

Determining Economic News Coverage

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ABSTRACT

While much research has been devoted to how individuals respond to media messages and frames, we know much less about what motivates variations in the content and tone of media coverage. Given the important consequences of media coverage of economic events, this paper explores the factors that explain variations in economic news coverage as a function of both economic indicators and contextual influences. Two innovations to the political communication field are introduced in this study. First, Poisson autoregression is used to investigate what accounts for monthly changes in the amount of economic coverage. Second, two separate measures of news tone, contemporary and comparative coverage, are used to assess how economic reality factors in to economic reporting. Results illustrate the news media does not view all economic statistics equally and at the same times in deciding economic newsworthiness and level of coverage. In addition, rival stories and elections impact the level of economic coverage. The results also suggest the news media indeed emphasizes the negative from both a contemporary and comparative perspective and economic reality has little impact on coverage tone.

I. Introduction

A central question in considering media effects is in how journalists translate reality into news headlines. To what degree do journalists convey information directly, and to what degree do journalistic norms and routines lead to a news product that differs from reality? A central test of this question comes in looking at the economy, where clear measures of objective economic realities are available. While previous studies investigate how closely the tone of news coverage reflect the actual state of the economy (most recently, Goidel and Langley 1995; Wu, Stevenson, Chen, and Güner 2002), less attention has been paid to how both pure economic data and contextual factors combine over time to impact the news product. Speaking to this issue, this paper explores whether the nature of the news media influences the kinds of economic information that is covered in the news, as well as whether the media also shape the tone of news coverage.

Investigating this question is particularly important for understanding public opinion and politics, since public opinion and voting scholars have long cited the economy and economic perceptions as one of the most important issues during the course of elections, particularly presidential elections (Erikson 1989; Fiorina 1981; Haller and Norpoth 1997; MacKuen, Erikson, and Stimson 1992). For example, Alvarez and Nagler (1996) show that concerns about the economy substantially dominated the 1992 election, even as the U.S. was pulling itself out of a recession, contributing to incumbent President George H.W. Bush's loss to Bill Clinton. Besides for the importance of the economy in voter evaluations, we also know that these evaluations are widespread, and that citizens are able to make rather sophisticated economic evaluations even with limited amounts of economic information (MacKuen, Erikson and Stimson 1992).

Given the essential role of the media in citizens learning about the economy, the kinds of economic news presented by the media will affect the amounts and kinds of economic information that citizens gain. When this coverage differs from objective reality, it has consequences for both understanding voting behavior as well as public assessments of politicians' actions. As Hetherington (1996) shows, the tone of economic news coverage is quite consequential for citizens' retrospective economic evaluations, which in turn may shape candidate evaluations. Variations in the amount of

economic coverage also affect presidential candidate evaluations (Shah, Watts, Domke, Fan and Fibison 1999). And more generally, what citizens consider the most important social and political issues relies in strong measure on the amount of news exposure they have to those topics (Brosius and Kepplinger 1990; Erbring, Goldenberg and Miller 1980; McCombs and Shaw 1972).

While much research has been devoted to how individuals respond to media messages and frames, we know much less about what motivates variations in the content and tone of media coverage. Given the important consequences of media coverage of economic events, this paper explores the factors that explain variations in economic news coverage as a function of both economic indicators and contextual influences. Two separate two separate analyses are conducted. In the first part, I investigate what economic and contextual factors account for the level of economic news coverage on the front-page of *The New York Times* from 1980 to 1996. Here, a Poisson autoregressive model is used to map out the effects of pure economic data and two contextual measures on coverage. The second analysis utilizes a simple distributed lag model to consider the effect of these same components on the tone of coverage from both a contemporary and comparative perspective. These two analyses demonstrate that not all economic data are created equal in the eyes of the news media and that the news media indeed emphasize negative economic news.

II. The Explanations of Economic News Coverage

Mutz (1992) suggests that citizens' perceptions of the economy are developed directly from news coverage as well as from personal experiences. Thus, knowing what kinds of economic information citizens are exposed to by the news media becomes particularly important. Specifically, does news coverage mirror pure economic data and, if not, what are the general trends? If the news media does not strictly report economic reality, then citizens' views and beliefs about the economy will likely be skewed, with important consequences for public opinion and voting.

What then explains media coverage of the economy? In one line of research, scholars argue that media coverage of the economy distorts reality, and frequently in a negative direction (Bennett 1988;

Nadeau, Niemi and Fan 1996). For example, Shah et al. (1999) find that when the economy is good, the media gives the economy little attention, but when the economy is bad, the media gives the economy a great deal of attention. The argument that the news media generally overemphasize the negative and downplay the positive is common to media research (e.g., Stein 1975; Hetherington 1996). In terms of economic information, Haller and Norpoth (1997) argue journalists are prone to negative economic news because bad economic times are perceived as more newsworthy than good economic times. Negative coverage may also be driven by the public's perceptions and opinions concerning the economy, as shown in Granger causality tests, though evidence on levels of cycling influence between the news product and the public's perceptions remain mixed (Blood and Phillips 1995; Stevenson, Gonzenbach and David 1994; Wu et al. 2002).

Absence of competing stories may also contribute to news attention of the economy. Hetherington (1996) found that network television's portrayal of the economy became increasingly negative as the economy improved during the course of the 1992 presidential election. With fewer rival stories during the 1992 election than in previous elections, journalists' focus on the economy increased. The tone of economic news may also be affected by the electoral context. Harrington (1989) finds that television networks give greater coverage to bad economic news during non-election years, but journalists are more balanced during election years. This result is due to greater journalistic objectivity during elections and that it is easier to build stories around a good economy during election years. Incumbency may also play a role. Shah et al. (1999) find that when the economy is good, the incumbent President receives positive coverage in regards to economic news (also see Mutz, 1998). In part, it may be much easier to pin the state of the economy on the incumbent president, regardless if it is positive or negative. For example, during the 1992 presidential election, Bush was frequently negatively linked to the economy.

Contrary to some of these findings, other work has argued that the economic news coverage does in fact accurately reflect the economy. Nadeau, Niemi, Fan and Amato (1999) observe that economic news shows a strong adjustment to current economic conditions. When the economy is bad, the coverage

is increasingly negative. When the economy is good, the coverage is increasingly positive. Behr and Iyengar (1985) find that for the most part, the news media reflects economic reality. Wu et al. (2002) generally concur, finding that the trend lines for coverage and reality are fairly consistent, but they also find that during recessionary periods a fascination with negativity prevails.

