

Asian Barometer Survey Wave 5
2018-2020
TECHNICAL REPORT
(TAIWAN)

By

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July 2019

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1. BASIC INFORMATION

1.1 LOCATION

The Asian Barometer Survey Wave V Taiwan survey covered the area of Taiwan, including six municipalities, 3 cities and 13 counties.



1.2 POPULATION

The population of Taiwan in December 2018 was 23,588,932.¹ The capital city is Taipei City. Additionally, there are five major municipalities, namely New Taipei City, Kaohsiung City, Taichung City, Tainan City, and Taoyuan City.

1.3 GOVERNMENT

Taiwan is a republic with the president as the head of the state. The institutional arrangement is categorized as semi-presidential system since the premier (the head of the Executive Yuan) is in charge of the executive branch. The premier is not an elected official but appointed by the president and does not need the approval of the Legislative Yuan.

¹ National Statistics Office, Accessed on January 30, 2019, https://www.moi.gov.tw/files/site_stuff/321/1/month/ml1-01.ods

Besides the major three branches of the government (the Executive, Legislative, and Judicial), two other branches were created under the Constitution, the Control Yuan and Examination Yuan. There are two major parties in Taiwan, the Nationalist Party (or Kuomintang, KMT) and the Democratic Progressive Party (DPP). The DPP controlled both the presidency and the legislature since the 2016 presidential election. The next presidential and legislative elections are scheduled in January 11, 2020.

The president is elected through the first-past-the-post system by plurality rule. The mixed-member rule is applied to electing members in the legislature. Among the 113 seats, 73 seats come from single-member districts, 6 from aboriginal reserved seats, and 34 seats elected under proportional party list with 5% threshold. The DPP held 68 seats while the KMT had 35 seats. The rest were shared by other small parties. The New Power Party, a party established after the Sunflower Movement, won 5 seats, becoming the third largest party in the legislature.

1.4 ECONOMIC PERFORMANCE

Economic growth was evaluated by gross domestic product (GDP). In 2018, the GDP growth was 2.64%. GDP per capita was USD 25,148. The GDP growth rate was down from 2.66% in 2017 and 3.08% in 2016.²

1.5 IMPORTANT POLITICAL AND SOCIAL EVENTS

President Tsai Ing-wen carried out several reforms since winning the elections in May 2016. The reforms include civil servants pension reform, labor reform and establishing the Transitional Justice Commission. Yet, these reforms have caused many controversies, with protests a usual phenomenon in the capital city. Tsai's popularity also plummeted to 21% by the end of 2018.³ The local elections held in November 2018 were a huge blow to Tsai and the DPP as the party lost its traditional stronghold, Kaohsiung City, to the KMT's Han Kuo-yu. Han's victory energized the KMT and several KMT political stars are preparing to run for the presidency for 2020. The DPP's pro-independence wing, meanwhile, tried to dissuade Tsai from seeking re-election. The pressure soothed, however, after Tsai affirmatively refuted Xi Jinping's call for "one country, two systems" as the final solution to Taiwan's future.

The KMT candidate for the Taipei mayoral election, Ting Shou-chung, applied for a ballot recount due to the flaws on the Election Day. Voters were allowed to cast ballots while officials were counting the votes. Ting accused that such procedure affected vote choice and he continued to file a law suit with the goal to annul the election results.

² National Statistics Office, Accessed on January 30, 2019, [https://www.stat.gov.tw/public/data/dgbas03/bs4/Statistical%20Tables/table\(028\).xls](https://www.stat.gov.tw/public/data/dgbas03/bs4/Statistical%20Tables/table(028).xls)

³ <https://tsjh301.blogspot.com/2018/03/2018-satisfaction-governance.html>, accessed on January 30, 2019.

2. TIMETABLE

Activity	Duration
Preparation	
Pre-test	2018/1/15~2/25
Finalizing the Questionnaire	2018/3/1~4/30
Institutional Review Boards	2018/4/11~6/30
Training for Supervisors and Interviewers	2018/7/9~13
Fieldwork	
Fieldwork	2018/7/16~2019/1/20
Re-test	2018/11/1~2019/1/31

3. RESPONDENTS

3.1 CRITERIA OF SELECTING RESPONDENTS

Data was gathered through face-to-face interviews of voting-age adults (20 years old and above), who had registered in the household system in department of household registration, Ministry of the Interior. The baseline information and addresses were drawn from the household information compiled by the Ministry of Interior and excluded residents in military organizations, hospitals, medical care centers, schools, vocational training centers, dormitories, detention centers, and prisons.

3.2 RESEARCH ETHNICAL REVIEW

The Taiwan team had obtained the permission to conduct human subject research to meet the international standard.

