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Economic Voting in Taiwan
The Significance of Education and Lifetime Economic Experiences

ABSTRACT
An analysis of the 1996 and 2004 Taiwan presidential elections demonstrates that the voters’ overall economic experiences under the dominant Kuomintang and level of education mediated the effect of short-term economic conditions on individual vote choice before and after the first power transition.

KEYWORDS: Economic voting, heterogeneity, one-party, education, Taiwan

Economic voting has been a widely accepted model for explaining individual vote choice, at least in the United States and other Western countries.1 Under this model, voters punish or reward incumbents on the basis of perceived gains or losses in either their personal or national material wellbeing. By using “low information rationality” that relies on intuition with respect to economic performance, economic voting is not only a legitimate expression of self-interest but also a reasonable strategy for ordinary voters to...
hold incumbents responsible for their actions while in office. The economy is consistently one of the most salient issues that voters factor into their decision calculus.

Nonetheless, contrary to the expectation that the state of the economy plays a crucial role in election outcomes among all democracies, there has been little consistent or strong empirical evidence of economic voting across countries and elections—the so-called instability dilemma. In other words, the significance of economic conditions for individual candidate preferences varies from country to country and from election to election. The effects of economic conditions differ depending on the level of analysis (vote share vs. individual vote choice) and kinds of economic indicators (e.g., inflation, unemployment, income, or individual perceptions of national/personal economic conditions). Scholars also disagree on whether voters react to past events more than to future ones, or vice versa.

Rather than dismissing the effect of economic conditions on election outcomes, however, evidence supports heterogeneous economic voting behavior. This assumes that the importance of economic concerns varies, as do the effects of economic concerns on voting behavior, both across countries and elections, and among individual voters. Recently, the economic voting literature has paid attention to institutional differences (e.g., the number of parties and the existence of clear alternatives) and individual differences (e.g., class, trust in government, and information access) to explain the variations in economic voting across countries and among individuals.


This study extends the body of literature on heterogeneous economic voting behavior by investigating what types of individuals in Taiwan exhibit either sociotropic or pocketbook economic voting. The evidence for economic voting has been inconsistent in Taiwan, a nation where voters have experienced one-party dominance until recent years. For example, the Taiwanese presidential elections of 1996 and 2004 both saw the incumbent parties prevail despite deteriorating economic conditions. Rather than ignoring the significance of economic conditions in Taiwanese elections, this article pays particular attention to individual differences in education levels and lifetime economic experiences. These variables can determine how salient attitudes toward economic conditions are to voters. Specifically, I argue that a voter’s level of education mediates the relationship between economic evaluations and vote choice by conditioning the ability to connect the economic climate with governmental responsibility.

This study also maintains that positive economic experiences under one-party dominance in Taiwan have tended to mute the influence of the economy in elections overall by making the issue of economic conditions less accessible and relevant. Voters who were economically less fortunate under the dominant Kuomintang (Nationalist Party, KMT) from 1949 to 2000, however, were more likely to be involved in economic voting (i.e., to vote against the incumbent party). This is because they were more susceptible to economic fluctuations and did not face heavy risks by voting for an untested opposition party. On the contrary, with voters experiencing the first alternation of power from the KMT to the Democratic Progressive Party (DPP) in 2000, we expect that the more-fortunate under the KMT would be more likely to be involved in economic voting (i.e., to vote for the incumbent party) because they had more to lose and higher expectations for the future.

In order to examine heterogeneous economic voting behavior in Taiwan, this article examines two presidential elections (1996 and 2004) since democratization. These cases illustrate how economic voting changed in Taiwan with the alternation of power.
before and after voters went through the first power transition, in 2000. Before presenting vote choice models, we first investigate the heterogeneity of the Taiwanese electorate in terms of the awareness and salience of economic issues. Second, multinomial logit (MNL) regression is used to analyze the Taiwanese vote choice by paying particular attention to interaction terms between economic conditions and both education levels and lifetime economic experience. The interactive relationships between these variables indicate that education and lifetime economic experience modify the effect of economic conditions on individual vote choice in Taiwan.

