Partisan Divide on War and the Economy

Presidential Approval of G. W. Bush

Gerald T. Fox
Earl Phillips School of Business
High Point University, High Point, North Carolina

This study examines the influence of 9/11, the Iraq War, the economy, and the coalition-of-minorities on presidential approval of G. W. Bush across partisan subgroups and aggregate popularity. The analysis considers the effect of underlying partisan preferences on overall approval. A partisan divide occurs for war and the economy on Bush popularity. The events of 9/11 and the Iraq War affect Democratic opinions of Bush more than Republican opinions, whereas the economy impacts Republicans more than Democrats. An in-party/out-party rally effect occurs. Democrats show stronger rallies than Republicans for 9/11 and the Iraq War, but also faster and deeper popularity decay of the rallies. All economic and war-related effects significantly influence Independents and aggregate Bush popularity. The coalition-of-minorities pattern of declining presidential approval is caused by the 9/11 rally decay effect, the war casualties effect, and the slowing economy during Bush’s second term in office.

Keywords: partisan presidential popularity; George W. Bush; Iraq War; 9/11; in-party/out-party effect

Introduction

What are the major differences among partisan groups concerning the influence of a war economy on presidential popularity? How do disparities in public opinion across partisan affiliations affect aggregate approval in a war economy? What is the relation between the coalition-of-minorities and the influence of war and the economy on popularity? This analysis examines these issues for partisan presidential approval of G. W. Bush during the period 2001 to 2008 corresponding to his two terms in office.

Beginning with the initial studies by Downs (1957), Kramer (1971), and Mueller (1973), an extensive literature in political science and economics has developed on
the various influences of presidential popularity and presidential election outcomes (Gronke and Newman 2003). Much of the economic research examines the nuances of macroeconomic influence on approval. This includes the major economic determinants, nonlinear economic influence (Smyth and Taylor 2003; Fox 2003), the partisan macroeconomic cleavage (Hibbs, Rivers, and Vasilatos 1982, 1987; Smyth, Taylor, and Dua 1992), other partisan economic effects (Winder 1992; Swank 1995; Carlsen 2000; Fox 2003), and the relation between the median voter’s macroeconomic preference, time-consistency, and inflation bias (Kydland and Prescott 1977; Alesina and Sachs 1988; Garman and Richards 1989; Lippi 2000; Fox 1997, 2003).

Much of the political research emphasizes rally events, war, the presidential honeymoon, scandals, and various political and international influences on approval (Lai and Reiter 2005; Erikson, MacKuen, and Stimson 2002; Eichenberg, Stoll, and Lebo 2006). This includes intervention analysis (Box and Tiao 1975; Callaghan and Virtanen 1993), media and elite influence on public beliefs (Brody 1991; Woessner 2005), the coalition-of-minorities (Mueller 1973), and other theories of popularity decay (Stimson 1976; Norpoth 1984; Tatalovich and Gitelson 1990; Marra, Ostrom, and Simon 1990; Brody, 1991).

Numerous analyses observe that the main macroeconomic influences on approval include unemployment and inflation (Hibbs, Rivers, and Vasilatos 1982; Hibbs 1987; Winder 1992; Swank 1995; Carlsen 2000; Smyth and Taylor 2003; Fox 1997, 2003; Gronke and Brehm 2002; Lebo and Cassino 2007). Carlsen (2000, 141) states: “Most studies find that the government’s performance in elections and opinion polls is systematically affected by economic variables, in particular unemployment and inflation.” Both variables frequently rank high as the “the most important problem facing the country” according to the Gallup Poll. Some analyses also find real economic growth or public beliefs on the economy to significantly influence approval (Hibbs 1987; Chappell 1990; Fox 2003; Eichenberg, Stoll, and Lebo 2006; Voeten and Brewer 2006; Norpoth and Sidman 2007).

Presidential vote studies likewise find unemployment to be a significant effect (Fox 2003), as well as inflation (Strom and Lipset 1984; Walker 2006), and especially real economic growth (Kramer 1971; Fair 1978; Chappel 1990; Hibbs 2000; Fox 2003; Abramowitz 2004; Walker 2006). As stated by Voeten and Brewer (2006, 811): “Citizens prefer incumbents who are competent economic policy makers to those who are not.” Popularity sentiment is sociotropic; approval ratings react to national economic performance.

An issue of debate is whether economic events or economic perceptions directly affect approval. Much of the economic research, based on rational voter theory (Downs 1957), assumes events are the direct influence. This Downsiand approach assumes retrospective rationality among the public. Hibbs (2006, 581) writes: “Rational voters logically will hold government accountable for macroeconomic outcomes that elected authorities have capacity to influence.” Erikson, MacKuen, and Stimson (2002, 96) remark: “The traditional retrospective view of the political response to
the economy holds that people update their presidential evaluations from ongoing observation of the economy as it happens.”

Rational voter theory assumes that citizens directly evaluate economic outcomes in their preference functions and the calculus of their opinion formation processes. Smyth, Taylor, and Dua (1991, 763) state: “When the presidential approval rating is viewed as a proxy for the public’s satisfaction with the state of the economy, the studies yield estimates of the public’s social preference function between inflation and unemployment.” According to this approach, influences such as media priming and elite opinions are generally excluded as direct explanatory variables. These effects, however, likely impact the size of economic and political parameters in the presidential popularity equation.

Much of the political research on presidential approval focuses on public beliefs of economic and political issues as measured by opinion polls and economic evaluations (Alvarez, Nagler, and Willette 2000; Nickelsburg and Norpoth 2000; Bond and Fleisher 2001; Erikson, MacKuen, and Stimson 2002; Voeten and Brewer 2006; Norpoth and Sidman 2007). Economic perceptions are affected by presidential rhetoric (Cohen and Hamman 2003; Marra, Ostrom, and Simon 1990) and by the media and elites (Brody 1991; Voeten and Brewer 2006; Lebo and Cassino 2007). Evans and Andersen (2006) also observe that economic beliefs are endogenously influenced by the public’s prior opinions of the incumbent.

The economic perceptions approach to popularity sentiment assumes public attitudes respond directly to political drama and opinion leadership rather than economic outcomes. Voeten and Brewer (2006, 823) state: “Evaluations of the president’s job performance are largely driven by subjective assessments of the economy, with objective economic conditions mattering only to the extent that they affect such assessments.” However, Erikson, MacKuen, and Stimson (2002, 44) observe that economic beliefs, as measured by the Index of Consumer Sentiment, are significantly related to underlying economic events, notably unemployment and inflation.

While acknowledging this debate, the present study adopts the rational voter approach and assumes economic outcomes directly impact approval. Unemployment and inflation create a continuous effect on popularity, while noneconomic events, which may be substantial in the short term, tend to be transitory. Because political crises, scandals, and major international incidents are often transient in nature, their influence on approval is likewise temporary (Mueller 1973; Norpoth 1984; Callaghan and Virtanen 1993; Smyth and Taylor 2003).

The important exception to this generalization is war, where two types of effects may occur. The first influence is the war rally. If a war is short-lived, victorious, and with low military casualties, the effect on approval consists of a transitory rally-round-the-flag popularity boost. The war rally, however, quickly turns against a president if military success is not soon achieved. Even with a swift military victory, the war rally tends to dissipate rapidly. This occurs for the 1991 Gulf War during the G. H. Bush presidency and the Falklands War during the Margaret Thatcher
era (Norpoth 1987; Nickelsburg and Norpoth 2000; Lai and Reiter 2005). Regarding the 1991 Gulf War, the fading war rally combined with an economic recession were major factors that caused approval for G. H. Bush to decline toward the end of his presidency, ultimately leading to his reelection defeat in 1992. Gronke and Newman (2003, 501) observe: “President Bush experienced almost universal acclaim after the first Gulf War, only to watch this support whither by over 50 percentage points in a matter of months.”

The second type of war influence on approval is popularity deterioration from military fatalities. If a war is protracted and with high casualties, as in the Vietnam Conflict or the Korean War, the influence on popularity is adverse, prolonged, and inversely related to either cumulative or marginal military deaths (MacKuen 1983; Hibbs 1987; Marra, Ostrom, and Simon 1990; Smyth, Taylor, and Dua 1991; Fox 1997, 2003; Gartner and Segura 1998; Gronke and Brehm 2002; Erikson, MacKuen, and Stimson 2002; Voeten and Brewer 2006; Eichenberg, Stoll, and Lebo 2006).

War casualties are the most salient war costs. From a cost-benefit approach, presidential approval erodes and splinters through a coalition-of-minorities pattern. War policy outcomes, especially military deaths, cause voters and interest groups to fragment away from support of a war president. The public becomes disillusioned if unrealistically high and naïve expectations at the beginning of a war go unfulfilled (Stimson 1976). Popularity decay may be exacerbated if the media, elites, and partisan opponents express strong criticism of the president’s war policies (Brody 1991).