4. SAMPLING PROCESS AND METHODOLOGY

4.1 SAMPLING SIZES AND ERROR MARGINS

An indicator of data quality is the standard error of the estimate, on which the margin for sampling error is based. As survey statistics are mostly proportions, the key measure of data precision is the standard error of a proportion taken from a sample. It is computed as follows:

$$\pm Z * \sqrt{\frac{p(1-p)}{n}}$$

Where Z, at 95% confidence level is 1.96; p is the sample proportion estimate and n is the sample size. The overall sample size of 1,259 voting-age adults gives a maximum error margin of $\pm 2.76\%$ at the 95% confidence level, assuming a simple random sampling design.

4.2 SAMPLING SCHEME

Taiwan was divided into six geographical areas. Using the total number of people eligible to cast ballots in the 2016 legislative elections, we estimated the total number of successful samples required in each geographical area.

In accordance with the 30/30 rule for using micro-level data to make macro level conclusions, the number of electoral constituencies (xuanqu) and neighborhoods (li) or villages (cun) to be sampled in each geographical area was based on the estimated total number of samples in that area. Sampling was carried out in three stages in accordance with the probability proportional to size (PPS) method. In the first stage, electoral constituencies were selected in each geographical area in accordance with the divisions in place for the 2016 Legislative Yuan elections. In the second stage, four neighborhoods or villages were selected in each of the twenty-seven electoral constituencies drawn in the first stage. In the third stage, respondents were selected in each of the neighborhoods and villages drawn in the second stage. We selected 10 people in each neighborhood or village on the basis of the feasibility of carrying out successful interviews. The sampling framework is shown below. In total, there were 1,259 successful interviewees, about 93% of the original sampling size.

The number of the final successful cases was below the target due to several reasons. First, the Ministry of the Interior refused to draw respondent lists but instead giving household lists due to the Enforcement Rules of the Personal Information Protection Act passed in 2016. This means that interviewers had to use Kish table to draw a respondent from each household and that makes refusal twice more likely. Even a member of one household agreed to be interviewed, he or she might not be the selected one and the selected one might refuse to be interviewed. Second, before the November local elections, due to the intensity of the competition, voters were relatively reluctant to be interviewed, especially for political matters. Finally, as the fieldwork dragged on, it approached the project deadline and we had to terminate the fieldwork in January 2019, not being able to reach our original target.

Area	Number of Voters	Percentage of Total	Number of Constituencies Selected	Number of Neighborhoods/ Villages Selected	Total Number of Samples
Taipei City/New Taipei City/ Keelung Area	5,599,335	30.59%	10	40	400
Taoyuan/ Hsinchu/ Miaoli Area	2,731,351	14.92%	5	20	200
Taichung/ Changhua/ Nantou Area	3,517,576	19.22%	7	28	280
Yunlin/ Chiayi/ Tainan Area	2,715,412	14.83%	5	20	200
Kaohsiung City/ Pingtung Area	2,865,471	15.65%	5	20	200
Yilan/ Hualien/ Taitung & Outlying Islands*	875,967	4.79%	2	8	80
Total	18,305,112	100.00%	34	136	1,360

* Including Penghu, Kinmen, and Mazu

4.2.1 FIRST STAGE-SELECTION OF PSU

After the number of electoral constituencies to be sampled in each geographical area was established, we undertook systematic sampling on the basis of PPS to select the constituencies. After selection of the electoral constituencies, we undertook systematic sampling on the basis of PPS to select neighborhoods and villages within the constituencies. The selected neighborhoods and villages are shown in the Appendix.

4.2.2 SECOND STAGE-SELECTION OF HOUSEHOLD

After the selection of neighborhoods and villages, we applied to the Department of

Household Registration, Ministry of the Interior for access to household registration data. We then used systematic sampling to select household on the basis of the required number of successful samples in each neighborhood or village.

4.2.3 THIRD STAGE-SELECTION OF RESPONDENT

A respondent was randomly chosen from among the voting-age adults in each selected household using a probability respondent selection table. A respondent not contacted during the first attempt was visited for a second and third time.

4.3 NUMBER OF CALLS AND SUBSTITUTION/ALTERNATE SAMPLES

Unsuccessful interviews are an inevitable part of survey research regardless of approach used. In order to avoid the problem of the eventual sample size being too small because of unsuccessful interviews, we also selected alternate sets of samples. If the original sample set was unsuccessful, alternate samples sets were used. The process and methodology for selecting alternate samples was the same as for the original sample set. In total we selected a total of twenty-one sets of alternate samples for each neighborhood or village. Once interviews on an alternative sample set had been started, the entire set had to be completed.⁴ The total number of samples in the first alternate set was the same as the original set. However, from the sixth alternate set onwards, only 50% of the original total were sampled.

