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PUBLIC OPINION ANDTHE PRESIDENT'S USE OF EXECUTIVE ORDERS: AGGREGATE- AND INDIVIDUAL-LEVEL ANALYSES ACROSS TIME

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A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Arts
in the Department of Political Science
in the College of Sciences
at the University of Central Florida
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ABSTRACT

Presidential approval ratings are a political resource that presidents and their advisors hope to influence through strategic action in order to achieve their policy goals (McAvoy 2008, 284). Through 1999, scholarly literature had largely ignored the president's use of unilateral powers. Since Moe and Howell (1999a, 1999b), however, the literature on the unilateral presidency has expanded rapidly. Despite the rapid growth of literature examining the unilateral presidency, and 45 years of presidential approval ratings literature, literature examining the link between the president's use of unilateral powers and subsequent presidential approval ratings is virtually nonexistent. Existing research has not statistically examined what effect, if any, the president's issuing executive orders has on subsequent job approval ratings. This thesis seeks to address that research gap. By modeling aggregate and individual-level presidential approval ratings, using fixed-effect models, OLS regression, and binary logistic regression, this thesis finds evidence indicating the president's issuing of executive orders has a negative impact on the subsequent presidential job approval ratings that individuals report. If an executive order is salient to the public, presidents receive lower presidential approval ratings from persons of all political parties; however, if the executive order is non-salient then presidents only receive lower presidential approval ratings from members of their own political party. Members of the opposition party report higher presidential approval ratings when the president issued non-salient executive orders. Thus, this thesis concludes that the president's issuing of executive orders has significant effects on subsequent presidential job approval ratings, and future research should be conducted to explore this relationship further.

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CHAPTER 1: INTRODUCTION

> "And that's why, today, I'm beginning a new effort to fix as much of our immigration system as I can on my own, without Congress."
>
> "I have also directed Secretary Johnson and Attorney General Holder to identify additional actions my administration can take on our own, within my existing legal authorities, to do what Congress refuses to do and fix as much of our immigration system as we can."
>
> President Barack Obama, June 30, 2014 (Office of the Press Secretary 2014).

Frustrated with a deadlocked Congress on immigration reform, and fearing the further growth of an ever-deepening humanitarian crisis on the border, President Obama decided to act unilaterally to do what Congress could not or would not do. President Obama is only one of many presidents who have increasingly decided to act unilaterally after facing a hostile or deadlocked Congress. Increasingly presidents have used executive orders to obtain their national or foreign policy goals (Moe and Howell 1999a, 1999b). By using executive orders to circumvent Congress, presidents are able to use only one of their many tools to act unilaterally.[1]

Through 1999, scholarly literature had largely ignored the use of unilateral powers by presidents. Since Moe and Howell (1999a, 1999b); however, the literature on the unilateral presidency has expanded rapidly. Despite the rapid growth of the literature examining the unilateral presidency, and 45 years of presidential approval ratings literature; literature examining the link between the president's use of unilateral powers and subsequent presidential approval ratings is virtually nonexistent. Existing research has not statistically examined what effect, if any, issuing executive orders have on a president's approval ratings. Some studies

[1] Other tools include executive agreements, proclamations, national security directives, memoranda, and signing statements (Howell 2005).

suggest an implicit negative relationship between presidential approval ratings and executive orders (*see* Mayer and Price 2002; Ouyang 2012). This thesis proposes a theory and a set of hypotheses, tested at the aggregate and individual-level, positing a negative relationship between the number of executive orders that a president issues and their subsequent presidential job approval ratings.

The next section of this chapter is a discussion of the central theory and hypotheses of this thesis. This chapter then concludes with two sections discussing some of the important expected findings of this thesis.

1.1 Theory and Hypotheses

As previously discussed, literature studying the relationship between executive orders and presidential approval is not extensive, and studies examining the effect executive orders has on presidential approval ratings (if any) are non-existent. Ouyang (2012) reports presidents are constrained in the number of executive orders that they can issue because of diffuse support approval ratings at an aggregate level; they fear issuing too many executive orders may lower diffuse support presidential approval ratings. Although Ouyang (2012) does not discuss why presidents fear issuing too many executive orders and how this lowers diffuse support presidential approval ratings, I theorize this is the case because a majority of the public does not, generally, approve of the president's acting unilaterally in the form of executive orders and issuing executive orders may lower presidential approval ratings in the aggregate. Members of the public may disapprove of the use of executive orders because executive orders often bypass

Congress (Howell 2005), or members of the public may disapprove of the president's acting unilaterally for ideological differences (discussed more below).

Ouyang (2012) argues presidents constrain themselves because the use of executive orders may lower the level of diffuse support the institution currently enjoys by negatively affecting the president's "image" in the public's view, and, during times of high diffuse support, presidents would not want to do this (Ouyang 2012, 11). There is a strong link between presidential job approval ratings and a president's "image" (McAvoy 2008). McAvoy (2008) reports that Gallup's presidential approval question is unable to differentiate between "image" or "surface" and "substance" or "depth," and, therefore, anything that affects a president's image also affects their presidential job approval ratings (McAvoy 2008, 296).[2] If the president's image is lowered because the public reacts negatively to the use of unilateral powers by the president in the form of issuing executive orders, as I theorize, then presidential approval ratings may also act accordingly.

Reeves and Rogowski (2016a), using five national representative surveys conducted between 2013 and 2015, report that public support for direct unilateral power use, through executive orders, is low but conditioned by context (148). The public generally disapproves of direct unilateral action; however, if the president acts unilaterally for the sake of national security or because Congress is in a state of gridlock approval for unilateral power use increases by 20 percentage points (Reeves and Rogowski 2016a, 148). Reeves and Rogowski's (2016a) findings are consistent with my theory and hypothesis in that the public disapproves of the president

[2] Gallup presidential job approval question asks: "Do you approve or disapprove of the way [first and last name] is handling his job as President?"

acting unilaterally. In general, the public demonstrates low levels of approval for unilateral actions (including executive orders); accordingly, executive orders should be negatively associated with presidential job approval ratings. If the public generally disapproves of unilateral power use (including issuing executive orders) by the president as Reeves and Rogowski (2016a) report, and my theory and hypotheses posit, then issuing executive orders may have a negative impact on presidential job approval ratings.

As discussed previously, I theorize the majority of the public, in general, disapproves of the president's acting unilaterally by issuing executive orders. Because of this, I hypothesize:

> **H_1**: There is a negative relationship between the number of executive orders that a president issues and subsequent presidential job approval ratings, *ceteris paribus*.

Ouyang (2012) also discusses the relative saliency of executive orders and how non-salient and salient executive orders have different effects on diffuse support approval ratings. Using a dataset on significant executive orders (collected by Howell 2003, 2005), Ouyang (2012) considers an executive order salient when it is non-ceremonial[3] and featured on the front page of *The New York Times*.[4] Because not all executive orders may be salient to the public, I hypothesize:

---

[3] As Howell (2005) notes, sometimes executive orders appear on the front page of *The New York Times* that do not include any policy content. These "ceremonial" executive orders are not included among the data analyzed in this study. Only executive orders that include policy content are analyzed presently.

[4] As Howell (2005) notes, virtually all page one stories carry over to other sections of the paper. Therefore, as long as the article discussing the executive order begins on the front page, it is defined as a salient executive order. Howell (2005) divides these salient executive orders into mentions of executive orders in the first 10 paragraphs only (the front page only), and mentions of executive orders that started on the front page. For the purpose of this paper, I consider an executive order as salient as long as the article began on the front page.

H_2: Salient executive orders will have a greater negative effect on presidential job approval ratings than will non-salient executive orders, *ceteris paribus*.

Bond and Fleisher (2001), and Lebo and Cassino (2007) find evidence indicating partisan identity has a large effect on presidential job approval ratings. Respondents belonging to the same party affiliation as the president approve of the president's job performance more than respondents belonging to different party affiliations. I hypothesize:

H_3: The negative relationship between the numbers of executive orders that a president issues and subsequent presidential job approval ratings holds for respondents belonging to all party affiliations, *ceteris paribus*; however, this negative relationship is less strong for persons belonging to the same political party as the president than is negative relationship for persons belonging to some other party, *ceteris paribus*.

If my theory that the majority of the public, in general, disapproves of the president's acting unilaterally in the form of issuing executive orders is empirically supported, then I expect to find evidence indicating support for Hypothesis 3. **Hypotheses 1** and **2** are tested in Chapters 3 and 4 on aggregate- and individual-level models. **Hypothesis 3** can only be tested in Chapter 4 at an individual-level due to data constraints that are discussed in Chapter 3. The next two sections of this chapter discusses expected findings for each section.

1.2 Aggregate-Level Model Expected Findings

Presidential job approval ratings are largely a function of previous presidential job approval ratings (Hibbs 1977; Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013).

Therefore, because presidential job approval ratings in one month are largely a function of previous monthly approval ratings, I expect to find previous presidential approval ratings will largely impact current presidential approval ratings. I expect to find previously low approval ratings are related to low current approval ratings, and previously high approval ratings are related to higher current approval ratings (**Expected Finding 3.1** [**EF 3.1**]). This is, thus, likely some sort of autoregressive function describing the relationship here between past and present levels of presidential job approval.

Fauvelle-Aymar and Stegmair (2013) tells us that the national economy, and specifically the stock market, are valid indicators of the economic well-being of the country at an aggregate-level. They find that the president is rewarded, in the form of higher presidential approval ratings, when the national economy is performing well; when the economy is performing poorly, the president is punished in the form of comparatively lower presidential approval ratings. Therefore, I expect to find evidence indicating presidential approval ratings are significantly associated with changes in the stock market. Increases in the stock market will be related to higher presidential job approval ratings, and decreases in stock market indices should be related to lower presidential job approval ratings (**EF 3.2**).

Presidents are more able to credibly pass blame to other political actors more during times of divided government than they are during times of unified government (Nicholson, Segura, and Woods 2002). Because of this, I expect to find that during times of divided government, presidential job approval ratings will be comparatively higher than such ratings during times of unified government (**EF 3.3**). Jones (2014), and nearly every presidential approval rating study since Mueller (1970, 1973), have reported presidents receive higher

approval ratings during their first six months in office (honeymoon period). Therefore, I expect to find evidence indicating presidents observe significantly higher approval ratings during their first six months in office than they do during the rest of their time in office (**EF 3.4**). Thus, the issuance of executive orders during the "honeymoon period" should have a lesser statistically significant and negative effect on presidential approval ratings during this period, than issuing executive orders would have outside of the "honeymoon period".

1.3 Individual-Level Model Expected Findings

As previously discussed, Bond and Fleisher (2001), and Lebo and Cassino (2007) find evidence indicating partisan identity has a large effect on presidential job approval ratings. Individuals belonging to the same political party of the president approve of the president's job performance at higher levels comparatively than respondents belonging to different political parties. Therefore, I expect to find (**Expected Finding 4.1** [**EF 4.1**]) that in comparing individuals, those who belong to the same political party as the president will be more likely to approve of the president than will those individuals who belong to a different political party than the president (Bond and Fleisher 2001; Lebo and Cassino 2007).

Brody (1991) notes that aggregate-level studies of presidential approval ratings often "assume that individuals: (1) receive evidence about the performance of the economy, (2) judge this evidence against some benchmark, and (3) blame or credit the president for the condition of the economy" (Bond and Fleisher 2001, 530). Unfortunately, this assumption may not always be empirically valid, because it assumes that individuals receive and are able to process information about the state of the economy. To test the effects of the economy on individuals, Bond and

Fleisher (2001) and Clarke et al. (2005) suggest that at an individual-level it is more valid to ask respondents about their retrospective and prospective assessments of the condition of the economy. Following the advice of Bond and Fleisher (2001) and Clarke et al. (2005), I use retrospective and prospective assessments in the individual-level models detailed in Chapter 5; therefore, I expect to find in comparing individuals, those with positive retrospective and prospective assessments of the state of the economy will be more likely to approve of the president than will those individuals who hold negative retrospective and prospective assessments of the state of the economy (**EF 4.2**).

As discussed in more detail in Chapter 5, my individual-level models also include variables controlling for divided government; therefore, I expect to find evidence indicating that during times of divided government, presidential job approval ratings are comparatively higher than presidential job approval ratings during times of unified government (**EF 4.3**).

Extant essays examining the "gender gap" report that differences exist between men and women in terms of how they approve or disapprove of political actors and actions; however, scholarly literature on presidential approval ratings has largely ignored these differences (Clarke et al. 2005). Clarke et al. (2005) argue that it is important for analyst to consider the gender gap when examining presidential approval ratings; because, by "assuming homogeneity between men and women in the forces driving approval ratings," researchers may report spurious estimates (Clarke et al. 2005, 31). I expect to find evidence indicating support for a "gender gap", or more specifically, evidence indicating women are more likely to approve of Democratic Party presidents than they are of Republican Party presidents, and men are be more likely to approve of Republican Party presidents than they are of Democratic Party presidents (**EF 4.4**).

CHAPTER 2: LITERATURE REVIEW

Scholarly literature on executive orders and presidential approval ratings is not extensive. In fact, it seems no study has ever been published examining the relationship between those variables by any social science journal or publisher. Literature on the president's use of unilateral powers has become abundant in the last two decades (Howell 2005); literature on presidential job approval ratings is no less abundant (Gronke and Newman 2003). However, it seems no published study has examined the relationship between the two concepts. Ouyang (2012) is the only existing study (published or not) that has examined this relationship. [5]

Ouyang (2012) argues presidents are constrained in the number of executive orders that they issue by public opinion – in that they issue differing numbers of executive orders during times of high and low levels of presidential approval. Using American National Election Study (ANES) surveys (1981-2001), he finds evidence to show that presidents will issue fewer executive orders during times of high diffuse support (support for the presidential institution as a whole); and more such orders during times of low diffuse support, but the level of diffuse support only constrains non-salient executive orders (executive orders of which the public is unaware). Ouyang argues that this relationship exists because presidents prefer to not use executive orders during times of high diffuse support. Because their use can lead to lower diffuse support levels if Congress or the Supreme Court overturn the executive order. Issuing executive orders can also sour relations between the president and Congress, and this may affect diffuse

[5] Ouyang (2012) was not published in a professional journal; however, it was selected to be presented at the 2012 American Political Science Association Conference (the conference was cancelled before Ouyang (2012) could be presented due to Hurricane Isaac).

support negatively. Finally, executive orders can also harm the president's image, thus lowering diffuse support (Ouyang 2012, 11).[6]

Jones (2014), similar to Ouyang (2012), examined the relationship between executive orders and presidential approval ratings; however, Jones (2014) found no relationship between the two concepts. Jones (2014) used a newly-created dataset to model aggregate level presidential job approval ratings from 1969 to 2012. The study found that the only statistically significant predictors of presidential job approval ratings at an aggregate level were previous presidential job approval ratings and presidential honeymoon periods (*i.e.*, the six months immediately following a president's inauguration). As an explanatory variable, executive orders failed to achieve statistical significance. Jones (2014) hypothesized this to be the case because the public, despite frequent attempts by the media to make executive orders a salient issue, does not attend to the president's use executive orders, because the majority of the public is generally politically unaware of the executive orders. Unfortunately, Jones (2014) did not analyze individual-level data, and the study was only intended to operate as a gateway to future research on this subject. Jones's (2014) study may have suffered from a number of problems, including using only aggregate-level data; and not differentiating between salient and non-salient executive orders.

Because Ouyang (2012) and Jones (2014) are the only existing studies to test the relationship between executive orders and public opinion, it is necessary to examine both types

[6] Ouyang (2012) assumes that an executive order the public does not like can harm a president's diffuse support. This presupposes a negative relationship between executive orders and diffuse support. This thesis argues a similar negative relationship exist between executive orders and specific support (support for specific presidents, as opposed to support for the presidency as a whole).

of studies (executive orders and presidential approval rating literatures) separately to specify the models estimated in this paper.

2.1 The Unilateral Presidency

Studies on unilateral powers were published before 1999; however, it was not until Moe and Howell's studies (1999a, 1999b) that the extant literature began to focus on a theory of presidential use of unilateral powers. Moe and Howell (1999a, 1999b) argue that a president's power to act unilaterally exists specifically because these powers were not enumerated in the Constitution; and, because of this, Congress or the courts are unlikely to restrict unilateral power. These powers have grown over time because presidents are motivated to enhance their legacy and, to do so, requires power. Accordingly, at the very least, no matter their other intentions, presidents are motivated to enhance their own power (Moe and Howell 1999a, 1999b).

Moe and Howell (1999a, 1999b) argue that although presidents are motivated to enhance their own power, they cannot extend this power too greatly or too rapidly without facing constraints. Congress, the courts and, to a much lesser extent, the public constrain presidents, because Congress can draft legislation against a particular executive order, and the Supreme Court can invalidate particular executive orders. Thus, presidents must be strategic about the times during which they can safely enhance their power without potentially harming their long-term legacy (Moe and Howell 1999a, 138).