Regarding the Vietnam Conflict and the coalition-of-minorities, Kernell (1978) finds that the downward popularity pattern for Lyndon Johnson is mainly attributable to war deaths. Kernell writes: “The impact of the war is conveniently picked up by the trend term representing the coalition-of-minorities” (509-10). Norpoth (1984, 263) also observes: “In Mueller’s model the impact of the war is picked up by the trend variable specific to Johnson’s second term—what Mueller called the ‘coalition-of-minorities’ effect.”

The two sequential effects of war rally followed by popularity deterioration from military casualties have relevance to the Iraq War during the G. W. Bush presidency. Several studies find that the popularity surge and decay effects of the Iraq War are large and highly significant on aggregate Bush approval (Hetherington and Nelson 2003; Eichenberg, Stoll, and Lebo 2006; Voeten and Brewer 2006; Gelpi, Feaver, and Reifler 2006). Eichenberg, Stoll, and Lebo (2006, 802) state that “although the measures in each study are different, each shows a positive rally during the combat phase in Iraq and a significant negative effect of casualties after that point.”

These prior studies examine aggregate Bush popularity, whereas the present analysis considers aggregate approval and popularity sentiment across the political demographics of Republicans, Independents, and Democrats. Figure 1 shows Bush popularity across partisan groups based on Gallup Poll data. Favorable opinions of Bush among Republicans surpass Democrats, whereas Independent opinions of
Bush occur between the two partisan outcomes. The two dramatic events of 9/11 and the start of the Iraq War stand out as major rally effects, each creating strong popularity surges, particularly among Democrats and Independents. Inspection of the data shows that the 9/11 rally exceeds the Iraq War rally. The popularity surges for 9/11 and the Iraq War are each followed by popularity decay. This is consistent with the coalition-of-minorities effect described by Mueller (1973), and later clarified by Kernell (1978) and Norpoth (1984) to denote the adverse influence of war casualties on approval.

On the Iraq War, Eichenberg, Stoll, and Lebo (2006, 789-90) observe: “Three features of the Bush presidency stand out immediately. The first is the dramatic impact of war related rallies. . . . Second, Bush’s job approval does decline after these rallies. . . . Third, it nonetheless appears that factors other than the economy are at work.”

Previous partisan presidential popularity studies find substantial divisions among Democrats, Republicans, and Independents for economic and political influence on
presidential job approval (Hibbs 1982; Erikson, MacKuen, and Stimson 2002; Fox 2003; Lebo and Cassino 2007). Jacobson (2003b, 1) writes: “The parties’ electoral bases have become increasingly polarized in terms of both ideology and presidential voting patterns. Presidential job approval data also show a widening gap in the average approval ratings expressed by self-identified Republicans and Democrats.”

Variations over time in the partisan split on presidential approval are not well understood. Partisan disparities in popularity sentiment appear somewhat fluid, fluctuating from one administration to next, rather than showing a fixed or easily predictable pattern for all presidencies (Mueller 1973; Gronke and Newman 2003). Perhaps the only systematic influence on partisan presidential popularity across all administrations is the base approval effect, as measured by the intercept term in the popularity equation.

Base approval is higher among in-party identifiers than out-party identifiers (Tatalovich and Gitelson 1990). Erikson, Stoll, and Lebo (2002, 68) remark: “Democrats like Democratic presidents better because they promote liberal policies, and Republicans like Republican presidents better because they promote conservative policies.” Beyond this straightforward result, more research is needed to better understand the causal mechanisms of partisan disparities in popularity sentiment across different presidencies and the influence of partisan differentials on aggregate approval. Regarding the G. W. Bush presidency, Lebo and Cassino (2007, 719) state: “The gulf between how Democratic and Republican partisans interpret political events, understand the state of the economy, and evaluate the president has perhaps never been wider. Nevertheless, how the dynamics of presidential approval differ between partisan groups remains largely unanswered in extant research.”

The present analysis tests three partisan influences on Bush approval, consisting of the partisan macroeconomic cleavage, an in-party/out-party rally effect, and a war-economy partisan effect. The partisan macroeconomic cleavage, as developed by Hibbs (1982, 1987), asserts that Democrats are relatively unemployment averse in their opinions of the president while Republicans are relatively inflation averse (see also Kiewiet 1983; Carlsen 1998; Haynes 1995; Fox 2007).

According to Lebo and Cassino (2007), the Hibbs model is limited because the analysis is time-bounded and assumes fixed regression coefficients in the popularity equation across presidencies. Consistent with this argument, Smyth, Taylor, and Dua (1991) and Fox (1997) find that structural change occurs in the presidential popularity equation from one administration to the next. This includes all parameters in the popularity equation across different presidencies, not just intercepts. Voters place different weights on the political and economic influences of presidential approval across different administrations. Popularity equations should be estimated separately for each presidency, rather than through a pooled popularity equation across multiple administrations. This reduces misspecification error in the economic and political parameters. The issue is important because many presidential approval studies estimate pooled popularity equations across several administrations without taking into account that the economic and political parameters shift.
Subsequent to Hibbs analyses, three studies find results that conflict with the partisan macroeconomic cleavage. Winder (1992) observes that Democrats may be more averse than Republicans to both inflation and unemployment during 1976 through 1988. Smyth, Taylor, and Dua (1992) find no significant partisan macroeconomic cleavage on Reagan popularity. Callaghan and Virtanen (1993) find insignificant unemployment aversion for both Democrats and Republicans on Jimmy Carter popularity, while Democrats may be more inflation averse than Republicans. A more recent analysis by Fox (2007), however, finds a significant partisan macroeconomic cleavage between inflation and unemployment on Clinton approval. Because of mixed results from various studies over different time periods, the partisan macroeconomic cleavage on popularity appears idiosyncratic rather than systematic.

Rally events on approval also vary across partisan groups (Lebo and Cassino 2007; Callaghan and Virtanen 1993; Sigelman and Conover 1981). Rally events refer to major political incidents that cause citizens to increase support for a presidency out of patriotism or nationalism (Mueller 1973; Eichenberg, Stoll, and Lebo 2006; Gronke and Newman 2003; Hibbs 1987; Jordan 1982; Sigelman and Conover 1981; Box and Tiao 1975). Rally effects are especially strong if opinion leaders refrain from criticism against a president’s response to a major crisis (Brody 1991; Woessner 2005).

Examples of major international rally events include the Cuban Missile Crisis during the Kennedy presidency (Marra, Ostrom, and Simon 1990), the Iranian hostage crisis and the Camp David Accord during the Carter presidency (Sigelman and Conover 1981; Callaghan and Virtanen 1993), the Gulf War during the G. H. Bush presidency (Smyth, Taylor, and Dua 1991; Fox 1997, 2003), and 9/11 and the start of the Iraq War during the G. W. Bush presidency (Hetherington and Nelson 2003; Eichenberg, Stoll, and Lebo 2006; Gelpi, Feaver, and Reifler 2006; Voeten and Brewer 2006). Even Clinton’s impeachment may have caused a small rally as many citizens, notably Democrats, viewed the Congressional punishment as excessive (Fox 2007; also see PollingReport.com for public opinion polls on the Clinton impeachment).

Rally events on Bush approval are predicted to be greater for out-party identifiers than in-party identifiers. This is similar to the results by Callaghan and Virtanen (1993), which show that out-party Republicans exhibited a stronger rally than in-party Democrats for the Iranian hostage crisis on Carter popularity. Callaghan and Virtanen (p. 762) remark: “Our analyses reveal that Republican support for President Carter increased somewhat more than Democratic support.” Lebo and Cassino (2007) also find an in-party/out-party effect for economic influence on popularity during the period 1955 to 2005. Their analysis shows: “Partisans of both parties reward and punish presidents of the opposite party on the basis of economic indicators while remaining largely unresponsive to those measures when their party holds the presidency” (740).

The present study tests the in-party/out-party hypothesis for the 9/11 and the Iraq War rallies on Bush approval. Base presidential approval among in-party identifiers tends to be strong because of party loyalty, such as Republican opinions.
of a Republican president. The potential for further popularity gain from a rally event among in-party identifiers is limited because base approval is already high (Callaghan and Virtanen 1993). Base presidential approval for out-party identifiers is weak because of opposition to the incumbent party, such as Democratic opinions of a Republican presidency. The potential for popularity gain from a rally event among out-party identifiers is relatively large because base approval is low.