4.4 SURVEY STATISTICS

No. of Potential Respondents	Successful Case	Refusal Rate
9,631	1,259	87%

In total, there were 9,631 respondents being contacted and, among them, 1,259 had completed the interviews. The refusal rate is high, at 87%. Most incidents of failed interviews came from outright refusal of the respondents or family members (36%), or the interviewers could not find the respondents for various reasons, including not living in the household, being away for a long time, or our interviewers could not access the buildings (51%).

⁴After interviews using the first sample set were completed in a neighborhood or village, if the minimum number of successful interviews is attained, then survey work in the neighborhood or village is ended. However, if the minimum number of successful interviews is not attained with the original samples, then the first set of alternate samples is used. If the minimum number of successful interviews is still not reached, then the second set is used, and so on. Each sample from a proceeding set has to be confirmed as unsuccessful before a new set can be used. However, once a new set is used, then each sample from that set must be completed even if the minimum total has already been met.

5. RESEARCH METHODOLOGY

5.1 PREPARATION

5.1.1 QUESTIONNAIRE

The Chinese-version questionnaire was designed based on the module questionnaire developed by the Asian Barometer Survey. In order to deliver the definitive message in the questionnaire, several meetings were held among the team members to discuss the questions and indicators that would accurately evaluate and explore the citizens' attitudes toward democracy.

5.1.2 PRE-TESTING AND FINALIZING QUESTIONNAIRE

In order to narrow down the perception gap between the questionnaire designers and the respondents, a pre-test was needed so that problems, such as unclear wording, conceptually vague sentences, recording difficulties etc., could be corrected before the fieldwork began. The team also received feedback about the questionnaire from field supervisors and interviewers after they conducted the pre-test. The pre-test has helped determine the following things:

- The length of interviews (about 40 min. to 1 hour)
- Wording of questions
- Adding new items or eliminating less significant questions
- Question sequence
- Translation
- Coding system
- Questionnaire instructions
- Conception and idea of questions

5.1.3 TRAINING

5.1.3.1 SUPERVISOR

Two one-day trainings were held to allow the field supervisors to become familiar with the questionnaire and survey procedure. They were instructed on how to supervise their field interviewers and check the questionnaires returned by the field interviewers. The supervisors were asked to conduct a pre-test before the second training. In the second training, the problems that the supervisors found during the pre-test were discussed together with the national team members and they were also instructed on how to deal with real situations encountered in fieldwork.

5.1.3.2 INTERVIEWER

The training for field interviewers were conducted in Taipei City. In the training,

the interviewers were given instruction on interview skills and coding. Moreover, they learned to become familiar with questionnaire by reading the questions in both Mandarin and Taiwanese, the dialect the majority of people speak in Taiwan, in order to deliver the exact meaning that the questions want to convey. The interviewers were asked to conduct pre-test before going to field and the supervisors were asked to assist their field interviewers when needed. This time we used tablets to do survey so the interviewers also had to be familiar with the CAPI system interface.

5.2 FIELDWORK

5.2.1 WORKERS ON HAND

For the survey, 89 Interviewers and 8 Supervisors were deployed:

	Supervisor	Field Interviewer
Taipei City/New Taipei City/ Keelung Area	2	23
Taoyuan/Hsinchu/Miaoli Area	1	15
Taichung/Changhua/Nantou Area	2	21
Yunlin/Chiayi/Tainan Area	1	13
Kaohsiung City/Pingtung Area	1	12
Yilan/Hualien/ Taitung & Outlying Islands Area	1	5
Total	8	89

5.2.2 SUPERVISION

5.2.2.1 EVALUATION OF INTERVIEWER' S WORK

Supervisors reported to the project manager who monitored the progress and quality of the survey full-time. Supervisors would accompany the interviewers to conduct one or two interviews in the beginning to observe the interviewers and instruct them on how to improve their skills and avoid refusal from respondents. They also followed up and checked on the field interviewers as well as ensured that field logistics were received promptly and administered properly.

5.2.2.2 SPOT-CHEKING

Supervisors were responsible for investigating the failure or success of a case and spot-check in order to retain the survey quality. Supervisors either visited the respondent or called the respondent to ensure that the questionnaire was properly conducted and that the respondent was the one selected on the list. By doing so, any incomplete or inconsistent answer was verified by the supervisors.

5.2.2.3 RE-TESTING

In order to test the reliability of sampling, after interviews were completed we selected a sample from successful interviews in order to retest the reliability of responses. The questions in the re-test questionnaires were far fewer and the same interviewer was not allowed to interview the same respondent he/she interviewed in the previous fieldwork.

