

---

7-1-2011

## What Do Indexes of Consumer Confidence Tell Us?

Marta Lachowska

*W.E. Upjohn Institute for Employment Research*, [marta@upjohn.org](mailto:marta@upjohn.org)

Upjohn Author(s) ORCID Identifier:

 <https://orcid.org/0000-0001-9158-2592>

Follow this and additional works at: [https://research.upjohn.org/empl\\_research](https://research.upjohn.org/empl_research)



Part of the [Behavioral Economics Commons](#)

---

### Citation

Lachowska, Marta. 2011. "What Do Indexes of Consumer Confidence Tell Us?" *Employment Research* 18(3): 1-4. [https://doi.org/10.17848/1075-8445.18\(3\)-1](https://doi.org/10.17848/1075-8445.18(3)-1)

This title is brought to you by the Upjohn Institute. For more information, please contact [repository@upjohn.org](mailto:repository@upjohn.org).

JULY 2011

### In this issue . . .

*Marta Lachowska*

What Do Indexes of Consumer Confidence Tell Us?

*John A. Turner*

The Policy Challenges of Increasing Longevity: Paying for the Costs of Living Longer

Upjohn Press Book Wins Richard A. Lester Award

### New Books

Vol. 18, No. 3

*Employment Research* is published quarterly by the W.E. Upjohn Institute for Employment Research. Issues appear in January, April, July, and October.

The Institute is a nonprofit, independent research organization devoted to finding and promoting solutions to employment-related problems at the international, national, state, and local levels. The Institute is an activity of the W.E. Upjohn Unemployment Trustee Corporation, which was established in 1932 to administer a fund set aside by Dr. W.E. Upjohn, founder of the Upjohn Company, to conduct research on the causes and effects of unemployment and seek measures for the alleviation of the hardships suffered by the unemployed.

W.E. Upjohn Institute  
for Employment Research  
300 S. Westnedge Avenue  
Kalamazoo, MI 49007-4686  
(269) 343-5541  
www.upjohn.org

Randall W. Eberts  
President

*Marta Lachowska*

## What Do Indexes of Consumer Confidence Tell Us?

**T**he term “consumer confidence” regularly appears in our daily lexicon. The press reports on the ups and downs of consumer confidence indexes as indicative of economic prospects. Politicians refer to consumer confidence as something that legislation needs to help restore. Economists use it to forecast the national economy. But what does it mean? Does confidence reflect our expectations about future earnings? Does it reflect inflation expectations? Does lower confidence mean buy now before

**It is crucial to understand whether consumer confidence is in any way useful in stimulating economic behavior.**

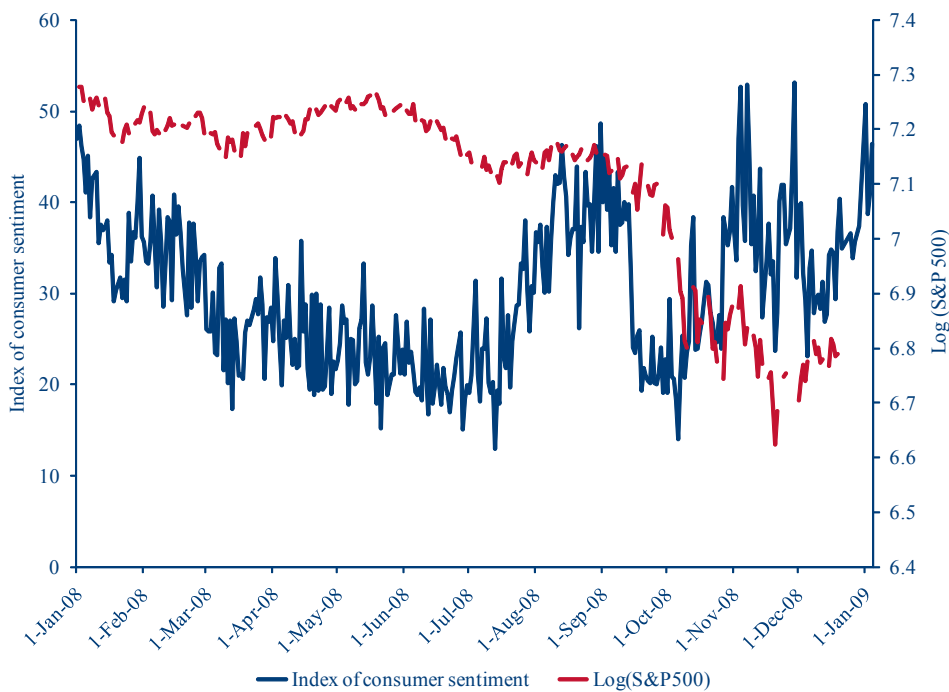
prices increase? Or is it independent of all of these and best described as “animal spirits,” as coined by Keynes (1965)? Do we as consumers need both income and confidence to be able and willing to make purchases? These are questions that economists are still trying to sort out.<sup>1</sup>

