

Testing Partisan Effects on Economic Perceptions: A Panel Design Approach

Chi Huang*

Abstract

The economic voting model has been established as a paradigm for studying electoral accountability based on past economic performances and future prospects. However, objective economic conditions may be a valence issue, and subjective evaluations of the national economy may still be positional. Recent “revisionist” commentators argue that economic voting is “endogenous” in the sense that partisanship strongly affects, if not distorts, voters’ perceptions of macroeconomic performance. Different responses have been elicited to this “partisan bias” claim, but few directly address the causal effect of partisanship on economic perceptions.

This study examined two competing theories of economic voting through investigating the partisan effects on sociotropic economic perceptions. By designing a narrow-window panel telephone survey conducted before and after the January 2016 presidential election in Taiwan, I constructed a two-way fixed effects (FE) model to test the existence of partisan bias. The estimates provided robust evidence of partisan effects on retrospective and prospective economic assessments. In other words, government party supporters evaluated both past and future economic performance favorably during the pre-election period but became pessimistic after their preferred party lost the election. By contrast, opposition party supporters discredited past economic performances during the government

* Professor of Department of Political Science, Senior Research Fellow of Election Study Center, and Director of the Taiwan Institute for Governance and Communication Research (TIGCR), National Chengchi University. E-mail: chihuang@nccu.edu.tw.

party's rule and expressed optimistic expectations regarding future economic performances after their preferred party won the election. However, the theoretical and methodological conclusions reached in this study extend beyond the single case of Taiwan's 2016 presidential election.

Keywords: partisan effects, economic perceptions, economic voting, counterfactual model of causal inference, fixed effects panel analysis

I. Introduction

A vast body of research has examined economic voting based on the idea that voters' evaluations of economic conditions determine their voting choices in national elections. According to this classic model, economic conditions affect incumbents on the election day. However, in recent years, several scholars have argued that voter perceptions may be simply a reflection of their partisan predispositions and are thus "endogenous." Debates between the classic and revisionist schools have triggered another wave of research in economic voting.

This study confronts the heated debates not by taking sides a priori but by first deriving empirical implications from the two competing models and then crafting a research design to compare the revisionist and classic viewpoints. Taiwan's 2016 concurrent presidential and legislative elections provided a suitable case to examine the hypothesized partisan effects on economic perceptions. The debacle of the then-ruling Kuomintang (KMT) in the 2014 local elections and the subsequent turmoil inside the party led many to expect that the then opposition Democratic Progressive Party (DPP) presidential candidate Tsai Ing-wen will win the 2016 election with a substantial margin even months before the election occurred. The landslide victory of the DPP on January 16, 2016, and the awkward fact that the heavily defeated KMT still had to remain in government until May 20 offered us an opportunity to determine if different party supporters altered their subjective economic perceptions in tandem with their favored party's fate immediately after the power-transition election result was confirmed. If voters changed their views, then the partisan effects on economic perceptions could be validated.

II. Debates on the Relationship between Partisanship and Economic Perceptions

The economic voting model has established itself as a paradigm of studying electoral accountability based on past economic performance and future prospects (Kanji and Tannahill 2013; Lewis-Beck 1988; Lewis-Beck and Lobo 2017; Lewis-Beck, Nadeau, and Elias 2008; Lewis-Beck and Stegmaier 2007; Lewis-Beck and Whitten 2013; Stegmaier, Lewis-Beck, and Park 2017). The straightforward reward-punishment argument in addition to the valence of economic prosperity make economic factors a key variable in many voting behavior studies, including those on Taiwan's elections (i.e., Ho et al. 2013; Hsieh, Lacy, and Niou 1998; Huang

2015; Sheng 2009; Tsai 2017; Wang 2004; Wu and Lin 2012; 2013).

The objective economic conditions and subjective evaluations of the national economy may not coincide; objective economic conditions may be related to valence, and subjective evaluations may still be positional. Recent “revisionist” commentators argue that economic voting is “endogenous” in the sense that partisanship strongly affects voters’ perceptions of macroeconomic performance in economic growth, unemployment, inflation, and the stock market (Anderson, Mendes, and Tverdova 2004; Anson 2017; Bartels 2002; Bisgaard 2015; Carlson 2016; Evans and Andersen 2006; Evans and Pickup 2010; Gerber and Huber 2010; Hansford and Gomez 2015; Kayser and Wlezien 2011; Popescu 2013; Wlezien, Franklin, and Twigg 1997). In other words, voters’ partisanship introduces a “lens” into the economic assessment, eliciting more favorable judgments of the economy when their party is in power and less favorable judgments when they are not. That is, incumbent party identifiers tend to evaluate the same objective economic conditions more favorably than opposition party identifiers. Economic perceptions may be largely a result of partisan rationalizations. Therefore, critics argue that partisan bias actually induces the spurious relationship between economic perceptions and voter decisions. Furthermore, party leaders’ economic campaign strategies and rhetoric (Hart 2016) as well as partisan media (Anson 2016) may reinforce or even shape voters’ biased economic perceptions.

III. Why Is It Important to Test Partisan Effects?

Determining whether and to what extent partisanship affects citizens’ perceptions of the national economy is crucial. If most people evaluate economic performance from a partisan perspective, policy analysts should be sensitive to the difference between citizens’ sentiment and actual policy demands. Furthermore, the link between partisanship and economic assessments has considerable implications for democratic accountability. Findings in this area will allow researchers to gain a deeper and more realistic understanding of the political psychology of governance.

Regarding economic voting, the debate on the role of partisanship is theoretically crucial and methodologically challenging. Researchers should directly determine whether partisan bias has a causal impact on economic perceptions. The answer to this key question is logically prior to how best to incorporate economic perceptions into economic voting. Little doubt exists that

such test results will determine the credibility of two competing theories of economic voting in the future. This is particularly valid from the perspective of increasing partisan polarization (Abramowitz and Webster 2016; Yu 2017). Methodologically, the test results can also provide more constructive guidance on the appropriate methods of ensuing model specification and estimation (Huang 2015).

Because many theoretical “stakes” are involved, the current literature regarding testing the effects of partisanship has largely focused on justification of positions rather than verification or falsification. This study argues that researchers should directly examine whether the partisan bias has a causal effect on economic perceptions.¹ The following section reviews several common approaches and discusses their strengths and limitations. Then, a design-based approach is proposed to overcome the macro-micro dilemma in studying sociotropic economic perceptions and the challenge of endogeneity.

