THE ECONOMIC EFFECTS OF NEGATIVE NEWS ON CONSUMER CONFIDENCE

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INTRODUCTION

The media and newspaper articles, whether it is online or not, have always seem to have an influence on the way which consumers make decisions. If the media reports that the stock market is down, typically, people begin to sell off a lot of their assets. If the media reports that the housing market is in a slump, people tend to avoid making large purchases, including houses or apartments. Many newspaper readers do not read the complete article, in fact on average, the average reader only readers about 30% of an article. If that is the case, then much of the consumer decisions are based on partial information, and may affect consumer confidence. Consumer confidence – a shorthand phrase for public views of economic conditions – is a closely watched, widely discussed and sometimes hotly debated economic indicator, all for good reason. Consumer spending accounts for about 70 percent of economic activity in this country. To the extent that consumer confidence interacts with consumer behavior, and with other economic factors, it may provide important information as to the economy's current condition and future direction alike.

Clearly there appears to be some sort of link between the type of news which we receive, and how confident we are in the economy. But which factors affect us the most? Does all news guide the way we feel about the economy, Or just certain factors, such as unemployment or interest rates? Is it only the amount of news that is deemed negative that is affecting consumers, or the amount of positive news as well? By understanding this, we can determine the type of news that affects consumer's decisions and work towards remedying that.

LITERATURE REVIEW

Consumer confidence is influenced by several factors. The most important determinant of consumer confidence is the real economy, as indicated by unemployment, economic growth, and the stock market. Doms and Morin (2004) find that several media-variables influence consumer confidence for the US in 1978-2003. In their study, their media-variables include the R-index, the number of times 28 newspapers use the word recession in the headline or first paragraph of published articles, the lay-off index, the number of times lay-off or job cuts were mentioned, and an economic recovery index. Dom and Morin also found that he news media affects consumers' perceptions of the economy through three channels. First, the news media conveys the latest economic data and the opinions of professionals to consumers. Second, consumers receive a signal about the economy through the tone and volume of economic reporting. Last, the greater the volume of news about the economy, the greater the likelihood that consumers will update their expectations about the economy. They also found that there was evidence supporting that consumers update their expectations about the economy much more frequently during periods of high news coverage than in periods of low news coverage; high news coverage of the economy is concentrated during recessions and immediately after recessions, implying that "stickiness" in expectations is countercyclical.

Also, Van Raaij (1989) has a theoretical account for the economic impact of news. A significant role of media-coverage is also found by Alsem (2008), who find for the Netherlands in the period 1998-2002 that media-coverage has a short-run effect on consumer confidence, when controlling for the stock market. Their media-variable captures the mood of coverage; experts judged articles from two large newspapers, on how negative or positive the news-coverage was.

Interestingly, according to Jansen and Nahuis, their paper studies the (short-run) relationship between stock market developments and consumer confidence in eleven European countries over the years 1986-2001. They find that stock returns and changes in sentiment are positively correlated for nine countries, with Germany as the main exception. Meaning that as people began to believe in the economy more, the more money was put into the economy, at least in Europe's case.   Otoo (1999) ran a similar experiment. Her paper examines the relationship between movements in consumer sentiment and stock prices. At the aggregate level, the two share a strong contemporaneous relationship: an increase in equity values boosts sentiment. However, it examined the nature of the relationship between the two. It found by using individual observations from the Michigan survey results more consistent with the view that people use movements in equity prices as a leading indicator. Although the findings do not rule out a traditional wealth effect, they do raise some questions about the causal role of wealth in aggregate spending.

In Berry and Davey (2004), they examine the exact definition of consumer confidence. They found that after controlling for fundamental determinants of spending, sentiment still has a small but significant value for predicting future changes in spending. According to them, consumer confidence indices receive considerable coverage in the media. And survey measures of consumer confidence are often used as indicators of household spending intentions. But it is not always clear exactly what information is being captured by these surveys. This article considers some possible interpretations of the consumer confidence data and assesses whether they provide useful incremental information for predicting consumption.   They believe that consumer confidence is a somewhat "nebulous" concept, meaning that it is imprecise and unclear. They assume that we can't measure it perfectly. However, in contrast, DeBoef and

Kellstedt (2004) state that economic conditions influence consumer confidence, which in turn influences both political evaluations and votes.

