Has Policy Uncertainty Slowed the Recovery?

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SF Fed, April 10\textsuperscript{th} 2013
Policy uncertainty has recently been argued to be a key factor in delaying the current recovery.

Global Recession Risk Rises
IMF Lowers Growth Forecasts, Warns New Downturn Would Be Tougher to Tame

"Risks for a serious global slowdown are alarmingly high," said the IMF's World Economic Outlook report, which was released here Tuesday ahead of the fund's annual fall meeting. It was its bleakest assessment of global growth prospects since the 2009 recession.

The fund expects the world economy to expand just 3.3% this year and 3.6% in 2013, as growth slows in nearly every major nation and political uncertainties threaten recoveries in the U.S. and euro zone. That is a revision downward of 0.2 percentage point for 2012 and 0.3 percentage point for 2013 from its July forecast. Under the IMF's definition, global gross domestic product doesn't have to shrink for the world to be in recession.

"No significant improvements appear in the offing," the IMF said. The global economy grew 3.8% in 2011 and 5.1% in 2010.

The IMF noted the absence of a simple unified message for how to avert another downturn.

Audio
Sudeep Reddy stopped by The Wall Street Journal This Morning with the latest.
But not everyone agrees: Krugman clearly disagrees
Of course Fox disagrees with Krugman’s disagreement
The paper tries to investigate this methodically

1) Measuring policy uncertainty

2) Evaluating our measure of policy uncertainty

3) Estimating the impact of policy uncertainty on the recovery
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3) Estimating the impact of policy uncertainty on the recovery
Our US Economic Policy Uncertainty index has 4 components – how we make the data “sausage”:

- News-based index (weight=1/2)
- Forecaster disagreement about government purchases of goods and services (weight=1/6)
- Forecaster disagreement about inflation (weight=1/6)
- Scheduled tax code expirations (weight=1/6)

Normalize each component to have unit standard deviation, then compute weighted sum to get overall index.
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Normalize each component to have unit standard deviation, then compute weighted sum to get overall index.
Constructing our US News-Based EPU Index

- For 10 major US papers get monthly counts of articles with:
  - {economic or economy}, and
  - {uncertain or uncertainty}, and
  - {regulation or deficit or federal reserve or congress or legislation or white house}

- Divide the count for each month by the count of all articles

- Normalize each to SD=1, then sum all 10 papers to get the U.S monthly index
US News-based policy uncertainty index: Jan 1985-Dec 2012

Our US Economic Policy Uncertainty index has 4 components – how we make the data “sausage”:

- News-based index (weight=1/2)

- Forecaster disagreement about government purchases of goods and services (weight=1/6)

- Forecaster disagreement about inflation (weight=1/6)

- Scheduled tax code expirations (weight=1/6)

Normalize each component to have unit standard deviation, then compute weighted sum to get overall index.
Notes: From the Philadelphia Federal Reserve Survey of Professional Forecasters. Takes the interquartile (IQ) range of the 1-year ahead forecasts (made every quarter) of total state and local government purchases relative to five year backward moving average GDP. Normalized to a mean 100 from 1985-2009. Spans about 45 forecasters per year.
Notes: From the Philadelphia Federal Reserve Survey of Professional Forecasters. Takes the interquartile (IQ) range of the 1-year ahead forecasts (made every quarter) of consumer price level. Normalized to a mean 100 index prior 1985-2009. Spans about 45 forecasters per year.
Our US Economic Policy Uncertainty index has 4 components – how we make the data “sausage”:

- News-based index (weight=1/2)
- Forecaster disagreement about government purchases of goods and services (weight=1/6)
- Forecaster disagreement about inflation (weight=1/6)
- Scheduled tax code expirations (weight=1/6)

Normalize each component to have unit standard deviation, then compute weighted sum to get overall index.
Combine the yearly CBO tax code expiration figures into an index by discounting by 50% per year the amount of tax code scheduled to expire in future years.

