in Taiwan. ⁷

New Taipei City is a large size city with 2,052 square kilometers and a population of 3.9 million. It locates at northern Taiwan and is also the newest city of Taiwan. With geographic advantages, New Taipei City has second most business activities, only next to Taipei City, with more than 240,000 registered enterprises, more than 20,000 factories, and 1.6 trillion NTD of capital. Its business produces more than 4 trillion NTD in value mainly in high-tech, knowledge industry, service and tourism. With this attraction and large job market, 70% of its residences are domestic immigrants. ⁸

Education

Taiwan extended its mandatory education to nine years from 1968. Recent survey shows that Taipei City’s average literacy (above age 15) and percentage of “College graduate” has been increasing. According to a 2011 survey, the population above age 15 is 2.27 million, within which “Literacy” rate is 99.22%, “College graduate” rate is 40.27% (“College degree”/ including “Master’s and Doctoral degree”), and “High school graduate” rate is 26.8% (“Senior and vocational high school”). ⁹ According to the 2012 survey from Taiwan’s Ministry of Interior, Taiwan’s “Illiteracy” is 1.71%, “College graduate” rate is 22.5%, “High school” 13.23%, “Junior college” 8.83%, “Elementary school” 13.41%, and “Junior high school” is 13.24%. ¹⁰ Within

⁷ Taipei City Government, 2013/06. “Introduction of Taipei City,”

<<http://www.taipei.gov.tw/mp.asp?mp=100001>>.

⁸ New Taipei City Government, 2013/06. “Introduction of New Taipei City,”

<http://www.ntpc.gov.tw/_file/2890/SG/24999/D.html>.

⁹ Department of Budget, Accounting and Statistics, Taipei City Government, “Taipei City Statistical Abstract,” 06 2011, p25, <http://w2.dbas.taipei.gov.tw/news_weekly/stindex/stic4.pdf>.

¹⁰ Department of Budget, Accounting and Statistics, Executive Yuan, “Education Rate,” 04 2013, <<http://stats.moe.gov.tw/files/ebook/indicators/101indicators.xls>>.

the 817 interviewees of our survey, “College graduate” occupies the highest ratio with 20.9%, “Doctor degree” is the lowest with only 0.2%, “High school” 15.8%, “Elementary school” 14.7%, “Junior high school” 14.0%, and “Junior college” 12.2%.

Comparing the survey results from nation-wide, Taipei City, and this research, there is no significant difference besides the higher “College graduate” rate of Taipei City. “College graduate” rate is the highest in comparing to other education background in these three surveys respectively. We believe Taiwan’s education reform under the pressure of globalization and knowledge-oriented economic development strategy is the major reason causing this phenomenon. In order to enhance Taiwan’s international competitiveness, human resource is one of the most important factors. Therefore, improving and popularizing college education are the necessary policy means to achieve this goal for Taiwan’s further economic and industrial development.¹¹

Table 4 Survey Results Comparison on Education

(Unit : %)

Education	Survey Result	Taipei City	Taiwan
College degree (Including MA, Ph.D.)	24.9	40.27	22.5
Technology college	12.2	14.23	8.83
Senior high school/ Vocational high school	31.6	15.6	13.23
Junior high school	14.0	8.41	13.24
Elementary school	14.7	9.24	13.41
Can’t read or illiterate	1.7	1.06	1.71

Occupation

With fierce international market competition and increasing globalization, Taiwan’s industrial and employment market structure have been changing rapidly. The definition of labor force is the population above age of 15 and is willing and has capabilities to work, which includes both employed and unemployed population. The definition of employment is a paid job working more than 15 hours per week. And the definition of unemployment is a person who is looking or waiting for an employment and is currently not receiving wage. The distribution among different occupations of the 817 interviewees is as the following: the group of “Service sector” has the highest ratio of 32.2%; “Housewife” occupies 14.0%; “Business owner” has 8.8%;

¹¹ Fang-Chung Chang, 2007/11/24, “A Study on the Expansion the Ratio of Higher Education and Their Experience for Taiwan Learning,” Sixth Conference on Education Management and Business Management for Ph.D. Students and Scholars (Location : Tainan University).p.4.

“Clerks or office personnel” has 8.3%; “Student” has 6.5%; “Technician” has 5.9%; “Other-retirement” occupies 5.8%; and “Other answers” are lower than 4.0%.

