

## A Comparative Study of Valence Politics Using the British and Taiwan Election Survey Data

Karl Ho, University of Texas at Dallas

Harold D. Clarke, University of Texas at Dallas

### Abstract

While Taiwan is in its young age of democratic development, the new Asian democracy is comparable to such western industrialized democracy as Great Britain in many areas. Election surveys and polls are so extensive in Taiwan featuring political elections every year that polls were well in par with the ones in Britain in terms of frequency and public attention. In this study, we compare the Britain and Taiwan election surveys by estimating a valence model first proposed by Stokes (1963, 1992) and published in a series of studies by Clarke et. al. (2009a, 2009b). We found that the valence model demonstrates as strong explanatory power in Taiwan election as much as in the British case. This study shows very similar results when the model is compared with a host of rival models in both British and Taiwan contexts (Clarke, Sandler, Stewart and Whitely 2009; Ho, Clarke, Chen and Weng 2011). We believe the new research model-based design of the British election surveys featuring longitudinal, panel studies can be applied in other democracies such as Taiwan. It will provide important scientific data for state-space models to further investigate other elections such as those in Taiwan. Through comparing the BES with the Taiwan counterparts, we expect to produce more robust results by exploring election models in both matured and new democracies.

Prepared for presentation at the 2012 World Association of Public Opinion Research conference to be held between June 14<sup>th</sup> and June 16<sup>th</sup>, 2012 at the University of Hong Kong, Hong Kong. Data analyzed in this paper were from the British Election Study (BES) project and Taiwan Election and Democratization Study (TEDS) 2008 project and TEDS 2010C project (Cities Municipal Election survey 2010). The principal investigators of the BES project are Harold D. Clarke, David Sanders, Marianne Stewart and Paul Whiteley. More information on BES is available at the project's website (<http://bes2009-10.org>). The coordinator of multi-year TEDS project is Professor Chi Huang (National Chengchi University). More information on TEDS is available at the project's website (<http://www.tedsnet.org>). The authors thank the BES and TEDS projects and the project investigators for providing the data in this study. The authors are solely responsible for views expressed herein.

## I. Introduction

How global financial crises shape vote choices in new democracies where voters may have weak partisanship or party system is still in formation? After two peaceful power alternations within one decade, Taiwan may be categorized as a young democracy but it also demonstrates many attributes that put the country among the ranks of advanced Western democracies. Universal suffrage is well implemented including elections of presidential office and the 113 seats in the unicameral legislature. Elections at all levels register an average turnout rate of over 75 percent (as high as 82 percent in 2004 presidential election). While Taiwan is still deeply divided between two camps along the issues of national identity and relationship with neighboring China, we find in this study that Taiwanese voters, like the citizen in Britain, weigh political party influence, government performance and leader images in voting decisions national and local elections alike. On the other hand, positional issues are still influential in moving voters to side with parties which offer most proximate policy orientations. However, valence issues such as the economy and national security, as well investigated in Clarke et al.'s analyses using British election data, play dominant roles in voters' calculation of whom to elect for governance. We argue it could be a model that can be generalized in most democratic elections. In a nutshell, the general public needs not discern whether economy or the issue of national identity (in the Taiwan case) is more important. Instead, voters just make their choices based on competence and leader image so they could choose a political leader who can really deliver.

In this study, we compare a series of models using the 2005 British election data and the Taiwan national presidential election data and mayoral election data. Then, we place a greater emphasis on the Taiwan case for two reasons. The Taiwan 2008 national election was held before the global financial crisis took place while the Taiwan 2010 ones occurred after the crisis. Comparatively, the latter provides a more favorable context to study the crisis' impact on vote choice. Second, given the open seat contest in 2008, the governing party successor did not benefit much from the scandal prone, outgoing president Chen Shui-bian in terms of government performance. More importantly, we argue that in the 2010 Taiwan new mayoral elections, voters make electoral decision not out of sheer considerations of local issues but national concerns. Hence, this study takes into account both local and national factors that could explain the voting decisions in the three cities of Taipei, Taichung and Kaohsiung, treating these elections virtually as national elections. We contend that voters in both well established democracies such as Great Britain, and those in Taiwan are similarly weighing in more on the performance of political parties and their leaders in delivering valence issues than their ideological or issue positions. With data from the 2005 BES and 2008 and 2010 TEDS election surveys, we test and compare a series of valence politics models in British parliamentary elections with Taiwan presidential and mayoral elections.

The organization of this paper is as follows: the Introduction briefly lays out the framework of this study. Section II reviews the development of valence theory and models of performance politics. In section III, we describe the model of performance politics in operationalization terms and the data and method employed for empirical investigations, followed by section IV giving more details on analyzing the models. Section V concludes with summary of the findings

and discussions of implications.

## II. Valence politics and Electoral choice

The valence politics model builds on Donald Stokes' theory of valence issues in his critique of the spatial issue voting models. Valence issues possess the quality of one-sided opinion distributions in sharp contrast with the positional issues that present a clear "pro-con" continuum that divides public opinion (Stokes 1963; see also Stokes 1992 and Clarke et al. 2009). Two common examples of valence issues are the economy and national security, which attract a general consensus that the government should bring a health economy with steady growth and a secure national and international environment for the public. Opinion may split on how to achieve sustainable growth and risk-averse foreign policies, but in general the public differs on how to achieve better on valence issues but not on the issue positions. Comparatively, positional issues such as further involvement in the European community in the British case feature with clear positions on one dimension and such contrast can be sharp in some cases. In a multi-party environment, some political parties possess the ownership of positional issues (e.g. Green party) and garner certain support to win seats in the parliament.

In valence models, voters are concerned not only on the issue position but more on the party's capability to do well on these issues such as the economy. In summary, according to Sanders et. al, "voters maximize their utilities by choosing the party that is best able to deliver policy success" (2011). According to this line of argument, voters choose their elected officials not merely on ideological or issue positions but more on perceived competence of the parties and their leaders. The reward-punishment thesis goes beyond the apparent implication that incumbent party is rewarded or punished based solely on its performance. Johnston and Pattie put it very well: "it is more likely that the government loses elections than the oppositions win them." (2011, p.284) The "punishing" part goes real time with "rewarding" a rival that must be perceived to do much better to deserve the vote. Otherwise, the punishment will not be dealt even for a non-performing government. In the Taiwan electoral environment, for instance, if the ruling KMT mayor scored poorly, he still could hang on and go "unpunished" if his opponent is considered not good enough to get rewarded and take over.