IV. Current Approaches to Testing Partisan Effects

There have been different responses to the claims of “partisan bias.” The first is to defend the classic economic voting theory by demonstrating a considerable link between the subjective and objective economy to dismiss the role of partisan bias. For example, Duch and Stevenson (2008) argue that voters have an astute awareness of the nature of their nation’s economy. Furthermore, Lewis-Beck, Martini, and Kiewiet (2013) revealed that in the United States, the sociotropic retrospective evaluations of the economy are shaped by objective aggregate-level gross domestic product (GDP) growth, inflation, and the stock market. In a special issue of *Electoral Studies* on economic voting, Lewis-Beck and Whitten (2013, 395) reasserted that “the economy places itself near the tip of the causal funnel.”

The second response is to deal with individual-level perceptions and the aggregate-level economy separately. Dassonneville and Lewis-Beck (2017) demonstrated a clear connection between GDP growth and aggregate incumbent vote share in European democratic elections after the 2008 financial crisis. Wimpy and Whitten (2017), claiming that aggregate-level models are not prone to endogeneity, used aggregate data from elections in 23 developing democracies in Africa and determined that economic voting was “alive and well.” Tsai (2017) analyzed

¹ As the effect of pocketbook economic evaluations has generally been revealed to be considerably weaker than sociotropic effects, I therefore focused exclusively on sociotropic effects.

economic voting in Taiwan's 2008 and 2012 elections by using micro-level survey data and macro-level data on disposable income per capita and the incumbent government's vote shares. Employing aggregate data regresses incumbent vote shares with macroeconomic indicators and thus ignores individual-level economic perceptions. However, the key concepts of partisan identities, economic evaluations, and voting choices all address the perceptions of individual voters. Using solely aggregate-level data to infer individual-level economic voting prevents the endogeneity problem but may introduce an ecological fallacy and thus offers no solution.

The third approach involves acknowledging the endogeneity problem and overcoming it through statistical methods to "exogenize" economic evaluation variables and obtain unbiased estimates. Scholars who advocate this approach argue that an instrumental variable (IV) approach is required to estimate the causal effect of economic perceptions on vote choice. For example, Hansford and Gomez (2015) constructed IVs for subjective economic assessments with objective local economic indicators, arguing that objective local economic indicators can predict subjective economic assessments and yet are exogenous to vote choice. However, as Sovey and Green (2011) warn, IV is not a panacea for endogeneity and may be difficult to find and justify a good one.

As randomized controlled experiments are often considered the gold standard of causal inference, unsurprisingly, in recent years, an increasing number of experiments have been conducted to test the effects of partisanship. Ideally, participants should be randomly assigned into two groups: one that is "treated" with partisanship and one that is not. Then, the effects of partisanship should be tested by comparing the outcome variables of these two groups. However, in reality, it is difficult to manipulate partisanship directly. Instead, researchers manipulate financial incentives and information to induce responses. For example, Tilley and Hobolt (2011) conducted a survey experiment to investigate how partisanship shapes the perceptions of performance and responsibility by manipulating the information of those responsible and the performance outcome. Bullock et al. (2015) performed experiments to distinguish sincere from expressive partisan differences in responses to factual questions, such as on unemployment and inflation, by providing financial incentives to induce correct answer. Anson (2016) employed a survey experiment to test how partisan media condition economic perceptions by manipulating the presence of partisan cues and the direction of proattitudinal information in news stories. Although these studies have confirmed that partisan loyalties influence economic evaluations to different degrees, they could only manipulate types of incentives or information as treatments

but not preexisting partisanship; partisanship is a prior political belief that cannot be randomly assigned.

V. A Narrow-Window Panel Survey Design

Testing the direct effects of partisanship on sociotropic economic perceptions is difficult. The key challenge lies in combining micro- and macro-level analyses. By definition, perceptions are based on individuals, whereas macroeconomic conditions are based on groups (on region or nation). The concept of sociotropic economic perceptions links voters with time-stable but individual-specific characteristics (such as sex, race, and education) to time-specific but individual-invariant macroeconomic conditions (such as growth in income or unemployment rate). In other words, objective macroeconomic environments change over time (hence “time specific”) but do not vary across micro-level individuals (hence “individual invariant”). Therefore, studies on a single election based on cross-sectional survey data cannot examine the effect of objective macroeconomic conditions on individual voters’ heterogeneous perceptions. Regressing economic perceptions on macroeconomic conditions and partisanship is futile because economic conditions will be perfectly collinear with the intercept.

To introduce variations in these time-specific but individual-invariant macroeconomic variables, several researchers have employed pooled cross-sectional time-series data (i.e., Markus 1988). However, pooling repeated cross-sectional survey data over multiple elections, if such abundant data are available, also introduces time and contextual heterogeneity, which further complicates the second potential problem of endogeneity. That is, some unobserved factors may affect both the key explanatory party identification variable and the outcome variable, rendering the coefficient estimate biased.

To examine the effects of partisanship on sociotropic economic perceptions at an individual level, we must address both the micro- and macro-level of the analysis problem (with individual time-invariant characteristics and period individual-invariant conditions) as well as the potential endogeneity problem (reverse causality or unobserved characteristics correlated with both the outcome and key explanatory variables). Because partisanship is difficult to manipulate directly as a treatment in randomized experiments, a careful observational study design of a natural experiment is necessary (Dunning 2012; Rosenbaum 2010; Shadish, Cook, and Campbell 2002). Inspired by the panel design of Gerber and Huber (2010), I examined a political event likely to

elicit divergent micro-level responses due to pre-existing partisanship. Such an event is a power-shift election in which the incumbent and opposition party switch positions. If the effects of partisanship are present, an individual's economic assessment should change in tandem with the outcome for their preferred party after a power-shifting election. By measuring partisanship prior to an election, concerns regarding reverse causality can be overcome. More importantly, the research design controls the macroeconomic conditions while isolating the micro-level effects of partisanship on economic perceptions.

I contend that each individual's sociotropic economic perceptions reflect a combination of objective knowledge and subjective evaluations of economic conditions (Prior, Sood, and Khanna 2015). Objective knowledge should result in negligible differences among various party identifiers (and nonpartisans), because it is largely a response to the same extraneous macroeconomic conditions at a given point in time. What makes sociotropic economic perceptions different from person to person is subjective assessments that reflect partisan bias.

This reasoning leads to a strategy that allows researchers to isolate the effects, if any, of prior partisanship regarding subjective economic perceptions through comparing the same group of individuals (i.e., a panel) before and after a power-shift election and then testing observable individual-level implications of the two competing economic voting models. If objective knowledge dominates voter perceptions and no partisan effects are observed in economic perceptions, as the classic model asserts, then each individual's sociotropic economic evaluations, retrospective or prospective, should remain stable before and after a power-shift election, regardless of their perceived partisanship. If perceptual effects of partisanship exist and as partisan bias is directional (i.e., bias toward congenial views of one's preferred party), as the revisionists argue, then the consistent motivation of motivated reasoning (Kunda 1990) should drive partisans to instantly alter their (biased) economic perceptions in response to a power-transition election result.