Two well-known surveys that measure U.S. consumer confidence are the Consumer Confidence Index from the Consumer Board, and the Index of Consumer Sentiment (ICS) from the Reuters/University of Michigan Surveys of Consumers. We use the latter, as it is more extensively studied in economics, having been conducted since the 1950s. The ICS is derived from answers to five questions administered monthly in telephone interviews with a nationally representative sample of several hundred people; responses are combined into the index score. The index is calculated by adding 100 to the arithmetic average of the net balances of positive minus negative responses to five questions on: (1) personal financial conditions over the past year; (2) anticipated personal financial conditions over the coming year; (3) anticipated economic conditions over the coming year; (4) anticipated economic conditions over the next five years; (5) whether now is a good or bad time to buy major household items. The final version of the (non-seasonally adjusted) index is obtained as a ratio to the base-period level. The preliminary report, which includes about 60% of total survey results, is released around the 10th of each month. A final report for the prior month is released on the first of the month. The index is becoming more and more useful for investors because it gives a snapshot of whether consumers feel like spending money.

Previous evidence suggests that consumer confidence indicators forecast future economic activity. For example, Ludvigson (2004) perform a detailed comparison between the two US consumer sentiment surveys and report that consumer sentiment forecasts various categories in future household spending, with the Conference Board indicator generally doing a better job overall. Knowing the public's consumer confidence is of great utility for economic policy

making as well as business planning. If higher consumer confidence levels capture reduced

uncertainty about the future and therefore diminished the precautionary motive for saving, then

higher consumer confidence should be associated with a higher level of consumption today,

relative to tomorrow.

When it comes to economic news, there are many different approaches to how it is

investigated. In Hollanders and Vliegenthart (2009), they examined the influence of negative

newspaper coverage on consumer confidence in the case of the Dutch. In their research, s

investigated the causal relation between media, the economy and consumer confidence in the

Netherlands between 1990-2008. The main finding is that amount of negative news, as

operationalized by the monthly referrals to negative economic developments in one of the Dutch

leading newspapers, Granger-causes consumer confidence, controlling for economic

circumstances, as represented by the stock market. In Haller and Norpoth (1997) took a slightly

different approach to gauge economic news impact on people's assessment of the economy.

They examined data from 1979 to 1990. However, they discovered that news only play a small

role in providing people with economic information. They found that news exposure did not

lead to a significant improvement of capability in assessing the economic situation of the US

economy. The measures of economic conditions such as unemployment and inflation

contributed more to economic opinion. However, also in Haller and Norpoth, it was discovered

that personal experiences such as unemployment, along with local newspaper coverage,

contributed to an individual's perception of the unemployment issue and the economic problems

at a national level. They state that people relied on media for information and making political

judgment. The results indicated an interesting pattern of information sources that people use in

order to form an opinion. Another example of this was For example, Shah (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

Contrary to some of these findings, other work has argued that the economic news coverage does in fact accurately reflect the economy. Wu (2002) found that the trend lines for coverage and reality are fairly consistent, but they also find that during recessionary periods a fascination with negativity prevails Wu, however, 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 precise 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.

Dor (2003) examined the effects of headlines and defined the definition of the "headline effect." In his paper, headlines provide the readers with the optimal ratio between contextual effect and processing effort, and direct readers to construct the optimal context for interpretation. The paper presents the results of an empirical study conducted in the news-desk of one daily newspaper. It shows that the set of intuitive professional imperatives, shared by news-editors and copy-editors, which dictates the choice of headlines for specific stories, can naturally be reduced to the notion of relevance optimization. The headline effect is another case which often is blamed for the medias effect on consumers. The headline effect is the effect that negative news in the popular press has on a corporation or an economy, whether it is justified or not, the investing public's reaction to various headlines can be very dramatic. Many economists believe that negative news headlines make consumers more reluctant to spend money. If a headline appears

negative, and the consumer alone only reads the headline, then it will greatly affect the purchases which they have. When negative financial news is carried in the newspapers of TV news shows, it reaches a wider audience and consequently the public reaction is more extreme. When negative news breaks, the headline effect can create an opportunity for traders.