HETEROGENEOUS ECONOMIC VOTING BEHAVIOR OF THE ELECTORATE IN TAIWAN

Issues must be available and accessible to voters in order to affect vote choice.\(^6\) Issue availability refers to whether voters form an opinion about a particular issue and are aware of its political relevance, while accessibility is related to how readily the existing opinion on the issue can be retrieved for political decisions.\(^7\) Accessibility is one of the most important factors in determining the strength of the connections between attitudes and later behaviors. The accessibility or salience of an attitude is high when the attitude is frequently and recently activated and considered important.\(^8\) Issues that


voters are neither aware of nor concerned about cannot be a determinant of electoral preferences. According to Norpoth, economic voting tends to be “hard-wired into the brain of citizens in democracies.”9 Indeed, the economy seems to be one of the perennial bedrock issues in democratic elections.

The availability and accessibility of economic issues have not been very different in the case of Taiwan. Availability is related to attribution of responsibility, which assumes that economic conditions influence electoral decisions only to the extent that voters attribute responsibility for conditions to governmental actions.10 The 2001 legislative election survey by the Taiwan Election and Democratization Study (TEDS),11 a survey research project sponsored by the Taiwan National Science Council (NSC), asked who had the greatest impact on government policies. More than 60% of the respondents named the president, the legislative body, or the premier, which implied that the majority of Taiwanese voters attributed responsibility for the economy to national political figures. Because the KMT did not lose its dominance in any government institutions until the late 1990s, Taiwanese voters clearly recognized who was responsible for all economic changes.12

The accessibility of an attitude is decided by the frequency and recency of its activation as well as its subjective importance.13 As Table 1 indicates, approximately 30% of Taiwanese respondents reported that the economy was

the most important problem Taiwan faced during the 1996, 2000, and 2004 elections. By comparison, the cumulative data from 1948 to 2004 from the American National Election Studies (ANES) show that around 31% of respondents reported the economy as the most important problem the U.S. faced. In other words, in multiple election years, the economy was as accessible to Taiwanese voters as to American voters. In short, issues related to the economy were available and accessible to Taiwanese voters.

Assuming that issue availability and accessibility are critical for issue voting, the availability and accessibility of economic issues in Taiwan support two different implications: (1) economic issues should be a determinant of individual vote choice in Taiwan, and (2) not all voters engage in economic voting. Contrary to the first implication, in their analyses of the 1996 presidential and 2001 Legislative Yuan elections, Hsieh and his colleagues found little to no significant effect of retrospective economic evaluations on Taiwanese voting behavior.14 These studies, however, do not account for the second point, the heterogeneity of the electorate. According to the post-election surveys conducted by the TEDS in 2001, not all respondents in

Taiwan ascribed economic well-being to government actions. Moreover, as Table 1 shows, many of the respondents named something other than the economy as the most important problem facing their country. In other words, the importance and thus the attitude accessibility of the economy differed considerably among the electorate. So did the effect of economic conditions on individual vote choice.

What types of individuals are more likely to be involved in economic voting, whether pocketbook or sociotropic, in Taiwan? This study focuses on individual variations in educational achievement and lifetime economic experiences under the dominant KMT. Studies on heterogeneous economic voting behavior focus on individual differences in education or political information (or sophistication). Most notably Duch and Gomez and Wilson argue that voters vary in their ability to clearly attribute the responsibility for economic changes to the government. Politically well-informed voters can easily link governmental actions and national/personal economic conditions, while such attribution is more difficult for the less politically informed.

