A Comparison Study of Exit Poll Methodologies between Taiwan and the U.S.

Ge Tang, Yeh-Diing Wang, Rene Bautista

Ge Tang *Survey Research and Methodology Program, University of Nebraska, Lincoln*
Yeh-Diing Wang *Poll Center, TVBS TV Network, Taiwan*
Rene Bautista *Survey Research and Methodology Program, University of Nebraska, Lincoln*

Abstract

The Poll Center of TVBS TV Network conducted an exit poll in 2004 during the Taiwan presidential election for the first time. They cooperated with Mitofsky International, which provided the sampling methodology for the poll. Although in Taiwan exit poll was conducted with a methodology similar to the one used in America, there were different factors that might affect exit polling results. The exit poll result in Taiwan showed that the support rate for two candidates was 47% vs. 53% while the official result was 50% for each. We investigated the differences of exit polling methodologies between Taiwan and America, especially focusing on sampling and non-sampling errors. A multistage complex design sample was drawn in Taiwan, as well as in U.S.; however, the sampling was conducted in a different way. Differences of sources of non-sampling error will be discussed in this paper, including (1) Early voters: in U.S. early voting was an important component of exit poll, while in Taiwan it was not allowed. (2) Incentives: in Taiwan, sample voters were given incentives, while in U.S. the incentives were not given. (3) Interviewers: in Taiwan, exit poll interviewers were young college students, who were apt to get higher response rates, while in U.S., previous researches show that older interviewers had higher response rates. (4) Questionnaire design: there were 4 versions of the national questionnaire in U.S. while only one version in Taiwan; the breaking news, such as Taiwan 319 presidential shooting incident was not included in the questionnaire. (5) Cultural background: the interactions between respondents and interviewers were different, which induced a lower refusal rate in Taiwan than in U.S. (6) Government pressure: the government declared the exit poll was not supported during the Taiwan presidential election, which might lead to the higher refusal rates for those government supporters.

Key Words: Exit poll, comparison study, Taiwan

1. Introduction

As early as the 1940s, an exit poll took place in Denver, Colorado, where voters were interviewed outside polling stations (Frankovic, 1992). In 1967, Warren Mitofsky and his colleague George Fine, inspired by his experience in movie industry, introduced the exit poll into the Kentucky governor's race (Morin, 2006). This was seen as the initiation of exit polls.

About 40 years later, the exit polling technique becomes a more mature technique in U.S. and the public are familiar with the exit polls. While in other countries and regions outside of U.S., such as Taiwan, it is still a fresh research method in the political election.

Edison Media Research and Mitofsky International have been the exclusive providers of exit poll data to the National Election Pool since 2003. Since 1994 Edison

Media Research and Mitofsky International have been conducting exit polls in the United States in addition to exit polls conducted for elections in Mexico, Russia, Taiwan and Azerbaijan.

These exit polls conducted outside of U.S. gave us more empirical experiences to test present methodologies of exit polls.

In 2004, it was the first time that TVBS, one of Taiwan's largest cable TV companies, conducted the exit poll for Taiwan presidential election cooperating with Mitofsky International.

TVBS planned to screen the results of a poll of at least 16,500 people at 4.01pm on Saturday, one minute after polling stations were closed. This exit poll involved six universities and eight professors, who were specialists in politics, sociology, and statistics. All interviewers were recruited from these majors of these six universities and trained by TVBS. The poll center of TVBS designed the questionnaire and Mitofsky International worked on the sampling design and data analysis.

This exit poll was conducted from 8:00 am to 3:00 pm on Election Day, March 20, 2004 by Poll center of TVBS. One thing should be mentioned is that just one day before Election Day, Taiwan 319 presidential shooting incident happened, which might change the voting intent of a number of voters.

Totally 13,449 voters were interviewed. Excluding those who did not answer which group of president candidates (president and vice president) they voted for, the valid sample size was 13,244. Two-step complex sampling design was used in the poll. In the first step, the systematic sampling was used to select precincts. In the second step, the systematic sampling was employed again to select voters in each sampled precinct.

It was a self-administered paper-pencil survey. Each respondent received a one-page questionnaire and finished it by themselves. After completing the questionnaire, the respondent received a magnet with a TVBS' logo as an incentive, which was worth $3.