The alternative *spatial* model focuses on comparing observed positions among political parties and how close these positions are related to the voter's own stances. The Downsian approach of rational calculation gauges party support by position proximities. Development of Issue voting reach leads to a rich body of studies building on the spatial theory of electoral choice (Wittman 1973; Grofman 1985; Rabinowitz and Macdonald 1989; Macdonald and Rabinowitz 1998; Glazer and Lohman 1999). Among the numerous studies, Grofman suggests that voters locate parties in relations to status quo, instead of calculating exact distance along the left-right spectrum and they are well aware that promises may not be fully delivered. As such, they assume that the party will move on the spectrum in direction of achieving announced policy goal even though it may not go all the way.

In the British case, tax reduction-public services spending and punishing criminals-rights of the

accused, as well as the desirability of Britain's continued membership in the European Union exemplified the positional issues that demonstrate a left-right scale, with the Tories and the Labour sitting on the scales' opposite positions.

In the example of Taiwan, national identity is a long-term issue that largely divides the population into two positions of pro-independence and supporting reunification with mainland China. While neither of these options receives majority support nor will each see imminent realization, a third option of maintaining status quo prevails. The positional issue becomes an identification factor when party choice is concerned. Pro-independence supporters will choose the green camp, mostly represented by the former governing party, the Democratic Progressive Party (DPP), and the smaller Taiwan Solidarity Union (TSU). Supporter of reunifications with China will side with the blue camp, led by the governing Kuomintang (KMT) and other parties including People First Party (PFP) and New Party (NP). Per Grofman, voters' calculation of utility is not solely driven an issue that is unlikely to change in status. Whereas the island country will not decide on or seek status change in the short run, accordingly, derivative issues from the national identity issue such as economic ties with mainland China and security issues regarding relations with the United States and China continue to emerge to inform voting decisions. In this sense, voters continue to make judgments and update their political support pertinent to the apparently and relatively static issue of national identity.

The judgment process is subtler than just gauging with a simple measurement then checking the other box on the ballot. Voters rely on heuristics to make informed decisions. Information must be fast and low cost to maintain rationality. The valence theory suggests three principal heuristics (Sanders et al. 2011). First and foremost is the evaluation of party leaders, in particular connecting to their capabilities in delivering positive policy outcomes. Leader images directly mirror the readiness of the party in taking over the role of governing and delivering policy outcomes.

The second heuristic regards the most important issue the country faces and which party is best able to handle this issue. The cognitive connection between this important issue and the party being most capable of management resonates with the issue proximity theory in which voters carry multiple issue positions to compare with parties. The latter theory posits that voters will choose the party holding minimal issue distances from his or her positions. The "most important" part in the valence theory however becomes critical when voters need only choose one party that can *best* deliver on the issue that the country in general is *most* concerned. This in fact is the most economical version of the issue proximities.

Last but not least is the party identification. The concept of partisanship in valence theory is more than the long-term stable self-identity as proposed in the socio-psychological theories of voting (see Campbell et al 1960). Instead, such identification is dynamic and continually updated through observations of party performance as evidenced in time series studies of partisanship that investigate changes of the individual and aggregate partisanship over time (see Clarke and McCutcheon 2009). More interestingly, like the British case, partisanship in Taiwan demonstrates a trend of decline in both numbers and strength of support. Recent

survey data indicate that over one third of voters said they do not identify with any political parties (see also Tan et al 1999). However, this does not imply party identification becomes less influential in voting decisions. In fact, most of the empirical studies on Taiwan democratic elections present strong evidence suggesting the important explanatory power of parties (see Hawang 1994 and Wu and Lee 2003). In addition to that, valence theorists emphasize the variability of party identification or how fluctuations of partisanship affect electoral outcomes in different levels of contests including presidential, legislative and local elections.

The valence theory finds good empirical support in many democracies particularly in British election studies. In Asia, Taiwan provides an excellent testing case for valence politics models. First, the two-party system is well established with a few smaller parties primarily promoting issues on the same well-defined issue space of national identity. The two biggest parties, the DPP and KMT, represent respective rival positions on each end of the national identity issue continuum, namely promoting independence from China on one end and reunification on the other. Second, the no-party voter population is big in size but precarious in electoral decisions. The variance comes from the fact that this group of voters can vote by temporary party attachment in one election but can switch to candidate in next election or election at a different level. They may or may not weigh in any positional issues when they vote. In addition, they have one more obvious choice than party-identifiers: abstain. Although all voters can choose not to turn out to vote but weak party identifiers or those with no party affiliations are more likely so. The third reason we theorize in this study is again related to the economy. Like other well developed democracies, Taiwan has experienced great economic volatility in the last decade and the Great Recession beginning 2008 has direct and profound impact on the island country with its IT industries highly dependent on such big economies and markets as the United States and Europe. The Taiwan voters are eager to look up to leaders who can demonstrate competence in economic management and bring forth a stable economy with promising growth. This concern of economy has been among the most important issues for elections at different levels (Ho, Clarke and Chen 2011).

### **Nationalization of Local Politics in Taiwan**

Regional politics in Taiwan were redefined in the year of 2010. The amendment of the Local Government Act passed early in the year was implemented shortly when new municipalities were added to the ranks similar to the capital Taipei and southern city of Kaohsiung. The Taichung and Tainan cities were merged with adjacent county of same names and become new metropolitan cities and a New Taipei city was established out of the former Taipei county. While sizes and populations still vary, the new municipalities are blessed with added resources to new levels comparable to Taipei and Kaohsiung and more importantly they represent a redrawn political map to the country's electoral landscape. The five new mayors, now with matching ranks as in the case of capital Taipei, possess new power similar to the state governors as in the US context.

In terms of electoral changes, the consolidation of political offices renders the local elections more competitive with less elected positions, presenting better chances for resourceful big

national parties. Contestants from smaller party representatives would have to target lower level races such as councilors or in other counties. The mayoral elections in particular become more a resemblance of national races given the new political influence the mayors would enjoy. These contests give new meaning to the phrase that “all politics is local.” First, the former local positions of county magistrates were eliminated with their jurisdictions and constituencies pooled to the new municipal mayor, causing the new elections to be more competitive not in terms of number of candidates but campaign resources. To political party campaign managers, new mayoral elections are virtually extensions of national level elections and they must field highly qualified party leaders as candidates to these five key areas, representing new blocks of political support for the national party. In other words, local elections are not “local” any more. Second, redistricting or consolidation of constituencies means redistribution of political support, which could directly affect elections of all levels, particularly the higher one including the presidential elections. In other words, all local politics are literally “national”. More importantly, to voters, the new mayoral elections are like the former Taipei elections and new mayors are perceived as national leaders who can become new president in future presidential elections.