Taipei City’s average employment rate of “Industrial labor” maintains around 19%.¹² The average employment rate of “Service sector” is around 80.56% in 2011, and has been increasing besides 2006 and 2009. And “Industrial labor employment” rate maintains around 19.16%, and “Agricultural labor” has only 0.28%.¹³ On the other hand, New Taipei City has 1.77 million work force, within which “Agricultural labor” occupies 0.5%, “Industrial labor” has 37.04%, and “Service” has 62.45%. Comparing to Taiwan’s average distribution of employment, New Taipei City has higher ratio in “Service and industrial labor”. In comparison to Taipei City, it has lower ratio in “Service sector”, but higher in both “Industrial and agricultural labors.”

In Taiwan’s average distribution of employment, “Industrial labor” occupies the highest ratio of 30.84%, followed by “Technician” 21.10%, and “Service sector” is at the third position with 18.67%. Our survey shows, although different to the government statistical numbers, average employment in “Service sector” has the highest ratio among other occupations. In addition, the surveys as well as the government numbers show that Taiwan’s “Agricultural labor” is rapidly shrinking.

Taiwan’s highly limited land supply, rapid industrialization and urbanization are the main factors causing the changes of employment structure. The increasing pressure of economic utilities and efficiency has forced the agricultural activities to decrease, which in turn changed the employment structure of “Agricultural labor”. Taiwan’s “Agricultural labor” occupied 7.65% of all employment in 2000, which is a huge decline from 30.15% in 1975. We are expecting the number will decrease even further with Taiwan’s participation in globalization.

In addition, the number of “Industrial labor” is also decreasing, from 42.90% in 1985 to 35.96% in 2000. As Taiwan is developing toward capital-, technology-, and knowledge-intense industries with increasing use of automation, we are also expecting further decline employment number in “Industrial labor.” On the other hand, employment number in “Service sector” has been increasing rapidly with all the developing trends mentioned above.¹⁴

Individual and Household Income

Taiwan’s average “Individual and household incomes” have been increasing rapidly since the 1970s.¹⁵ Although the average income in both top 5% and lowest 5% have been increasing, but

¹² Department of Budget, Accounting and Statistics, Taipei City Government, “Taipei City Statistical Abstract,” 07 2011, p.16 <http://w2.dbas.taipei.gov.tw/NEWS_WEEKLY/summary/38.pdf>.

¹³ Department of Budget, Accounting and Statistics, Taipei City Government, “Taipei City Statistical Abstract,” 06 2011, <http://w2.dbas.taipei.gov.tw/news_weekly/stindex/stic3.pdf>.

¹⁴ Department of Budget, Accounting and Statistics, New Taipei City Government, “2009 Taipei County Human Resource Report,” 06 2010, p6 <www.ntpc.gov.tw/web66/_file/1528/.../990619.doc>.

¹⁵ Department of Budget, Accounting and Statistics, New Taipei City Government, “2010 Report on the Survey of Family Income and Expenditure,” 10 2011, p16, <http://www.ntpc.gov.tw/web66/_file/1528/upload/statistic/ntpc99familyrevenu.doc>.

the top 5%'s increase is obviously faster than the lowest population. In addition, both Taipei and New Taipei cities have higher average "Individual and household incomes" than Taiwan's average numbers. Their penetration ratio of household appliances are also higher than entire Taiwan's average numbers. Both trends imply higher living standards of Taipei and New Taipei cities than the rest of Taiwan.

According to the 2011 survey on average household income from Taiwan's Directorate General of Budget, Accounting, and Statistics, the average individual annual income is 309,626 NTD in 2001, 345,766 NTD in 2010, and 351,944 NTD in 2011.¹⁶ Our survey with 817 interviewees shows that, the average individual income of "300,000 NTD" is 28.2% which is also the highest among all. Average individual income "Above 1.2 million NTD" has the lowest ratio of 8.4%, followed by 18.0% at "300,000 to 500,000 NTD," 17.2% at "500,000 to 700,000 NTD," 12.3% at "700,000 to 900,000 NTD," and 10% at "0.9 to 1.2 million NTD." From individual annual income, 28.2% of the interviewees is lower than Taiwan's average individual annual income. The analysis believes that the relatively high competition in Taipei City and New Taipei City have caused high income disparities which in turn resulted in the high percentage of individual annual income of these two cities lower than Taiwan's average number.