Out-party identifiers also show more rapid and deeper popularity decay of rally effects than in-party identifiers (Mueller 1973; Kernell 1986; Sigelman and Conover 1981; Brody 1991). Out-party identifiers, because of opposition to the incumbent party, give fleeting credit to a president of the opposing party for a rally event. In-party identifiers exhibit slower popularity decay for a rally event because of allegiance to the incumbent party. Out-party identifiers have stronger rallies, but also faster and deeper defections than in-party identifiers.9

On this pattern of motivated reasoning among partisans, Lebo and Cassino (2007, 726-27) comment: “We should indeed see stronger reactions ... among the out-party partisans than among those of the in-party. When out-party partisans do respond to new information we should see rebound effects. That is, updated evaluations of a political figure should quickly revert to initial levels.”

The events of 9/11 and the Iraq War are predicted to influence Democratic opinions of the Republican G. W. Bush presidency more than Republican opinions of Bush. Democrats are expected to exhibit stronger 9/11 and Iraq War rallies than Republicans, but also faster and deeper popularity deterioration of the rallies. A related partisan effect is also hypothesized to occur for war and the economy on Bush approval. Democrats are predicted to be more anti-war averse than Republicans (various survey reports, Pew Research Center).10 This is consistent with results by Hibbs, Rivers, and Vasilatos (1982), which show that Vietnam War casualties adversely influenced Democratic opinions of the Johnson presidency more than Republican opinions. Erikson, MacKuen, and Stimson (2002, 72) observe a similar partisan effect in their analysis of the Vietnam War on Johnson approval.

Ideological polarization among the electorate affects partisan perceptions of G. W. Bush’s war policies. Jacobson (2003b, 1) states that partisan polarization has “reduced incentives for opposition members to support the president, while making it politically more attractive for the president’s own partisans to support his positions.” Iraq War casualties are therefore predicted to adversely affect Democratic opinions of Bush more than Republican opinions. Because of the tendency toward partisan polarity, the economy is predicted to influence Republican opinions of Bush more than Democratic opinions. A partisan wedge occurs over the main issues that impact partisan presidential approval. Aversion to the Iraq War dominates Democratic sentiment while Republican opinions de-emphasize war casualty costs and instead identify with the state of the economy.

Disaggregated partisan opinions impact the outcome of aggregate approval. Each of the political and economic influences on aggregate popularity is examined to determine whether underlying sentiment from Democrats, Independents, or
Republicans is the main source of influence. The relation between partisan preferences and aggregate approval is a subject that has not been closely studied in prior analyses.

Norpoth (1984, 254) poses the question: “What share of the often dazzling explanatory power of popularity models belongs to the economic side, how much to noneconomic factors such as foreign policy crises, domestic scandal, war, presidential personality, and the like?” Several studies find that economic influence on approval is greater than or equal to political influence (Norpoth and Sidman 2007; Smyth and Taylor 2003; Erikson, MacKuen, and Stimson 2002; Nickelsburg and Norpoth 2000).

Some recent analyses suggest this generalization may not apply to G. W. Bush popularity during the Iraq War period. Voeten and Brewer (2006) observe that the effect of the Iraq War is greater than the economy on aggregate Bush approval during August 2002 to February 2006. Similar results occur for Norpoth and Sidman (2007), Eichenberg, Stoll, and Lebo (2006), Hetherington and Nelson (2003), and Gelpi, Feaver, and Reifler (2006). Eichenberg, Stoll, and Lebo (2006, 802) state: “We find that the fundamental dynamic of Bush approval has been an erosion caused by the continuing accumulation of casualties. . . . Particularly striking is the fact that no study has found that economic performance has been a major influence on Bush approval, findings that are in stark contrast to the existing literature.”

On the approval ratings of other wartime presidencies, both the Vietnam Conflict and the economy significantly influenced Johnson popularity (Mueller 1973; Kernell 1978; Hibbs 1982, 1987; Fox 1997; Erikson, MacKuen, and Stimson 2002). This was also the case for the Korean War and the economy on Truman popularity (Mueller 1973; Nickelsburg and Norpoth 2000).

The present study considers war and economic influence on Bush approval across partisan groups and aggregate popularity during his entire two terms in office. This contrasts with prior analyses that examine aggregate Bush approval during only the first part of his presidency, prior to the declining economy of 2007 and 2008.

**Popularity Equation for G. W. Bush**

A substantial amount of research suggests citizens are backward-looking or retrospective rather than forward-looking or prospective on the influence of economic events on presidential approval. Numerous studies observe that current or lagged economic performance significantly affects popularity, rather than future economic outcomes (Smyth, Taylor, and Dua 1994; Bond and Fleisher 2001; Kiefer 2005; Hibbs 2006). Nickelsburg and Norpoth (2000, 319) state: “Here citizens are asked to give the president a passing or failing grade for work done in the course of governing, just as a teacher gives a student a grade for work done in a course of study.”

Several economic studies denote the presidential popularity equation as a quadratic function of inflation and unemployment. The advantages of this approach are
twofold. First, the quadratic model explicitly identifies the median citizen’s economic targets or bliss points. This allows empirical testing for time consistency of the median citizen’s macroeconomic preference to determine whether inflation bias occurs. Second, empirical estimation of the quadratic model explicitly tests for non-linearities in the influence of the economy on approval ratings (Barro and Gordon 1983; Fox 1997, 2003; Nordhaus 1975; Garman and Richards 1989; Smyth, Taylor, and Dua 1991, 1992, 1994; Smyth and Taylor 2003).  

The present analysis likewise specifies presidential approval as a quadratic function of inflation and unemployment. A partial adjustment mechanism is included in the model to take into account opinion persistence among citizens. As stated by Eichenberg et al. (2006, 786): “There is nonetheless an inertial quality to aggregate approval.”

The popularity equation is written as follows:

\[ A = \alpha_0 - \beta_1 (u - u^*)^2 - \beta_2 p^2 + \beta_3 H + (\beta_4 W - \beta_5 F) + (1 - \lambda)A_{-1} \]

where \( \alpha_0 = \lambda(\beta_0 - \beta_1 u^*)^2 \), \( \alpha_1 = \lambda \beta_1 \), \( \alpha_2 = 2\lambda \beta_2 \), \( \alpha_3 = \lambda \beta_3 \), \( \alpha_4 = \lambda \beta_4 \), \( \alpha_5 = \lambda \beta_5 \), \( \alpha_6 = \lambda \beta_6 \), \( \alpha_7 = \lambda \beta_7 \), \( \alpha_8 = \lambda \beta_8 \), \( \alpha_9 = (1 - \lambda) \).

The political determinants include the presidential honeymoon (H) and a set of rally and decay effects for 9/11 (T, δ) and the Iraq War (W, F). The dependent variable A refers to presidential approval, which is the percentage of responses that approve of the job performance for G. W. Bush. Gallup Poll data are utilized in the analysis because this survey measures presidential approval at aggregate level and across political party affiliations. The lagged dependent variable, \( A_{-1} \), is included in the model to measure opinion persistence among citizens.

The partial adjustment mechanism for opinion persistence consists of a geometric lag structure: \( A - A_{-1} = \lambda(A - A_{-1}) \), where \( \lambda \) denotes long run presidential approval and \( \lambda \) is the partial adjustment parameter (Hibbs, Rivers, and Vasilatos 1982; Smyth 1991, 2003; Fox 1997, 2003). Inclusion of the lagged dependent variable in the empirical model corrects the autocorrelation problem associated with the time-series presidential approval and macroeconomic data. This is tested using the Durbin-h statistic in the regression analysis.

From Equation 1, long-run presidential approval is

\[ \dot{A} = \beta_0 - \beta_1 (u - u^*)^2 - \beta_2 p^2 + \beta_3 H + (\beta_4 W - \beta_5 F). \]
macroeconomic preference is time consistent and no inflation bias occurs. If \( u^* \) is less than the natural unemployment rate, then the median citizen’s preference is time inconsistent and inflationary bias occurs (Kydland and Prescott 1977; Alesina and Sachs 1988; see also Garman and Richards [1989] for positive inflation targets as a source of inflation bias). Attempts by macroeconomic policy makers to achieve and sustain an unemployment target than is less than the natural unemployment rate causes accelerating inflation.