Comparable local council elections in Britain, Taiwan local elections can also be characterized as “second-order election” in which voters cast the vote to vent out their discontent with the central government’s poor performance and deliver “protest votes” to governing party (Huang 1997). While the national identity issue and party identification variables dominate most of traditional Taiwanese voting models, performance or valence variables receive little attention until recent studies (see Hawang 1994, Hsieh 2005). Empirical studies of recent Taiwan elections start to focus on the “capacity of governance” in particular the central government and how that affects electoral outcomes at legislative (Wu and Lee 2003) and local elections at different levels (Wu and Lee 2004, I. Liu 2005, J. Liu 2005, Huang and Cheng 2005, Hsiao and Yu 2008).

In the next section, we will discuss on our research design and data we employ for testing the valence models.

### **III. Methods and Data**

When comparing the British and Taiwanese elections, we first examine the comparability of the two countries. Table 1 provides basic information of the two systems. Despite the differences in political and electoral systems, the countries both feature a two-party-plus system, with two major parties taking turns to govern. In the British case in 2010, the Conservatives had to form a coalition with the Liberal Democrats in order to achieve a majority in the House of Commons. Yet, in general, the British government is primarily under the two major parties: Labour and the Conservatives. In the case of Taiwan, the two major parties are the KMT and the DPP. Even though there were two power transitions in the presidential office between the two major parties (2000 and 2008), the KMT has been in firm control of the Legislative Yuan since the first democratic elections in 1980s.

--- Insert Table 1 here ---

The first group of analyses focuses on comparing valence models in Clarke et al. 2009 with the Taiwan models using both national and mayoral election data. In section II, we shift to focus on the Taiwan case and examine the valence models of how voters use simple heuristics to inform their vote choices. They evaluate party leaders by collecting information about their prospective capability in delivering performance. The variables include a series of assessments of the candidate's capability and capacity to lead in future government. Evaluations of a leader entail judgment and expectations of someone the voters can count on to deliver policy outcomes. Whereas these variables can be correlated with party identification, they serve well independently as predictors of vote intention. Both national and local leader evaluation variables are included in the models.

Another heuristic for the valence model is the perception of which party or candidate can best handle the most important issue for the country. We created one variable per candidate out of counts of responses to the survey question.

One valence component regards the voters' partisan attachment or party identification as an accumulative tally of party performance evaluations. To operationalize that attachment, we create dummy variables of each party to represent voters' identification or leaning toward that party. We also create a variable "NOPARTY" for those who do not identify or lean toward any party.

On top of the valence measures, another class of variables is government performance derived from the voter's assessment of both local and central governments' records to give an overall performance score. A separate group of variables pertains to the KMT government's performance account is evaluations of President Ma's Cross-strait trade policies. A battery of questions in the TEDS 2010 was designed to measure how these policies improve or deteriorate the national, local or personal well-being.

Specifically, on economic evaluations, we also adopt the conventional treatment and create four questions out of two dimensions of sociotropic vs. egocentric and prospective vs. retrospective evaluations of the economy.

For the positional issue of national identity, we create the three positional variables including pro-independence, pro-unification and maintaining status quo from the responses to question giving six options for respondents to choose for Taiwan's future. These options are "immediate unification", "immediate independence", "maintain status quo, move toward unification in future", "maintain status quo, move toward independence in future", "maintain status quo, decide either unification or independence in future" and "maintain status quo forever".

In estimating the turnout variable, we generate a series of "citizenship" variables including political efficacy, political interest, political knowledge, political trust and sense of civic duty in electoral participation. We contend that the higher the sense of citizenship, the less likely the voters will abstain from participation.

Last but not least, we include the demographic variables such as income, gender and education. Since ethnic identity is substantively related to the national identity issue, we also tap into the question of whether one considers oneself a Taiwanese, Chinese or both to create a Taiwanese identity variable.

The dependent variable is vote intention. Individual voting choice is derived from the survey question: ‘Which candidate did you vote for in presidential/municipality mayoral election?’ We offer three treatments of the dependent variable. Since the complexity and number of combinations in the Taiwan case, we first create a simple dichotomous variable when only two vote choices of blue or green candidates are involved. In that case, we need to put aside the two categories of non-voter respondents and those who refused to answer. In the second treatment, we address the turnout issue by including the non-voters as a separate category compared to the blue and green choices.

One notable observation of three Taiwan election survey datasets is the proportion of “refused to answer” response, particularly on the vote variable. Table 2 shows the distribution of vote variable in three cities, indicating on average one in every ten respondents resort to the nonresponse. One theory is respondents consider this political sensitive information and are unwilling to disclose. Another posits that some supporters of political parties are unwilling to give real answers to provide information for pollsters of rival parties. Excluding this group of respondents presents a serious problem of selection bias. As indicated in Table 2, regardless, we take into our models the “refusal to answer” category to explicitly estimate that as an option in the third treatment of the vote variable. In other words, in the meantime we model the vote choices we also address the question of what causes a voter to keep mum on electoral choices.

--- Insert Table 2 here ---

A composite model of voting intention is as follows:

*Vote=f(National leader image, local leader image, Central government performance, local government performance, President’s Cross-strait policy, PartyID, Party preference on handling most important issues, Economic evaluations, National identity, Citizenship, Demographics)*

Data used in this study were from the multi-year Taiwan Election and Democratization Study (TEDS) project. The 2008 presidential election survey collected data targeting the population of voters in the whole country. The 2010C survey collected data from the three municipalities of Taipei, Taichung and Kaohsiung through face-to-face interviews. The 2008 dataset has 1,905 cases whereas the 2010 datasets have 1,131, 1168 and 1,177 responses respectively on a series of questions, providing a wealth of information for testing party support and electoral choice models.

To adapt the valence politics model from Clarke et. al. 2009, we employ a comprehensive approach and estimate various electoral choice models under different combinations (10

models in 2008 and 11 models X 3 dependent variables X 3 cities in 2010). We next compare the explanatory power of each model with that of the valence model. The Akaike Information Criteria (AIC) and Bayesian Information Criteria are computed alongside with McFadden  $R^2$  to provide data for pitting the models against each other. Smaller AIC values indicate better model performance by taking into account model parameterizations (Burnham and Anderson 2002). We conduct the first group of analyses by estimating the binary choice models of choosing incumbent versus other parties in all three cities. In the subsequent group of turnout models, we include the non-voters. The last group includes all categories including the nonresponsive respondents.

