THE CINDERELLA CONSTRAINT: WHY REGULATIONS INCREASE SIGNIFICANTLY DURING POST-ELECTION QUARTERS

Jay Cochran, III

Research Fellow Regulatory Studies Program Mercatus Center George Mason University 3401 N. Fairfax Drive Suite 450 Arlington, VA 22201-4433 USA

(703) 993-4955 e-mail: jcochra1@gmu.edu

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#### ABSTRACT

In this paper, the anecdotal impression is tested that the volume of regulations tends to increase significantly during post-election quarters of presidential election years. This tendency toward "midnight regulations" is found to recur regularly in the volume of published *Federal Register* pages (a proxy for regulatory volumes) since 1948. In election years with complete executive branch turnover—that is, when the Cinderella constraint binds fully—the model suggests regulatory volumes during the post-election quarter tend to increase 27 percent on average as compared to the same periods in non-election years.

# I. INTRODUCTION

In 1981, *The Washington Post*<sup>1</sup> and the *New York Times*<sup>2</sup> reported on a phenomenon then labeled as "midnight regulations," referring to a significant increase in regulatory volumes during the 1980-81 post-election quarter.<sup>3</sup> The daily volume of rules during the final three months of the Carter Administration—as approximated by page counts of the *Federal Register*<sup>4</sup>—ran more than 40 percent above the level it had averaged during the same months of the non-election years 1977, 1978, and 1979. Indeed, the volume of midnight regulations was so

<sup>&</sup>lt;sup>\*</sup> I thank Wendy Gramm, Richard E. Wagner, Tyler Cowen, Gordon Tullock, Susan Dudley, Joe Johnson, and various members of Congressional staff for helpful comments on an earlier draft of this paper. In addition, special thanks go to Amy Swanstrom for tireless research assistance collecting the data at the core of this study.

<sup>&</sup>lt;sup>1</sup> See, for example, Philip J. Hilts, Agencies Rush Rules to Beat Inaugural Gun, Wash. Post, January 18, 1981, at A14.

<sup>&</sup>lt;sup>2</sup> See, for example, Steven R. Weisman, Reagan Ends Wage-Price Unit, Delays Pending Regulations, Denounces Soviet Intentions, N.Y. Times, January 30, 1981, at A1.

<sup>&</sup>lt;sup>3</sup> The term, "post-election quarter" refers to the full three months of November and December in presidential election years, and the following (Inauguration) January.

<sup>&</sup>lt;sup>4</sup> The *Federal Register* is the principal repository in which executive branch agencies promulgate new regulations, announce hearings, and withdraw or modify existing regulations. Using page counts of the *Federal Register* as a proxy for regulatory volumes is subject to a number of potential limitations; including that during publication, the Government Printing Office often inserts blank pages in order to accommodate rules that either do not materialize, or prove shorter than anticipated. Moreover, particular rule writers may be more or less verbose than others, and short rules may prove more costly than long ones. In addition, rules aimed at deregulation also appear in the *Register*.

In spite of these limitations, the number of pages published in the *Federal Register* should function reasonably well as a first approximation of the total volume of regulations issued by federal agencies. This obtains for several reasons. First, there is little reason to expect systematic variances among rule writers, or in the number of blank pages. Second, Notices published in the *Register* can have economic effects similar to regulations. The International Trade Administration, for example, uses Notices to publish import duties and quotas. In addition, Executive Orders, which can often have effects similar to regulations, are also published in the *Federal Register*. *Federal Register* page counts also have the virtue of being a particularly long time series on which to conduct an analysis. Finally, comparing the first differences of final regulations issued from 1977-1999 to the first differences of the number of pages in the *Federal Register* produces a correlation coefficient of 0.773. Sources for *Federal Register* page counts, National Archives and Records Administration, Office of the *Federal Register*. Data on rule counts—available only back to 1977—are from the Office of Management and Budget.

high that the incoming Reagan Administration imposed a 60-day moratorium on the implementation of these last minute rules.<sup>5</sup> Was the Carter-Reagan transition an anomaly or was it simply a more obvious manifestation of a regulatory tendency that has existed in most post-World War II administrations? This paper develops an answer to that question.