On the Election Day, more than one-third interviewers were forced to stand more than 30 meters (about 90 feet) away from the polling locations. The Taiwanese researchers believe that this is one of the most important factors which led to the inaccuracy in 2004 exit poll. While in America, many election officials imposed distance restrictions of 50 feet or more in 2004 election (Edison Media Research and Mitofsky International, 2005).

The poll center of TVBS collected the exit poll data and sent them to Mitofsky International by Internet at 3:38. Mitofsky International processed the data analysis and sent the result back to TVBS at 3:55, which predicted the support rates of President Chen Shui-bian (Democratic Progressive Party, DPP) and his opposition Kuomintang (KMT) challenger Lien Chan were 47% vs.53%. Since precincts in some regions, such as Taizhong, Kaohsiung, were not closed until 5:00pm, TVBS decided to delay the projection. Until 5:12pm, they projected that the supporting rates of two candidates were 47% v.s.53%. However, since the margin of difference was less than 8%, according to the principle of the projection of exit polls, they did not declare who was the winner.

Then TVBS sent the quick counts (real voting results) of those precincts which were sampled in the exit polls to Mitofsky International, until 5:20pm the real results of 80 precincts had been sent to U.S. At 5:36pm, based on these 80 precincts' real counts, Mitofsky International revised the prediction as 50% vs. 50%. At 6:01 pm, they received the data from real counts of all 150 precincts sampled and confirmed the revised support rates (50% vs. 50%).

It was the first time that island wide exit poll was conducted in Taiwan. TVBS did not know there might be a revised prediction, and nor did the public. They were concerned that it was not easy for the public to understand why there was a revised result, which might lead to confusion and distrust. So they decided not to announce the revised

prediction result (50% vs. 50%). In fact, in Taiwan, the ballots were counted quickly. The counting might be completed in 2 to 3 hours. This is much faster than the counting speed of America. It was very common to revise prediction using real counts in U.S. for a large territory.

Finally, the really voting result was 50.11% (DPP) vs. 49.89% (KMT). The number of the eligible voters was 16,507,179, and the turnout rate was 80.28%. President Chen Shui-bian and Vice President Annette Lu of the Democratic Progressive Party were re-elected by a margin of 0.22% of valid votes over a combined opposition ticket of Kuomintang (KMT) Chairman Lien Chan and People First Party Chairman James Soong.

2. Comparison of methodologies

Although in Taiwan exit poll was conducted with a similar methodology in America, there were several factors that might affect accuracy of estimation. It is a vital problem for Taiwan pollsters that how to adapt American Exit poll methodologies into Taiwan's Presidential Election based on the theories and practice in comparative studies of cross-cultural surveys. We investigated the differences of exit polling methodologies between Taiwan and America, especially focusing on sampling and non-sampling errors.

2.1 Sampling error

Sampling errors are usually regarded as the main reason which induces the discrepancy between estimates and real results in exit polls. We compared the sampling design of Taiwan with U.S. and investigated the reasons for inaccuracy of estimation in the Taiwan exit poll.

2.1.1 Sampling design of United States presidential election

Usually a multistage complex design sample was drawn in American. For instance, in 2004 presidential election, the statewide samples were selected in two stages. In the first stage, a stratified random sampling was adopted. A probability sample of voting precincts within each state was selected to represent the different geographic areas across the state and the vote by party. In the second stage, within each precinct, voters were sampled systematically throughout the voting day at a rate that gave all voters in a precinct the same chance of being interviewed.

2.1.2 Sampling design of 2004 Taiwan presidential election

Precincts were survey units in the exit poll of 2004 Taiwan presidential election. The systematic sampling was employed. It was planned to sample 150 precincts from all 13,469 precincts and select 110 voters in each precinct, totally more than 16,500 voters would be interviewed. The list of precincts of each county or city for the latest Taiwan election (The fifth legislator election) was the sampling frame, which was ordered in the number of precincts.

When sampling, taking the representation and size of each county/city into account, pollsters ordered the precincts according to their ID numbers and listed the number of voters of each precinct, added them up and got the total number of voters N (16,476,000 voters). If 150 precincts was selected, let N/150=k (k=109,840) and a random start R was chosen from 1 to k, thus the precinct including R was the first precinct sampled, based on the accumulative number of voters. The second selected precinct was the precinct which included R+K. Then R+2K, R+3K, R+4K etc., until the last one including R+149K was selected. Because the sizes of precincts was accumulated, the precincts with larger sizes

had higher probability of being selected, while the precincts with smaller sizes had lower probability of being selected, which conformed to the rule of random sampling.