5.3 FIELD EDITING

5.3.1 DATA PROCESSING

The CAPI system recorded all answers and some basic logical checks were already set up. Thus, the team members only needed to discuss the coding problem in open questions and decided the new codes.

5.3.2 DATA ENTERING AND CLEANING

Data was then verified and the consistency of the encoded data was checked before data tables were generated.

6. RELIABILITY ANALYSIS

As part of a full review of the survey, questions were subjected to a reliability analysis. Reliability was measured using Cronbach's alpha, α . It is a common rule of thumb that a Cronbach α value of .6 to .7 is an acceptable value. This Technical Report uses commonly accepted rule of thumb in interpreting Cronbach's α values:

$\alpha \geq 0.9$ *Excellent*

$0.7 \leq \alpha < 0.9$ *Good*

$0.6 \leq \alpha < 0.7$ *Acceptable*

$0.5 \leq \alpha < 0.6$ *Below Standard*

$\alpha < 0.5$ *Poor*

6.1 PSYCHOLOGICAL INVOLVEMENT

The total Cronbach's α value of the three items was .634. The consistency of each concept is, therefore, acceptable in terms of reliability analysis. No question should be deleted from this battery since doing so will not significantly enhance the Cronbach's α significantly. Overall, the reliability of this set of questions is *acceptable*.

Cronbach's α = .634	Corrected Item-total correlation	Cronbach's α if item deleted
Q46. How interested would you say you are in politics?	.559	.416
Q47. How often do you follow news about politics and government?	.483	.670
Q48. When you get together with your family members or friends, how often do you discuss political matters?	.509	.574

6.2 TRADITIONALISM

The total Cronbach's α value of the 12 items was .795. The consistency of each item was *good* in terms of reliability analysis. Q68 and Q69 had the lowest correlations, and, deleting them does not increase Cronbach's α value. There was no significant difference in the coefficient Cronbach's α when we removed individual items. There are therefore no items that need to be deleted from this perspective.

Cronbach's α = .795	Corrected Item-total correlation	Cronbach's α if item deleted
Q58. For the sake of the family, the individual should put his personal interests second.	.388	.785
Q59. In a group, we should sacrifice our individual interest for the sake of the group's collective interest.	.491	.775
Q60. For the sake of national interest, individual interest could be sacrificed.	.469	.778
Q61. When dealing with others, developing a long-term relationship is more important than securing one's immediate interest.	.484	.775

Q62. Even if parents' demands are unreasonable, children still should do what they ask.	.468	.777
Q63. When a mother-in-law and a daughter-in-law come into conflict, even if the mother-in-law is in the wrong, the husband should still persuade his wife to obey his mother.	.394	.785
Q64. Being a student, one should not question the authority of their teacher.	.462	.778
Q65. In a group, we should avoid open quarrel to preserve the harmony of the group.	.496	.776
Q66. Even if there is some disagreement with others, one should avoid the conflict.	.503	.777
Q67. A person should not insist on his own opinion if his co-workers disagree with him.	.411	.783
Q68. Wealth and poverty, success and failure are all determined by fate.	.350	.788
Q69. If one could have only one child, it is more preferable to have a boy than a girl.	.380	.785

6.3 REGIME PREFERENCE

6.3.1 IDEAL SYSTEM OF DEMOCRATIC GOVERNMENT

This group has a total of eight items. After measuring each main question and supplementary question, the two were grouped together and given a new code. For example, Q82 and Q82a were grouped together as “Strongly agree: Government leaders implement what voters want. (Code 1)”, “Agree: Government leaders implement what voters want. (Code 2)”, “Agree: Government leaders do what they think is best for the people. (Code 3)”, and “Strongly agree: Government leaders do what they think is best for the people. (Code 4)”. Q85+Q85a showed the lowest correlations with the other three items with a figure of .356. The total Cronbach's α value for the four items was high at .603, which is *acceptable*. Removing each of the items does not heighten the

Cronbach's α significantly. The consistency of each item was therefore good in terms of reliability analysis.