Since Moe and Howell (1999a, 1999b) studies of unilateral power have expanded in number. Deering and Maltzman (1999) report that presidents use executive orders to bypass Congress, but only when presidents think the Congress will not overturn the executive order by

legislating to contravene the president's policy goal. Mayer and Price (2002) find that presidents use executive orders to affect significant policy change and to send strategic signals to other actors in the political system, such as members of Congress. Cooper (2001) argues that sometimes presidents use executive memoranda (a type of executive action by presidents that is similar to executive orders, but are not published in the Federal Register) (Cooper 2001, 128) instead of executive orders to confuse others in the policy making arena, even though the use of an executive order would be more direct (Cooper 2001, 140). Because the Federal Register Act governs executive orders, but not memoranda (Cooper 2001, 128), presidents may issue an executive order that is a public record, but also issue a memorandum that is not a public record to conceal pertinent information about the executive order, which can lead to confusion among other political actors outside of the executive branch (Cooper 2001, 138). Howell and Lewis (2002) find that presidents reorganize and create executive branch organizations to minimize congressional ability to constrain the president and to maximize their own ability to control these agencies, thus enhancing their own unilateral power.

More recently, Fine and Warber (2012) find that presidents issue three different types of executive orders (major, routine, and symbolic), and previous research has not sufficiently distinguished these types of executive orders. Symbolic executive orders are executive orders that do not have any implications on policy, or executive agency management. Most symbolic executive orders are used to honor dead presidents or to create seals and medals (Fine and Warber 2012, 262). Routine executive orders are executive orders that, "do not drastically depart from existing or newly created policies enacted by Congress" (Fine and Warber 2012, 262). These are executive orders that are designed to carry out the intent of Congress (Warber 2006,

141). Major executive orders are executive orders that create significant and substantive public policies that depart from the "original intent of Congress" (Warber 2006, 143). Fine and Warber (2012) find that symbolic and routine executive orders are more likely to be issued during times of unified government and when Congress is ideologically proximate to the president. During times of divided government, presidents are more likely to issue major executive orders because their legislative preferences diverge from those of Congress (272). Thus, Fine and Warber (2012) conclude that divided and unified government play important roles in the type of executive orders that presidents issue.

Most unilateral power research attempts to explain the conditions in which presidents act unilaterally and why; however, recent research by Warber (2014), and Rottinghaus and Warber (2015) have focused on how presidents use their unilateral powers to target specific constituencies to potentially enhance their own approval ratings with those constituencies.

Warber (2014), argues unilateral power literature often assumes executive orders are solely directed at the bureaucratic offices that make up the executive branch, however, this assumption is not entirely correct. Warber (2014) hypothesizes that presidents may issue executive orders that are directed at specific interests. Using the same executive orders classification scheme discussed previously (symbolic, routine, and major executive orders), Warber (2014), reports that presidents do issue executive orders targeted at specific audiences. Specifically, Democratic presidents issued nearly twice as many major executive orders per year than Republic presidents that targeted specific interests (Warber 2014, 281). Additionally, both parties issue more major executive orders than they do symbolic and routine executive orders when targeting specific interests (Fine 2014, 282). Unfortunately, Warber (2014) is unable to

address why presidents target specific interests when they issues executive orders. The author suggest future research must be conducted to examine this question if unilateral power research is to advance beyond explaining why presidents issues executive orders.

Expanding upon Warber (2014), Rottinghaus and Warber (2015), merge unilateral presidency research with research on the public presidency, and identify the conditions in which presidents can target specific groups when issuing executive orders and executive proclamations. According to public presidency literature, presidents seek to lead and represent the public. Rottinghaus and Warber (2015) argue that the president can seek to lead and represent the public through unilateral directives by issuing constituency based executive orders and executive proclamations. The authors finding suggest that presidents issue more constituency targeting executive proclamations when Congress possesses a large majority party, or when divided government occurs (Rottinghaus and Warber 2015, 306). The authors argue the reason for this finding is because when institutional friction exist presidents need to appeal to their constituents even when they may be unable to get their way in terms of substantive policy, and executive proclamations are one way in which presidents can appeal to their constituents (Rottinghaus and Warber 2015, 303). Rottinghaus and Warber (2015) report presidents do not issue constituency targeting executive orders when institutional friction exists because presidents may be less willing to issue executive orders, because executive orders have policy implications that proclamations do not have. Presidents are more likely to issue constituency targeting executive orders during election years, and during their first year in office (Rottinghaus and Warber 2015, 304-305). Thus, presidents issue executive orders and proclamations that target specific constituencies in order to lead and represent the public.

Seeking to address a research gap in unilateral power literature – research has generally tended to focus on the institutional and behavioral factors that influence presidential power (Young 2013, 329) – Young (2013) studied the role natural disasters, foreign policy crises, and economic crises has in the president's ability to expand unilateral powers. Young (2013) argues presidents are aware of the environment in which they operate, and will attempt to capitalize on moments that present the largest opportunity to increase their power (348). Using negative binomial regression, Young (2013), finds foreign policy crises present the best opportunity for presidents to increase their power (349). Foreign policy crises were found to have a positive statistically significant effect on presidential unilateral power. During foreign policy crises presidential unilateral power (as measure by the number of significant executive order issued) increased dramatically. Economic crises and natural disasters were found to have no significant impact on unilateral power. Suggesting that presidents are unwilling or unable to enhance their own power during economic crises and natural disasters.

A recent unilateral powers study (Reeves and Rogowski 2016a), using four nationally representative surveys, reports that the public has low levels of support for unilateral power use, and these mass attitudes of presidential unilateral power use are stable over time. The authors argue that evaluations of the president are structured by citizens' commitment to core democratic values (Reeves and Rogowski 2016a, 27). The authors report that public support for direct unilateral action is conditioned by context. Public support for unilateral action increases by 20 percentage points during congressional gridlock[7] and when dealing with matters of national

[7] Congressional gridlock occurs when Congress refuses or is unable to pass legislation.

security (27). Surprisingly, the authors report partisanship and evaluations of the president do not strictly shape attitudes about unilateral power use.

Reeves and Rogowski (2016b), using a series of nationally representative survey samples, report the public is responsive to the methods in which presidents intend to use to achieve their policy goals. In the survey, respondents reported lower approval ratings for hypothetical presidential candidates that intended to achieve their policy goals by acting unilaterally. Candidates that intended to achieve their policy goals by working with Congress received higher approval ratings. By using another national representative survey that asked respondent whether they approve or disapprove of a series of policies that presidents from Lincoln to Obama have achieved through acting unilaterally, Reeves and Rogowski (2016b) report that attitudes toward unilateral power shape how voters evaluate policies presidents have achieved through unilateral means (19). Both findings suggest that the public report lower approval ratings when presidents act unilaterally, as opposed to acting legislatively, and when policies are achieved through acting unilaterally members of the public that do not approve of the president acting unilaterally are less likely to support the policy. Thus, public opinion serves as an important constraint on presidents' use of unilateral powers (Reeves and Rogowski 2016b, 21).

2.2 The First Wave of Presidential Approval Ratings Research

Early studies, and indeed most studies, on presidential approval ratings or presidential popularity are derived from Mueller's (1970, 1973) seminal research. Mueller, using multiple OLS regression and Gallup's presidential popularity question, over a 24-year period beginning

with the Truman administration and ending with the Johnson administration, finds four key insights on presidential approval ratings. First, he finds statistically significant evidence indicating president's popularity decline over time.[8] He hypothesizes this is the case because, even if an administration acts with majority support on each issue, it can eventually alienate enough political minorities to be defeated and, in the process, lower popularity will result because public disillusionment with the President occurs over time. This disillusionment occurs because presidents, while seeking election, invariably say or imply they will do more than then they can feasibly do during their term in office (Mueller 1970, 20). Second, he finds statistically significant evidence indicating increases in national unemployment cause the president to receive lower approval ratings, but decreases in unemployment have no effect on presidential approval ratings. Third, he finds evidence indicating presidential approval ratings increase during rally-around-the-flag periods. Finally, he finds evidence indicating presidential approval ratings decline during times of war.

Gronke and Newman (2003) report that presidential approval research has generally advanced in three waves; with the first wave consisting of reactions to Mueller's (1970, 1973) seminal research (502). The first to react to Mueller (1970, 1973) was Stimson (1976). Stimson (1976) finds that presidential popularity follows a cyclical pattern, in which presidents begin their terms with high popularity, but experience parabolic declines, resulting in a loss of popular

[8] Nearly every study dealing with presidential approval ratings recognizes a negative trend in presidential approval ratings after a president takes office. The citations are too numerous to include them all here. For some examples see: Stimson (1976); Kernell (1978); Monroe (1978); Siegelman and Knight (1983); Brody (1991); Gronke and Brehm (2002); Eichenberg, Stoll, and Lebo (2006); Beck, Carr, and Walmsley (2012); Berlemann, Enkelmann, and Kuhlenkasper (2012); and Berlemann, and Enkelmann (2014).

support for about three years, and then recover some at the ends of their terms. Whereas Mueller (1970, 1973) attributed this decline to a coalition of minorities, Stimson (1976) attributed the cyclical decline in presidential approval ratings over time to uninformed citizens having exaggerated expectations of what the president can achieve that inevitably decline (Gronke and Newman 2003, 502). Refuting Mueller (1973) and Stimson (1976), Kernell (1978) agrees presidential approval ratings tend to decline over time; however, he argues that these declines occur because of "real events and conditions," such as the economy, wars, scandals, and international events (Kernell 1978, 508). Similarly to Kernell (1978), Monroe (1978) reports declines in presidential approval ratings can be attributed to changes in inflation and military expenditures. By linking declines in presidential approval ratings to real world events, instead of time, Kernell (1978) and Monroe (1978) ushered in the second wave of presidential approval research (Gronke and Newman 2003, 503).

2.3 The Second Wave of Presidential Approval Ratings Research

The second wave of presidential approval research, published in the early to mid-1980s, followed Kernell (1978) and Monroe (1978) by, "attempting to specify more realistically the links between the economy, political events, and approval" (Gronke and Newman 2003, 503). In an effort to make presidential approval models more realistic, researchers during the second wave of presidential approval research, debated the merits of different: model specification, lag structures, duration of effects, and estimation techniques (Gronke and Newman 2003, 503). MacKuen (1983) sought to identify how long-run rally-events affected presidential approval

ratings, while Norpoth and Yantek (1983) sought to identify how long-run economic conditions affected approval ratings.

Two important theoretical developments mark the second wave of presidential approval research (Gronke and Newman 2003, 504). The first important development was the rise of research focusing on the incentives presidents have to gain and maintain approval ratings. By focusing on the president's incentive to maintain approval ratings, Ragsdale (1984), Ostrom and Job (1986), and Simon and Ostrom (1989) made their models more politically focused and realistic (Gronke and Newman 2003, 504). The second major development occurred when researchers began to focus on individual-level models.[9] Previously, when researchers applied aggregate-level findings to individuals, they committed the ecological fallacy. By developing individual-level models researchers were able to test theories that could not be tested at an aggregate-level without committing that error. By using individual-level data, Ostrom and Simon (1985) report when presidents are successful in Congress, presidential approval ratings rise accordingly and, when presidents are less successful in the legislative arena, presidential approval ratings fall accordingly.[10]

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[9] See: Kernell and Hibbs (1981); Kinder (1981); Hibbs, Rivers, and Vasilitos (1982a, 1982b); Ostom and Simon (1985); and Tedin (1986).

[10] For other studies linking congressional success to presidential approval ratings see Brace and Hinckley (1992), and Cohen (2013). For studies linking presidential approval ratings to congressional success see Rivers and Rose (1985); Rohde and Simon (1985); Peterson (1990); Bond and Fleisher (1990); Cohen (1997); Kernell (1997); Canes-Wrong and de Marchi (2002); and Bond, Fleisher, and Wood (2003).

2.4 The Third Wave of Presidential Approval Ratings Research

The third, and current wave of presidential approval research, has been more diverse and less focused in its research. Early studies primarily focused on how the media and elite discourse shape presidential approval ratings (Gronke and Newman 2003, 504). Later studies, however, vary widely in their focus, and thus cannot be defined by any one specific focus. Brody (1991) reports that the media and elite discourse primarily shape public reactions of events and new presidents through a two-step process. In the first step events are evaluated by political elites, and then, during the second step, these evaluations are transmitted to the public via the mass media (Brody 1991).[11]

Priming issues is another way in which the media shapes opinions (Miller and Krosnick 2000).[12] Priming causes people to place special weight on certain issues when evaluating the issue. When the media reports on some issues, but not others, the media primes the issues reported on by making the primed issue more politically salient to the public. By priming an issue the issue becomes more salient to the individual. Edwards, Mitchell, and Welch (1995) find that saliency of issues that affect presidential approval ratings (generally) vary over time, and that only salient issues impact presidential job approval ratings. The more salient the issue, the more impact that it has on presidential job approval ratings. For instance, if the public perceives the president as doing a good job handling foreign affairs, but doing poorly on the economy, presidential job approval ratings will reflect the issue that is more publically salient. If the more

[11] For more studies on how elite discourse and the media shape presidential approval ratings see: West (1991); Mutz (1992, 1994); Goidel, Shields, and Peffley (1997); and Nadeau et al. (1999).

[12] For more research on priming see: Lyengar and Kinder (1987); and Krosnick and Kinder (1990).

publically salient issue is the economy, approval ratings will be low; if foreign affairs are more salient to the public, then approval ratings should be high.

Some third wave researchers, Bond and Fleisher (2001) and Lebo and Cassino (2007) focused their research on the widening partisan gap that exist in presidential approval ratings. Specifying logit models from individual-level data obtained from American National Election Surveys (ANES), Bond and Fleisher (2001) find evidence of a widening partisan gap affecting presidential approval ratings from 1972 to 2000. Members of the public belonging to the same political party as the president evaluate the president more positively than do members of the opposition party. The authors hypothesize this to be the case because, "the president's partisans may be more likely to give him credit for a good economy and less likely to blame him for a bad economy than opposition partisans" (Bond and Fleisher 2001, 358). Thus, presidents are more likely to receive higher approval ratings from citizens with the same party affiliation as the president than they are of citizens not belonging to the same party affiliation as the president.

Divided and unified government interact in theoretically interesting ways with presidential job approval ratings. Nicholson, Segura, and Woods (2002) find that divided government allows presidents to credibly pass blame onto other political actors, thus allowing for higher presidential job approval ratings. This effect occurs even when controlling for well-known predictors of approval. Thus during times of divided government, presidents may have higher job approval ratings and issue more symbolic executive orders.

Clarke et al. (2005) highlight the importance of considering gender differences when modeling presidential approval ratings. By disaggregating 240 monthly Survey of Consumer datasets gathered from 1978 through 1997, Clarke et al. find evidence indicating the "gender

gap" between men and women's presidential approval ratings are due to differences in how both sexes evaluate the economy and the president. Seeking to identify which type of economic evaluation model best fits men and women, Clarke et al. (2005) find that national prospective economic evaluation models perform the best for women, and personal prospective models work the best for men.[13] This finding suggests that men and women assess the performance of the president by assessing the future state of the economy either for the nation (women) or for themselves (men).[14] Clarke et al. report that women's economic evaluations were consistently more negative than those of men, regardless of who the president was or the president's party affiliation (Clarke et al. 2005, 51).

Using ARFIMA methods (discussed in more detail in Chapter 4), Lebo and Cassino (2007) continue Bond and Fleisher's (2001) research on the presidential approval partisan gap. They find that partisans of both parties reward and punish, in terms of approval ratings, presidents of the opposite party on the basis of economic indicators, while remaining largely unresponsive to those indicators when their party holds the presidency (Lebo and Cassino 2007, 740). Lebo and Cassino (2007) argue that although this finding may not be normatively desirable, partisans are not so biased as to completely ignore bad economic indicators when their party holds the presidency. If the economy is bad enough, partisans will respond accordingly by

[13] National prospective models posit that individual give higher approval ratings when they believe the economy as a whole is going to do better in the future, and lower approval ratings when they believe the economy as whole is going to do worse in the future. Personal prospective models posit that individual give higher approval ratings when they believe their own personal economic situation is going to improve in the future, and lower approval ratings when they believe their own personal economic situation is going to worsen in the future.

[14] Prior to Clarke et al. many studies attempted to determine whether prospective or retrospective perceptions of the economy performed best when modelling presidential approval ratings (e.g., MacKuen et al. 1992; Clarke and Stewart 1994; and Norpoth 1996).

reporting lower presidential approval ratings even if they belong to the same political party as the president.

By conducting a series of correlation tests, and creating a structural equation model to "fully capture the interrelated nature of the personal and policy components of presidential approval" (McAvoy 2008, 294), McAvoy demonstrates that researchers cannot safely assume that Gallup's presidential job approval question strictly measures job performance, because the question also measures presidential favorability. McAvoy reports that presidential favorability ratings measure respondents' evaluations of a president's character and image; and presidential job approval ratings measures a president's competence. McAvoy's overall findings contribute to the literature by highlighting the need to consider favorability ratings when trying to explain job approval ratings, even if favorability has a comparatively lesser effect on presidential job approval ratings than economic evaluations (297).

