# Macroeconomic Indicator Forecasting with Deep Neural Networks

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## Abstract

*Economic policymaking relies upon accurate forecasts of economic conditions. Current methods for unconditional forecasting are dominated by inherently linear models that exhibit model dependence and have high data demands. We explore deep neural networks as an opportunity to improve upon forecast accurac y with limited data and while remaining agnostic as to functional form. We focus on predicting civilian unemployment using models based on four different neural network architectures. Each of these models outperforms benchmark models at short time horizons. One model, based on an Encoder Decoder architecture outperforms benchmark models at every forecast horizon (up to four quarters).*

*Keywords: C45- Neural Networks and Related Topics; C53 - Forecasting and Prediction Methods; C14 - Semiparametric and Nonparametric Methods: General.*