Source: Congressional Budget Office. Utilizes list of scheduled future tax code expirations and their estimated dollar value. Expirations are discounted by 50% per year.
Our US Economic Policy Uncertainty index has 4 components – how we make the data “sausage”:

- News-based index (weight=1/2)
- Forecaster disagreement about government purchases of goods and services (weight=1/6)
- Forecaster disagreement about inflation (weight=1/6)
- Scheduled tax code expirations (weight=1/6)

Normalize each component to standard deviation=1, then compute weighted sum to get overall index.
Our main index of US policy uncertainty
January 1985-December 2012

Source: Data at www.policyuncertainty.com. Data normalized to 100 prior to 2010.
US index is similar to the VIX index of 1 month implied S&P500 stock market volatility, but not the same

Correlation VIX and Policy Uncertainty is 0.55

US index is more similar to 10 year implied S&P500 stock market volatility (correlation 0.73)

Notes: Data from “The buzz: Links between policy uncertainty and equity volatility”, by Krag Gregory and Jose Rangel, Goldman Sachs, November 12, 2012.
European Economic Policy Uncertainty Index

What seems to be driving US policy uncertainty? It seems to be mainly fiscal policy and health care.

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<tr>
<td>Economic Policy Uncertainty</td>
<td>109</td>
<td>141.2</td>
<td>87.7</td>
<td>127.8</td>
<td>71</td>
<td>83</td>
<td>131.5</td>
<td>127.8</td>
<td>100</td>
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<td>Monetary policy</td>
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<td>41.6</td>
<td>25.9</td>
<td>44.9</td>
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<td>31.5</td>
<td>27.6</td>
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<td>48.1</td>
<td>31.7</td>
<td>50.9</td>
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<td>31.3</td>
<td>56.6</td>
<td>67.9</td>
<td>39.7</td>
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<td>Government spending</td>
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<td>26.7</td>
<td>12.1</td>
<td>17.2</td>
<td>8.5</td>
<td>6.6</td>
<td>17</td>
<td>30.6</td>
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<td>Health care</td>
<td>7</td>
<td>15.3</td>
<td>14.9</td>
<td>18.3</td>
<td>13.1</td>
<td>13.4</td>
<td>29.2</td>
<td>39.2</td>
<td>16.3</td>
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<td>National security</td>
<td>24.9</td>
<td>53.4</td>
<td>17.9</td>
<td>54.5</td>
<td>25.3</td>
<td>15.8</td>
<td>21.2</td>
<td>19.3</td>
<td>24.4</td>
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<td>Entitlement programs</td>
<td>7.2</td>
<td>12.5</td>
<td>11.4</td>
<td>18.6</td>
<td>8.8</td>
<td>8.2</td>
<td>15.2</td>
<td>23.4</td>
<td>11.8</td>
</tr>
<tr>
<td>Regulation</td>
<td>15.7</td>
<td>22.9</td>
<td>14.5</td>
<td>19.5</td>
<td>11.1</td>
<td>15.4</td>
<td>29.1</td>
<td>30.4</td>
<td>17.2</td>
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<tr>
<td>Trade policy</td>
<td>3.8</td>
<td>4</td>
<td>6.3</td>
<td>2.6</td>
<td>1.7</td>
<td>2</td>
<td>1.4</td>
<td>2.3</td>
<td>3.9</td>
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<tr>
<td>Sovereign debt, currency</td>
<td>1.4</td>
<td>0.6</td>
<td>2.3</td>
<td>0.5</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
<td>4.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Overall Economic Uncertainty</td>
<td>217.1</td>
<td>348</td>
<td>185</td>
<td>325.3</td>
<td>159</td>
<td>183.8</td>
<td>369</td>
<td>262.8</td>
<td>219.3</td>
</tr>
</tbody>
</table>

Note: Analysis uses Newsbank coverage of around 1000 US national and local newspapers.
The paper tries to investigate this methodically

1) Measuring economic policy uncertainty

2) Evaluating our policy uncertainty

3) The impact of policy uncertainty on the recovery
Two Measurement Concerns with News Indices

**Suitability:** Does a count of news articles about uncertainty provide a good indicator for actual economic uncertainty?

**Accuracy:** Do specific text-string searches accurately identify the set of articles that discuss economic policy uncertainty?
Suitability test: news based indices for tracking equity market uncertainty seem to work quite well.

Notes: News-Based Financial Uncertainty Index composed of monthly number of news articles containing uncertain or uncertainty, economic or economy, and ‘stock prices’, ‘equity prices’, or ‘stock market’. Daily VXO data is scaled so both series have equal means. Data to October 2012.
Suitability test: news based indices for tracking unemployment also seem to work quite well

Notes: Index of Unemployment News composed of quarterly news articles containing terms like ‘unemployment’, ‘layoffs’, or ‘job loss’ (scaled by the smoothed total number of articles) in 5 newspapers (WP, BG, LAT, WSJ and CHT). Data normalized to 100 from Jan 1900-Dec 2011. Unemployment data is overall seasonally adjusted unemployment rate taken from the BLS.
Accuracy test: performing human audits

We had 6 undergraduates read 3,500 newspaper articles using a 29-page audit guide to code articles if they discuss “economic uncertainty”=0/1 and “economic policy uncertainty”=0/1.