Newman and Forcehimes (2010) contribute to presidential approval literature by creating a list of major events from 1953 to 2006 that may impact presidential approval ratings. They argue that, although studies since Mueller (1970) recognize the importance of including control variables for major events that may affect presidential approval ratings, studies often diverge in the events that they select for inclusion and, by doing so, inhibit direct comparisons between them (Newman and Forcehimes 2010, 144). To create a uniform list of major events for study the authors include dozens of possibly significant events in a model of presidential approval ratings and report the events that had any statistically significant effect on presidential job approval ratings. Newman and Forcehimes implore all future researchers to use the list of

significant events discussed in their study because it provides for consistent comparison across studies and because their selection of events is ostensibly unbiased.

Newman and Forcehimes (2010) do not consider congressional committee probes in their list of events that can affect presidential approval ratings. Kriner and Schickler (2014), however, find evidence indicating congressional committee probes have significant negative effects on presidential approval ratings. Kriner and Schickler (2014) report Congress can and does use investigative committees to negatively harm the president's standing in the public. By doing so Congress can check the president's power even if they are unable to act legislatively to do so due to veto threats by the president (Kriner and Schickler 2014, 521). Thus, future studies that attempt to model every presidential event should consider including congressional committee probes in their list of significant events.

Nearly all presidential approval rating research controlled for the national economy; however, four third wave researchers, Geys and Vermeir (2007) and Fauvelle-Aymar and Stemair (2013), specifically focused their research on how the national economy effects presidential job approval ratings. Controlling for the strength of the national economy, wars, scandals, rally-around-the-flag effects, and individual presidential terms, Geys and Vermeir (2007), find that the level of the tax burden and changes in the tax structure affected presidential approval ratings from 1959 through 2006. Interestingly, Geys and Vermeir find no statistically significant evidence of inflation's or unemployment's having any effect on presidential approval

ratings; however, budget deficits are found to have a statistically significant negative effect on presidential approval ratings.[15]

Fauvelle-Aymar and Stemair (2013) find that changes in the speed of growth or decline in the stock market can model presidential job approval ratings. When stock market growth is decelerating presidential job approval ratings decrease; when growth is accelerating presidential job approval ratings increase. When the stock market is declining, and if it is declining at increasing rates the president is punished through lower job approval ratings. However, when the market is declining at a decreasing rate, the president is rewarded with comparatively higher job approval ratings. Burden and Mughan (2003) argue that the international economy is equally important to presidential job approval ratings and the public as is the national economy. They find that, during different periods during the last century, different aspects of the international economy (such as trade deficits, and exchange rates) increased and decreased in issue saliency to the American public. Because of the changes in issue saliency, these different aspects of the international economy had varying impacts on presidential job approval ratings depending on which aspect of the international economy was more politically salient to the public at the time. The authors argue that these aspects of the international economy substantially affect presidential job approval ratings when they become salient to the American public.

Interestingly, some presidential approval rating research has focused on the role emotions and genetics play in presidential approval ratings. González-Bailón et al. (2012) examine

[15] Similarly to Geys and Vermeir (2007), most research on presidential approval ratings measures aggregate responses to objective economic indicators. For studies that use subjective indicators of the economy, *see*: MacKuen, Erikson, and Stimson (1992); Clarke and Stewart (1994); Norpoth 1996; Bond and Fleisher (2001); and, Clarke et al. (2005).

approval ratings from a social-psychological perspective. Specifically they use online discussions to examine the emotions of the discussion posters following significant presidential events. They study the discussions by coding them for varying levels of three emotional dimensions: valence, arousal, and dominance. Then the authors model trends in valence, arousal, and dominance to trends in political evaluations (specifically presidential approval ratings) over a five year period (September 1999 to February 2005). Valence measures words that are associated with feelings of happiness, satisfaction, and hope. The higher the score the more happy or satisfied the subject is; however, lower scores represent sadness and despair (González-Bailón et al. 2012, 127). Arousal measures words that are associated with feelings of excitement, anger, or frenzy. Dominance, as the name suggest, measures a subjects feelings of domination or being in control versus feelings of submission or awe (González-Bailón et al. 2012, 127).

González-Bailón et al. (2012) report that high levels of anger might contribute to positive evaluations of presidents at the beginning of wars (134). The angrier the public grows the better evaluations become for presidents. The authors found valence and dominance feelings to be statistically insignificant. Their findings are consistent with rally-around-the-flag-effect literature and the finding the approval ratings start off high when wars start, but decline as wars draft on.

Perhaps the most important new research to come out on presidential approval ratings, Miles (2015), demonstrates that roughly 62% of the variation in presidential approval ratings are genetically heritable (773). Miles (2015) argues genes are "substantially more influential on individual evaluations of presidential performance than [socialization]" (773). If Miles (2015) results are theoretically valid than genetics plays a more important role in the development of political attitudes and characteristics than socialization. In terms of presidential approval ratings,

Miles (2015) finds the genetic makeup of individual's influence how they perceive and interpret presidential behavior in the short and long terms (773). Thus, genetic predispositions and heritability can "explain why rally events, honeymoon periods, and the economy influence short-term evaluations of presidential performance" (Miles 2015, 773).

The extant literature on presidents' use of unilateral powers has grown substantially since Moe and Howell (1999a, 1999b); however, additional analyses are needed to study the relationship between presidential approval ratings and executive orders. The literature suggests that many variables impact a president's approval ratings. Most of these variables fall into one of Mueller's (1970, 1973) three categories: political variables, war-related variables, and event dummy variables (Berlemann and Enkelmann 2014, 46). The next chapter of this thesis seeks to use and expand upon past presidential approval research by modeling aggregate-level presidential job approval ratings using political variables, war-related variables, and event dummies, while also including variables to test the main theory and hypotheses of this thesis.

CHAPTER 3: AGGREGATE-LEVEL MODELS

This chapter begins by examining the data and methodology used to create two aggregate-level models, including how the data were obtained and how it was coded. After this I discuss some of the problems inherent in time series data. Thus I present some of the bivariate analysis results, followed by the results of ordinary least squares regression estimation of two fixed effects models discussed in this chapter. I then end the chapter with a discussion of how the results of this paper differ from prior research.

3.1 Data and Methodology

Two models are estimated at an aggregate level. [16] Both models employ monthly data, beginning in January 1953; however, due to data limitations Model 1 includes data through 2012, and Model 2 only includes data through 2002. Doing so yields 706 and 585 unique observations respectively. The primary difference between the two models is that there is two variants of the main variable of interest (*Executive Orders*). The executive orders variable can be subdivided into two types: model 1 includes an executive orders variable that is a count of every executive order issued in each month from 1953 to 2012; model 2 includes the same executive order variable; however, it only include salient executive orders. Salient executive orders are defined as those executive orders that are theoretically salient to the public, because they are featured by news outlets and other forms of mass media. As previously discussed using data from Howell

[16] Other models and variables were estimated; however, this paper only discusses the models and variables that provided the best fit.

(2005) [17], an executive order is considered a salient executive order when it is non-ceremonial and featured on the front page of *The New York Times*.

The main dependent variable of all aggregate-level models (*Average Approval*) is the average presidential job approval ratings for each month. To obtain this average, I use data drawn from Gallup polls to measure presidential job approval ratings for each month. Then, I average all approval ratings during the month to reach the mean presidential approval ratings in each month. Presidential approval ratings for January, following presidential elections, are indicative of the public's view of the incoming president, because approval ratings for the incumbent president were missing in most cases.[18]

The main independent variable of both aggregate-level models (*Executive Orders*) is a variable measuring the total count of the month's executive orders issued by the president.[19] To code this variable, I use data obtained from Howell (2005). There are two aggregate-level models, and both models use different versions of the Executive Orders variable (see above). Both variables are used to test Hypothesis 1 and 2.

Each aggregate-level model also contains the same vector of control variables. These include control variables for: previous monthly presidential job approval ratings (*Lagged Approval*); the stock market (*Stock Market Index*); the consumer price index (CPI); the unemployment rate (*Unemployment*); divided government (*Divided Government*); the presence

[17] Unfortunately this data only goes through 2002, and because of this Model 2 has fewer observations (n=585).

[18] Presidential job approval ratings that were missing following presidential elections are left missing in the dataset; however, in all other cases linear interpolation was used to replace the missing presidential job approval ratings data.

[19] Lagging this variable and the other variables discussed below (*Unemployment*, *CPI*, and *SP_Comp*) had no significant effect on the models.

or absence of honeymoon periods (*Honeymoon*); scandals (*Watergate* and *Iran Contra*); the first Iraq war, the second Iraq war, the Afghanistan war, and the 2007 surge in combat troops (*Desert Storm, Military Casualties (Iraq), Military Casualties (Afghanistan), Iraq_War*, and *Surge* respectively); the September 11th 2001 terrorist attacks (*9/11*); and dummy variables for each president in the study (*Eisenhower-Obama*) to control for period effects during each of their respective administrations.

A previous month's average approval ratings are created by lagging the average presidential approval variable by one month. [20] Because previous research has shown that a president's approval ratings are largely a function of previous approval ratings; including this variable is a necessity in order to avoid autocorrelation and thus bias in the parameter estimates (Fauvelle-Aymar and Stegmair 2013). CPI is the monthly Consumer Price Index all urban consumers. *Stock Market Index* is the monthly Standard and Poor's (S&P) 500 stock market index[21]. Jones (2014) used unemployment data as an indicator of the nation's economic well-being; however, this indicator variable failed to achieve statistical significance in any model. Fauvelle-Aymar and Stegmair (2013) recommend that scholars employ a stock market index as an indicator variable for the nation's economic well-being because presidential job approval ratings are highly associated with the economic well-being of the country. The paper uses both variables. Doing so allows me to test the validity of Expected Finding 4.2. *Unemployment* is the

[20] The first observation for each presidency is dropped from the study because a lag for their previous presidential approval ratings does not exist within the dataset.

[21] CPI and the S&P 500 stock market index were obtained from a dataset hosted by the economic department of Yale University and created by Robert Shiller, Fumiko Kon-Ya and Yoshiro Tsutsui. http://www.econ.yale.edu/~shiller/data.htm (accessed October 13, 2015)

monthly unemployment rate. Data for this variable were obtained from the Bureau of Labor Statistics Current Population Survey. [22]

Divided Government is a dichotomous variable that is coded one (1) when either chamber of Congress' majority party are not that of the president; it is coded zero (0) otherwise. Theoretically, presidential approval ratings should be higher *ceteris paribus* during times of divided government because it allows a president to credibly blame Congress for governmental failures (Nicholson, Segura, and Woods 2002). This variable, and the accompanying divided government variables, directly test Expected Finding 4.3. *Honeymoon* is a dichotomous variable used to control for "honeymoon" periods (Expected Finding 4.4). Jones (2014) included this variable and found it to have a statistically significant impact on presidential job approval ratings. It is coded one (1) during the first six months of a newly-inaugurated president's term, and zero (0) otherwise.

The rest of the non-presidential dummy variables in the model are used to control for wars, scandals, and rally-around-the-flag effects that may independently impact presidential approval ratings (Geys and Vermeir 2008, 308; and Fauvelle-Aymar and Stegmair 2013, 414). Omitting these variables would likely cause omitted variable bias, and bias the estimates of both models. It is likely that at the start of a war, presidential approval ratings will increase as citizens react in a rally-around-the-flag effect (Geys and Vermeir 2008, 308), but as the war continues, presidential approval ratings may decrease because of the increasing amount of battle deaths associated with the war (Geys and Vermeir 2008, 308). Scandals are theorized to exert a negative impact on presidential approval ratings. Both Watergate and the Iran-Contra Affair, for

[22] http://www.bls.gov/home.htm (accessed October 13, 2015)

example, should have negative statistically significant effects on presidential approval ratings. Rally-around-the-flag effects should exert positive changes in presidential approval in subsequent months at least in the short-term. During times of national crises, rally-around-the-flag effects should theoretically increase presidential approval ratings because a public mood of national unity tends to permeate the country such that presidents will observe comparatively higher presidential job approval ratings in the short-term (Geys and Vermeir 2008, 308).

There are four variables pertaining to war in this study: Operation Enduring Freedom (*Military Casualties (Afghanistan)*), Operation Iraqi Freedom (*Military Casualties (Iraq)*), Iraq_War (referring to Operation Iraqi Freedom), and *Desert Storm*.[23] Operations Enduring and Iraqi Freedom are both monthly counts of military casualties pertaining to each war. *Iraq_War* is a variable pertaining to the second Iraq war and Operation Iraqi Freedom, but instead of being a count of military casualties, *Iraq_War* is a dichotomous variable coded (1) from March 2003 through September 2003 and (0) otherwise.[24] Desert Storm is a dummy variable pertaining to the 1990 invasion of Kuwait by Iraq and the subsequent U.S. military response (Operations Desert Shield and Desert Storm). Similarly to Geys and Vermeir (2008), this variable is coded (1) during each month from August 1990 to January 1991, and (0) otherwise[25]. It is theorized that *Military Casualties (Afghanistan)* and *Military Casualties (Iraq)* will both have a negative effect

[23] Due to data limitations (I was unable to gain access to credible statistics on Vietnam battle deaths) no variable was included for the Vietnam War. Theoretically the presidential dummy variables included in this study should account for the effects of the Vietnam War on presidential job approval ratings.

[24] Geys and Vermeir 2008 and Fauvelle-Aymar and Stemair (2013) include a similarly coded variable; however, the dates used in this paper differ by a few months. Both papers begin their second Iraq War variable in the first quarter of 2003 and end it in the second quarter.

[25] This study uses monthly data, but Geys and Vermeir (2008) used quarterly data.

on presidential job approval ratings, because of the length of both wars and the staggering military casualties for the U.S.A. Desert Storm may have a positive effect on presidential job approval ratings because of the short nature of the war and the much lower military casualties (Geys and Vermeir, 2008). Geys and Vermeir (2008) and Fauvelle-Aymar and Stemair (2013) consider Operations Desert Shield and Desert Storm to be a rally-around-the-flag effect variable. Similarly, I hypothesize the first few months of the second Iraq War (*Iraq_War*) will have a positive effect on presidential approval ratings and behave similarly to a rally-around-the-flag effect variable.

Two scandal control variables are included in this study: *Watergate* and *Iran Contra*. Both variables borrow a similar coding scheme from Geys and Vermeir (2008). As its name suggest, Watergate controls for the 1970s Watergate scandal that affected President Nixon. It is coded (1) for all months from April 1973 to June 1974, and (0) otherwise. The Iran-Contra Scandal affected President Reagan during the later months of 1986 and the early months of 1987. To code this variable, all months between October 1986 and March 1987 are coded (1), and (0) otherwise.

Besides *Desert Storm*, one other rally-around-the-flag-effect variable is included in this study: the September 11, 2001 terrorist attack. Because of the dramatic increase in presidential approval ratings following the attack and the remarkably slow decay in approval ratings after the attack (Gaines 2002; Hetherington and Nelson 2003) I follow the advice of Geys and Vermeir (2008) and code this variable as (0) in all months before the attack and as (1/*t*) beginning in September for all months afterwards (where t = 1, 2, 3, …). Dividing (1) by (*t*) for all months

after September 11, 2001 allows the variable to capture the effect of the slow decay in presidential job approval ratings following the event.

The final vector of control variables in the proposed study is a series of dummy variables that represent when each respective president was in office. There is one variable for each president included in this study (Eisenhower to Obama). This vector thus specifies fixed effects for the model allowing me to control for period effects during each presidents administration. This will also allow me to test if executive orders had differing levels of issue saliency to the public under each individual president. Each variable is coded one (1) during the respective president's presidency, and zero (0) otherwise.

$$Model\ 1\ Equation$$

$$Average\ Approval = \hat{b}_1(All\ Executive\ Orders) + \hat{b}_2(Lagged\ Approval)_{t-1} + \hat{b}_3(Stock\ Market\ Index) + \hat{b}_4(Consumer\ Price\ Index) + \hat{b}_5(Unemployment\ Rate) + \hat{b}_6(Divided\ Government) + \hat{b}_7(Honeymoon\ Period) + \hat{b}_8(Watergate) + \hat{b}_9(Iran\ Contra) + \hat{b}_{10}(Desert\ Storm) + \hat{b}_{11}(Iraq\ War) + \hat{b}_{12}(Military\ Casualties\ Iraq) + \hat{b}_{13}(Military\ Casualties\ Afghanistan) + \hat{b}_{14}(Iraq\ "Surge") + \hat{b}_{15-25}(Eisenhower - Obama)$$

$$Model\ 2\ Equation$$

$$Average\ Approval = \hat{b}_1(Salient\ Executive\ Orders) + \hat{b}_2(Lagged\ Approval)_{t-1} + \hat{b}_3(Stock\ Market\ Index) + \hat{b}_4(Consumer\ Price\ Index) + \hat{b}_5(Unemployment\ Rate) + \hat{b}_6(Divided\ Government) + \hat{b}_7(Honeymoon\ Period) + \hat{b}_8(Watergate) + \hat{b}_9(Iran\ Contra) + \hat{b}_{10}(Desert\ Storm) + \hat{b}_{11}(Iraq\ War) +$$

$\hat{b}_{12}(Military\ Casualties\ Iraq) + \hat{b}_{13}(Military\ Casualties\ Afghanistan) +$

$\hat{b}_{14}(Iraq\ "Surge") + \hat{b}_{15-25}(Eisenhower - Obama)$

3.2 Descriptive Statistics and Bivariate Analysis

Table 1 (see Appendix A) contains a number of descriptive statistics including the monthly minimum, maximum, and mean of the following variables: presidential job approval ratings (*Presidential Approval*); executive orders (*E.O.* and *Salient E.O.*); the S&P stock market index (*Stock Market Index*); the Consumer Price Index all urban consumers (*CPI*); and Unemployment.[26] The stock market and consumer price indices are not particularly informational on their own, because of the time series nature of the data used and monetary inflation; therefore, I have also included descriptive statistics of the percentage change in both variables. Of particular interest, the executive orders variable has a maximum of 19 executive orders issued in a month, but the maximum number of salient executive orders in a month was only four; however, both maxima only occur once in this dataset. Tables 2 and 3 (see Appendix A) contain frequency distributions of both executive order variables. As can be seen from the tables the modes for both executive order variables are three and zero respectively (occurring in 118 and 457 different months respectively).

