Between Independence and Unification: 
An Ordered Probit Analysis of Panel Survey Data on Taiwan’s Constitutional Future

CHIA-HUNG TSAI, DING-MING WANG, AND LIVIANNA TOSSUTTI

The evolution of a multi-party system in Taiwan has seen public opinion about the independence/unification issue coinciding with partisan positions. While aggregate public opinion data have shown that most Taiwanese support the current cross-Strait relations, or “status quo,” less is known about the stability of individual policy preferences. Drawing on panel data from the Taiwan Election and Democratization Study (TEDS), this article measures whether the same respondents maintained the same position on the constitutional question in 2001 and 2004. Using ordered probit modeling, it also assesses the impact of previously-held opinions and rational assessments on attitudes in 2004, net of standard sociological and psychological determinants. We find that preferences generally remained stable in strength and direction between 2001 and 2004. When opinions did change, they trended toward support for the status quo from a pro-unification position. In addition to showing the lag impact of previous attitude, our analysis confirms that individual’s self-identified nationality, partisanship, and rational assessments of Taiwan’s economy are significant predictors of his independence/unification issue position.

KEYWORDS: public opinion; independence/unification issue position; panel survey; rational assessments.

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In the 1980s, democratization and ethnic divisions were the most significant political cleavages in Taiwan. Since the 1990s, democratization and the evolution of a multi-party system have reinforced the political saliency of domestic debates about Taiwan’s constitutional future. Attitudes about the independence/unification question have emerged as critical determinants of voting behavior, political party evaluations, and cross-Strait relations.

When Taiwan was an authoritarian regime, the ruling Kuomintang (KMT, 國民黨) labeled “Taiwan independence” (台獨) as “Taiwan poison” (台毒) due to their similarities in pronunciation. The lifting of martial law and the introduction of free speech and competitive elections has institutionalized partisan differences on the independence/unification question. Pointing to the narrowing of economic disparities between China and Taiwan, the opening of China’s markets to the West, the growth in

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the number of Taiwanese companies with investments and managers in China, and the desire to avoid a military confrontation with the PRC, the once-hegemonic KMT continues to support the unification of Taiwan and China once China becomes prosperous and democratic.

The Democratic Progressive Party (DPP, 民進黨), which ended a half-century of KMT rule in the 2000 presidential election and emerged as the largest single party in the Legislative Yuan (立法院) following the 2001 and 2004 elections, has accused the KMT of selling Taiwan out to China. The DPP has proposed that Taiwan should use popular referendums to determine its future and seek more recognition in the international community from non-governmental organizations and the United Nations. The KMT has denounced the call for independence as a partisan strategy that ignores the extensive economic interdependence between Taiwan and China.

Cross-sectional surveys show that public opinion about the relationship between Taiwan and China is characterized by a preference for the status quo and net aggregate stability. Between 1994 and 2001, an average 78 percent of Taiwanese preferred maintaining the status quo, 4.5 percent supported immediate independence, and 2.6 percent favored immediate unification. Of those favoring the status quo, 47.7 percent did not show a directional preference on the issue, 11 percent leaned toward independence and 19.2 percent leaned toward unification. These surveys also showed small standard deviations in opinions about independence and unification, although Emile Sheng (盛治仁) expressed caution about reading too much stability into these patterns since the meaning of the terms “independence,” “unification,” and “maintaining the status quo” has changed over time.

Although cross-sectional surveys suggest that aggregate public opinion on this issue has been stable, they cannot reveal whether the same respondents express the same policy preferences over time. The stability of issue attitudes has been debated extensively in mature democracies, but less is relatively known about this phenomenon in third wave democracies such as Taiwan.

Drawing on two waves of panel data provided by the 2004 Taiwan’s Election and Democratization Study (TEDS, 台灣選舉與民主化調查), this study measures whether the same respondents maintained or changed their attitudes about the

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7 Sheng, “Cross-Strait Relations and Public Opinion on Taiwan,” 23.
independence/unification issue between 2001 and 2004. It also uses ordered probit modeling to assess the relative impact of previously-held opinions and rational economic assessments on attitudes about the constitutional question in 2004, net of other well-known determinants of policy preferences such as ethnicity, age, Taiwanese identity, and political predisposition. In doing so, this study will contribute to previous research on attitudes about Taiwan’s status by investigating individual-level attitudinal stability and introducing a time lag variable into a multivariate model of public opinion.

It should be emphasized that only a few scholars have utilized this panel data since it was released. The TEDS dataset allows researchers to investigate the extent to which attitudes changed in two years. Between 2001 and 2004, only two local elections—the Taipei (台北市) and Kaohsiung (高雄市) mayoral elections—were held, which supposedly had a minimal influence on attitudes on the national issue such as independence/unification. Since this study is about to reveal the lag impact of previous attitudes and the respondents’ assessments of their personal financial status and Taiwan’s economic prospects, it is proper to control for the possible interference caused by short-term events like elections. Therefore, we are able to identify the causes of attitudinal change based on this data analysis.

