

# Peter Devine

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TS/SCI

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## PROFESSIONAL

- 2023 - present** *Fellow, National Economic Council, The White House* Washington, DC
- In charge of optimizing Ukraine's economic recovery and growth coordinating with Treasury, State, MNDBs and INTECON to guarantee its long-term security. I was point for the US maritime industry emphasizing submarine and UUV industries, naval force structure, and industrial capacity. I headed NEC's defense industrial organization efforts addressing market structure, coordinated with DOD, NSC, and the interagency. I ran NEC's analysis and interagency coordination on US industrial, trade, and counter-geo-economic coercion strategies. I assisted with the White House's CHIPS Act coordination and economic analysis. I helped the NEC monitor the US economy and economic messaging. I led NEC and CEA modeling of China's economy, quantifying current and future US economic exposure in all channels including new and emerging industries.
- 2022 - 2023** *Lecturer, Duke University, Kyiv School of Economics* Durham, NC, Kyiv, Ukraine
- Taught courses in the Duke economics department, KSE, and a master's course in the Sanford School of Public Policy on utilizing alternative data sources and complementary models to estimate economic data during wartime invasions and using those proxy results to assess consequences to disequilibria in labor markets, defense industries, growth, and inflationary pressure. Monitored the Russian economy at the micro and macro levels for KSE using aggregated data such as satellite nightlights to estimate the level of economic activity in Russia, independent of government statements. Taught methods include data analysis, machine learning, and econometrics.
- 2018 – 2021** *Master Instructor, Economics, United States Naval Academy* Annapolis, MD
- Applied game and network theory to evaluate strategic coalitions and conflict in the context of trade, finance, development, environmental factors, and conflict indicators to improve U.S. foreign and geo-economic policy. Taught courses in macroeconomics, econometrics and statistics, as well as logic and rhetoric. Developed a graduate course in game theory and geopolitics.
- 2018 – 2020** *Economist, The World Bank* Washington, DC
- Worked on the Blue Economy Project, advising small developing nations on managing their coastal resources and debt loads while improving competitiveness, income per capita, and reducing environmental impact. I compiled and analyzed country economic indicators and data to develop new policy proposals to grow economies.
- 2017 – 2019** *Speechwriter, United States Naval Academy* Annapolis, MD
- Wrote congressional testimony, articles, and policy speeches for the Superintendent of the United States Naval Academy for his engagements with senior U.S. government officials, foreign heads of state, and policy conferences. Responsible for developing the content for speeches, outlining current and future naval strategies.
- 2014– 2017** *Strike Fighter Pilot, United States Navy* Atsugi, Japan
- Forward-deployed F/A-18F Super Hornet pilot to the Indo-Pacific. 4 carrier deployments and multiple shore detachments, providing air support to U.S. naval and land forces via intercepts and combat air patrols. Conducted intelligence-gathering missions on foreign adversaries and illicit sea traffic around the Philippines, Indonesia, Vietnam, and terraformed military installations on South China Sea shoals and reefs. Provided armed overwatch in the Sea of Japan and the Yellow Sea, near-shore to both China and North Korea during heightened tensions in 2017. Over 1000 flight hours developing new integrated fighter tactics with USAF and allies, including 6 major exercises.
- 2011 – 2014** *Pilot, F/A-18 Pilot Pipeline, United States Navy* Multiple Duty Stations
- Student Naval Aviator (Pilot). Graduated first-in-class in F/A-18 Super Hornet training, ranked first in air-to-air combat, air-to-ground attack, and overall. Excelled in close air support of special ground forces, completed Priority-A carrier qualification for both day and night, and deployed directly from flight training to a frontline squadron.

## EDUCATION

George Washington University, Washington, DC, **Ph.D. Economics**, 2023

Duke University, Durham, NC, **M.A. Economics**, 2010

University of Notre Dame, South Bend, IN, **B.A. Economics**, 2009

Trinity College, Dublin, Ireland, *Faculties of Economics and Physics*, 2007-2008

## SELECTED PRESENTATIONS AND AWARDS

Council on Foreign Relations. “An Economic Strategy for Post-Invasion Ukraine.” 2024.