Figure 1 (see Appendix A) is a graph that depicts the relationship between mean average monthly approval ratings and all executive orders. Table 4 depicts the same relationship as Figure 1, but using mean comparison analysis instead of a graph. The figures indicates either a

[26] Unless noted otherwise, all data discussed in this section and the relevant tables and figures in Appendix A use the original unmodified data that I collected before I fractionally differenced and made each series stationary.

very slight positive relationship or no relationship between the two at all. Conducting a Pearson's r correlation indicates a weak positive statistically significant correlation of .07 between all executive orders and presidential job approval ratings.[27] These findings are contrary to my main hypothesis; however, a correlation of .07 is too low to consider it as definitive evidence against Hypothesis 1.

Conducting the same hypotheses test between presidential job approval ratings and salient executive orders provides clearer evidence as to the validity of Hypothesis 1. Figure 2 depicts the relationship between mean average monthly approval ratings and salient executive orders only. Table 5 is the accompanying mean comparison chart. Both indicate a strong positive relationship between the two variables. As the number of salient executive orders issued in a month increases, presidential job approval ratings increase; however, the strength of this relationship is not as strong as the graph and mean comparison analysis seems to indicate. A Pearson's r correlation of the two variables indicates a rather weak relationship (r = .132) between the two but it is a statistically significant correlation result. The correlation between presidential job approval ratings and salient executive orders is much higher than the correlation between presidential job approval ratings and all executive orders; however, it is also far too low to provide any notable support for Hypothesis 1.

To test the remaining hypotheses using bivariate methods I estimated Pearson correlation tests between presidential job approval ratings and the following variables: the previous month's presidential job approval ratings (i.e., presidential job approval ratings lagged by one month); the

[27] See Appendix A and Table 6 for Pearson's *r* correlations of lagged approval ratings, all executive orders, significant executive orders only, stock market index, and the consumer price index on presidential job approval ratings.

S&P stock market index (*Stock Market Index*); the consumer price index (*CPI*); divided government; and honeymoon.[28] Not surprisingly, and consistent with the literature (Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013), the correlation between presidential job approval ratings and lagged presidential job approval ratings is positive and highly statistically significant with a correlation of .930. Surprisingly, the correlation between the S&P Stock Market Index and presidential job approval ratings is negative and highly statistically significant (r = -0.186). It was expected that the stock market index would be positive and statistically significant. This is inconsistent with prior research (Fauvelle-Aymar and Stemair 2013) and Expected Finding 4.2. The CPI and presidential approval ratings correlation is in the expected direction (negative) and highly statistically significant with a correlation of -0.261. An increase in the consumer price index should have a theoretically negative impact on presidential approval ratings (Fauvelle-Aymar and Stemair 2013) and according to the correlation test it does.

Unfortunately, correlation tests between presidential job approval ratings and the divided government variable did not find evidence to support Expected Finding 4.3. The correlation between the two variables is statistically insignificant. Not surprisingly, and consistent with all prior research and Expected Finding 4.4, the correlation between presidential job approval ratings and the honeymoon period variable indicate a positive and statistically significant relationship between the two, with r = 0.183. Correlation tests of presidential job approval ratings and the dummy variables for the Watergate and Iran-Contra Scandals were also conducted (see Table 7). Not surprisingly both variables possess negative correlations with

[28] See Table 6 for the correlation results.

presidential job approval ratings; however, the correlation between the Iran-Contra scandal and presidential job approval ratings is statistically insignificant.

While not particularly relevant to hypothesis testing I have also included a table containing information on each respective president's average job approval rating and the average number of executive orders they issued monthly (see Table 8 in Appendix A). Examining the data there seems to be no noticeable difference in the average amounts of monthly executive orders issued by Republican and Democrat presidents; however, there is clear trend of decreasing amounts of executive orders issued monthly as time passes. In fact, after President Carter's term in office the average amount of executive orders issued monthly dramatically declines for all future presidents. The average amount of salient executive orders issued monthly stays fairly consistent with slight declines after Presidents Kennedy and Reagan.

3.3 A Brief Word on OLS Regression and Time Series Analyses

Because this aggregate-level analysis of presidential job approval ratings uses monthly data, it is necessary to discuss some of the potential problems associated with time series analysis. The estimation technique used in this analysis is ordinary least squares regression (OLS), but OLS regression requires several assumptions that need to be met that time series data sometimes violate. The primary assumption that time series data are most likely to violate is the assumptions of data stationarity. If data are not stationary, then spurious estimates may be reported (Lanier 2003, 195). To solve the problem of non-stationary data researchers have relied

on using first differences to make their data stationary (Lanier 2003, 195)[29]; however, this technique may also lead to spurious regression if the data (series) is fractionally integrated because taking the first difference "may serve to create patterns in the data that are not naturally present" (Lanier 2003, 195). By fractionally differencing data, researchers can "more accurately capture the data-generating process underlying their data" (Lanier 2003, 195).

To determine if my data are fractionally integrated (e.g., the data can by differenced by d where $0<d<1$ to make the data stationary) I use the Robinson's Gaussian Semiparametric Estimation Procedure to estimate d (Robinson 1995), where d is the number of differences needed to make the series stationary and may be a non-integer (see above) (Lanier 2003, 196-97). Table 9 in Appendix A shows the results of the Robinson's Gaussian semiparametric estimation procedure (RGSE procedure). The RGSE procedure test two null hypotheses. The first is that $d = 0$, and the second is that $d = 1$. All series reject the null hypothesis that $d = 1$; however, the following series fail to reject the null hypothesis that $d = 0$: *The Surge*; *Watergate*; *Divided Government*; *Eisenhower; Kennedy*; *Johnson*; *Nixon*; *Ford*; *Carter*; *Reagan*; *Bush*; *Clinton*; *George W. Bush*; and *Obama*. Failing to reject the null hypothesis that $d = 0$ indicates that fractional differencing is not necessary for these variables.[30] The variables that do reject both null hypotheses need to be fractionally differenced by d, because they are fractionally integrated. Because they are fractionally integrated, I must difference the series by d, because, as

[29] Geys and Vermeir (2008), and Fauvelle-Aymar and Stemair (2013) use first differences for their series.

[30] Because fractional differencing is not necessary, if a series is determined to be non-stationary first differencing may be used to make the series stationary.

mentioned above, differencing the series by an integer "may serve to create patterns in the data that are not naturally present" and result in spurious estimates (Lanier 2003, 195).

The traditional test for stationarity is the Augmented Dickey-Fuller (ADF) test; however, this method has limited power in the presence of fractional alternatives. When data are fractionally integrated it is more precise to use the Kwiatkowski, Phillips, Schmidt, and Shinn (KPSS) test, because it is more robust to fractionally integrated data (Lanier 2003, 196-97).[31] Conducting ADF test on the data indicates that the series are stationary; however, the Robinson's Gaussian semiparametric estimation indicates that it is inappropriate to use ADF tests because all of the series are fractionally integrated. KPSS test on each series of data indicate that each series is non-stationary. After fractionally differencing the series that reject the null hypotheses of the RGSE procedure by *d*, and then conducting KPSS tests I find that all of the series of data are now stationary (See Table 10).[32]

OLS regression also assumes homoscedasticity (the error term is the same across all values of the independent variable). If the assumption of homoscedasticity is violated the robustness of the model comes into questions. Homoscedasticity can inflate the significance of some variables in that the standard error of the coefficient parameters are biased downwardly, and deflate the significance of other variables. To combat homoscedasticity robust standard errors were used when estimating each model. By controlling for stationarity, fractional

[31] See Geys and Vermeir (2008), and Fauvelle-Aymar and Stemair (2013) for studies that only use ADF test.

[32] All dichotomous (dummy) variables were made stationary by taking the first difference of the series.

integration, and homoscedasticity I have created more robust models than using OLS regression alone permits.

3.4 Regression Results

The results of both models can be found in Table 11 in Appendix A[33]. Despite previous findings indicating a slight (albeit positive, and not negative) relationship between presidential approval ratings and both executive orders variables, the hypothesis fails to find support in both models. At an aggregate-level, presidential approval ratings are not affected by the number of executive orders (salient or not) issued in a given month. Both models fail to find support for Expected Finding 4.1. Previous monthly presidential approval ratings do not have a statistically significant effect on the current month's presidential approval ratings *ceteris paribus*.[34] This is despite an overwhelming amount of prior research indicating it should (Nicholson, Segura, and

[33] Coefficients are unstandardized. The constant was excluded from the model to allow for presidential dummy variables for each president. This decision was made after testing revealed which presidential dummy variable to exclude (if I kept the constant) had non-arbitrary effects on which variables were statistically significant.

[34] This suggest the lagged endogenous variable (lagged presidential approval ratings) may not be necessary to include in the models. It was included in this study due to the overwhelming amount of prior research that suggested it had significant impacts on presidential job approval ratings (Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013), and because it controls for serial-autocorrelation. Because lagged presidential approval ratings was not statistically significant, I estimated a new model without the variable. When the lagged endogenous variables was not included in the estimation, military casualties in Afghanistan was found to be statistically insignificant. Besides military casualties in Afghanistan becoming statistically insignificant, no other significant changes occurred between models. It should be noted, however, that the model without lagged approval ratings suffers from slight positive autocorrelation. A Durbin-Watson test statistic of 1.77 was estimated for the model. Durbin-Watson test statistics range in value from 0-4. A value of two (2) indicates no autocorrelation, a value of zero (0) indicates extreme positive autocorrelation, and a value of four (4) indicates extreme negative autocorrelation.

Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013).

Not surprisingly, in both models CPI is negative and statistically significant, and *Stock Market Index* is positive and statistically significant. Both variables function as indicators of the national economy, and coefficients for each variable have the expected sign (negative for *CPI*, and positive for *Stock Market Index*). These findings are consistent with prior research (Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013). Consistent with my own prior research (Jones 2014) and other prior research (Nicholson, Segura, and Woods 2002; Geys and Vermeir 2008; Fauvelle-Aymar and Stegmair 2013), the unemployment variable is statistically insignificant in both models.

The divided government variable included in both models is positive and statistically significant in both models. The results of both models lend support to the notion (Expected Finding 4.3) that presidents are more able to pass blame credibly to other political actors during times of divided government than they are during times of unified government (Nicholson, Segura, and Woods 2002). Jones (2014), however, found divided government to have no statistically significant effect on presidential approval ratings. Surprisingly, the Honeymoon variable is statistically insignificant in both models, despite prior research finding it to be statistically significant (Nicholson, Segura, and Woods 2002; Geys and Vermeir 2008; Fauvelle-Aymar and Stegmair 2013).

The variables pertaining to the Watergate and Iran-Contra scandals fail to achieve statistical significance. The War variables do not fare much better.[35] The variable measuring military casualties in the Afghanistan war is negative and statistically significant; however, the sign of the variable measuring military casualties in the second Iraq war is in the theoretically unexpected direction (positive) and statistically insignificant. Both dichotomous war variables (*Desert Storm* and *Iraq War*) possess the theoretically expected sign, but they fail to achieve statistical significance. This is not too surprising given that Fauvelle-Aymar and Stegmair (2013) also fail to find statistical significance for the Gulf War variables; however, it should be noted that Fauvelle-Aymar and Stegmair (2013) and I based both Gulf War variables from the coding used in Geys and Vermeir (2008) and latter set of authors did find statistical significance for both variables. [36]

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[35] As previously discussed, the presidential fixed-effects variables estimated in both models should theoretically control for the effects of the Vietnam War on presidential approval ratings. To test this theory I created a control variable for the Vietnam War. The variable is coded (-1) during the Johnson administration, (1) during the Nixon administration, and (0) during all other administrations. This coding scheme is borrowed directly from Norpoth (1984) and Fauvelle-Aymar and Stegmair (2013). Norpoth suggest the Vietnam War had a negative impact on Johnson's approval ratings, and a positive impact on Nixon's approval ratings. Because this new variable was found to be non-stationary, but not fractionally integrated, I took the first difference of the variable to make it stationary. The Vietnam War variable was not statistically significant when included in both models, and it had no significant impact on the models. This suggest that either the variable's coding scheme is not theoretically valid, or that the fixed-effects dummy variables are capturing the impacts of the Vietnam War on presidential approval ratings. Perhaps using U.S. military casualties during the Vietnam War would have statistically significant impacts on both models; however, I was unable to obtain reliable data on U.S. military casualties during the Vietnam War.

[36] I did, however, change the months coded (1) and the months coded (0) from the original coding of Geys and Vermeir (2008) for my second Gulf War variable (*Iraq_War*), and both papers (Geys and Vermeir 2008; and Fauvelle-Aymar and Stegmair 2013) used quarterly data instead of monthly data. Their doing so may promote more volatility in the variables, which could lead to statistically significant findings.

Most of the fixed-effects presidential dummy variables achieve statistical significance; however, some of their coefficient estimates are unexpectedly large (*Eisenhower* and *Kennedy*). This could be indicative of a problem with the model, or it could indicate that large period effects affected presidential approval ratings during Eisenhower and Kennedy's respective presidencies. The dummy variables for Eisenhower and Kennedy are both negative and have fairly large coefficients (-76 and -70 respectively). Pearson's *r* correlations on all presidential dummy variables reveal none have any correlation with each other except the Eisenhower and Kennedy variables with a correlation of 0.7. This correlation is high, and as variance inflation factors indicate, is causing multicollinearity to exist between the two variables.

The decision to include two variables that are collinear was not made lightly. Testing of four different models revealed Akaike Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC) scores were lower for the model that included both the Eisenhower and Kennedy fixed-effects variables. Lower criterion scores indicate a better fitting model. Because, the models that excluded one or more of the Eisenhower, and Kennedy fixed-effects variables performed worse (i.e., higher criterion scores), choosing to use the model that included all presidential fixed-effects variables is the right decision. Multicollinearity increases the standard error of the estimated coefficients, and makes them unstable in several ways; however, multicollinearity is "only a problem for the variables that are collinear…. but so long as the collinear variables are only used as control variables and they are not collinear with your variables of interest, [multicollinearity is not a] problem" (Allison 2012). I have chosen to keep both variables in the final specification because they provide the best fit, the most explanatory

power, and have no adverse effect on the primary variables of interest to this study (executive orders).

3.5 Conclusion

The results presented here differ from those of previous research in several significant ways. Probably the most significant way is that in both models, the lagged dependent variable (presidential job approval ratings) was not statistical significant despite prior research suggesting that it should be (Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013). There are a number of reasons this could be the case. It is difficult to compare previous research on the subject because models and methodology used between researchers can differ; researchers often use varying time periods; and many studies use different units of analysis (monthly or quarterly data). Some of the papers discussed (Burden and Mughan 2003; and Geys and Vermeir 2008) fail to use robust standard errors to combat the possible heteroscedasticity of their estimates. Nicholson, Segura, and Woods (2002) and Fauvelle-Aymar and Stegmair (2013) use robust standard errors to combat possible heteroscedasticity; however, both papers fail to address the problem of fractional integration. Nicholson, Segura, and Woods (2002) do not account for the stationarity of their data or fractional integration. Fauvelle-Aymar and Stegmair (2013) do consider the stationarity of their data; however, by only testing the stationarity of their data using Augmented Dickey-Fuller tests, and not testing for the presence of fractionally integrated data their findings might be the result of spurious regression (Lanier 2003, 195). Newman and Forechimes (2010) use error correction models so they may be controlling for heteroscedasticity;

however, they only account for fractional integration in their dependent variable, and not in every series. This is a fundamental violation of the assumption of model equivalency that underlies time series analyses. The use of potentially non-stationary, and fractionally integrated data, as well as failing to control for heteroscedasticity, could explain why prior research found lagged approval ratings to be statistically significant while this analysis does not. When I estimate both models without using Huber-White robust standard errors, many of the variables that are statistically insignificant in my models become statistically significant (including lagged approval).