Some scholars contend that sociotropic voting based on national economic conditions is stronger among the informed, while pocketbook voting based on personal economic situations is more likely to occur among the less informed. Their argument is based on the assumption that self-constructs are more accessible than social constructs. Put differently, they contend that individuals are supposed to better receive, accept, and remember information or experiences that affect them personally. However, there is scant empirical evidence of pocketbook voting, even in the U.S.

mere rationalizations of individual political choice, because many voters do not recognize the political relevance of personal economic situations.\textsuperscript{19} As personal needs or experiences tend to be “morselized” or isolated from the public arena, therefore, recognizing the linkage between politics and personal well-being requires higher cognitive abilities than identifying the political relevance of national economic conditions. I expect that the well-informed are involved in both sociotropic and pocketbook voting, because they can assign the responsibility for both personal and national economic conditions to the government. And for the reasons stated above, sociotropic voting should be more prevalent among the less-informed.

Lifetime economic experience is another mediating factor expected to impact the relationship between economic evaluations and vote choice. Few economic voting studies have paid attention to the significance of lifetime or long-term economic experience either as a determinant of vote choice or as a conditional factor in economic voting. The primary reason for this is that many scholars consider voters to have a short-term memory.\textsuperscript{20} The nature of individuals, however, is largely determined by context. Much economic voting literature has studied competitive democracies where voters experience (ir)regular power alternations between parties. With frequent power shifts after elections, voters can decide whether to punish or reward an incumbent on the basis of perceived gains or losses in their material well-being—only during the current government. In other words, such voters do not have to look back too far because the incumbent is responsible only for the current economic situation.

Lifetime or long-term economic experience has particular importance in one-party-dominant democracies. One-party dominance implies the lack of a viable or tested opposition party. Under these circumstances, opposition parties have no record of accomplishment to show their ability to govern or handle the economy, which causes voters to be uncertain about their potential


performance. Assuming that voters tend to be risk averse, they would continue to vote for the incumbent party unless they acquired confidence in an opposition party and experienced an economy poor enough to offset previous positive economic experience. In short, under a one-party-dominant system, voters might not withdraw support for an incumbent until the payoffs associated with punishing the incumbent exceed the risk of voting for the never-tested opposition. Therefore, high economic growth and one-party dominance tend to mute economic voting based on short-term economic conditions, but not necessarily based on long-term economic experiences. Magaloni’s, and Aldrich and Magaloni’s studies on Mexico and Taiwan, for example, showed that long-term economic prosperity and asymmetric information between the ruling and opposition parties kept incumbents in power for a long time, despite short-term economic downturns. Their main finding is that long-term economic conditions under the dominant parties influenced individual vote choice: the better lifetime economic experience voters had under the dominant party, the more likely they were to vote for the dominant party candidate.

The object of this study, however, is not to identify the effects of long-term retrospective economic assessments but to ascertain their conditioning effect on economic voting based on short-term economic evaluations under a dominant party system. Even in the context of asymmetric information among parties, voters face different risks related to voting for uncertain opposition parties. Not only does long-term prosperity temper short-term economic loss, but supporting an untested opposition party might be too risky for voters who have witnessed higher economic growth. Individuals who enjoyed prosperity under a dominant party, therefore, are less likely to punish it even if they have witnessed a short-term economic decline and are slower to change political preferences.


On the other hand, voters who experienced less economic fortune under dominant party rule are more likely to punish the incumbent for a short-term economic failure because they have less to lose by voting for an uncertain opposition party. Therefore, voters in this situation are expected to be more likely to engage in economic voting. Even after the first alternation of power, voters compare their overall economic experience under the previous dominant party with their current economic situation under the new government. Voters who previously enjoyed economic prosperity are more likely to respond to a short-term economic recession under the new government, while voters who did not witness much economic success are less likely to punish the new government for a short-term economic downturn. In short, economic experiences throughout dominant party rule affect how voters respond to short-term economic conditions both before and after they experience an alternation of power.

