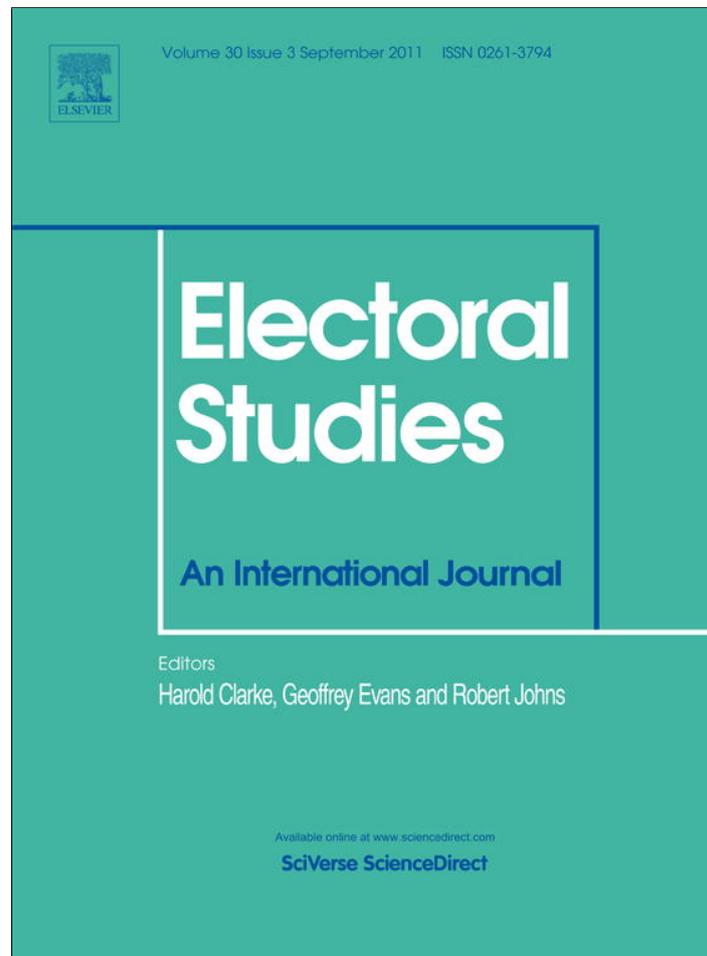


Provided for non-commercial research and education use.  
Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



Contents lists available at ScienceDirect

## Electoral Studies

journal homepage: [www.elsevier.com/locate/electstud](http://www.elsevier.com/locate/electstud)

# The heterogeneity of consumer sentiment in an increasingly homogenous global economy<sup>☆</sup>

Raymond M. Duch<sup>a,\*</sup>, Paul M. Kellstedt<sup>b</sup>

<sup>a</sup> Nuffield College, University of Oxford, OX1 1NF Oxford UK

<sup>b</sup> Texas A&M University, 4348 TAMU, College Station, TX 77843-4348, USA

## A B S T R A C T

### Keywords:

Consumer sentiment  
Economic vote  
Business cycles  
Cross-national  
Voting behavior

Recent investigations concerning consumer confidence in the U.S. have shed light on both the economic and political forces that contribute to its dynamics. And yet, as the recent financial crisis makes clear, the world economy is an increasingly interdependent place. This paper explores whether, in fact, consumer confidence responds differently to economic events in different political and institutional contexts. Our preliminary findings indicate that consumer confidence has shared variance in four countries for which we have data, but also unique variance with origins in national politics.

© 2010 Elsevier Ltd. All rights reserved.

## 1. Fool's Gold?

In retrospect, you could see it coming. Real-estate prices seemed impossibly high, and climbing by the week. The bulls were running amok in the asset markets. Both of these factors, understandably, made a great many homeowners feel quite wealthy, with seeming guarantees of being even wealthier as the values of their homes and retirement accounts continued to skyrocket. The first whispers of trouble had the air of incredulity about them—"How long can this possibly last?"—and more than a bit of wishful thinking, as if trying to postpone the inevitable. Eventually, though, the whispers of "how long?" gave way to open discussions of "bubbles."

The global financial crisis broke into the open in September, 2008. Its origins are hotly debated, but its effects are commonly understood. Banks stopped lending money. Credit froze. Whispers of "bubbles" on cable television channels changed, literally overnight, into panicked Wall Street CEOs on the front pages of the news worried that global capitalism might not survive as a system.

The crisis affected consumers quickly and profoundly. As the housing bubble burst, foreclosures skyrocketed, real-estate prices tumbled, and homeowners stopped getting home-equity loans and spending the money. Consumer confidence evaporated, falling to nearly historic lows. Because consumer spending comprises roughly two-thirds of the U.S. economy, when consumer confidence falls, so does consumer spending, particularly on the big-ticket items like cars and household appliances.