This analysis uses econometric modeling techniques to create the aggregate-level models. Other alternative modeling options exist that may be considered when modeling presidential job approval ratings. The primary alternative is to use Autoregressive Fractionally Integrated Moving Average (ARFIMA) models to model presidential approval ratings.[37] This methodology has some strengths and weaknesses compared to the methodology used to create the aggregate-level models in this paper. No matter what methodology is used, it is important for future researchers to consider not only the stationarity of their data, but also the possibility that their data are fractionally integrated. Given the findings reported in Table 9 and the Robinson's procedure used in this analysis, it seems likely that all aggregate-level Presidential job approval rating data are fractionally integrated, because aggregate-level presidential job approval data are created by aggregating individual-level data which results in fractional dynamics in the time series, because the aggregate series is produced by combining individual-level series that have their own autoregressive and/or moving average components that describe the individuals'

[37] See Newman and Forchimes (2010) for an example of AFIMA models.

behavior being combined (Granger 1980; Lanier 2003, 193-194). Future researchers should also consider using different modeling techniques more suited to handling events that can cause exogenous shocks on presidential approval ratings. Some studies have attempted to model every possible event that can have an exogenous shock on presidential job approval ratings (see Newman and Forcehimes 2010). While this analysis does control for some of those events, it does not control for every possible event that could affect presidential approval ratings.

Given the rather low explanatory power of both models (the adjusted R was .27 and .23 for model 1 and 2 respectively), it seems many potential explanatory factors were omitted from the model.[38] Some of these may have been events that I missed (as noted above). Other potential predictors of presidential approval ratings that were left out include various international economy variables. As Burden and Mughan (2003) demonstrate, U.S. citizens are keenly aware of the international economy, and, therefore, presidential approval ratings are affected by the state of the international economy as it relates to the U.S. economy.

Future aggregate-level studies should split presidential approval ratings by partisan identity. Gallup has data on aggregate-level presidential approval ratings by partisan identity; however, I was unable to access this data. Future studies benefit greatly from there data if they use it, because it seems likely that factors that affect presidential approval ratings may not effect it evenly for all partisan identities (Bond and Fleisher 2001). Perhaps executive orders do have a

[38] Due to the large size of the *9/11* coefficient estimate, some may theorize the adjusted R-Squared of .27, for model 1, and .23, for model 2, may be overwhelmingly due to the inclusion of the *9/11* terrorist attack rally-around-the-flag variable. Estimating an OLS regression of only the *9/11* variable on presidential approval ratings yielded an adjusted R-Squared values of .02. This suggest that the *9/11* variable on its own, only explains 2% of the variation in presidential job approval ratings.

statistically significant effect on presidential approval ratings when you disaggregate presidential approval ratings by partisan identity. To test this theory, and to prevent the ecological fallacy of applying aggregate-level findings on individuals, I examine two individual-level models of presidential approval ratings in the next chapter.

CHAPTER 4: INDIVIDUAL-LEVEL MODELS

The previous chapter has tentatively demonstrated that at aggregate-level, the number of executive orders issued by presidents in a given month does not affect presidential approval ratings. To examine how the number of executive orders a president issues affects presidential approval ratings at an individual-level, a pooled cross section arrangement of data from 1980 to 2012 are constructed to specify two logistic regression models. The next section of this chapter examines the data and methodology used to create the two logistic regression models, including how the data were obtained and how it was coded. In section 4.2 I present some of the bivariate analysis results, followed by the results of binary logistic regression estimation of the two models discussed in this chapter. I then conclude by discussing how the results of this project differ from those of prior research.

4.1 Data and Methodology

Two models are estimated at the individual-level of analysis. Both models employ time series survey data obtained from The American National Election Studies (ANES). [39] The ANES time series surveys gathered data for the years 1980 through 2012.[40] The ANES has survey data as early as 1948; however, 1980 is the first year in which questions about the national economy were asked in the survey. Model 1 uses data from 1980 through 2012, which yields 31,526

[39] *http://electionstudies.org/studypages/anes_timeseries_cdf/anes_timeseries_cdf.htm* (accessed May 1, 2015)

[40] The ANES time series surveys that gathered these data from 1980 through 2012 were administered every two years from 1980 to 2004 (i.e., the survey years are 1980, 1982, 1984, etc.) In 2006 and 2010 the ANES did not conduct time series surveys.

unique observations.[41] Similarly to the previous chapter, Model 2 uses data only through 2002, because Model 2's main independent variable of interest is only salient executive orders.[42] This yields 20,570 unique observations. By using salient and non-salient executive orders as defined by Howell (2005) this analysis (and the previous aggregate-level analysis) can control for issue salience. Issues vary over time in their salience to the public and in their impact on presidential approval ratings (Edwards III, Mitchel, Welch 1995, 108). Issues that are more salient to respondents have larger effects on presidential approval ratings than issues with less salience.

The main dependent variable of all individual-level models (*Presidential Approval*) is the answer to a yes-or-no question asking respondents "Do you approve or disapprove of the way that [the president] is handling his job as President?" Because the answer to this question is dichotomous, binary logistic regression is used in this analysis to estimate both models; because the use of OLS regression for such dependent variables would likely lead to biased coefficient estimates (Pollock III 2012, 237). Both models are primarily differentiated by the use of two different executive orders variables (all executive orders, or salient executive orders only) as the primary independent variable of theoretical interest. *Executive Orders* is the count of all executive orders issued from August of the previous year through August of the year of the survey. Each ANES survey began data collection in September, so *Executive Orders* is the count of all executive orders issued over the 13-month period prior to the survey's being

[41] I have chosen to pool the data obtained from each year, instead of creating separate datasets and models for each year. See section 4.5 of this chapter for a discussion of the disadvantages of this method.

[42] See section 3.2 for a definition of "salient executive orders".

administered.[43][44] Similarly, *Salient Executive Orders* is a count of all salient executive orders issued from August of the previous year through August of the year of the survey.

With one exception (discussed below), both models incorporate the same vector of control variables. These include variables controlling for a respondent's party identification (*Party ID*)[45]; age (*Age*); education (*Education*); gender (*Gender*); social class (*Social Class*)[46]; race (*Caucasian*, *African American*, and *Hispanic*)[47]; internal efficacy (*Internal Efficacy*); external efficacy (*External Efficacy*); perception of the economy in the past (*Perception of the Economy (Past)*); and outlook of how the economy will perform in the future (*Perception of the Economy (Future)*). Model 1 includes a control variable for divided government (*Divided Government*) that is not included in Model 2 due to multicollinearity issues.[48] Both models also contain a control variable for each president's partisan identity (*President's Party ID*), and several carefully chosen interaction effect variables (discussed below).

Party ID is an ordinal level variable that measures the strength of a respondent's partisan identity when compared to the current president at the time of the survey. This variable has the following seven categories: (1) "strong opposite"; (2) "mild opposite"; (3) "weak opposite"; (4) "neutral" (or independent); (5) "weak same"; (6) "mild same"; and (7) "strong same." The

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[43] This variable (*Executive Orders*) is mean-centered in Model 1 (discussed below).

[44] There are a number of drawbacks to coding both executive order variables this way. See the conclusion section of this chapter (section 4.5) for a discussion on these drawbacks.

[45] This variable is mean-centered in Model 1 (discussed below).

[46] Substituting *Social Class* with household income had no significant impacts on any model.

[47] Estimating the logistic regression models by excluding the Caucasian, and Hispanic dichotomous variables and only specifying the African-American dichotomous variable had no significant impacts on any model.

[48] Multicollinearity was determined by examining variance inflation factor (VIF) statistics. The VIF for *Divided Government* was over 15 in Model 2 – suggesting extreme multicollinearity with *President's Party ID* (discussed below).

ANES asks respondents to place themselves on the following seven-point ideological scale: strong Democrat, weak Democrat, independent-leaning Democrat, Independent, independent-leaning Republican, weak Republican, or strong Republican. To construct the *Party ID* variable, I subtracted four from the ANES seven-point ideological scale described above, and multiplied this variable by -1 during survey years in which the president is a Democrat, and by positive one when the president was a Republican. If Expected Finding 5.1 is theoretically valid I expect to find evidence indicating that as *Party ID* increases the likelihood of an individual approving of the way the president is handling his job as president increases, *ceteris paribus*.

Model 1 also contains an interaction effect variable created by multiplying *Executive Orders* and *Party ID*. I included this interaction effect variable because, theoretically, executive orders may have different effects on respondents' approval of the president when they are more closely aligned with the president's partisan identity (as measured by *Party ID*), than when they are more distant from the President's partisan identity.[49] By estimating this interaction effect, multicollinearity was introduced into Model 1. It is important to remove the multicollinearity from the specified equation, because multicollinearity may bias the estimates; therefore, I removed the multicollinearity in the model by mean-centering *Executive Orders* and *Party ID*.[50][51] Then, I recreated the interaction effect variable from the newly-centered variables and

[49] This variable is not available in Model 2, because an interaction of *Salient Executive Orders* and *Party ID* was found to be statistically insignificant when estimating Model 2 and including the interaction effect variable in the model did not increase its level of statistical significance.

[50] Mean centering is the act of subtracting the mean from the variable. Mean centering (or standardizing) a variable is a common technique to avoid multicollinearity between interaction effect variables, and the variables that are used to create the interaction effect variable (Aiken and West 1991).

[51] It should be noted that Party ID is a discreet variable and an unpublished pdf document from Williams (2015) cautions readers to only mean center continuous variables.

specified only the mean-centered variables in Model 1. Doing so allows me to keep all three variables without adversely affecting the model estimation (Aiken and West 1991).

Age is a standard interval-level control variable that measures a respondent's age.[52] *Education* is an ordinal-level control variable that measures the highest level of education that a respondent has obtained, with the following four categories: (1) grade school or less; (2) high school; (3) some college (but no degree); and (4) college or advanced degree. *Gender* is a standard control variable; however, it is also used to test the validity of Expected Finding 5.4. It is a dichotomous variable coded such that female respondents are coded one (1), and male respondents are coded zero (0). Social Class is an eight category ordinal-level variable that controls for a respondent's wealth by controlling for their social class. The categories are as follows: (0) lower class; (1) average working; (2) working; (3) upper working; (4) average middle; (5) middle class; (6) upper middle; and (7) upper class.

A respondent's race is specified in the models by the following three dichotomous race variables: *Caucasian*, *African American*, and *Hispanic*. As the variable names suggest, each race variable is coded one (1) if the respondent belongs to that race (*Caucasian*, *African American*, or *Hispanic*), and zero (0) otherwise.[53] *Internal Efficacy* measures a respondent's internal level of political efficacy. The ANES ask respondents if they agree with or disagree with the following question: "sometimes politics and government seem so complicated that a person like me can't really understand what's going on." *Internal Efficacy* is coded one (1) when a respondent

[52] Age intervals range include 1-99, and 100 or over.

[53] These race dummy variables were chosen because Caucasian, African American, and Hispanic respondents were the most commonly identified races of respondents in the survey (99% of the surveyed respondents identified themselves as Caucasian, African American, or Hispanic).

disagrees with the question, and zero (0) when the respondent agrees with the question. *External Efficacy* controls for a respondent's external level of efficacy. The ANES also ask respondents: "how much of the time do you think you can trust the government in Washington to do what is right?" The ANES then coded responses to this question following this metric: (1) none of the time/never; (2) some of the time; (3) most of the time; (4) just about always; and (9) don't know or depends. To code external efficacy (*External Efficacy*) I recoded the original measure that the ANES employed into a four-category, ordinal-level variable with respondents who answered do not know or depends recoded as missing; thus, higher categories in the variable denote higher levels of absolute trust in the government to do what is right.

Perception of the Economy (Past) is a control variable used to control for a respondent's perception of how the economy has performed in the past and to test the validity of Expected Finding 5.2. The ANES ask respondents to answer the following question: "Would you say that over the past year the nation's economy has gotten better, stayed the same or gotten worse?" Respondent responses are then coded as missing, better, stayed same, or worse. To code *Perception of the Economy (Past)* I recoded the variable discussed above into a three-category, ordinal-level variable such that worse was coded negative one (-1), stayed the same was coded zero (0), and better was coded one (1). This variable controls for both the national economy, and respondents' knowledge about how the economy is performing. *Perception of the Economy (Future)* is very similar to *Perception of the Economy (Past)*; however, as the variable name suggests, *Perception of the Economy (Future)* asks respondents about how they believe the economy will perform in the next year. It is coded negative one (-1) when respondent's believe

the economy will perform worse, zero (0) when they believe the economy will stay about the same, and one (1) when they believe the economy will perform better.

Model 1 also includes a variable (*Divided Government*) to control for periods of divided government. *Divided Government* is a dichotomous variable that is coded one (1) during survey years in which either chamber of Congress' majority party are not that of the president; it is coded zero (0) otherwise. As mentioned above, and described in further detail below, this variable is not specified in Model 2 because it had to be excluded to avoid multicollinearity. Both models also contain a variable (*President's Party ID*) to control for the current president's (at the time of the survey administration) party affiliation. *President's Party ID* is coded one (1) when the president belongs the Republican Party; and zero (0) otherwise.[54] Both models also contain a *Gender* and *President's Party ID* interaction effect variable that is used to test the validity of Expected Finding 5.4. To create this variable I simply multiplied *Gender* by *President's Party ID*.

Model 1

$$Presidential\ Approval = \hat{a} + \hat{b}_1(Executive\ Orders) + \hat{b}_2(Party\ ID) +$$
$$\hat{b}_3(Executive\ Orders * Party\ ID) + \hat{b}_4(Age) + \hat{b}_5(Education) + \hat{b}_6(Gender) +$$
$$\hat{b}_7(Social\ Class) + \hat{b}_8(Caucasian) + \hat{b}_9(African\ American) + \hat{b}_{10}(Hispanic) +$$
$$\hat{b}_{11}(Internal\ Efficacy) + \hat{b}_{12}(External\ Efficacy) +$$
$$\hat{b}_{13}(Perception\ of\ the\ Economy\ Past) + \hat{b}_{14}(Perception\ of\ the\ Economy\ Future) +$$
$$\hat{b}_{15}(President's\ Party\ ID) + \hat{b}_{16}(Div_Gov) + \hat{b}_{17}(Gender * Pres_PID) + e$$

[54] I coded the dummy variable such that Republican presidents were coded 1, because Republican presidents were in office during 55% of the surveyed years.

Model 2

$$Presidential\ Approval = \hat{a} + \hat{b}_1(Salient\ Executive\ Orders) + \hat{b}_2(Party\ ID) + \hat{b}_3(Age) + \hat{b}_4(Education) + \hat{b}_5(Gender) + \hat{b}_6(SES) + \hat{b}_7(Caucasian) + \hat{b}_8(African\ American) + \hat{b}_9(Hispanic) + \hat{b}_{10}(Internal\ Efficacy) + \hat{b}_{11}(External\ Efficacy) + \hat{b}_{12}(Perception\ of\ the\ Economy\ Past) + \hat{b}_{13}(Perception\ of\ the\ Economy\ Future) + \hat{b}_{14}(President's\ Party\ ID) + \hat{b}_{15}(Gender * Pres_PID) + e$$

4.2 Descriptive Statistics and Bivariate Analysis

Table 12 (see Appendix B) contains a number of descriptive statistics for the following variables: *Presidential Approval*; *Executive Orders*; *Salient Executive Orders*; *Party ID*; *Age*; *Education*; *Gender*; *SES*; all three race variables; *Internal Efficacy*; *External Efficacy*; *Perception of the Economy (Past)*; *Perception of the Economy (Future)*; *President's Party ID*; and *Divided Government*. The mean of *Presidential Approval* is .55 suggesting that 55 percent of respondents approved of the way the president (at the time) handled their job. The minimum number of executive orders issued in this study (Carter-Obama) was thirty-one by President George W. Bush. The highest number of executive orders issued in this study was 82 by President Reagan. Executive orders that were reported on by the *N.Y. Times*, and, thus, considered salient executive orders, were issued less often, having a minimum of zero and a maximum of five salient executive orders issued in a given thirteen month period.

Table 13 provides descriptive statistics on the number of respondents in each survey year, the number of all executive orders and salient executive orders issued in the 13 month period prior to the start of each survey, and the type of government (unified or divided) at the time of

each survey. As can be seen from the tables, 714 executive orders were issued in total, but only 26 salient executive orders were issued, and divided government was present in twelve out of the fifteen years that the surveys covered.

Table 14 (see Appendix B) depicts the relationship between mean *Presidential Approval* and *Executive Orders*. The table seems to indicate no relationship at all between *Presidential Approval* and *Executive Orders*, and does not support Hypothesis 1. Conducting a Pearson's *r* correlation indicates no statistically significant relationship exist between the two variables with a correlation of 0.00.[55]

Table 15 provides slightly clearer evidence as to the validity of Hypothesis 2; however, it fails to find any notable support for the hypothesis. Table 15 depicts the relationship between mean *Presidential Approval* and *Salient Executive Orders* with a mean-comparison analysis. Table 15 seemingly indicate a weak negative relationship between the amount of salient executive orders issued and approval of the president.