I extend this research on what explains economic news coverage in four important ways. First, structural factors that affect economic news coverage are combined with the influence of real economic indicators. While some models have considered only electoral effects or specifically the effects of economic indicators, this combination constructs a more comprehensive model of what explains economic news coverage. Second, this paper improves on other research by considering the explanations for economic news over not just a few years or an election cycle, but over a sixteen year time span, including both electoral on and off years. While many have looked to the 1992 election as a key instance of economic news coverage, it is important to know whether this is a representative case or an outlier among other time periods. Third, the paper develops improved measures and models of economic news. Previous literature on levels of economic coverage has often relied on simplified measures of economic news. For instance, Goidel and Langley (1995) provide simple descriptive statistics of monthly amount of economic coverage in *The New York Times*, instead of modeling effects. And Wu et al. (2002) rely purely on the number of stories with the word “recession” as their news coverage variable versus all types of economic news. Using a detailed coding of *New York Times* articles, the paper develops a more fine-grained measure of economic news. Finally, the effects of these factors are considered on both the amount of economic news coverage as well as its tone, combining news effects often considered in isolation of each other.

III. Modeling Economic News as a Function of Context and Economic Reality

Most attention to economic news has focused on its consequences for citizens, with little attention paid to identifying the explanations for why and when coverage of economic news deviates from real economic indicators. In considering the mediating influence of the media generally, scholars have

pointed to the importance of several factors – the influence of elite actors including politicians and interest groups, social norms and values, and journalistic routines and organizational pressures (Gans 1979; Shoemaker and Reese 1996). In the case of economic news, the most important factor among these is journalistic norms. The norms and values of the public seem less related to economic news than they might to other situations, while the ability of political elites to constrain economic news coverage is strongly limited by economic realities. Politicians may claim that a good economy is actually doing poorly, but such claims traditionally have little pull.

What effect, then, will journalistic norms and practices have on attention to economic news and the tone of economic coverage? As others have argued, news routines exert a potent force on news coverage. Journalists traditionally see themselves as members of a professional community, and are thus committed to professional norms such as objectivity and balance (Tuchman 1978). In addition, journalists are constrained by the nature of the media as an institution (Cook 1998). News production is a constant job, and in order to make this task more manageable, it is common to adopt simplifying routines, such as newsbeats. In addition, the nature of the media as a commercial enterprise also makes journalists concerned with public attention, which motivates simplified story lines and accessible news stories (Tuchman 1978).

Applying these arguments specifically to the amount of coverage of economic issues, this focuses on three influences. The first is the real economy. While journalists may aspire to put their own personal imprint on news stories, either to cast a story in a novel, interesting way or perhaps for some ideological agenda, this is strongly limited to what the numbers say. Thus, a strong influence on economic coverage should be the status of the economy. Here, I consider whether different economic statistics create varying levels of news, looking at the individual effects of inflation, unemployment and a composite economic measure, the index of coincident indicators, on the amount of economic news. Two intervening factors that may temper or accelerate the level of economic coverage are also considered: rival stories and elections. Given the finite nature of news space and the importance of news values such as importance and timeliness, dramatic news stories at the national level may depress the amount of economic news

coverage. The economy represents a relatively consistent news item, with a new slate of newsworthy economic indicators released monthly or quarterly. Against rival events, economic news may be pushed off the front page. In terms of elections, economic considerations will become more salient to voters as elections near and more newsworthy fodder for journalists.

Considering next the tone of economic news coverage, this analysis draws a distinction between explanations of the contemporary economy versus explanations of the current economy compared to prior economic health. Using two separate measures of contemporary and comparative economic news tone adds a richer notion of how economic news is presented to the public. Contemporary tone compares how the media portray economic times in general – that is, is the economy performing well or poorly on the whole. This measure of tone is what is traditionally used to measure economic tone. Expanding on these prior studies, comparative coverage is also examined – whether the media are reporting the economy is performing better or worse than the recent past. Coding at these two levels allows more leverage in assessing the media negativism hypothesis. For instance, we can ascertain what the media thinks of the economy in the big picture, but also whether this is connected to other recent economic trends. Thus, it is possible to reconcile stories that suggest the economy is still in a recession, but improving. Previous studies would treat this type of story simply as “negative” coverage since the word “recession” was used. Here, one is able to distinguish that the tone is “negative” in the general state of the economy, but is trending “better” in the recent past.

We know the news media has a penchant for overemphasizing the negative when the economy is performing poorly. Are there some conditions where this effect is more pronounced? First, I consider whether all economic statistics predict negative news tone similarly, or whether movement in certain statistics matters more than others. Again, also investigated, is whether the effects are conditioned by election times or the presence of rival events. On one hand, elections may increase negative economic coverage (Hetherington 1996). Alternately, elections may serve to balance coverage (Harrington 1989). With both Democrats and Republican candidates taking positions on economic issues, journalists are able

to produce economic news stories that balance partisan viewpoints (meeting objectivity goals) and present partisan controversy (stimulating citizen interest) (Hallin 1986).

IV. Data

The dependent variable data used in this study consists of a content analysis of the front-page of *The New York Times* between October 1980 and December 1996. The data collected includes monthly raw counts of economic stories on the front-page of *The New York Times*. As noted, the stories collected were coded for whether they presented the economy as good, bad or neutral, as well as if the tone was better, worse or neutral.¹ Coding for both of these items simultaneously offers additional leverage in assessing economic coverage by the news media. Coding for good, bad or the same gets at how media portray economic times in general (contemporary coverage). Coding for better, worse or the same sees whether media are reporting that the economy is better or worse than in the recent past (comparative coverage). For instance, if a story stated that the aggregate economy was performing poorly, but unemployment rates were decreasing, it was coded “bad/better.” Finally, the economic data were attained from the Commerce Department.

This choice of source and focus on front page stories makes data collection more manageable, but may raise some concerns of generalizability. Yet, the front page of any newspaper, particularly above the fold, signals what stories editors find most important and interesting to the public as well as to the news profession. This is especially true for *The New York Times* as an elite national newspaper and agenda-setter for other newspapers (see, Blood and Phillips 1995; Reese and Danielian 1989; and Wu et al. 2002). Further, if one was to consider all economic stories in *The New York Times*, or any paper for that matter, then the business section or daily space allocated to business should serve as a constant. Meaning, the month-to-month space for economic news should remain relatively equal in such sections. We should also expect that the tone of front page economic coverage should vary little from the tone of economic news within the business section or other parts of the newspaper. While some variation in tone may be present, it seems quite reasonable to expect commonality between the front-page and the business section.