Job approval tends to diminish over time, especially during the presidential honeymoon period of the first year. This may be explained in terms of the coalition-of-minorities (Mueller 1973), disillusioned voters (Stimson 1976), or elite leadership (Brody 1991). The honeymoon variable, \( H \), equals twelve for the president’s first month in office; \( H \) then declines by one each month until the end of the first year. \( H \) equals zero thereafter. The president enjoys a popularity boost in the first year, which gradually erodes to zero by the start of the second year (Smyth, Taylor, and Dau 1991, 1994; Fox 1997, 2003).17

Intervention analysis is used to estimate the rally effects on Bush approval (Box and Tiao 1975). The immediate aftermath of 9/11 creates a rally-round-the-flag popularity surge.18 The variable \( T \) denotes the 9/11 rally event, which is in the form of an abrupt step, permanent variable. \( T \) equals zero prior to September 2001 and equals one afterward. The 9/11 popularity surge gradually and partially decays over a period of 18 months leading up to the start of the Iraq War in April 2003.19,20 A countervariable, \( \delta \), is used to estimate the 9/11 rally decay effect, which is in the form of a gradual step, permanent variable. \( \delta \) equals zero up through September 2001; \( \delta \) then equals one for October 2001 and rises by one each month for 18 months until the start of the Iraq War in March 2003. The decay variable \( \delta \) remains at 18 afterward (January 2001 = 0, . . . , September 2001 = 0, October 2001 = 1, November 2001 = 2, December 2001 = 3, . . . , March 2003 = 18, April 2003 = 18, . . . , December 2008 = 18). The popularity decay effect assumes that the 9/11 rally gradually dissipates as the intensity of public memory of the event partially fades over a time period of one-and-a-half years leading up to the Iraq War.

The variable \( W \) denotes the rally event for the start of the Iraq War. This is in the form of a three-month temporary pulse. This dummy variable equals one during April-June 2003 and zero elsewhere. G. W. Bush receives a short-term popularity spike at the beginning of the conflict.21 Bush approval gradually diminishes following the initial war rally as the number of U.S. military fatalities accumulate.22 The war casualties variable, \( F \), equals the \( \log_{10} \) of cumulative U.S. military fatalities in the Iraq War, based on the Iraq Coalition Casualty Count (http://icasualties.org/oif/). The log variable creates a diminishing marginal influence on approval. The adverse effect of additional war fatalities on popularity becomes smaller as total war fatalities rise. This is analogous to the approach by Mueller (1973), Gartner and Segura (1998), and more recently Eichenberg, Stoll, and Lebo (2006).23
From Equation 2, long-run approval, $\bar{A}$, equals total economic influence, $E$, plus the combined rally and decay effects for 9/11 and the Iraq War, $C$:

$$\bar{A} = \beta_0 + E + C.$$  \hspace{1cm} (3)

The parameter $\beta_0$ is base presidential approval, where $\beta_0 = (\alpha_0 + \alpha u^2)/\lambda$. Because of motivated reasoning among partisans, $\beta_0$ is greater for in-party identifiers than out-party identifiers. Base approval is also influenced by presidential personality factors such as charisma and leadership and by media priming and elite opinions. Total economic influence on presidential approval equals $E = -\beta_1(u - u^*)^2 - \beta_p p^2$. The rally and decay effects for 9/11 and the Iraq War on approval equals $C = (\beta_4 T - \beta_5 \delta) + (\beta_6 W - \beta_7 F)$. An implication for the analysis is whether the rally and decay effects outweigh economic influence on long-run Bush approval across political subgroups and aggregate popularity.

**Empirical Results**

The observations consist of monthly time-series data from March 2001 to December 2008. Two missing observations occur for presidential approval at the start of the Bush presidency during January and February 2001. Presidential approval is analyzed across four categories—Democrats, Republicans, Independents, and aggregate popularity of all respondents. The analysis includes a three-equation seemingly unrelated regression (SUR) system for presidential approval among Democrats, Independents, and Republicans. Several studies of partisan presidential popularity utilize the SUR model (Smyth et al. 1992; Erikson, MacKuen, and Stimson 2002; Fox 2007). Smyth et al. (1992, 51) state: “Any disturbance in a particular month, such as an international conflict, will simultaneously affect Democrat, Republican, and Independent approval ratings. Thus, the error terms in the three equations will be contemporaneously correlated. Seemingly unrelated regression (SUR) is the appropriate estimation procedure in this situation.”

Aggregate popularity is excluded from the SUR system because sentiment among Democrats, Independents, and Republicans are included in the aggregate measurement. Aggregate popularity is estimated by a separate ordinary least squares (OLS) regression. Table 1 shows the empirical results, including the coefficients and $t$ statistics, along with the implied $\beta$ parameters and regression diagnostics.25

The adjusted coefficient of determination, $R^2$, is high among each of the four popularity regressions, ranging from .845 to .9627. The SUR-system $R^2$ is also high at .9924. The results show strong goodness of fit. The term $\sigma$ denotes the standard error for each of the popularity regressions. The Durbin-h statistic is low among the four popularity regressions, indicating insignificant autocorrelation of errors as a result of inclusion of the lagged dependent variable in the model. The opinion persistence coefficient, $\alpha_o$, is significant for all popularity regressions; this
Table 1
Model 1: Seemingly Unrelated Regression-Ordinary Least Squares (SUR-OLS)
Model of Bush Approval (March 2001-December 2008)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Democrats</th>
<th>t</th>
<th>Independents</th>
<th>t</th>
<th>Republicans</th>
<th>t</th>
<th>Aggregate Popularity</th>
<th>t</th>
</tr>
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<tr>
<td>Unemployment</td>
<td>$\beta_1$</td>
<td>50.683**</td>
<td>4.179</td>
<td>84.623**</td>
<td>5.228</td>
<td>38.879**</td>
<td>2.694</td>
<td>60.867**</td>
<td>4.517</td>
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<td>Inflation(^2)</td>
<td>$-\alpha_1$</td>
<td>-0.311**</td>
<td>-3.803</td>
<td>-0.528**</td>
<td>-4.825</td>
<td>-0.217**</td>
<td>-2.319</td>
<td>-0.304**</td>
<td>-3.453</td>
</tr>
<tr>
<td>Honeymoon</td>
<td>$\beta_1$</td>
<td>1.825**</td>
<td>2.505</td>
<td>3.450**</td>
<td>3.911</td>
<td>1.277</td>
<td>1.710</td>
<td>2.757**</td>
<td>3.962</td>
</tr>
<tr>
<td>9/11 rally</td>
<td>$-\beta_1$</td>
<td>45.530**</td>
<td>9.248</td>
<td>30.182**</td>
<td>5.236</td>
<td>5.280</td>
<td>1.105</td>
<td>24.966**</td>
<td>5.460</td>
</tr>
<tr>
<td>9/11 rally decay</td>
<td>$-\alpha_1$</td>
<td>-2.037**</td>
<td>-9.092</td>
<td>-0.929**</td>
<td>-3.911</td>
<td>0.124</td>
<td>0.646</td>
<td>-0.582**</td>
<td>-3.111</td>
</tr>
<tr>
<td>Iraq War</td>
<td>$\beta_1$</td>
<td>17.268**</td>
<td>6.544</td>
<td>13.222**</td>
<td>4.289</td>
<td>2.464</td>
<td>0.973</td>
<td>9.003**</td>
<td>3.622</td>
</tr>
<tr>
<td>Log of war fatalities</td>
<td>$-\alpha_1$</td>
<td>-4.383**</td>
<td>-5.641</td>
<td>-1.772**</td>
<td>-2.111</td>
<td>-1.066</td>
<td>-1.516</td>
<td>-1.677*</td>
<td>-2.364</td>
</tr>
<tr>
<td>Lagged approval</td>
<td>$\beta_1$</td>
<td>0.152**</td>
<td>2.409</td>
<td>0.334**</td>
<td>4.898</td>
<td>0.650**</td>
<td>8.899</td>
<td>0.507**</td>
<td>7.355</td>
</tr>
</tbody>
</table>

**Long-run parameters**

| Unemployment target     | $u^*$        | 5.644 | 5.660 | 5.495 | 5.572 |
| Base approval           | $\beta_2$    | 25.455 | 37.937 | 79.419 | 34.466 |
| Unemployment\(^2\)      | $-\beta_2$   | -5.294 | -11.227 | -10.110 | -11.077 |
| Inflation\(^2\)         | $-\beta_2$   | -0.367 | -0.793 | -0.619 | -0.617 |
| Honeymoon               | $\beta_1$    | 2.152 | 3.182 | 3.649 | 5.591 |
| 9/11 rally              | $\beta_1$    | 53.688 | 45.328 | 15.090 | 50.629 |
| 9/11 rally decay        | $-\beta_1$   | -2.402 | -1.395 | 0.354 | -1.180 |
| Iraq War                 | $\beta_1$    | 20.362 | 19.857 | 7.042 | 18.259 |
| Log of war fatalities   | $-\beta_1$   | -5.168 | -2.662 | -3.048 | -3.402 |
| Partial adjustment      | $\lambda$    | 0.848 | 0.666 | 0.350 | 0.493 |

| $R^2$   | 0.9627 | 0.9267 | 0.845 | 0.9458 |
| $\sigma$ | 3.91 | 4.79 | 4.02 | 3.77 |
| Durbin-Watson Statistic | -0.555 | -0.772 | -1.059 | -0.873 |
| Observations | 94 | 94 | 94 | 94 |

* $p < .05$; ** $p < .01$; two-tailed $t$-tests.
effect is strongest for Republicans and weakest for Democrats. The presidential honeymoon coefficient, \( \alpha_n \), is significant at .05 or stronger among Democrats, Independents, and aggregate popularity; the honeymoon effect is marginally significant for Republicans with a \( p \) value of .091.