Cronbach's α = .603	Corrected Item-total correlation	Cronbach's α if item deleted
Q82+Q82a. Regime Preference 1: <i>Statement 1. Government leaders implement what voters want. Statement 2. Government leaders do what they think is best for the people.</i>	.380	.534
Q83+Q83a. Regime Preference 2: <i>Statement 1. It is more important for citizens to be able to hold government accountable, even if that means it makes decisions more slowly. Statement 2. It is more important to have a government that can get things done, even if we have no influence over what it does.</i>	.425	.501
Q84+Q84a. Regime Preference 3: <i>Statement 1. The media should have the right to publish news and ideas without government control. Statement 2. The government should have the right to prevent the media from publishing things that might be politically destabilizing.</i>	.377	.540

Q85+Q85a. Regime Preference 4: <i>Statement 1. Political leaders are chosen by the people through open and competitive elections. Statement 2. Political leaders are chosen on the basis on their virtue and capability even without election.</i>	.356	.551
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6.3.2 OPERATION OF CURRENT GOVERNMENT INSTITUTIONS

The correlation of each item with the other three items in this set is acceptable, with a minimum figure of .603. The total Cronbach's α value for the four items was .831. The consistency of each item was good in terms of reliability analysis. Removing any one item does not increase Cronbach's α value. Therefore, it is not necessary to delete any items. Overall, the design of this set of questions is good. Each question passed the reliability test.

Cronbach's α = .831	Corrected Item-total correlation	Cronbach's α if item deleted
Q86. Over the long run, our system of government is capable of solving the problems our country faces.	.614	.805
Q87. Thinking in general, I am proud of our system of government.	.708	.765
Q88. A system like ours, even if it runs into problems, deserves the people's support.	.721	.758
Q89. I would rather live under our system of government than any other that I can think of.	.603	.816

6.4 MEANING OF DEMOCRACY

The Cronbach's α value for the four items is .93, which is considered as *excellent*. Each of the seven items is positively correlated with each of the other questions in this battery. Deleting any of the items from this battery would not have a significant effect on the overall Cronbach's α value, i.e., none of the items would increase the reliability if they were deleted

because all values are less than or similar to the overall reliability.

Cronbach's α = .93	Corrected Item-total Correlation	Cronbach's α If Item Deleted
Q91. The court protects the ordinary people from the abuse of government power.	.700	.926
Q92. Politics is clean and free of corruption.	.740	.923
Q93. People have the freedom to take part on protests and demonstrations.	.800	.918
Q94. When making laws, the government seeks advice from religious authorities.	.789	.918
Q95. Political leaders rule by following their own wisdom rather than people's preferences to ensure a society's collective welfare.	.790	.918
Q96. Rule by one party that represents the interests of all classes.	.804	.916
Q97. Qualified candidates are pre-selected by religious leaders.	.819	.915

6.5 PREFERENCE FOR DEMOCRACY

Each of the five questions showed positive correlation with the other four questions. The correlation of each item with the other four items in the set was above .440. The total Cronbach's α value for the five items was .695, which is *acceptable*. There was no significant difference in the coefficient Cronbach's α when we removed individual items. Overall, the ability of this set to reliably measure democratic legitimacy is fairly adequate.

Cronbach's α = .695	Corrected Item-total correlation	Cronbach's α if item deleted
Q132. Which of the following statements comes closest to your own opinion? (1) Democracy is always preferable to any other kind of government (2) Under some circumstances, an authoritarian government can be preferable to a democratic one	.461	.641

(3) For people like me, it does not matter whether we have a democratic or a nondemocratic regime		
Q133. Which of the following statements comes closer to your own view? (1) Democracy is capable of solving the problems of our society (2) Democracy cannot solve our society's problems	.443	.655
Q134. If you had to choose between democracy and economic development, which would you say is more important?	.440	.650
Q135. If you had to choose between reducing economic inequality and protecting political freedom, which would you say is more important?	.469	.637
Q136. Do you agree or disagree with the following statement: "Democracy may have its problems, but it is still the best form of government."	.463	.645

6.6 LEGITMACY OF DEMOCRACY/ DETACHMENT FROM AUTHORITARIANISM

The Cronbach's α value for the four items is .897, which is considered *good*. Each of the four items is positively correlated with the other three questions in this module. Deleting any of the items from this battery would not have a significant effect on the overall Cronbach's α value, i.e., none of the items would increase the reliability if they were deleted because all values are less than the overall reliability α .

Cronbach's α = .897	Corrected Item-total Correlation	Cronbach's α If Item Deleted
Q137. We should get rid of parliament and elections and have a strong leader decide things	.782	.865
Q138. Only one political party should be allowed to stand for election and hold office	.786	.863

Q139. The army (military) should come in to govern the country	.761	.874
Q140. We should get rid of elections and parliaments and have experts make decisions on behalf of the people	.770	.870

6.7 CITIZEN EMPOWERMENT AND POLITICAL SUPPORT

The Cronbach's α value for the five items is .806, which is considered *good*. Each of the five items is positively correlated with each of the other questions in this module. Q141 (.518) has the lowest corrected item-total correlation. Deleting any of the items from this battery would not have significant effect on the overall Cronbach's α value, i.e., none of the items would increase the reliability if they were deleted because all values are less than the overall reliability Cronbach's α .