According to Taipei City government's survey, the average household annual income has increased 21 times from 76,579 NTD in 1971 to 1,670,079 NTD in 2010.¹⁷ The average growth rate is around 8.22%, however the average number only increased 3.06% in 2010, which is 49,627 NTD lower than the increase in 2009.¹⁸ The sum of household annual income at New Taipei City is 1,671,609 million NTD in 2011, which has increased 6.04% from 2010. The average household annual income is 1,178,833 NTD in 2011, which has increased 4.0% from 2010.¹⁹ Comparatively, Taiwan's 2011 overall average household annual income is around 1,158,000 NTD which is an increase of 3.0% from 2010.²⁰

Household Appliances

According to the 2011 survey on average household income from Taiwan's Directorate General of Budget, Accounting, and Statistics, Taiwan's penetration rate of "Cellphone" has reached

¹⁶ Department of Budget, Accounting and Statistics, Executive Yuan, "Report on the Survey of Family Income and Expenditure, 2011," 10 2012, p8, <<http://win.dgbas.gov.tw/fies/doc/result/100.pdf>>.

¹⁷ Department of Budget, Accounting and Statistics, Taipei City Government, "Taipei City Statistical Abstract," 06 2013, p114, <http://w2.dbas.taipei.gov.tw/news_weekly/stindex/stic13.pdf>.

¹⁸ Department of Budget, Accounting and Statistics, Taipei City Government, "Taipei City Statistical Abstract," 07 2011, p.72, <http://w2.dbas.taipei.gov.tw/NEWS_WEEKLY/summary/38.pdf>.

¹⁹ Department of Budget, Accounting and Statistics, New Taipei City Government, "Report On the Survey of Family Income and Expenditure, Taipei New City, 2011," 10 2012, p.10, <www.ntpc.gov.tw/web66/_file/1528/upload/.../100_Family_In_Out_.pdf>.

²⁰ Department of Budget, Accounting and Statistics, Executive Yuan, "Report On the Survey of Family Income and Expenditure, 2011," 10 2011, p.8, <<http://win.dgbas.gov.tw/fies/a11.asp?year=100>>.

91.7% which has increased 12.2% from 1990.²¹ In addition, the penetration rate of “Computer” in 2011 is 71.9% which has increased 21% from 1990. “Internet” penetration rate has also reached 69% from 38.8% in 1990.²²

Besides “Television” and “Telephone,” our survey shows higher penetration rate in all type of household appliances than Taiwan’s overall average numbers, especially in “Cellphone,” “Automobile,” “Digital camera,” “Computer,” and “Internet.” Although the government’s survey shows lower penetration rate of “Automobile” and “Digital camera,” our survey indicates these two numbers are quite similar to the penetration rate of other household appliances. This also implies that residences of Taipei and New Taipei cities enjoy more modern household appliances than Taiwan’s average households.

Table 5 Comparison of Household Appliances Penetration Rate (Unit : %)

Household Appliances	Survey Result	Taiwan
Television	98.3	99.2
Landline Phone	93.8	96.1
Car	70.4	59.1
Cell Phone	96.1	91.7
Other 3C Equipment	80.1	51.7
Computer	89.0	71.9
Internet	88.6	69.0

Source: Department of Budget, Accounting and Statistics, Executive Yuan, 〈Report On the Survey of Family Income and Expenditure,2011, <<http://win.dgbas.gov.tw/fies/a11.asp?year=100> >.

Religion

Taiwan has highly diversified religious believes. According to survey conducted by Taipei City government in 2012, there are 14 major religions including Buddhism, Taoism, Christian, and Catholic. The distribution among different religions of the interviewees is as the following: the group of “Buddhism” has the highest ratio of 46.2%; “Islam” has the lowest ratio of 0.0%; “Taoism” has 21.9%; “No particular religion or atheist” has 21.8%; “Christian” has 4.9%; and other answers are lower than 3.0%. According to Dr. Lin and M.A. Yuan’s thesis entitled Ethnicity and Religion in Taiwan, the relations between ethnicity and religion are as the following: Minnan people’s main religions are Taoism and I-Kuan Tao, Buddhism and traditional

²¹ Department of Budget, Accounting and Statistics, Executive Yuan, “Report On the Survey of Family Income and Expenditure, 2011,” 10 2011, p.12, <<http://win.dgbas.gov.tw/fies/a11.asp?year=100> >.