Table 1 summarizes the theoretical expectations of the revisionist school regarding how supporters of government and opposition parties would perceive the economy in pre- and post-election interviews. In Table 1, a "+" indicates a favorable assessment of "at least the same or better," whereas a "-" signals a negative evaluation. Specifically, government party supporters should evaluate both past and future economic performances favorably during the pre-election period (t_1), but then turn pessimistic prospectively after their preferred party loses the election (t_2). However, opposition party supporters should criticize past economic performances and

become optimistic toward future economic performances after their preferred party wins the election. In other words, power-transition election results are expected to cause party identifiers of incumbent and opposition parties to alter their (biased) sociotropic economic perceptions in opposite directions. By contrast, nonpartisan voters should remain relatively unaffected by the power-shifting election result and respond mainly to objective economic conditions (Adams et al. 2017).

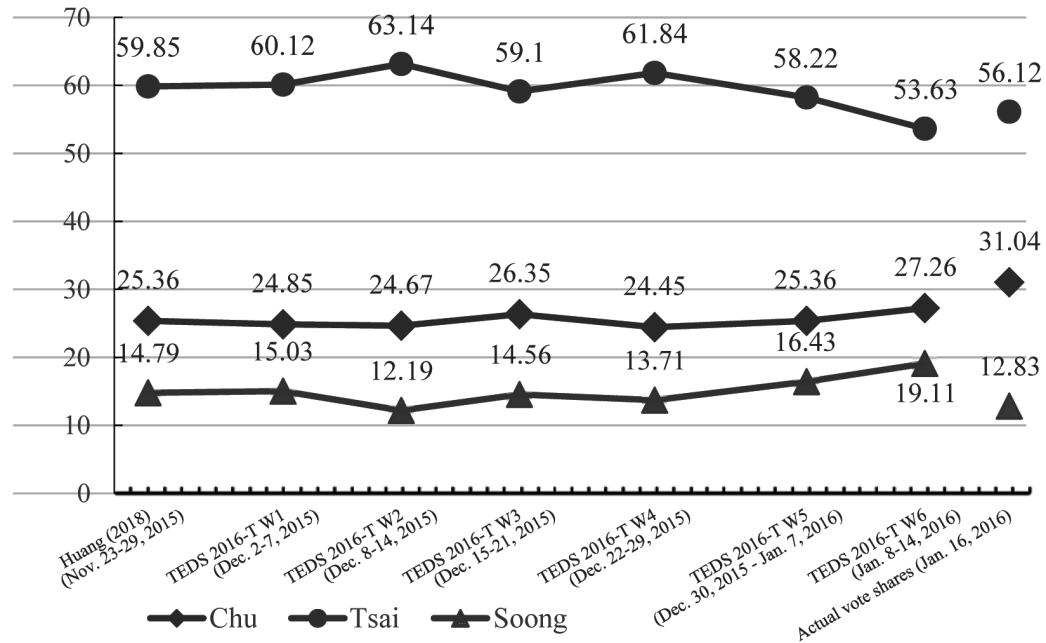
Table 1 Expected Sociotropic Economic Perceptions before and after the Election

Preexisting Partisanship	Election that causes power transition	
	Pre-election (t_1)	Post-election (t_2)
Expected sociotropic economic perceptions		
Government		
retrospective	+	+
prospective	+	-
Opposition		
retrospective	-	-
prospective	-	+

Notes: A “+” indicates a favorable assessment of “at least the same or better,” whereas a “-” signals a negative evaluation.

This study employed Taiwan’s 2016 presidential election that resulted in a power transition from the KMT to the DPP. Taiwan’s concurrent legislative and presidential election arrangement since 2012 (see Huang 2017; Huang, Kuo, and Stockton 2016) as well as its third power transition mandated by the 2016 presidential election results provided an excellent opportunity to examine the role of partisanship on economic perceptions for the following reasons:

1. It was generally expected that the then opposition DPP presidential candidate Tsai Ing-wen would win the 2016 election with a substantial margin over the KMT’s candidate Eric Chu on the election day of January 16, 2016, as presented in Figure 1. Tsai Ing-wen’s extremely stable support rates ensured no significant intervening events occurred to “contaminate” the measurements and thus alleviated concerns of an abrupt shift in partisanship during our study period. If the effects of partisanship remain significant even when power transition is predictable before the election day, the evidence for our study hypothesis is robust.



Sources: Huang (2018); TEDS 2016-T (Huang 2016).

Figure 1 Predicted Vote Shares of Presidential Candidates, November 2015-January 2016

2. The objective economic performance during the 2015-2016 period was also relatively stable. Although economic growth gradually increased from 0.72% in 2015 to 1.48% in 2016, the unemployment rate rose only slightly from 3.78% to 3.92% (Directorate-General of Budget, Accounting and Statistics [DGBAS] 2017).

A panel study of two-wave telephone survey was designed to collect data on partisanship and economic perceptions 6 weeks prior to the January 16, 2016 general election and then trace the same group of respondents a week after the election. By twice observing the same group of people within a short space of time, we could control persistent individual-specific heterogeneities, both observed and unobserved, and minimize time-variant confounders. With two time points, we could further consider time-specific but individual-invariant environmental conditions such as macroeconomic performance. Institutional factors, such as electoral systems (Huang 2017) and clarity of responsibility (Dassonneville and Lewis-Beck 2017), remained constant and were therefore controlled for during this short period of time.

VI. Two-Way Fixed Effects Model Based on a Panel Design

Because it is difficult to manipulate partisanship directly, those conducting observational studies should identify a reference group (nonpartisans in this case) that is least affected by the event of interest (i.e., an election that causes a power transition) and then compare it with other groups (i.e., party identifiers) (Lee 2016). No difference between these groups confirms the absence of partisan effects, whereas significant differences provide evidence of their existence.

In the following section, we first describe a general model that encompasses both schools of thought regarding the effects of partisanship on economic perceptions. The model is parameterized such that the classic model of the absence of the effects of partisan effects is nested within the revisionist model of partisan bias, so that selection between two competing models can be based on the statistical tests of estimates of parameters associated with partisan effects; a failure to reject the null hypotheses constitutes evidence for no partisan effects.