Economic Policy Uncertainty

Audit Methodology: Main Steps
1. Download all NY Times, LA Times, and SF Chronicle articles from 1985 to 2012 that pass our Economic Uncertainty filter (uncertainty > 0).
2. The pages of articles.
3. Assign 84 of the sampled articles for each paper to Kyle and 84 to Sophie. Call these subsamples Sub(Name, Paper).
4. Review the documents using the audit guide.
5. In sum, we get 17 z values per page.
6. Lastly, we review the articles.

Auditing the Sampled Articles, 2
3. If yes to 2, then identify the policy category (checking all that apply):
   - Monetary policy
   - Fiscal policy
   - Taxes
   - Labor regulations
   - Legal policy
   - Competition Policy
   - Government spending
   - Health care programs and regulations
   - National security and terrorism
   - Trade Policy
   - Energy & environmental regulation, natural resources and commodities
   - Entitlement programs, social safety net, welfare programs
   - Financial regulation (including banking and equity markets)
   - Political conflict and leadership changes
   - Sovereign debt, exchange rate policy, foreign reserves
   - Other policy matters (specify)
4. Code other aspects of policy uncertainty treated in the article: direction of change, nature of policy uncertainty (is it about who, actions, or effects?), and whether it discusses policy concerns in the United States or foreign countries.
Evaluation results from the human audit helped refine our search, and confirmed our EPU measure is well correlated with true policy uncertainty.

Permutations of regulation, budget, spending, policy, deficit, tax, federal reserve, government, congress, senate, president, legislation, government spending, federal spending.

Optimal set, correlation of 0.65 with true policy uncertainty.

Finally, also checked for political bias – some, but quantitatively very small (explains <2% of movement)

Papers sorted politically using the media slant measure from Gentzkow and Shapiro (2010).
The paper tries to investigate this methodically

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Why might uncertainty impact the real economy?

Economics literature has mainly focused on three channels:

- “Real-options effects”: Uncertainty can make firms cautious about investing and hiring
- “Financing costs”: Uncertainty can increase risk-premia
- “Precautionary savings”: Uncertainty can reduce consumption
The most important channel seems to be real options (caution) effects

Dave Cote, chairman and CEO of Honeywell, a Fortune 500 firm that employs 130,000 people worldwide stated "Right now we're holding back on all but the most necessary external hiring. And on capital expenditures, if I can make the decision now or six months from now, I'll make the decision six months from now and see what develops".

November 5th 2012
Lots of survey evidence pointing to uncertainty as a problem – Chamber of Commerce

REPORT

United States Chamber of Commerce
Q2 Small Business Study
July 16, 2012
Survey Dates: July 2, 2012 – July 9, 2012

Flat Economic Growth and Uncertainty Continue to Limit Hiring

Eight-out-of-ten small businesses continue to think the national economy is off on the wrong track and more than half (53%) of small businesses surveyed cite economic uncertainty as their top concern. Only 14% say the national economy is on the right track.

Forty-five percent of small business owners surveyed are not sure if their business’s best days are ahead of or behind them. In addition, only 34% of small business owners say the business climate over the next two years is likely to greatly or somewhat improve.

Business’s Best Days Are...

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<th>Jul</th>
<th>Oct</th>
<th>Jan</th>
<th>Mar</th>
<th>Jul</th>
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<tbody>
<tr>
<td>Ahead of you</td>
<td>39%</td>
<td>33%</td>
<td>40%</td>
<td>37%</td>
<td>35%</td>
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<tr>
<td>Behind you</td>
<td>23%</td>
<td>26%</td>
<td>20%</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>Not Sure</td>
<td>38%</td>
<td>40%</td>
<td>40%</td>
<td>41%</td>
<td>45%</td>
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Lots of survey evidence pointing to uncertainty as a problem – Global CEO survey

15th Annual Global CEO Survey 2012
Confidence disrupted⁵/Balancing global and local⁹/Risk resilience¹⁶/The talent challenge²⁰/What’s next²⁷/CEO interviews³⁰

Figure 10: Global economic uncertainty remains the top threat to growth prospects
Q: How concerned are you about the following potential threats to your business growth prospects?