²² Department of Budget, Accounting and Statistics, Executive Yuan, “Report On the Survey of Family Income and Expenditure, 2011,” 10 2011, p.13, <<http://win.dgbas.gov.tw/fies/a11.asp?year=100> >.

religions for Hakka, and no particular religion, Christian and Catholic for Mainlanders. This distribution explains ethnicity still has heavy impacts on people's religions in Taiwan. ²³

Marriage Status

In the 817 interviewees' marriage status, "Married" occupies highest ratio of 62.0%, "Divorced" is the lowest with 4.3%, "Single" 29.0%, "Widowed" 4.5%, and only 0.2% "Refused to answer" this question. According to Taipei City government's 2011 survey on marriage status of its population with age above 15, "Married" also occupies the highest ratio of 53.01% which increased 0.48% from 2010, followed by "Single" of 34.62% which decreased 0.53% from 2010, "Divorced" 6.85%, and "Widowed" has 5.51%. ²⁴ Other the other hand, the 2010 survey from New Taipei City government shows that "Married" has 50.49%, "Single" 37.04%, "Divorced" 7.70%, and "Widowed" has 4.77%. ²⁵ Overall, "Married" still occupies the highest ratio in marriage status in Taiwan. However, the gradual penetrations of individualism and economic pressure have made late marriage and single become more popular. Therefore, Taiwan's overall birth rate is dropping significantly, which results in unhealthy population structure in recent years.

Cross-analysis

This study utilizes Contingency Coefficient to conduct cross-analysis on pairs of variables and select variables with correlation and statistical significance to conduct further in-depth analysis. However, the SPSS results show the variables with correlation and statistical significance (r greater than 0.4) are only a few, therefore this report has selected the variables with r value greater than 0.25 to conduct further analysis.

Occupation, Education, Housing Type, and Household Income to Social Activities

This section conducts cross-analysis on correlation of four basic variables: "Occupation," "Education background," "Housing type," and "Annual household income," to social activities. Social activities includes four types: "Community activities," "Sports, arts, and entertainment activities," "Volunteer, NPOs, citizen groups activities," and "Others."

However, all the correlation coefficient of these four basic variables in explaining social activities are lower than 0.4 which implies low correlation. The highest correlation coefficient is "Occupation" in explaining "Community activities" ($r = 0.233$), and in explaining "Volunteer,

²³ Pen-Hsuan Lin, Liu, Chiu Yuan, 2010/12/05, "Ethnicity and religion in Taiwan," Annual Conference of Taiwanese Sociological Association, (Location: Fu Jen University). p.3.

²⁴ Department of Budget, Accounting and Statistics, Taipei City Government, "Taipei City Statistical Abstract," 06 2011, p9, < http://w2.dbas.taipei.gov.tw/news_weekly/stindex/A_100.pdf >.

²⁵ Department of Budget, Accounting and Statistics, New Taipei City Government, "New Taipei City Marriage Survey," 09 2011, <<http://www.bas.ntpc.gov.tw/web/SG?command=display&pageID=50426&page=view>>.

NPOs, citizen groups activities” ($r = 0.223$). In addition, the most active participants in social activities are “Housewife” followed by “Public servant,” and “Professional manager.” Their ratio in participating in social activities reaches 29.9%, followed by “Public servant” and “Professional manager” with a ratio of 11.9%. And the least active participants in social activities are “Industrial labor” and “Unemployed or underemployed labors” with a ratio of 10.2%.

The analysis is as the following: First, “Housewife,” “Business owner,” “Private business employee,” and “Unemployed urban residents” are relative active in participating in social activities. As most Taiwanese housewives have similar daily schedule and strong locality, therefore it is relatively convenient for them to be attracted or attract others to participating in social activities. Due to business activities, business owners and private business employees also have more contacts and chances in receiving information of social activities, which give them more incentives to participate in social activities in order to promote their businesses. “Unemployed urban residents” also have more time to expose to social and community activities.

Secondly, “Public servants,” “Professional managers,” “Private entrepreneur,” “Technicians”, “Clerks,” “Office personnel,” and “Students” are relatively passive in participating in social activities. This might result from their busy daily schedule and work-centric lifestyle. Their social activities are still centered on their working places. It is also true for students. Their social activities are mostly centered on school activities rather than community or geographic-related activities.

Thirdly, “Industrial labors” and “Unemployed or underemployed labors” are the least active in participating in social activities. For “Industrial labors,” the main reason is their labor-centric nature of works. Most industrial labors use their off-duty time for resting or private activities such as watching television and family gathering, and lack of incentives to participating in social or community activities. For “Unemployed or underemployed labors,” their perception of unemployment and underemployment as a shameful matter has prevented them from participating in community activities.