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8 Data analyzed in this article were from “Taiwan's Election and Democratization Studies, 2004” (TEDS 2004P) (NSC 94-2420-H004-008-SSS). The coordinator of the multi-year project TEDS is Professor Chi Huang (黃紀) of National Chengchi University (國立政治大學). TEDS2004P is a yearly project on the presidential election of 2004. The principal investigator is Professor Hwang Shiou-duan (黃秀端) of Soochow University (東吳大學). For more information visit the TEDS website (http://www.tedsnet.org). The authors appreciate the assistance in providing data by the institute and individuals aforementioned. The authors are alone responsible for views expressed herein.

The Stability of Individual-Level Policy Preferences

Early research on American voters showed that political identification is inherited from parents early in life and remains relatively unchanged.\(^{10}\) In contrast, attitudes about political issues, particularly foreign aid, isolationism, and federally guaranteed employment, were not characterized by the same level of continuity between two elections.\(^{11}\)

A comparison of panel surveys from the 1950s and 1970s revealed a hierarchy in the temporal stability of attitudes in different issue domains. Attitudes about moral issues concerning marijuana and abortion were more stable due to their deeper resonance among those who were not normally attentive to policy debates.\(^{12}\) These were followed by opinions on domestic issues central to everyday experiences. Political themes such as foreign policy that were removed from daily life exhibited less stability.\(^{13}\) Markus’ study of issue opinions between 1973 and 1982 found that attitudes about marijuana legalization and the equality of gender roles were the most stable within each cohort, while opinions related to more abstract political subjects displayed the lowest correlations.\(^{14}\)

Krosnick\(^{15}\) drew on the 1972-76, 1956-60, and 1980 National Election Panel Studies to investigate the stability of preferences on symbolic and non-symbolic political themes.\(^{16}\) Symbolic attitudes are acquired through early childhood socialization and remain relatively stable throughout one’s lifetime, while nonsymbolic attitudes are formed through the integration of information during adulthood. Nonsymbolic attitudes, unlike symbolic attitudes, can shift easily as the result of


\(^{13}\) Ibid., 40.


changes in the wording of survey questions.

Krosnick initially found that attitudes about symbolic political objects as party identification, ideological orientation, and racial policy were more stable than attitudes about nonsymbolic objects such as social groups or nonracial domestic issues. However, after accounting for measurement unreliability, he concluded that issue preferences appeared to be stable and no less solidified than party identification, ideological orientations, attitudes toward social groups, and feelings of efficacy and trust. Achen also argued that party identification and policy attitudes were equally stable after correcting for unreliable survey questions and other observational errors.

Hsu and Chen’s research has cast doubt on socialization theories that attitudes are formed early in life and are resistant to change during adulthood. Using Bayes theorem to explain why the intensity of information flow drives the stability of the independence/unification issue, they found that educational attainment and provincial origin jointly determined likely positions on national identity. Their findings uphold the learning model approach that posits that the introduction of new information can lead to attitudinal shifts. Similarly, the 1999 Swiss Election Panel Study found that an intense, issue-specific information flow had a strong effect on the probability of attitudinal change, and that the direction of this effect depended on the direction of the political message.

Relatively little is known about the stability of individual policy preferences in Taiwan because most studies have relied on cross-sectional data. One early study that used panel data to investigate the consistency of attitudes on the independence/unification issue found that opinions were highly stable before and after the 1991


19 Hsu Yung-ming and Chen Ming-tong, “Souxun Taiwan minzhong tongdu taidu de dongli: yige geti dongtai moxing de jianli” (Identifying the dynamics underlying mass choices on Taiwan’s future), Taiwan zhengzhi xuekan 3 (1998): 65-114.


National Assembly (國民大會) election. Sheng used an experimental design to show that people expressed firm stands on “easy” issues like independence/unification and capital punishment, and could be persuaded to change their attitudes only by very detailed information.

While the stability of issue opinions in general and across issue domains is disputed, most research, on the one hand, suggest that opinions about issues that are salient to the quotidian concerns of citizens tend to be stable. The independence/unification question is such an issue, and attitudes about it are tied to symbolic themes such as party identification and identity. Some scholars, on the other hand, indicate that, new information would lead to an attitudinal shift. Considering the policy aspect of the independence/unification issue, we expect that individual-level policy preferences will exhibit modest stability between 2001 and 2004.