If parties are labeled with subscripts $j=1, 2, \dots, J$ with $j = 0$ referring to “nonpartisans or independents,” (i.e., those not identified with any particular party), then a model linking party identification to economic perceptions Y_{ijt} for individual i identified with party j at time t (with t_1 denoting pre-election and t_2 postelection) is a function of party identification (Pid_{ij}), observed individual characteristics (X_i), unobserved individual characteristics (α_i) and an omnibus time-specific but individual-invariant factor such as macroeconomic conditions (β_t). According to the counterfactual model of causality, the observed outcome Y_{ijt} consists of the potential treatment Y_{ijt}^1 and control Y_{ijt}^0 :

$$\text{Potential control: } Y_{ijt}^0 = a + \alpha_i + \beta_t + \gamma X_i + \lambda_j Pid_{ij} + \varepsilon_{it}, t=1, 2$$

$$\text{Potential treatment: } Y_{ijt}^1 = Y_{ijt}^0 + \delta_j W_t,$$

where W_t is an indicator of “+” or “-” sign listed in Table 1. In other words,

$$\text{for retrospective perception: } W_t = \begin{cases} +1 & \text{for identifiers of losing party} \\ 0 & \text{for nonpartisans} \\ -1 & \text{for identifiers of winning party} \end{cases}$$

$$\text{while for prospective perception: } W_t = \begin{cases} +1 & \text{for identifiers of winning party} \\ 0 & \text{for nonpartisans} \\ -1 & \text{for identifiers of losing party} \end{cases}$$

Then, a dummy interaction term is defined to capture the subgroup who may change economic perceptions due to power-shift election results during the postelection period:

$D_{ijt} = Pid_{ij} \times Post_{t_2}$. Obviously, $D_{ijt} = 1$ only if $j \neq 0$ and $t = 2$, that is, only at t_2 for those party identifiers affected by power-shift election results, and $D_{ijt} = 0$ otherwise.

Finally, the observed outcome Y_{ijt} is a realization of potential treated and untreated responses:

$$\begin{aligned} Y_{ijt} &= (1 - D_{ijt}) \times Y_{ijt}^0 + D_{ijt} \times Y_{ijt}^1 \\ &= a + \alpha_i + \beta_t + \gamma X_i + \lambda_j Pid_{ij} + \delta_j (Pid_{ij} \times Post_{t_2} \times W_t) + \varepsilon_{it}, \quad t = 1, 2 \end{aligned}$$

Interestingly, this equation is a special case of a two-way² fixed effects (FE) model (Baltagi 2013; Biørn 2017; Hsiao 2014; Wooldridge 2010). FE models have advantages for providing causal inferences from observational data because they use each individual as his or her own control (Allison 2009) and avoid the potential bias due to individuals “anchoring” their scale at different levels (Baltagi 2014). It is also widely acknowledged that the standard difference-in-differences (DD) estimator is numerically equivalent to the linear two-way fixed effects regression estimator if there are two time periods and the event of interest affects some units only in the second time period (Angrist and Pischke 2015; Baltagi 2014; Lee 2016). By performing an FE estimation, we can “difference out” unobserved individual-specific variables (α_i) and control for time-specific conditions (β_t), the core condition to ensure unbiased estimations of key causal parameters (δ_j). A test of $H_0: \delta_j=0$ for $j \neq 0$ is equivalent to testing the classic versus revisionist models of economic perceptions.

VII. Data

The data for this study were a closely spaced pre- and post-election panel survey (Table 2). Respondents were selected from a representative random-digit dialing (RDD) sample. A pre-election survey was completed in the period between November 23 and November 29, 2015, and a postelection survey was completed between January 24 and January 30, 2016 (see Figure 2). In addition to political and demographic questions during the first interview, in the pre- and post-election surveys, a standard set of questions regarding economic perceptions were included. Each respondent was asked to rate the economy in the past year and the forthcoming year as 1 = *worse*, 2 = *the same*, or 3 = *better* (see Appendix A for the coding of variables).

² The main difference between one-way and two-way FE models is that the former assumes the unobserved time-specific factor $\beta_t = 0$.

Table 2 Panel Surveys

Survey	Mode	Sampling Design	Time	Sample Size
1 st wave	telephone	RDD	Nov. 23-29, 2015	1,515
2 nd wave	telephone	panel	Jan. 24-30, 2016	843

Source: Huang (2018).

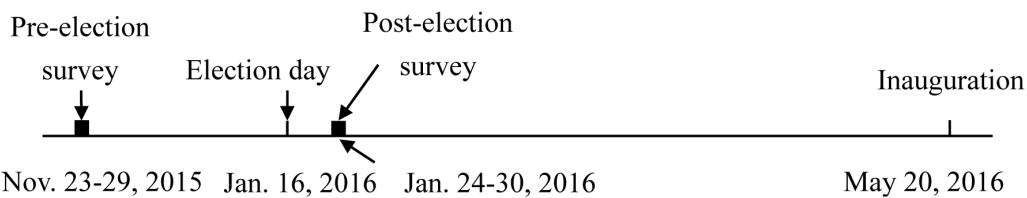


Figure 2 Timing of Pre-election Survey, Election Day, Post-election Survey, and Inauguration of Tsai Ing-wen

Table 3-1 summarizes the sociotropic retrospective economic assessments among party identifiers³ and nonpartisan citizens who consider the state of the economy to have remained the same or improved. Although the supporters of the then-ruling KMT tended to rate the economy more favorably than those of other parties, as expected, retrospective economic evaluations remained relatively stable within each group during pre- and post-election surveys with a slight exception of those of the small People First Party (PFP). However, the prospective economic expectations presented in Table 3-2 exhibit a markedly different pattern. Supporters of the KMT became pessimistic regarding future economic performances, whereas those of the DPP became markedly optimistic compared with moderate nonpartisan citizens, as revisionists predicted. A pertinent question is how the impressions portrayed by these descriptive statistics were supported in rigorous tests.

³ The New Party (NP), Taiwan Solidarity Union (TSU), and New Power Party (NPP) were not included in the analyses as these parties did not field presidential candidates in the 2016 election, and because each party had a valid panel sample size of less than 20.

Table 3-1 Retrospective Economic Perception: Those Who Consider the State of the Economy to Have “Remained the Same or Got Better” (%)

Party ID	Pre-election	Post-election
	(Nov. 23-29, 2015)	(Jan. 24-30, 2016)
KMT	55.75	53.71
DPP	26.81	25.95
PFP	26.53	30.43
Non-partisan	35.92	36.16

Source: Huang (2018).

Table 3-2 Prospective Economic Perception: Those Who Believe That the State of the Economy Will “Remain the Same or Get Better” (%)

Party ID	Pre-election	Post-election
	(Nov. 23-29, 2015)	(Jan. 24-30, 2016)
KMT	61.47	51.61
DPP	64.08	80.80
PFP	53.49	53.66
Non-partisan	52.31	61.22

Source: Huang (2018).