Far from being unique, this paper suggests that the experience of the Carter-Reagan transition varied perhaps in magnitude but not in pattern from the norm for regulatory output during most post-election periods.<sup>6</sup> Since 1948 in fact, the general tendency has been for regulations during the post-election quarter to increase roughly 17 percent, on average, over the volumes prevailing during the same periods of non-presidential election years. (A simple averaging of the raw data—without controlling for economic, election year, or partisan effects—shows regulations increasing about 28 percent during the post-election quarter of presidential election years.)

At first glance, one might incline toward a partisan explanation of the phenomenon; however, as will be described shortly, partisanship provides no explanatory power in connection with midnight regulations. Therefore, if partisan differences do not explain an increased propensity to regulate, why might one expect the output of rules to increase appreciably during post-election quarters?<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> See Weisman *supra* note 2.

<sup>&</sup>lt;sup>6</sup>Compared to the previous three years of the Carter Administration, the volume of *Federal Register* pages issued during the 1980-81 post-election quarter were 43 percent higher than the average volumes in those same periods of the preceding three non-election years. Moreover, the 1980-81 post-election quarter represented, until just recently, the absolute high water mark for *Federal Register* page counts in any three-month period, 24,531 pages, with 10,134 pages issued in January 1981 alone. However, that 20-year record was eclipsed with the publication of 26,542 pages in the *Federal Register* during the 2000-01 post-election quarter.

<sup>&</sup>lt;sup>7</sup> One potential explanation for midnight regulations may rest in electioneering. Under this explanation, executive branch regulators, in effect, use the regulatory process to buy the support of particular constituencies. However, for this explanation to be true, one would expect the propensity to be sharper during pre-election periods than post-election periods. In fact, the most rapid increase in regulations during election years occurs in the months

## II. WHY DO MIDNIGHT REGULATIONS OCCUR?

This paper tests the hypothesis that a combination of individual preferences and institutional constraints combine to produce the effect colloquially referred to as midnight regulations. Indeed, the model will show that a periodically binding constraint in the executive branch is a chief contributor to the phenomenon. Specifically, since Cabinet officers and agency heads often turnover after a successful re-election, and *must* turnover after at most two terms in office (or following an election defeat), executive branch administrators face a limited and known term in office constraint.

This institutional periodicity is here termed the "Cinderella constraint." Simply put, as the clock runs out on an administration's term in office, would-be Cinderellas—including the President, Cabinet officers, and agency heads—work assiduously to promulgate regulations before they turn back into ordinary citizens at the stroke of midnight.<sup>8</sup> Executive branch term limits are periodically binding constraints that may cause an individual's focus on the deadline to increase as it draws nearer. In other words, as the term-in-office deadline approaches, a rush ensues to get regulations out the door in order to achieve the executive's ends (or to indulge his preferences) before that deadline arrives.<sup>9</sup>

*following* an election. While it is true that regulations increase steadily throughout most election years (lending some support to an electioneering hypothesis), the increase is most dramatic during the post-election quarter of an administration suggesting that other factors besides electioneering may be at work.

<sup>&</sup>lt;sup>8</sup> To be technically correct, perhaps last minute regulations should be called "noontime-regulations" in recognition of the fact that an Administration ends at noon on Inauguration Day. However, the term midnight regulations was originally chosen and it is therefore used here for consistency.

<sup>&</sup>lt;sup>9</sup> Another explanation suggests that career civil servants of the regulatory agencies may be rushing regulations out the door during the post-election quarter in an attempt to consume a wasting asset: namely, a knowledge of how the particular agency head operates with respect to rules promulgation. Although interesting in its own right, this explanation is compatible with the idea that the Cinderella constraint generates the changed behavior seen as increased regulatory volumes.