Though few dispute that the crisis began in the U.S. economy, it quickly became apparent that the ills that plagued the banking system—bubbles in real-estate markets, impossible-to-understand financial products called "credit default swaps"—were not limited to the United States. Indeed, among the earliest institutional victims of the crisis was the UK-based bank Northern Rock. And the crisis in consumer confidence, likewise, was not limited to the U.S. As we will see shortly, consumer

<sup>☆</sup> Earlier versions of this paper were presented at the Annual Meeting of the Midwest Political Science Association, April 2009, and at the conference on the Economic Crisis in Europe and Beyond, Texas A&M University, May 2009. Thanks to Jim Stimson, Guy Whitten, Harold Clarke, Evan Parker-Stephen, Quan Li, Lucy Goodhart, Tim Hellwig and Randy Stevenson for comments on previous drafts.

\* Corresponding author.

E-mail addresses: [raymond.duch@nuffield.ox.ac.uk](mailto:raymond.duch@nuffield.ox.ac.uk) (R.M. Duch), [kellstedt@polisci.tamu.edu](mailto:kellstedt@polisci.tamu.edu) (P.M. Kellstedt).

confidence fell precipitously in other western democracies as well.

Whatever the origins of the financial crisis, the global economic slowdown that followed in its wake is undeniably, in part, a function of the decline in consumer confidence and the attendant changes in consumer behavior. This paper provides a preliminary investigation into the roles that objective economic reality and other, potentially political, factors play in shaping consumer confidence, with a particular focus on how comparative context affects these relationships.

In just the U.S. context, De Boef and Kellstedt (2004) recently addressed the issue of consumer confidence, addressing a surprisingly poorly understood aspect: What are the origins of consumer confidence? The typical argument is that economic conditions influence consumer confidence, which in turn influences both political evaluations and votes. It is generally assumed that monthly reports of the nation's level of consumer confidence respond to objective economic conditions. De Boef and Kellstedt (2004) argue that politics is important for understanding consumer sentiment beyond what we know from economic conditions. Specifically, they demonstrate a direct effect of political evaluations of the president's management of the economy, the party of the president, extraordinary political events, and monetary policy, as well as an indirect effect of media coverage of the economy, on consumer sentiment, after controlling for economic conditions. When news coverage—especially what they call “non-political” news coverage—is positive, citizens give favorable evaluations, leading to more positive sentiment; what they deem “political” media coverage also has effects on sentiment, but they are smaller and only short-lived. Their findings suggest that understanding the political economy requires an emphasis on the causal effect of politics as well as economics.

The aforementioned results, however, are limited to the U.S. context. Duch and Stevenson (2008) make a persuasive case for the notion that these relationships should be highly conditioned by the institutional and political context. As a result, consumer confidence series may in fact respond quite differently to economic and political events in different institutional contexts. This paper explores whether in fact consumer confidence responds differently to economic events in different political and institutional contexts. We begin by revisiting the notion of consumer confidence as it is used in literature broadly. Next, we describe our modeling strategy, the available data, and our preliminary results.

## 2. What is consumer confidence?

Consumer confidence (or sentiment) is a broad set of subjective assessments by the mass public pertaining to the state of the economy. Fortuitously, its measurement is highly similar across a variety of democratic contexts. In the U.S., consumer sentiment is measured as part of *The Survey of Consumer Attitudes and Behavior* conducted by the Survey Research Center at the University of Michigan, which has surveyed Americans regularly for over four decades. That survey's index of consumer sentiment is based on a subset of questions from this survey. The items are a mixture of

forward-looking (what do you expect) and backward-looking items (are things better now than they were), as well as personal (your household) and national (the country as a whole).<sup>1</sup> In Europe, consumer sentiment is measured as part of the EU Consumer Confidence Surveys, which are administered monthly in each of the member countries of the European Union. For each EU member country, the consumer sentiment series is the arithmetic average of the balances (in percentage points) to four questions concerning their economic situation.<sup>2</sup> In Canada, consumer confidence is measured by The Conference Board of Canada, which have been administered monthly throughout the country since 1980.<sup>3</sup>

The historical time series of consumer sentiment for Canada, France, Germany and the U.K. are presented in Fig. 1. The series in each country clearly varies significantly over time. And the patterns of variation appear to be distinct from one country to the next, possibly reflecting the different business cycles in each country. Our expectation, however, is that there is more going on in the series than simply reflecting objective economic conditions.