In addition, from the perspective of audience effects, we can be relatively confident that even if citizens are not reading the newspaper from front to back, it is quite likely that they at least scan the front-page of the paper to see what is going on in the political and economic worlds. So front page coverage should be reasonably representative of the nature of the economic agenda.

Some recent content analyses of the news media have used different newspapers from across the United States (Shah et al., 1999; Nadeau et al., 1999), but *The New York Times* serves as a sufficient proxy for economic coverage by other newspapers. *The New York Times*, in part, sets the agenda for what network television newscasts and other national newspapers will report on for that day and the next.² Thus, *The New York Times*' front-page should adequately reflect the agenda for the important topics of the day within the news media institution (Goidel and Langley 1995; Wu et al. 2002).

Using a time-series data set provides leverage in examining economic news coverage by the news media. If we were only looking at a few weeks, months, or even years, we might get a distorted image of how the news media functions. This study spans 195 months, five presidential elections, nine congressional elections and two recessions. Though not ideal, the sixteen-year period should produce a clearer signal of how news media perform and act in covering the economy. The raw story counts for the time period are presented in Figure 1.

[Figure 1 about here]

Looking at Figure 1, it is clear that there are significant differences in the amount of coverage the economy receives over time. Expectedly, the two peaks in the figure, October 1982 and October 1991, correspond to the recessions in the early 80s and 90s. Figure 1 shows that the amount of economic coverage is certainly not constant and demonstrates notable variation month-to-month. We see that there are changes in coverage, now the question is what accounts for these changes?

V. Level of Economic Coverage

Variables

The dependent variable in the model is the number of stories per month about the economy on *The New York Times*' front-page. The independent variables used are: monthly change in the inflation rate, monthly change in the unemployment rate, monthly change in the index of coincident indicators (ICI), an election dummy and an event dummy.³ In addition, interaction terms are included between the economic variables and the election dummy, to see whether the effects of the real economy are more pronounced during elections and less influential when competing events hold center stage.

The inflation rate examined here is simply the monthly change in inflation. Since inflation is an important economic statistic that the media examines, it is appropriate to include inflation in this analysis. Moreover, the inflation rate is a popular sign of the health of the economy and is highly correlated with the level of interest rates. The monthly change in unemployment is another visible measure of the health of the economy. Journalists should find it relatively easy to produce scores of human-interest stories based on movement in the unemployment rate (probably more when it increases). During times of high unemployment, citizens are able to look around their community and see themselves and others losing their jobs and having financial difficulty. Specifically, unemployment is an emotional issue where message conflict between parties and candidates will likely be prominent during times of high unemployment rates (Conover, Feldman and Knight, 1986). Journalists understand the importance that the public places on unemployment and thus are likely to increase coverage when the rate increases.

The index of coincident indicators is a composite aggregate economic indicator of current growth in the economy. The purpose of this indicator is to assess the current strength of economic activity, thus serving as a variable signaling general economic health. When the index is up the economy is expanding and when the index is down the economy is contracting. Policymakers use the index as an assessment of current economic policies and strategies. The index consists of eleven components that capture different facets of the economy including the index of consumer expectations, new orders for consumer goods and materials and the index of stock prices (see Wu et al. 2002, for further use of this measure). One of the components in the index is average weekly claims for state unemployment insurance. Though similar, again, the unemployment variable above is change the unemployment rate at the national level – of

course, aggregated up from states. Yet, we found no collinearity between the index and the unemployment rate change – or between any of the predictor variables.⁴ For this data set, the monthly changes in the index range from -20 to 23.

The event dummy is a measure testing whether rival stories affect economic news coverage. Although many events could have been used, only political events that were likely to distract media attention away from the economy were included.⁵ These events include, for example, Iran-Contra, the first Gulf War and U.S. fighting in Somalia. Hence, the expectation is that rival stories should suppress the amount of economic coverage given that space and time are finite in the news product. Finally, the election dummy simply denotes whether there was a congressional and/or presidential election during that month and year. This dummy variable is a measure of a conceptual increase in economic news as an election approaches. Hence, September, October and November are coded “1” before an election and all other months are coded “0”. Since the economy is particularly salient during elections, there should be increased economic coverage during such times. Moreover, this variable partially captures the potential impact of candidates on coverage.

Modeling Strategy

Performing exploratory analysis on the data, Durbin-Watson d-statistic and Portmanteau White Noise tests, revealed a strong degree of autocorrelation in the dependent variable – as we may suspect given the time-serial nature of the data. In particular, a correlogram of twenty lags clearly indicated an AR(1) process. The count data also exhibited substantial overdispersion. Overdispersion is simply when the variance is greater than the mean. In these cases, standard Poisson regression is inefficient and the standard errors will be biased downward, resulting in large z-values (Long, 1997). In a cross-sectional context, researchers would use a negative binomial regression model to account for overdispersion. Hence, we need to find the technology to deal with autoregressive count data with overdispersion in our outcome variable.

Building on seminal papers in statistical analysis and public health research (Grunwald, Hamza and Hyndman 1997; Schwartz, Spix, Touloumi, Bacharova, Barumamdzadeh, le Terte, Piekarksi, Ponce de Leon, Rossi, Saez, and Schouten 1996; Schwartz 1996), Brandt and Williams (2001) introduce the Poisson autoregressive model of order p (PAR(p)) for use on political and economic data (also see Mitchell and Moore (2002) for an application to presidential use of force data). The benefit of the PAR(p) model is that it allows for both autocorrelation and overdispersion in the outcome variable without biasing the standard errors. The downside is that it is complicated. A quick and dirty solution is just to use a lagged dependent variable model. Yet, research has shown that with event count data, this method creates linear exponential growth that may not actually have a cyclical component (Brandt, Williams, Fordham and Pollins 2000).