On the Election Day, as it was impossible to know the voting rate for each precinct beforehand, the number of voters in the latest island-wide election (The fifth legislator election) was used to predict the possible number of voters of each sampled precinct in this presidential election. For example, there were 2,392 eligible voters in some precinct, predicted number of voters was 1,866 (vote rate=78%), with the assumed refusal rate of 30%, if it was planned to interview 110 voters (157 x 70%), at least 157 voters should be contacted. The systematic sampling was employed and interviewers stood outside of the precinct and counted the voters who had voted and selected one from every 12 voters （1866/157=11.9）to interview.

Comparing the sampling design of Taiwan with that of U.S., we see that the standard error is larger in sampling design of Taiwan than that of American. (Taiwan: Design effect=7.93; U.S.: Design effect: usually around 1.5). The design effect is the measure of the precision that is lost in any complex probability design, compared to simple random sampling. That means the sampling design of Taiwan would increase more standard errors of all estimates compared with that of America. We believe the reason is that in the first stage, when pollsters did systematic sampling to select precincts, they used a sampling frame in which the precincts were listed by ID number of precincts (in arbitrary order). They were not ordered by some special information, such as population of precincts, geographic location, party identity, etc., which could be used to stratify those precincts.

2.2 Non-sampling error

Besides sampling errors, the scarce evidence suggests that non-sampling errors may have an important impact on exit polling estimates, particularly in close races (Bautista, et al., 2008). Within Precinct Error (WPE) is an indicator used as an independent variable in measuring non-sampling errors in exit polls in countries and regions where information is available, like U.S.
Unfortunately, the precinct level information was not available in 2004 Taiwan presidential election exit poll. There was only county level information. We approximately calculated the Within County Error (WCE) based on county level information. The calculation formula is similar to the Liddle's WPE formula (Liddle, 2005, Lindeman, et al, 2006; Blumenthal, 2005a; Bautista et al, 2007):

$$WCE = 2 * \frac{D_p^2(1-\alpha) - D_v(1-\alpha)}{D_v(1-\alpha)} \quad \text{Where } \alpha = \frac{D_p/D_v}{K_p/K_v} = \frac{S_D}{S_K}$$

Here, D_v is the real voting proportion of DPP; K_v is the real voting proportion of KMT; D_p is the predicted proportion of DPP; K_p is the predicted proportion of KMT. S_D is the DPP achieved sampling rate and S_K is the KMT achieved sampling rate.

Compared with traditional WPE formula, Liddle's formula takes the sampling rate of two Parties of each county into account. This new measure was used by Mitofsky in the reanalysis of the 2004 exit poll data (Blumenthal, 2005b; Mitofsky, 2005; Bautista et al 2007). The WCEs of 2004 Taiwan Presidential Election are shown in table 1. A negative sign means that there was an overestimation of DPP, and a positive sign means there was an underestimation of DPP. There were 10 counties in which the voting rate of DPP was overestimated and 13 counties in which the voting rate of DPP was underestimated. The average WCE is 0.011.