Some of the variation in these series reflects how attitudes about the economy are formed. Conceptually, sentiment varies along two dimensions—temporal and situational. Temporally, consumer confidence can focus on comparing the past to the present, tapping into whether members of the mass public think the economy is improving or getting worse. Alternatively, the temporal conceptualization of consumer confidence can focus on the future, and on citizens' expectations about whether they expect the future economy to get better, to get worse, or to expect more of the same. Situationally, consumer confidence can have an extremely local focus, tapping into the economic situation of a respondent (and his or her family). Alternatively, consumer sentiment can have a broad focus, seeking

<sup>1</sup> For further details see the Survey of Consumer Attitudes Web site at: <http://www.sca.isr.umich.edu/documents.php?c=i>.

<sup>2</sup> A description of the wording of the consumer sentiment questions and the method employed for creating the sentiment series is provided in European Commission, 2007. The EU consumer sentiment series is the arithmetic average of the balances (in percentage points) of the answers to the following: 1) How do you expect the financial position of your household to change over the next 12 months? (get a lot better; get a little better; stay the same; get a little worse; get a lot worse); 2) How do you expect the general economic situation in this country to develop over the next 12 months? (get a lot better; get a little better; stay the same; get a little worse; get a lot worse); 3) How do you expect the number of people unemployed in this country to change over the next 12 months? The number will (increase sharply; increase slightly; remain the same; fall slightly; fall sharply); 4) Over the next 12 months, how likely is it that you save any money? (very likely; fairly likely; not likely; not at all likely).

<sup>3</sup> A complete description of the series is available from the Conference Board's web site at: <http://www2.conferenceboard.ca/weblinx/ica/Default.htm>. The consumer confidence series is the average of the following four questions: 1) Considering everything, would you say that your family is better off or worse off financially than six months ago? (better off; same; worse off); 2) Again, considering everything, would you say that your family will be better off, the same or worse off financially six months from now? (better off; same; worse off); 3) How do you feel the job situation and overall employment will be in this community six months from now? (more; fewer; same); 4) Do you feel that right now is a good time or a bad time for the average person to make a major outlay for things such as a home or a car or some other major item? (good; bad).