VIII. FE Estimation and Results

The linear FE estimates of sociotropic retrospective economic perceptions are presented in Table 4-1. As stated in the discussion of two-way FE models, the key focus is on the coefficients of interaction terms between party identification and the postelection period (denoted by “Post” in tables and graphs). Compared with nonpartisans, supporters of the KMT had a stable retrospective economic assessment, whereas supporters of the DPP became significantly negative in perceiving the economic performance in the past year after the election. It seems that the DPP’s victory had strengthened its supporters’ view of the lousy economic performance in the past year. This downward trend of -0.35 (on a 3-point scale, $p = 0.005$) regarding DPP supporters relative to nonpartisan citizens is displayed in Figure 3-1. This estimate can be interpreted as a DD estimate because it measured DPP supporters’ change in perception relative to the reference group of nonpartisan citizens. Using RE to represent the predicted value of retrospective economic perception from our FE model, then DD estimate can also be computed as:

$$DD_{RE,DPP} = (RE_{DPP,t_2} - RE_{DPP,t_1}) - (RE_{Non,t_2} - RE_{Non,t_1})$$

$$= (1.377 - 1.861) - (1.486 - 1.620) = -0.35$$

Table 4-1 Estimates of Retrospective Economic Perception

	Coefficient estimates	Robust S.E.	p-value
Time-specific factor	-0.134	(0.092)	0.146
Partisanship (base = Nonpartisan)			
KMT	-0.014	(0.128)	0.911
DPP	0.241	(0.134)	0.073
PFP	0.091	(0.224)	0.684
Interactions (base = Nonpartisan)			
KMT × Post	-0.034	(0.129)	0.791
DPP × Post	-0.350**	(0.124)	0.005
PFP × Post	0.093	(0.224)	0.619
constant	1.620***	(0.084)	<0.001

Number of individuals: 779
 Within R²: 0.087

Source: Huang (2018).

Note: * : p<0.05, ** : p<0.01, *** : p<0.001.

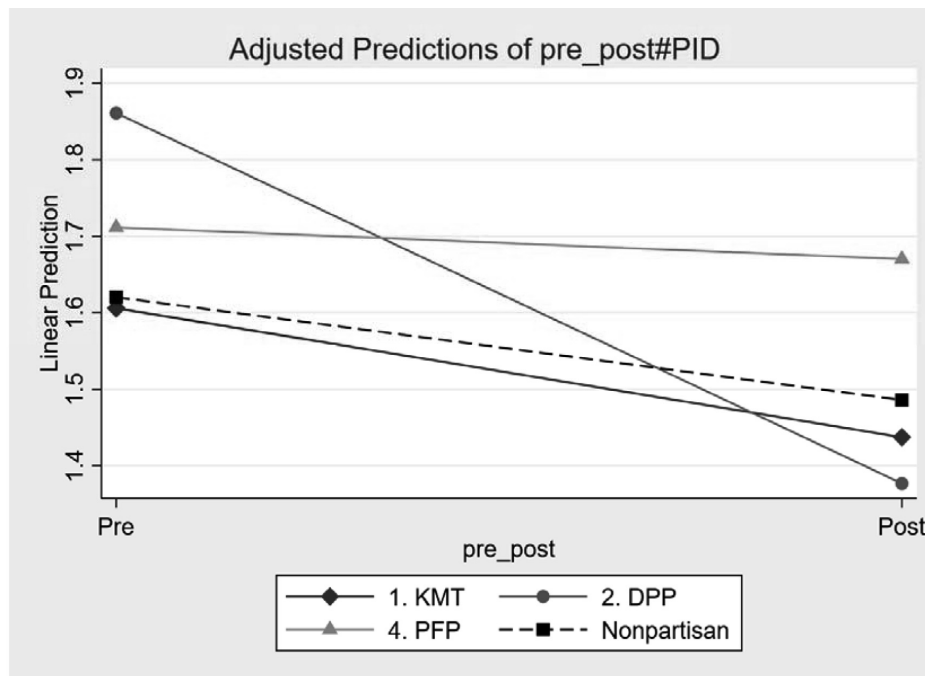


Figure 3-1 Pre- and Post-election Values of Retrospective Economic Perceptions

The contrast between the KMT and DPP was more pronounced in prospective economic perceptions (Table 4-2). Compared with nonpartisan citizens' positive response to the 2016 power-shift election results, the supporters of the KMT had significantly negative perceptions (-0.539 , $p < 0.001$) toward the future economy, whereas DPP supporters responded to their leader's victory by exhibiting much more positive (0.548 , $p < 0.001$) expectations regarding future economic performances. This shift in partisan citizens from the pre- to post-election period, evidenced in the two crossing lines in Figure 3-2, fit the predictions made by the revisionist school of economic voting. Motivated reasoning encouraged partisan citizens to alter their (biased) economic perceptions in response to a power-transition election result. This held true even in a highly predictable power-shift election.

Table 4-2 Estimates of Prospective Economic Perception

	Coefficient estimates	Robust S.E.	<i>p</i> -value
Time-specific factor	0.339***	(0.071)	<0.001
Partisanship (base =Nonpartisan)			
KMT	0.329**	(0.098)	0.001
DPP	-0.166	(0.093)	0.076
PFP	0.156	(0.147)	0.289
Interactions (base =Nonpartisan)			
KMTPost	-0.539***	(0.106)	<0.001
DPPPost	0.548***	(0.091)	<0.001
PFPPost	0.103	(0.170)	0.546
constant	1.382***	(0.057)	<0.001
Number of individuals: 806			
Within R ² : 0.368			

Source: Huang (2018).

Note: * : $p < 0.05$, ** : $p < 0.01$, *** : $p < 0.001$.