Table 6 Cross-analysis on Occupation and Participation in Social Activities

Independent Variable	Dependent Variable	Correlation Coefficient	Significance
What kind of community activities in the following table do you participate in?	What is your occupation? If you have more than one, please choose the most important one.	0.233	0.000

Table 7 Cross-analysis on Occupation and Participation in Volunteer, NPOs, Citizen Groups Activities

Independent Variable	Dependent Variable	Correlation Coefficient	Significance
What kind of community activities in the following table do you participate in?	What is your occupation? If you have more than one, please choose the most important one.	0.223	0.000

Table 8 Cross-analysis on Occupation and Participation in Community Activities

Occupation	Yes	No
Housewife, Business owner, Service trade, Urban unemployed	101(29.9)	337
Public servant, Professional manager, Private entrepreneur, Technician, Clerks or office personnel, Student	30(11.9)	252
Industrial labor, Unemployed or underemployed labor	5(10.2)	49
Agricultural labor	3(60)	2
Other-retirement	0(0)	3
Total	139(21.6)	643

Social Trust and Political Participation

This section aims to conduct cross-analysis on social trust and political participation (“Concerns on political/Public affairs, “Participation in political activities in community”) from different perspectives. The indicators we use to measure social trust are interaction level with “Relatives,” “Neighbors,” “Friends” and “Colleagues” to see their impacts on the interviewees’ “Participation frequency in community activities,” and “Benefits from participating in community activities.” However, no matter we use “Political participation” or the frequency of “Politics-related activities in community” as the dependent variable, the Correlation Coefficient is still lower than 0.4. In other words, our analysis shows that there is no statistical significance between the frequency of participating in social activities and interaction level with different actors to the concerns and “Participation in political activities” or “Public affairs.”

However, the analysis does show significance ($r = 0.530$) between the concerns on “Political/public affairs” and the benefits to “Participate in future community activities.” In

other words, the interviewees who have more concerns on “Political/public affairs” tend to believe they will benefit a lot from participating in community and social activities, such as enriching knowledge and skill and being able to make more friends. Our analysis interprets that people who have more concerns on “Political/public affairs” tend to be more active in participating in community and social activities, also have higher motives in receiving new knowledge, skills, and human interaction, therefore they will benefit more from these activities.

In the frequency of politics-related activities in community, the highest correlation coefficient and significance is “Intention of participating in volunteer/Non-profit organization/Citizen group activities” ($r = 0.518$), and “Status of participation in community activities.” ($r = 0.343$) Our analysis interprets that the interviewees who are more active in “Volunteer, NPO, citizen group activities” and community activities tend to be more politically active, easily to be mobilized, and have broader social network due to more opportunities to receive information on political and public affairs.

Finally based on the interviewees’ perception of social trust, besides the top two and lowest two options, the relatively high correlation coefficient are “Concerns on political/Public affairs,” ($r = 0.260$) and “Frequency of community groups holding political activities.” ($r = 0.257$) Our analysis interprets that the interviewees who have higher social trust tend to be more willing to have contacts with difference social groups and have more concerns on community holding politics-related activities. It is especially true for geographic community activities, the major motive for participants is the social binding from human network in Taiwanese society. As participation in “Politics-related activities” has high sensitivity regarding political position, the interviewees tend to participate in “Political/Public affairs activities” only when they feel sufficient sense of trust toward given groups and communities.

Table 9 Cross-analysis on Political Participation and Participation in Community Activities 1

Independent Variable	Dependent Variable	Correlation Coefficient	Significance
How would you describe your concern in politics and public affairs (elections, parades, demonstration, etc.)?	How would you describe the benefits to participate in future community activities?	0.530	0.001

Table 10 Cross-analysis on Political Participation and Participation in Community Activities 2

Independent Variable	Dependent Variable	Correlation Coefficient	Significance
How often do your community or community groups hold political activities, including rallies, campaigns, speeches, etc. ?	How often do you interact with your friends or colleagues outside school or working place?	0.259	0.000
	Have you joined any particular community groups?	0.343	0.010
	How would you describe your intention to participate in volunteer, non-profit organization, and/ or citizen groups in the future?	0.518	0.000

Table 11 Cross-analysis on Political Participation and Participation in Community Activities 3

Independent Variable	Dependent Variable	Correlation Coefficient	Significance
How would you describe your concern in politics and public affairs (elections, parades, demonstration, etc.)?	How many people do you feel trustworthy in the society ?	0.260	0.000
How often do your community or community groups hold political activities, including rallies, campaigns, speeches, etc. ?	How many people do you feel trustworthy in the society ?	0.257	0.000

Analysis on Life Difficulties in Taiwanese Society

This question set is to understand the period of time in experiencing life difficulties, helper and solution for major difficulties in Taiwanese society. We have conducted Simple Tabulation to analyze the survey results.