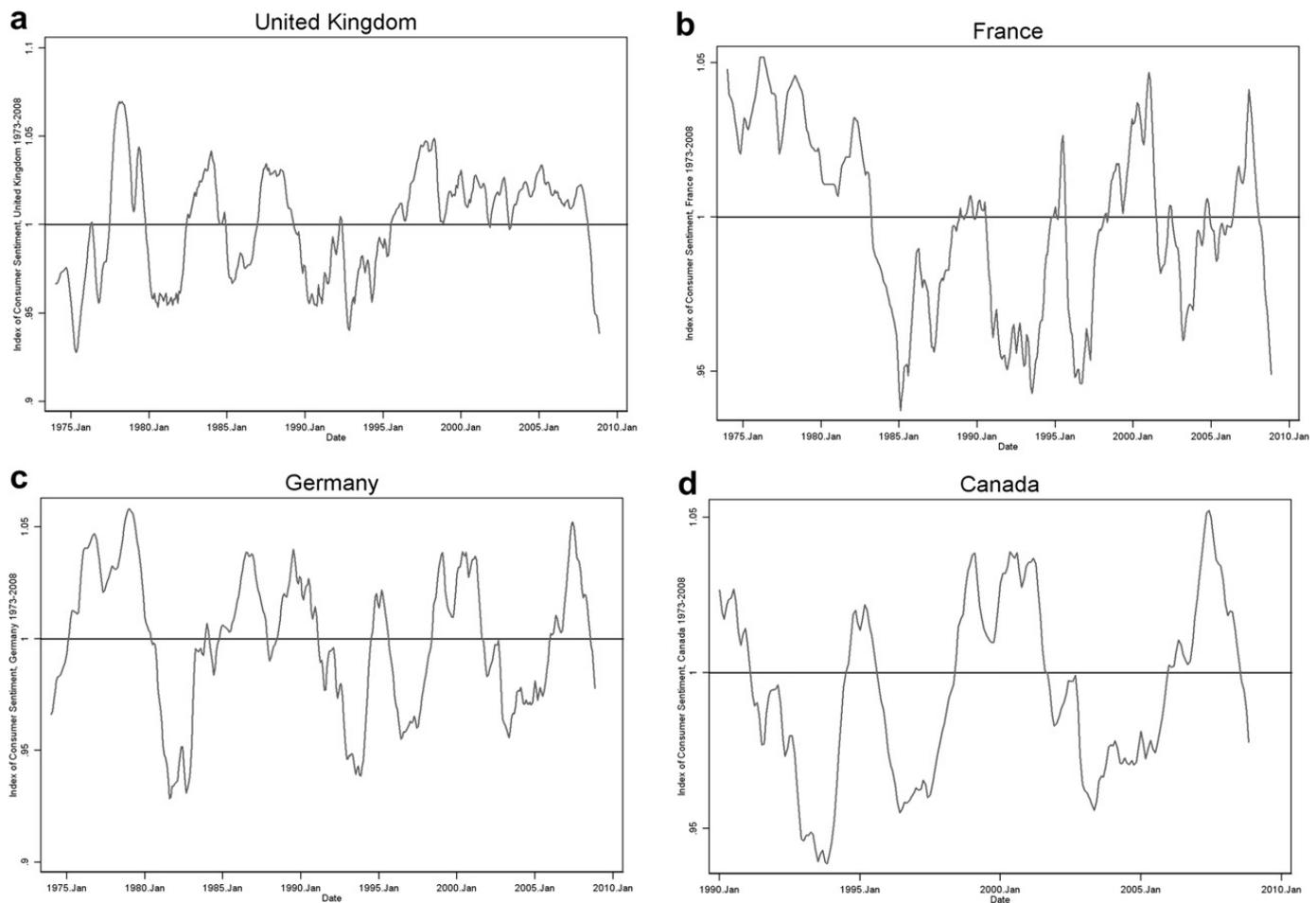


Fig. 1. Consumer sentiment series: Canada, France, Germany and U.K.

a person's reaction to the economy of the nation as a whole. Together, these two dimensions form a straightforward two-by-two understanding of consumer confidence.<sup>4</sup>

Some variant of consumer confidence—sometimes oriented toward the future, at other times toward the past; sometimes directed at the survey respondent's personal economic situation, and other times at the country as a whole—appears on the right-hand side of an impressive variety of models of the political economy. Micro-level models of phenomena such as vote choice depend on consumer confidence to help explain (in part) why citizens vote for incumbents or out-parties.<sup>5</sup> Here, the subjective nature of consumer sentiment is important because, obviously, there is no variance in objective economic indicators (at the national level) in objective conditions, whereas in a subjective sense, a great amount of variation (potentially)

<sup>4</sup> At times, there are theoretical reasons to distinguish between these dimensions of consumer sentiment, to judge (for example) whether or not voters are retrospective or prospective in focus, or whether or not the public evaluates administrations prospectively or retrospectively. At other times, particularly in many macro-level studies, the over-time variation in these indicators are so highly correlated as to not make a meaningful analytic difference.

<sup>5</sup> Duch and Stevenson (2008) provide an extensive discussion of the theory of the economic vote and present empirical evidence from 19 countries.

exists in different citizens' assessments of the economy. Most macro-level dynamic models of phenomena such as election outcomes, partisan balance, administration approval, and policy sentiment contain some variant of consumer sentiment as exogenous variables (a classic example here is Erikson et al. (2002)). In the earliest uses of these constructs, it was typically assumed in a straightforward sense that economics was exogenous to political evaluations and behaviors.

In an academic sense, as this indicates, consumer sentiment has been important in helping to explain various political and economic phenomena. But beyond this, consumer sentiment has important real-world implications as well. Indeed, since 1989 in the U.S., consumer confidence has been a part of the Index of Leading Economic Indicators. This is *prima facie* evidence that consumer confidence (as a leading indicator) helps to predict the economic future. And yet, until recently, consumer confidence resembled an Oracle—everyone knew that what the Oracle said was important, but nobody knew how to predict the Oracle's declarations.

### 2.1. The economy and consumer confidence

We expect that economic sentiment in advanced democracies is influenced by economic reality. Periods of negative consumer sentiment coincided with the periods of

sustained negative growth—this is the case for the UK and Germany in the early 1980s. We also see consumer confidence hitting historical lows in all four countries in 2008–2009. And the expansions of the global economy in the post-dot-com recession of 2000 witnessed sustained periods of positive economic evaluations. We can move beyond the historical sketch, though, to more systematic documentation of the effects of the “objective” economy on the “subjective” economy. Rounding up the usual economic suspects, we model consumer sentiment similarly to Erikson et al. (2002), including inflation, unemployment, several measures of the productivity of the economy, trade, and the dynamics of asset markets.

In order to decompose consumer sentiment in the four countries in our sample into its clearly economic and non-economic components, we pursue the following strategy. First, for each country, we regress consumer sentiment on lags of sometimes-collinear measures of economic reality as noted above. Importantly, in these first analyses, we do not include a lagged dependent variable, which would serve as a proxy for the lagged values of omitted (largely political) variables. The consequence is that we maximize the possibility for economic reality to account for the dynamics of consumer sentiment, and are therefore able to purge the effects of objective economic reality from the consumer sentiment series. Individual coefficients in these models are inefficient and occasionally perversely signed (but unbiased and asymptotically consistent), as might be expected in such a saturated model with high doses of multicollinearity. The aim that these models serve is to provide a very good forecast of consumer sentiment based solely on objective economic reality. The residuals of these models, by definition, constitute the variance of consumer confidence that cannot be explained by objective economic reality. Put differently, the residuals are measures, in each country, of economically irrational optimism and pessimism.