**Determinants of Public Opinion about Taiwan’s Status**

Researchers have argued there are rational and affective components to attitudes about Taiwan’s status, with the rational component reflected in partisan divisions over Taiwan’s future. For example, the KMT used to suggest that Taiwan independence would lead to intense cross-Strait relations, which forced the DPP to adopt a moderate position. With the growth of indirect trade between China and Taiwan and factories moving to China for its market and labor, many Taiwanese witnessed the ascendancy of China’s power and questioned whether it was worthwhile to challenge its tolerance of any moves toward independence.

Wu has provided evidence of a rational basis to voters’ policy preferences based on their reactions to two hypothetical statements. The first was: “If a peaceful relationship can still be maintained with China after a declaration of Taiwan independence, Taiwan should then declare independence and become a new country,” and the second was: “If the economic, social, and political conditions between China

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and Taiwan converge, then the two sides should unify.” Those who agreed with the first statement, but disagreed with the second, were designated as “Taiwan nationalists”; those who disagreed with the first statement and agreed with the second were classified as “Chinese nationalists;” and those who agreed with both statements were described as “pragmatists.” Wu found that the pragmatists tended to tolerate the separation of Taiwan from the motherland, and were more likely than the Chinese and Taiwanese nationalists to emphasize liberalism over ethnic consciousness.

Emile Sheng has argued that attitudes about Taiwan’s future derived from affective identification or rational calculation. Affective respondents held to their original predispositions, regardless of changes in the environment. Affective unification advocates would not adjust their attitudes even if China remained economically underdeveloped and authoritarian in its political structure.²⁵ In contrast, the rational calculators would change their position if declaring independence would lead to war, or if China improved its democratic and economic performance.

Emile Sheng further classified his respondents into five subcategories comprised of “rational pro-unification,” “rational pro-independence,” “rational no predisposition,” “affective pro-unification,” and “affective pro-independence.” He found that about half of the respondents determined their orientations by rational calculation, while the other half were affectively oriented. This implies that the threat of war and China’s social, economic, and political development would influence how Taiwanese feel about their constitutional future.²⁶ He has argued that the proportion of rational no-predisposition and affective pro-independence types increased between 1992 and 2000, while affective pro-unification types comprised an increasingly smaller segment of the Taiwanese voting population.²⁷ The rational calculators are said to be the stabilizing forces in Taiwanese politics and pivot voters during elections.

Lin, Wu, and Lee have also argued that pragmatic concerns such as the possibility of China using force following a declaration of independence, and financial deterioration in Taiwan following unification, also condition policy preferences about the independence issue.²⁸ Niou’s analysis of the conditions under which people would

²⁵ Sheng, “Cross-Strait Relations and Public Opinion on Taiwan,” 24-25.
²⁶ Ibid., 28, 45.
²⁷ Ibid., 31, 37.
²⁸ Lin, Wu, and Lee, “Symbolic Politics or Pragmatism?”
move from the status quo position to independence or unification found that 22.7 percent of status quo respondents could support either option. Preferences were conditional on factors such as China’s military threat, the American commitment to Taiwan’s security, and China’s prospects for becoming democratic and prosperous. Using similar conditional questions, Hsieh and Niou constructed a new scale of the independence-unification issue and found that about 38 percent of respondents chose the status quo and 33 percent of respondents preferred unification.

As argued previously, the independence/unification issue has an affective component because reunification with China is a complex proposition shaped by the long-term dominant nationalism that Taiwan is part of China and that people across the Strait share the same heredity and culture. Since the KMT traces its historical roots back to the founding father of China, Sun Yat-sen (孫逸仙), it is unacceptable for party members to relinquish the goal of reunification. Even Lee Teng-hui (李登輝), the former president and KMT chairman, had to assure supporters that he would push for reunification after he was strongly criticized for sympathizing with the independence movement.

Tensions between mainland Chinese and the Taiwanese have stymied a consensus on nationhood. Therefore, it is not surprising that opinions about the independence/unification issue are also strongly influenced by ethnicity. Of all ethnic groups, mainlanders are most likely to self-identify as only Chinese. The Chinese-born firmly support unification because they share the same heredity and culture and believe that unification would benefit each side economically and politically. The Minnan (閩南) Taiwanese are more likely to support independence, although a sizeable number of Minnan and Hakka (客家) Taiwanese also favor the status quo. These ethnic divisions tend to coincide with allegiances to parties that adopt distinct positions about Taiwan’s status. The native Taiwanese tend to support the pro-independence

DPP and Taiwan Solidarity Union (TSU, 台灣團結聯盟), while mainlanders tend to support the KMT and unification.\(^{34}\)