Lifetime economic experience is expected to have a significant effect on economic voting in Taiwan, where voters have experienced one-party dominance. Although Taiwan was a democracy by 2000, the ruling KMT had never lost control of the presidency or the Parliament (the Legislative Yuan) at the national level. In other words, the former authoritarian party, which retreated to Taiwan from mainland China after losing the civil war with the communists in 1949, had been the only ruling party through repeated democratic elections until 2000. Spurred by KMT-led economic policies, Taiwan experienced rapid and unprecedented economic growth. This growth, and the risk from uncertainty about opposition parties, deterred many Taiwanese voters from punishing the long-time incumbent for relatively lower growth in recent years. However, national economic growth does not uniformly benefit all the members of a society. Different lifetime economic experiences under the KMT, therefore, are expected to influence how individual voters in Taiwan respond to recent economic changes.

RESEARCH DESIGN: DATA, VARIABLES, AND MODELS

To examine the heterogeneity of economic voting within the Taiwanese electorate, this study analyzes the 1996 and 2004 presidential elections. The 1996 election was the founding election, the first free and competitive presidential election in Taiwan. The 2004 election was the first following the transition from the KMT to the DPP in 2000. By 2004, Taiwanese
voters had experienced both parties in power and were able to evaluate them based on their respective economic performance. Studying two elections eight years apart will provide insight into the effect of short-term economic conditions on individual vote choice before and after the first alternation of power in Taiwan. The dataset for the 1996 Taiwanese presidential elections comes from An Interdisciplinary Study of Voting Behavior, conducted after the election. The 2004 Taiwanese presidential election data come from the TEDS collected between June and September 2005 after the election. The dependent variable is individual vote choice.

Independent Variables and Measurements

The variables considered in these models are sociotropic and pocketbook evaluations, lifetime economic experience, national identity, the issue of Taiwan independence, and party identification, as well as demographic factors. The primary interests, however, are the interaction variables between education and economic evaluations and between lifetime economic experience and economic evaluations. The interactive relationships between these variables imply that the impact of economic evaluations on vote choice differs depending on education levels and lifetime economic experience. The following explains how each variable is measured.

As noted above, sociotropic evaluation refers to the individual perception of national economic conditions, while pocketbook evaluation denotes individual perception of personal economic situations. Sociotropic evaluation is measured by how individuals evaluate changes in the national economy over the previous year. Pocketbook evaluation is measured by how individuals perceive the change in their personal or family financial situation over the past year. These two evaluations are measured on five-point scales, with 1 indicating “better-off” and 5 indicating “worse-off.” Respondents who view national and/or personal economic conditions as being worse are expected to be more likely to vote for a presidential challenger.

Lifetime economic experience is another variable. Along with short-term economic evaluations, lifetime economic experience shapes voters’ electoral...
preferences, especially in one-party-dominant countries. To measure lifetime economic experience under the dominant party, the average gross domestic product (GDP) growth rate experienced by an individual is used. It would be better to use individual perceptions of lifetime economic experience under KMT rule; however, the surveys do not provide appropriate questions. The average GDP growth rate witnessed by an individual during the KMT rule does not directly tap individual perceptions of the KMT’s economic performance. However, this macroeconomic indicator might properly represent overall impressions of individual lifetime economic experiences with the KMT. In particular, individual perceptions on long-term economic performance can be shaped by macroeconomic performance reported by the media. This is because individuals tend to update memories using external information.

To measure lifetime economic experiences with the dominant party, this study uses GDP growth from 1952 forward, published online by the Statistical Bureau of the Republic of China (Taiwan). Following the formula used by Aldrich and Magaloni, the average economic growth experienced by each individual from age 10 onward, year by year, is computed by weighting these economic experiences so that early years, when individual attitudes about politics develop, are more heavily weighted. It is assumed that all

\[
\sum_{t=1}^{T} \text{growth}_t \times 0.9^{t-1} / \sum_{t=1}^{T} 0.9^{t-1}
\]