Cronbach's α = .806	Corrected Item-total Correlation	Cronbach's α If Item Deleted
Q141. I think I have the ability to participate in politics	.518	.795
Q142. Sometimes politics and government seems so complicated that a person like me can't really understand what is going on	.661	.748
Q143. People like me don't have any influence over what the government does	.599	.766
Q144. You can generally trust the people who run our government to do what is right	.588	.770
Q145. A citizen should always remain loyal only to his country, no matter how imperfect it is or what wrong it has done	.607	.763

6.8 AUTHORITARIAN/DEMOCRATIC VALUES

Each of the ten questions showed positive correlation with the other nine questions. The total Cronbach's α value for the eleven items was 0.9, which is considered *excellent*. The consistency of each item was good in terms of reliability analysis. Thus, no items need to be deleted.

Cronbach's α = .90	Corrected Item-total correlation	Cronbach's α if item deleted
Q146. Women should not be involved in politics as much as men.	.516	.898
Q147. The government should consult religious authorities when interpreting the laws.	.676	.889
Q148. People with little or no education should have as much say in politics as highly-educated people.	.630	.892
Q149. Government leaders are like the head of a family; we should all follow their decisions.	.699	.887
Q150. The government should decide whether certain ideas should be allowed to be discussed in society.	.712	.887
Q151. Harmony of the community will be disrupted if people organize lots of groups.	.682	.888
Q152. When judges decide important cases, they should accept the view of the executive branch.	.630	.893
Q153. If the government is constantly checked [i.e. monitored and supervised] by the legislature, it cannot possibly accomplish great things.	.655	.892
Q154. If we have political leaders who are morally upright, we can let them decide everything.	.723	.886
Q155. If people have too many different ways of thinking, society will be chaotic.	.662	.890

6.9 GLOBALIZATION

The measurement in globalization battery is the same as that of ideal system of democratic government (section 6.3.1 at p. 12-14). This group has five items; only (Q156+Q156a) and (Q157+Q157a) were grouped together and given a new code. The Cronbach's α value for the five items is .532, which is considered *below standard*. Each

of the three items is positively correlated with each of the other questions in this module, though the correlations are low. Deleting any of the items from this battery would not have significant effect on the overall Cronbach's α value, i.e., none of the items would increase the reliability if they were deleted because all values are less than the overall reliability Cronbach's α .

Cronbach's α = .532	Corrected Item-total correlation	Cronbach's α if item deleted
Q156+Q156a. <i>Statement 1. Our country should do more to defend our way of life. Statement 2. Our country should do more to learn from other countries even if we might lose our country's distinct way of life (or culture).</i>	.379	.377
Q157+Q157a. <i>Statement 1. Our country should limit the imports of foreign goods to protect our farmers and workers. Statement 2. Our country should do more trade with other countries even if the rise of imports might harm our workers and farmers.</i>	.333	.453
Q158. Do you think the government should increase or decrease the inflow of foreigners who come to work in our country?	.324	.463

6.10 REDISTRIBUTION

Each of the four items showed positive correlation with the other three items. Yet the coefficients are small. The total Cronbach's α value for the four items was .857, which is *good*. There was no significant difference in the coefficient Cronbach's α when we removed individual items. Therefore, it is not necessary to delete any items.

Cronbach's α = .857	Corrected Item-total Correlation	Cronbach's α If Item Deleted
Q160A. Narrow the gap between the rich and poor.	.687	.826
Q160B. Make sure that everyone has affordable housing.	.730	.805
Q160C. Make sure that everyone has	.683	.826

access to basic medical care.		
Q160D. Make sure that basic necessities such as food and shelters are provided for everyone.	.710	.814

6.11 DEMOCRATIC DECONSOLIDATION

The Cronbach's α value for the four items is .904, which is considered as *excellent*. Each of the six items is positively correlated with each of the other questions in this battery. Deleting any of the items from this battery would not have a significant effect on the overall Cronbach's α value, i.e., none of the items would increase the reliability if they were deleted because all values are less than or almost equal to the overall reliability.

Cronbach's $\alpha = .904$	Corrected Item-total Correlation	Cronbach's α If Item Deleted
Q168. Under a democratic system, the country endures poor economic performance.	.649	.900
Q169. Democratic regimes are indecisive and full of problems.	.772	.881
Q170. Democratic systems are not effective at maintaining order and stability.	.821	.874
Q171. The citizens in our country are not prepared for a democratic system.	.729	.888
Q172. Democracy negatively affects social and ethical values in our country.	.780	.880
Q173. As long as a government can solve our country's economic problem, it does not matter if it is democratic or not democratic.	.672	.896

7. EXAMINATION OF REPRESENTATIVENESS OF SAMPLE SET AND WEIGHTING

We conduct goodness-of-fit tests and found that the distributions of areas and age do not match the distributions of two factors in the population. Therefore, we firstly weight the data by area. Then another two weighting factors are calculated using age and education. The final weighting factor, then, is the multiplication of the three weighting factors.