As expected Expected Finding 5.1 finds statistical support from the results listed in Table 16. Table 16 reports the results from a mean-comparison analysis between *Presidential Approval* and *Party ID*. Each one unit change in *Party ID* corresponds to higher mean *Presidential Approval*. This shows a strong positive relationship between the two variables, which is consistent with the findings of Bond and Fleisher (2001) and Lebo and Cassino (2007). Tables 17 and 18 provided credible support for Expected Finding 5.2, consistent with the findings of Bond and Fleisher (2001) and Clarke et al. (2005). Table 17 is a mean-comparison analysis

[55] This finding is not statistically significant, because the two-tailed significance was 0.935. *See* Appendix B and Table 21 for all Pearson's r correlations of variables relevant to the five individual-level hypotheses.

between *Perception of the Economy (Past)* and *Presidential Approval*, and a mean-comparison analysis between *Perception of the Economy (Future)* and *Presidential Approval*. In both tables, one unit changes in *Perception of the Economy (Past)* and *Perception of the Economy (Future)* are associated with higher mean approval ratings for the president. A mean-comparison analysis of divided government and presidential approval ratings (Table 18 in Appendix B) finds some credible support for Expected Finding 5.3. The mean of *Presidential Approval* is higher during times of divided government than it is during times of unified government. Expected Finding 5.4 finds some support consistent with the theoretical expectations of Expected Finding 5.4. *Gender* and *Presidential Approval*, while controlling for a president's party affiliation (see Table 19 in Appendix B), yielded results indicating a statistically significant difference of .05 in mean approval ratings between genders.

4.3 Logistic Regression Results

The results of both models can be found in Table 20 located in Appendix B.[56] *Executive Orders* is statistically insignificant in Model 1; however, the interaction effect variable for *Executive Orders* and *Party ID* is statistically significant. Table 21 reports the predicted probability of a respondent approving of the president when all variables are held at their mean, median, or modal values (where appropriate)[57] – excluding *Executive Orders* and *Party ID* which

[56] Variance Inflation Factor (VIF) scores are included in Table 20 to test for multicollinearity. All scores are less than 10 (and most less than 5) suggesting that multicollinearity is not present in either model after mean-centering *Executive Orders*, *Party ID*, and their interaction effect variable in Model 1 (Kennedy 1985; and Hair et al. 1995).

[57] Variables are held at their mean when they are measured at an interval-level, their median when they are measured at an ordinal-level, and their modal value when they are measured at a nominal-level.

are allowed to vary. Table 21 provides partial evidence as to the validity of Hypothesis 1. As the number of executive orders issued increases, the predicted probability of a respondent approving of the president decreases for respondents that identify as being strongly aligned with the president's partisan identity (*Party ID*=7); however, as the number of executive orders issued increases the predicted probability of respondents identifying as being strongly opposite of the president's partisan identity (*Party ID*=1), increases. This is inconsistent with my theory and Hypothesis 3.[58] Table 21 reports these results despite the fact that *Executive Orders* is not statistically significant, because its interaction with Party ID is statistically significant and because the interaction effect variable has a negative coefficient estimate. Not surprisingly, Tables 20 and 21 provide evidence as to the validity of Expected Finding 5.1 for both models. *Party ID* is statistically significant and its coefficient estimate is positively consistent with my theoretical expectations. The predicted probability of a respondent's approving of the president is much higher when a respondent is classified as "strong same" for every level or number of executive orders issued than it is at all other values of Party ID, as evidenced by Tables 21 and 22.

Similar to Table 21, Table 22 notes the predicted probability of a respondent approving of the president when all variables are held at their mean, median, or modal values (where appropriate), excluding *Salient Executive Orders* and *Party ID* which are allowed to vary. *Salient executive orders* is statistically significant and has a negative parameter estimates. This suggest, and as Table 22 demonstrates, that as the number of salient executive orders issued increases, the probability of a respondent's approving of the president decreases, *ceteris paribus*, consistent

[58] The implications of this finding are discussed in the conclusion section of this chapter.

with Hypothesis 3. Consistent with Expected Finding 5.2, and the reported findings of Bond and Fleisher (2001) and Clarke et al. (2005), *Perception of the Economy (Past)* and *Perception of the Economy (Future)* are statistically significant and their coefficients are in the expected direction (positive) for both models. Respondents who believe the economy is now performing better than it actually was over the last year are significantly more likely to approve of the president than are respondents who believe the economy has been performing worse that it was over the last year. Similarly, respondents who believe the economy will perform better in the next twelve months (*Perception of the Economy (Future)*) are more likely to approve of the president, than are those respondents who believe the economy will perform worse in the next twelve months.

Consistent with Expected Finding 5.3 and the findings of Nicholson, Segura, and Woods (2002), *Divided Government* is positive and statistically significant in Model 1. During times of divided government, respondents are more likely to approve of the president than they are during times of unified government. Contrary to the results of Clarke et al. (2005), and other literature reporting a gender gap, I do not find support for Expected Finding 5.4 in either model. Table 23 reports the predicted probabilities of approving of the president when all other variables – excluding *Gender* and *President's Party ID* – are held at their mean, or median (where appropriate). Table 23 reports the probability of a respondent's approving of a Republican president is roughly the same for both genders, and females are equally likely to approve of Democratic presidents or Republic presidents. The predicted probability of a female respondent's approving of a Democratic president is slightly higher than the predicted probability of a male respondent approving of a Democratic president; however, this slight difference is not consistent

with Expected Finding 5.4, because Table 23 reports both genders are more likely to approve of Republican presidents than Democratic presidents.

Interestingly, *age* and *education* have negative signed coefficient estimates in both models. This suggest that the probability of a respondent's approving of the president decreases as *age* increases. Similarly, the probability of a respondents' approving of the president decreases as *education* increases. *Social Class* and all three race control variables are statistically insignificant in both models. Suggesting that the likelihood of a respondent approving of the president is not affected by a respondent's social class or race when controlling for all of the other variables in the models. This finding may suggest that controlling for respondent's social class and race are unnecessary when data are properly weighted.[59] The internal efficacy variable has an unexpectedly negative coefficient. This finding suggest that respondents who think the government is too complicated to understand are more likely to approve of the president than respondents who do not think the government is too complicated to understand. The external efficacy variable has the expected coefficient estimate sign (positive) and is statistically significant. Both efficacy variables have a statistically significant effect on presidential approval ratings, but most presidential approval studies do not include controls for these variables. Most studies that do contain both of these variables usually pertain to voting, and not approval of presidents.[60]

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[59] The ANES over-sampled and under-sampled some portions of the national population during different survey years. To combat this problem the ANES provides researchers with an appropriate weight variable to weigh the dataset with. Failing to weigh data correctly, or not at all, may cause the researcher to report spurious estimates.

[60] For an example of a presidential approval study that does specify external efficacy as a variable, see Ostrom and Simon (1985).

4.4 Conclusion

The results of logistic regression estimation yielded evidence to partially support Hypothesis 1 and 3, and fully support Hypothesis 2. At an individual-level salient executive orders had a negative statistically significant effect on presidential approval ratings for members of both political parties. As the number of salient executive orders issued increases, the probability of a respondent approving of the president decreases accordingly, *ceteris paribus*. This finding holds for salient executive orders no matter which political party a respondent belongs to; however when the type of executive order is non-salient this finding only holds for members belonging to the same political party as the president. The amount of non-salient executive orders issued actually increased the predicted probability of respondents approving of the president when those respondents identified as being strongly opposite of the president's partisan identity (*Party ID*=1). This anomalous finding is inconsistent with Hypothesis 1 and 3, and at present, I have no theoretical reason for this finding.

The finding that salient executive orders had a statistically significant effect on presidential approval ratings at an individual-level warrants future studies to fully explore this relationship. The individual-level models used in this chapter may suffer from a few design problems that may be causes for some concern, and future studies may address these issues. One cause for concern is the lack of fixed-effect variables in this model (Stimson 1985). By pooling the data, I am unable to control for time period effects within the data without the use of fixed effect variables; however, due to multicollinearity all fixed effect variables that were initially included in this study had to be eliminated from the models. Because of this, these models are

unable to control for wars, rally-around-the-flag-effects, scandals, election years, and more. The results of this paper may not be generalizable accordingly.

The use of pooling data "have become increasingly common in political science and other social sciences"; however there are alternative methods that may be better (Lebo and Weber 2015, 242). One such method that is beyond the scope of this paper is to use an autoregressive fractionally integrated moving average (ARFIMA) model, and a multi-level model (MLM) to deal with autocorrelation at the aggregate and individual-levels (Lebo and Weber 2015, 242-243)." This paper uses two different datasets for the aggregate and individual-level models. Using the more advanced modeling techniques described above, only one dataset would be required that could be used to estimate both individual and aggregate-level models. Doing so, a researcher could use a series of cross section surveys taken over time to model individual-level effects while controlling for time-varying relationships. Unfortunately, the logistic regression models estimated in this chapter cannot control for time-varying relationships at an individual-level due to be pooled.

The executive order variables used in this chapter may also be some cause for concern. By using ANES cross-sectional data and pooling multiple datasets over time, both executive order variables do not have a high amount of variation. This is because each variable is the same for every respondent in a survey year, and with only fifteen survey years this does not yield much variation in the variable. Future studies that expand the impact that executive orders has on presidential approval should use monthly data instead of yearly data. Doing so may yield more variation in a variable that counts the number of executive orders issued by presidents. Because of the low variation in each executive order variable, both models had difficulty in distinguishing

each variable from other fixed effect variables. This may have been what caused multicollinearity in the initial models that estimated fixed effect control variables. By using ANES surveys, the logistic regression models estimated in this chapter are able to control for individual-level factors that other surveys may not be able to control for, such as perceptions about the economy and political efficacy; however, while this chapter demonstrates respondent's perceptions about the economy and political efficacy have a statistically significant effect on presidential approval ratings; the benefits of using ANES data may not outweigh some of the limitations mentioned here.

This study failed to find evidence of a gender-gap in presidential approval ratings. This may be because of the time period excluded from this study. Of the fifteen surveys that make up the pooled dataset, nine of the survey years included Republican presidents. The disparity between the amount of Republican and Democratic presidents, and the abnormally low approval ratings for President Carter may be the cause for this study failing to find evidence to support Expected Finding 5.4. Using survey data that predates 1980 may leave a researcher to find evidence of the gender gap in presidential approval data. Clarke et al. (2005) find that the gender gap between men and women's approval of the president is due to the way men and women differ in their economic evaluations. This study finds that a gender gap does not exist when controlling for individual-level factors such as partisan identity, race, political efficacy, and education, or aggregate-level factors such as divided government. Clarke et al. (2005) control for fixed effects such as scandals and wars, but do not control for the variables mentioned above. This finding suggest that there may be homogeneity between men and women in the forces driving presidential approval ratings.

Some may, correctly, argue that by pooling data from 1980-2012 I am limiting my results by assuming that the effect of variables over time are going to remain constant. A possible solution to this problem would be to pool the data around individual presidencies.[61] Doing so should allow the effects of variables to change over time instead of remaining constant from 1980-2012. Pooling the data around individual-presidencies using the same variables[62] did allow some variables change over time. In every model created, twelve in total (two for each presidency), *African American* was statistically significant. For Democratic presidents *African American* was positively signed, and for Republic presidents *African American* was negatively signed. This finding suggested that African American respondents were more likely to approve of Democratic presidents than they were of Republican presidents, not a terribly surprising finding. This finding differs greatly from the finding of the 1980-2012 pooled data, however, in which *African American* was statistically insignificant. *Gender* had a positive coefficient sign and was statistically significant during the Carter and Clinton models. For all other models, *Gender* was statistically insignificant. This finding is not inconsistent with my original findings because *Gender* was statistically insignificant for all but four models.

Consistent with my original findings, in every model salient executive orders had a statistically significant negative effect on presidential approval ratings. *Executive Orders* varied

[61] Carter (1980), Reagan (1982-1988), Bush (1990-1992), Clinton (1994-2000), G. W. Bush (2002-2008), and Obama (2012).

[62] Creating separate models and datasets for each presidency restricted me from using the divided government, president party affiliation, and gender interaction variables. Divided government was a constant in every model except the Clinton and G.W. Bush models; however, including it in those two models cause extreme multicollinearity. Similarly, the president's party affiliation would be a constant in every model, and because of this the gender and president's party affiliation interaction variable had to be dropped from every model.

between each model. For Carter, *Executive Orders* had a statistically significant negative effect on presidential approval ratings; however, the interaction effect variable for a respondent's party affiliation and the number of executive orders issued had to be dropped from the model due to extreme multicollinearity.[63] For Reagan, the numbers of executive orders issued were not statistically significant; however, the interaction effect variable for *Executive Orders* and *Party ID* had a positive coefficient and was statistically significant. Similarly to Carter, the Bush models had to drop the *Executive Orders* and *Party ID* interaction effect variable. By doing so, Executive Orders were found to have a statistically significant positive impact on presidential job approval ratings. Similarly to Reagan, for Clinton executive orders were not statistically significant; however, the interaction effect variable for *Executive Orders* and *Party ID* had a positive coefficient and was statistically significant. Similarly to Carter and Bush, in the G. W. Bush and Obama models the interaction between *Executive Orders* and *Party ID* had to be dropped. For both models Executive Orders had a statistically significant negative effect on presidential approval ratings.

While it is true pooling data into models for each presidency allowed some variables to differ over time (*African American*, *Gender*, and *Executive Orders*), and even led to somewhat different results, these results are suspect due to a number of issues I encountered when generating the models for each president. The models discussed above were plagued by multicollinearity issues, and many of the interaction effect variables had to be dropped accordingly. I was unable to include the divided government variable in any model (including

[63] Interestingly, mean centering both variables (Executive Orders and Party ID) did not reduce the VIF scores of any of the three variables.

the Clinton and G. W. Bush. models) due to multicollinearity. In eight of the models that I estimated, I had to drop the constant term from the model, because if I did not my executive orders variables would be dropped from the model. This occurred because in four models (Carter and Obama) the *Executive Orders* and *Significant Executive Orders* variables were constant and did not have any variation between respondents; the matrix was thus singular. Similarly, in the rest of the models (Reagan-G.W. Bush) the amount of variation in *Executive Orders* and *Significant Executive Orders* was extremely low. This lack of variation likely caused the multicollinearity issues discussed above.

Even if the individual-presidency models results were not suspect due to the issues discussed above, they would still only be specific to individual presidents, and therefore not generalizable. Pooling the data from 1980-2012 is not ideal, because it necessitates that the effects of variables do not change over time; however, for the purpose of testing the effects of executive orders on presidential approval ratings it is a better solution than pooling data around each presidents time in office. This is the better solution for three reasons: first, it allowed a greater amount of variation in the executive orders variables than pooling data around each presidency; second, the 1980-2012 pooled data were not plagued by issues with multicollinearity; third, the 1980-2012 pooled models were able to control for times of divided and unified government.

There are a few key implications from the results discovered in this chapter. Besides, the need for future research to look at how issuing presidents issuing executive orders affect their approval ratings, future presidential approval models, at an individual-level, should consider adding internal and external efficacy control variables. This chapter has tentatively demonstrated

that a respondent's level of external political efficacy is positively associated with higher presidential approval, and a respondent's level of internal political efficacy is negatively associated with higher presidential approval. If this finding is theoretically valid, then omitting political efficacy variables may cause a researcher to report spurious estimates due to omitted variable bias. This thesis chapter highlights the need for proper data collection or data weighing. Variables controlling for a respondent's race and social class were statistically insignificant. This finding implies that respondent's probability of approving of the president is not affected by their race or social class. Studies that find race and social class variables to be statistically significant may suffer from over or under survey sampling, and may not be properly weighing their data. The next chapter highlights the major overall findings of this thesis and discusses the implications of these findings for future research.

CHAPTER 5: CONCLUSION

In Chapter 3, two OLS regression fixed-effect models were estimated at an aggregate-level. Both models employ monthly data, beginning in January 1953; however, due to the data limitations previously discussed (in Chapter 3), Model 1 includes data through 2012, and Model 2 only includes data through 2002. Both models employ Gallup survey data, and both models control for several variables: previous monthly presidential job approval ratings; the strength of the economy; the occurrence of divided government; the presence or absence of honeymoon periods; scandals; wars; and period effects during each respective president's administration. Model 1 did not find support for Hypothesis 1. At an aggregate-level, issuing executive orders did not have any significant effect on presidential job approval ratings. When controlling for the issue saliency of executive orders, Model 2 fails to find support for Hypothesis 2. At an aggregate-level, issuing salient executive orders did not significantly impact on presidential job approval ratings.

Chapter 4 constructed a pooled cross-section arrangement of data from 1980 to 2012, using data obtained from The American National Election Study Surveys, to specify two binary logistic regression models. Both models controlled for the following variables: respondent's party identification, age, education, gender, social class, race, internal political efficacy, external political efficacy, perception of the economy past performance; and outlook of how the economy will perform in the future. Model 1 also included a control variable for divided government; and both models contained a control variable for each president's partisan identity and several carefully chosen interaction effect variables. Model 1 reports that the number of non-salient executive orders issued actually increased the predicted probability of respondents' approving of

the president when those respondents identified as being strong Democrat and the president was a Republican, or when respondents identified as being strong Republican when the president was a Democrat. This finding is anomalous and contradictory to my theory and hypotheses. Consistent with my theory and hypotheses, when respondents identified as being strongly aligned with the president's partisan identity, increasing numbers of non-salient executive orders decreased the predicted probability of respondents approving of the president. Also consistent with my theory and hypotheses, Model 2 reports that, at an individual-level, salient executive orders had a negative statistically significant impact on presidential approval ratings for members of both political parties. As the number of salient executive orders issued increases, the probability of a respondent approving of the president decreases accordingly, *ceteris paribus*.