In the question set of “Suffer from life difficulties,” “Financial difficulties” and “Illness or injury (self or family)” have the highest ratio. Our analysis interprets that the traditional family values and human network are the most important factors to this question set. This makes helps from family, relatives, and friends become the most often mentioned helpers and solutions during life difficulties in our survey. In addition, Taiwan’s economic stagnation in recent years and worsening distribution of wealth are the major reason causing the highest ratio in answering financial difficulties and third highest ratio in unemployment, especially from the low- and mid-level classes in the society. There are more than 50% of the interviewees responded that they have experienced “Financial difficulties” and “Unemployment” in recent five years, within which 29.5% has experienced “Financial difficulties” “2-5 years ago,” and 33.8% has experienced “Unemployment” “2-5 years ago.” The analysis interprets this was caused by the 2008 global financial crisis.

In the question set of “Who has given you help during the difficult times?” the analysis shows that “Mother” is the main helper during difficult times for the interviewees, followed by “Father” and “Friends.” Family lifestyle, mothers’ role as good listeners, and fathers’ silent role are the main factors to this result. Therefore, Taiwanese people tend to share their problem and receive help from mothers. In addition, Taiwanese families often have division of labor between father and mother in terms of their relations with children. Mothers are often the one who represent parents’ offers for help rather than fathers. Therefore the differences in roles play by father and mother in Taiwanese family cause this phenomenon. In other words, we need to reconsider the interpretation of survey result from social preferences of a given country. Moreover, during serious illness and injury most interviewees tend to ask help from mother, brother, and sister rather than father. We believe the main reason is to avoid scout from father.

In the question set of “What has assisted you during life difficulties?” we can see that “Myself” occupies the highest ratio around 30 to 50% to different kinds of life difficulties, followed by friend, family. In the question of financial difficulties, “Bank loan” has the highest ratio. And in the question of serious illness and injury (self or family), relatives have the highest ratio. In addition, most interviewees answered “Myself” as a solution or helper during natural disaster followed by “Local government” to the same question.

The analysis has three explanations for the above data. First, obvious shortage and incomplete mechanisms of government services and emergency assistance, and troublesome application process have made residents prefer to solve the problems by themselves. Second, Taiwanese people tend to solve problems in lives by their own human network rather than seeking assistances from government. Third, the ratio of “Local group/Organization” is second lowest. The analysis believes that most interviewees tend to include local group and organization into “Local government” or “Police or fire station,” which resulted in low ratio of “Local

group/Organization.”

Items Needed to Be Improved in Life

This section regroups the survey results on question: “If you could improve your daily life, what are the items?” in order to conduct further analysis. The analysis combines “Road pavement,” “Public health/Sanitation,” and “Public transportation” into “Public facilities.” It also combines “Power supply,” “Gas supply,” and “Tap water” into “Energy supply,” and combines “Childcare,” “Means of transportation,” and “Communication equipment” into “Family service and equipment.” In addition, it separates “No need to improve” from “Others.”

After regrouping, the analysis finds that most interviewees answered “Public facilities” is the most needed item to be improved in their lives. And the second highest ratio is “Energy supply,” “Household annual income,” and “Family service and equipment” with quite similar ratio, around 10% lower “Public facilities.” The analysis interprets that the poor quality of “Public facilities” is the main reason causing the survey results. As the second highest ratio of the three items, the analysis shows that the interviewees tend to believe the improvement on these three items are on their own rather than the government, therefore showing higher satisfaction and lower expectation to improve.

The analysis’ interpretations toward the above data are quite similar to the previous question. The first is the insufficient public infrastructure and services due to shortage of related budget. Second, as the higher education background and better occupational condition in Taipei and New Taipei cities, the interviewees tend to have higher requirement and standard to evaluate government performance in public infrastructure and services. Third, following the same reason, the residents in both Taipei and New Taipei cities have higher average income which allows them better capabilities to take care of problems in lives, therefore their responses in “Household appliances” is the lowest.

Cross-analysis on Social Trust and Threats in Life

This section conducts cross-analysis on questions regarding “Social trust,” “Concerns on political/Public affairs,” and questions. The analysis concludes that these variables have statistical significance with correlation coefficient greater than 0.25. Through cross-analysis on “Concerns on political/Public affairs” and answers, the analysis reaches the following conclusions:

“Neighbors,” “Colleagues,” and “Clan” have positive correlation with “Concerns on political/Public affairs.” This result demonstrates that interviewees shows higher concerns on neighbors and clan than on “Local government” and “Police or fire station.” In addition, the analysis also shows that when the interviewees demonstrate higher concerns on neighbors and clan, they also have higher concerns on political and public affairs. For social trust, the interviewees have shown relatively high reliance on “Local governments” than “School, hospital and other Government organizations” and “Local/Autonomous group” during social risks, especially when facing “Unemployment,” “Low income,” and “Natural disasters.”

