

# SHUOSHUO HOU

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## Education

<b>Ph.D. Candidate, Economics</b>	2014-present
Temple University	
Dissertation: “Essays on industries’ production network in macroeconomics”	
Expected Completion Date: August 2022	
<b>M.A., Economics</b>	2014
Temple University	
<b>B.S., Information &amp; Computing Science (with honors)</b>	2011
Shenyang Agricultural University, China	

## Research Interests

Primary Fields	Macroeconomics (Applied and Theory)
Secondary Fields	Industrial Organization, Financial Economics

## Job Market Paper

“*The Importance of Input-Output Network Structure in the U.S. Economy*”

Hulton’s Theorem argues that in the presence of input-output linkages, the impact of a sector-level shock on the aggregate economy is entirely captured by its size, regardless of its position in the production network. This paper proposes the idea that the production network in isolation represents an essential channel in shaping macroeconomic fluctuations in the United States. First, based on the data from the Bureau of Economic Analysis (BEA) input-output account, this paper shows that as the empirical production network is becoming sparser over the past five decades, namely, a majority of industries are dominated by a few central input suppliers, GDP growth tends to decline and is more volatile. Motivated by these facts, this paper embeds the input-output network into a multisector real business cycle model with constant elasticity of substitution (CES) technologies. In order to highlight the role of the input-output network, this paper characterizes sectoral total factor productivity (TFP) shocks’ impact on macroeconomic aggregates nonlinearly. Finally, this paper measures realized sector-level productivity shocks from the data, feeds them into the model, and observes that the calibrated model can quantitatively generate observed empirical patterns. Overall, this paper tests the role of the production network structure in deciding aggregate fluctuations and shows it to be empirically and quantitatively important.

## Research Papers

*“Do financial shocks drive real business cycle fluctuations in China?”*

This paper tests the extent to which the financial shocks, measured as the residuals of a firm’s enforcement constraint, are the main driving force of macroeconomic fluctuations in China during the financial crisis of 2007-2009. Specifically, to identify the origin of aggregate fluctuations, I employ a standard real business cycle model that allows financial asset trading between firms and households and imposes restrictions on firms’ credit constraints. As assumed in the model that payments to labor need to be made before the realization of revenues, firms might need to raise funds with intra-period loans to fill liquidity shortages in between two periods. However, during recessions, firms can neither obtain enough indirect finance from banks nor convert capital assets into liquidity within a short time horizon. As a result, firms have to cut budget constraints by laying off workers. To calibrate key parameters fitting characteristics in China’s economy, I combine macroeconomic data from the National Bureau of Statistics of China (NBS) and financial data in the China Stock Market & Accounting Research (CSMAR) database. Then, I solve systematic equations of the dynamic stochastic general equilibrium (DSGE) model analytically and quantitatively with DYNARE. This paper finds that financial shocks can explain about 66% of GDP fluctuations during the 2007-2009 recession. Therefore, this paper concludes that financial frictions are the main driving force of macroeconomic fluctuations in China through the real economic factor, labor.

*“The impact of service outsourcing on labor productivity”* (work in progress)

This paper investigates the impact of service outsourcing on sectoral labor productivity in the U.S. over the period 1963-2019. I observe that service-related sectors have substantially increased their central positions as input suppliers in the U.S. economy, and it is where most of the service outsourcing activity is concentrated. Outsourcing refers to a situation where firms or industries contract out particular types of jobs, such as accounting, data analyzing, and cleaning, to specialized companies rather than produce them in-house. Moreover, I determine a significant positive relationship between movements in employment in service sectors and changes in their inputs supplied. The fact implies that this structural transformation induces the reallocation of employment across industries. Therefore, it might also influence sectoral (or service) labor productivity. To account for these sectoral movements, I incorporate the input-output network into a multisector real business cycle model to quantitatively gauge the changes in the composition of intermediate inputs and their sourcing mode to labor productivity.

## Teaching Experience

**Instructor**, Temple University

Econ 1101 Macroeconomic Principles Spring 2021, Fall/Spring 2020, Summer 2017-2019

Econ 1102 Microeconomic Principles Spring 2020

Econ 3502 Intermediate Macroeconomic Analysis Summer 2016

**Teaching Assistant**, Temple University

Fall 2021, Fall/Spring 2014-2017

Econ 1101 Macroeconomic Principles Professor Michael Leeds/Professor Moritz Ritter

Econ 1102 Microeconomic Principles Professor Shreyasee Das/Professor George Lady

Econ 3502 Intermediate Macroeconomic Analysis Professor Yuan Yuan

Econ 3563 International Trade Professor Brenden Mason

Econ 3564 International Monetary Economics Professor Yuan Yuan

## Conferences and Seminars

### As a Presenter

“*The Importance of the Input-Output Network Structure in the U.S. Economy*”: the VIII Permanent Workshop of SHAIIO, University of León 2021 (scheduled), International Input-Output Association (IIOA) Online Development Programme 2021, Pennsylvania Economic Association Annual Conference, Misericordia University 2021

### As a Discussant

Pennsylvania Economic Association Annual Conference, Misericordia University 2021: “*Crime Rate Convergence in Pennsylvania Counties: A Spatial Examination Using Panel Data*” (By Jozefowicz, Habacivch, and Redilla)

## Awards and Honors

**Teaching & Research Assistantship**, Temple University, 2014-2021

**National Scholarship (top 1%)**, Shenyang Agricultural University, 2011

**University Scholarship (top 5%)**, Shenyang Agricultural University, 2007-2010

## Software

Advanced: MATLAB, DYNARE, STATA, L<sup>A</sup>T<sub>E</sub>X

Intermediate: R, SAS, GEPHI

## Other

Languages: Chinese-Mandarin (native), English (fluent)

Nationality: China (F-1 visa)

## References

Professor [Pedro Silos](#) (Chair)  
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