Other sociological attributes including generation, age, and education have also shaped attitudes about Taiwan’s future. Liu found that Minnan Taiwanese who were born prior to the 1950s and who had undergone the transition to democracy tended to support independence, while mainlanders from this same generation became more supportive of unification.\(^{35}\) Another study found that unification with China was the most favored policy for first generation respondents born on or before 1931 and whose formative experiences were shaped by the retreat of the Nationalist government from mainland China.\(^{36}\) Independence was the preferred option for second generation respondents born between 1932 and 1953 who had witnessed Taiwan’s growing international isolation, while younger respondents preferred the status quo, or supported independence.\(^{37}\) Individuals with less formal education tend to be more supportive of independence than individuals with more education.\(^{38}\) Taiwanese over the age of 50 are more likely to support independence, and 30 to 39-year-olds are more inclined to support unification, although age effects became insignificant after the introduction of statistical controls.\(^{39}\)

Despite that little is known about the impact of previously-held positions on subsequent attitudes about Taiwan’s constitutional future, Emile Sheng has suggested that people took firm stands on the independence/unification issue and that only very detailed information could change their minds.\(^{40}\) Therefore, we expect that an issue stance adopted in 2001 will influence an individual’s position in 2004. If an attitudinal change occurs, it must take some information into account beyond the conventional sociological and psychological factors that tend to keep issue positions steady. Since several studies have pointed to a growing number of rational calculators in Taiwanese


\(^{35}\) Liu, “Generational Discrepancies in Public Attitude on Taiwan’s Unification Issue,” 103-21.

\(^{36}\) Chang and Wang, “Taiwanese or Chinese?” 29-49.

\(^{37}\) Ibid., 40-42.

\(^{38}\) Hsieh, “Ethnicity, National Identity, and Domestic Politics in Taiwan,” 18; and Chang and Wang, “Taiwanese or Chinese?” 41.

\(^{39}\) Hsieh, “Ethnicity, National Identity, and Domestic Politics in Taiwan,” 17.

\(^{40}\) See note 23 above.
politics, we also assume that assessments of Taiwan’s economic performance and one’s personal financial stake in China are significant predictors of attitudes in 2004.

**Data and Methodology**

The analysis is based on the TEDS national panel study of 505 respondents who were first interviewed in 2001, and then re-interviewed in 2004 about the independence/unification question. TEDS2001 is a national sample based on a multi-stage, stratified sampling frame. Half of the TEDS2001 samples were re-interviewed in 2003, and the rest of them were re-interviewed in 2004.

For the purpose of comparison, the 2001 and 2004 wave asked the respondents with the same question about the independence/unification issue position.\(^{41}\) It consisted of six categories: immediate independence; maintaining the status quo and in the future moving toward independence; maintaining the status quo and in the future deciding either unification or independence; maintaining the status quo forever; maintaining the status quo and in the future moving toward unification; and immediate unification. Most researchers treat these six categories as a one-dimensional scale, where “maintaining the status quo and in the future deciding either unification or independence” and “maintaining the status quo forever” are viewed as the status quo or middle positions.

In order to evaluate the relative impact of previously-held positions and rational assessments of economic and financial considerations on policy preferences in 2004, we modeled the five-category unification/independence dependent variable as a function of a respondent’s preference in 2001, evaluations of the Taiwanese economy, whether one’s family had invested in China, and sociological and psychological variables including age, marital status, gender, income, education, Taiwanese identity, and political predisposition.

We used the ordered probit model because the regular probit model overlooks the ordering of the dependent variable. Linear regression is not suited to analyzing ordered data because it assumes that increments from one category to the next are exactly the same, and may produce negative variances and predicted probabilities of

\(^{41}\) See appendix for the wording of the independence/unification question. The 2003 wave has different format of this question, thus we choose the 2004 wave.
less than 0 or greater than 1. Winship and Mare used ordered probit models to estimate
the effects of father’s schooling and color on son’s schooling, where both father’s
schooling and color and son’s schooling are ordinal variables. In their conclusion,
they pointed out that sociologists ignore the ordinal measurement and mistakenly treat
it as continuous variables. Furthermore, it is legitimate to put the ordinal variable on
both the right- and left-handed side of the equation.

The ordered probit model considers the discrete dependent variable $Y_i$ as the
realization of a continuous, but unobserved variable $Y_i^*$. The relationships between the
categories of $Y_i$ and the values of $Y_i^*$ are:

- $Y_i = 0$, insist on the unification, if $Y_i^* \leq 0$
- support unification, if $0 < Y_i^* \leq \mu_1$
- maintain status quo, if $\mu_1 < Y_i^* \leq \mu_2$
- support independence, if $\mu_2 < Y_i^* \leq \mu_3$
- insist on independence, if $\mu_3 \leq Y_i^*$

Since probit estimators assume that $Y_i$ is represented by the cumulative normal
distribution, the predicted probability in ordered probit is calculated as: $\text{Prob}(Y_i = j) = \Phi(\mu_j - x' \beta) - \Phi(\mu_{j-1} - x' \beta)$, where $\mu_j$ and $\mu_{j-1}$ denote the upper and lower
threshold values for category $j$, $x'$ denotes the matrix of independent variable, and $\beta$ is
the matrix of estimated coefficients. The ordered probit equation then computes the
components of $\mu$ and $\beta$ by maximum likelihood estimation.