In another group of analyses, we focus on the 2010 Taiwan election data and address a methodological issue ignored in most binary and ordinal logit models. One pitfall of the binomial or ordinal regression models is the assumption of equality in error variance structure. This homoscedasticity assumption sometimes causes biased parameter estimates when the assumption is too strong to be fulfilled. Another problem is the model being unable to acquire substantively important information in the error covariances (Williams 2009, 2010). For instance, while a logistic regression model can deliver information on the mean difference, the model will stop short and be limited if more subtle difference resides in the variance. In the context of electoral choices, one interesting finding is the difference between parties on voting intentions. However, more information actually can be revealed on if and how the variances also differ across party supporters. In the second group of analyses, we develop a heteroskedastic choice model to estimate both the means and variances of selected variables. Heterogeneous choice model (Williams 2009, 2010) explicitly addresses the issue of variability and specify the determinants of heteroskedasticity (Williams 2009; Keele & Park 2006). We offer analyses of the two groups of analyses in next section.

#### **IV. Analyses**

The TEDS data present an excellent series of datasets for empirical tests of valence models, allowing full comparisons with rival models. In 2008, the former President Chen Shui-bian of the Democratic Progressive Party (DPP) stepped down after eight years of governance, opening the competition to the then opposition KMT candidate Ma Ying-jeou and DPP candidate Frank Hsieh. In the 2010 mayoral elections, the three cities of Taipei, Taichung and Kaohsiung present different electoral context for comparison and demonstrating similarities and disparities alike. Taipei is a traditional stronghold of the governing party of KMT. Mayoral office has been remarkably important for this capital city for one and its being political “cradles” to two elected presidents for another. The incumbent Hau Lung-bin has been under critical scrutiny for a few white elephant projects hosted in Taipei. Noteworthy is also his DPP challenger Su Tseng-chang, who was former premier and DPP chairman. Su has been a media darling and is widely recognized of his track record in his Taipei county magistrate’s office.

Kaohsiung on the other end of the island is one of the electoral bases and regional stronghold for the opposition DPP. It is the most complicated among five races but also with most predictable outcomes. KMT fielded a female legislator who was perceived as an also-run. On

the other side, however, the former DPP county magistrate Yang Chiu-hsing rejected party primary results and dropped his party membership to compete as an independent with the incumbent mayor Chen Chu. The three-horse races proved an uphill battle for him even though KMT was hopeful it could benefit from the split DPP support.

Taichung interestingly is located close to the partisan divide regionally speaking. Despite that the KMT Mayor Jason Hu enjoys long-time incumbency in the office, the combined constituencies of Taichung city and adjacent Taichung county present a very different political topography, not to mention his DPP opponent being the party's new rising star. What plagued the governing party further were the criticisms on triad activities coupled with the cities well-reported night life subculture. It has become a main target of geopolitics for both parties who are eager to cross into the rival's territories.

The 2008 model is straightforward. But the 2010 mayoral models are much more complicated. To examine in details these three election models, we employ three series of logit models including one binomial logit using incumbent votes as the base category (blue or KMT in Taipei and Taichung and green or DPP in Kaohsiung) and two multinomial logit models, one with an expanded vote dependent variable including the nonvoter category and the third one covering also the refused to answer category. We first run the logit models with one set of variables separately, before estimating the valence model including the three components (party best in important issues, party identification and party leader's image) and the composite model including all components.

To start with, we show the BES findings in Table 3, which presents the results from the 2005 British Election Study model. The comparison of different models indicates the valence model excels in explaining the vote choice dependent variable even compared to the composite model with more predictors.

--- Insert Table 3 here ---

Similarly, we run the series of models as close to the British ones as possible. The proximities variables are not available but we run the national identity variable model as an issue proximity surrogate Table 4 summarizes the Taiwan model results<sup>i</sup>. The issue of independence and unification with China models presented relatively weak results, suggesting by itself the positional issue offers little explanatory power to voting intentions. The social demographics are slightly stronger, mostly due to the Taiwanese identity, which captures partial effect of the national identity variable. Note that the economic evaluations model is much weaker in 2008, suggesting economy was a relatively weaker factor in voters' consideration. In 2010, that model became much stronger. In that series, the ascending rank orders are: economic evaluations, citizenship, President Ma's cross-strait trade policies, local and central government performances and the three valence components. The last two series of models are the valence components and the composite models including all of the above. The model with three valence components registers strong results, in particularly the PartyID variables. The parsimonious two variable model (KMT and DPP) scores the second highest McFadden  $R^2$

among all (.594 in 2008 and .648, .485 and .332 for Taipei, Taichung and Kaohsiung respectively), only next to the Leadership image model with more parameters. Comparatively, the 2010 Kaohsiung models are weaker because of the three-way contest, joining the former DPP county magistrate with the two parties' candidates. The tactical voting effectively took support from the less popular KMT contestant, rendering the weaker model fit in the Kaohsiung series. However, the valence components generally work well even in Kaohsiung. In statistical terms, the valence models are parsimonious encompassing to the larger composite model except the Taichung models (see Charemza and Deadman 1997 and Hendry 1995)<sup>ii,iii</sup>. This provides strong empirical evidence that the valence models outperform all rival models.

--- Insert Table 4 here ---

To account for the impact of the recent financial crisis, we shift our focus to the more recent 2010 series. Table 5 provides the detailed account of composite models of the binomial and multinomial logit analyses in Taipei<sup>iv</sup>. The first column (Panel A) reports the binary logit results and second through fourth column (Panel B) the multinomial logit ones. Both models demonstrate strong partisan votes and the leadership image effect is obvious. When a voter chooses a party as the one which best able to handle most important issues, probability of voting for that party is greatly enhanced. Identifying as a Taiwanese and younger voter favors DPP candidate but adversely affects support for the incumbent KMT candidate. The national identity issue scores no effect, but this can be due to the strong effect of other partisanship variables. Interesting to note is also the cross-strait policy variable, which works positively for promoting support of KMT candidates. In other words, it represents the endorsement of the central government's management of this "valenced" issue in the form of support for its mayor candidates. This cross-strait policy represents a combined issued of economic development and China relations. The finding is indicative of the governing party's ownership of the *valenced* issue considered by the public one of the most important among all issues.

--- Insert Table 5 here ---

Panel B gives more information on the nonvoters and the refusals. The nonvoter profile is characterized as being male, more educated, generally an opposition supporter a green camp supporter (in Taipei, for instance, non-voter is identified as DPP supporter with disapproval of incumbent Blue mayor and KMT's handling of the most important issue). In citizenship variables, he can be efficacious in local affairs but poor in political knowledge. The largest common denominator is the belief (or non-belief) that voting is a citizen's civic responsibility.