These seemingly-contradictory findings between both sets of models can be explained by the differences between the two models. By specifying a series of dummy variables that represent when each respective president was in office, the aggregate-level (fixed effect) models are able to control for period effects during each presidents administration; however they are unable to control for individual-level factors that affect presidential approval ratings. The individual-level models have demonstrated that partisan affiliation, perceptions about the economy's retrospective and prospective performance, age, education, and levels of internal and external efficacy affect presidential approval ratings.

Respondents who share the same party affiliation as the president were statistically more likely to approve of the president's job performance, than were respondents not sharing the same party affiliation as the president. Respondents who believed the economy performed well in the past, and respondents who believed the economy will perform better in the future were

statistically more likely to approve of the president's job performance than were respondents who believed the economy performed poorly in the past and respondents who believed the economy will get worse in the future. Age was demonstrated to have a negative effect on presidential approval ratings. As age increased, the probability of a respondent's approving of the president decreased accordingly. Similarly, as education levels increased, the probability of a respondent's approving of the president decreased. Internal political efficacy levels had a negative effect on presidential approval ratings, suggesting that respondents who think the government is too complicated to understand are more likely to approve of the president than respondents who do not think the government is too complicated to understand. External political efficacy levels were demonstrated to have a positive effect on presidential approval ratings. Respondents who believed the government would do what is right were statistically more likely to approve of the president's job performance, than were respondents who had less faith in the government to do what is right. Thus, the respondent's levels of political efficaciousness had significant impacts on the approval ratings they report.

The aggregate-level models are weakened by a researcher's not accounting for the vari0ables discussed above. However, while the individual-level models are able to control for the variables discussed above, due to the multicollinearity issues, that prevented the specification of fixed-effect variables, they are unable to control for the same period effects that the aggregate-level models are able to control for. This shortcoming is not ideal, and it may lower the generalizability of the individual-level model results. Future researchers, using the methods described in the previous chapter, may wish to consider including fixed-effect control variables in their models. Doing so allows researchers to ensure their models are more robust than models

that do not included fixed-effect control variables. Despite the lack of fixed-effects in the individual-level models, I believe the individual-level models may be a better theoretical explanation of presidential approval ratings. I believe this to be the case because the aggregate-level models may suffer from omitted variable bias due the absence of the variables discussed above.

Presidential approval ratings are read in Washington and considered approximate to reality (Gronke and Newman 2003, 501). Higher approval ratings tend to pay of electorally for the president and his party in Congress and "also affect the president's policy-making goals, legislative strategy, and success in promoting his agenda" (Gronke and Newman 2003, 501).[64] This impact occurs because presidential approval ratings are a political resource that presidents and their advisors hope to influence through strategic action (McAvoy 2008, 284).[65] If the finding that the president's issuing executive orders has a negative effect on presidential job approval ratings is theoretically valid, as the individual-level models suggest, then the ramifications of this finding on presidents and future presidential research are indicative of a structural link in the president's performance ratings. Like all decisions presidents make, presidents must think strategically when planning to issue executive orders, because issuing executive orders that are salient to the public has been demonstrated to have a negative effect on

[64] See also: Sigelman (1979); Newman and Ostrom (2002); and Gronke, Koch, and Wilson (2003).

[65] See also: Bond and Fleisher (1990); Bond, Fleisher, and Wood (2003); and Jacobs and Shapiro (1994).

presidential approval ratings, *ceteris paribus*; and even non-salient executive orders may lead the president to receive lower presidential approval ratings from some members of the public.[66]

Future presidential approval research that attempts to model approval ratings may wish to include a variable for executive orders. Newman and Forcehimes (2010) implore researchers to use their list of significant presidential events because it provides for consistent comparison across studies and because their selection of events is ostensibly unbiased. I implore researchers to include Howell's (2003, 2005) list of significant (salient) executive orders and treat the issuance of salient executive orders as significant presidential events. Doing so may significantly enhance the explanatory power of future models. I do not advise researchers to model non-significant executive orders in a similar manner as presidential events; however, researchers should include counts of non-significant executive orders in their models, because they were demonstrated to have significant effects on approval ratings at an individual-level.

This thesis has found two significant findings that differ from prior research. Chapter 3 demonstrated that past monthly presidential approval ratings do not significantly affect current presidential approval ratings. This finding is contrary to past research (Nicholson, Segura, and Woods 2002; Burden and Mughan 2003; Geys and Vermeir 2008; Newman and Forcehimes 2010; Fauvelle-Aymar and Stegmair 2013). The use of potentially non-stationary, and fractionally integrated data, as well as failing to control for heteroscedasticity, could explain why prior research found lagged approval ratings to be statistically significant while this analysis does not. This thesis has failed to find evidence of a gender-gap in presidential approval ratings. There

[66] As previously discussed, it was demonstrated in Chapter 4 that non-salient executive orders had a negative effect on respondents belonging to the same political affiliation as the president.

are a few reasons that could explain why this study did not find evidence of a gender-gap. It is possible that a gender-gap does not exist when examining the time period used by the individual-level models. It is also possible the disparity between the amount of Republican and Democratic presidents, and the abnormally low approval ratings for President Carter may be the underlying reason for this study's failing to find evidence of a gender-gap. Of course, it is also possible that a gender gap does not exist when controlling for individual-level factors such as partisan identity, race, political efficacy, and education, or aggregate-level factors such as divided government.

This thesis has also demonstrated the need for future researchers to include control variables for individual's levels of efficaciousness. Chapter 4 has tentatively demonstrated that a respondent's level of external political efficacy is positively associated with higher presidential approval, and a respondent's level of internal political efficacy is negatively associated with higher presidential approval. Omitting political efficacy variables may cause a researcher to report spurious estimates due to omitted variable bias, and including political efficacy control variables should enhance the explanatory power of future models.

This thesis has demonstrated that president's issuing of executive orders has a significant effect on the approval ratings they receive from individuals. When the executive order issued is salient to the public, presidents can expect to receive lower presidential approval ratings from individuals. This finding is consistent why my theory and hypotheses, and is consistent with the assumptions of Mayer and Price (2002) and Ouyang (2012). Even non-salient executive orders were found to have a negative impact on the approval ratings presidents receive from members of their own party.

Reeves and Rogowski (2016a, 2016b), and this paper, are important first steps in advancing literature on how unilateral power use impacts approval ratings, and how the public reacts to the use of unilateral powers. Reeves and Rogowski (2016a) has demonstrated that support for unilateral power use is low. They report this finding by conducting six nationally representative surveys that ask respondents if they agree or disagree with the exercising of unilateral power by presidents under varying circumstances. Similarly, Reeves and Rogowski (2016b) use nationally representative surveys to measure support for hypothetical presidential candidates. The authors report that candidates that pledge to achieve their policy goals through unilateral power use receive consistently lower approval ratings than candidates that pledge to achieve their policy goals through congressional legislation.

While the research of Reeves and Rogowski (2016a, 2016b) advance the literature in theoretically interesting ways, the authors admit the research designs they conducted do not empirically test the effects the president's use of unilateral power has on the approval ratings they receive in real-world instances of unilateral power use. This thesis does empirically test the effects the president's issuing of executive orders has on the approval ratings they receive. Future researcher may wish to improve on the models discussed in this thesis to more rigorously test the significant relationship found between the president's issuing of executive orders and the subsequent approval ratings they receive.

APPENDIX A: CHAPTER 3 TABLES AND FIGURES

Table 1. Aggregate-Level Data Descriptive Statistics 1953-2012

Variables	N	Minimum	Maximum	Mean
Presidential Approval[1]	719	23.00	88.00	54.27
Executive Orders	720	0.00	19.00	4.37
Salient Executive Orders	588	0.00	4.00	0.28
Stock Market Index	720	23.27	1539.66	437.19
Consumer Price Index	720	26.50	231.40	103.20
Unemployment	720	2.50	10.80	5.93
Percent Change Stock Market Index	720	-20.39%	12.02%	0.62%
Percent Change Consumer Price Index	720	-1.91%	1.80%	0.29%

[1]Source: Gallup Survey Data.

Table 2. A Frequency Distribution of all Executive Orders 1953-2012

The number of Executive Orders Issued in a Month[1]	Frequency	Percent	Valid Percent	Cumulative Percent
0	15	2.1	2.1	2.1
1	58	8.1	8.1	10.1
2	116	16.1	16.1	26.3
3	118	16.4	16.4	42.6
4	109	15.1	15.1	57.8
5	104	14.4	14.4	72.2
6	70	9.7	9.7	81.9
7	49	6.8	6.8	88.8
8	31	4.3	4.3	93.1
9	19	2.6	2.6	95.7
10	12	1.7	1.7	97.4
11	9	1.3	1.3	98.6
12	3	.4	.4	99.0
13	1	.1	.1	99.2
14	2	.3	.3	99.4
16	1	.1	.1	99.6
17	1	.1	.1	99.7
18	1	.1	.1	99.9
19	1	.1	.1	100.0
Total	720	100.0	100.0	

[1]Source Howell (2005).

Table 3. A Frequency Distribution of Salient Executive Orders 1953-2002

The number of Salient Executive Orders Issued in a Month[1]	Frequency	Percent	Valid Percent	Cumulative Percent
0	457	63.5	77.7	77.7
1	105	14.6	17.9	95.6
2	20	2.8	3.4	99
3	5	0.7	0.9	99.8
4	1	0.1	0.2	100
Total	588	100	100	

[1]Source: Howell (2005).

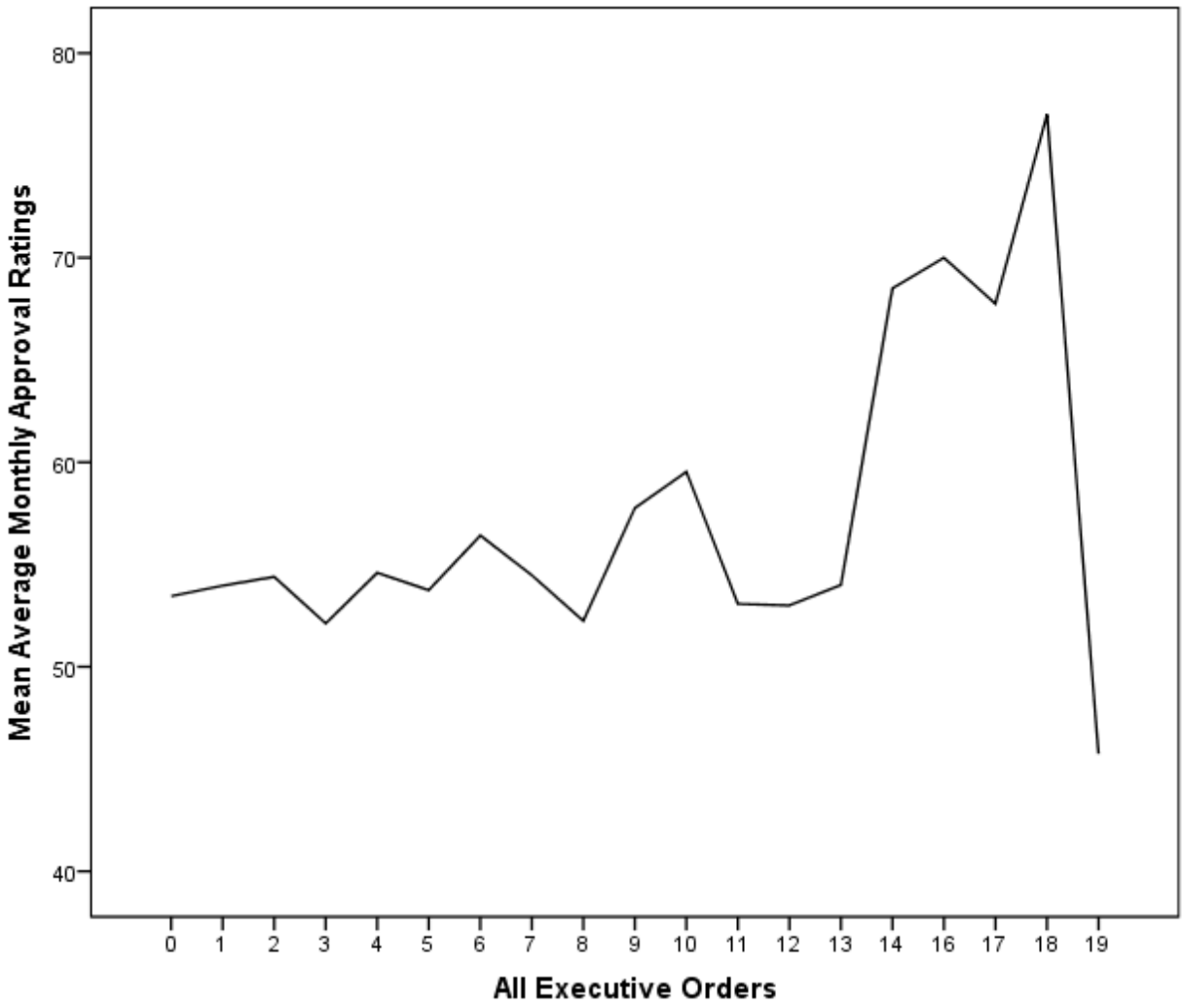

Figure 1. How Presidential Approval Ratings are Affected by Executive Orders 1953-2012

Table 4. Mean Presidential Job Approval Ratings by the Number of Executive Orders Issued 1953-2012

Executive Orders[1]	Mean	N	Std. Deviation
0	53.45	15	13.407
1	53.97	58	11.053
2	54.4	116	11.579
3	52.12	118	11.773
4	54.59	109	12.567
5	53.75	104	12.515
6	56.42	70	12.846
7	54.47	49	12.583
8	52.24	31	12.572
9	57.76	19	10.672
10	59.53	12	17.638
11	53.07	8	13.175
12	53	3	10.817
13	54	1	.
14	68.5	2	23.335
16	70	1	.
17	67.75	1	.
18	77	1	.
19	45.75	1	.
Total	54.27	719	12.296

[1]Source: Howell (2005).

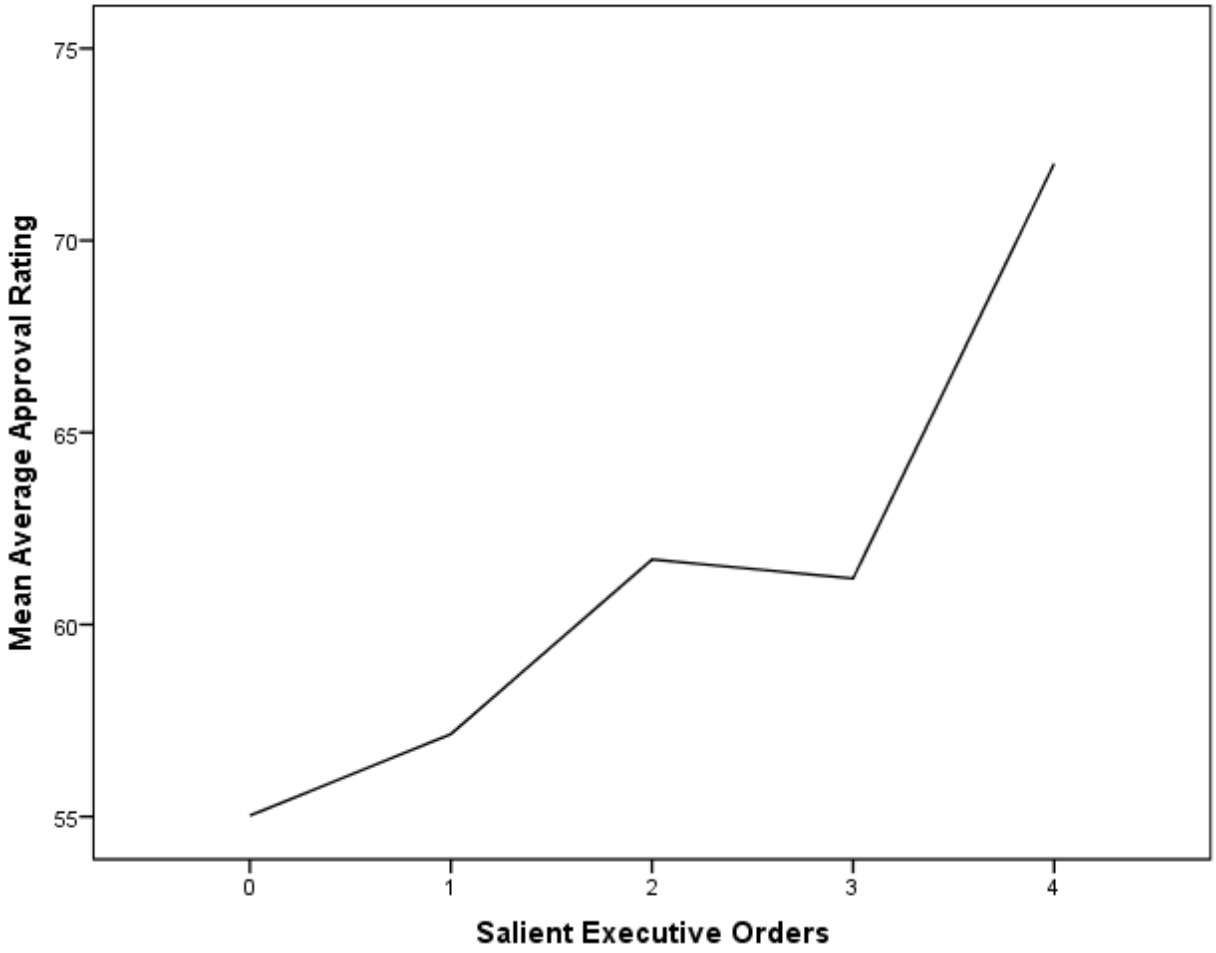

Figure 2. How Presidential Approval Ratings are Affected by Salient Executive Orders 1953-2012

Table 5. Mean Presidential Job Approval Ratings by the Number of Salient Executive Orders Issued 1953-2002

Salient Executive Orders[1]	Mean	N	Std. Deviation
0	55.03	457	11.89
1	57.15	104	11.542
2	61.7	20	10.255
3	61.2	5	12.513
4	72	1	.
Total	55.71	587	11.856

[1]Source: Howell (2005).