29. Putting more weight on earlier economic experiences is based on an assumption of political socialization theory that individual experiences during pre-adult years greatly influence political attitudes in adult years. See, for instance, Ronald Inglehart, Modernization and Postmodernization: Cultural, Political, and Economic Change in 43 Societies (Princeton: Princeton University Press, 1997). Furthermore, much symbolic politics literature argues that political predispositions learned early in life shape individual political preferences in adult life. See, for instance, David O. Sears, Carl P. Hensler, and Leslie K. Speer, “Whites’ Opposition to ‘Busing’: Self-Interest or Symbolic Politics?” *American Political Science Review* 73:2 (June 1979), pp. 369–84. Reflecting the assumption of political socialization, Aldrich and Magaloni, “When Hegemonic Parties Lose,” use the following formula:
Taiwanese respondents born before 1942 have the same lifetime economic experience.30

Social cleavages rooted in identity are another major factor that helps explain individual vote choice in Taiwan. The ethnic cleavage between Chinese mainlanders (those who came to Taiwan after 1949 and their descendants) and native Taiwanese has been the major division within Taiwanese society because of the historical disparity of political power between these two groups. After democratization in the late 1980s, political elites in Taiwan politicized social identity by building political parties based on national identity. The national identity of Taiwanese is measured by a three-point scale (ranging from Taiwanese identity, to Taiwanese as well as Chinese, to Chinese [in 1996]) and by a five-point scale (from Taiwanese, closer to Taiwanese, Taiwanese as well as Chinese, closer to Chinese, to Chinese [in 2004]).

One of the political issues that have provoked emotional debates in Taiwan is the issue of independence. The issue has been particularly important during election periods. China’s military threats, issued in an effort to prevent candidates who oppose unification from being elected, as well as the clear difference between candidates on the issue, have made this issue salient. A respondent’s position on Taiwan’s independence is placed on a three-point scale running from advocating independence, to maintaining the status quo, to pro-unification with the mainland.

Party identification (PID) in Taiwan is often a psychological attachment to a particular party, as conventionally defined. However, the measurement of PID differs slightly from that of PID in the U.S. Political parties in Taiwan cannot be positioned on the ideological spectrum from liberal to conservative. Rather they tend to be formed by political leaders who pursue the presidency or have different positions on Taiwan’s independence.31 Party identification in Taiwan, therefore, is measured with dummy variables that indicate support for a particular party. In the 1996 presidential election, there were three main parties—the KMT, DPP, and New Party (NP). Right after the 2000 presidential election, James Soong, then-governor of Taiwan Province, defected from the KMT to launch the People First Party (PFP). Yet another party arose when former President Lee Teng-hui, who had briefly withdrawn

from politics in 2000, came back and founded the Taiwan Solidarity Union (TSU) in 2001. In the 2004 presidential election, parties were divided into two camps: Pan-Green, a coalition of KMT, NP, and PFP that advocated unification with China, and Pan-Blue, a coalition of DPP and TSU that supported Taiwan independence. Because there were only two candidates, PID in 2004 is measured on a five-point scale, from strongly leaning Pan-Green to strongly leaning Pan-Blue. The final category of variables captures demographic characteristics of respondents by including age in years and highest level of education.

Models

MNL models are commonly used for more than two unordered nominal dependent variables. The 1996 Taiwanese presidential election, therefore, is analyzed using the MNL, because the election had more than two candidates. The logit model is used to analyze the 2004 Taiwanese election, which had only two candidates. Like other discrete-choice models, both the MNL and logit models assume that the probability of selecting a given choice is the probability that the utility for this choice exceeds the utility of the alternative. The coefficients for the incumbent party candidate are normalized to zero. Therefore, a negative coefficient indicates a higher probability of voting for the incumbent party candidate in each column, while a plus sign indicates a higher probability of choosing the opposition party candidate. In order to explore the heterogeneity of the electorate in economic voting, I examine the significance of the interaction terms. I also look at the marginal effect of economic evaluations on vote choice at different points of the modifying variables, education and lifetime economic experience. This is