Following Brandt and Williams (2001), the PAR(p) model can be defined by a measurement equation, state equation and conjugate prior. The measurement equation is:

$$\Pr(y_t | m_t) = \frac{m_t^{y_t} e^{-m_t}}{y_t!},$$

where $m_{t-1} = E[y_t | Y_{t-1}]$ is the conditional mean of the linear AR process. The model's transition equation is:

$$m_t = \sum_{i=1}^p \rho_i Y_{t-i} + \left(1 - \sum_{i=1}^p \rho_i\right) \mu,$$

where ρ is any real number and $\mu = Y_0$. Finally, the conjugate prior is defined as:

$$\Pr(m_t | Y_{t-1}) = \Gamma(\sigma_{t-1} m_{t-1}, \sigma_{t-1}),$$

where $m_{t-1} > 0$, $\sigma_{t-1} = \text{Var}[y_t | Y_{t-1}]$, $\sigma_{t-1} > 0$ and $\Gamma(\cdot)$ denotes a gamma function, since the prior is assumed from a gamma distribution. From the model's definition we can derive the forecast function for conditional mean and variance for the PAR(p) model. The conditional mean is:

$$m_{t+1|t} = \sum_{i=1}^p \rho_i m_{t|t-i} + \left(1 - \sum_{i=1}^p \rho_i\right) \mu.$$

And the variance is given by

$$Var[y_{t+1}|Y_t] = \frac{1 + \sigma_{t+1|t}}{\sigma_{t+1|t}} m_{t+1|t}.$$

Though specialty software packages exist, STATA 8.0 includes a built-in procedure to estimate the PAR(p) model. As mentioned above, exploratory analysis suggest an AR(1) process for the outcome variable and thus this analysis uses a PAR(1) model.

Results

Four different models were run to determine changes in the amount of economic news coverage. The first contains the economic variables, the event dummy and the election dummy. The second model includes an interaction between change in unemployment and the election dummy. The third model contains an interaction between inflation and the election dummy and the fourth model includes an interaction between ICI and the election dummy. Hence, all the economic variables were interacted with the election dummy in this analysis. Throughout the four models, all the predictors are signed in the expected direction. Table 1 presents the results from the PAR(1) model for the four different models.

[Table 1 about here]

Unlike estimates from Poisson and negative binomial regressions, a direct interpretation of the coefficients to percent increase or decrease of the outcome is not possible. For the PAR(p) model, the instantaneous effect of a predictor depends on the regression coefficient estimate as well as the estimate value of ρ_i , given the temporal dynamics of the model (Brandt and Williams 2001). That is, to interpret expected percent change due to a predictor variable, one cannot simply take the exponentiation of the coefficient, subtract 1 and multiply by 100 if we are using a PAR(p) model. To interpret the estimated instantaneous percentage change on the outcome variable due to a predictor variable, one needs to employ the following equation,

$$= \frac{100 \left[\frac{(1 - \sum_{i=1}^p \rho_i) \exp(x_t, \beta_1) \exp(z_t, \beta_2) (\exp(\Delta z_t \beta_2) - 1)}{\sum_{i=1}^p \rho_i y_{t-i} + (1 - \sum_{i=1}^p \rho_i) \exp(x_t \beta_1 + z_t \beta_2)} \right]}{(1 - \sum_{i=1}^p \rho_i)},$$

where β_1 is the constant, β_2 is a predictor variable and ρ is the AR parameter.

In the first model, change in unemployment, the event dummy and the election dummy are significant predictors of the magnitude of economic coverage. Substantively, for a one-point climb in the unemployment rate, economic news coverage is expected to increase by 94%. Though movement of this magnitude is not common, it suggests the impact unemployment has on the minds and pens of the news media. A change of this magnitude gives journalists abundant information from different sources and angles to produce stories. For instance, journalists may write about how the increase is likely to affect citizens and business in the near and far future, and citizens are likely to understand the implications. The rival story predictor decreases coverage of the economy by 41%. Although this figure fluctuates due to the importance of the rival story and the size of the change in economic statistics, it is still an important variable in decreasing coverage on the economy. Finally, when an election is approaching, economic coverage is expected to increase by 43%. Previous findings have suggested that during an election, the economy and any movement in the economy are considered to be substantially newsworthy by the media. This result adds to that body of work by illustrating the importance given to the economy during both congressional and presidential elections.

Inflation and ICI are both insignificant predictors of amount of economic coverage. That inflation is insignificant serves as an interesting counter to some popular pundits who argue that inflation is the most important economic indicator. Surely, inflation is important and has direct impact on interest rates, but apparently changes in inflation are insufficient to affect the level of economic news coverage. It is rather surprising that movement in the general economic indicator fails to significantly impact the level

of news coverage. It seems that a journalist given a simple measure of overall economic performance would easily be able to use that as a launching pad to a story. This leads us to a final noteworthy finding.

In the final three models, added interaction terms between unemployment and the election dummy in model two and inflation and the election dummy in model three fail to be significant. Although the magnitude of the coefficient for the unemployment/election interaction suggests a large impact, it is not statistically significant. Unemployment is a very visible economic statistic and by all apparent reports is particularly so during election time. Yet, interestingly, movement in the unemployment rate during election time is no more newsworthy than at any other time. This is a rather surprising result given we might suspect if there was ever a time unemployment would be important it would be during election time. It is worth noting that through examining the adjusted r-squared terms, none of the four models are a significant improvement over any of the others in terms of fitting the data.

The results of the fourth model show the interaction between ICI and the election dummy is mildly important in explaining coverage. A one-unit point in the ICI during an election is expected to decrease in the number of stories on the economy by 4%. Consistent with the direction of the non-significant estimates for ICI in the other three models, we see that positive movement in the economy can actually decrease the amount of economic news coverage. Yet, what is appealing is that this is apparently only during an election. Why might that be the case? Possibly the increased scrutiny given to the economy during the electoral season by the news media is only worth reporting when the economy is moving negative. Hence, good economic news is bad news for the news media's bottom line. Instead of referencing a single economic statistic during election time, what may be important is the state of the aggregate economy. Nothing better encapsulates that concept better the measure for ICI.

These results suggest that the news media do not view movement in different economic components in the same light and to be important at the same times. Seemingly, movement in inflation, an economic indicator that Republican administrations have traditionally sought to keep low, does not lead to changes in the amount of economic coverage. If the news media fails to consistently report on movement in inflation levels then we may expect for the public to be relatively unsure of its level and,

getting back to the media's agenda setting role, not consider it an important issue. On the other hand, the news media seems quite adept at recording movement in unemployment rates, traditionally a statistic that Democratic administrations have sought to keep low. And yet, we fail to find statistical evidence of its effect on coverage during the course of a congressional or presidential election. Another interesting finding is that the general state of the economy *only* matters during election season. While its effect is small, it is important to note as a comparison against inflation and unemployment. These findings suggest that economic coverage may not be a translation of the whole economy, but of certain salient elements.