Despite the ubiquitous presence of the word *confidence* in the public discourse, it is not understood how this collective consumer “attitude” is related to key economic indicators, such as stock market prices and inflation. The primary issue is whether the consumer confidence

indexes contain additional information than what is found in other economic indices. There is no agreement. Since consumption behavior is a key aspect of macroeconomic modeling, it is crucial to understand whether consumer confidence is in any way useful in stimulating economic behavior.

A standard reference for understanding the role of sentiment in predicting spending is Carroll, Fuhrer, and Wilcox (1994), who conclude that sentiment contains information valuable for future consumption growth not captured by changes in income. (See also Ludvigson [2004] for a survey of literature on consumer confidence indexes.) More recently, Barsky and Sims (2009) study the dynamic path of income and expenditure following a shock to consumer confidence. The path of consumption following a shock to sentiment can point to either an animal spirits interpretation or an information view. The animal spirits view implies that following a sudden drop in consumer confidence, there will be an initial decrease of expenditure followed by decay back to trend. Conversely, the information view suggests a gradual reaction of output and spending. Barsky and Sims find support for the information view in their analysis. This finding is at odds with previous research findings concerned with the economic information

**Figure 1 Consumer Sentiment and the Logarithm of Stock Prices (Standard & Poor's 500)**



NOTE: Stock price data is spotty due to lack of observations on weekends.

contained in indexes of consumer confidence.

Most of the economic literature concerned with sentiment uses aggregate data. One exception is Souleles (2004), who matches individual-level microdata from the survey underlying the Michigan Index of Consumer Sentiment with data from the Consumer Expenditure Survey. Souleles's findings suggest that indexes of consumer confidence could be an aggregator of idiosyncratic information about economic prospects, which is observable to the consumer, but not otherwise to the researcher studying the data.

**Data**

Similar to previous work, my research tries to understand whether consumer confidence contains information relevant for spending but is independent of other measures, such as stock market prices, gas prices, or daily news reports. My approach to understanding consumer confidence differs from previous work in several ways, however. First, I use data with a much higher frequency

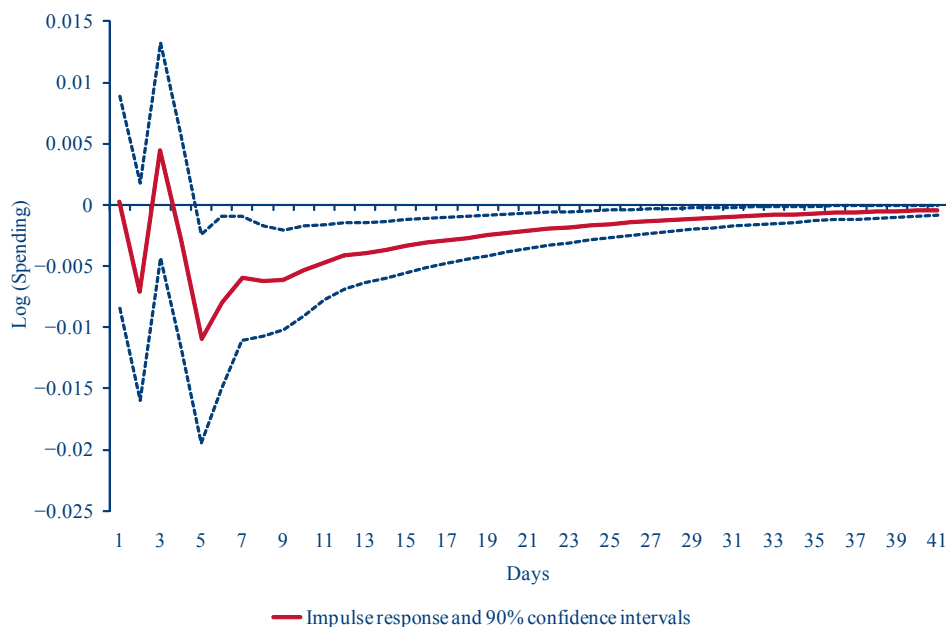
than earlier work, which allows me to surpass the “chicken or the egg” causality problem. As updates about the state of the economy arrive at a slower pace than the variations in daily sentiment and spending, I can conclude that news