Regarding those who refused to give answer on voting intention question, one observation common in all three mayoral elections is this group belongs to or identifies with the opposition (green supporter in Taipei and Taichung and blue supporter in Kaohsiung). Statistical findings indicate supporters of the winning party or incumbent are *less* likely to refuse to answer the vote question.

Comparing effects of various issues indicates that the Ma government's cross-straits trade policy enhances significantly the chances of voting blue in mayoral elections. More detailed examinations of the effect suggest there is more subtlety in the issue effects. Figure 1 presents the odd ratio plots of voting behaviors between supporters of the two camps. The top row charts are the blue votes and the bottom the green votes. Noteworthy is the pattern of high volatility among the KMT supporters in reference to their DPP counterparts. Taichung, in particular, presents noticeable variabilities when the base category of vote is switched. To further investigate the volatility in voting behaviors we develop a set of ordinal generalized linear models (OGLM) based on the valence model<sup>v</sup>.

Table 6 presents the results of the two sets of OGLM models. Columns 1 to 3 show each of the blue vote models in the three cities and the columns 4 to 6 are the green vote models. We estimate the variance of the PartyID, in each set of the models. Echoing the findings in the odd ratio comparisons, this variable is found to be the source of the variability and the associated variance in the residuals is statistically significant in all three OGLM models. In particular, KMT identifiers in the Taichung model exhibit a higher variance than non-KMT supporters, suggesting the standard deviation of the residuals is  $\exp(.818) = 2.266$  times higher for KMT supporters than others<sup>vi</sup>. Substantively, despite that the models indicate that KMT supporters are highly likely to vote for the blue camp candidate, this support could also be more variable and unpredictable when compared to the DPP supporters, which show no statistical significance in the variance components. Nonetheless, one should use good caution to interpret this finding per the program's author Williams' advice (2010, p.9). The high variability can be interpreted as the more heterogeneous pattern composed of other intervening or precedential causal factors such as high evaluations of party leaders contributing to identification with the party leader's same party, and then voting for his party's candidate. Reviewing the distribution of the KMT variable and its cross-tabulation with vote variable, KMT supporters do show relatively more volatility than DPP identifiers in terms of vote choices (see Table 7). For example, on average, only two out of three KMT supporters or about 66% turn out to cast a vote for a Blue candidate as compared to DPP's 83%. The big difference is partially attributed to the party's candidate receiving low support in Kaohsiung because of tactical voting, which dragged down the average. That said, these figures do provide supportive evidence to the findings of the OGLM models that estimate the variance and testify to the subtlety in the variance model.

--- Insert Table 6 and Table 7 here ---

## V. Conclusion

Despite the unusually large number of models estimated in this study and that summarizing all presents a formidable task, we estimated a series of election models using the BES approach and put together a big picture of electoral choice in Taiwan. The 2008 presidential election and the three mayoral elections in 2010 epitomize very different electoral contests and contexts. However, after testing a series of vote models on each election, we arrive at the same conclusion with BES findings: when compared with a host of rival models, the valence model

stands out to be the parsimonious but strongest candidate in explaining voting intention. Such a finding resonates really well with other studies of electoral choice in Europe and North America. The resemblance to the BES finding is striking: the rank order of model explanatory power is almost identical, putting the valence model closely comparable to the composite model (see Table 3 and 4). In fact, the former model works even better in the Taiwan context, demonstrating it can explain more than the bigger composite model with less predictors. This is not an artifact of remixing combinations of variables to reach high  $R^2$ . We ran each model programmatically before compiling the results and reach the same finding in all nine runs, including three cities and three dependent variables (Blue and Green only, Blue, Green and Non-voters, and Blue, Green, Non-voters and Refusals).

The model of valence politics composed of the three key variables-- namely, partisanship, leader images and party preferences on most important issues—provides an effective analytical tool to explain vote intention in Taiwan. Theoretically, they represent a simplified but more efficient mechanism of spatial calculation in the Downsian issue voting model: for voters, they maintain rationality through collecting political information at a low cost and that can be accomplished by using well-established heuristics from political parties and their leaders. While comparing exact issue positions between candidates and oneself could effectively identify utilities of supporting different candidate (proximity model), it is a sophisticated but costly practice. The valence component provides a more efficient measure requiring less cognitive effort. What it takes is merely for a voter to identify the party or candidate who can handle the *perceived* most important issue to the country. Logically, the voter would have taken into consideration evaluations of the candidate and the affiliated party with whom one can entrust the issue and expect good investment reward. Like most capital investments, a voter naturally requires a government he or she voted for or invested in is able to deliver and brings good return or policy outcomes the general public enjoys such as a promising economic growth and a secure environment. That summarizes what is called the valence politics.

As evidenced in a rich body of research on mature democracies, valence politics prevails in national election models. In the context of Taiwan, the elections at both the national and municipal levels well exemplify the relevancy of valence. One has to admit though the Taiwan municipal elections in 2010 are a new breed of its kind that requires voters' consideration of both local and national factors including policy and issue evaluations at both levels. With the expanded jurisdiction and constituencies, the five new mayors are less regarded as local leaders but enjoy new national political status. More importantly, such a new status must be acquired first within the national party through internal selections due to the fact that candidates must rely on national party support for campaigning and voter support. That renders an enhanced role of national political parties at local levels in particular the municipal leaders.

Another implication of the findings is municipal elections have reached new heights of competitiveness and such races must necessitate high level of campaign resources only national parties can afford. Independent or smaller party contestants will have little survival space in these contests. As a consequence, campaign speaking, the connections between national party

and local government leaders become stronger and more prominent as municipal politics become “nationalized.”

Not unrelatedly, more detailed investigation into the party variable reveals the difference between DPP and KMT supporters. The higher variability among the latter could be a harbinger to change in the political map of Taiwan, particularly in central constituencies. The incumbent KMT mayor Jason Hu won reelection, but with an unexpectedly small winning margin (51% over 49%). With help from new methods inquiring the variance components, future research on electoral choice will shed more light on variance and predictability of partisanship effects and how this variable with other individual valence components change the electoral outcome.

To summarize, the Taiwan models represent more than a replication of investigations in BES case and in other Western democracies. We expand the study to different levels of elections ranging from the national presidential election to most recent mayoral elections, using new method to further examine the variance component in the vote choice model. Perhaps the real test would not come until the data availability of the latest 2012 Taiwan presidential election. However, the findings in this study suggest first the valence model demonstrates promising application in both the Western and Asian contexts. Second, new data collection techniques in the BES project such as high volume internet survey data collections and affordable longitudinal data panels can be employed in the Taiwan election studies in order to reach for more sophisticated data sets. With better data, researchers can look into more advanced models such as growth curve models and state-space models, which are not easily applicable with traditional survey modes common in the new democracies in Asia and elsewhere.