We are concerned about potential heteroscedasticity associated with different
groups of individual respondents, that is, that the distribution of support for
independence from China may vary and will result in unequal error variances across
respondents. Since heteroscedasticity in the ordered probit model causes inefficient
and inconsistent parameter estimators, we are able to model the robust error variance.

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42 Christopher Winship and Robert D. Mare, “Regression Models with Ordinal Variables,” *American


44 Ibid., 648-50.
The 2001-04 Panel Data on Taiwan’s Constitutional Future

The overview of attitudinal change on the unification/independence question begins with a distribution of public opinion between 1994 and 2004 (see figure 1). The original five-category question on issue positions developed by the Election Study Center at National Chengchi University was collapsed into four attitudinal categories: pro-independence, pro-unification, maintaining the status quo, and non-response.

[Figure 1 about here]

The timeline shows that pro-independence sentiments rose in 1996 during the first popular presidential election. Prior to this watershed event, Taiwan had already undergone substantial political changes that likely contributed to increased support for independence. In 1994, the mayors of Taipei and Kaohsiung cities were directly elected for the first time since these municipalities fell under the supervision of the Executive Yuan (行政院) in 1967, as was the governor of Taiwan province in an election that attracted a very high turnout of 76 percent.

Cross-Strait relations also became increasingly tense in the run-up to the 1996 presidential election. In 1994, the Taiwanese public was stunned by the brutal murder of a group of Taiwanese tourists in Zhejiang (浙江省), China. The Qiandaohu (千島湖) incident prompted Taiwanese President Lee Teng-hui to bitterly criticize China for attempting to cover up this serious crime. Lee’s 1995 visit to his alma mater Cornell University, where he delivered a speech that emphasized Taiwan’s democracy, was interpreted by China as a challenge to its hegemony. During the 1996 presidential election in which Lee was a candidate, China launched several missiles off the shore of northern Taiwan. China’s military showdown had the effect of stimulating the consciousness of the Taiwanese people.45

Support for Taiwan independence hovered at 15 percent for several years, and then dropped to 10 percent on the eve of the 2000 presidential election when China’s Premier Zhu Rongzhi (朱鎔基) warned that the Chinese people were willing to shed blood to prevent Taiwan from becoming independent. Heightened cross-Strait tensions appeared to stem the shift in support towards Taiwan independence until April 2003, when an outbreak of severe acute respiratory syndrome (SARS) epidemic in Taiwan resulted in the deaths of 83 people by June. Taiwan sought assistance from the World Health Organization (WHO) to fight the disease, but China claimed that Taiwan was

part of China and did not allow the WHO to assist Taiwan. China’s behavior antagonized Taiwan’s inhabitants and boosted pro-independence sentiments.

Figure 1 presents a mixed picture of the political psychology of the Taiwanese. On the one hand, half are oriented toward the “status-quo,” although the meaning of “status quo” has alternated between a “one China, two governments policy” and “state-to-state” relations. Yet there are proportionately more “pro-independence” than “pro-unification” Taiwanese, partly because the old generation became pro-independence and the young generation is still undecided on this issue.46

Table 1 shows the proportion of respondents’ issue positions across the three-year interval of this study. The highest level of attitudinal stability can be found in the status quo-status quo cell, where 68.7 percent of respondents expressing a preference for the status quo in 2001, maintained their position in 2004. Table 1 also presents correlation statistics for the relationship between attitudes in 2001 and 2004. The highest correlation between the two attitudes is the gamma value at 0.626. The association between the two is rather modest, when compared to the correlations between prior and current attitudes reported by Ho,47 which range from 0.769 to 0.926. If we account for measurement effects as an explanation for these differences, it is possible that attitudinal stability in our analysis may increase.