32. The Multinomial probit (MNP) or the mixed multinomial logit (MMNL) model are alternatives to the MNL model. The MNP and the MMNL differ from the MNL in an important assumption. The MNL model assumes Independence of Irrelevant Alternative (IIA) that the probability to choose one candidate over the other does not change because of the third-party candidate. On the contrary, the MNP and the MMNL model allow for both individual-specific and alternative-specific variables and do not impose the IIA assumption by admitting the possibility of non-independence among the choice dimensions. See Michael R. Alvarez and Jonathan Nagler, “When Politics and Models Collide: Estimating Models of Multicandidate Elections,” American Journal of Political Science 42:1 (January 1998), pp. 56–96. This study, however, uses the MNL model to analyze the 1996 Taiwanese presidential election because no choice-based regressors are included. Furthermore, the third candidate, Lin Yang-kang, did not seem to make much difference in individual vote choice. Lin, who defected from the ruling KMT, was expected to hurt the incumbent, Lee Teng-hui, but Lee prevailed.
necessary because it is possible for the marginal effect of economic conditions on individual vote choice to be significant for particular values of the conditioning variables, even though the coefficients of the interaction terms are statistically insignificant.33


The 1996 Taiwanese Presidential Election

The 1996 presidential election was a four-way competition between the KMT’s Lee Teng-hui, the DPP’s Peng Ming-min, independent Lin Yang-kang, and independent Chen Li-an. Despite an economic slowdown and tensions between Taiwan and mainland China, incumbent Lee Teng-hui was elected with more than 50% of the popular vote. Table 2 presents MNL regressions testing the interactive relationships between economic evaluations and education, and between economic evaluations and lifetime economic experience. The results seem to show the null effect of sociotropic and pocketbook evaluations. Neither of the constitutive coefficients is statistically significant. The coefficients and significance of both sociotropic and pocketbook evaluations themselves, however, are not very meaningful since they are valid only when education and lifetime economic experiences are zero, which is rarely true. The coefficients of the interaction terms identify the nature of interactive relationships. The insignificant coefficients of the interaction terms also indicate no significant effect of economic evaluations on individual vote choice, regardless of levels of education and lifetime economic experience.

Before asserting the null effects of economic evaluations, the marginal effects of economic conditions at different values of modifying variables are examined. Particular attention is paid to the marginal effects of economic evaluations on individual vote choice in conjunction with education and lifetime economic experience. Figure 1 presents the marginal effect of sociotropic evaluations on individual vote choice between challenger Lin and incumbent Lee.34

34. Figure 1 includes all marginal effects that are statistically significant at p ≤ .1 in 1996 and 2004.
Pocketbook evaluations had little influence on vote choice both between Lin and Lee and between Peng and Lee, even after considering the heterogeneity of the electorate in education and lifetime economic experience. On the other hand, sociotropic evaluations had a substantial effect on individual vote choice between Lin and Lee—but not between Peng and Lee. Uncertainty about Peng, the opposition party candidate, prevented voters from selecting their candidate on the basis of retrospective national economic evaluations. On the contrary, challenger Lin’s experience within the KMT government lessened the uncertainty about his ability to handle the
Figure 1 suggests that the better-educated who had experienced mediocre or less-than-mediocre economic prosperity under the dominant party were more likely to vote based on sociotropic evaluation when they faced the alternative between challenger Lin and incumbent Lee. The more-educated and economically less fortunate were even more inclined to do so. Voters who were highly educated and witnessed less than average economic growth were 29% more likely to vote for challenger Lin when sociotropic evaluations changed from better-off to worse-off. Voters who witnessed the least economic prosperity, however, were not involved in sociotropic voting, regardless of education level. At the same time, there is little evidence that the least-educated based their vote on their short-term national economic evaluations, irrespective of their lifetime economic experiences under the dominant party.