reports may, in the short run, affect spending and confidence, but not vice versa. This allows me to isolate the causal effect of sentiment on spending.

Second, similar to Souleles (2004), I use individual-level microdata. Uniquely, these data collect information on consumer confidence and spending for the same individual, whereas previous research has resorted to imputing sentiment. Third, the information in the microdata can be used to contrast the reactions of different types of consumers.

The data on confidence and spending, called G1K, come from a survey conducted by the Gallup Organization; they are collected daily via telephone interviews with a random sample of about 1,000 individuals aged 18 and older and living in the United States. The G1K data include a variety of demographic measures, a set of questions on health, and also evaluations of living and working conditions. A unique feature of the survey is that it collects high frequency information on daily expenditure. The expenditure question reads as follows: “Next, we’d like you to think about your spending yesterday, not counting the purchase of a home, motor vehicle, or your normal household bills. How much money did you spend or charge yesterday on all other types of

**Figure 2 Reaction of Spending Following a Shock to Confidence**



purchases you may have made, such as at a store, restaurant, gas station, online, or elsewhere?” My sample collects this information on about 359,000 individuals living in the United States surveyed across 355 days, from January 2008 to January 2009.

The confidence measure is collected among the same subsample of the survey as the data on expenditure. The respondent is asked to evaluate the economic conditions in the United States. The question reads as follows: “Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse?” The answers are measured as getting worse, the same, or getting better. The G1K is the only data set that collects information on consumer confidence and spending for the same individuals. This feature is particularly attractive since the spending behavior and consumer confidence can be aggregated to a time series from the disparate information contained in the microdata, as opposed to pooling information from two separate, aggregate data sets.

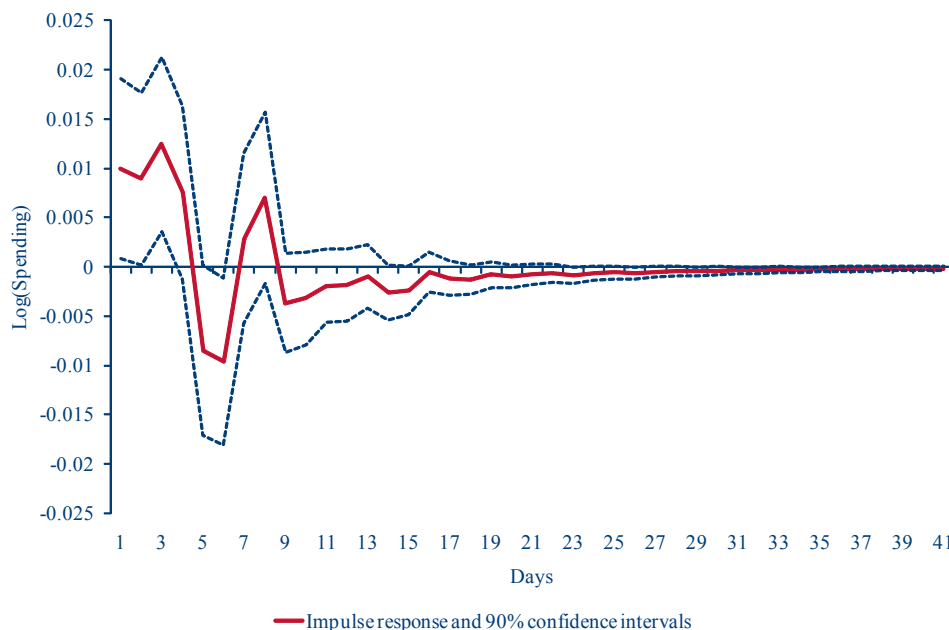
In order to contrast the informational content in the sentiment index to information about economic prospects, I turn to external data. Stock market indices contain gyrations, and as they are collected at a high frequency, it is natural to consider whether the information contained in the stock prices reflects the swings in confidence. Previous research has highlighted the importance of stock prices as predictors of future productivity (see Beaudry and Portier [2006]). Presumably, if the stock market tells us something about the state of the economy, it ought to be relevant to consumers when they adjust their spending behavior.