VI. Negativity Amongst the News Media

Data

The news media's negativity bias discussed previously suggests there should be more negative coverage than positive coverage of the economy by the news media. In addition, when the economy is bad, there should be more negative coverage of the economy than positive coverage of the economy when the economy is good. This first expectation is easily demonstrated by examining the stories whose tone was coded on two levels, contemporary and comparative coverage. Comparing these stories, there were 269 more negative stories than positive stories concerning how the economy is doing in general (contemporary coverage). Examining coverage of how the economy is doing currently as compared to the recent past (comparative coverage), we see that there are 156 more negative stories.

A simple graphical representation enables us to get a handle on the expectation of more negative coverage during bad economic times than positive coverage during good economic times. In Figures 2 and 3 the net tone of coverage is contrasted with the general state of the economy, as measured by the ICI. Graphing a variable such as unemployment, instead, only provides a relatively small picture of the economy. The y-axis is simply the net tone of coverage measured by the number of stories plotted against time. Comparing Figures 2 and 3, we see that comparative coverage tends to fluctuate more

around the neutral point, zero, than contemporary coverage. Hence, it seems easier to make comparative statements than absolute statements about the economy.

[Figures 2 and 3 about here]

Figure 2 demonstrates that news media are inclined to overemphasize the negative when the economy is doing poorly. The dotted line is the index of coincident indicators, which is used as a sign of the general health of the economy, and the solid line is the contemporary economic coverage variable. Also, news media do not overemphasize the positive when the economy is performing well. In fact, it is hardly ever the case that news media are over-reporting the positive when the economy is strong. One possible reason is reporters and editors may emphasize the negative to pique the public's interest, thus attempting to maximize revenues from viewership and readership. Figure 3 substitutes in comparative economic coverage and we see a similar pattern with figure 2. News media are not as extreme in reporting on the comparative economy as on the contemporary economy. Still, there are more negative stories than positive stories, but the divergence is less severe than in Figure 2. Since the comparative economic coverage variable gets at news media's interpretation of the immediate trend in the economy, we might expect to find more objective reporting. For instance, news media are more likely to say that the economy is getting better than to say that the economy is out of a recession after bad economic times. These results demonstrate that news media seem quick to point out when the economy is doing poorly and yet are slow to report when the economy is doing well.

Model

What can we say about what accounts for movement in contemporary and comparative economic tone coverage in the news media. Consistent with the previous analysis, both dependent variables have a strong degree of autocorrelation and, more specifically, an AR(1) process. Since both dependent variables vary between -30 and 10, we can utilize the much simpler distributed lag regression model. The model consists of a lagged dependent variable using ordinary least squares estimation. The dependent

variable is lagged one month. Hence, the results can be interpreted directly and an elaborate equation such as in section five is not needed.

Movement in tone of coverage is tested with the same set of variables used for explaining changes in amount of coverage. This analysis of economic coverage tone comes closer to what other scholars have done in the past (e.g., Blood and Phillips 1995; Goidel and Langley 1995; Wu et al. 2002). Yet, again, this analysis looks at both a contemporary and comparative examination of economic news tone. We should find similar findings to previous work, but since we are dealing with different time spans, searches and data analyses they should not mirror each other.

Results

In Table 2, as in every distributed lag model, the lagged contemporary coverage variable is a highly significant and powerful predictor of contemporary coverage, given that it is itself one time period previously. The only significant predictor across the four models in Table 2 is change in unemployment. What is important to note is the sheer size of its effect. A one-point increase in the unemployment rate, albeit large, is expected to generate three more negative stories. This result holds across the four specifications of the model, suggesting a robust effect. This echoes the findings in the first analysis where movement in unemployment created the most variation in level of economic coverage.

[Insert Table 2 about here]

[Insert Table 3 about here]

For the comparative coverage distributed lag models, there is an interesting finding. Separate economic indicators only seem to matter during the election season. As we see in model 2 in Table 3, a change in unemployment during an election has a substantial impact on the tone of economic news. A one-point increase in unemployment during an election is expected to produce nearly seven more “the economy is getting worse” type stories. Compare this to the other statistically significant estimate for the interaction between ICI and the election dummy, where a one-unit increase in the ICI creates less than a half more “the economy is getting better” type stories. This is fairly strong evidence that the news media

tends to over report negative economic movement particularly during campaigns. Again, there is reason to expect movement in unemployment during an election to be salient for both citizens and the news media. We should note that the overall fit of the four models are not very impressive, thus suggesting the potential of exclude variables. Quite possibly, these excluded variables may be journalistic norms and practices that are difficult to capture quantitatively.

While Wu et al. (2002) had partition findings for whether economic news coverage mirrored economic reality, it is important to note that over a similar time span there is no effect for ICI in either tone measure, save for the interaction with election in the comparative coverage analysis. However, this analysis can speak directly to Goidel and Langley's (1995) findings. These authors examined the impact inflation, unemployment and GDP had on a general economic news tone variable from 1981 to 1992. Utilizing a feasible generalized least squares estimator, they find that percentage change in all three indicators had a significant impact on economic news tone. Yet, several methodological issues regarding the use of their estimator and that they have incorrectly signed though significant predictor variable estimates may temper confidence in their results. Still, this paper's results suggest no effect for inflation and a considerably larger effect for unemployment.

VII. Conclusion

This paper set out to explore two avenues of inquiry. First, how does economic reality and intervening factors affect the level of economic news coverage? Second, what can we say about the often studied tone of economic news coverage from economic reality and intervening factors? In both analyses, this paper offers innovations of two sorts. The first analysis utilizes a sophisticated statistical tool, Poisson autoregression, to examine the time serial count data. Given Poisson autoregression's inherent benefits, allowing for both overdispersion and autocorrelation in dependent variables, it seems political communication researchers may want to consider employing it in future work of time serial data. In the second analysis, two separate measures of economic news tone are examined: contemporary and

comparative coverage. Comparing results from these two measures to previous studies on economic news tone produces several interesting conclusions.

From the first analysis we find that news media views different economic statistics differently in choosing the level of economic coverage. Specifically, movement in the unemployment rate seems to dominate the news media's decision on changing the amount of economic news. Fluctuations in inflation and in a composite measure of the economy, the index of coincident indicators, appear not to play a role in the news media's decision to alter the level of economic news coverage. Perhaps unsurprisingly, we find that rival stories can detract the attention of the news media away from the economy, while elections increase economic coverage.