Table1: Within County Error (WCE) for 2004 Taiwan Presidential Election

county name	P-DPP%	P-KMT%	V-DPP%	V-KMT%	WCE= $2*\dfrac{D_v^2(1-\alpha)-D_v(1-\alpha)}{D_v(1-\alpha)}$
Taipei City	43.05%	56.95%	43.47%	56.53%	0.008
Keelung City	41.08%	58.92%	40.56%	59.44%	-0.010
Taipei County	46.85%	53.15%	46.94%	53.06%	0.002
Yilan County	56.49%	43.51%	57.71%	42.29%	0.024
Taoyuan County	47.98%	52.02%	44.68%	55.32%	-0.066
Hsinchu County	30.60%	69.40%	35.94%	64.06%	0.107
Hsinchu City	31.64%	68.36%	44.88%	55.12%	0.265
Miaoli County	40.17%	59.83%	39.25%	60.75%	-0.018
aichung County	51.12%	48.88%	51.79%	48.21%	0.013
Taichung City	45.28%	54.72%	47.34%	52.66%	0.041
Changhua County	54.29%	45.71%	52.26%	47.74%	-0.041
Nantou County	46.82%	53.18%	48.75%	51.25%	0.039
Yunlin County	68.42%	31.58%	60.32%	39.68%	-0.162
Chiayi County	67.07%	32.93%	62.79%	37.21%	-0.086
Chiayi City	50.62%	49.38%	56.06%	43.94%	0.109
Tainan County	58.52%	41.48%	64.79%	35.21%	0.125
Tainan City	57.07%	42.93%	57.77%	42.23%	0.014
Kaohsiung County	60.80%	39.20%	58.40%	41.60%	-0.048
Kaohsiung City	48.15%	51.85%	55.65%	44.35%	0.150
Pingtung County	67.23%	32.77%	58.11%	41.89%	-0.182
Penghu County	42.35%	57.65%	49.47%	50.53%	0.142
Hualien County	35.14%	64.86%	29.80%	70.20%	-0.107
Taitung County	38.10%	61.90%	34.48%	65.52%	-0.072

Note: V-DPP% (Dv): real voting proportion of DPP
   V-KMT% (Kv): real voting proportion of KMT
   P-DPP% (Dp): predicted proportion of DPP
   P-KMT% (Kp): predicted proportion KMT

Base on WCEs, we believe that there are diverse sources of errors that may affect the estimates. We focus on investigating the sources of non-sampling errors in the following aspects: (1) Early voters; (2) Incentives; (3) Interviewers; (4) Questionnaire design; (5) Cultural background; (6) Government pressure.

2.2.1 Early voters

In U.S. early voting is an important component of exit poll. The interviewers at the

exit of polling places miss those voters who cast their ballots prior to the Election Day (Merkle and Edelman, 2000). There was a growing trend toward absentee and early voting. In 2008 American presidential election, those U.S. citizens overseas were encouraged to vote through Internet. Two weeks before the Election Day, at least 2.2 million people already had voted using absentee or other types of ballots that allowed them to vote before the polls open on November 4 (Stewart, M. 2008). In Oregon, unlike any other states, the ballot is mailed to all residents, who are then supposed to fill out the ballot and either mail it back to the elections official or bring it to a drop box. The absentee voting leads to the coverage error since the exit poll could not catch the information of this part of voters. In the pre-election polls, the telephone surveys are usually used to investigate the opinion of the absentee voters. The data from the telephone surveys are combined with the data from the exit polls to estimate the result of the race, which involves mixed mode.

While in Taiwan the early voting was prohibited, which led that many Taiwanese living abroad, including in North America and Mainland China, had to go back to Taiwan and casted their ballots. Typical estimates indicate that about 20,000 people travelled from North America and between 100,000 and 150,000 people travelled from Mainland China. Most analysts believe that the voters from North America would be split evenly between the two candidates, but that those from Mainland China voted overwhelmingly for KMT.

2.2.2 Incentives

The incentive is always a controversial factor in the exit polls of U.S. There is no sufficient evidence to support that incentives could increase response rate significantly. According to leverage-saliency theory, different persons place different importance on the features of the survey request (Grove et al, 2000A). These attributes of the survey include the topic of the survey, the interviewing burden, the sponsor of the survey, incentives, etc. The respondents assess these attributes, putting positive values on some attributes, while putting negative values on others. The result of this assessing process will lead to a decision to take the survey or not. In one of the previous experiments, researchers found the positive incentive effect could be diminished when community involvement is a likely motivator for cooperation (Grove et al, 2000B). Another research, which investigated the impact of interest on cooperation decision and the interaction between the interest of survey topic and the monetary incentives provided, shows that the positive effect of the incentive was found, but it did not attain statistical significance, and the incentive effect could diminish the effect of the topic interest (Grove et al, 2004).