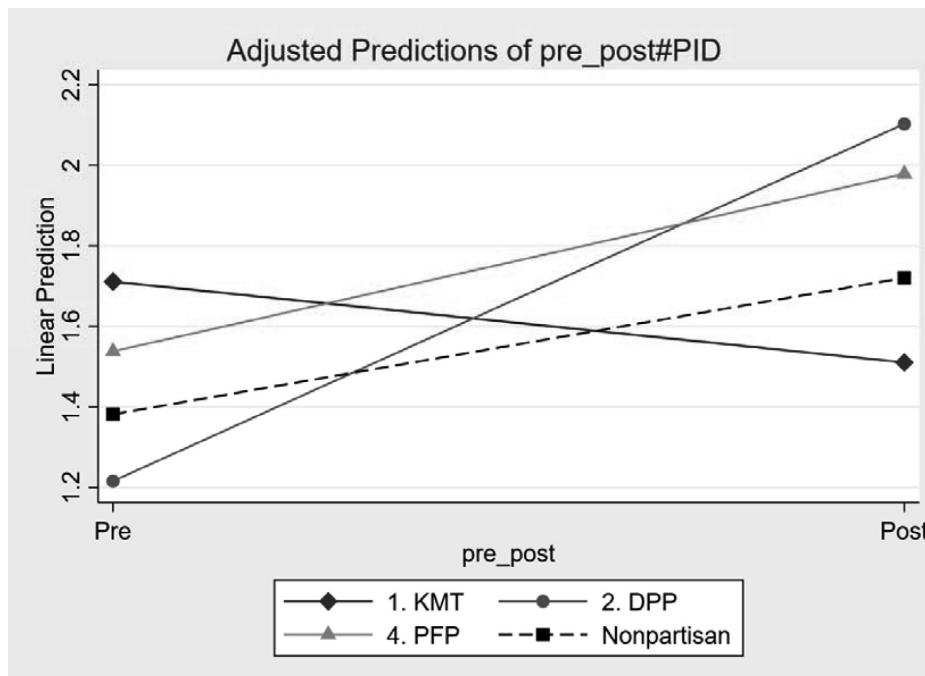


Figure 3-2 Pre- and Post-election Values of Prospective Economic Perceptions

These findings have crucial theoretical and methodological implications. Theoretically, they remind us of how prior political beliefs and motivated reasoning can affect and rationalize individuals' perceptions. Although partisan effects may vary in different contexts, it is reasonable to conclude that the revisionist school's thoughts regarding economic voting provides a more comprehensive theoretical framework for understanding the relationships among partisanship, economic perceptions, and vote choices. Methodologically, our findings also support the call for incorporating a mediation analysis (i.e., Hayes 2018) into an empirical model of economic voting (Huang 2015). Furthermore, researchers should exercise caution when using measures of economic perceptions as explanatory variables of voting choice in a postelection survey of a power-shifting election. As partisan voters tend to alter their economic perceptions after finding out their preferred party loses or wins the election, such measures of economic assessments are indeed endogenous. This is particularly valid for prospective economic perceptions.

Notably, the two-way FE model is a linear model that treats the outcome variable of economic perceptions as those measured on three-point scales. If the two outcome variables are considered as ordinal measures, nonlinear ordered logit models should be applied. However, consistent FE estimations of nonlinear ordered logit models have only recently been developed

by Baetschmann, Staub, and Winkleman (2015) by using blow-up and cluster (BUC) estimator. The BUC estimation results of the sociotropic retrospective and prospective economic perceptions are presented in Appendix B. The results are similar to those of the linear FE model in finding significant negative coefficients in DPP supporters' retrospective assessment as well as in KMT supporters' prospective perception. BUC estimation also finds a positive and significant cheerleading effect in prospective perception among the DPP supporters. The main difference between BUC and linear FE estimations is that in those of the BUC, the KMT identifiers' positive effect in retrospective economic perception was also statistically significant at the .05 level. In general, however, both linear and ordered logit FE estimations confirm partisan effects on economic perceptions.

IX. Conclusions

This study examined two competing theories of economic voting, the classic and revisionist schools, by testing the partisan effects on sociotropic economic perceptions. Through designing narrow-window panel surveys that were conducted before and after the January 2016 presidential election in Taiwan, a two-way fixed effects model was constructed to determine the existence of partisan bias. The estimates indicated robust evidence of partisan effects on retrospective and prospective economic assessments. In other words, government party supporters evaluated both past and future economic performances favorably during the pre-election period but became pessimistic prospectively after their preferred party lost the election. By contrast, opposition party supporters discredited the past economic performance during the government party's rule and expressed optimistic expectation regarding future economic performances after their preferred party won the election.

The findings of this study have crucial theoretical and methodological implications. The theoretical implication is that researchers should seriously consider the revisionist view of potential partisan when modeling economic voting studies. Methodologically, our findings also imply that economic perceptions should be more appropriately treated as mediators between pre-existing partisanship and vote choice. Both the theoretical and methodological conclusions reached in this study extend beyond the single case of Taiwan's 2016 presidential election.

* * *

Received: 107.04.19; Revised: 107.07.12; Accepted: 107.11.23

Appendix A Coding of Variables

(Sociotropic Retrospective Economic Perception) Would you say that over the past year, the state of the economy of Taiwan has got better, stayed about the same, or got worse?

1. Worse
2. About the same
3. Better

(Sociotropic Prospective Economic Perception) Would you say that in the forthcoming year, the state of the economy of Taiwan will get better, stay about the same, or get worse?

1. Worse
2. About the same
3. Better

(Partisanship)

1. KMT
2. DPP
3. NP
4. PFP
5. TSU
6. NPP
7. Independents (Nonpartisans)

(NP, TSU, and NPP were not included in the analyses as these parties did not field presidential candidates in the 2016 election, and because each party had a valid panel sample size of less than 20.)

Appendix B Fixed Effects Estimation of Ordered Logit Models

Table B-1 BUC Estimates of Retrospective Economic Perception

	Coefficient estimates	Robust S.E.	<i>p</i> -value
Time-specific factor	-2.098***	(0.293)	<0.001
Partisanship (base =Nonpartisan)			
KMT	-1.058**	(0.387)	0.006
DPP	0.359	(0.448)	0.423
PFP	0.217	(0.722)	0.763
Interactions (base =Nonpartisan)			
KMT×Post	1.530***	(0.359)	<0.001
DPP×Post	-1.287**	(0.439)	0.003
PFP×Post	0.104	(0.769)	0.893

Number of clusters: 553
 Log pseudo-likelihood: -257.140
 Pseudo R²: 0.545

Source: Huang (2018).

Note: * : $p < 0.05$, ** : $p < 0.01$, *** : $p < 0.001$.

Table B-2 BUC Estimates of Prospective Economic Perception

	Coefficient estimates	Robust S.E.	<i>p</i> -value
Time-specific factor	2.100***	(0.346)	<0.001
Partisanship (base =Nonpartisan)			
KMT	1.281**	(0.411)	0.002
DPP	-0.673	(0.467)	0.150
PFP	1.281	(1.139)	0.261
Interactions (base =Nonpartisan)			
KMTPost	-2.410***	(0.420)	<0.001
DPPPost	1.583**	(0.552)	0.004
PFPPost	-0.674	(0.727)	0.354

Number of clusters: 458
 Log pseudo-likelihood: -188.188
 Pseudo R²: 0.539

Source: Huang (2018).

Note: * : $p < 0.05$, ** : $p < 0.01$, *** : $p < 0.001$.