Table 1 presents the results of the regressions employed to generate the consumer sentiment residuals for the four countries in our sample. The independent variables in each of these models are the economic time series characterizing the state of each country's economy. These data are from the *OECD Monthly Economic Indicators*. In the case of each country we employed those variables for which we were able to construct a complete time series corresponding to the consumer sentiment series from the particular country. These models explain between 50 and 88 percent of the variance in consumer sentiment. The dependent variable in these equations is the Index of Consumer Sentiment, measured monthly from 1975 in the UK and France, from 1980 in the case of Germany and 1990 in the case of Canada (all series end in 2009). Cell entries are block F-tests for the joint significance of excluding two lags from the unrestricted equation. For example, for the Consumer Price Index cell, lags 0 and 1, for the monthly rate of inflation, the  $p$ -value represents the probability that the variable does not help explain consumer sentiment. Unsurprisingly, the table confirms that subjective consumer sentiment is, in part, driven by the dynamics of the business cycle. When a nation's economy fares well, consumer confidence improves, but when various indicators of an economy's health plummet, so does consumer confidence.

**Table 1**Economic Explanations for Consumer Sentiment: Block F-tests ( $p$ -values).

Block of Coefficients ( $p$ -values)	UK	Germany	France	Canada
Consumer Price Index	0.11	0.00	0.00	0.00
Retail confidence		0.19		
Share prices	0.00		0.00	0.00
Terms of trade			0.00	
Leading industry indicators	0.00	0.00	0.00	0.00
Building permits		0.60	0.00	0.08
Total industry production	0.57	0.27	0.00	0.31
Manufacturing production	0.59	0.33	0.00	0.25
Production investment goods	0.00	0.63	0.74	
Car registration	0.00	0.05	0.04	0.04
Unemployment	0.00	0.04	0.00	0.04
Net trade	0.55	0.00	0.38	0.00
R-Square	0.50	0.56	0.80	0.56
Observations	417	356	399	356

By definition, if the subjective economy were solely a function of the objective one, then the residuals from the above models would be white noise. This is not the case, however. We have plotted these residual series in Fig. 2, where we see, instead of randomness, sustained periods of months (and even, on occasion, years) on end where consumer confidence is either too optimistic (given reality) or too pessimistic. In the figure, the zero lines represent equilibria of sorts, where objective economic conditions perfectly predict subjective consumer confidence. In effect, what these residuals represent are periods of hyper-optimism or hyper-pessimism about each of these economies, for the positive and negative numbers quite literally represent the degree to which subjective evaluations of the economy are too rosy or too gloomy given the objective economic situation.

All four of the residual series are, by simple visual inspection, autoregressive; a positive (negative) residual in one month strongly predicts a positive (negative) residual in the following month. Quite obviously, this is not what one would expect to see if economic reality perfectly predicted consumer confidence. Periods of hyper-optimism and hyper-pessimism are evident in all four countries, though it is not equally pronounced in all four countries. Note, for example, in the German residual series, which begins (in 1980) with a prolonged period of hyper-pessimism. By around 1983, however, the series drifts into overly optimistic territory, and remains there for almost the entire rest of the decade. The mid-1990s saw another period of hyper-optimism, followed by an overly pessimistic period over the last part of that decade. The residual series in Canada evinces similarly long-lasting periods where consumers are too pessimistic or too optimistic for extended periods; the mid-1990s contained the longest prolonged period where the Canadian public was too optimistic given objective conditions, with the latter part of that decade representing extended and unwarranted pessimism about the economy.

### 3. Explaining consumer optimism or pessimism

What might cause these bouts of excessive optimism or pessimism? Political events clearly have an impact here.