All economic coefficients display the expected signs and are significant across each of the popularity regressions. The implied economic parameters \( \beta_1 \) and \( \beta_2 \) are larger for Republicans than Democrats while Independents show the strongest economic effects. Estimates of the unemployment target, \( u^* \), are remarkably close among the four popularity regressions, ranging between 5.495 and 5.66. Because the estimates are approximately equal to the natural unemployment rate of 5 to 6 percent, the median macroeconomic preference for each group appears time consistent, exhibiting little or no inflation bias. This is similar to previous results by Fox (1997, 2003).

The rally and decay coefficients for 9/11 and the Iraq War consist of \( \alpha_5 \), \( \alpha_6 \), \( \alpha_7 \), and \( \alpha_8 \). Each of the coefficients is significant for all groups except Republicans. The long-run rally and decay effects, as measured by \( \beta_4 \), \( \beta_5 \), \( \beta_6 \), and \( \beta_7 \), are largest for Democrats, and in most cases are smallest for Republicans, while the effects for Independents and aggregate popularity in most instances occur between the two partisan outcomes.

The empirical results imply linkages between underlying partisan preferences and aggregate popularity. Differences in partisan opinions affect the result of aggregate approval. Based on the estimated parameters \( \beta \) and \( \beta_2 \), economic influence on aggregate Bush popularity is mainly attributable to underlying Independent and Republican opinions and is least affected by Democratic sentiment. The economic parameters are about twice as large for Republicans and Independents than Democrats. The rally and decay effects for 9/11 and the Iraq War on aggregate approval are mainly attributable to Democratic and Independent sentiment, because these effects are small and insignificant for Republicans.

The determining factor on aggregate popularity is Independent opinions, as partisan polarization between Democrats and Republicans largely offset each other. The influence of Independents on aggregate approval is likely a stabilizing factor if, as suggested by Lebo and Cassino (2007, 727): “Independents will have weaker attitudes and show less bias in how they interpret new information.”

Partisan Differentials

The analysis tests three partisan influences on Bush approval: (1) the partisan macroeconomic cleavage, (2) the in-party/out-party rally effect, and (3) the war-economy partisan effect. The partisan macroeconomic cleavage predicts Democrats are relatively more unemployment averse than Republicans. Relative unemployment aversion is measured by the economic preference ratio \( \beta_1 / \beta_2 \) (Hibbs 1986; Smyth, Taylor, and Dua 1992). The larger is the ratio, the greater is the degree of relative unemployment aversion. Democrats are predicted to have a larger preference ratio than Republicans. The results do not support this hypothesis. The ratio for Republicans

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(β_1/β_2 = 10.11/6.19 = 16.33) is slightly greater than Democrats (β_1/β_3 = 5.294/3.67 = 14.43). Additionally, the inflation and unemployment parameters are nearly twice as large for Republicans than Democrats. Interestingly, the short-run effects α_1 and α_2 are reversed, and are larger for Democrats than Republicans, consistent with the in-party/out-party economic hypothesis by Lebo and Cassino (2007).

The in-party/out-party effect also relates to base approval and rally events. Base approval, β_0, is predicted to be largest for Republicans because of in-party loyalty to the Republican president. β_0 is predicted to be smallest for Democrats because of out-party opposition to the Republican presidency. β_0 for Independents and aggregate popularity are predicted to occur between the two partisan outcomes. The results support this hypothesis. β_0 for Republicans equals 79.42; β_0 for Democrats is 25.46; β_0 for Independents equals 37.94; and β_0 for overall popularity is 34.47.

The rallies for 9/11 and the Iraq War are predicted to be larger for out-party identifiers than in-party identifiers. Because in-party identifiers exhibit strong base support, rally events have limited potential for further influence on approval. Because out-party identifiers have weak base support for a president of the opposition party, rally events have greater potential for influence. As predicted, both the 9/11 and Iraq War rallies are larger for Democrats than Republicans, as estimated by β_4 and β_6. The 9/11 and Iraq War rally effects for Independents and aggregate popularity occur between the two partisan outcomes.

Out-party identifiers are predicted to exhibit faster and deeper deterioration of rally events than in-party identifiers. Democrats give fleeting credit to a Republican president for rally events, while Republicans give more sustained credit. As predicted, the 9/11 decay effect, β_5, is largest for Democrats and smallest for Republicans. The 9/11 rally decay effect for Independents and aggregate popularity occurs between the two partisan outcomes. The 9/11 rally decay effect for Republicans, while insignificant, is slightly positive instead of negative.

The partisan war-economy hypothesis asserts that Iraq War fatalities influence Democrats more than Republicans. As predicted, the parameter β_7 is larger for Democrats than Republicans. This is consistent with the view that Democrats are more antiwar averse than Republicans, emphasizing war casualty costs to a greater extent. This is consistent with opinion poll data that show a wide partisan gulf on the issue of the Iraq War. Jacobson (2003a, 724) observes:

There was also a noticeable partisan divide on going to war with Iraq. . . . Democrats were considerably less supportive than Republicans, and the partisan gap had widened over time as Republicans became more supportive while Democrats became less so until the war began. . . . Even after statues of Saddam were falling in Baghdad, partisan differences over the Iraq war remained much wider than partisan differences over fighting terrorism in Afghanistan.

From Equation 3, the influence of 9/11 and the Iraq War on presidential approval equals C = (β_4T - β_5δ) + (β_6W - β_7F). This expression is estimated from the results
Figure 2
Partisan Differential on the Influence of 9/11 and the Iraq War

Note: Results based on parameter estimates in Table 1. CD = (53.688T - 2.4025) + (20.362W - 5.168F).
CR = (15.09T + .3540) + (7.042W - 3.048F).


Figure 2 illustrates the pattern for CD and CR. Democrats show stronger rally and decay effects than Republicans for 9/11 and the Iraq War. Based on estimates for β, the 9/11 rally equals a remarkable 53.69 percent for Democrats and a moderate 15.09 percent for Republicans. The popularity decay effects for 9/11 and the Iraq War are more rapid and deeper for Democrats than Republicans. This is shown in Figure 2 by the downward popularity trend following 9/11, and then again following the Iraq War. This decline in approval creates a coalition-of-minorities pattern.

Democrats exhibit rally and decay effects that reach a greater height and fall to a lower depth than Republicans. Among Democrats, the influence of 9/11 and the Iraq War on approval ranges from a high of +53.69 percent following 9/11 to a low of −8.28 percent in December 2008 because of mounting war fatalities, an incredible downward swing of −61.97 percent. The high-low range for the rally and decay effects among Republicans occurs over a smaller interval from +21.97 percent at the start of the Iraq War to a low of +10.41 percent in December 2008, a relatively small downward shift of −11.56 percent. These results support Jacobson’s (2003b, 1)
observation that “the overwhelming bipartisan popular and congressional support initially enjoyed by George W. Bush after the terrorist attacks of September 11, 2001 was unsustainable because it was not supported by a fundamental and durable change in mass political attitudes.”

While not in Figure 2, the 9/11 and Iraq War effects for Independents and aggregate popularity consist of rallies that are almost as large as Democrats, but with slower popularity deterioration than Democrats.

From Equation 3, economic influence on approval is $E = -\beta_u(u - u^*)^2 - \beta_p^2$. This is also estimated from the implied parameters in Table 1. Among Democrats, $E_D = -5.294(u - 5.644)^2 - 0.367p^2$. For Republicans, $E_R = -10.11(u - 5.495)^2 - 0.619p^2$. Figure 3 illustrates the pattern for $E_D$ and $E_R$. The economy has greater adverse influence on presidential approval among Republicans than Democrats. Economic influence on Republican opinions occurs from $-1.17\%$ to $-29.4\%$, a spread of $28.23\%$. Economic influence on Democrats occurs from $-0.46\%$ to $-12.82\%$, a smaller range of $12.36\%$. While not in Figure 3, economic influence on popularity sentiment among Independents and aggregate popularity...
occurs between Republicans and Democrats. Figure 3 illustrates that economic influence on Bush approval exhibits a downward popularity trend, consistent with the coalition-of-minorities effect. This is attributable to upward unemployment fluctuations during Bush’s second term in office, combined with periods of moderately rising inflation throughout much of the Bush presidency (excluding the last four months where inflation fell dramatically because of decreasing petroleum and gasoline prices). The overall coalition-of-minorities pattern on Bush approval is caused by three factors, following the initial presidential honeymoon and the 9/11 rally. Popularity deterioration develops from the 9/11 rally decay effect, mounting war casualties, and declining economic performance.

