**Now-Casting Building Permits with Google Trends**

Coble, David and Pincheira, Pablo M., Now-Casting Building Permits with Google Trends (February 1, 2017). Available at SSRN: <https://ssrn.com/abstract=2910165> or [http://dx.doi.org/10.2139/ssrn.2910165](https://dx.doi.org/10.2139/ssrn.2910165)

A wide range of actors from the U.S. government to private construction enterprises utilize building permit data to forecast economic and infrastructural changes within certain geographical regions. Building permit data lags behind current trends by approx. 2 months. The researchers propose a forecasting model using up-to-date construction search terms from Google Trends in order to supplement the lagging permit indicator. Our forecasting model is also subject to this data lag and we could supplement our forecasting model with Google search terms as the researchers did here. The researchers see value in combining factors for forecasting, which they stop short of pursuing. In our project, we would combine Google Trend forecasting *for a specific region* with the corresponding permit data.

**Univariate and Multivariate Arima Versus Vector Autoregression Forecasting**

Bagshaw, Michael L., 1987. “Comparison of Univariate ARIMA, Multivariate ARIMA and Vector Autoregression Forecasting,” Federal Reserve Bank of Cleveland, Working Paper no. 86-02.

In this paper, Bagshaw compares the performance of 4 forecasting models: ARIMA, MARIMA, VAR, and BVAR on general economic data (EG unemployment rate and GNP). For this data, Bagshaw demonstrated that MARIMA generated the most accurate forecasts. In our project, we will use a time-series forecasting model and this paper serves as a foray into several popular models which we could implement and select the best on for final analyses. Bagshaw compares several models, but he does so all on the same data set. Our analysis expands on this shortcoming by implementing the same models on a different category of data – building permits.

**The Other Side of the Broken Window: A Methodology that Translates Building Permits into an Ecometric of Investment by Community Members**

O’Brien, D.T., Montgomery, B.W. The Other Side of the Broken Window: A Methodology that Translates Building Permits into an Ecometric of Investment by Community Members. *Am J Community Psychol* **55,** 25–36 (2015). https://doi.org/10.1007/s10464-014-9685-8

Most research concerning community health focus on assessing health by the levels of physical disorder in a neighborhood. A neighborhood with many broken windows signals a community in poor health. This paper proposes a methodology for assessing health based on infrastructural investment sourced from building permits. The researchers’ data is nearly the same as ours and they establish conventions and processing methodologies that we could use to prepare our data set. Given the nebulous nature of the subject, the researchers fail to establish a causal relationship between their indicators and community health. Our project is unlikely to establish one either, but we hope to add another perspective from which to view such a relationship.