University of California, Berkeley. “Economic Statecraft and War.” 2023.

Kyiv School of Economics. “Conflict Prediction, Empirical Methods.” 2022.

University of Toronto. “Applied Economics in Foreign Policy.” 2021.

Sophia University, Tokyo, Japan. “Marking Territory.” 2016.

The World Bank. “Modeling the Spread of Ethnic Conflict.” 2016.

International Affairs Fellow – Council on Foreign Relations 2023-2024.

Centurion – USS Ronald Reagan (Forward Deployed) 2016.

Top 5 Nugget – Carrier Air Wing FIVE (Forward Deployed) 2015.

Top Stick – Strike Fighter Squadron ONE ZERO SIX graduating class 2014.

## ACADEMIC PUBLICATIONS

“**Alliance Formation in a Multipolar World.**” (with Sumit Joshi and Ahmed Saber) *Journal of Economic Behavior and Organization*. 2024.

We propose a multilayer network approach to alliance formation. In a signed affinity layer, agents are partitioned into clusters, with friendly relations within and hostile connections across clusters. Agents then form defensive collaborations in an alliance layer as follows: Agents in the same cluster form a nested split graph with degree inversely correlated to the level of hostility, and agents from disparate clusters with high-degree and low-hostility for cliques. Within cliques, agents from a cluster that is “intermediate” in terms of discord serve as a bridge to interconnect agents from more “extreme” clusters.

“**Blue Economy and Environmental Resiliency.**” (with Charlotte De Fontaubert and Nicolas Desramaut) *The World Bank Country Economic Memorandum for Sao Tome and Principe*. Washington, DC, June 2019.

Oceans are an important source of wealth, at least 3 to 5 percent of global GDP is derived from the oceans, but their overall health is reaching a tipping point. Close to a third of fish stocks are fully fished or overfished, climate change is impacting coastal and marine ecosystems through a variety of vectors, unbridled development in the coastal zone is causing erosion, widespread desalination in semi enclosed seas is threatening fauna and flora alike, and marine pollution, particularly from land-based sources is reaching such a proportion that its impacts cannot even be accurately measured. Millions depend on healthy oceans for jobs, nutrition, economic growth, and climate regulation. Central to the Blue Economy approach is the recognition that social benefits should be maximized over the long-term, ensuring that the economic drivers that result from the sustainable use of ocean resources are maintained. It is also known that business as usual in the different economic sectors associated with coastal and marine ecosystems will have great environmental and social impacts.

ADDITIONAL  
PUBLICATIONS

**“Washington is divided into two separate hemispheres: defense and economics; both will gain if they can work together.”** *Briefing Book*, October 7<sup>th</sup>, 2024.

**“China Is Sweeping Up Pacific Island Allies: Here’s how Washington can fight back.”** (with Jim Kolbe) Argument. *Foreign Policy*, July 1st, 2022.

**“Strategic Ambiguity Isn’t Working to Deter China on Taiwan”** *Just Security*, September 1st, 2022.

**“Oh Charlie Brown... Insights on North Korea.”** Opinion. *Foreign Policy Association Blogs*, June 18th, 2018.

**“To Preserve Democracy, Require All Americans to Vote.”** Opinion. *Times of San Diego*, March 20th, 2018.

**“WAR GAMES: Military Strategy and Economic Game Theory.”** *Student Economic Review* (22):23-30. Trinity Publications, Trinity College, Dublin, 2008.

RESEARCH  
PAPERS

**“Conflict Heterogeneity: What Matters Most?”** (with Charles Becker, Harun Dogo, and Elizabeth Margolin) Under Peer Review. 2024.