A partisan cleavage occurs for war and the economy. The rally and decay effects for 9/11 and the Iraq War are large for Democrats but small for Republicans while economic influence on approval is large for Republicans and small for Democrats. To further examine the partisan divide, Wald statistics are used to test the \( \beta \) parameters for equality-of-coefficients across equations. This involves non-linear least squares (NLS) regression analysis of the model to directly estimate the parameters.\(^{27}\)

Based on the NLS procedure, the unemployment parameter, \( \beta_4 \), is significantly greater for Republicans than Democrats at the .05 level (one-tailed test; t-statistic = 1.76); while the inflation parameter, \( \beta_2 \), is insignificantly different between the two political parties (t-statistic = 1.21). Three of the four rally and decay parameters—\( \beta_4 \), \( \beta_5 \), and \( \beta_6 \)—are significantly different between Democrats and Republicans at the .01 level (t-statistics equal –3.23, –5.8, and –2.14 respectively). Also, as predicted, the war-casualties parameter, \( \beta_7 \), is significant for Democrats and insignificant for Republicans (t-statistics are 7.01 and 1.78 respectively). However, the difference between the two political parties for the war casualties effect is found to be insignificant (t-statistic equals –1.27). Overall, four of the six economic and war-related parameters are significantly different between Democrats and Republicans, supporting the hypothesis of a partisan split on the war economy.

Table 2 shows a breakdown of the various effects on approval among Democrats, Independents, Republicans, and aggregate popularity. Economic influence on Democrats ranges from –0.46 percent to –12.82 percent while the rally and decay effects extend over a much wider range from 53.69 percent to –8.28 percent. Economic influence on Republican opinions occurs from –1.17 percent to –29.4 percent while the rally and decay effects occur over a smaller range from 21.97 percent to 10.41 percent. For Independents and aggregate popularity, both the war-related effects and the economic effects are substantial. Economic influence on Independents ranges from –0.978 percent to –26.63 percent while the rally and decay effects occur from 45.33 percent to 10.57 percent. Economic influence on aggregate popularity occurs from –0.928 percent to –29.36 percent while the rally and decay effects range from 50.63 percent to 17.06 percent.

Each of the individual economic and rally and decay effects also supports the hypothesis of a partisan differential. The high-low range for both the unemployment and inflation effects are greater for Republicans than Democrats, whereas the
Table 2
High-Low Range of Influence for Economic and Rally/Decay Effects

<table>
<thead>
<tr>
<th>Influence on Approval</th>
<th>Democrats</th>
<th>Independents</th>
<th>Republicans</th>
<th>Aggregate Popularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation (-β1p^2)</td>
<td>0.00 to -11.10</td>
<td>-0.01 to -23.99</td>
<td>-0.01 to -18.72</td>
<td>-0.01 to -18.66</td>
</tr>
<tr>
<td>Unemployment (-β1(u - u*)^2)</td>
<td>-0.01 to -12.82</td>
<td>-0.02 to -26.63</td>
<td>0.00 to -29.39</td>
<td>-0.01 to -29.36</td>
</tr>
<tr>
<td>Inflation and unemployment (E = -β1p^2 - β1(u - u*)^2)</td>
<td>-0.46 to -12.82</td>
<td>-0.98 to -26.63</td>
<td>-1.17 to -29.4</td>
<td>-0.93 to -29.36</td>
</tr>
<tr>
<td>9/11 rally and decay (βT - βF)</td>
<td>53.69 to 10.45</td>
<td>45.33 to 20.22</td>
<td>21.46 to 15.09</td>
<td>50.63 to 29.39</td>
</tr>
<tr>
<td>Iraq War rally/decay (βW - βF)</td>
<td>9.29 to -18.74</td>
<td>14.15 to -9.65</td>
<td>0.51 to -11.05</td>
<td>10.97 to -12.33</td>
</tr>
<tr>
<td>9/11 and Iraq War (C = βT - βF + βW - βF)</td>
<td>53.69 to -8.28</td>
<td>45.33 to 10.57</td>
<td>21.97 to 10.41</td>
<td>50.63 to 17.06</td>
</tr>
</tbody>
</table>

Note: High-low effects based on explanatory variables and parameter estimates in Table 1.

high-low range for the various 9/11 and the Iraq War effect occur over a wider interval for Democrats than Republicans.

Among Independents, Republicans, and aggregate popularity, the positive rally events for 9/11 and the Iraq War exceed the subsequent 9/11 popularity decay and war casualty effects, creating a net gain on approval. For instance, the net influence of 9/11 and the Iraq War on aggregate approval occurs over a positive range, from a high of 50.63 percent to a low of 17.06 percent. This appears to support the findings by Norpoth and Sidman (2007), which show that the Iraq War rally likely slowed down the decay effect of the 9/11 rally on aggregate popularity. Among Democrats, the 9/11 popularity decay and war casualty effects eventually cancel out the rally effects by July of 2003. The net influence on Democrats drops into the negative range from that date until the end of the Bush presidency. The net influence of 9/11 and the Iraq War on Democratic opinions ranges from 53.69 percent to -8.28 percent.28

Robustness of Results

Further analysis considers other economic influences on Bush approval. This includes the Dow Jones Industrial Average (DJII), real GDP growth (RGDP), real disposable personal income growth per capita (RDPI), and gasoline prices. The DJI effect is insignificant in almost all estimates. The influence of either RGDP or RDPI is significant in some cases, but the findings are not nearly as strong as inflation and unemployment in the initial model. The price per gallon of regular unleaded gasoline is closely substitutable for inflation in the initial model, yielding strong significant results.29 This is not surprising as gasoline and petroleum prices are a major influence on inflation.30
An alternative method is also used to estimate the rally and decay effects for the Iraq War and 9/11. Two news coverage variables by Eichenberg, Stoll, and Lebo (2006) are utilized for the two rallies. The first news variable measures the volume of articles in *The New York Times* that refer to 9/11 in the weeks after the event. The second news variable measures the volume of *New York Times* stories that refer to the Iraq War in the weeks following the start of the conflict. The news variables provide a way to estimate the intensity and duration of the two rallies based on media activity, which is less arbitrary than the counter- and dummy variables in the initial model of Table 1.

This approach assumes that news coverage affects public opinion of rally events. Eichenberg, Stoll, and Lebo (2006, 801) state: “Our findings show that rally events can positively (and sometimes negatively) influence support, and we have demonstrated that impact using a new and arguably superior measure of rallies based on news coverage of rally events.” Eichenberg, Stoll, and Lebo’s news variables are substituted for the counter- and dummy variables in the initial model.

Preliminary analysis finds Eichenberg et al.’s rally variables are strongly significant. Table 3 shows the empirical results for this version of the Bush popularity model, which utilizes gasoline prices instead of inflation and the news variables instead of the counter- and dummy variables. The findings support the results of the initial model in Table 1. The coefficients for the two rallies and the war casualties effect, $\alpha_{5n}$, $\alpha_{6n}$, and $\alpha_{8}$, are large and highly significant for Democrats while the coefficients are small and insignificant for Republicans. The economic coefficients are large and highly significant for Republicans, whereas the economic coefficients are much smaller for Democrats. The coefficient for gasoline prices, $\alpha_{3g}$, is significant for Democrats, but the effect is small, while the unemployment and squared unemployment coefficients, $\alpha_{1}$ and $\alpha_{2}$, are small and insignificant for Democrats.

All economic, rally, and war fatalities effects are large and highly significant for Independents and aggregate popularity. The results reinforce the earlier findings of a partisan differential for war and the economy. One difference between the first model in Table 1 and the second model in Table 3 is the presidential honeymoon. The honeymoon coefficient, $\alpha_{4}$, is either insignificant or has the wrong sign for the popularity regressions in Model 2 while the honeymoon effect is significant for all groups except Republicans in Model 1.

Prior studies find that economic influence on G. W. Bush approval is insignificant during the Iraq War time period following March 2003 (Voeten and Brewer 2006; Eichenberg, Stoll, and Lebo 2006; Gelpi, Feaver, and Reifler 2006; Hetherington and Nelson 2004). Previous analyses, however, consider only the first part of the Bush presidency, whereas the current study examines the entire two terms in office. Table 4 provides a reestimation of Model 2, corresponding to the Iraq War period from April 2003 to December 2008. The honeymoon and 9/11 variables are excluded from the analysis because the events occurred prior to the Iraq War.