Figure 1 plots the time series of consumer confidence and the logarithm of the daily series of close prices of the Standard & Poor’s 500 index. It suggests that confidence and the stock market prices tend to share a common trend. This raises the question of whether the information contained in the index of consumer confidence contains an independent component that is predictive for spending.

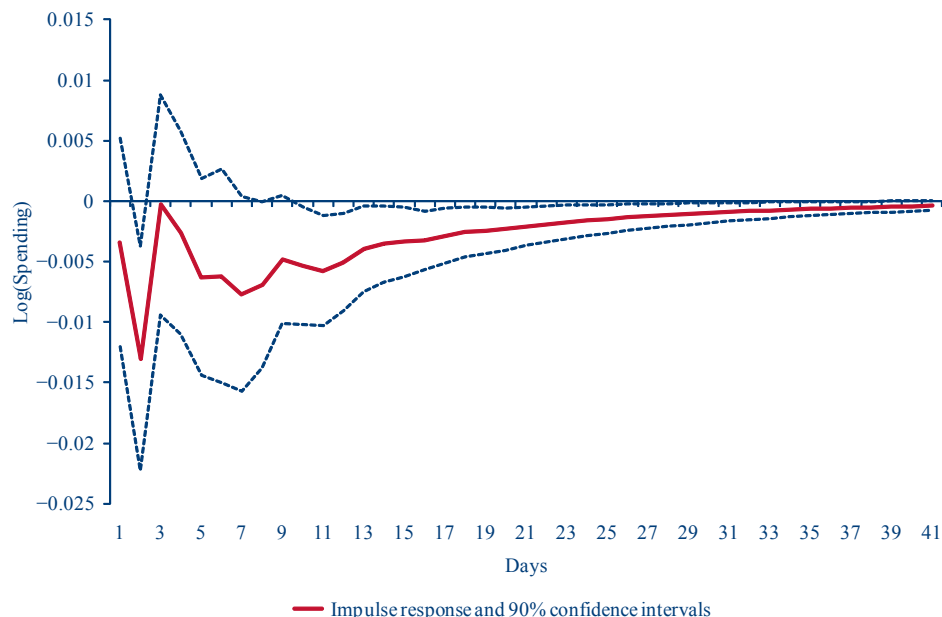
If the fluctuations of stock prices carry information about economic prospects, spending should adjust to incorporate this update. If sentiment reflects information about future prospects, the reaction of spending following a shock to sentiment should be modest once the information available to the stock market is controlled for. However, if the dynamic path of

spending remains unchanged, it is an indication that sentiment reflects some other relevant but independent information, divorced from news about the future behavior of the economy. Hence, the reaction of spending is indicative of the informational content confidence. To study this, I examine empirically the daily series of stock

**Figure 3a Reaction of Spending Following a Shock to Log (S&P 500)**



**Figure 3b Reaction of Spending Following a Shock to Confidence**



market prices and the daily time series of consumer spending and confidence from the GIK.<sup>2</sup>

## Results

Consider first the simple bivariate dynamics of expenditure and confidence. Figure 2 shows the reaction of spending following an unexpected change in confidence—a “shock.” It appears that spending reacts to changes in consumer confidence. This shock results in a displacement of spending that lasts for about 30 days, which is consistent with consumers acting upon a precautionary saving motive—if an increase in confidence correlates with an increased level of uncertainty (e.g., a higher variance in a consumer’s income process), the prudent consumer will react by accumulating a buffer stock (see Carroll, Fuhrer, and Wilcox [1994]).