7.1 GOODNESS-OF-FIT TESTS

Area	Sample		Population	Result
	Frequency	Percent	Percent	
Taipei City/New Taipei City/Keelung Area	351	28%	30%	Chi square= 20.10 P=.003<.05 <u>Not Consistent</u> <u>with the</u> <u>population</u>
Taoyuan/Hsinchu/Miaoli Area	184	15%	15%	
Taichung/Changhua/Nantou Area	254	20%	19%	
Yunlin/Chiayi/Tainan Area	206	16%	14%	
Kaohsiung City/Pingtung Area	177	14%	16%	
Yilan/Hualien/Taitung & Outlying Islands	87	7%	5%	
Total	1,259	100%	100%	

Gender	Sample		Population	Result
	Frequency	Percent	Percent	
Male	604	48%	49%	Chi square= 0.872 P=.351>.05 Consistent with the population
Female	655	52%	51%	
Total	1,259	100.00	100.00	

Age Group	Sample		Population	Result
	Frequency	Percent	Percent	
20 – 29	137	10.9%	16%	Chi square= 86.774 P=.000<.05 <u>Not consistent with the population</u>
30 – 39	177	14.1%	19%	
40 – 49	221	17.6%	19%	
50 – 59	283	22.5%	19%	
60 – 69	260	20.7%	15%	
70 – 79	120	9.5%	7%	
80 +	61	4.8%	4%	
Total	1,259	100%	100%	

Note: There are 17 missing values, which we replace with the mean (52).

Education	Sample		Population	Result
	Frequency	Percent	Percent	
Elementary and less	224	18%	13%	Chi square= 40.72 P=.000<.05 <u>Not Consistent with the population</u>
Junior High School	146	12%	12%	
Senior High School	339	27%	28%	
Vocational	173	14%	11%	
College and above	377	30%	35%	
Total	1,259	100%	100%	

Note: There are 8 missing values, which we replace with the mean (3).

7.2 SAMPLE REPRESENTATIVENESS

Area	Before weighting		After weighting	
	Frequency	Percent	Frequency	Percent
Taipei City/New Taipei City/ Keelung Area	351	28%	379	30.1%
Taoyuan/ Hsinchu/ Miaoli Area	184	15%	195	15.5%
Taichung/ Changhua/ Nantou Area	254	20%	241	19.1%
Yunlin/ Chiayi/ Tainan Area	206	16%	181	14.4%
Kaohsiung City/ Pingtung Area	177	14%	195	15.5%
Yilan/ Hualien/ Taitung & Outlying Islands	87	7%	68	5.4%
Total	1,259	100%	1,259	100%

Chi-squared=0.95662, $p=0.966>0.05$, consistent with the population after weighting

Age Group	Before weighting		After weighting	
	Frequency	Percent	Frequency	Percent
20 – 29	137	10.9%	190	15.1%
30 – 39	177	14.1%	229	18.2%
40 – 49	221	17.6%	239	19%
50 – 59	283	22.5%	247	19.6%
60 – 69	260	20.7%	202	16%
70 – 79	120	9.5%	94	7.5%
80 +	61	4.8%	57	4.5%
Total	1,259	100%	1,259	100%

Chi-squared=3.543, $p=0.738 > 0.05$, consistent with the population after weighting

Education	Before weighting		After weighting	
	Frequency	Percent	Frequency	Percent
Elementary and less	224	17.8%	164	13%
Junior High School	146	11.6%	154	12.3%
Senior High School	339	26.9%	356	28.3%
Vocational	173	13.7%	138	11%
College and above	377	29.9%	447	35.5%
Total	1,259	100%	1,259	100%

Chi-squared=0.185, $p=0.996 > 0.05$, consistent with the population after weighting

Appendix

1. List of PSU and SSU

Area	City/County	Electoral District (PSU)	Neighborhood (Li)/Village (SSU)
Taipei City/New Taipei City/Keelung Area	New Taipei City	1	Danshui/Minsheng
			Taishan/Futai
			Taishan/Fuxing
			Bali/Longyuan
		3	Sanchong/Dayou
			Sanchong/Fude
			Sanchong/Datong
			Sanchong/Chongyang
		7	Banqiao/Yuguang
			Banqiao/Xingyi
			Banqiao/Fuan
			Banqiao/Xizhou
		8	Zhonghe/Jisui
			Zhonghe/Jiaxin
			Zhonghe/Qingsui
			Zhonghe/Zhongxing
		11	Xindian/Xinyi
			Xindian/Yongan
			Xindian/Xiangpo
			Pinglin/Dalin
		12	Xizhi/Baozhang
			Xizhi/Jiancheng
			Xizhi/Hulian
			Jinshan/Jinmei
	Taipei City	4	Neihu/Ziyang
			Nangang/Dongming