**Table 1. Comparison of Political, electoral and party systems in Britain and Taiwan**

	<b>Britain</b>	<b>Taiwan</b>
Population	60 millions	23 millions
Eligible voters	~30 millions	~12 millions
System	Parliamentary	Semi-Presidential
Chambers	Bicameral	Unicameral
Seats in Lower House	650	113
Electoral system	Mixed +PR party list	Single Member District + PR party list
Turnout	65.1% (2010)	74.7% (2012)
Party system	2+	2+
Major parties	Conservative, Labour, Liberal Democrats	Kuomintang, Democratic Progressive Party, People First Party, TSU

Table 2 Data vs. Actual Vote share in Taiwan

Survey Data vs. Actual Vote						
	Taipei		Taichung		Kaohsiung	
	TEDS	Actual Vote	TEDS	Actual Vote	TEDS	Actual Vote
<b>Did Not Vote</b>	<b>14.1</b>		<b>13.4</b>		<b>13.5</b>	
<b>Blue</b>	<b>49.4</b>	<b>55.65</b>	<b>42.6</b>	<b>51.12</b>	<b>12.7</b>	<b>20.52</b>
<b>Green</b>	<b>27.9</b>	<b>43.81</b>	<b>30.5</b>	<b>48.88</b>	<b>43.7</b>	<b>52.8</b>
<b>Independent</b>	-		-		<b>20.7</b>	<b>26.68</b>
<b>Refused to Answer</b>	<b>8.6</b>		<b>13.6</b>		<b>9.4</b>	

Source: 2010 TEDS Mayoral Election Surveys (<http://esc.nccu.edu.tw/>) and Central Election Commission (<http://en.cec.gov.tw/>).

**Table 3 Rival models of electoral choice in the 2005 British general election**

Panel A. Dependent Variable: Vote Labour vs. vote for another party

Model	McFadden R <sup>2</sup>	McKelvey R <sup>2</sup>	AIC†
Social class	0.01	0.02	2622.19
All demographics	0.04	0.07	2571.15
Emotional reactions	0.07	0.13	2471.30
Economic evaluations	0.29	0.44	1896.61
Issue-party proximities	0.24	0.46	2020.09
Party best most important issue	0.27	0.40	1943.69
Party identification	0.36	0.48	1698.23
Party leaders	0.40	0.65	1595.42
Valence politics	0.55	0.74	1215.08
Composite model‡	0.59	0.78	1145.39

†-Akaike Information Criterion; smaller values indicate better model performance.

‡-composite model includes all predictors for other models plus tactical voting.

Note: McKelvey R<sup>2</sup> is undefined for multinomial logit model.

**Table 4 Rival Models of electoral choice in the Taiwan 2008 Presidential Election and Taiwan 2010 Mayoral Election**

Panel A. Dependent Variable: Voting Incumbent vs. Opposition(s)

Model	2010 Mayoral Election						2008 Presidential Election	
	Taipei		Taichung		Kaohsiung		Taiwan	
	McFadden R <sup>2</sup>	AIC	McFadden R <sup>2</sup>	AIC	McFadden R <sup>2</sup>	AIC	McFadden R <sup>2</sup>	AIC
Social Demographics	0.235	867.69	0.107	1009.31	0.128	1054.75	0.175	1580.48
Indep./Unification	0.149	958.13	0.090	1022.16	0.086	1099.40	0.182	1560.58
Economic Evaluations	0.155	954.90	0.096	1019.26	0.156	1019.05	0.065	1786.75
Citizenship	0.243	862.82	0.155	959.64	0.154	1027.38	0.057	1801.97
Cross-Strait Policy	0.243	856.99	0.166	941.27	0.215	948.17	-----	-----
Gov't Performance	0.389	689.44	0.276	813.99	0.209	952.13	0.245	1438.86
Party Best Important Issue	0.452	619.47	0.299	789.44	0.192	972.43	0.248	1435.44
Party Identification	0.648	400.28	0.485	581.19	0.332	805.35	0.594	776.95
Party Leaders	0.743	300.54	0.623	435.47	0.554	549.85	0.598	774.15
Valence Model	0.820	223.63	0.704	352.51	0.610	490.12	0.730	532.40
Composite Model	0.850	225.84	0.729	360.40	0.652	480.66	0.748	522.08

Note: 2008 results based on Blue votes due to the open seat contest.

AIC – Akaike Information Criterion; Smaller values indicate better model performance.

Composite Model includes all predictors for other models.

Source: 2008 TEDS Presidential Election surveys and 2010 TEDS Mayoral Election surveys.

Table 5 Binomial and Multinomial logit analyses of voting in the 2010 Taipei Mayoral Election, Composite Specification

Predictor Variables	Panel A		Panel B	
	KMT	Nonvoter	DPP	Refused To Answer
Taiwanese	-0.882+	0.341	0.860**	0.701*
Male	-0.086	0.572*	0.642*	0.238
Age	0.094**	-0.011	-0.041+	-0.002
Education	0.044	0.364**	0.059	0.084
Income	-0.018	0.038	0.038	-0.015
KMT	1.937**	-0.302	-1.849**	-1.147**
DPP	-2.425**	1.105*	2.286**	-0.121
Blue Leader Capability	0.265+	-0.251**	-0.263*	-0.443**
Green Leader Capability	-0.399**	0.070	0.281**	-0.339**
Blue candidate image	0.523*	-0.010	-0.237+	-0.190
Green candidate image	-0.554*	-0.000	0.108	0.177
Ma	-0.083	0.002	0.091	0.053
Tsai	-0.180	0.104	0.292**	0.154
KMT best most important issue	1.837**	-0.531*	-0.921*	-1.323**
DPP best most important issue	-1.813**	0.641	2.176**	0.391
Central Gov't Perf..	0.103	-0.093	-0.043	-0.200+
Local Gov't Performance	-0.032	-0.001	0.032	0.007

<b>Pro-independence</b>	0.356	-0.298	-0.264	-0.469
<b>Pro-reunification</b>	-0.548	0.350	-0.004	0.434
<b>Cross-strait Policy</b>	1.071*	-0.269	-0.096	0.142
<b>Economic Evaluations</b>	-0.124	0.015	0.020	-0.129
<b>Political Efficacy</b>	0.232*	-0.004	-0.094	-0.049
<b>Political Trust</b>	0.149	-0.081	-0.106	0.056
<b>Local Efficacy</b>	-0.298*	0.172*	0.033	0.113
<b>Local Trust</b>	-0.107	-0.097	-0.004	-0.077
<b>Political Knowledge</b>	0.349	-0.512**	-0.175	0.078
<b>Political Interest</b>	-0.082	-0.116	0.056	0.016
<b>Civic Duty</b>	-0.220	-0.241**	0.101	0.173+
<b>Constant</b>	1.390	0.618	-2.094	-0.296
<b>N</b>	855	1106		
<b>Pseudo R<sup>2</sup></b>	0.820	0.509		
<b>Chi2</b>	917.085**	1342.617**		
<b>AIC</b>	223.634	1467.740		
<b>BIC</b>	275.896	1903.480		

+ p < 0.10; \* p < 0.05; \*\* p < 0.01; one tail test.