[Table 1 about here]

After calculating the total percentages of each cell in table 1, it is estimated that 47 percent of the respondents had shifted their orientations in these two years (see table 2). The attitudinal shift is significant, and it is noteworthy that many “switchers” moved to the status quo position; 15.2 percent of the respondents switched from the unification to the status quo, and 4.9 percent from independence to status quo stance. In other words, 20.1 percent of respondents changed their attitudes from either side to the status quo position. Some respondents who used to be indifferent about unification and independence took sides: 21.8 percent switched to the independence position and 1.9 percent moved to the unification from the status quo. Only 2.8 percent of the respondents switched from unification to independence and 0.4 percent switched from independence to unification. When examining the net change of issue positions

46 See note 23 above; and Liu, “Generational Discrepancies in Public Attitude on Taiwan’s Unification Issue,” 103-21.

47 See note 22 above.
between 2001 and 2004, we see that more respondents turned to independence or
unification from the status quo, than from one side to the opposite side (see table 2).
The “status quo” was the most popular choice for respondents who changed their minds

[Table 2 about here]

The panel data show that the independence/unification issue can be
conceptualized as a spectrum. For individuals expressing preferences for unification or
independence, it was difficult to change from one extreme to the other. However, it was
easy to switch to the position of status quo, or to move from the status quo position to
either side. The dilemma in choosing between independence and unification has
resulted in a preference for the status quo—an ambivalent but decision-free middle
ground. Because of the status quo position serves as a middle ground, public opinion
remains stable in a period of three years, which also justifies the use of the lag variable
of the issue position.

The Determinants of Independence/Unification Attitudes

We developed two ordered probit models to identify the determinants of
constitutional policy preferences in 2004. Model 1 predicts the current independence/
unification issue position with several psychological and sociological variables: party
identification with the pan-Green and pan-Blue camps, Taiwanese identity, provincial
origin, ethnicity age, gender, income, education, and marital status. Political
predisposition refers to individual’s orientation towards the pan-Blue (泛藍; i.e., KMT
and PFP) and pan-Green (泛綠; i.e., DPP and TSU) camp. The pan-Blue and pan-Green
camps have contested in legislative elections since the PFP and TSU were formed in
2000 and 2001 respectively. We expect that individual’s pan-Blue and pan-Green
predispositions are crucial to his independence/unification issue position.\footnote{Chi Huang, “Explaining Referendum Voting Choices in Taiwan,” Issues & Studies 40, no. 3/4
(September/December 2004): 329.}

In keeping with previous research, our analysis displays that respondents
having identification with the pan-Green camp and Taiwanese nationality were more
inclined to enthusiastically support Taiwan independence (see table 3). The coefficient
shows that being mainlander is less likely to support Taiwan independence, though the
effect is not significant at the 0.05 level. Elderly people were more likely to support independence than members of the younger generation, yet the coefficient is not statistically significant.

Model 1 confirms previous research on the impact of Taiwanese identity and political orientation on attitudes about the unification/independence issue. However, it omits the lagged impact of previous attitudes and the rational component of attitudes, namely, the respondents’ assessments of the economic prospects of Taiwan. Those variables are considered in Model 2. After controlling for self-identified Taiwanese identity and other sociological variables, the lagged independence/unification issue position and rational contemplation have statistically significant impact on the current issue position. Respondents who were skeptical about the economic performance of Taiwan were more reluctant to support its independence from China. The direction of the investment variable is as what we expect, though it is not statistically significant. Overall, we are able to conclude that independence preferences were not only strongly influenced by previous inclinations, but also by rational economic considerations.

Since the coefficients cannot be interpreted as the marginal effects of the independent variables in a probit model, we drew the predicted probability diagrams based on Model 2 to discern the conditional effects of independent variables on policy preferences. The distribution of the probability conditional on different level of previous independence support and current economy evaluations are shown in figure 2 and figure 3.

After controlling for other independent variables, the predicted probability of a cross-Strait issue position in 2004 was explained by preferences in 2001 (see figure 2). When a voter strongly supported unification in 2001, he probably would strongly supported unification in 2004. When he became more and more inclined to support independence in 2001, the probability of being pro-independence increased sharply while the trend of choosing status quo declined gradually in 2004. Figure 2 shows that the influence of the previous issue position on the current issue position is quite remarkable.

In figures 3, we turn our focal point to the influence of respondents’ economic considerations by controlling for other independent variables. Since the economy in Taiwan has been heavily reliant on China, it is reasonable to presume that people
consider the financial impact when considering their stance on the cross-Strait relationship. For it is widely believed that economic disparity between the two sides becomes smaller due to the increasing economic interdependence, we assume that the economy pessimism about Taiwan would lead to unification. As shown in figure 3, as people expressed pessimism about the economy, they were less likely to support Taiwan independence. On the other hand, those who were optimistic about Taiwan’s economy were more likely to support Taiwan independence and very unlikely to support unification. This confirms our expectation that issue positions were partly driven by rationality.

[Figure 3 about here]

Conclusion

The panel data analysis shows evidences that voters tended to maintain stable attitudes on the independence/unification issue, and that prior issue positions and rational assessments of cross-Strait relations and the Taiwanese economy influenced attitudes in 2004, net of other factors. Those who were optimistic about Taiwan’s economy were more likely to support independence and very unlikely to support the unification, and vice versa.