For the analysis that follows, it is simply accepted that (i) regulators have preferences for certain regulatory outcomes, (ii) these preference can vary by regulator and over time, and (iii) such preferences may be pecuniary or non-pecuniary in nature. Of course, consideration and analysis of the pecuniary incentives in political economy can be found in the works of Buchanan and Tullock,<sup>10</sup> Stigler and Friedland,<sup>11</sup> and Peltzman<sup>12</sup>, among others. In contrast, Kalt and Zupan<sup>13</sup> have shown how non-pecuniary motives can also exist among politicians, including but not limited to altruistic motives.<sup>14</sup> The important point remains, however, that regardless of the prevailing preferences among regulators and policymakers, such preferences are simply taken as given and fixed over the span of a single observation. This simplification allows the focus to be placed more closely on the changing pattern of institutional constraints.

The institutional environment—that is, the set of rules or constraints—within which the principal regulatory actors operate delimits the set of possible outcomes that can emerge. During non-election years, regulatory executives may ordinarily seek to maximize their own or the President's agenda, or to minimize Congressional oversight, or to maximize budget authorizations, or to win public acclaim among other things.<sup>15</sup> These preferences combine with

<sup>&</sup>lt;sup>10</sup> James M. Buchanan & Gordon Tullock, The Calculus of Consent, Logical Foundations of Constitutional Democracy (1962).

<sup>&</sup>lt;sup>11</sup> George J. Stigler & Claire Friedland, What Can Regulators Regulate? The Case of Electricity, 5 J. Law & Econ (1962).

<sup>&</sup>lt;sup>12</sup> Sam Peltzman, Toward a More General Theory of Regulation, 19 J. Law & Econ. (1976).

<sup>&</sup>lt;sup>13</sup> Joseph P. Kalt & Mark A. Zupan, Capture and Ideology in the Economic Theory of Politics, 74 Amer. Econ. Rev. (1984).

<sup>&</sup>lt;sup>14</sup> Under non-pecuniary incentives, one might also place the quest for fame or prestige. In this connection, see, for example, Tyler Cowen, What Price Fame? (2000).

<sup>&</sup>lt;sup>15</sup> See, for example, William A. Niskanen, The Peculiar Economics of Bureaucracy, 58 *Am. Econ. Rev.* (1968) for a fuller exposition of utility maximization that can be undertaken by bureaucrats generally.

institutional constraints such as legislative and executive branch rules, procedures, and practices to produce some level of regulation.

In the quarter following a presidential election, however, the requirements for agency heads to obtain a budget, or to undergo meaningful congressional oversight, are effectively relaxed (though not eliminated entirely). Combining looser legislative constraints with a pending Cinderella constraint on the executive branch in effect removes an implied repeated dealings constraint between Congress and the executive branch. Weaker constraints in these circumstances allow regulatory executives, if they so choose, to indulge in personal preference maximization insofar as the promulgation of regulations is concerned. The net result is an increase in regulations during the waning days of an administration.

#### III. MODEL AND ASSUMPTIONS

To develop a model of midnight regulations and of the Cinderella constraint, we begin with a simple observation that regulators produce a particular volume of regulations within a set of institutional constraints. This regulatory production process is influenced by the availability of Congressional "inputs," including the fact that Congress furnishes the enabling legislation that authorizes a particular regulatory undertaking. Congress also exercises oversight responsibility over the various rulemaking agencies in the executive branch, in addition to its power of the purse with respect to Agency appropriations.

In general, more Congressional inputs should generate more regulation.<sup>16</sup> As Congress passes more legislation, more regulations is one likely consequence as the executive branch implements the finer points of the legislation passed by Congress. Congressional oversight,

<sup>&</sup>lt;sup>16</sup> Even in cases of deregulation, an initial increase in regulatory volumes is necessary. That is, to deregulate, one must write rules describing how the deregulation is to be carried out.

however, can have both positive and negative effects on regulatory output. In response to oversight hearings, for example, Congress may pass new laws that confer increased regulatory powers on agencies, or that results in increased agency budgets. Conversely, Congress may also use its oversight responsibilities to restrain an overly zealous regulatory agency by curtailing its authority or budget, or at least by threatening to do so.<sup>17</sup>

In addition to Congressional inputs, the institutional setting of the executive branch also affects the volume of regulations that emerges during the post-election quarter. Executive branch officers face a limited term in office, suggesting that turnover rates of department and agency heads should reflect the periodic application of this Cinderella constraint. Other things being equal, higher rates of Cabinet officer turnover ought to correspond to higher regulatory volumes, since higher rates of turnover will tend to correspond with periods when the Cinderella constraint binds.