			Nangang/Baifu
			Nangang/ Chongyang
		7	Xinyi/Yongchun
			Xinyi/Daren
			Xinyi/Jingxin
			XinyiLian
		8	Wenshan/Wanyou
			Wenshan/Zhinan
			Wenshan/ Zhangwen
			Wenshan/Wanxing
	Keelung	1	Anle/ Zhuangguan
			Nuannua/Nuanxi
			Qidu/Bade
			Qidu/Taian
Taoyuan/ Hsinchu/ Miaoli Area	Taoyuan City	1	Luzhu/Luzhu
			Luzhu/Haihu
			Guishan/ Zhongxing
			Guishan/Longshou
		4	Taoyuan/Dalin
			Taoyuan/ Zhongxing
			Taoyuan/Zhonglu
			Taoyuan/Longan
		6	Zhongli/Renhe
			Bade/Danan
			Bade/Jiaming
			Daxi/Ruiyuan
	Hsinchu City	1	Beiqu/Minfu
			Beiqu/Wuling
			Beiqu/Jinzhu

			Dongqu/Xinzhuang
	Hsinchu County	1	Zhubei/Xshizing
			Guanxi/Dongshan
			Chudong/Ronghua
			Beibu/Nanxing
Taichung/ Changhua/ Nantou Area	Taichung City	3	Houli/Yili
			Tanzi/Tiujia
			Daya/Yafeng
			Shengang/Sanjiao
		6	Dongqu/Dingxin
			Nanqu/Deyi
			Xiqu/Minlong
			Xiqu/Gongping
		7	Taiping/Xinglong
			Dali/Xiangxing
			Dali/Liren
			Dali/Zhongshin
		8	Fengyuan/Dongnan
			Fengyuan/ Dongyang
			Dongshi/Fulong
			Dongshi/Qingfu
	Changhua County	2	Changhua City/Fushan
			Changhua City/Hediao
			Huatan/ Zhongzhuang
			Huatan/Nankou
		3	Xihu/Dongliao
			Buyan/Bunan
			Erlin/Nanguang
			Erlin/Beiping
	Nantou	2	Nantou/Jianxin

	County		
			Minjian/ Zhongzheng
			Shuili/Xincheng
			Nantou/Neixin
Yunlin/ Chiayi/ Tainan Area	Yunlin County	1	Tuku/Xinzhuang
			Mailiao/Wayao
			Shulin/Haibu
		2	Douliu/Linto
			Douliu/Huzi
			Douliu/Zhendong
			Gukeng/Hebao
	Chiayi County	1	Dongqu/Renyi
			Xiqu/Guanglu
			Xiqu/Xinfu
			Dongqu/Wenya
	Tainan City	1	He-chien
			Chung-chou
			Chiao-nan
			Hsien-tsao
		3	Annan/Xiding
			Annan/Yuanzhong
			Annan/Guoan
			Zhongxiqu/Yaowan
		4	Dongqu/Weiguo
			Dongqu/ Xhuangjing
			Dongqu/Zhongxiao
			Nanqu/Jinghua
Kaohsiung City/ Pingtung Area	Kaohsiung City	3	Nanzi/Hongrong
			Nanzi/Longchang
			Zuiying/Xinshang
			Zuiying/Fushan

		7	Xingxing/ Zhongdong
			Lingya/Boren
			Lingya/Zhongda
		6	Ding-shi
			Ding-sheng
			Pao-an
			Ding-tai
		9	Qianzhen/ Shengfeng
			Xiaogang/Gangxin
			Xiaogang/ Liuling
	Pingtung County	1	Kaosu/Xinnan
			Neipu/Dongning
			Neipu/Dongshi
			Ligan/Talou
		3	Xinpi/Jianggong
			Nanzhou/Qikuai
			Dinggang/Chaoan
			Checheng/Xinjie
Yilan/ Hualien/ Taitung & Outlying Islands*	Hualien County	1	Hualien/Minde
			Hualien/Guoguang
			Hualien/Guohun
			Jian/Qingfeng
	Yilan County	1	Yilan City/Wenhua
			Sanxing/Shangwu
			Dongshan/Yongmei
			Toucheng/Fucheng