Our findings echo previous research which has found that rationality shapes public policy preferences in Taiwan. This study has contributed to existing knowledge by showing that rational economic assessments are as powerful predictors of attitudes as most conventional and psychological factors. This leads to the question of whether cross-Strait relations influence this reasoning and its underlying dynamics. Although it is widely perceived that cross-Strait relations shape public opinion about China and Taiwan, more panel data is needed to uncover the underlying dynamics of this policy issue. Conversely, we can view the relative importance of each variable in the equation as an indicator of how people perceive cross-Strait relationships. If pragmatic concerns affect individual reasoning, we can expect that mainland policy will center on problem-solving rather than on confrontation or stand-offs.

Unlike Lin, Wu and Lee’s study dealing with the issue of national security (2004), our analysis has only examined the role of economic self-interest. In addition to the two economic variables we included in our model, future studies should include items tapping into concerns about economic, political, and social dimensions of
Taiwanese society. These would include how people feel about international marriages between Taiwanese and Chinese, economic interdependence between China and Taiwan, Taiwan’s military exercises, the United States, and China. In doing so, we may tell if rationality or predispositions drive mass attitudes and further classify issue positions.
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APPENDIX
Survey Questions and Coding of Variables

Independence/Unification Issue Position

"Concerning the relationship between Taiwan and mainland China, which of these six positions do you agree with: (1) immediate unification, (2) immediate independence, (3) maintain the status quo, in the future move toward unification, (4) maintain the status quo, in the future move toward independence, (5) maintain the status quo, in the future decide either unification or independence, or (6) maintain the status quo forever?" (1 = insist on unification; 2 = maintain the status quo, but in the future move toward unification; 3 = maintain status quo [maintain the status quo, in the future decide either unification or independence and maintain the status quo forever]; 4 = maintain the status quo, but in the future move toward independence; 5 = insist on independence)

National Economy Pessimism

"Compared to three or four years ago, would you say that the state of economy on Taiwan has gotten better, stayed about the same, or gotten worse? " (1 = much better; 2 = better; 3 = stayed the same; 4 = worse; 5 = much worse)

Family’s Investment in China

"Have you or any member of your family made investments, conducted business, or held employment in mainland China?" (0 = no; 1 = yes)

Political Predisposition

It is derived from the following questions: "Among the main political parties in our country, including the KMT, DPP, PFP, NP, and TSU, do you think of yourself as leaning toward any particular party?" Those who classify themselves as independents are asked the following question: "Do you feel yourself leaning a little closer to one of the political parties than the others?" [If yes] "Which party do you feel close to?" (1 = Kuomintang; 2 = Democratic Progressive Party; 3 = People First Party; 4 = Taiwan Solidarity Union). We classify the Kuomintang and People First Party as the pan-Blue camp, and the Democratic Progressive Party and Taiwan Solidarity Union as the pan-Green camp.

Provincial Origin

Provincial origin of respondent’s father (1 = mainlander; 0 = Taiwanese [Minnan and Hakka])

Age

Respondent’s age measured in years (20 to 70)

Gender

Respondent’s sex (1 = male; 0 = female)
Figure 1

Attitude Change of Independence/Unification Issue, 1994-2004

Table 1 Correspondence between 2001 and 2004 Issue Positions

<table>
<thead>
<tr>
<th>2004 issue position</th>
<th>Strong pro-unification</th>
<th>Pro-unification</th>
<th>Status quo</th>
<th>Pro-independence</th>
<th>Strong pro-independence</th>
<th>Row</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong pro-unification</td>
<td>0.0</td>
<td>0.9</td>
<td>0.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Pro-unification</td>
<td>(0)</td>
<td>(1)</td>
<td>(2)</td>
<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
<td>(3)</td>
</tr>
<tr>
<td>Pro-unification</td>
<td>50.0</td>
<td>35.8</td>
<td>6.8</td>
<td>5.1</td>
<td>5.6</td>
<td>15.4</td>
<td>(65)</td>
</tr>
<tr>
<td>(7)</td>
<td>(39)</td>
<td>(15)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(65)</td>
<td></td>
</tr>
<tr>
<td>Status quo</td>
<td>42.9</td>
<td>53.2</td>
<td>68.7</td>
<td>27.1</td>
<td>27.8</td>
<td>56.3</td>
<td>(237)</td>
</tr>
<tr>
<td>(6)</td>
<td>(58)</td>
<td>(152)</td>
<td>(16)</td>
<td>(5)</td>
<td>(5)</td>
<td>(237)</td>
<td></td>
</tr>
<tr>
<td>Pro-independence</td>
<td>0.0</td>
<td>6.4</td>
<td>21.3</td>
<td>50.9</td>
<td>50.0</td>
<td>22.1</td>
<td>(93)</td>
</tr>
<tr>
<td>(0)</td>
<td>(7)</td>
<td>(47)</td>
<td>(30)</td>
<td>(9)</td>
<td>(9)</td>
<td>(93)</td>
<td></td>
</tr>
<tr>
<td>Strong pro-independence</td>
<td>7.1</td>
<td>3.7</td>
<td>2.3</td>
<td>16.9</td>
<td>16.6</td>
<td>5.4</td>
<td>(23)</td>
</tr>
<tr>
<td>(1)</td>
<td>(4)</td>
<td>(5)</td>
<td>(10)</td>
<td>(3)</td>
<td>(3)</td>
<td>(23)</td>
<td></td>
</tr>
<tr>
<td>Column total</td>
<td>3.3</td>
<td>25.9</td>
<td>52.5</td>
<td>14.0</td>
<td>4.3</td>
<td>100.0</td>
<td>(421)</td>
</tr>
<tr>
<td>(14)</td>
<td>(109)</td>
<td>(221)</td>
<td>(59)</td>
<td>(18)</td>
<td>(18)</td>
<td>(421)</td>
<td></td>
</tr>
</tbody>
</table>