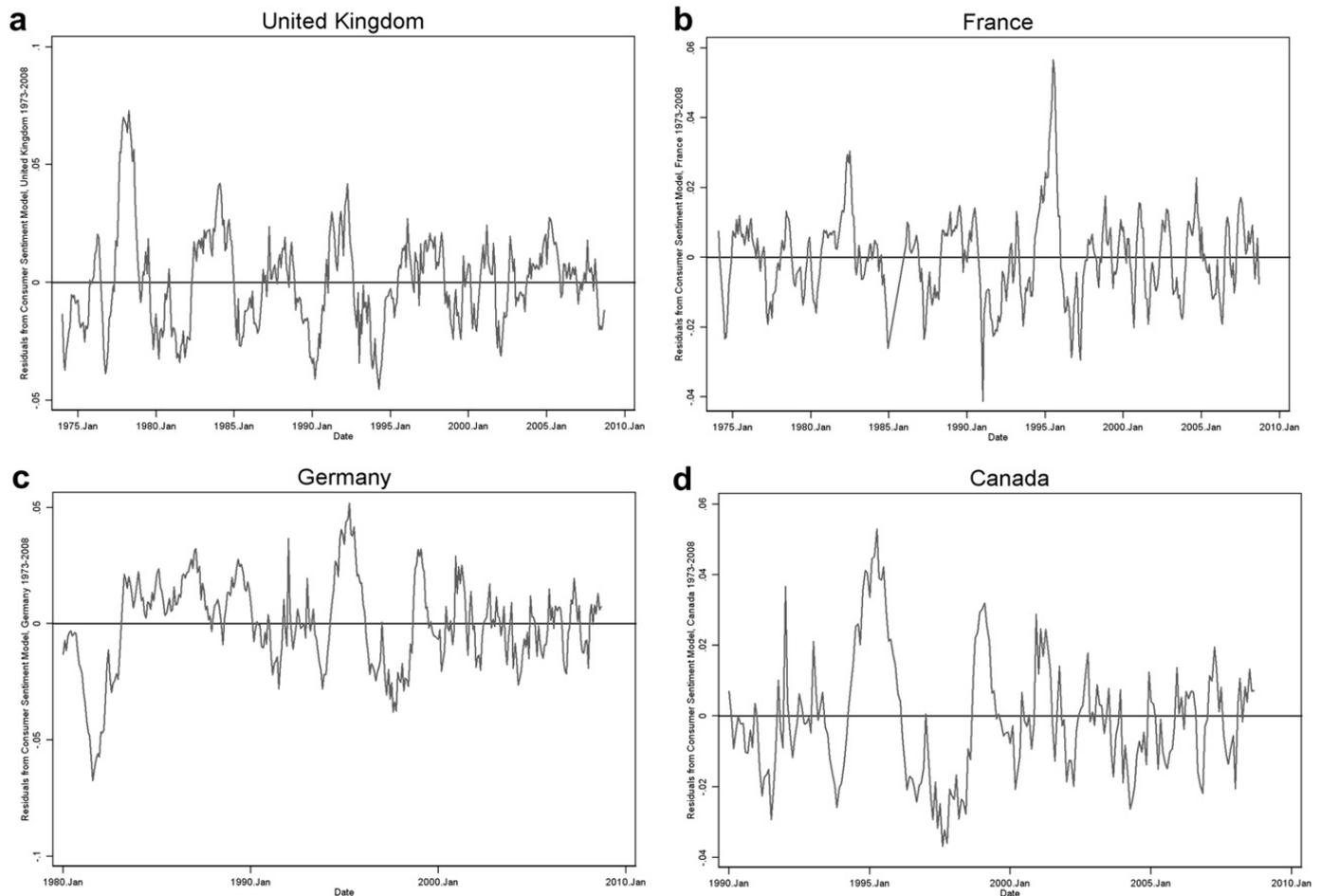


Fig. 2. Residuals from consumer sentiment regressions.

Gerber and Huber (2009) nicely demonstrate how political enthusiasm in the wake of an election can affect consumer confidence and spending behavior. Assessments of the government's stewardship of the economy have the potential of influencing economic evaluations. When citizens have faith in the economic competence of the administration, they may view the economic future more optimistically, because they perceive the economy to be in good hands. In contrast, if the public feels that the administration is incompetent or untrustworthy, this may filter into negative expectations about the economic future, or even the economic past. Regardless of the accuracy of the notion that governments somehow "manage" the economy in a hands-on manner, many (perhaps most) people perceive this to be the case; incumbent governments, especially in good times, do nothing to dissuade us of this belief. And when the public has confidence in that economic stewardship, they will be more confident in the current and future trajectories of the economy. This was the interesting insight that De Boef and Kellstedt (2004) found in their analysis of U.S. consumer sentiment.

There is also evidence that these bouts of optimism and pessimism vary across institutional contexts. Duch and Stevenson (2009), for example, find that the fit between consumer sentiment and the real economy does vary cross-

nationally—the economic attitudes tend to track the real economy more closely in some countries than others. This raises the possibility that political influences on consumer sentiment vary across institutional contexts.

We do not have a direct measure of public evaluation of economic stewardship as was the case in the U.S. analysis conducted by De Boef and Kellstedt (2004). Nevertheless, in this preliminary analysis we have an indirect measure—government popularity—which we believe will provide some initial insights into this question. Fig. 3 plots the popularity of the German Federal government and the German residuals generated from the equations in Table 1. This is suggestive of the extent to which public evaluations of the government might shape consumer sentiment—the arrows in Fig. 3 identify periods of hyper-optimism or hyper-pessimism that we believe might be shaped by these political evaluations. Take 1995, for example: this is a period in which the consumer sentiment residual series is very high, suggesting hyper-optimism on the part of consumers. It is also a period in which government popularity is at a particularly high value. Our expectation is that some of that optimism on the part of German consumers results from public enthusiasm for their Federal government.