Table 6. Presidential Job Approval Ratings Pearson's *r* Correlation Test Results 1953-2012

	Pearson Correlation	Sig. (2-Tailed)	N
All Executive Orders[1]	0.077*	0.04	719
Salient Executive Orders[1]	0.132**	0.00	587
Lagged Presidential Approval[2]	0.930**	0.00	718
Stock Market Index[3]	-0.186**	0.00	719
Consumer Price Index[3]	-0.261**	0.00	719

Each Pearson's r correlation test is with presidential job approval ratings. ** Correlation is significant at 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed). [1]Source: Howell (2005). [2]Source: Gallup Survey Data. [3]Source: Shiller (2005).

Table 7. Presidential Job Approval Ratings and Scandals Pearson's *r* Correlation Test Results 1953-2012

	Pearson Correlation	**Sig. (2-Tailed)**	**N**
Watergate	-0.264**	0.000	719
Iran Contra	-0.029	0.435	719

Each Pearson's r correlation test is with presidential job approval ratings. ** Correlation is significant at 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 8. Average Presidential Approval Ratings and Average Number of Executive Orders Issued by President 1953-2012

	Approval Ratings[1]				Executive Orders[2]				Salient Executive Orders[2]			
Presidents	**N**	**Minimum**	**Maximum**	**Mean**	**N**	**Minimum**	**Maximum**	**Mean**	**N**	**Minimum**	**Maximum**	**Mean**
Eisenhower	95	49	77	64	96	1	12	4.92	96	0	3	0.45
Kennedy	35	56	79	69.85	35	1	18	6.54	35	0	4	0.63
Johnson	61	34	78	55	61	1	12	5.11	61	0	3	0.25
Nixon	67	23	65	49.59	67	0	14	5.3	67	0	3	0.39
Ford	29	37	70	47.02	29	1	11	5.24	29	0	2	0.21
Carter	48	29	71	44.65	48	1	19	6.42	48	0	2	0.17
Reagan	96	36	68	52.72	96	0	9	3.89	96	0	2	0.21
Bush	48	33	84	59.21	48	0	7	3.33	48	0	1	0.15
Clinton	97	40	67	54.63	97	0	11	3.73	97	0	1	0.13
G. W. Bush	96	27	88	49.37	96	0	14	2.96	12	0	2	0.33
Obama	48	41	65	49.26	48	0	9	3.04				

[1]Source: Gallup Survey Data. [2]Source: Howell (2005)

Table 9. Robinson's Gaussian Semiparametric Estimation Procedure

Series	**Robinson Gaussian Semiparametric Estimate of *d***	**H_0: d=0[1]**	**H_0:d=1[1]**
Executive Orders[2]	-0.63	-17	10
Salient Executive Orders[2]	-0.81	-20	4.8
Stock Market Index[3]	0.08	2.21	29
Consumer Price Index[3]	0.22	6.09	33
Unemployment	0.33	9.1	36
Military Casualties (Afghanistan)	-0.44	-12	15
Military Casualties (Iraq)	-0.39	-10	16
The Surge	0.00	0.00	27
Desert Storm	-0.18	-4.98	22
9/11 Terrorist Attack	-0.57	-15	11
Watergate	-0.03	0.83	26
Iran-Contra Scandal	-0.24	-6.65	21
Honeymoon	-0.2	-5.54	22
Divided Government	-0.01	-0.27	27
Eisenhower	0.00	0.00	27
Kennedy	0.00	0.00	27
Johnson	0.01	0.27	27
Nixon	0.00	0.00	27
Ford	-0.02	-0.55	27
Carter	-0.01	-0.55	27
Reagan	0.00	0.00	27
Bush	-0.01	-0.27	27
Clinton	0.00	0.00	27
G. W. Bush	0.00	0.00	27
Obama	0.00	0.00	27
Presidential Approval[4]	-0.20	-5.54	22

[1]These are the t-ratios of the null hypothesis that d=0 and d=1
[2]Source: Howell (2005). [3]Source: Shiller (2005). [4]Source: Gallup Survey Data.

Table 10. Kwiatkowski et al. (KPSS) Unit Root Test Results

Series	Lag Truncation Parameter (L)			
	L = 0	L=10	L=20	L=28
Executive Orders[1]	0.15	0.4	0.39	0.37
Salient Executive Orders[1]	0.01	0.02	0.03	0.03
Stock Market Index[2]	0.11	0.09	0.08	0.09
Consumer Price Index[2]	0.31	0.37	0.35	0.32
Unemployment	0.01	0.01	0.02	0.02
Military Casualties (Afghanistan)	0.74	1.07	0.71	0.61*
Military Casualties (Iraq)	0.12	0.12	0.09	0.08
The Surge	0.03	0.03	0.03	0.03
Desert Storm	0	0	0.01	0.02
9/11 Terrorist Attack	0.04	0.05	0.07	0.08
Watergate	0.01	0.01	0.01	0.02
Iran-Contra Scandal	0.05	0.1	0.09	0.09
Honeymoon	0.32	0.07	0.08	0.09
Divided Government	0.02	0.02	0.02	0.03
Eisenhower	0.21	0.22	0.22	0.22
Kennedy	0.02	0.02	0.02	0.02
Johnson	0.04	0.04	0.04	0.04
Nixon	0.04	0.04	0.04	0.04
Ford	0.02	0.02	0.02	0.02
Carter	0.03	0.03	0.03	0.03
Reagan	0.06	0.06	0.06	0.06
Bush	0.03	0.03	0.03	0.03
Clinton	0.06	0.06	0.06	0.06
G. W. Bush	0.06	0.06	0.06	0.06
Obama	0.28	0.28	0.28	0.28
Presidential Approval[3]	0.02	0.02	0.02	0.03

[1]Source: Howell (2005). [2]Source: Shiller (2005). [3]Source: Gallup Survey Data.

Table 11. OLS Regression Estimated Effects on Presidential Job Approval Ratings 1953-2012 (Model 1) 1953-2002 (Model 2)

	Model 1		Model 2	
Variable	**Coeff**	**S.E.**	**Coeff**	**S.E.**
Executive Orders[1]	0.06	0.06		
Salient Executive Orders[1]			0.12	0.25
Stock Market Index[2]	0.01**	0	.01*	0.008
Consumer Price Index[2]	-0.69+	0.328	-1.80*	0.83
Unemployment	-0.58	0.91	-0.88	0.99
Military Casualties (Afghanistan)	-0.03+	0.02	2.13	1.53
Military Casualties (Iraq)	0.001	0.01		
Surge	-1.63	1.62		
Desert Storm	1.56	6.38	2.15	6.82
Iraq War	0.832	3.67		
9/11	20.61**	0.66	22.56**	1.33
Watergate	-1.65	3.46	-1.67	3.54
Iran Contra	-3.33	2.55	-3.30	2.6
Honeymoon	0.97	0.991	1.02	1.03
Divided Government	2.72**	0.58	4.18**	0.58
Eisenhower	-75.11**	7.77	-79.74**	8
Kennedy	-69.26**	6.65	-72.16**	7.02
Johnson	-54.77	5.65	-56.78**	5.94
Nixon	-43.23	4.67	-46.93**	5.01
Ford	2.14	3.75	-1.3	3.96
Carter	-3.90	2.58	-5.00	2.91
Reagan	2.06	1.92	-0.51	2.187
Bush	-9.28**	1.17	-11.62**	1.27
Clinton	5.62**	0.62	5.41**	0.7
G. W. Bush	2.89**	0.96	3.51**	1.15
Obama	38.47**	2.03		
Lagged Approval[3]	0.12	0.07	0.108	0.08
N	706		585	
Adj. R-Squared	0.27		0.23	

Standard error of the estimate	4.28	4.43
Durbin H	-0.06[H]	0.40[1]

+, significant at 10%; *, significant at 5%; **, significant at 1%, all 2-tailed. [H]non-significant therefore no serial autocorrelation is present. Coefficients are unstandardized. [1]Source: Howell (2005). [2]Source: Shiller (2005). [3]Source: Gallup Survey Data.

APPENDIX B: CHAPTER 4 TABLES AND FIGURES

Table 12. Individual-Level Data Descriptive Statistics 1980-2012

Variables	N	Minimum	Maximum	Mean
Presidential Approval	30212	0	1	0.55
Executive Orders	31529	31	82	45.62
Salient Executive Orders	20570	0	5	2.31
Party ID	31254	1	7	3.96
Age	31529	0	99	45.29
Education	31207	1	4	2.65
Gender	31529	0	1	0.54
Social Class	23828	0	7	2.99
Caucasian	31316	0	1	0.76
African American	31316	0	1	0.12
Hispanic	31316	0	1	0.09
Internal Efficacy	18044	0	1	0.29
External Efficacy	24674	1	5	2.82
Perception of the Economy (Past)	30929	-1	1	-0.24
Perception of the Economy (Future)	27411	-1	1	0.08
President's Party ID	31529	0	1	0.55
Divided Government	31529	0	1	0.85

Executive orders data obtained from Howell (2005). All other data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 13. The Type of Government (Unified or Divided), Number of Respondents, and Number of Executive Orders Issued, in Each Survey Year (1980-2012)

Year	Frequency	Executive Orders	Salient Executive Orders	Type of Government
1980	1614	82	4	**Unified**
1982	1418	65	4	Divided
1984	2257	49	1	Divided
1986	2176	36	5	Divided
1988	2040	46	1	Divided
1990	1980	43	1	Divided
1992	2488	52	2	Divided
1994	1795	46	5	**Unified**
1996	1714	50	1	Divided
1998	1281	41	2	Divided
2000	1807	36	0	Divided
2002	1511	52		Divided
2004	1212	42		**Unified**
2008	2322	31		Divided
2012	5914	43		Divided
Total	31529	714	26	

Executive orders data obtained from Howell (2005). All other data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 14. Mean Comparison Analysis of Presidential Job Approval Ratings and Executive Orders 1980-2012

Executive Orders	Mean
31	0.2723
36	0.6546
41	0.748
42	0.4563
43	0.5431
46	0.5623
49	0.6337
50	0.6801
52	0.7186
65	0.5136
82	0.4081
Total	0.552

Executive orders data obtained from Howell (2005). Presidential approval data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 15. Mean Comparison Analysis of Salient Executive Orders and Presidential Approval Ratings 1980-2002

Salient Executive Orders	Mean
0	0.6715
1	0.639
2	0.5384
4	0.458
5	0.5869
Total	0.5872

Executive orders data obtained from Howell (2005). Presidential approval data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 16. Mean Comparison Analysis of Party ID and Presidential Approval Ratings (1980-2012)

Party ID	Mean
Strong Opposite	0.1705
Mild Opposite	0.3829
Weak Opposite	0.294
Neutral (Independent)	0.5441
Weak Same	0.7761
Mild Same	0.7907
Strong Same	0.9203
Total	0.5519

Data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 17. Mean Comparison Analyses of Past Performance of the Economy and Presidential Approval Ratings, and Future Performance of the Economy and Presidential Approval Ratings 1980-2012

	Past Performance of the Economy	**Future Performance of the Economy**
	Mean	**Mean**
Worse	0.3728	0.4099
Stay(ed) the same	0.6207	0.5411
Better	0.8226	0.686
Total	0.5512	0.5558

Data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 18. Mean Comparison Analysis of Divided Government and Presidential Approval Ratings 1980-2012

Divided Government	Mean
Unified	0.4796
Divided	0.5642
Total	0.552

Data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 19. Mean Comparison Analysis of Gender and Presidential Approval Ratings 1980-2012

President Party ID	Respondent Gender	Mean	N
Democrat	Male	0.5321	6338
	Female	0.5903	7267
	Total	0.5632	13606
Republican	Male	0.5701	7545
	Female	0.5201	9061
	Total	0.5428	16607
Total	Male	0.5528	13883
	Female	0.5513	16329
	Total	0.552	30212

Data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 20. Logistic Regression Estimated Effects on Presidential Job Approval Ratings 1980-2012 (Model 1) 1980-2002 (Model 2)

	Model 1				Model 2			
Variable	B	S.E.	Sig.	VIF	B	S.E.	Sig.	VIF
Executive Orders[1]	0	0	0.94	1.92				
Salient Executive Orders					-0.182	0.02	0	1.47
Party ID[1]	0.589	0.01	0	1.1	0.536	0.01	0	1.07
EO*Party ID[1]	-0.003	0	0	1.04				
Age	-0.004	0	0	1.1	-0.004	0	0.01	1.1
Education	-0.148	0.03	0	1.35	-0.127	0.03	0	1.36
Gender	0.164	0.07	0.01	2.19	0.212	0.08	0.01	2.78
Social Class	-0.007	0.01	0.61	1.26	0.009	0.02	0.55	1.25
White	-0.045	0.13	0.73	6.08	-0.056	0.15	0.72	7
Black	-0.026	0.14	0.86	4.34	-0.251	0.17	0.13	5.09
Hispanic	0.157	0.15	0.29	3.31	0.111	0.18	0.53	3.55
Internal Efficacy	-0.272	0.05	0	1.17	-0.261	0.06	0	1.18
External Efficacy	0.092	0.02	0	1.19	0.063	0.02	0	1.17
Economic Perception of the Economy (Past)	0.849	0.03	0	1.25	0.69	0.03	0	1.19
Economic Perception of the Economy (Future)	0.12	0.03	0	1.15	0.114	0.03	0	1.12
President's Party ID	0.751	0.07	0	2.75	0.522	0.08	0	2.65
Divided Government	0.24	0.09	0.01	2.4				
Gender*President's Party ID	-0.269	0.09	0	3.36	-0.321	0.1	0	3.94
Constant	0.324	0.17	0.06		-1.139	0.2	0	
Cox & Snell R Square	0.321				0.278			
Nagelkerke R-Square	0.428				0.373			
Percentage of Cases Correctly Classified	76.50%				74.80%			
Cases Included in Analysis	12967				10273			
Missing Cases	18559				21253			
Total Cases	31526				31526			

[1] This variable is mean centered in Model 1.

Executive orders data obtained from Howell (2005). All other data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 21. Predicted Probability of Approving of the President When Executive Orders and Party ID Vary (Model 1) 1980-2012

Executive Orders[1]	Party ID (-3 "Strong Opposite")	Party ID (0 "Independent")	Party ID (3 "Strong Same")
-14.63	0.293	0.7346	0.9487
-9.63	0.3025	0.7346	0.9464
-4.63	0.312	0.7346	0.9441
-3.63	0.314	0.7346	0.9436
-2.63	0.3159	0.7346	0.9431
0.37	0.3218	0.7346	0.9417
3.37	0.3277	0.7346	0.9402
4.37	0.3297	0.7346	0.9397
6.37	0.3337	0.7346	0.9386
19.37	0.3602	0.7346	0.9315
36.37	0.3961	0.7346	0.9211
Total	0.3214	0.7346	0.9416

[1] In Model 1 *Executive Orders* and *Party ID* are mean centered. The actual mean should be 0.00 instead of 0.37 (0.37 is the result of a rounding error when subtracting the mean from *Executive Orders* in SPSS).

All other interval-level variables were held at their mean. Ordinal-level variables were held at their median value, and nominal-level variables were held at their modal value.

Executive orders data obtained from Howell (2005). All other data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 22. Predicted Probability of Approving of the President When Salient Executive Orders and Party ID Vary (Model 2) 1980-2002

Salient Executive Orders	Party ID (1 "Strong Opposite")	Party ID (4 "Independent")	Party ID (7 "Strong Same")
0	0.3932	0.7639	0.9417
1	0.3507	0.7295	0.9309
2	0.3105	0.6921	0.9182
4	0.2383	0.6097	0.8864
5	0.2069	0.5656	0.8667
Average	0.3027	0.6764	0.9105

All other interval-level variables were held at their mean. Ordinal-level variables were held at their median value, and nominal-level variables were held at their modal value.
Executive orders data obtained from Howell (2005). All other data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

Table 23. Predicted Probability of Approving of the President by Gender and the President's Party Affiliation (Model 1) 1980-2012

President Partisan Identity	Female	Male
Democrat	0.63	0.59
Republic	0.73	0.75
Total	0.69	0.68

All other interval-level variables were held at their mean. Ordinal-level variables were held at their median value, and nominal-level variables were held at their modal value.
Data obtained from The American National Election Studies' ANES Time Series Cumulative Data File 1948-2012.

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