Note: Two analyses are presented. Panel A: Binomial logit analysis of voting for KMT vs voting for any of the opposition parties; Panel B: Multinomial logit analysis of DPP, Nonvoter and Refuse to answer, with KMT voting as base category.

Figure 1. Odd ratios of Voting Intentions and Evaluations of Cross-strait Policy

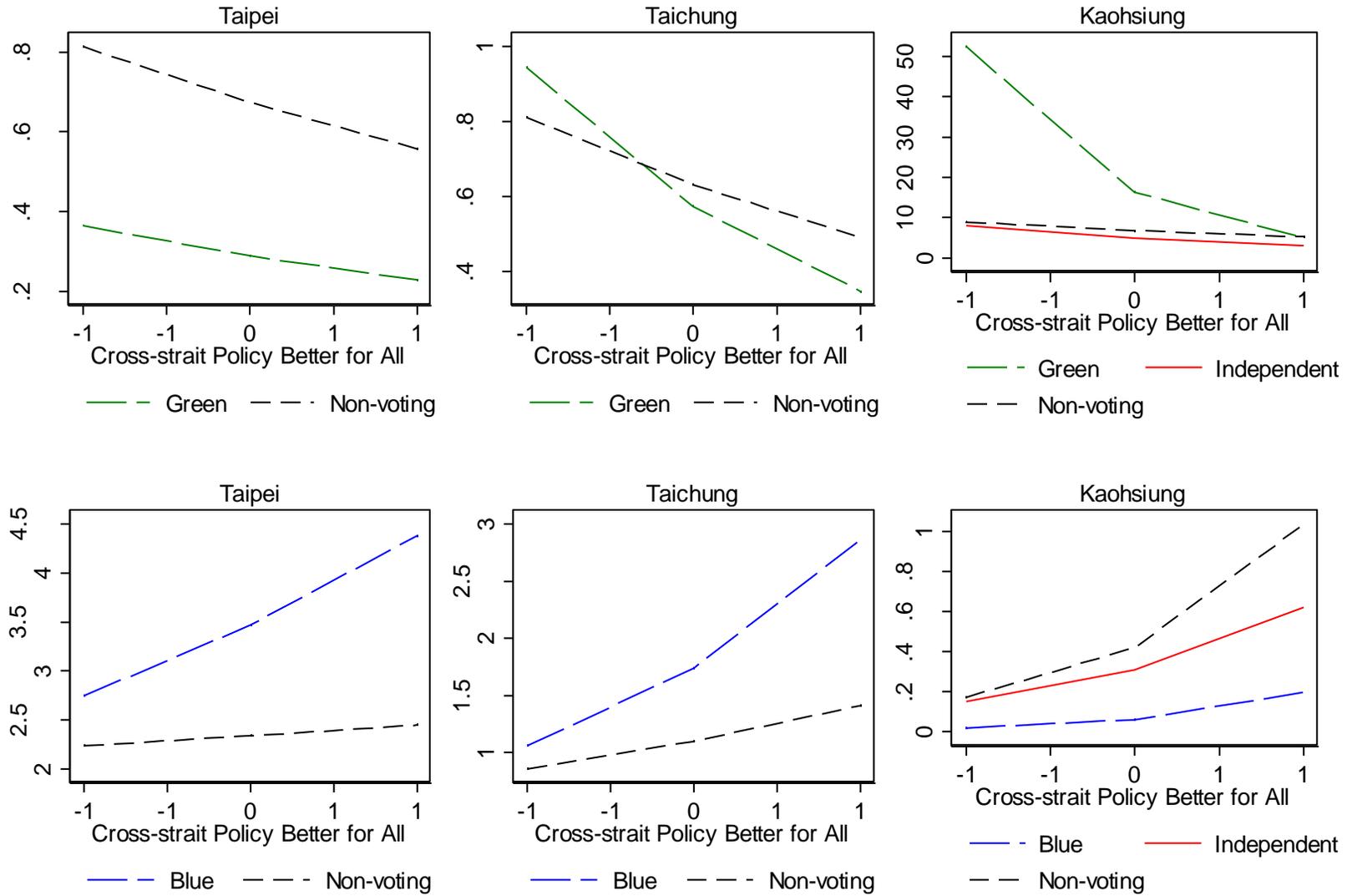


Table 6. OGLM Analyses of voting in the 2010 Mayoral Election

	Taipei	Taichung	Kaohsiung	Taipei~G	Taichung~G	Kaohsiun~G
<b>Main Variables</b>						
KMT	1.250** (0.352)	2.457** (0.621)	0.916 (0.711)	-1.598** (0.411)	-0.711* (0.312)	-0.895** (0.251)
DPP	-1.352** (0.499)	-1.762** (0.450)	-2.252** (0.788)	2.242** (0.546)	1.714** (0.375)	0.843** (0.254)
KMT best most important issue	0.858** (0.284)	1.151** (0.336)	1.042+ (0.566)	-0.388 (0.456)	-0.760 (0.487)	-0.381 (0.521)
DPP best most important issue	-1.350* (0.556)	0.046 (0.371)	-0.415 (0.467)	1.766** (0.366)	0.442+ (0.267)	0.423+ (0.224)
Blue Leader Capable	0.390** (0.074)	0.390** (0.076)	0.517* (0.236)	-0.014 (0.120)	-0.182* (0.085)	-0.392* (0.173)
Green Leader Capable	-0.036 (0.082)	-0.187* (0.093)	-0.122 (0.101)	0.412** (0.089)	0.416** (0.068)	0.253** (0.054)
Blue candidate image	0.236* (0.108)	0.340** (0.103)	0.394* (0.156)	-0.278* (0.120)	-0.131 (0.101)	-0.012 (0.054)
Green candidate image	-0.152 (0.093)	0.033 (0.110)	-0.302* (0.152)	0.133 (0.119)	0.103 (0.093)	0.275** (0.058)
Ma	0.055 (0.086)	0.095 (0.082)	0.200+ (0.110)	0.074 (0.096)	-0.044 (0.066)	-0.093* (0.045)
Tsai	-0.202** (0.078)	-0.049 (0.080)	0.068 (0.088)	0.274** (0.101)	0.072 (0.068)	0.063 (0.046)
Indep. best most import			-1.092 (0.708)			-0.496+ (0.300)
Indep. Leader Capable			-0.104 (0.134)			-0.059 (0.064)
Indep. candidate image			-0.150 (0.140)			-0.103+ (0.053)
Insigma KMT	0.444** (0.167)	0.818** (0.215)	0.529+ (0.299)			
DPP				0.433+ (0.223)	0.206 (0.218)	-0.033 (0.156)
cut1	1.264* (0.498)	3.773** (0.566)	3.199** (0.693)	3.839** (0.744)	2.046** (0.464)	2.048** (0.418)
N	1131	1168	1177	1131	1168	1177
Pseudo R <sup>2</sup>	0.506	0.455	0.427	0.649	0.489	0.408
Chi2	793.252**	137.487**	95.448**	861.045**	141.549**	160.270**
AIC	797.302	886.192	530.731	489.449	746.678	978.188
BIC	857.672	946.948	606.792	549.819	807.434	1054.248