35. Lin was vice premier from 1984–87 and president of the Judicial Yuan from 1987–94.


**Note:** Marginal effects indicate the change in the predicted probability of vote choice for the challenger given a discrete change in sociotropic evaluation from its minimum (1 for “better-off”) to maximum (5 for “worse-off”) at a given level of education and lifetime economic experience. Marginal effects that are statistically significant at \( p \leq .1 \) are presented here. Marginal effects are computed by using Clarify. See Gary King, Michael Tomz, and Jason Wittenberg, “Making the Most of Statistical Analyses: Imposing Interpretation and Presentation,” *American Journal of Political Science* 44:2 (April 2000), pp. 341–55.
Other than economic evaluations, national identity was one of the determinants of individual vote choice in 1996 between Peng and Lee, but not between Lin and Lee. The more a voter identified himself with Chinese national identity, the more likely he was to vote for the incumbent from the KMT than the challenger from the DPP. On the other hand, as Lin defected from the KMT, his ticket looked not much different from the KMT’s in terms of national identity. The issue of Taiwan’s independence and party identification also significantly influenced individual electoral choice, not only between Peng and Lee but also between Lin and Lee. As an independent candidate, Lin was endorsed by the NP and perceived as an adamant supporter of unification with China against the incumbent, Lee, who had an ambiguous position on independence.

The 2004 Taiwanese Presidential Election

The 2004 election was the first presidential election after the opposition DPP captured presidential power in 2000. The election was a competition between Pan-Blue and Pan-Green, which were perceived as supporting different views on national identity and relations with mainland China (see Table 3). The incumbent, President Chen Shui-bian, ran for reelection representing the Pan-Green camp, against the challenger, former Premier Lien Chan, who led the Pan-Blue ticket. In spite of unprecedented economic and political misfortunes during Chen’s first term, Taiwanese voters reelected him—but by a margin of just 0.22%. Except for the coefficient of the interaction term between lifetime economic experience and sociotropic evaluation, none of the coefficients related to short-term and lifetime economic conditions are statistically significant in 2004. This suggests that the better economic experiences under the long period of KMT rule strengthened economic voting based on short-term economic situations after the first power transition from the KMT to the DPP.

Figure 1 also confirms that there is a significant difference in sociotropic, not pocketbook, voting across different lifetime economic experiences among the less-educated. As expected, voters who witnessed higher economic growth throughout KMT governance were more likely to be involved in sociotropic voting. It was most pronounced among the least-educated who had experienced the highest economic growth. Their probability to vote for the previous dominant party candidate increased almost 67% when they...
perceived that the short-term national economy had been worse-off than when they evaluated it as better-off. In other words, the higher the economic prosperity voters experienced under the KMT regime, the more responsive they were to short-term economic declines. The national economic conditions Taiwanese voters experienced throughout most of their lives were attributed to the KMT government because until 2000, it was the only party that had governed. Therefore, if voters witnessed better economic growth during KMT rule but worse economic conditions after the DPP took over, they were more likely to punish the incumbent Chen, from the DPP.