The analysis on economic news tone unexpectedly uncovers a set of null results. It is quite interesting to note that changes in the unemployment rate dramatically increase negative contemporary coverage, but has no effect on comparative coverage unless coupled with an election. Moreover, news coverage of the comparative economy seems less judgmental than coverage of the contemporary economy, but yet still fails to adequately represent economic reality. Given the trend lines illustrated and some of the regression results, the news media appear to be quick to point out when the economy is doing poorly and yet they are slow to report when the economy is doing well. Hence, the findings add empirical support to previous work suggesting news media overemphasize the negative and downplay the positive.

The results from both analyses have implications for citizens' voting decisions. As Mutz (1992) and others have pointed out, citizens' perceptions of the economy are developed directly from news coverage as well as from personal experiences. Yet, as Goidel and Langley (1995) suggest, if this is the case, what confidence should we have in the quality of information that citizens are exposed to when making such decisions. The results here suggest that the information citizens are exposed to tends to emphasize the negative and fails to mirror pure economic data. Hence, in regards to the economy, the news media agenda-setting ability is directed at negative coverage and misrepresentations of the current state of the economy. Since the news media does not report economic reality then we can expect citizens'

views and beliefs about the economy to be skewed (see, e.g., Dua and Smyth 1993). This potentially could have a significant impact on the democratic process.

**Table 1. Poisson Autoregression Estimates
of Amount of Economic News Coverage**

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Inflation</i>	.000 (.015)	.003 (.015)	.010 (.016)	.000 (.015)
<i>Index of Coincident Indicators</i>	-.018 (.011)	-.018 (.011)	-.018 (.016)	-.013 (.012)
<i>Unemployment</i>	.648* (.277)	.504 (.296)	.608* (.281)	.557* (.278)
<i>Event Dummy</i>	-.546* (.192)	-.520* (.192)	-.523* (.193)	-.572* (.191)
<i>Election Dummy</i>	.373* (.127)	.305* (.135)	.468* (.145)	.436* (.129)
<i>Unemployment * Election</i>	-	1.04 (.694)	-	-
<i>Inflation * Election</i>	-	-	-.053 (.041)	-
<i>ICI * Election</i>	-	-	-	-.058* (.029)
<i>AR Parameter (Lag One)</i>	.399* (.066)	.386* (.067)	.395* (.066)	.411* (.066)
<i>Constant</i>	1.70* (.082)	1.69* (.083)	1.66* (.088)	1.70* (.082)
<i>Adjusted R²</i>	.27	.28	.27	.29

Note: Standard errors are in parentheses. N = 196

* p < .05, one-tailed test

**Table 2. Distributed Lag Estimates
Contemporary Economic News Coverage**

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Lagged Dependent</i>	.771* (.044)	.765* (.045)	.768* (.044)	.766* (.044)
<i>Inflation</i>	-.014 (.077)	-.019 (.078)	-.030 (.083)	-.022 (.077)
<i>Index of Coincident Indicators</i>	.103 (.057)	.102 (.057)	.103 (.057)	.078 (.058)
<i>Unemployment</i>	-3.03* (1.43)	-2.83* (1.47)	-2.98* (1.43)	-2.85* (1.42)
<i>Event Dummy</i>	1.09 (.818)	1.06 (.821)	1.06 (.822)	1.18 (.815)
<i>Election Dummy</i>	-.756 (.710)	-.737 (.712)	-1.01 (.859)	-1.37 (.787)
<i>Unemployment * Election</i>	-	-2.33 (4.27)	-	-
<i>Inflation * Election</i>	-	-	.120 (.229)	-
<i>ICI * Election</i>	-	-	-	.297 (.170)
<i>Constant</i>	-.482 (.425)	-.461 (.428)	-.416 (.444)	-.402 (.425)
<i>Adjusted R²</i>	.69	.68	.68	.69

Note: Standard errors are in parentheses. N = 196

* p < .05, one-tailed test

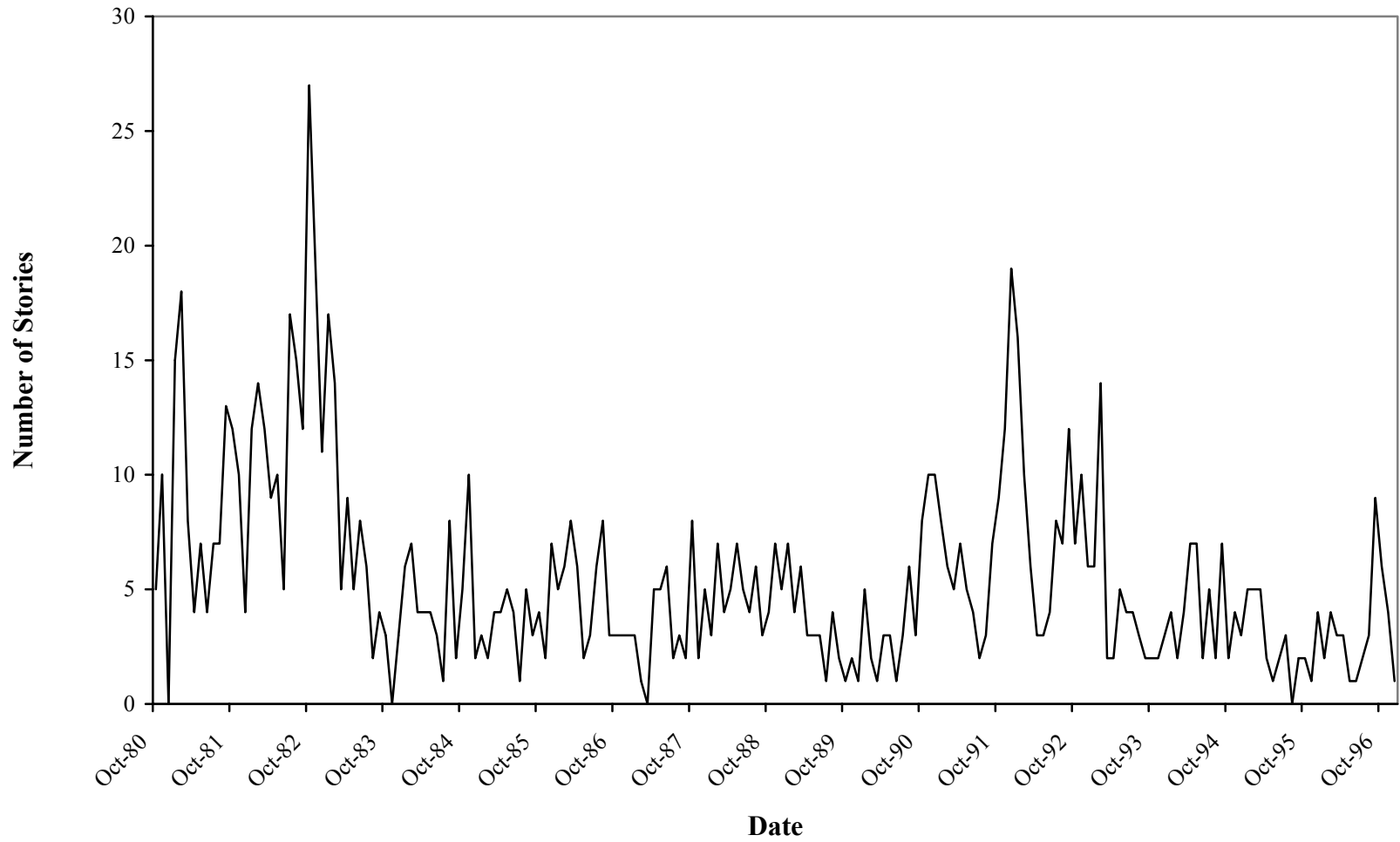
**Table 3. Distributed Lag Estimates
Comparative Economic News Coverage**