In Edmonds (2012), they examine the newspaper of today in comparison to the newspaper of yesterday. The way we receive news today is so much different from the ways we received it ten years ago. In the 1940s, much of the news was broadcast through newspapers and newsreels. Even ten years ago, our main of news was the television news programs and newspapers. Today, we receive it from a variety of sources. This includes newspapers, TV news programs, social media networks such as Facebook or Google Plus, internet news outlets, like CNN or Yahoo News, and phone applications can send news updates directly to our phones. The internet has become one of the largest sources of news broadcasting. On a typical day, 23 % of Americans get news online, 18% visit news aggregators (Google News, Yahoo! News, AOL News, etc.), 14% visit national TV networks' sites (CNN.com, MSNBC.com, ABCnews.com, etc.), 14% visit newspaper Web sites, 4% visit news blogs, and 3% visit online news magazines (Slate.com, Salon.com, etc.). However, newspapers still maintain their hold in news receiving, with about 40% of Americans reading a newspaper every day.

The statistics regarding newspapers are incredibly alarming as well. According to a study conducted by Edmonds (2012), the total number of Americans getting news on an average day is down almost 10% from 1994, meaning less people are paying attention to the news. Young Americans are the most likely to get no news at all, with 27% of people under 30 reporting they get no news on an average day. Of those who do get news, half go to multiple sources. On average, Americans spend 67 minutes every day gathering news from various formats. As points

of comparison: on an average day, 63% of Americans watch non-news TV, 44% exercise or play a sport, 38% read a book, 24% read a magazine, 24% watch a movie at home, and 17% play video games. Another interesting thing to note is that many younger people (ages 18-30) who receive news are receiving it through social media outlets. A new study by AYTM Research showed that 12.9 respondents to a survey said that they got their news from a social media website. The survey also found that 54.7 percent of the people surveyed found out about breaking news on Facebook and 19.9 percent on Twitter. This emphasizes how important it is for a legal internet marketing company to post news content on a variety of social media platforms. The majority of those surveyed still rely on newspapers and news sites for news, but getting the news on social media is poised to grow and many agencies offer applications, which deliver news directly to social media accounts.

Over the past half a century, the amount of newspapers circulating has dramatically decreased as well. In 1965, 71 percent of Americans reported reading a newspaper on an average day. As of 10 years ago, that number had fallen to 50 percent, and today it stands at 40 percent. The average circulation for a U.S. newspaper in 2005 was 37,492 for the weekday edition and 63,118 for the Sunday edition. According to the Pew Center study, Among national newspapers, as of September 2006, The New York Times had an average daily circulation of just over 1 million and an average Sunday circulation of over 1.6 million. As of 2005, The Washington Post had a weekday circulation of just over 715,000 and a Sunday circulation of just under 1 million. The Los Angeles Times had a circulation in fall 2006 of roughly 900,000 on weekdays and 1.2 million18 on Sundays. USA Today and The Wall Street Journal both have weekday circulations over two million. The New York Times and USA Today have the most popular newspaper web sites. Five percent of people who get news online report using each of

these sites. Local newspapers are struggling to attract readers to their Web sites, with fewer than half of people who read newspapers online visiting local newspaper sites.

DATA & METHODOLOGY

In order to accurately measure the effect of "positive" news versus "negative" news, the data was collected from the archives of The New York Times. The New York Times was chosen because it is a national newspaper which has been around for a long period of time. Going back through five years of data and keeping track of how many news stories were considered positive and the ones that were considered negative. The data was compiled monthly. Certain data was compiled daily but was averaged out by month.

The first thing collected was the independent and the dependent variables. There is one dependent variable, which is consumer confidence. Consumer confidence was found by collecting data from the Federal Reserve data base. From there, the University of Michigan Consumer Sentiment Index was collected from monthly data and used as an independent variable. s a consumer confidence index published monthly by the University of Michigan and Thomson Reuters. The index is normalized to have a value of 100 in December 1964. At least 500 telephone interviews are conducted each month of a continental United States sample (Alaska and Hawaii are excluded).

The four independent variables used to run a regression are as followed: unemployment rate, interest rate, S&P 500 index, and the Euro to USD exchange rate. All were collected from the St. Louis Federal Reserve Economic Database (FRED). The unemployment rate was found using the civilian unemployment rate, The unemployment rate represents the number of unemployed as a percentage of the labor force. Labor force data are restricted to people 16 years

of age and older, who currently reside in 1 of the 50 states or the District of Columbia, who do

not reside in institutions (e.g., penal and mental facilities, homes for the aged), and those who are

not on active duty in the Armed Forces. This rate is also defined as the U-3 measure of labor

underutilization. The interest rate is discount rate for United States. The S&P 500 index is

regarded as a gauge of the large cap U.S. equities market. The index includes 500 leading

companies in leading industries of the U.S. economy, which are publicly held on either the

NYSE or NASDAQ, and covers 75% of U.S. equities. The Euro to USD exchange rates were

based off of the buying rates in New York City for cable transfers payable in foreign currencies.