The interesting puzzle here is determining whether in fact these bouts of hyper-optimism or hyper-pessimism on

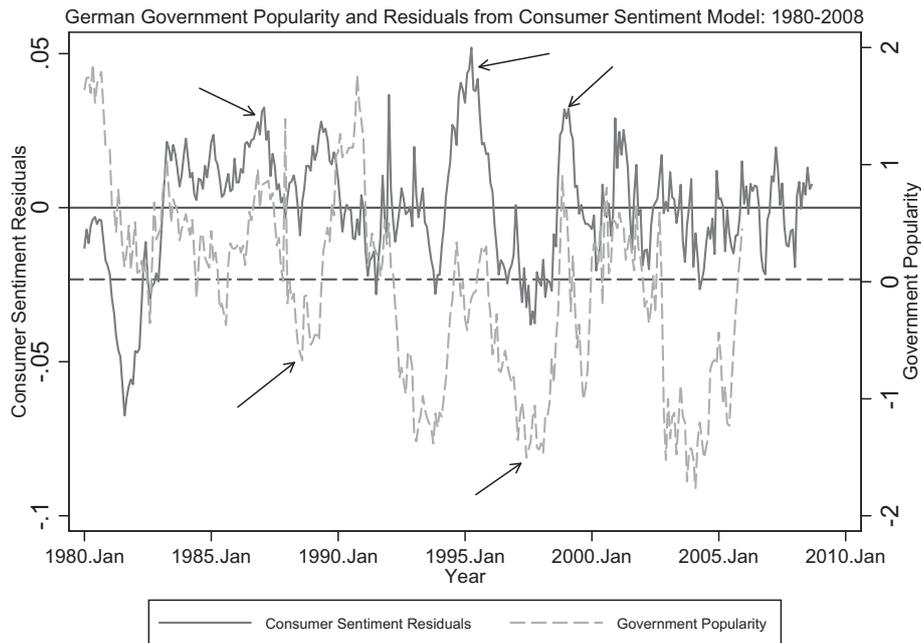


Fig. 3. German government popularity and residuals from consumer sentiment model: 1980–2008.

the part of consumers are in fact driven by the accompanying fluctuations in the government's popularity (or the media's spin on the government's economic performance). Again without direct measures of the public's assessment of the government's economic performance or of media content, at the moment we have relatively imprecise tools for testing this argument. One implication of the argument is that these bouts of hyper-optimism or hyper-pessimism by the consumer should be distinct across countries. Any correlation in the national residuals from Fig. 2 would represent consumer sentiment that is responding to economic shocks experienced in both countries—possibly global or regional economic shocks that were not captured in the equations in Table 1. Hence any clear distinctions in the behavior of the series would suggest fluctuations that were shaped by national political events. Fig. 4 presents such a comparison between the consumer sentiment residuals from France and Germany. Note that the residual series are, in fact, quite strongly related—resulting, in our opinion, from economic shocks that are shared across the two economies. Nevertheless, there clearly are fluctuations in the two residual series that are distinctly unrelated to each other—a number of these are again highlighted by arrows in the figure. We consider these to be bouts of hyper-optimism or hyper-pessimism that unambiguously result from fluctuation in the public's assessment of the government's stewardship of the economy and/or the media's spin on economic outcomes but essentially unrelated to objective economic reality.

Note in Fig. 4 the very wide gaps in the two series—these we believe are almost certainly the result of political shocks that have impacted consumer sentiment. Take, for example, the very dramatic drop in the German consumer sentiment residual series in 1981 and 1982. One political explanation for this drop in the consumer sentiment residuals is the

political angst and uncertainly linked to the change in coalition government resulting from the switching of the FDP from the Socialist party to the CDU without the calling of a new election. And some of the post-1990 positive spikes in the German consumer sentiment residuals may be related to the immediate political and media euphoria associated with German unification. It is clear from Fig. 4 that politics, at least in the case of France and Germany, makes an independent contribution to understanding consumer sentiment in a rather punctuated fashion.

#### 4. The puzzle: cross-national variation in consumer enthusiasm and pessimism

We are in the early stages of exploring the role that politics plays in shaping consumer sentiment in diverse political and economic contexts. Nevertheless, we believe this essay identifies the intriguing theoretical and empirical puzzle that needs to be addressed. First, we have provided a sample of consumer sentiment time series from four countries—Canada, France, Germany and the U.K. It is clear from these series that consumer sentiment in these countries have distinct patterns. A portion of these patterns is clearly related to the unique business cycles that characterize their economies but some, we would contend, are associated with the distinct rhythm of politics in each country—the result of different timings of elections, and different national assessments of the various governments' economic competence.