### TABLE 3. Logistic Estimates for the 2004 Taiwanese Presidential Election

<table>
<thead>
<tr>
<th>Variables</th>
<th>Challenger Lien (KMT)/Incumbent Chen (DPP) MLE (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic variables</td>
<td></td>
</tr>
<tr>
<td>Sociotropic</td>
<td>−1.604 (1.441)</td>
</tr>
<tr>
<td>Pocketbook</td>
<td>−1.138 (1.876)</td>
</tr>
<tr>
<td>Lifetime economic experience</td>
<td>−.684 (.440)</td>
</tr>
<tr>
<td>Other control variables</td>
<td></td>
</tr>
<tr>
<td>National identity</td>
<td>.519 (.108)**</td>
</tr>
<tr>
<td>Independence-unification</td>
<td>.584 (.201)**</td>
</tr>
<tr>
<td>PID</td>
<td>3.401 (.247)**</td>
</tr>
<tr>
<td>Age</td>
<td>.008 (.014)</td>
</tr>
<tr>
<td>Education</td>
<td>.150 (.500)</td>
</tr>
<tr>
<td>Interactions</td>
<td></td>
</tr>
<tr>
<td>Economic experience*sociotropic</td>
<td>.263 (.154)**</td>
</tr>
<tr>
<td>Economic experience*pocketbook</td>
<td>.084 (.200)</td>
</tr>
<tr>
<td>Education*sociotropic</td>
<td>−.082 (.174)</td>
</tr>
<tr>
<td>Education*pocketbook</td>
<td>.221 (.243)</td>
</tr>
<tr>
<td>Constant</td>
<td>−7.786 (4.056)**</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>−250.320</td>
</tr>
<tr>
<td>LR $\chi^2$</td>
<td>1,118.630***</td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>.691</td>
</tr>
<tr>
<td>N</td>
<td>1,172</td>
</tr>
</tbody>
</table>


Note: Coefficients for incumbent Chen are normalized at zero. Sociotropic and pocketbook evaluations are coded as 1 for “better-off” and 5 for “worse-off.”

*p $\leq .1$.

**p $\leq .05$.

***p $\leq .01$. 
Similar to the results in the 1996 presidential election, national identity, the issue of Taiwan’s independence, and party identification significantly influenced Taiwanese voters’ electoral preferences. The more respondents considered themselves to be Chinese and supported unification with China, the more likely they were to vote for Lien on the Pan-Blue ticket.

CONCLUSIONS

This article has studied the heterogeneity of economic voting within the Taiwanese electorate, focusing on how education and lifetime economic experience interact with short-term economic evaluations to influence voter preferences. As indicated by empirical analyses of the presidential elections in 1996 and 2004, economic voting based on short-term economic conditions seems neither pervasive nor consistent in Taiwan. After taking account of population heterogeneity, however, this study finds that certain types of Taiwanese voters were more likely to be engaged in economic voting than others.

In the 1996 Taiwanese presidential election, which was held before the first regime change, voters who experienced less economic prosperity under KMT dominance were more likely to be engaged in sociotropic voting. In other words, voters who experienced high economic growth were less likely to vote against the incumbent even after experiencing short-term economic decline. On the other hand, the 2004 Taiwanese presidential election brought the opposite result: the more lifetime economic fortune that voters witnessed, the stronger their sociotropic voting.

The 2004 Taiwanese election was the first election after political power shifted from the KMT to the DPP in 2000. Voters who experienced high economic prosperity under the previously dominant KMT were more likely to punish the incumbent from the DPP for a short-term economic recession. These results demonstrate that long-term or lifetime economic experience is an important mediating factor in respect to economic voting in countries where voters are transitioning away from one-party dominance. Education and lifetime economic experience jointly affected the impact of economic evaluations on individual vote choice. There was little evidence of pocketbook voting across the elections, even after taking account of individual differences in education and lifetime economic experience. On the other hand, sociotropic voting occurred across different educational groups and
diverse lifetime economic experiences, in two elections. Sociotropic voting in the 1996 election was stronger among the most-educated who had enjoyed less lifetime economic growth. Conversely, it was stronger in the 2004 election among the less-educated who had witnessed higher long-term economic growth.

These results have two important implications. First, witnessing a power alternation between parties lessened the asymmetry of information between the dominant and opposition parties, thus removing the uncertainty about those parties that had never been tested. This facilitated economic voting in Taiwan. Second, the various effects of economic evaluations across different groups were only evident when the two modifying variables of education and lifetime economic experience were considered together at their different values. In other words, insignificant coefficients of interaction and constitutive terms do not mean a null effect of economic conditions on individual vote choice. It is important to examine the effects of economic conditions at various points of modifying variables to study the heterogeneity of economic voting behavior.