The method of compiling the explanatory variable was tracking the front page of the New

York Times front page and examining the headlines in order to determine whether of not the

story would be considered "Positive" or "negative" on first glance. In order to calculate the

negative news to positive news ratio, count the number of stories on the front page which have a

negative connotation (indicating that the economy is still in a failing state) and compare them to

stories which have a positive connotation (indicating that the economy is getting better) and form

a ratio. After completing a chart indicating the day and compare them over a time line. It will

then compare it to the interest rates, stock market rates and profit rates at the time and see if the

news had any effect on any of the controlled variables. Key words such as "recession" and

"economic slowdown" were used to create a "bad news" index, "economic recovery" and

"economic growth" for good news "index, and "unemployment" and "layoff" for an

unemployment perspective. The data was compiled into two separate categories. The two

categories were then averaged monthly and used to compare to the other variables collected.

and then a ratio was compiled using the following equation:

$$Ratio = (Positive\ News)/(Postive\ News + Negative\ News)$$

This ratio helps to see what percentage of the news is considered positive, which is expected to be low, especially after the economic recession beginning in 2008. Once all information was compiled, simple regressions were run and corrected for errors such as autocorrelation and heteroscedasticity.

RESULTS

In order to be in occurrence with the thesis, the amount of negative news should positively correlation with consumer confidence. This means that when the amount of negative news increases, the amount of confidence that consumers have in the market should increase as well. However, this is not the case. In Chart 1 and Chart 2, when compared to each other, there is a no clear correlation, which does not support the hypothesis. When regressions were run to support or disprove this hypothesis, they offered little explanation.

As stated previously, the explanatory variable used in this experiment was the average and standard deviation of positive news and negative news. This data was collected from January 2007 to December 2012 and was used to explain whether to explain whether the other variables in this experiment were correct. The dependent variable used to test the experiment was consumer confidence, which was found used the University of Michigan's consumer sentiment index. The independent variables were interest rates, unemployment rates, US Dollar to Euro exchange rate, and the S&P500 index. In order to properly test if there was any correlation in the data, a regression was run in the STATA program. Adjustments were made in order to make sure the data was being examined correctly.

The results of the experiment were not as expected. Some of the results were consistent with what was initially expected in my hypothesis. For example, when testing for correlation in the regression, the dependent variable, for all of the following regressions, was consumer confidence. Consumer confidence, as defined previously, is an economic indicator which

measures the degree of optimism that consumers feel about the overall state of the economy and their personal financial situation. It is essentially how confident people feel about stability of their incomes affect their economic decisions, such as spending activity, and therefore serves as one of the key indicators for the overall shape of the economy. The independent variables in the first experiment run were unemployment rate, interest rate for the United States, SP 500 and exchange rate of USD to Euro.

Results for the simple regressions run can be found with on Table 1. Numbers found in parenthesizes are the t-statistic. The t-statistic is a ratio of the departure of an estimated parameter from its notional value and its standard error. In the first row, which was the initial regression run, the equation with coefficients can be found from Table 1 row 1 using the following equation format:

$$Y = C + unratex + inratex + sp500x - usdtoeurox$$

Upon running the regression, a robust regression was run on the data. A robust regression is a form of regression analysis designed to circumvent some limitations of traditional parametric and non-parametric methods. Along with fixing for robustness, a test was run for heteroskedasticity. Heteroskedasticity was found and fix for it. When the same variables that were used in a robust regression, the following equation came from the regression is:

$$Y=82.92+1.06x+5.06x+.035x-57.50x$$

As one can see, the equation changes very little, meaning that the robust equation meant very little.

The next regressions that were run included the variable a-positive and/or a-negative, which is the average positive story for the monthly data compiled. This variable was added as an additional independent variable in order to help explain. They were run separately. The equation with the addition of the A-positive variable can be found in Table 1 in Row 2 as Equation 2. The

equation with the addition of the A-negative variable can be found in Table 1 in Row 3 as Equation 3.