Gamma 0.626
Cramer’s V 0.290
Tau-b 0.426

Note: Numbers of observations are in parentheses.
Table 2 Net Change of Issue Position, 2001-04

<table>
<thead>
<tr>
<th>2004 Position</th>
<th>Pro-unification</th>
<th>Status quo</th>
<th>Pro-independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-unification</td>
<td>----</td>
<td>1.9(8)</td>
<td>0.4(2)</td>
</tr>
<tr>
<td>Status quo</td>
<td>15.2(64)</td>
<td>----</td>
<td>4.9(21)</td>
</tr>
<tr>
<td>Pro-independence</td>
<td>2.8(12)</td>
<td>21.8(92)</td>
<td>----</td>
</tr>
</tbody>
</table>

Note: Entries computed from the total percentages in table 1.
<table>
<thead>
<tr>
<th></th>
<th>Heteroscedastic ordered probit</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( \beta )</td>
<td>SE(( \beta ))</td>
<td>( \beta )</td>
</tr>
<tr>
<td><strong>Lag variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence preference</td>
<td>----</td>
<td>0.438</td>
<td>(0.076)**</td>
</tr>
<tr>
<td>t-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Economic variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National economy</td>
<td>----</td>
<td>-0.175</td>
<td>(0.081)**</td>
</tr>
<tr>
<td>pessimism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family investment in</td>
<td>----</td>
<td>-0.024</td>
<td>(0.186)</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Psychological variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taiwanese identity</td>
<td>0.590</td>
<td>(0.124)**</td>
<td>0.365</td>
</tr>
<tr>
<td>Identification with</td>
<td>-0.280</td>
<td>(0.148)</td>
<td>-0.282</td>
</tr>
<tr>
<td>pan-Blue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification with</td>
<td>0.595</td>
<td>(0.139)**</td>
<td>0.491</td>
</tr>
<tr>
<td>pan-Green</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sociological variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial origin</td>
<td>-0.199</td>
<td>(0.174)</td>
<td>-0.154</td>
</tr>
<tr>
<td>(mainlander)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.001</td>
<td>(0.003)</td>
<td>0.003</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>-0.105</td>
<td>(0.106)</td>
<td>-0.085</td>
</tr>
<tr>
<td>( \mu_1 )</td>
<td>-2.171</td>
<td></td>
<td>-1.616</td>
</tr>
<tr>
<td>( \mu_2 )</td>
<td>-0.769</td>
<td></td>
<td>0.026</td>
</tr>
<tr>
<td>( \mu_3 )</td>
<td>1.097</td>
<td></td>
<td>2.039</td>
</tr>
<tr>
<td>( \mu_4 )</td>
<td>2.228</td>
<td></td>
<td>3.328</td>
</tr>
<tr>
<td><strong>Number of observation</strong></td>
<td>445</td>
<td>402</td>
<td></td>
</tr>
<tr>
<td>Pseudo R(^2)</td>
<td>0.11</td>
<td></td>
<td>0.16</td>
</tr>
<tr>
<td>Likelihood ratio chi(^2)</td>
<td>116.92</td>
<td>151.18</td>
<td>&lt;=0.001</td>
</tr>
<tr>
<td>Prob. &gt; chi(^2)</td>
<td>&lt;=0.001</td>
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<tr>
<td>Log likelihood</td>
<td>-459.20</td>
<td>-383.46</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Robust standard error in parentheses; * \( p<0.05 \), ** \( p<0.005 \), *** \( p<0.001 \) (two-tailed).
Figure 2: Lag Impact on the Cross-Strait Issue

Figure 3: Economic Pessimism and the Independence/Unification Issue Position