The results in Table 4 are analogous to Table 3. The coefficients for the Iraq War rally and the war casualties effect are large and highly significant for Democrats.
Table 3  
**Model 2: Alternative Seemingly Unrelated Regression-Ordinary Least Squares (SUR-OLS)**  
Model of Bush Approval (March 2001 to December 2008)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Democrats</th>
<th>t</th>
<th>Independents</th>
<th>Republicans</th>
<th>t</th>
<th>Aggregate Popularity</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>$\alpha_0$</td>
<td>-5.911</td>
<td>-0.158</td>
<td>-85.328*</td>
<td>-2.167</td>
<td>-65.566*</td>
<td>-2.174</td>
<td>-74.424*</td>
</tr>
<tr>
<td>Unemployment</td>
<td>$\alpha_2$</td>
<td>13.550</td>
<td>1.007</td>
<td>46.577**</td>
<td>3.182</td>
<td>48.029**</td>
<td>3.762</td>
<td>42.270**</td>
</tr>
<tr>
<td>Gasoline prices</td>
<td>$\alpha_3$</td>
<td>-0.021*</td>
<td>-2.016</td>
<td>-0.057**</td>
<td>-4.503</td>
<td>-0.063**</td>
<td>-5.001</td>
<td>-0.046**</td>
</tr>
<tr>
<td>Honeymoon</td>
<td>$\alpha_4$</td>
<td>-1.029*</td>
<td>-2.460</td>
<td>0.195</td>
<td>0.492</td>
<td>0.239</td>
<td>0.821</td>
<td>-0.038</td>
</tr>
<tr>
<td>9/11 news</td>
<td>$\alpha_{5n}$</td>
<td>32.080**</td>
<td>8.863</td>
<td>20.860**</td>
<td>5.944</td>
<td>1.503</td>
<td>0.595</td>
<td>17.625**</td>
</tr>
<tr>
<td>Iraq War news</td>
<td>$\alpha_{6n}$</td>
<td>18.000**</td>
<td>4.008</td>
<td>18.429**</td>
<td>4.069</td>
<td>5.615</td>
<td>1.679</td>
<td>13.699**</td>
</tr>
<tr>
<td>Log of war fatalities</td>
<td>$\alpha_7$</td>
<td>-5.545**</td>
<td>-6.077</td>
<td>-2.606**</td>
<td>-3.546</td>
<td>-0.059</td>
<td>-0.126</td>
<td>-2.304**</td>
</tr>
<tr>
<td>Lagged approval</td>
<td>$\alpha_8$</td>
<td>0.422**</td>
<td>6.864</td>
<td>0.407**</td>
<td>5.892</td>
<td>0.420**</td>
<td>4.611</td>
<td>0.483**</td>
</tr>
</tbody>
</table>

**Long-run parameters**

| Unemployment target  | $\alpha_9$   | 5.425     | 5.608  | 5.377        | 5.491       |
| Base approval        | $\beta_0$    | 53.392    | 76.334 | 110.711      | 80.552      |
| Unemployment$^2$     | $\beta_1$    | -2.162    | -7.000 | -7.777       | -7.449      |
| Gasoline prices      | $\beta_2$    | -0.037    | -0.097 | -0.110       | -0.089      |
| Honeymoon            | $\beta_3$    | -1.782    | 0.329  | 0.416        | -0.073      |
| 9/11 news            | $\beta_{5n}$| 55.534    | 35.165 | 2.617        | 34.107      |
| Iraq War news        | $\beta_{6n}$| 31.160    | 31.067 | 9.779        | 26.509      |
| Log of war fatalities| $\beta_7$    | -9.606    | -4.392 | -1.012       | -4.459      |
| Partial adjustment   | $\lambda$    | 0.578     | 0.593  | 0.574        | 0.517       |

| $R^2$                | 0.9451       | 0.9244    | 0.8781  | 0.9511       |
| $\sigma$             | 4.74         | 4.87      | 3.57    | 3.58         |
| Durbin-h Statistic   | -0.368       | -0.762    | -1.081  | -1.689       |
| Observations         | 94           | 94        | 94      | 94           |


* $p < .05$. ** $p < .01$; two-tailed t-tests.
Table 4
Model 2A: Bush Approval during the Iraq War (April 2003 to December 2008)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Democrats</th>
<th>t</th>
<th>Independents</th>
<th>t</th>
<th>Republicans</th>
<th>t</th>
<th>Aggregate Popularity</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>$a_0$</td>
<td>54.814</td>
<td>1.151</td>
<td>-10.930</td>
<td>-0.226</td>
<td>-44.903</td>
<td>-0.964</td>
<td>-40.425</td>
<td>-1.067</td>
</tr>
<tr>
<td>Unemployment$^2$</td>
<td>$-a_1$</td>
<td>-0.505</td>
<td>-0.040</td>
<td>-2.911*</td>
<td>-2.202</td>
<td>-4.205**</td>
<td>-2.856</td>
<td>-3.638**</td>
<td>-3.296</td>
</tr>
<tr>
<td>Unemployment</td>
<td>$a_2$</td>
<td>0.298</td>
<td>0.021</td>
<td>32.391*</td>
<td>2.181</td>
<td>44.667**</td>
<td>2.737</td>
<td>39.488**</td>
<td>3.198</td>
</tr>
<tr>
<td>Gasoline prices</td>
<td>$a_3$</td>
<td>-0.204</td>
<td>-0.292</td>
<td>-0.039**</td>
<td>-2.711</td>
<td>-0.058**</td>
<td>-3.463</td>
<td>-0.041**</td>
<td>-3.392</td>
</tr>
<tr>
<td>Iraq War news</td>
<td>$a_4$</td>
<td>16.578**</td>
<td>3.848</td>
<td>12.051*</td>
<td>2.543</td>
<td>3.427</td>
<td>0.760</td>
<td>10.751**</td>
<td>2.910</td>
</tr>
<tr>
<td>Lagged approval</td>
<td>$a_6$</td>
<td>0.186</td>
<td>1.785</td>
<td>0.229*</td>
<td>2.185</td>
<td>0.394**</td>
<td>3.529</td>
<td>0.319**</td>
<td>3.001</td>
</tr>
</tbody>
</table>

**Long-run parameters**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Democrats</th>
<th>t</th>
<th>Independents</th>
<th>t</th>
<th>Republicans</th>
<th>t</th>
<th>Aggregate Popularity</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment target</td>
<td>$u^*$</td>
<td>2.966</td>
<td>5.563</td>
<td>5.308</td>
<td>5.427</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base approval</td>
<td>$\beta_1$</td>
<td>67.873</td>
<td>102.620</td>
<td>121.583</td>
<td>97.917</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment$^2$</td>
<td>$-\beta_2$</td>
<td>-0.062</td>
<td>-3.774</td>
<td>-6.947</td>
<td>-5.339</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Gasoline prices</td>
<td>$-\beta_3$</td>
<td>-0.005</td>
<td>-0.050</td>
<td>-0.095</td>
<td>-0.060</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iraq War news</td>
<td>$\beta_4$</td>
<td>20.364</td>
<td>15.622</td>
<td>5.658</td>
<td>15.777</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log of war fatalities</td>
<td>$-\beta_5$</td>
<td>-16.534</td>
<td>-16.387</td>
<td>-4.635</td>
<td>-12.214</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial adjustment</td>
<td>$\lambda$</td>
<td>0.814</td>
<td>0.771</td>
<td>0.606</td>
<td>0.681</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| $R^2$                         | 0.8359        | 0.8903    | 0.8436 | 0.9115       |
| $\sigma$                      | 3.7           | 3.92      | 3.88   | 3.15         |
| Durbin-h Statistic            | -2.32         | 0.164     | -0.539 | -1.403       |
| Observations                  | 69            | 69        | 69     | 69           |


*p < .05. **p < .01; two-tailed t-tests.
while the coefficients are small and insignificant for Republicans. The economic coefficients are large and highly significant for Republicans, whereas the economic coefficients are small and insignificant for Democrats. All economic, rally, and war fatalities effects are large and highly significant for Independents and aggregate popularity. Gasoline prices and unemployment are significant influences on presidential approval across all groups except Democrats, whereas the war fatalities effect is significant across all groups except Republicans.

These empirical results contrast with prior analyses of aggregate Bush approval during the Iraq War period that find economic influence is insignificant. The discrepancy is attributable to two factors. Unlike previous studies, the present analysis measures the economy in terms of gasoline prices and the quadratic influence of unemployment. Second, this analysis examines the entire Bush presidency, including the last two years of declining economic performance, whereas previous studies consider only the first part of the Bush administration prior to the slowing economy of 2007 and 2008.