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Lagged Dependent</i>	.256* (.073)	.228* (.074)	.251* (.074)	.256* (.072)
<i>Inflation</i>	-.082 (.065)	-.096 (.064)	-.098 (.070)	-.092 (.064)
<i>Index of Coincident Indicators</i>	.095 (.049)	.094 (.049)	.096 (.049)	.064 (.050)
<i>Unemployment</i>	-2.22 (1.18)	-1.60 (1.22)	-2.17 (1.19)	-1.96 (1.17)
<i>Event Dummy</i>	.137 (.687)	.045 (.684)	.104 (.691)	.253 (.679)
<i>Election Dummy</i>	-.983 (.597)	-.930 (.593)	-1.22 (.723)	-1.70* (.656)
<i>Unemployment * Election</i>	-	-6.80* (3.35)	-	-
<i>Inflation * Election</i>	-	-	.114 (.193)	-
<i>ICI * Election</i>	-	-	-	.353* (.141)
<i>Constant</i>	-.389 (.361)	-.334 (.360)	-.329 (.376)	-.285 (.359)
<i>Adjusted R²</i>	.16	.18	.16	.18

Note: Standard errors are in parentheses. N = 196

* p < .05, one-tailed test

**Figure 1. Economic Stories on the Front-Page
of *The New York Times***



**Figure 2. Contemporary Economic Coverage vs.
Index of Coincident Indicators**

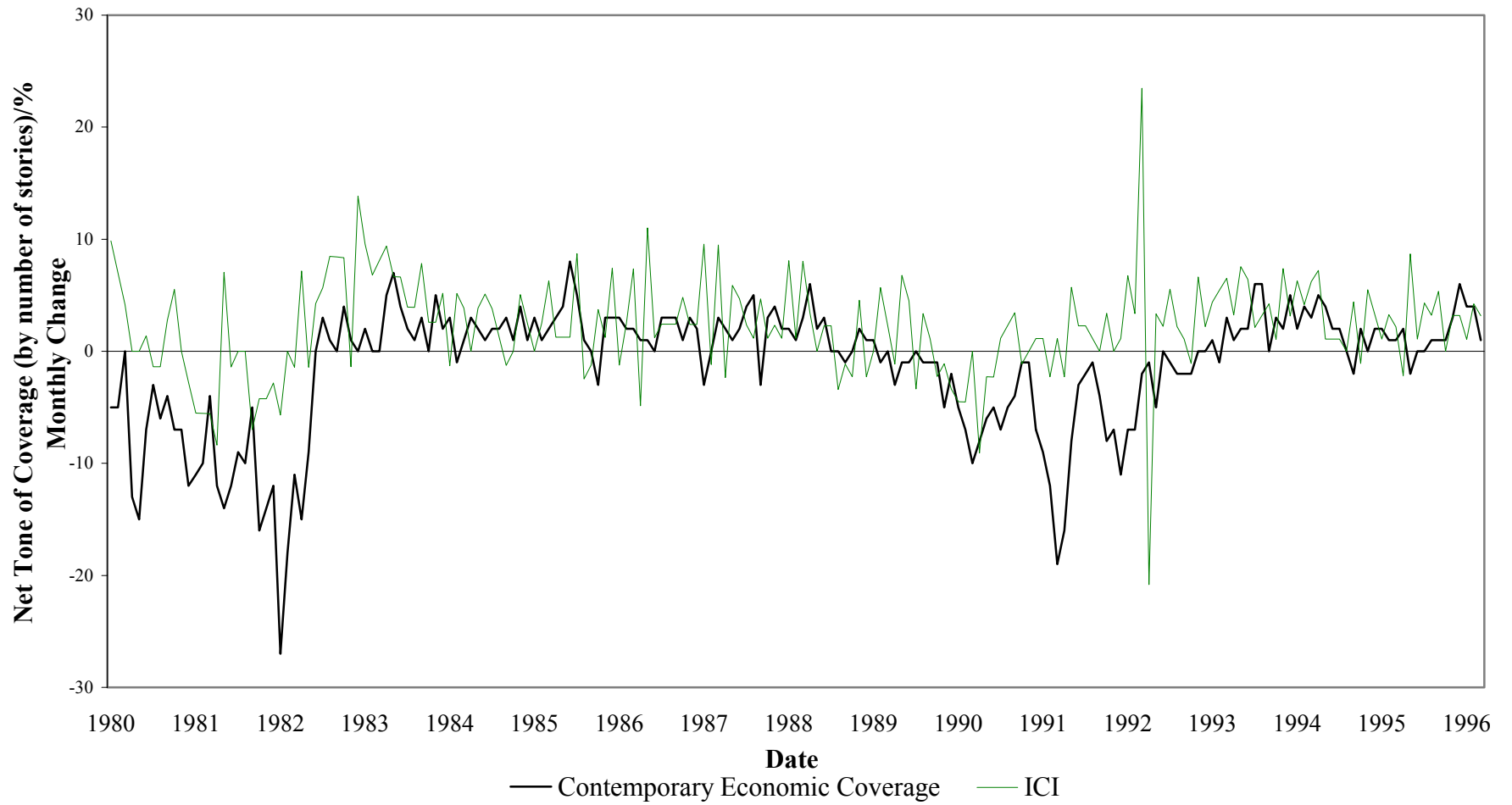
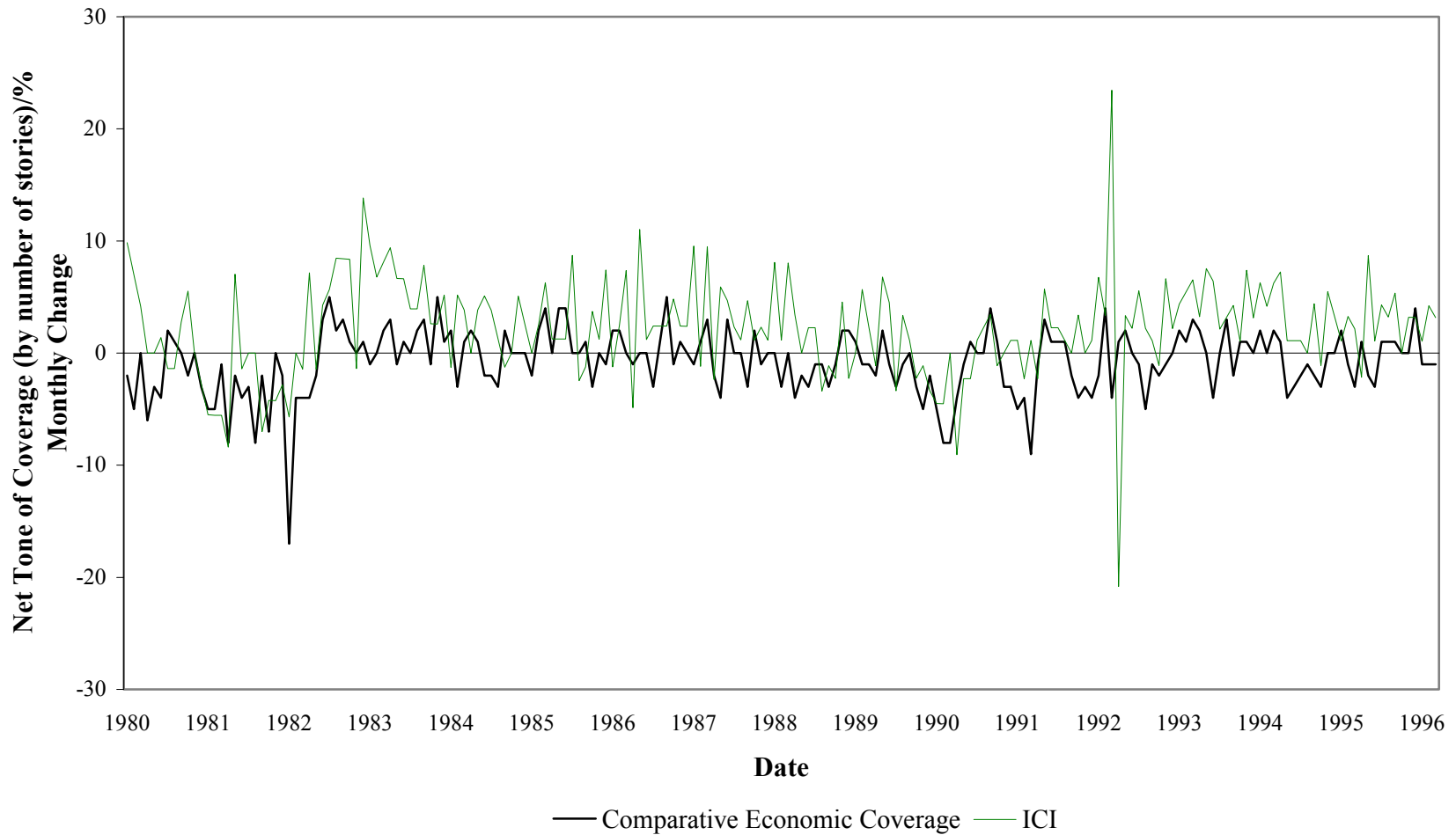