There is a very large difference in between the two sets of data. It is interesting to note that the R squared value differs very little in between each other the above equation, varying at most .001. However, almost all the t values are significant. While the a-negative t value makes sense, being negative and being insignificant, the a-positive t value is an oddity. It would be expected to be positive, however, that is not the case. It is instead a very high negative value, indicating that it will yield a negative result. A negative t-value simply indicates a reversal in the directionality of the effect, which has no bearing on the significance of the difference between groups.

After these regressions were run, it was decided to look at the change variable which I had also collected, which came to be known as the change variable. The change variable was found by using the following equations, which has already been state previously.

$$Ratio=(Positive\ News)/(Positive\ News+Negative\ News)$$

As well as this equation:

$$Ratio=(Negative\ News)/(Positive\ News+Negative\ News)$$

The first equation came to be known as the "ChangePos" variable and the second equation came to be known as the "ChangeNeg" variable. These variables were then run in regressions in replace of the average variables and the standard deviation variables, where very little changed. The results from the regressions can be found on Table two in the back of this research paper. The numbers in parenthesizes are the t-statistic, and the equation was run as robust because heteroskedasticity was found.

The variable which was added later was the change from month to month between the average positive stories, average negative stories, and positive and negative standard deviation. When they were added to the regression equation, the R squared value changed little again, making it significant. The new equation with the change can be found in Table 2 Row 1 as Equation 1.

Though it was thought that the amount of change of either positive news or negative news would help to explain if it affects consumer confidence, it was found that it differed very little in terms of the coefficients run. The R-square was found to be significant. Once again, R-squared was defined as the "is a statistic used in the context of statistical models whose main purpose is either the prediction of future outcomes or the testing of hypotheses, on the basis of other related information. It provides a measure of how well observed outcomes are replicated by the model."

Regressions were run with the standard deviation variables, however they were found to not change the variable as much. Overall, the additional variables did not change the initial equations much and were not able to help prove the hypothesis which was initially conceived.

CONCLUSION

What do these results mean? The data did not correlate with the hypothesis that I had in mind. I believed that the more negative news that there was, it would correlate properly with consumer confidence. However, the data proved that there was no correlation. The only two variables that proved correlation with the data was the S&P500 index, which the coefficient was incredibly small and virtually, had no effect, and the USD to Euro exchange rate. There are many reasons for the Euro to USD exchange rate to be the main variable which worked. One

may be because in the past few years there has been a lot of talk on the ongoing crisis in Europe and fears that it may spread overseas. Greece, Iceland, Spain and Cyprus have all faced tremendous economic downturns in the past five years and have affected the way that many view the economy.

This research, however, gave me considerable insight into the way the news media has an effect on the US Economy. The research showed that even if the news tends to be reporting things in a more negative light, it does not affect how confident consumers are in the economy.

If this research and experiment were to be run again, there are many things which good be changed to improve results, such as controlling for different variables. Different independent variables could be used in order to improve results, such as profit rate. A different dependent variable could be used as well, such as the amount of money put into the economy or the consumer spending and compare it to the explanatory variable. This may be able to give a more fiscal analysis of how the media news affects the US economy. It may also be interesting to compare the US Economy to the European economy in terms of how the news affects the media.

The media has a huge impact on the society. The effects are of course, positive as well as negative. It is up to the people to decide which effect they want to bask in. Media is such a powerful tool that it literally governs the direction of our society today. It is the propeller as well as the direction provider of the society. Opinions can change overnight and celebrities can become infamous with just one wave by the media. Media brings into open the innumerable achievements that are going on in the country. Media gives ordinary people the power to reach out to the society as a whole. It can make heroes out of ordinary men. However, media can adversely affect the thinking capability of individuals and instill negative or destructive thinking patterns in the society as a whole. As already said before, media has the power to form and alter

opinions. Though this experiment did not necessarily prove this, this means media can portray an ordinary thing so negatively that it may force people to think or act in quite the opposite way.

