



Apr 14th, 10:00 AM - 11:00 AM

# A Time-Series Analysis Of Two Decades in Peoria's Labor Market

Nick Kenaga

*Illinois Wesleyan University*

Diego Mendez-Carbajo, Faculty Advisor

*Illinois Wesleyan University*

Follow this and additional works at: <http://digitalcommons.iwu.edu/jwprc>

 Part of the [Economics Commons](#)

Kenaga, Nick and Mendez-Carbajo, Faculty Advisor, Diego, "A Time-Series Analysis Of Two Decades in Peoria's Labor Market" (2012). *John Wesley Powell Student Research Conference*. 3.

<http://digitalcommons.iwu.edu/jwprc/2012/oralpres5/3>

This Event is brought to you for free and open access by The Ames Library, the Andrew W. Mellon Center for Curricular and Faculty Development, the Office of the Provost and the Office of the President. It has been accepted for inclusion in Digital Commons @ IWU by the faculty at Illinois Wesleyan University. For more information, please contact [digitalcommons@iwu.edu](mailto:digitalcommons@iwu.edu).

©Copyright is owned by the author of this document.

Oral Presentation O5.3

**A TIME-SERIES ANALYSIS OF TWO DECADES IN PEORIA'S LABOR MARKET**

Nick Kenaga and Diego Mendez-Carbajo\*  
Economics Department, Illinois Wesleyan University

Over the past few decades, the U.S. unemployment rate in the manufacturing industry has steadily increased, particularly during recessions. In the Peoria Metropolitan Statistical Area (MSA), an area with a relatively high proportion of the population employed in the manufacturing industry, this is a particular concern. This study focuses on the monthly unemployment rate in the Peoria MSA between 1992 and 2011, with data collected from the Bureau of Labor Statistics, and compares it to national levels both overall and in the manufacturing industry. This statistical analysis establishes the presence of seasonal patterns and linear trends in the data. It also determines the order of integration of the series in order to fit an auto-regressive and moving-average (ARMA) model. Finally, it performs static and dynamic forecasting to project the series into the short-term future.