In (1), a reduced form specification is presented that forms the basis for subsequent empirical tests. In addition to the institutional constraints just mentioned, controls for partisan effects are also introduced.

(1) FRP = f(DIS, CABTO, DEMCONG, EBPARTY, RGDP).

Where,

FRP is the natural log of the number of pages published monthly in the Federal Register;

<sup>&</sup>lt;sup>17</sup> Barry R. Weingast & Mark J. Moran, Bureaucratic Descretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission, 91 *J. Pol. Econ.* (1983) show that federal rule-making agencies tend to be responsive to the views of Congress. In particular, they found the Federal Trade Commission was responsive to the views of the chair of the House Subcommittee on Consumer Affairs. More generally, Weingast & Moran contend that Congress can economize on monitoring costs by relying on a combination of interest groups and ex post sanctions to control the regulatory bureaucracy. In other words, the regulatory environment enjoyed by the United States is largely consistent with the will of Congress. If it were not, Congress certainly has the wherewithal to make it so.

DIS	is the number of House Days in Session in a given month for a particular
	Congress;
CABTO	is the monthly rate of Cabinet officer turnover in the executive branch;
DEMCONG	is the percentage of House and Senate seats held by Democrats;
EBPARTY	is a dummy variable for the party that controls the executive branch (1 =
	Democrat, 0 = Republican);
RGDP	is the natural log of the level of real gross domestic product (in 1996 dollars).

## A. Parameters and Hypothesized Signs

The specification in (1) says that the volume of federal regulations promulgated in a given month is a function of Congressional (DIS) and executive (CABTO) inputs, as well as partisan (DEMCONG and EBPARTY) and economic (RGDP) influences. FRP is the natural log of the number of pages published monthly in the *Federal Register* during the post-election quarter, and is the dependent variable used to proxy the volume of executive branch regulatory output during this period.<sup>18</sup>

DIS is a generalized proxy for the Congressional inputs to the regulatory process. Days in session of course is a crude proxy, but one that tries to combine, at a broad level of abstraction, the major sources of Congressional influence on regulatory output: budgets, enabling legislation, and oversight.<sup>19</sup> The combination of legislation, oversight, and budgeting is ambiguous as to expected sign a priori; therefore, this determination is left as an empirical matter—though, the long-run tendency is likely to be positive since legislative and budget effects should be unambiguously positive, and should overwhelm any negative tendencies present in oversight.

<sup>&</sup>lt;sup>18</sup> Source for page counts: National Archives and Records Administration, Office of the Federal Register.

<sup>&</sup>lt;sup>19</sup> For the sake of parsimony and economy, the number of days the House of Representatives was in session during a given month is used as a proxy for potential Congressional action with respect to regulation. The number of House days in session was chosen since the House of Representatives has exclusive power of the purse, and Niskanen, *supra* note 10 suggests that budget maximization is an important consideration for bureaucrats. (Source for House of Representatives days in session: Clerk of the House website, http://clerkweb.house.gov/

CABTO, on the other hand, is the rate at which the President's Cabinet officers and important agency heads turnover in a given month. CABTO attempts to capture the effect that the Cinderella constraint may have on the propensity to regulate at the last minute. To keep the data collection problem manageable, monthly turnover rates for all Cabinet officers and for the heads of the Environmental Protection Agency (EPA) and the Federal Communications Commission (FCC) were used. These last two agencies combined with the Cabinet departments, account for more than four-fifths (81.4 percent) of all rules issued by the executive branch between 1996 and 1999 for example.<sup>20</sup> Thus, the turnover rates of these major agency and Cabinet officers ought to be reasonably indicative of the overall turnover of executive branch officials in general, and, therefore, of the effects of the Cinderella constraint on midnight regulation tendencies. CABTO is derived by dividing the number of Cabinet secretaries and major agency heads who leave during a given month by the total number Cabinet secretaries and agency heads authorized for that month.<sup>21</sup>

The partisan composition of Congress as well as the party controlling the executive branch may also contribute to understanding midnight regulations. DEMCONG, therefore, represents the percentage of total Congressional seats (House and Senate) held by Democrats. Similarly, the existence of any partisan effects on regulatory output by the executive branch may

histrecs/househis/lists/sessions.htm, visited September 1, 2000.) Further refinement of the model in the future might include more detail on the Congressional inputs to the federal regulatory process.

