Economic Policy Uncertainty in Ireland

Ryan Zalla

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Villanova School of Business
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**Importance:**

- Public information can have significant effects on the macroeconomy.
- Policymakers should know unintended consequences of political, fiscal, and monetary indecision.
- Uncertainty shocks are followed by changes in the stock market, interest rate, employment, and industrial production.
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Related Work:

- Knight (1921) – perception and reaction to uncertainty.
Innovations:

1. Create crucial measure of economic policy uncertainty unique to Ireland.
2. Develop enhanced web-scraping method using C# and Microsoft SQL Server.
3. Analyze significance of periods containing low uncertainty.
Further Contributions:

- Capture both high and low economic uncertainty events in Ireland (1985-2016).
- Irish Stock Exchange (ISEQ) demonstrates strictly negative behavior in response to an EPU shock.
- Considerable correlation with United States, United Kingdom, European, and Spanish EPU indices.
Constructing the Economic Policy Uncertainty (EPU) Index:

2. Select articles must contain keywords about the economy, uncertainty, and policy.
3. Standardize data to unit standard deviation; normalize to mean of 100.
4. Match behavior in EPU to specific events both domestic and international.
EPU Index for Ireland (1985-2016)
Vector Auto-regression (VAR):

$$A x_t = B_1 x_{t-1} + B_2 x_{t-2} + \ldots + B_p x_{t-p} + \Gamma Z_t + \epsilon_t$$

- $A$ and $B$ are matrices of coefficients.
- $\epsilon_t$ is a vector of unobservable zero mean white noise processes.
- $\Gamma Z_t$ gives the deterministic terms.
Figure 2: Impulse Response Functions
Conclusion

Remarks

✓ Results broadly consistent with economic theory.
✓ Demonstrates influence of public uncertainty on the economy.
✓ Reinforces integrity of textual analysis as macroeconometric tool.
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Future Study

• Incorporate more newspapers into the EPU index.
• House of Oireachtas’ session transcripts and Irish Central Bank’s Quarterly Bulletin.
• Generate implied volatility index for ISEQ.
• Substitute daily data for monthly data.
Search Terms

- Economy: “economic,” “economics,” “economy.”
- Uncertainty: “uncertain,” “uncertainty.”
VAR Data

- ISEQ index downloaded from CSO Ireland.
- Interest rate is ECB’s marginal lending rate obtained from the Statistical Data Warehouse.
- Employment is seasonally adjusted, total number of persons on live register from CSO Ireland.
- Industrial Production was sourced from the IMF’s International Financial Statistics database.
Figure 3: Data Used in VAR

EPU

ISEQ

Interest

Employment

Industrial Production
Figure 4: Differences of Data Used in VAR
Figure 5: AIC for Lag Lengths
Figure 6: VAR Residuals
Figure 7: Forecast Error Variance Decomposition
Figure 8: Forecast Error Variance Decomposition
Figure 9: Forecast Error Variance Decomposition
Figure 10: Forecast Error Variance Decomposition
Figure 11: Forecast Error Variance Decomposition