+ p < 0.10; \* p < 0.05; \*\* p < 0.01; one tail test. Standard errors in parentheses. Source: TEDS2010C Mayoral Election Surveys.

**Table 7 Party Identification and Electoral choice in the 2010 Mayoral Election**

		Not Vote	Blue	Green	Independent	Refused to Answer
KMT	Taipei	12.78%	81.02%	2.63%	-	3.57%
	Taichung	10.1	80.29	5.29	-	4.33
	Kaohsiung	12.13	35.8	10.06	36.98	5.03
	Average		65.70	5.99		
DPP	Taipei	8.39	2.19	86.86	-	2.55
	Taichung	9.39	3.97	81.23	-	5.42
	Kaohsiung	8.77	0.27	80.27	8.22	2.47
	Average		2.14	82.79		

Source: 2010 TEDS Mayoral Election Surveys (<http://esc.nccu.edu.tw/>)

**Reference:**

- Clarke, Harold D., David Sandler, Marianne C. Stewart and Paul F. Whiteley. 2009. *Performance Politics and the British Voter*. Cambridge: Cambridge University Press.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper and Row.
- Grofman, Bernard. 1985. "The Neglected Status Quo in Models of Issue Voting" *Journal of Politics*, 47:230-7.
- Hsieh John Fuh-sheng, 'Ethnicity, National Identity and Domestic Politics in Taiwan', *Journal of Asian and African Studies*, 40, 1/2, 2005, pp. 13–28.
- Huang, David. 1997. Second-Order Elections and European Parliament Elections: An Empirical Test with British Data. *Journal of European and American Studies*. 27: 199-231.
- Johnston, Ron and Charles Pattie. 2011. Where Did Labour's Votes Go? Valence Politics and Campaign Effects at the 2010 British General Election. *The British Journal of Politics and International Relations*. VOL 13, 283–303.
- Macdonald, Stuart Elaine and George Rabinowitz. 1998. "Solving the Paradox of Nonconvergence: Valence, Position and Direction in Democratic Politics" *Electoral Studies*, 17: 281-300
- Rabinowitz, George and Stuart Elaine Macdonald. 1989. "A Directional Theory of Issue Voting" *American Political Science Review*, 83: 93-121.
- Sanders, D., Clarke, H.D., Stewart, M.C., Whiteley, P. 2011. Downs, Stokes and the Dynamics of Electoral Choice. *British Journal of Political Science*, 41 : pp. 287-314
- Stokes, Donald E. 1963. 'Spatial Models of Party Competition', *American Political Science Review*, 57: 368-77.
- . 1992. 'Valence Politics', in Dennis Kavanagh (ed.), *Electoral Politics*. Oxford: Clarendon Press.
- Williams, R. 2009. Using heterogeneous choice models to compare logit and probit coefficients across groups. *Sociological Methods & Research* 37: 531-559. A prepublication version is available at [http://www.nd.edu/~rwilliam/oglm/RW\\_Hetero\\_Choice.pdf](http://www.nd.edu/~rwilliam/oglm/RW_Hetero_Choice.pdf).
- Williams, R. 2010. Fitting heterogeneous choice models with oglm. *Stata Journal* 10: 540-567.
- Wu, Chung-li and Shih-hung Lee. 2003. 總統施政表現對於國會選舉影響之初探：以 2001 年立法委員選舉為例 (Presidential Performance and Legislative Election: an Exploratory Study of 2001 Legislative election in). *Theory and Policy*. 17(1): 27-52.
- Wu, Chung-li and Shih-hung Lee. 2004. 政府施政表現與選民投票行為：以 2002 年北 高市長選舉為例 (Government Performance and voting behavior: a Case Study of 2002 Taipei and Kaohsiung mayoral elections). *Theory and Policy*. 17(1): 27-52.

## Notes:

<sup>i</sup> The multinomial logit model tables giving very similar pictures are not shown.

<sup>ii</sup> Likelihood ratio test (see the following Taipei output table) of the two models indicates the valence model that consumes smaller degrees of freedom (11 vs 29) registers a lower AIC than the composite model, suggesting the former “explains more with less” compared to a model it is nested within. The BIC gives stronger support to this conclusion. The LR  $X^2$ 's for Taichung and Kaohsiung tests are 28.10 ( $p=.0605$ ,  $d.f.=18$ ) and 49.46 ( $p=.0003$ ,  $d.f.=20$ ) respectively.

```
Likelihood-ratio test                                LR chi2(18) =      33.79
(Assumption: TPB_BG_val nested in TPB_BG_comp)      Prob > chi2 =      0.0134
```

Model	Obs	ll (null)	ll (model)	df	AIC	BIC
Valence	855	-559.3593	-100.8169	11	223.6337	275.8959
Composite	855	-559.3593	-83.92004	29	225.8401	363.622

Note: N=Obs used in calculating BIC; see [R] BIC note

<sup>iii</sup> The generally weaker explanatory power of the Taichung models is largely due to the additional category of independent candidate and high percentage of refusals (13.6%).

<sup>iv</sup> Detailed model result tables for Taichung and Kaohsiung are not produced in this paper but will be available upon request.

<sup>v</sup> We implement the OGLM using Richard William's Stata program named oglm.

<sup>vi</sup> The variability scores in Taipei and Kaohsiung are 1.559 and 1.7 respectively.