<sup>&</sup>lt;sup>20</sup> From 1996 to 1999, the EPA and the FCC were the two most prolific non-Cabinet level executive branch agencies in terms of total rules published. EPA contributed 9.9 percent of all rules published during this period, while the FCC contributed the next most, 2.5 percent. (Source for published rules: Office of Management and Budget, *Unified Agenda*.)

<sup>&</sup>lt;sup>21</sup> For example, in January 1993, 93 percent—or 13 of 14 Cabinet secretaries and 2 major agency heads left office following the election defeat of President Bush (or, fifteen-sixteenths). President Bush's Secretary for Veterans' Affairs left office in September 1992 and was not replaced. The turnover rate for September 1992 therefore, was 6 percent (that is, one sixteenth, or 1 officer out of 14 Cabinet secretaries and 2 Agency heads). Data

be captured by EBPARTY—a dummy variable that marks the party controlling the White House (1 = Democrat, 0 = Republican).<sup>22</sup> Given the general increase in regulations since 1948, it is difficult to determine beforehand the sign of any partian coefficients. Such determination is left, therefore, as an empirical matter.

Lastly, the natural log of real gross domestic product is used to control for any secular trend and for economic influences on regulatory volumes. The principal economic justification for including a measure of real income follows from the fact that wealthier societies can afford more regulation just as they can afford more of other things. Moreover, given that regulations in advanced countries have increased at a faster rate than incomes in the second half of the 20<sup>th</sup> Century suggests that regulations may in fact be luxury goods. In any event, regulations certainly appear to be at least income normal if not superior goods, and controlling for the economic circumstances underlying the regulatory environment is important.<sup>23</sup>

## B. Equation Estimates and Predictions

Equation (2) shows estimates of just the effects of election years, economic well-being, and partisanship on regulatory volumes. This regression represents an initial evaluation of the

on Cabinet Officer turnover rates were calculated from dates appearing in Colleen McGuiness, ed., *American Leaders: A Biographical Summary* (1994), as well as from various Agency websites.

<sup>&</sup>lt;sup>22</sup> It is possible that even controlling for partisan effects in this way that a partisan influences still remain in regulation but that effectively cancel out over time. It may be, for example, that the Democrats when in power seek the imposition of economic regulation and social deregulation, while the Republicans when in power seek the opposite. The global effect, while partisan at its root, could be masked by the possibly offsetting tendencies of the two parties.

<sup>&</sup>lt;sup>23</sup> Real Gross Domestic Product (GDP) data are taken from the St. Louse Federal Reserve Economic Database (FRED) http://www.stls.frb.org/fred/data/gdp/gdpc96, accessed August 15, 2000. Real GDP data are presented in chained 1996 dollars and were originally released by the Department of Commerce, Bureau of Economic Analysis.

midnight regulation phenomenon, and provides a basic benchmark against which a fuller specification can be evaluated.<sup>24</sup>

(2) 
$$\ln(FRP) = 4.180 + 0.155(EYR) + 1.285(RGDP) + 0.056(DEMCONG) + (6.17) (2.85) (8.91) (0.08)$$
  
 $0.030(EBPARTY) + 0.614(rho) (0.28) (5.66)$   
Adjusted R<sup>2</sup> = 0.9063 Durbin-Watson = -1.733

Even this basic specification shows the election year dummy (EYR) variable exerting a positive and significant influence on the proxy for post-election quarter regulatory volumes, and indicates at least some evidence in favor of a systematic tendency toward midnight regulations.<sup>25</sup> The estimated coefficient for EYR in fact suggests that one can expect average regulatory output to increase 16.8 percent compared to the same periods during non-election years.<sup>26</sup> The coefficient on real gross domestic product indicates that each one percent rise (or fall) in GDP generates about a 1.3 percent rise (or fall) in regulatory output. Partisan effects for both the legislative and executive branches were positive but not significant.