North America | Western Europe | Asia Pacific | Latin America | CEE | Middle East/Africa
---|---|---|---|---|---
Uncertain or volatile economic growth | Uncertain or volatile economic growth | Uncertain or volatile economic growth | Uncertain or volatile economic growth | Uncertain or volatile economic growth | Uncertain or volatile economic growth

- Public deficits
- Over-regulation
- Unstable capital markets
- Availability of key skills
- Shift in consumers
- Increasing tax burden
- Exchange rate volatility
- Inability to finance growth
- Protectionism

- Exchange rate volatility
- Over-regulation
- Unstable capital markets
- Availability of key skills
- Shift in consumers
- Increasing tax burden
- Public deficits
- Energy costs
- Inadequacy of basic infrastructure
- Availability of key skills

- Public deficits
- Over-regulation
- Unstable capital markets
- Availability of key skills
- Shift in consumers
- Increasing tax burden
- Exchange rate volatility
- Inflation
- Bribery and corruption
- Increasing tax burden

- Availability of key skills
- Public deficits
- Over-regulation
- Unstable capital markets
- Availability of key skills
- Shift in consumers
- Increasing tax burden
- Exchange rate volatility
- Inflation
- Bribery and corruption
- Increasing tax burden
Lots of survey evidence pointing to uncertainty as a problem – National Association of Business Economists

NABE Policy Survey:
Tighten Macroeconomic Policies Later Rather than Sooner

The National Association for Business Economics (NABE) recently surveyed its members on a number of policy issues. Results of the survey show that generally, there is not much support among the economists surveyed for policy tightening over the next 12 months. A majority of respondents would prefer that both monetary and fiscal policies become more stimulative or remain unchanged in 2013. Only one-third of the respondents feel that both monetary and fiscal policies should, respectively, become more restrictive next year. However, support among the panel rises for policy tightening in the longer run, with more than one-half of the business economists surveyed indicating that they feel fiscal policy should become more restrictive in 2014.

Consistent with findings of the March 2012 NABE Economic Policy Survey, there is overwhelming support among NABE members for a balanced approach to eventual fiscal tightening. Although respondents’ views seem to tilt in the direction of favoring spending cuts, roughly 90 percent of panelists would prefer some combination of spending cuts and tax increases in order to reduce the federal government budget deficit. Only a small minority (less than 15 percent) of survey participants think that the payroll tax should be permanently extended at its current rate, but higher percentages—between 35 percent and 45 percent—favor permanent extension of current tax rates on income, dividends, and capital gains. The vast majority of panelists feels that uncertainty about fiscal policy is holding back the pace of economic recovery.

Most respondents consider current monetary policy to be “about right” and three-quarters of the respondents believe that short-term interest rates will remain unchanged over the next 12 months.
Lots of survey evidence pointing to uncertainty as a problem – FOMC Beige Book

Correlation with our EPU index = 0.84

Note: Plots the frequency of the word “uncertain” in each quarter of the Federal Open Market Committees’ (FOMC) Beige Book. Data from 1983Q4 (when the Beige book started) to 2013Q1. The Beige Book is an overview of economic conditions of about 15,000 words in length prepared two weeks before each FOMC meeting. The count of “Policy Uncertainty” uses a human audit to attribute each mention of the word uncertain to a policy context (e.g. uncertainty about fiscal policy) or a non-policy context (e.g. uncertainty about GDP growth). See the paper for full details.
The Beige Book Policy Uncertainty also focuses on tax, spending and regulation uncertainty 2010-12