Although in American exit polls, the incentives are seldom provided since its positive effect to the response rate is not supported sufficiently, there was a useful exploratory experiment. In September1997 New York City primary election, the experiment was designed and conducted by Daniel Merkle and Murray Edelman etc, in which an incentive, a Voter News Service (VNS) ball pen with the logos of the VNS member organizations (ABC, the Associated Press, CBS, CNN, Fox and NBC) was handed out during the exit poll (Merkle et al, 1998). At the same time, a colorful folder was used as another experiment factor. So, they constructed three conditions: Folder Condition, Folder and Pen condition, and Traditional Condition. The sampled precincts were randomly assigned to these three conditions. Then the response rate for each precinct was calculated, as well as measures of survey error (include signed error and absolute error). The result showed the hypothesis that the pen would increase the response rate was not supported. The average response rate was basically the same in both the Folder and Pen Condition (55%) and the Folder Condition (54%) (t=.25, p=not

significant). The hypothesis that the pen would decrease the survey error was not supported either.

In 2004 Taiwan presidential election exit poll, they boldly employed incentives with intent to increase the response rate. They used magnets with logo of TVBS, the sponsor of the survey, as incentives (worth about $3 each). From the aspect of advertisement of the company, it was a good way to enhance the company's image. TVBS has a relatively neutral image among media in Taiwan, which helps it get trust from the voters. From the viewpoint of survey error, the response rate was about 60%, which was higher than that of U.S. (50%). But it is also hard for us to find sufficient evidences to support that incentives increased the response rate.

2.2.3 Interviewers

Interviewer characteristics such as age were more often related to precinct error (Edison Media Research and Mitofsky International, 2005). In U.S., the evaluation of Edison and Mitofsky election system (2004) shows that the older interviewers usually get higher response rates. They had lower WPE than the younger interviewers, and also had better completion rates. The mean absolute WPE of interviewers with 24 years old and under was 15.0, while the mean absolute WPE of interviewers with 65 years old and over was 12.9. For interviewers with 24 years old or under, the completion rate was about 0.50, while it was about 0.61 for older interviewers (65+). It indicates that voters were less likely to complete questionnaires from younger interviewers.

However, this is not the case in Taiwan. From the previous practice, the Taiwan pollsters found that college students usually got higher response rates in surveys in Taiwan. So, in 2004 presidential election exit poll, all the interviewers were college students from six universities. They majored in related fields, such as politics, sociology, and statistics.

They were trained by poll center of TVBS before the Election Day. TVBS sent survey trainers to six universities and the focus groups and role playing were used in the training. A very detailed interviewer handbook was distributed to each student. The mock interviews were conducted among students and then experts gave them feedback and comments on the mock interviews.

The interviewer handbook regulated many details in surveys which interviewers should follow, such as how to administer instruments (cellphones, questionnaires, incentives, and certificate of interviewers, etc.), how to be dressed (wear TVBS caps, not wear bizarre dress, etc.), how to sample respondents and do surveys, and how to call back to poll center, etc.

2.2.4 Questionnaire design

The self-administered paper-pencil surveys were used both in Taiwan and U.S. exit polls. Taiwan pollsters adapted the questionnaire of U.S. To acquire functional equivalency, they changed some questions. To get higher response rates, they cut the length of questionnaires.

Questionnaire length

There were 4 versions of national questionnaires in 2004 American presidential election exit poll, which were two-page letter size questionnaires, while there was only one version of questionnaires in 2004 Taiwan presidential election exit poll, which were

one-page letter size questionnaires. Compared with American questionnaires, the Taiwanese one was relatively shorter. It could reduce the respondents' burden and led to higher response rates.

Different questions asked

Regarding demographic information, the family income was asked in American questionnaires, while the occupation was asked in Taiwan questionnaires instead. This indicates the different standards were used to distinguish the social classes in different societies. In both of these surveys, pollsters want to investigate the social status of the respondents. In Taiwan, the construct of social status is more presented by the indicator of occupation, while, in America, it is indicated by family income. When adapting the American questionnaire into Taiwan, the equivalency should be considered. When the scores/values can be meaningfully compared across cultures in different questions (Van de Vijver and Leung 1997), we call it "functionally equivalent" (Braun and Mohler, 2003). In this case, the family income is not very commonly used in the surveys in Taiwan. They usually use occupations to classify the social status (economic status). Taiwanese don't like to disclose their income in the surveys. So questionnaire designers replaced the question of family income with the question of respondent's occupation. We also should notice that this background variable in these two surveys changed from group level data (family income) to individual level data (respondent's occupation).

Breaking news

In American 2004 presidential election exit poll questionnaire, the breaking news could be added into the questionnaire. They deliberately preserved some question for breaking news, thus they could get the attitudes of voters immediately, which could help improve the accuracy of estimating and be of benefit to further policy decision-making.