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Table 1

Regression Results for Consumer Confidence against Averages and Standard Deviations

Eq.	C	unrate	inrate	sp500	eurotousd	apositive	anegative	sdpos	sdneg	Rsquared (Adjusted Rsquared)	F	# of Obvs.
1	81.05614 (6.29)	1.124265 (2.33)	5.704552 (6.25)	0.0333548 (8.44)	-56.70174 (-7.29)					0.7397 (0.7226)	43.33	66
2	83.40706 (5.33)	1.372848 (2.61)	5.36316 (7.34)	0.0351127 (8.69)	-54.83129 (-5.49)	-6.864395 (-2.04)				0.7358	44.39	72
3	95.31835 (4.49)	1.085735 (2.17)	5.061143 (7.14)	.034888 (8.74)	-55.86914 (-5.90)		-3.018354 (-0.72)			0.7334	38.92	72
4	74.77601 (5.03)	1.500161 (2.85)	5.14228 (6.74)	0.03437722 (9.45)	-51.38211 (-5.82)	-9.048139 (-2.81)		9.282369 (1.59)		0.7579	36.68	72
5	71.68912 (4.17)	1.536662 (2.75)	5.174058 (6.65)	0.0347716 (8.63)	-51.00179 (-5.79)	-8.587034 (-2.52)	2.6594325 (.054)	8.038299 (1.17)	2.483548 (0.38)	0.7584	32.17	72

Table 2

Regression Results for Consumer Confidence against Ratio of News

Eq.	C	unrate	inrate	sp500	eurotousd	chpositive	chnegative	Rsquared (Adjusted Rsquared)	F	# of Obvs.
1	79.09639 (5.13)	1.124265 (2.33)	4.76783 (6.91)	0.0347624 (8.69)	-54.17283 (6.10)	1.842486 (0.29)		0.7191	40.34	71
2	80.05393 (5.38)	1.428338 (2.79)	5.060062 (7.22)	0.034727 (8.94)	-51.67979 (-5.38)		1.254896 (.015)	0.07385	41.63	71

CHART 1

Consumer Confidence from January 2007 to December 2012 (monthly data)