Analysis on Life Threats and Depending Individuals and Organizations

This section conducts analysis on the questions based on the interviewees' answers in "Unemployment/Low income," "Illness/Injury," "Food shortage" and "Polluted water/Drinking water," and reached the following conclusions: "Local government" also has the highest ratio in "Depending organizations" or "Individuals" during "Unemployment/Low income," followed by "Friends." This demonstrates government plays larger role in solving these types of life difficulties. "School, hospital and other government organizations" has the highest ration in "Depending organizations or individuals during illness or injury," followed by "Family." The interviewees also answered that when serious illness or injury occurs, they go directly to hospital to receive medical treatment.

From the results, the analysis interprets that most interviewees have heavy reliance on local governments during the above life difficulties, which demonstrates that the interviewees have faith in the Legitimate Expectation toward the governmental functions in these fields.

Residence Period and Participation in Community Activities to Conflict Solution

This section conducts cross-analysis on question: "How long is your current residence period?" and "Participation in community activities." From the correlation coefficient, the analysis reaches conclusion of statistical significance with r larger than 0.25. The correlation coefficient is -.004 which shows negative and low correlation in the interviewees' residence period and utilization of conflict solution mechanism. In other words, this implies that longer residence period might lower the utilization of conflict solution mechanism. As the correlation coefficient is -.219 which shows that the frequency of "Participation in Volunteer/Non-Profit Organizations/Citizen Group Activities" does not increase the interviewees' abilities in solving conflicts through conflict solution mechanism. Moreover, "Participation in Volunteer/Non-Profit Organizations/Citizen Group Activities" might have negative impacts to their conflict solving abilities.

Occupation, Religion, and Annual Household Income to Participation in Weddings and Funerals

This section conducts cross-analysis on "Occupation," "Religion," and "Annual household income." The result shows statistical significance with r greater than 0.25. Through cross-analysis, the analysis also reaches the following conclusions regarding participation in "Wedding ceremony" and "Funerals" with "Occupation," "Religion," and "Annual household income." For the interviewees who have positive correlation between "Occupation," "Religion," and "Annual household income" and "Participation in weddings and funerals," r is smaller than 0.25. This shows that "Occupation," "Religion," and "Annual household income" have low impact to participation in weddings and funerals.

For the interviewees who have positive correlation between "Religion," "Annual household income" to "Participation in funerals," however they also have negative correlation between "Occupation" and "Participation in funerals," with r smaller than 0.25. The result shows

that occupation, religion, and annual household income have low impact in participation in weddings.

Social Trust to Participation to Festival or Religious Activities

This section conducts cross-analysis on “Social trust,” “Relatives interaction level,” and “Neighborhood interaction level.” The result shows statistical significance with r greater than 0.25. Through cross-analysis, the analysis also reaches the following conclusions regarding the relations between “Social trust,” “Relatives interaction level,” and “Neighborhood interaction level” with “Participation in festival or religious activities,” “Encountering major family problems or important events,” and “Intention to consult with fortune tellers, temples or churches.”

For the interviewees who show positive correlation between “Interaction level with relatives” and “Participation in festival and religious activities,” however they also show negative correlation between “Interaction level with neighbors” and “Participation in festival and religious activities.” This demonstrates that the interviewees who have higher interaction with their relatives tend to participate in festival or religious activities more often. For those who have lower interaction with their neighbors tend to participate in festival or religious activities more often.

For the interviewees who show positive correlation between “Higher social trust, and higher interaction level with relatives and neighbors” and “Encountering major family problems or important events, and intention to consult with fortune tellers, temples or churches,” however r is smaller than 0.25. This shows that social trust and interaction level with relatives and neighbors have low impact on intention to consult with fortunetellers, temples or churches when encountering major family issues.

Conclusion

As Senshu University provided the original version questionnaire in Japanese language, there might be slight variations in definitions of questions during translation due to language and lifestyle differences, despite our prior consultations with professional translators, scholars, and experts. It is highly recommended to customize questionnaires in accordance with national preferences for future cross-nation research. In addition, due to budget constraints this research has limited its survey areas on Taipei and New Taipei City. It is highly recommended that future research should go further to utilize stratified methods to cover entire Taiwan.