References

- Abramowitz, Alan I., and Steven Webster. 2016. "The Rise of Negative Partisanship and the Nationalization of U.S. Elections in the 21st Century." *Electoral Studies* 41: 12-22.
- Adams, James, Erik Engstrom, Danielle Joeston, Walt Stone, Jon Rogowski, and Boris Shor. 2017. "Do Moderate Voters Weigh Candidates' Ideologies? Voters' Decision Rules in the 2010 Congressional Elections." *Political Behavior* 39(1): 205-227.
- Allison, Paul D. 2009. *Fixed Effects Regression Models*. Thousand Oaks: Sage.
- Anderson, Christopher J., Silvia M. Mendes, and Yuliya V. Tverdova. 2004. "Endogenous Economic Voting: Evidence from the 1997 British Election." *Electoral Studies* 23(4): 683-708.
- Angrist, Joshua D., and Jörn-Steffen Pischke. 2015. *Mastering 'Metrics': The Path from Cause to Effect*. Princeton: Princeton University Press.
- Anson, Ian, G. 2016. "Just the Facts? Partisan Media and the Political Conditioning of Economic Perceptions." *Political Research Quarterly* 69(3): 444-456.
- , 2017. "'That's Not How It Works': Economic Indicators and the Construction of Partisan Economic Narratives." *Journal of Elections, Public Opinion and Parties* 27(2): 213-234.
- Baetschmann, Gregori, Kevin E. Staub, and Rainer Winkelmann. 2015. "Consistent Estimation of the Fixed Effects Ordered Logit Model." *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 178(3): 685-703.
- Baltagi, Badi H. 2013. *Econometric Analysis of Panel Data* (5th ed.). Chichester: Wiley.
- , 2014. "Panel Data and Difference-in-Differences Estimation." In *Encyclopedia of Health Economics*, Vol. 2, ed. Anthony J. Culyer. Waltham: Elsevier.
- Bartels, Larry M. 2002. "Beyond the Running Tally: Partisan Bias in Political Perceptions." *Political Behavior* 24(2): 117-150.
- Biørn, Erik. 2017. *Econometrics of Panel Data: Methods and Applications*. Oxford: Oxford University Press.
- Bisgaard, Martin. 2015. "Bias Will Find a Way: Economic Perceptions, Attributions of Blame, and Partisan-Motivated Reasoning during Crisis." *Journal of Politics* 77(3): 849-860.
- Bullock, John G., Alan S. Gerber, Seth J. Hill, and Gregory A. Huber. 2015. "Partisan Bias in Factual Beliefs About Politics." *Quarterly Journal of Political Science* 10(4): 519-578.
- Carlson, Elizabeth. 2016. "Finding Partisanship Where We Least Expect It: Evidence of Partisan

- Bias in a New African Democracy.” *Political Behavior* 38(1): 129-154.
- Dassonneville, Ruth, and Michael S. Lewis-Beck. 2017. “Rules, Institutions and the Economic Vote: Clarifying Clarity of Responsibility.” *West European Politics* 40(3): 534-559.
- Directorate-General of Budget, Accounting and Statistics (DGBAS). 2017. “National Statistics.” <http://ebas1.ebas.gov.tw/pxweb/Dialog/NI.asp> (accessed October 5, 2017).
- Duch, Raymond M., and Randolph T. Stevenson. 2008. *The Economic Vote: How Political and Economic Institutions Condition Election Results*. Cambridge: Cambridge University Press.
- Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Cambridge: Cambridge University Press.
- Evans, Geoffrey, and Robert Andersen. 2006. “The Political Conditioning of Economic Perceptions.” *The Journal of Politics* 68(1):194-207.
- Evans, Geoffrey, and Mark Pickup. 2010. “Reversing the Causal Arrow: The Political Conditioning of Economic Perceptions in the 2000-2004 U.S. Presidential Election Cycle.” *The Journal of Politics* 72(4):1236-1251.
- Gerber, Alan S., and Gregory A. Huber. 2010. “Partisanship, Political Control, and Economic Assessments.” *American Journal of Political Science* 54(1): 153-173.
- Hansford, Thomas G., and Brad T. Gomez. 2015. “Reevaluating the Sociotropic Economic Voting Hypothesis.” *Electoral Studies* 39: 15-25.
- Hart, Austin. 2016. *Economic Voting: A Campaign-Centered Theory*. New York: Cambridge University Press.
- Hayes, Andrew F. 2018. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* (2nd ed.). New York: The Guilford Press.
- Ho, Karl, Harold D. Clarke, Li-khan Chen, and Dennis Lu-chung Weng. 2013. “Valence Politics and Electoral Choice in a New Democracy: The Case of Taiwan.” *Electoral Studies* 32(3): 476-481.
- Hsiao, Cheng. 2014. *Analysis of Panel Data* (3rd ed.). Cambridge: Cambridge University Press.
- Hsieh, John Fuh-sheng, Dean Lacy, and Emerson M.S. Niou. 1998. “Retrospective and Prospective Voting in a One-Party-Dominant Democracy: Taiwan’s 1996 Presidential Election.” *Public Choice* 97(3): 383-399.
- Huang, Chi. 2015. “Endogenous Regressors in Nonlinear Probability Models: A Generalized Structural Equations Modeling Approach.” *Journal of Electoral Studies* 22(1): 1-33.
- , 2016. “TEDS2016-T: Taiwan’s Election and Democratization Study, 2012-2016 (Phase

- IV): Telephone Interviews of the Presidential and Legislative Elections, 2016.” MOST 101-2420-H-004-034-MY4. Taipei: Ministry of Science and Technology Research Project (Report). (in Chinese)
- , 2017. “Electoral System Change and Its Effects on the Party System in Taiwan.” In *The Taiwan Voter*, eds. Christopher H. Achen and T.Y. Wang. Ann Arbor: University of Michigan Press.
- , 2018. “Endogenous Explanatory Variables: Innovative Methods and Applications to Economic Voting Research.” MOST 104-2410-H-004-089-MY2. Taipei: Ministry of Science and Technology Research Project (Report). (in Chinese)
- Huang, Chi, Ming-feng Kuo, and Hans Stockton. 2016. “The Consequences of MMM on Party Systems.” In *Mixed-Member Electoral Systems in Constitutional Context: Taiwan, Japan, and Beyond*, eds. Nathan Batto, Chi Huang, Alexander Tan, and Gary Cox. Ann Arbor: University of Michigan Press.
- Kanji, Mebs, and Kerry Tannahill. 2013. “What are the Current Preoccupations of Economic Voting Research?” *Electoral Studies* 32(3): 391-392.
- Kayser, Mark Andreas, and Christopher Wlezien. 2011. “Performance Pressure: Patterns of Partisanship and the Economic Vote.” *European Journal of Political Research* 50(3): 365-394.
- Kunda, Ziva. 1990. “The Case for Motivated Reasoning.” *Psychological Bulletin* 108(3): 480-498.
- Lee, Myoung-jae. 2016. *Matching, Regression Discontinuity, Difference in Differences, and Beyond*. Oxford: Oxford University Press.
- Lewis-Beck, Michael S. 1988. *Economics and Elections: The Major Western Democracies*. Ann Arbor: University of Michigan Press.
- Lewis-Beck, Michael S., and Marina Costa Lobo. 2017. “The Economic Vote: Ordinary vs. Extraordinary Times.” In *The SAGE Handbook of Electoral Behaviour*, Vol. 2, eds. Kai Arzheimer, Jocelyn Evans, and Michael S. Lewis-Beck. London: SAGE.
- Lewis-Beck, Michael S., Nicholas F. Martini, and D. Roderick Kiewiet. 2013. “The Nature of Economic Perceptions in Mass Publics.” *Electoral Studies* 32(3): 524-528.
- Lewis-Beck, Michael S., Richard Nadeau, and Angelo Elias. 2008. “Economics, Party, and the Vote: Causality Issues and Panel Data.” *American Journal of Political Science* 52(1): 84-95.
- Lewis-Beck, Michael S., and Mary Stegmaier. 2007. “Economic Models of Voting.” In *The Oxford Handbook of Political Behavior*, eds. Russell J. Dalton and Hans-Dieter Klingemann.