On version 4 of the national questionnaire, a question was set aside that would allow the interviewers to ask on late breaking news events. On the Sunday before the election, interviewers were instructed to write in "the Osama bin Laden video" on the blank line on each version 4 questionnaire that had been sent to them for use on November 2. The question looked like this:
[L] In your vote for president today, how would you rate the importance of
_____?
1   Very important
2   Somewhat important
3   Not too important
4   Not at all important

The purpose of this question was to allow the National Election Pool to have an exit poll question about an event that occurred as late as the Sunday before the election, even though the questionnaires had been printed about a week before the election.
This method could be used in the future exit polls of Taiwan. It was believed that Taiwan 319 presidential shooting incident changed some voters' intents. However, for the defect of the questionnaire design, this important information could not be included in the exit poll, which might affect the accuracy of the estimation and miss important information. On March 19, 2004, President Chen, Shui-bian and Vice-President Lu, Annette (DPP) were both shot while campaigning in Tainan. Their injuries were not life-

threatening, and both Chen and Lu were released from Chi-Mei Hospital on the same day. Nevertheless, the attack provoked shock and unease in Taiwan. The challenger (KMT) supporters even believed that the incident was faked in order for Chen to gain sympathy votes. The next day's election was not postponed, as Taiwanese law only allows for suspension of election upon the death of a candidate. Chen, Shui-bian appeared publicly the next day when he voted.

2.2.5 Cultural background

In Taiwan, the refusal rate was about 40%, while in U.S., the refusal rate was about 50%. The interactions between respondents and interviewers were different, which might induce a lower refusal rate in Taiwan than in U.S.

We think the main reason for different response rates is the different cultures. People in these two regions have different core moral, political, or social outlooks. Previous researches show that easterner more prefer collectivism while westerner prefer individualism. Within individualism, the core unit is the individual, and societies exist to promote the well-being of individuals; within collectivism, the core unit is the group, and individuals must fit into the society (Oyserman and Lee, 2008). Personal behaviors are different according to different philosophies, which lead to different interactions between respondents and interviewers. Within collectivism, more Taiwanese believe that response to the survey is their obligation. To be a well-being person, they should cooperate with interviewers. It is polite and a good way to show respects to interviewers. Under this culture, it is harder to say "no" to someone who asks you for help. On the contrary, within individualism, American respondents don't regard cooperation with interviewers as an obligation. Whether they take part in the surveys depends on the decision based on the leverage-saliency theory. (This has been discussed in the previous incentive part.) That means American voter make decision mostly based on their interests, incentives, etc. They prefer say "no" if they are not interested in the survey. They don't care more about the psychological reaction of the interviewers. There are many studies on assessing the collectivism and individualism. Oyserman et al. tried to explore the quantitative analysis of collectivism and individualism and pointed out important conclusions: both individualism and collectivism can be assessed, and countries differ systematically on these measures (Sorensen, N. and Oyserman, D. in press). How to measure the collectivism and individualism and explore the relation between philosophies and response rates of the exit polls under different cultural background will be our future study goal.

On the other side, no matter what philosophy people have, the social desirability is involved in this respondent-interviewer interaction procedure. However, the extent of social desirability is different under different culture. Moreover, some components of the survey, such as the incentive, which is not efficient in U.S. to increase response rates, might be significant factors in different regions and cultures.

In summary, the distinct cultural background is one of the main reasons for the discrepancy of response rates between Taiwan and U.S.

2.2.6 Government pressure

Support from government

The government declared the exit poll was not supported during the Taiwan presidential election, which might lead to the higher refusal rates for those government supporters. On the Monday (March 15, 2004) of the election week, TVBS announced they would conduct the exit poll on Election Day. The next day (Tuesday, March 16), the

government appealed to the public not to take part in the exit poll, which affected the participating intention of those who were supporters of government. At that time, the Democratic Progressive Party (DPP) was the ruling party, which means the refusal rates of DPP supporters might higher than KMT supporters at the exit poll on Election Day.