Figure 3. Comparative Economic Coverage vs. Index of Coincident Indicators



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¹ The total number of stories used in the analysis was 1056 and months were the units of analysis. Stories were omitted that did not directly discuss the present or past economy. These included stories about international economic situations without reference to the U.S. economy and stories concerning congressional debate over economic bills (e.g., the annual budget) that did not refer to the past or present state of the economy. Typically, we omitted approximately 15-20% of the monthly stories on the front-page for these and similar reasons. The intercoder reliability, calculated by several coders coding the same subset of stories, was .90.

² In this regard, if we are to believe the theoretical argument of Cook (1998) then we should find relative homogeneity across news mediums. Therefore, it should not matter a great deal which major media outlet a researcher chooses to use. In addition, some scholars have argued that *The New York Times* and the *Washington Post* serve the role as agenda setter for other media outlets (see Behr and Iyengar, 1985). Recent work has pointed to the fact that there are discrepancies in reporting between major media outlets (Wooley, 2000). However, the general patterns are similar and this should not affect the results in any substantial manner. In addition, many smaller newspapers receive a majority of their national-level stories from the wires. *The New York Times* is one of the institutions that sets the content of stories on the wires.

³ In attempting to deal with any model misspecification, extreme bound analyses were performed on the predictors in the paper. Change in unemployment is slightly sensitive to model specification, but is consistent in all specifications. The other predictors have little sensitivity to model specification. These results suggest that we should not worry about the impact of model specification on the variables.

⁴ A correlation between predictors, a variance-covariance estimation (VCE) test and regressing the predictors on themselves were performed. In the correlation, none of the predictors were found to be highly correlated. Regressing the predictors on themselves, I find that the change in unemployment and index of coincident indicators, as well as inflation and the election dummy, predicted each other. In the case of change in unemployment and index of coincident indicators, the influence was not substantial enough to remove either one of the variables from the model. In addition, since the index contains information about the general economy and the unemployment is a specific measure of the economy it is appropriate to keep both variables in the model. I am inclined to believe that the relationship between inflation and the election dummy is an anomaly.

⁵ These events included (from MacKuen, Erikson and Stimson, 2001): Reagan wounded (10/81); Grenada invasion (10-11/1983); Iran-Contra revealed (11/1986); Bush-Gorbachev first summit (12/1989); Iraq invades Kuwait

(8/1990); Budget summit and Congressional fight (9-10/1990); Gulf War (1/1991); War in Bosnia begins (4/1992); WTC bombing (3/1993); Waco (4/1993); U.S. fighting in Somalia (10-11/1993); Oklahoma City bombing (4/1995); Budget crises (1/1996).