Conclusion

Partisan divisions among the electorate are strongly apparent during the G. W. Bush era. Disparities in partisan opinions occur over many issues, including the Iraq War. The main contribution of this study is an analysis of two partisan presidential popularity issues. The analysis examines the relation between the coalition-of-minorities and the influence of war and the economy on partisan presidential approval. The study also considers the effect of polarity among partisan preferences upon overall popularity sentiment.

The influence of 9/11, the Iraq War, and the economy upon Bush approval are examined across Democrats, Republicans, Independents, and aggregate popularity. Differences occur across partisan subgroups, as well as some similarities and linkages. 9/11 and the Iraq War outweigh economic influence on Democratic opinions of Bush while economic influence surpasses the effects of 9/11 and the Iraq War on Republican opinions. 9/11 and the Iraq War affect Democratic opinions of Bush more than Republican opinions while the economy affects Republicans more than Democrats. A partisan split occurs for war and the economy on Bush approval.

All economic and war-related effects are significant for Independents and aggregate approval. Economic influence on aggregate Bush popularity is mainly attributable to Republican and Independent opinions because economic influence on approval is small for Democrats. The effects of the Iraq War and 9/11 on aggregate popularity are mainly attributable to Democratic and Independent sentiment because those effects are small for Republicans. Independent sentiment is the decisive influence on aggregate approval because disparities between Democratic and Republican sentiment largely cancel out.
Citizen macroeconomic preferences are approximately time consistent across all groups, exhibiting little or no inflation bias. The partisan macroeconomic cleavage does not occur for Bush approval; Democrats are not relatively more unemployment averse than Republicans. Instead, economic influence on Republican opinions is greater than Democrats, for inflation and unemployment. An in-party/out-party effect occurs for rally events on Bush approval. Democrats show stronger rallies than Republicans for 9/11 and the Iraq War. Democrats also show faster and deeper popularity decay of the 9/11 and Iraq War rally events than Republicans.

The results are robust. An alternative specification for the Bush popularity equation utilizes gasoline prices instead of inflation and Eichenberg, Stoll, and Lebo’s (2006) news coverage variables for 9/11 and the Iraq War rather than the counter- and dummy variables. The findings are similar to the initial framework, showing a partisan split for war and the economy. Reestimation of the model during the Iraq War time frame shows analogous results for the partisan differential. Unlike prior studies of aggregate Bush popularity, this analysis finds that economic influence on Bush popularity is significant during the Iraq War time period across all groups, except Democrats. Finally, the analysis shows that the coalition-of-minorities pattern of declining Bush approval is caused by the 9/11 rally decay effect, the war casualties effect, and declining economic performance.

Notes

1. The initial studies by Downs (1957) and Kramer (1971) examine presidential and congressional votes while Mueller’s (1973) breakthrough study considers presidential approval.

2. Carlsen (2000) refers to three partisan macroeconomic influences on presidential approval, consisting of the responsibility hypothesis, the clientele hypothesis, and the salient goal hypothesis.

3. Part of the coalition-of-minorities pattern is likely included in the presidential honeymoon effect. Erikson, MacKuen, and Stimson (2002, 36) state: “The interesting question is why the honeymoon fades. Some say the reason why presidents lose support over time is that they cannot please all segments of society all the time. This theory is often called the coalition-of-minorities argument.”

4. Recent trends for “the most important problem facing the country” are available at Gallup Poll Web site at http://www.gallup.com/poll/1675/Most-Important-Problem.aspx.

5. The analysis by Eichenberg, Stoll, and Lebo (2006) includes real disposable income per capita as an explanatory variable for G. W. Bush popularity but excludes inflation and unemployment from the model.


7. The political-military cycle literature examines the use of military force abroad as a means to manipulate presidential approval or election outcomes (Gowa 1998; Hess and Orphanides 1995; Ostrom and Simon 1985).


9. Callaghan and Virtanen (1993) speculate that out-party identifiers may exhibit weaker rallies than in-party identifiers. The results of their analysis, however, reject this hypothesis for the Iran Hostage crisis on Carter approval.
10. Three reports from the Pew Research Center (www.pewresearch.org) find Democrats are more ant-war averse than Republicans for the Iraq War. The reports include Beyond Red vs. Blue (May 10, 2005), More Say Iraq War Hurts Fight Against Terrorism (July 21, 2005), and Petraeus' Proposals Favored, But No Lift in War Support (September 18, 2007).

11. An appealing characteristic of the quadratic preference equation is that the model reduces to a linear policy reaction function, which is convenient for estimation (Friedlaender 1973; Alesina and Sachs 1988).

12. In prior studies of economic influence on G. W. Bush popularity, Gelpi, Feaver, and Reifler (2006) find that the Dow Jones Industrial Average has a marginally significant influence; Voeten and Brewer (2006) find that the consumer comfort index is significant but relatively small; and Eichenberg, Stoll, and Lebo (2006) find that real disposable income growth or consumer confidence is significant in the pre–Iraq War period but not during the war.

13. The popularity equation is similar to the specification by Fox (1997, 2003). The α parameters in the popularity Equation 1 denote short-run effects on approval, while the implied β parameters are the long-run effects.

14. Preliminary analysis finds other events such as the capture of Saddam Hussein and the "mission accomplished" speech have insignificant influence on Bush approval, similar to the results by Eichenberg et al. (2006).

15. The Gallup Poll frequently tabulates presidential approval more than once each month. In these instances, the midmonth popularity measurements are used in the empirical analysis. Presidential approval is based on the Gallup Poll question: “Do you approve or disapprove of the way George W. Bush is handling his job as president?”

16. Alternative approaches to the geometric lag structure include the Box-Jenkins model and other time-series, autoregressive, and error correction methods that make no a priori assumptions on the pattern of lagged effects (Kernell 1978; Callaghan and Virtanen 1993; Carlsen 2000; Lebo and Cassino 2007).


18. The influence of the U.S. invasion into Afghanistan is merged with the 9/11 rally effect because the two events are closely related and occur sequentially.

19. The U.S. invasion of Iraq began on March 20, 2003. The influence on approval, however, is not observed in this analysis until April because midmonth popularity observations are used in the empirical model.


21. Preliminary analysis finds that a three-month pulse for the Iraq War rally yields stronger empirical results than either a one-month pulse or a two-month pulse. The three-month Iraq War rally is similar in duration to the three-month Gulf War rally on G. H. Bush approval in 1991 (Fox 2003).

22. Refer to Lai and Reiter (2005) for a discussion of the rally and decay effects of war on U.K. government approval.

23. Several studies observe that monthly war causalities during the Vietnam War significantly affect Johnson popularity (MacKuen 1983; Smyth, Taylor, and Dua 1991; Gartner and Segura 1998; Fox 1997, 2003). Preliminary analysis of G. W. Bush approval, however, finds that the monthly casualties effect is insignificant. Instead, cumulative casualties are found to significantly influence Bush approval, similar to the results by Eichenberg, Stoll, and Lebo (2006).

24. The honeymoon effect is set equal to zero for long-run presidential approval because the influence is transitory, occurring only in the first year.

25. To show robustness, ordinary least squares (OLS) estimates of the popularity equations for Democrats, Independents, and Republicans yield similar results to the seemingly unrelated regression (SUR) model in Table 1. The OLS model for partisan presidential approval is available at the Journal of Conflict Resolution Web site.
26. The cause-effect relation between partisan opinions and aggregate presidential approval assumes overall popularity approximately equals the sum of opinions among Democrats, Independents, and Republicans. While some Gallup Poll respondents may not identify with any of the three partisan categories, this small effect is unlikely to alter the main results of the analysis.

27. The NLS regression model for partisan presidential approval is available with the replication materials at http://jcr.sagepub.com/supplemental

28. To test robustness, partisan presidential approval is reestimated as a logit model, which assumes citizens opinions exhibit a near-normal (logistic) distribution. This contrasts with the SUR-OLS model in Table 1, which assumes citizen opinions are uniformly distributed. The main results of the logit analysis are similar to the initial model and are available at the Journal of Conflict Resolution Web site.

29. Monthly averages for gasoline prices are calculated based on Weekly U.S. Regular All Formulations Retail Gasoline Prices (Cents per Gallon) from the Energy Information Administration (http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html).

30. Decker and Wohar (2007) find that petroleum product prices may influence U.S. presidential election outcomes in U.S. states that are heavy consumers of petroleum.

31. Eichenberg, Stoll, and Lebo’s news coverage variables for 9/11 and the Iraq War are originally constructed as weekly observations. The data are transformed into monthly observations using the general approach by Eichenberg, Stoll, and Lebo (2006, 793). This consists of “totaling the words of all relevant stories” per month and then dividing through by the maximum monthly total.

References


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