The goal of this project is to very carefully explore the role of politics in shaping these national trends in consumer sentiment. One major component of this effort is first estimating what we have labeled bouts of hyper-optimism or hyper-pessimism in consumer sentiment. In this essay we have sketched out the method that we will

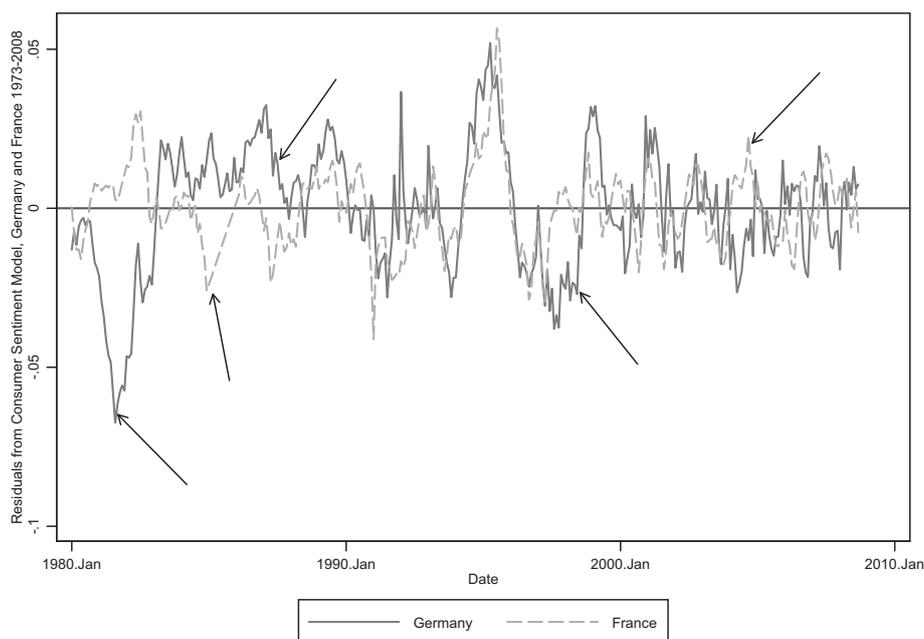


Fig. 4. German and France consumer sentiment residuals: 1980–2008.

employ to generate these consumer sentiment residuals which is derivative of the one used by De Boef and Kellstedt (2004). They are generated by purging as much of the effects of the real economy from the evaluations—we do this by regressing the sentiment series on the most complete set of economic time series available for each country. The time series of these purged sentiment series for our sample of four countries are not white noise, and hence confirm our suspicion that consumer sentiment responds to information of a non-economic nature, some of which we believe is a combination of political judgments and media coverage.

A second component of the project is to then model these consumer sentiment residual series as a function of the public's dynamic evaluation of the government's stewardship of the macro-economy. In this essay we have only been able to explore this part of the analysis in an indirect fashion. A properly specified model of consumer hyper-optimism and hyper-pessimism would include measures of political judgments and media coverage. Nevertheless, our exploratory analysis that proxies government popularity for the public's evaluation of the government's economic stewardship generates results that are at least not inconsistent with our expectations.

The third facet of this project is to suggest that there is interesting contextual variation in the degree to which consumer sentiment responds to political judgments. It is

instructive, and a bit surprising, to notice that consumer sentiment in Canada, France, Germany, and the U.K. do not move entirely in tandem. Obviously all of these economies are subject, to varying degrees, to the same global economic forces, particularly the availability of capital. But their obvious differences represent a clear testimony to the power of context. Each of these countries has its own unique political cycles that are (presumably) the result of different timings of elections, and different national assessments of the various governments' economic competence.

## References

- De Boef, S., Kellstedt, P.M., 2004. The political (and economic) origins of consumer confidence. *American Journal of Political Science* 48, 633–649.
- Duch, R.M., Stevenson, R., 2008. *The Economic Vote: How Political and Economic Institutions Condition Election Results*. Cambridge University Press, Cambridge.
- Duch, R., Stevenson, R., 2009. *The Economy: Do Voter Get It Right?* Manuscript Nuffield College Oxford University.
- European Commission, 2007. *The Joint Harmonised EU Programme of Business and Consumer Surveys. User Guide*. European Commission Directorate-General for Economic and Financial Affairs.
- Erikson, R.S., MacKuen, M.B., Stimson, J.A., 2002. *The Macro Polity*. Cambridge University Press.
- Gerber, A.S., Huber, G.A., 2009. Partisanship and economic behavior: do partisan differences in economic forecasts predict real economic behavior? *American Political Science Review* 103, 407–426.