CHART 2

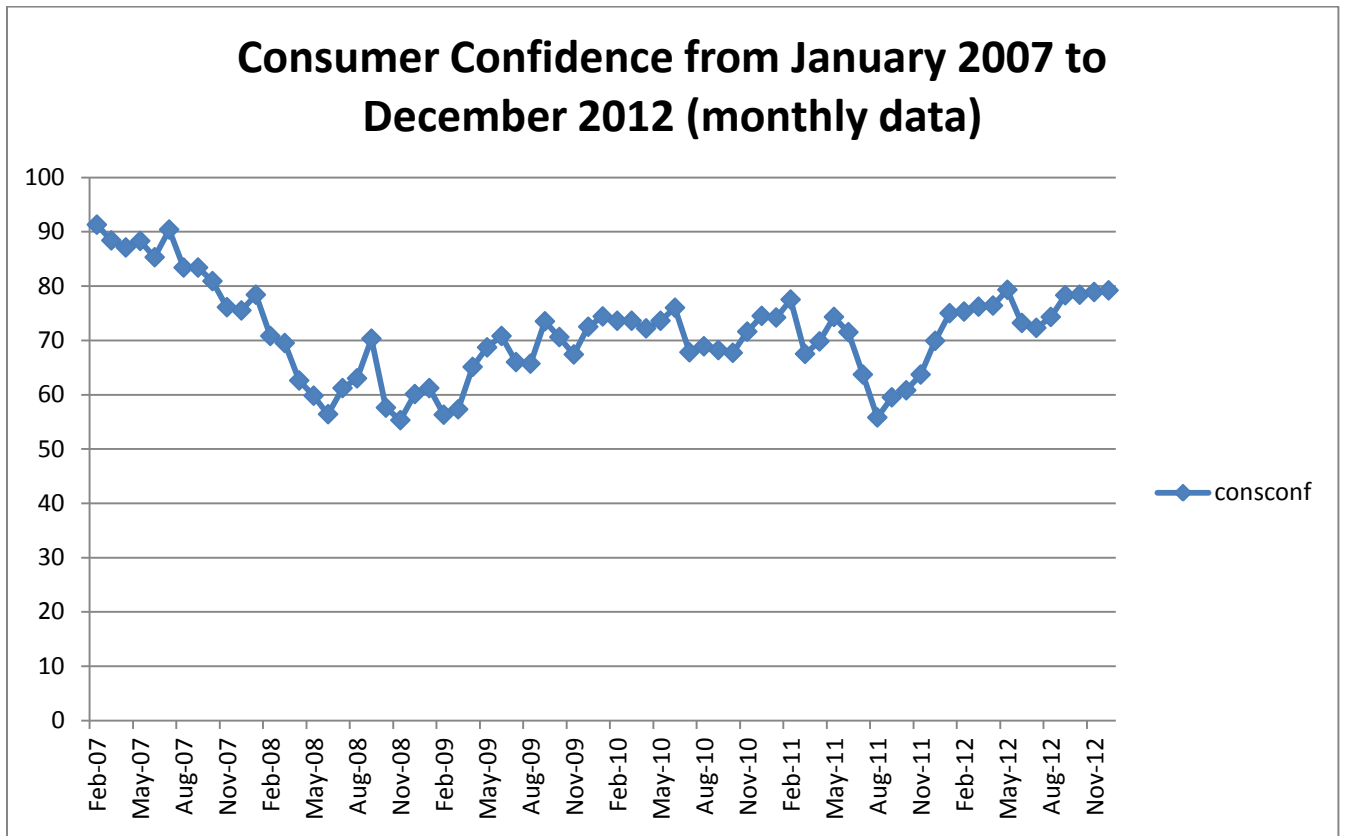## Average Monthly Negative News Stories from the New York Times
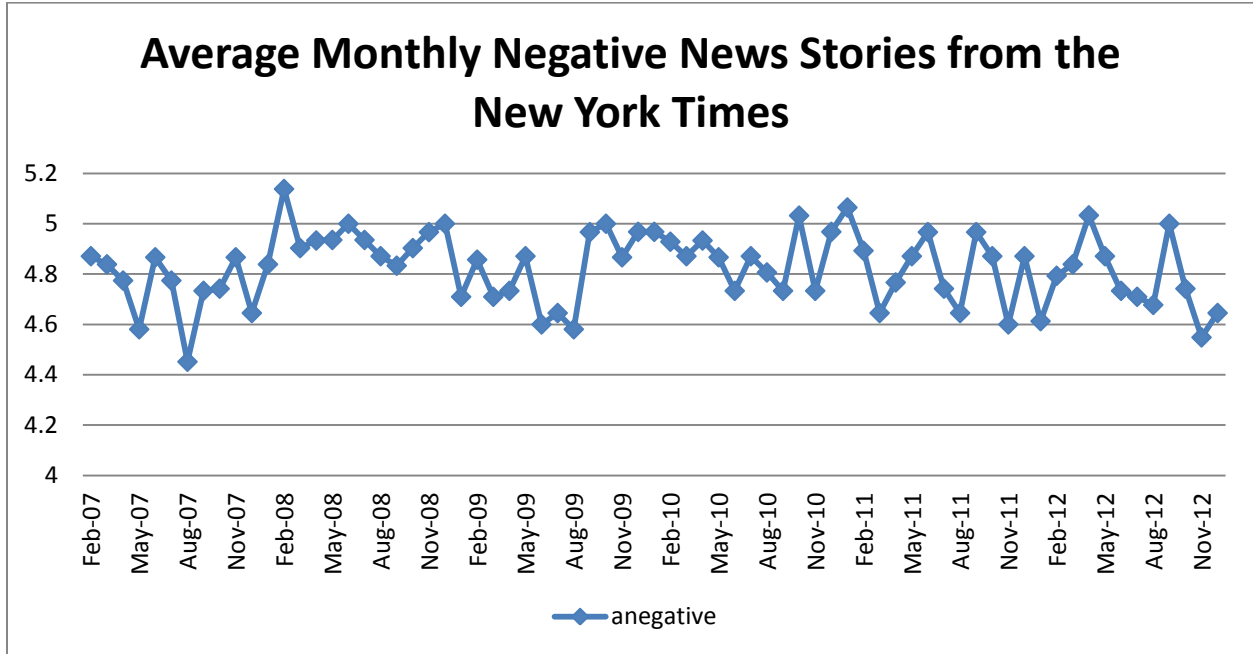