- Oxford: Oxford University Press.
- Lewis-Beck, Michael S., and Guy D. Whitten. 2013. "Economics and Elections: Effects Deep and Wide." *Electoral Studies* 32(3): 393-395.
- Markus, Gregory B. 1988. "The Impact of Personal and National Economic Conditions on the Presidential Vote: A Pooled Cross-Sectional Analysis." *American Journal of Political Science* 32(1): 137-154.
- Popescu, Gheorghe H. 2013. "Partisan Differences in Evaluations of the Economy." *Economics, Management and Financial Markets* 8(1): 130-135.
- Prior, Markus, Gaurav Sood, and Kabir Khanna. 2015. "You Cannot Be Serious: The Impact of Accuracy Incentives on Partisan Bias in Reports of Economic Perceptions." *Quarterly Journal of Political Science* 10(4): 489-518.
- Rosenbaum, Paul R. 2010. *Design of Observational Studies*. New York: Springer.
- Shadish, William R., Thomas S. Cook, and Donald T. Campbell. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston: Houghton Mifflin.
- Sheng, Sing-yuan. 2009. "The Impacts of Economic and Welfare Issues on Voting Behavior: A Discussion of 2008 Presidential Election." In *2008 Taiwan Presidential Election: the Second Party Turnover*, eds. Lu-hui Chen, Ching-hsing Yu, and Chi Huang. Taipei: Wunan. (in Chinese)
- Sovey, Allison J., and Donald P. Green. 2011. "Instrumental Variables Estimation in Political Science: A Readers' Guide." *American Journal of Political Science* 55(1): 188-200.
- Stegmaier, Mary, Michael S. Lewis-Beck, and Beomseob Park. 2017. "VP-Function: A Review." In *The SAGE Handbook of Electoral Behaviour*, Vol. 2, eds. Kai Arzheimer, Jocelyn Evans and Michael S. Lewis-Beck. London: SAGE.
- Tilley, James, and Sara B. Hobolt. 2011. "Is the Government to Blame? An Experimental Test of How Partisanship Shapes Perceptions of Performance and Responsibility." *The Journal of Politics* 73(2): 316-330.
- Tsai, Chia-hung. 2017. "Economic Voting in Taiwan: Micro- and Macro-Level Analysis." In *The Taiwan Voter*, eds. Christopher H. Achen and T.Y. Wang. Ann Arbor: University of Michigan Press.
- Wang, Bo-yauo. 2004. "The Evaluation of Economic Voting and Voting Choice: 2001 Legislative Election of Taiwan." *Journal of Electoral Studies* 11(1): 171-195. (in Chinese)
- Wimpy, Cameron, and Guy D. Whitten. 2017. "What Is and What May Never Be: Economic

- Voting in Developing Democracies.” *Social Science Quarterly* 98(3): 1099-1111.
- Wlezien, Christopher, Mark Franklin, and Daniel Twigg. 1997. “Economic Perceptions and Vote Choice: Disentangling the Endogeneity.” *Political Behavior* 19(1): 7-17.
- Wooldridge, Jeffrey M. 2010. *Econometric Analysis of Cross Section and Panel Data* (2nd ed.). Cambridge: The MIT Press.
- Wu, Chin-en, and Yi-tze Lin. 2012. “Economic Voting and Presidential Elections: An Assessment of Validity and Endogeneity.” *Taiwanese Political Science Review* 16(2): 175-232. (in Chinese)
- , 2013. “Cross-Strait Economic Openness, Identity, and Vote Choice: An Analysis of the 2008 and 2012 Presidential Elections.” *Journal of Electoral Studies* 20(2): 1-35. (in Chinese)
- Yu, Ching-hsin. 2017. “Parties, Partisans, and Independents in Taiwan.” In *The Taiwan Voter*, eds. Christopher H. Achen and T.Y. Wang. Ann Arbor: University of Michigan Press.

政黨偏好是否左右經濟評估？ 定群追蹤之因果效應分析

黃紀*

《本文摘要》

古典經濟投票模型認為選民會回溯及展望經濟之榮枯，對執政者課責。但即使舉國對經濟莫不喜榮厭枯，個別選民對客觀經濟的主觀評估，卻仍可能因其原先政治立場而異。近年經濟投票之修正論者就質疑經濟投票有「內因性」(endogenous)，亦即選民對總體經濟的認知其實受其政黨偏好左右，與客觀經濟有差距，產生政黨偏差 (partisan bias)。此說已引發許多論辯，但文獻卻鮮少單刀直入，直接檢定政黨偏好對經濟評估之因果效應。本文旨在彌補此一缺憾。

本文先就古典派與修正派這兩個針鋒相對的理論，各推導出其預期之經驗意涵：若古典派「無政黨偏差說」為真，則選民對整體經濟的評估，應不會受政黨輪替選舉結果的影響，亦即選前、選後的經濟評估應該大致穩定；反之，若修正派「有政黨偏差說」為真，則選民對整體經濟的評估，應會受政黨輪替選舉結果的影響而前後翻盤。為了檢測這兩種經驗預期，作者針對選前普遍預期會產生政黨輪替的 2016 年總統大選，設計了選前、選後時間貼近的兩波定群追蹤 (panel) 電訪，然後以二維固定效果 (two-way fixed effects) 模型進行定群資料分析，檢定同一群選民之整體經濟評估是否會因自己偏好的政黨勝選或落敗而改變。分析結果與修正論之預期相符，不論是回溯或前瞻之整體經濟評估，都受到政黨偏好的顯著影響。換言之，原國民黨支持者，在 2016 大選前對過去及未來整體經濟多表肯定，但選後卻因國民黨敗選，對未來經濟走勢改為悲觀。反之，原民進黨的支持者，在選前對過去及未來整體經濟多表負面評價，但選後卻因民進黨勝選，對過去評價更為負面、而對未

* 國立政治大學講座教授、政治學系教授暨選舉研究中心合聘研究員、台灣政經傳播研究中心主任。

來經濟則大幅看好。此一研究發現的意涵深遠，應不僅限於台灣 2016 年大選的個案。

關鍵詞：政黨偏差效應、經濟評估、經濟投票、反事實因果推論模型、
固定效應定群分析