Distance issue:

Previous researches show that the distance between interviewers and the exit of the voting place is highly correlated with WPE. WPE and absolute error increase significantly if interviewers are more than 25 feet away from the polling places (Edison Media Research and Mitofsky International, 2005). In some states, the distance restriction is 50 feet or more on exit poll interviewers. In Taiwan, this problem is more serious. In 2004 Taiwan presidential election exit poll, more than one-third interviewers were forced to stand more than 30 meters (about 90 feet) away from the polling locations. To correct this challenge to exit polls, the pollsters should improve the relationship with the government and get better cooperation.

3. Conclusion

After investigating the differences of exit polling methodologies between Taiwan and America, especially focusing on sampling and non-sampling errors, we found a unique multistage complex design sample was drawn in Taiwan, which was distinct from American. Non-sampling errors are more attractive to the pollsters, which sheds light on the future implementation of exit polls. (1) With the development of the political election in Taiwan, the earlier voting (absentee voting) might be allowed, the survey data of those earlier voters should be combined with the exit poll data and taken into account to estimate the result. The other modes of surveys, such as telephone surveys should be considered for earlier voters. (2) Based on the cost constraints, more studies are needed to prove incentives' efficiency in Taiwan, although the practice shows that respondents are likely to take part in the survey because of the gifts. (3) Previous practices shows that exit poll interviewers in Taiwan were young college students, who could get higher response rates, while in U.S., older interviewers usually got higher response rates. (4) Regarding questionnaire design, how to adapt the American questionnaire into Taiwanese version, equivalency should be considered. Based on the population discrepancy, one version of questionnaire in Taiwan was acceptable; the breaking news should be taken into account. It was a pity that such important event as Taiwan 319 presidential shooting incident was not included in the questionnaire. The forms of the additional question about breaking news in American national exit poll could be adapted in Taiwanese questionnaires. (5) The distinct cultural background is one of the main reasons for the discrepancy of response rates between Taiwan and U.S. Personal behaviors are different due to different philosophies, which leads to different interactions between respondents and interviewers. How to measure the collectivism and individualism and explore the relation between philosophies and response rates of the exit polls under different cultural background will be our future study goal. (6) The government declared the exit poll was not supported during the Taiwan presidential election, which might lead to the higher refusal rates for those government supporters. The distance restriction on the interviewers has a significant effect on the accuracy of estimation. Thus, how to improve the relationship with the government and get better cooperation is a vital problem both in Taiwan and U.S.

References

Bautista, R., Callegaro, M., Paniotto, V., Kharchenko, N., Scheuren, F., (2008). *Exit polling methodologies across nations: Some constraints and measurement problems*, Paper presented at the 3MC conference, Berlin, June 2008.

Bautista, R., Callegaro, M., Alberto Vera, J, and Abundis, F. (2007) Research Notes: Studying Nonresponse in Mexican Exit Polls. International Journal of Public Opinion Research Vol. 19, No. 4

Blumenthal, M. (2005a, April 29). The Little model that could. Retrieved September 2006, from http://www.mysterypollster.com/main/2005/04/the_liddle_mode.html

Blumenthal, M. (2005b, May 16). AAPOR: Exit poll presentation. Retrieved September 2006, from http://www.mysterypollster.com/main/2005/05/aapor_exit_poll.html

Braun, M., & Mohler, P., "Background variables" (Chapter 7) Cross-cultural Survey Methods. Edited by Harkness, J., Van De Vijver, F., Mohler, P. 2003. New Jersey: John Wiley & Sons, Inc

Cross-cultural Survey Guidelines: http://www.ccsg.isr.umich.edu/quality.cfm

De Leeuw, E., 2005. To Mix or Not to Mix Data Collection Modes in Surveys. Journal of Official Statistics. Vol. 21, No. 2, pp. 233–255

Dillman, D.A. 2007. Mail and Internet Surveys: The Tailored Design Method 2rd edition. 2007 Update with New Internet, Visual, and Mixed-Mode Guide. New York: John Wiley& Sons, Inc.

Dillman, Don A., Leah Melani Christian, and Jolene D. Smyth. 2008. Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 3rd Edition. New York, NY: John Wiley and Sons.