Moreover, the genogram-based questions required the interviewees more time to think and consult with other family members during interview processes, therefore it is highly recommended to reconsider the questionnaire design based on national preferences. In addition, some genogram-related questions involving personal privacy, such as the reasons not to live with family, have resulted in higher interview refusal rate, which in turn might impact the survey results. Furthermore, although with the prior-survey discussion between Senshu University and National Sun Yat-sen University, it is highly recommended that further discussion and

consultation should be held at mid- and later-phase of survey in order to increase understanding on the project purposes.

At last, as the increasing social activities on internet arenas gradually has been becoming one of the main methods for citizens to participate in social, economic, and political activities, it is highly recommended that future research on social activities should include surveys on internet community activities.

BIBLIOGRAPHY

Article

Jieyu Liu, "Incorporating Development Stratification of Taiwan Townships into Sampling Design of Large Scale Health Interview Survey," *Journal of Health Management*, 2006/06,4(1),pp.1-22.

Research Paper

Fang-Chung Chang, 2007/11/24. "A Study on the Expansion the Ratio of Higher Education and Their Experience for Taiwan Learning," Sixth Conference on Education Management and Business Management for Ph.D. Students and Scholars (Location : Tainan University).p.4.

Pen-Hsuan Lin, Liu,Chiu Yuan, 2010/12/05. "Ethnicity and religion in Taiwan," Annual Conference of Taiwanese Sociological Association, (Location:Fu Jen University) .p.3.

Official Website

Department of Budget, Accounting and Statistics, Executive Yuan, 2013/04. "Education Rate," < <http://stats.moe.gov.tw/files/ebook/indicators/101indicators.xls> >.

Department of Budget, Accounting and Statistics, Executive Yuan,2008/12. "Report employees in industrial and commercial, 2006," < <http://www.stat.gov.tw/public/Attachment/07301044771.pdf> >.

Department of Budget, Accounting and Statistics, Executive Yuan, 2012/10. "Report on the Survey of Family Income and Expenditure, 2011," 10 2012, < <http://win.dgbas.gov.tw/fies/doc/result/100.pdf>>.

Department of Budget, Accounting and Statistics, Executive Yuan, 2011/10. "Report On the Survey of Family Income and Expenditure,2011," <<http://win.dgbas.gov.tw/fies/a11.asp?year=100> >.

Department of Budget, Accounting and Statistics, New Taipei City Government, 2011/10. "2010 Report on the Survey of Family Income and Expenditure," <http://www.ntpc.gov.tw/web66/_file/1528/upload/statistic/ntpc99familyrevenu.doc >.

Department of Budget, Accounting and Statistics, New Taipei City Government, 2011/09. "New Taipei City Marriage Survey," <<http://www.bas.ntpc.gov.tw/web/SG?command=display&pageID=50426&page=view>>.

Department of Budget, Accounting and Statistics, New Taipei City Government, 2012/10. “Report On the Survey of Family Income and Expenditure, New Taipei City, 2011,” <www.ntpc.gov.tw/web66/_file/1528/upload/.../100_Family_In_Out_.pdf>.

Department of Budget, Accounting and Statistics, New Taipei City Government, 2010/06. “2009 Taipei County Human Resource Report,” <www.ntpc.gov.tw/web66/_file/1528/.../990619.doc>.

Department of Budget, Accounting and Statistics, Taipei City Government, 2011/06. “Taipei City Statistical Abstract,” <http://w2.dbas.taipei.gov.tw/news_weekly/stindex/stic3.pdf>.

Department of Budget, Accounting and Statistics, Taipei City Government, 2011/07. “Taipei City Statistical Abstract,” <http://w2.dbas.taipei.gov.tw/NEWS_WEEKLY/summary/38.pdf>.

Department of Household Registration, Accounting and Statistics, Executive Yuan, 2010/01. “Report population density, 2009,” <<http://sowf.moi.gov.tw/stat/week/week10102.doc>>.

Department of Household Registration, Accounting and Statistics, Executive Yuan, 2010/01. “Report population density, 2011,” <<http://sowf.moi.gov.tw/stat/week/week10202.doc>>.

New Taipei City Government, 2013/06. “Introduction of New Taipei City,” <http://www.ntpc.gov.tw/_file/2890/SG/24999/D.html>.

Taipei City Government, 2013/06. “Introduction of Taipei City,” <<http://www.taipei.gov.tw/mp.asp?mp=100001>>.