Next consider the empirical analysis when information on stock prices is included. Assuming that the stock prices are reflective of all the information available on the market about the state of the economy, once the stock prices are controlled for, confidence should not forecast spending if the consumer confidence index is another manifestation of the same information.

Figure 3a shows that spending reacts strongly and positively to a shock to stock market prices. Figure 3b shows that following a shock to sentiment, spending takes on a very similar pattern to the reaction found in Figure 2.

This suggests that information contained in consumer sentiment is not fully reflective of information on the stock market, as spending still reacts following an unexpected change in sentiment. Extending the conditioning information set of my analysis further to other survey measures originating from the GIK, I find that sentiment is also not a reflection of concerns about employment stability, which casts some doubt on the explanation of confidence as an aggregator of idiosyncratic information.

Does consumer confidence then reflect animal spirits? The principle of parsimony implies that for the

animal spirits interpretation to hold, well-established models of economic behavior would need to be rewritten to support a theory where consumers decide to go shopping because they feel confident on a particular day. The results are best interpreted as indicating that confidence plausibly aggregates disparate information available to consumers, but not observable by the econometrician, and hence matters for forecasting changes in spending. This issue could be best explored further with a richer set of conditioning variables and a longitudinal component in the underlying microdata.

## Notes

This article contains statements not referenced due to space constraints. For a complete bibliography, see Lachowska (2011).

1. The severity of the recent recession has highlighted the ongoing need to understand the underlying causes of macroeconomic distress. A large literature on real business cycles attributes recessions to fluctuations in technology. An older view, associated primarily with Keynes (1965), ascribes the variations in economic activity to drops in consumer demand. In recent years we have witnessed resurgence in interest in bridging the divide between the latter view and the real business cycle approach, for example, in the literature on news-driven business cycles. The turbulence of the last recession has also sparked a renewed interest in nonstandard explanations of consumer behavior; see, for example, Akerlof and Shiller (2009) and Farmer (2010).

2. Since the U.S. stock market data are only available on weekdays, in order to merge this information I exclude the data on spending and confidence that was collected on the weekends. The sample used for estimation in Figures 2 and 3a–b consists of 238 observations occurring on weekdays.

## References

Akerlof, George A., and Robert J. Shiller. 2009. *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism*. Princeton, NJ: Princeton University Press.

Barsky, Robert B., and Eric R. Sims. 2009. “Information, Animal Spirits, and the Meaning of Innovations in Consumer Confidence.” NBER Working Paper No. 15049. Cambridge, MA: National Bureau of Economic Research.

Beaudry, Paul, and Franck Portier. 2006. “Stock Prices, News, and Economic Fluctuations.” *American Economic Review* 96(4): 1293–1307.

Carroll, Christopher D., Jeffrey C. Fuhrer, and David W. Wilcox. 1994. “Does Consumer Sentiment Forecast Household Spending? If So, Why?” *American Economic Review* 84(5): 1397–1408.

Farmer, Roger E. A. 2010. *How the Economy Works: Confidence Crashes and Self-Fulfilling Prophecies*. New York: Oxford University Press.

Keynes, John Maynard. 1965. *The General Theory of Employment, Interest, and Money*. New York: Harcourt, Brace & World.

Lachowska, Marta. 2011. “Expenditure, Information, and Sentiment: Identifying Shocks to Consumer Confidence Using High-Frequency Data.” Unpublished paper. Interested readers may contact the author directly at lachowska@upjohn.org.

Ludvigson, Sydney C. 2004. “Consumer Confidence and Consumer Spending.” *Journal of Economic Perspectives* 18(2): 29–50.

Souleles, Nicholas S. 2004. “Expectations, Heterogenous Forecast Errors and Consumption: Micro Evidence from the Michigan Sentiment Surveys.” *Journal of Money, Credit and Banking* 36(1): 39–72.

*Marta Lachowska is an economist at the Upjohn Institute.*