The specification in (2) simply provides some initial evidence in support of the existence of a systematic tendency toward midnight regulations, but beyond that, it does not suggest what features of election years may be giving rise to it. By refining the parameter estimates implicit in

<sup>&</sup>lt;sup>24</sup> All equation estimates in this study were made using feasible generalized least squares (that is, first order auto regressions based on the Cochrane-Orcutt method). Coefficient t-statistics appear in parenthesis beneath the parameter estimates. There are 53 observations, and the Durbin-Watson statistic reported is Durbin's "h" statistic. "Rho" is the autoregressive coefficient. Complete regression results are available from the author upon request.

<sup>&</sup>lt;sup>25</sup> The coefficient estimates for all of the non-partisan variables attained significance at the 0.01 level.

<sup>&</sup>lt;sup>26</sup> The parameter estimate in (2) for EYR is 0.155. This estimate must be transformed according to  $e^{\delta} - 1$ , where  $\delta$  is the estimated dummy variable coefficient. Transformation yields the estimate that regulations tend to increase by 16.8 percent during election years, on average, as compared to the same periods of non-election years.

the EYR variable—as shown in (1) above and as estimated in equation (3) below—the underlying influences of regulatory output in election years become easier to see.

(3) 
$$\ln(FRP) = 4.295 + 0.003(DIS) + 0.242(CABTO) - 0.218(DEMCONG) + (6.62) (2.34) (3.03) (-0.30) + 0.016(EBPARTY) + 1.264(RGDP) + 0.589(rho) (0.18) (9.42) (5.30)$$
  
Adjusted R<sup>2</sup> = 0.9103 Durbin-Watson = -2.301

The coefficient for Congressional inputs (DIS) indicates that the legislature is a significant contributor to the existence of midnight regulations.<sup>27</sup> On average, each additional day in session during the post-election quarter raises regulatory output by three-tenths of one percent.<sup>28</sup> Although DIS is statistically significant, its magnitude is relatively small. This observation comports with the idea that Congress has the *potential* to influence regulations during the post-election quarter, but in fact, that influence tends to be small (and largely unrealized).

The coefficient estimate for CABTO<sup>29</sup> suggests that when an entire cabinet turns over that is, when the Cinderella constraint binds fully—one can expect an average increase in regulatory output of 27.4 percent, other things being equal.<sup>30</sup> Conversely, as the rate of executive branch turnover diminishes, such as following a successful re-election, the Cinderella constraint is less binding and last minute regulatory output is accordingly smaller (though still

<sup>&</sup>lt;sup>27</sup> DIS attained significance at better than the 0.05 level.

 $<sup>^{\ 28}</sup>$  Over the last 53 years, Congress has been in session an average of 24 days during the post-election quarter.

<sup>&</sup>lt;sup>29</sup> CABTO and the remaining non-partisan coefficient estimates were significant at the 0.01 level.

 $<sup>^{30}</sup>$  An exponential transformation is required to derive the correct elasticity estimate for the CABTO coefficient as described *supra* note 26.

higher when compared to the same periods of non-election years). This observation helps explain why there remains a positive albeit diminished midnight regulation effect during successful re-election years. Following successful re-election bids, one tends to see lower vacancy rates among Cabinet and agency heads, thereby leading to fewer midnight regulations arising out of the Cinderella constraint.<sup>31</sup>

As with the simpler formulation in (2), economic and secular influences exert a positive influence on regulatory volumes in (3). Each percentage point rise in real gross domestic product leads one to expect roughly a 1.3 percent increase in regulatory output.<sup>32</sup> This elasticity estimate suggests that regulations, at least over the period studied, exhibit characteristics of superior goods. Partisanship continues to offer no explanatory power in this expanded formulation, and this is taken as at least some evidence in favor of the interpretation that Republican and Democrat administrations are equally prone, on the average, to last minute increases in regulatory volumes.

Figure 1 summarizes the model's predicted fit plotted against the actual volume of regulations issued during the post-election quarter, ignoring any partisan effects in either branch. The adjusted  $R^2$  suggests that this model explains better than ninety-one percent of the variation in regulatory page outputs.