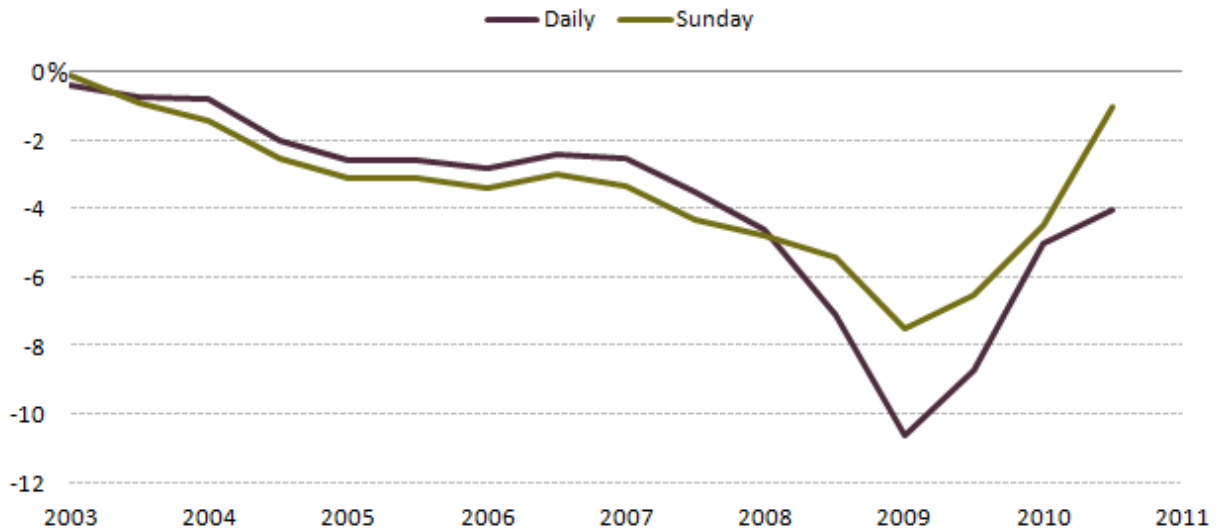anegative

CHART 3

Circulation Losses Less Severe in Recent Years

Percentage Declines in Circulation by Six-Month Period

Daily   Sunday

Source: Deutsche Bank Securities and Audit Bureau of Circulations. 2011 estimate by Rick Edmonds.

PEW RESEARCH CENTER'S PROJECT FOR EXCELLENCE IN JOURNALISM

2012 STATE OF THE NEWS MEDIA

CHART 4

A Continued Slide in Paid Circulation

In Millions

Weekday Morning — Weekday Evening — Total Weekday — Sunday
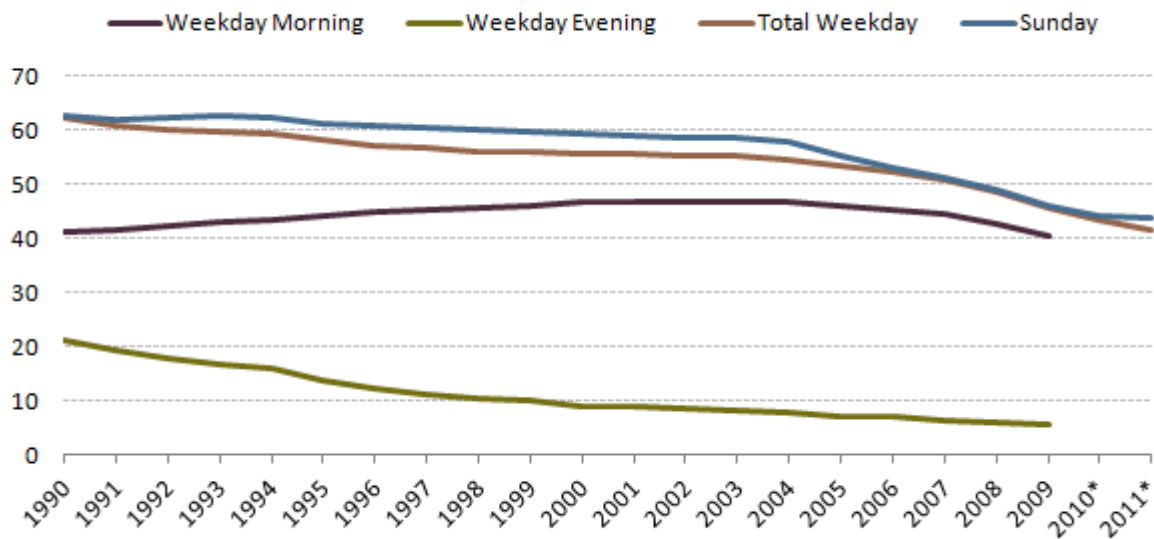
Source: Editor and Publisher Yearbook. 2010 and 2011 figures are estimates by Rick Edmonds based on the period ending Sept. 30 2010.

PEW RESEARCH CENTER'S PROJECT FOR EXCELLENCE IN JOURNALISM

2012 STATE OF THE NEWS MEDIA