We develop a general method to heterogeneously classify conflict in economic experiments. Current literature treats conflict as unidimensional occurrences. However, conflict is inherently heterogeneous, and any robust analysis needs a more causal structure. In the 1992-95 war in Bosnia and Herzegovina each group had different endowments, constraints, driving different tactics and objectives that evolved over time. We deconstruct each battle in the conflict into its constituent characteristics then use its principal components to identify archetypes. Running prediction models on the archetypes shows substantial increases in statistical significance and demonstrates that exogenous predictors are not uniformly positive or negative across types.

**“Start Up or Sell Out: Modeling High Tech Start Up Market Entry Decisions as Network Formation Failures through Private Information.”** Dissertation Chapter. 2022

This paper attempts to understand how firms are born, vertically integrate, and splinter into new firms in high-innovation sectors. I present a theory of start-up firms that endogenizes market entry using sequential bidirectional signaling games of private information. When a selling agent offers its idea for a contract to a buyer, they reveal some portion of their private information. Similarly in negotiations the buyer reveals some of its private information driving seller beliefs about their joint probability of success. Additionally, the selling agent knows whether it will accept or reject and so has a market information advantage over the buyer leading to sellers to defect, with some statistical certainty, forming new start-up firms. Agents merge becoming firms and continue to vertically integrate in order to increase their joint probability of market success by adding agents in exchange for contracts. This repeats until any agent in the sequence recognizes their amassed knowledge or novel idea has an expected success greater than the expected value of the contract and defects, creating a new start-up. This novel analysis allows for an endogenous model of market equilibrium number of firms and its relationship with the business cycle.

**“How Ukraine Gained Allies: Modeling Political Systems as Changes in Variance in Conflict Games.”** Dissertation Chapter. 2022.

Ukraine gained allies during Russia’s invasion because each ally could credibly signal its level of commitment, collectively building a stable alliance. I model conflict as a two stage game where outcomes pivot on the ability to build a stable alliance rather than a state’s individual strength. Recognizing that different political systems have different abilities to signal private information, I treat each state’s level of commitment as a random variable with allies forming beliefs with distinct distributions and shrinking variances depending on the type of governance. I show that, unlike in two player zero-sum games, democratic governments have an advantage in a networked conflict game because they can shrink the variance of allies’ beliefs through signaling. The war in Ukraine shows that a neighborhood of democratic states can credibly signal their reliability, turning a head-to head disadvantage into a multilateral coordinating advantage.

**“Endogenous Formation of Strategic Networks in Geopolitical Games with Private Information.”** Dissertation Chapter. 2022

I examine the endogenous formation of alliance networks in conflict games with private information about types where outcomes pivot on the ability to build a stable coalition rather than individual strength. This paper develops a multi-stage game where conflict is entered via a hawk-dove game between an aggressive state and a target state that subsequently attempts to form a defensive coalition by a simultaneous contribution game. The coalition is developed pre-conflict through a network formation game where states invest in diplomatic, economic, and military links focusing on Katz-Bonacich centrality, but links are not secure until conflict ensues allowing coalition members to renege on peacetime statements. Private information about link reliability determines stable equilibria and dominates individual military strength in two ways. First, beliefs about other states’ type counter-intuitively allows weaker states draw larger defensive coalitions, i.e. a rally effect. Second, looking ahead, nations maneuver pre-conflict to increase or decrease their network centrality based on two axis: their specific costs of fighting and their relative vulnerability. These results explain dynamics of alliances like NATO and the EU and their level of support for Ukraine, and maneuvering for coalitions in Asia.

**RESEARCH IN  
PROGRESS**

**“Determining the Effects of Endogenous Time Breaks, Economic Nightlight Activity, and Attacker Defender Dyads on Heterogeneous Conflict Types”** (with Charles Becker and Stephanie Dodd)

**“Maximizing Post-Conflict Economic Recovery: Empirical Evidence from Ukraine”** (with Charles Becker and Stephanie Dodd)

**“A Network Approach to Economic Growth”** (with Roberto Samaniego)