# < INSERT FIGURE 1 ABOUT HERE >

<sup>&</sup>lt;sup>31</sup> This may also explain why the midnight regulation effect occurred before the 1968 post-election quarter in President Johnson's second term. By spring 1968, Johnson had removed himself from the nomination process, and thereby advanced the executive branch's "lame duck" status by several months possibly causing midnight regulations to occur earlier than usual.

<sup>&</sup>lt;sup>32</sup> The model was also tested against inclusion of secular trend in addition to and in lieu of the real GDP variable. When both a trend real GDP term were estimated together, neither achieved statistical significance even though each did so when tested separately. This suggests that broad secular trends of technological innovation, institutional development, and so on, may affect both variables similarly and therefore that the implied multicollinearity could be difficult to separate. Thus, the estimated equations show real GDP effects only.

Although the constraints of time and space do not permit fuller exposition, the midnight regulation effect was also tested against semi-annual and annual time series, in addition to the post-election monthly data. Those tests provided additional (though weaker) evidence in support of the hypothesis advanced here. That is, testing against semi-annual and annual monthly series produced estimates that were similar in sign but smaller in magnitude as the time series lengthened as compared to those just presented. This last observation (smaller magnitudes in longer time series) lends support to the idea that any tendency to increase regulatory output becomes stronger as an election year wanes.

## IV. AVENUES FOR FURTHER RESEARCH AND CONCLUSION

Invariably, a question of motivation surfaces when the findings in this study are presented. That is, what considerations might be motivating a last minute increase in regulations? Throughout this study, the question of motivations or preferences has been deliberately held constant under a *ceteris paribus* condition. Partly this was done for tractability, and partly it reflects a supposition that no consistent pattern of preferences is likely to emerge over time among regulators even assuming those preferences could be accurately gauged. That is, regulators on the whole seem as likely as the citizens they regulate to have diverse preferences for regulatory outcomes. Thus, to expect a pecuniary (or non-pecuniary) bias among regulators across time does not appear warranted.<sup>33</sup>

Another interesting question concerns whether the last minute crush of regulations imparts significant economic effects apart from the individual rules themselves. That is,

<sup>&</sup>lt;sup>33</sup> This is not meant to be too dismissive of the motives question, as it is interesting in its own right. Indeed, it is entirely possible that the regulatory bureaucracy attracts those more motivated by questions of social utility, for example, and thereby introduces some sort of systematic bias into the motives question. As stated above, however, without some stronger evidence to the contrary, it seems the more prudent first course is to assume no systematic bias among the preferences of regulators across time.

economists often accept the law as a fixed and stable point of orientation for ordering economic affairs, and in most cases this a valid procedure. However, when the law changes in large bunches and in a relatively compressed time, that fixity assumption may no longer be valid. In effect, midnight regulations may cause the law to move from background to foreground in economic exchange decisions as uncertainty increases (if only to the extent of the time taken to comprehend and apply the crush of new laws), and transactions costs increase (as some exchanges are made more costly while others may be placed off limits entirely).

Whether and to what extent such concentrated legal reordering affects economic relationships are additional aspects of the midnight regulations phenomenon that merit further careful study. This paper has only sought to study the more elementary existence question of midnight regulations. The evidence presented here offers some support to the conclusion that there is in fact a systematic tendency across time and across parties to increase regulatory volumes during the waning days of an administration. Whether this is ultimately an efficient economic outcome is a question that will have to await additional study.

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# Figure Legends

# Figure 1

# REGULATORY OUTPUT IN POST-ELECTION QUARTERS, ACTUAL VS. FITTED VALUES

Model fit improves slightly when the statistically insignificant partian variables are dropped from the estimated equation. The model shown here, therefore, is given by (t-statistics in parenthesis):

 $\begin{aligned} &\ln(\text{FRP}) = 4.164 + 0.003(\text{DIS}) + 0.239(\text{CABTO}) + 1.270 \ln(\text{RGDP}) + 0.571(\text{rho}). \\ & (8.79) \quad (2.41) \quad (3.07) \quad (9.98) \quad (5.07) \end{aligned}$ 