Edison Media Research and Mitofsky International (E/M) (2005). Evaluation of Edison/Mitofsky Election System 2004, January 19, 2005, available on the Internet at: http// www.vote.caltech.edu/media/documents/EvaluationJan192005.pdf

Early voting suggests 2008 may see record turnout. CNN's Martina Stewart, Lisa Desjardins, Scott J. Anderson and John Helton contributed to this report. http://www.cnn.com/2008/POLITICS/10/21/early.voting/

Frankovic, K.A. (1992). Technology and the Changing Landscape of Media Polls, *Media Polls in American Politics*, Mann, T.E. and Orren, G.R. (eds.), Washington, DC: The Brookings Institution, 32-54

Groves, R. M., Singer, E., Corning, A. (2000). Leverage-Saliency Theory of Survey Participation: Description and an Illustration. *Public Opinion Quarterly*, Vol. 64:299–308.

Groves, R. M. et al. 2004.Survey Methodology. New Jersey: John Wiley & Sons, Inc.

Hader, S. & Gabler, S. "Sampling and estimation" (chapter 8) Cross-cultural Survey Methods. Edited by Harkness, J., Van De Vijver, F., Mohler, P. 2003. New Jersey: John Wiley & Sons, Inc

Harkness, J., Van De Vijver, F., Mohler, P. 2003. New Jersey: John Wiley & Sons, Inc

Harkness, J., Mohler, P., Van De Vijver, F. 2003. *Comparative Research.* Edited by Harkness et al:,*Cross-cultural Survey Methods.* New Jersey: John Wiley & Sons, Inc

Harkness, J., Pennell, B., Schoua-Glusberg, A., 2004.Survey Questionnaire Translation and Assessment. Edited by Presser, S et al. New Jersey: John Wiley & Sons, Inc. pp.453-473

Inter-University Consortium for Political and Social Research (ICPSR). 2005. National Election Pool General Election Exit Polls, 2004, available on the Internet at: http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04181.xml

Johnson, T.P. & Van de Vijver F.J.R., "Social Desirability in Cross-cultural Research" (chapter 13) Cross-cultural Survey Methods. Edited by Harkness, J., Van De Vijver, F., Mohler, P. 2003. New Jersey: John Wiley & Sons, Inc

Liddle, E. (2005, April 27). Edison/Mitofsky Exit Polls: Differential non-response or vote-count corruption? Retrieved September, 2006, from http://www.geocities.com/lizzielid/WPEpaper.pdf

Lindeman, M., Liddle, E., & Brady, R. (2006). Investigating causes of within precinct error in exit polls: Confounds and controversies. In 2005 ASA proceedings. ASA Biometric Section [CD-ROM] (pp. 282–292). Alexandria, VA: American Statistical Association.

Merkle, D and Edelman, M. 2000. "A review of the 1996 Voter News Service Exit Polls from a Total Survey Error Perspective." (chapter 3) Election Polls, the News Media, and Democracy. Edited by Lavrakas, P.J. and Traugott, M.W. New York: Chatham House Publishers of Seven Bridges Press, LLC

Merkle, D., Edelman,M., Dykeman, K., Brogan, C. (1998). An Experimental Study of Ways to Increase Exit Poll Response Rates and Reduce Survey Error. Paper presented at the annual conference of the American Association for Public Opinion Research, St. Louis, MO, May 14-17.

Morin, R. (2006). The Pioneer Pollster Whose Credibility You Could Count On. The Washington Post, September 6, 2006, C01, available on the Internet at: http//www.mitofskyinternational.com/WP-Morin.html

Oyserman, D. and Lee, S. W. S. (2008). Does Culture Influence What and How We Think? Effects of Priming Individualism and Collectivism. *Psychological Bulletin*, Vol. 134, No. 2, 311–342

Scheuren, F.J. and Alvey, W. 2008. Elections and Exit Polling. New Jersey: John Wiley & Sons, Inc

Sheng, Z., (2006). The Discussion of Taiwan First Exit Poll of Presidential Election—What We Learned?. (chapter 1). Political Communication and Election Strategies. Edited by Liang, S. 2006. Taiwan: Wu-Nan Culture Enterprise.

Sorensen, N. & Oyserman, D. (in press). Collectivism, Effects on Relationships. To appear in H. T. Reis and S. K. Sprecher's (Eds.) Encyclopedia of Human Relationships. Thousand Oaks, CA: Sage

Van de Vijver F.J.R., Leung K., 1997. Methods and Data Analysis for Cross-Cultural Research. Newbury Park, CA: Sage.