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<tr>
<td>b) Fiscal Policy</td>
<td>0.3</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td>0.3</td>
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<tr>
<td>c) Taxes</td>
<td>0.2</td>
<td>0</td>
<td>0.3</td>
<td>1.0</td>
<td>0.2</td>
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<tr>
<td>d) Government Spending</td>
<td><strong>1.0</strong></td>
<td>0</td>
<td>0.2</td>
<td><strong>0.8</strong></td>
<td>0.2</td>
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<tr>
<td>f) Health Regulation</td>
<td>0.0</td>
<td>0</td>
<td>0.2</td>
<td>0.5</td>
<td>0.1</td>
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<tr>
<td>g) Financial Regulation</td>
<td>0.0</td>
<td>0</td>
<td>0.2</td>
<td><strong>1.3</strong></td>
<td>0.3</td>
</tr>
<tr>
<td>h) Labor Regulation</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.1</td>
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<tr>
<td>i) Environmental Regulation</td>
<td>0.7</td>
<td>0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.1</td>
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<td>j) National Security</td>
<td>0.0</td>
<td>2</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>k) Sovereign Debt</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td><strong>0.8</strong></td>
<td>0.1</td>
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<tr>
<td>o) Political Conflict/Leadership Change</td>
<td>0.0</td>
<td><strong>3.2</strong></td>
<td>0.0</td>
<td>2.3</td>
<td>0.8</td>
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<tr>
<td>Policy-Related Count</td>
<td>1.2</td>
<td>4.8</td>
<td>0.8</td>
<td><strong>6.3</strong></td>
<td><strong>1.7</strong></td>
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<td>Policy-Related Count (Each category mention counted once)</td>
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<td>5.2</td>
<td>0.8</td>
<td>9.0</td>
<td>2.3</td>
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<tr>
<td>Total Uncertainty Count</td>
<td>7.7</td>
<td>13.5</td>
<td>10.2</td>
<td><strong>15.3</strong></td>
<td><strong>6.9</strong></td>
</tr>
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Source: Baker, Bloom and Davis analysis of FOMC Beige Books
VAR Estimated Industrial Production and Employment changes after a Policy Uncertainty Shock

Notes: This shows the impulse response function for Industrial Production and employment to an increase in the policy-related uncertainty index, equal to the rise in the increase from 2006 (the year before the current crisis) until 2011.

The central (black) solid line is the mean estimate while the dashed (red) outer lines are the one-standard-error bands.

Estimated using a monthly Cholesky Vector Auto Regression (VAR) of the uncertainty index, log(S&P 500 index), federal reserve funds rate, log employment, log industrial production and time trend. Data from 1985 to 2011.
Robustness to Different VAR Specifications

Months after the policy uncertainty shock

Notes: This shows the impulse response function for GDP and employment to an 124 unit increase in the policy-related uncertainty index. Estimated using a monthly Cholesky Vector Auto Regression (VAR) of the uncertainty index, log(S&P 500 index), federal reserve funds rate, log employment, log industrial production and time trend unless otherwise specified. Data from 1985 to 2011.
My view - based on data, surveys and business discussion - is that from 2008-2010 policy uncertainty was an effect of low growth, but from 2011 onwards is starting to cause low growth.

Policy Uncertainty: Is Now the Time?

- A common explanation for the economy’s disappointing performance in recent years is a rise in “policy uncertainty,” a term popularized by Nicholas Bloom of Stanford University and his co-authors. They suggest that the increase in their “US policy uncertainty index”—which is based on news searches, expiring tax provisions, and forecaster disagreement—has depressed real GDP by more than 3%.

- We do not doubt that uncertainty shocks depress economic activity, or that uncertainty has risen substantially since 2006. But we do not believe that the economy’s poor performance has been caused by an exogenous increase in US policy uncertainty.

- First, the observation that most forecasters have been surprised by the economy’s poor performance probably says more about the forecasters than about the economy. The historical record shows clearly that the bursting of a large asset price and debt bubble inflicts enormous and long-lasting damage on economic activity, and the US economy is no exception.
Recently extending the news data back to 1900 and see intriguingly a rise since the 1960s.

Notes: Index of Policy-Related Economic Uncertainty composed of quarterly news articles containing uncertain or uncertainty, economic or economy, and policy relevant terms (scaled by the smoothed total number of articles) in 5 newspapers (WP, BG, LAT, WSJ and CHT). Data normalized to 100 from 1900-2011.
One reason for rising policy uncertainty appears to be a rising Government share of the economy (Jan 1948 – Dec 2012)

Notes: Index of Policy-Related Economic Uncertainty composed of quarterly news articles containing uncertain or uncertainty, economic or economy, and policy relevant terms (scaled by the smoothed total number of articles) in 5 newspapers (WP, BG, LAT, WSJ and CHT). Data normalized to 100 from Jan 1900-Dec 2011. Government expenditure is total federal, state, and local expenditures over GDP, annually.
Another reason for rising policy uncertainty might be rising Government regulation.
Finally note that monthly & daily data is on-line

Data available at: www.policyuncertainty.com
Conclusion

- Appears policy uncertainty has risen since 2008

- Evidence suggests this may be holding-back the current recovery, although not definitive

- Also appears that policy uncertainty rising post 1960 alongside the expansion of government

Looking ahead I see policy uncertainty easing this year, but still well above pre-2008 levels given lack of long-term reform