Curriculum Vitae

PERSONAL INFORMATION

Sanjay B Singh, PhD (Expected May,2023)
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EDUCATION

07/2018–06/2023	**Ph.D., Economics** Department of Economics,Texas Tech University, Texas, USA. **Dissertation Topic:** Three Essays in Economics: Evidence from the United States. **Dissertation Chair:** Prof. Rashid B Al-Hmoud
07/2016–05/2018	**M.A.(Economics)** Department of Economics, University of Houston, Texas, USA.
01/2012–02/2014	**M.Sc.(Statistics)** Karnataka State Open University , Mysore, India.
01/1999–01/2002	**M.A.(Economics)** Tribhuvan University, Kathmandu , Nepal.
07/1991–06/1993	**M.Sc.(Mathematics)** University of Delhi, Delhi, India.

RESEARCH INTEREST

Primary	Energy-Environmental Economics, Applied Time-Series Econometrics and Forecasting.
Secondary	Applied Macroeconomics and Finance.

RESEARCH EXPERIENCE

Dissertation Essay 1: Job Market Paper

Topic: "Impacts of Monetary Policy on Climate Change: Evidence from the US".

Abstract: Despite integrating climate change into the monetary policy of central banks across the globe, the impact of monetary policy on climate change needs further study. Therefore, this paper is an extension of the well-known TVP-VAR model used to investigate the impact of monetary policy on unemployment and inflation by Primiceri (2005). I extend his work by incorporating climate change in his TVP-VAR model, which allows the model to estimate the impulse responses of carbon emissions proxied for climate change to a one percent increase in interest rate. I have chosen TVP-VAR with or without stochastic volatility to discover

whether volatility in residuals plays a significant role in carbon emissions change. The model is based on the quarterly effective Fed funds rate, unemployment, inflation rate, and carbon emissions data obtained from the Fed, St. Louis, and US Energy Information Administration from Q1 1973 to Q1 2022. This paper mainly focuses on expansion and recession periods for the impulse response of emissions to a one percent increase in the US interest rate. An impulse response of US emissions to a one percent interest rate increase has negatively affected US emissions and decreases by 0.3833 percentage points after second quarter and unemployment after the third quarter in all three expansion and recession periods. The response of inflation to a one percent interest rate increase often hints at the existence of a price puzzle in line with Sims (1992) when using the VAR model. These results are verified through robustness tests replacing the interest rate with a three-month treasury bill rate. I also have replaced unemployment and inflation with gross private domestic investment and crude oil prices to verify the base model's results. Estimated results also show that volatility plays an almost negligible role while estimating. The results have implications for whether the Fed Bank system manipulates monetary policy to trade off between economic growth and carbon emissions.

Dissertation Essay 2

Topic: **"Does Monetary Policy Uncertainty interlink with Stock Returns of Renewable Energy ETFs? Evidence from the United States."**

Abstract: This paper examines the effects of monetary policy uncertainty on stock returns of renewable-energy exchange-traded funds in the US. For estimation, I apply a Bayesian structural VAR model using monthly data on MPU and stock returns of renewable-energy exchange-traded funds from August 2008 to October 2021. Estimated results show that positive shocks in monetary policy uncertainty decrease the stock returns of renewable-energy exchange-traded funds in the US. Furthermore, the impacts of a one-standard-deviation increase in monetary policy uncertainty on industrial production and inflation suggest that high unemployment caused by tight monetary policy in turn reduces economic activity. The findings indicate the empirical relevance of monetary policy uncertainty on the stock returns of renewable-energy funds, which can help policy makers achieve green investment goals during the low-uncertainty period in monetary policy in the US economy.

Dissertation Essay 3

Topic: **"Climate Policy Uncertainty and Renewable Energy Consumption: Evidence from the United States."**

Abstract: This paper studies the effects of climate policy uncertainty (CPU) on the US's renewable energy consumption (REC) growth at the aggregate and sectoral levels. I estimate a Bayesian vector autoregression (B-VAR) model using monthly CPU and renewable energy growth data from December 2000 to October 2021. Estimated results show that positive shocks in climate policy uncertainty increase the growth of renewable energy consumption in the US. However, the empirical

evidence about the uncertainty in climate policy has asymmetric effects at sectoral levels depending on whether sectors are substitutable between fossil fuel energy and renewable energy or not. In this scenario, the result shows that the negative effect on the transportation sector might be due to the lack of substitutability between fossil fuels and renewable energy in the US economy. The overall findings demarcate the empirical relevance of climate policy uncertainty on the dynamic growth of renewable energy consumption for the US economy.

Working Papers and Papers in Progress

Paper 1: "Revisiting the Dynamics of Stock Prices of Energy firms in the United States."

Paper 2: "The impacts of Global Warming on Energy Consumption in the United States."

Teaching Experience

Instructor - Texas Tech University

Summer, 2021 | Summer, 2022	Intermediate Macroeconomics (ECO: 3311)
Fall, 2019 | Spring, 2020 | Fall, 2020 | Summer, 2020.	Principles of Economics (ECO: 2305)
Spring, 2021 | Fall, 2021 | Spring, 2022 | Fall, 2022.	Principles of Macroeconomics (ECO: 2302)

Assistant Professor - Tribhuvan University

Spring, 2012 - Spring, 2016.	Adv. Macroeconomics, Mathematical, and Monetary Economics
Fall, 2005 - Fall,2011.	Adv. Microeconomics, and Quantitative Techniques,
Fall, 2003 - Spring,2005.	Quantitative Statistics for Psychology
Fall, 2018 - Spring,2019.	Teaching Assistant (Texas Tech University)
Fall, 2016 - Spring,2017	Teaching Assistant (University of Houston)

Research Experience

F/2022 - till date	Research Assistant for Prof. B.T.Ewing
	Center for Risk-Based Community Resilience Planning,
	A NIST-funded Center of Excellence,
	Colorado State University.
	"Analysis of Core Metrics for Resilience and Recovery".

Honors, Awards & Scholarships

2018 - 2019	Texas Tech Study Abroad Competitive Scholarship (SACS).

2018 - till date	Graduate Assistantship, Department of Economics, Texas Tech University.
2021 - 2022	Graduate Economics Student Travel Award, Department of Economics, Texas Tech University, Texas.
2022 - 2023	Dr. Rashid B. Al-Hmoud Scholarship in Economics, Texas Tech University, Texas.

PROGRAMMING SKILLS

Proficiency : STATA ; MS-Excel/Word; Eviews ; R and LaTeX.

Familiar : Matlab ; Dynare ; RATS ; and OxMetrics.

REFERENCE

1. Prof. Rashid B Al-Hmoud   (Dissertation Committee Chair)

Associate Professor and Chair

Department of Economics

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2. Prof. Misak G Avetisyan   (Committee Member)

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3. Dr. Julian F Ludwig   (Committee Member)

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