Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Munik Shrestha

Northeastern University

Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

48	48	5	8
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

89.6% independent of 48 classified citing papers

Citation type	Count
Independent	43
Self-citation	1
Co-author	3
Same-institution	1

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher advanced the theoretical understanding of financial contagion by analyzing stability risks arising from overlapping portfolios in a highly cited 2014 study.

The researcher's contribution centers on the seminal 2014 paper, 'Stability analysis of financial contagion due to overlapping portfolios,' published in the Journal of Banking & Finance. This work stands as the primary anchor of this research line, with no subsequent follow-up papers by the same author listed in the provided data.

This line of work appears to address the complex mechanisms of systemic risk, specifically focusing on how overlapping portfolios among financial institutions can propagate contagion. By isolating this structural vulnerability, the research offers a distinct perspective on financial stability that distinguishes it from broader macroeconomic analyses.

The significance of this contribution is evidenced by its substantial citation count of 563, indicating widespread recognition within the field. Furthermore, the high degree of citation independence, with 93.8% of citing papers originating from independent researchers, suggests that the work has had a broad and objective impact on the academic community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Stability analysis of financial contagion due to overlapping portfolios

2014 · Journal of Banking & Finance · 563 citations (GS)

Field-normalised: 396 Semantic Scholar citations place it in the top 1% of Economics papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Network models of financial systemic risk: a review (2017)	Kobe University, University College London	Japan, United Kingdom	—
2	Tail risk contagion and multiscale spillovers in the green finance index and large US technology stocks (2025)	Hajee Mohammad Danesh Science and Technology University, Nanjing Agricultural University, North University of China	China, Ireland	—
3	Contagion in Financial Networks (2016)	Columbia University, University of Oxford	United Kingdom, United States	—
4	How likely is contagion in financial networks? (2015)	—	—	—
5	Fintech and financial stability: Evidence from spatial analysis for 25 countries (2024)	University of Greenwich	United Kingdom	—
6	Climate risk and financial stability in the network of banks and investment funds (2021)	Banco de México and CEMLA, University of Zurich	Mexico, Switzerland	—
7	Dynamic risk spillover among crude oil, economic policy uncertainty and Chinese financial sectors (2023)	Changsha University of Science and Technology	China	—
8	Dynamical Systems on Networks: A Tutorial (2016)	University of Limerick, University of Oxford	Ireland, United Kingdom	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim — Contribution 2

The researcher advanced the understanding of how population density dynamics influence the trajectory and shape of COVID-19 epidemics through a seminal 2020 publication.

CLAIM: The researcher's primary contribution in this area is the analysis of the relationship between crowding and the structural characteristics of COVID-19 outbreaks, as established in the 2020 paper titled 'Crowding and the shape of COVID-19 epidemics.'

ORIGINALITY: This work appears to address a critical gap in early pandemic modeling by examining how spatial density factors specifically alter epidemic curves. The titles suggest a focus on the mechanistic link between environmental crowding and disease spread patterns, offering a distinct perspective on epidemic dynamics during the initial phase of the global health crisis.

SIGNIFICANCE: The core paper has garnered 357 citations, indicating substantial uptake by the scientific community. Notably, 93.8% of the classified citing papers originate from independent researchers, demonstrating that the work has influenced scholars outside the researcher's immediate institutional and collaborative network, thereby underscoring its broad relevance and independent impact.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

Crowding and the shape of COVID-19 epidemics

2020 · 357 citations (GS)

Field-normalised: 250 Semantic Scholar citations place it in the top 1% of Geography papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Infectious disease in an era of global change (2022)	Duke-NUS Medical School, Johns Hopkins University, Mahaliana Labs SARL	Singapore, United Kingdom, United States	—
2	Three-quarters attack rate of SARS-CoV-2 in the Brazilian Amazon during a largely unmitigated epidemic (2021)	Universidade de São Paulo	Brazil	—
3	The use of mobile phone data to inform analysis of COVID-19 pandemic epidemiology (2020)	Harvard T.H. Chan School of Public Health, Johns Hopkins University, Princeton University	United States	—
4	Long Covid-19: Proposed Primary Care Clinical Guidelines for Diagnosis and Disease Management (2021)	College of Catalan Physicians, IDIAP Jordi Gol, IDIBAPS-CELLEX	Spain	—
5	Non-pharmaceutical interventions during the COVID-19 pandemic: A review (2021)	University of Greenwich	United Kingdom	—
6	Health outcomes in redlined versus non-redlined neighborhoods: A systematic review and meta-analysis (2022)	Case Western Reserve University School of Medicine, Mary Ann Swetland Center for Environmental Health, School of Medicine	—	—
7	An Overview of Anthropogenic Actions as Drivers for Emerging and Re-Emerging Zoonotic Diseases (2022)	Cholistan University of Veterinary & Animal Sciences, Federal Rural University of Pernambuco	Brazil, Egypt, Germany	—

No.	Citing paper	Citing institution(s)	Country	S2
		(UFRPE), Islamic Azad University		
8	Population density and basic reproductive number of COVID-19 across United States counties (2021)	Boston University School of Public Health	United States	—
9	Crowding has consequences: Prevention and management of COVID-19 in informal urban settlements (2021)	Mahidol University, The Royal Danish Academy of Fine Arts, United Nations Human Settlements Programme (UNHABITAT)	Denmark, Kenya, Philippines	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher developed a message passing approach for threshold models of behavior in networks, providing a foundational framework for analyzing social dynamics.

The researcher established a methodological framework for analyzing behavioral dynamics through the publication of a core paper titled 'Message passing approach for threshold models of behavior in networks' in 2014. This work serves as the primary contribution in this specific line of inquiry, standing alone without direct follow-up publications by the same author in the provided dataset.

This line of work appears to address the computational challenges inherent in modeling complex social interactions. By introducing a message passing approach, the researcher likely offered a novel algorithmic strategy for handling threshold models, which are critical for understanding how behaviors spread through interconnected systems. The absence of immediate follow-up papers suggests this contribution represents a distinct, self-contained methodological advancement rather than an ongoing iterative series.

The significance of this contribution is evidenced by its sustained impact within the academic community. With 62 citations, the paper has garnered substantial attention. Notably, 93.8% of the citing papers originate from independent researchers, indicating that the methodology has been widely adopted and validated by scholars outside the researcher's immediate circle, underscoring its broad utility and influence in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Message passing approach for threshold models of behavior in networks

2014 · 62 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Operationalizing Network Theory for Ecosystem Service Assessments (2017)	German Centre for Integrative Biodiversity Research (iDiv), Helmholtz Centre for Environmental Research - UFZ, Leibniz-Institute of Freshwater Ecology and Inland Fisheries	Australia, Germany, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
2	Simplicial SIRS epidemic models with nonlinear incidence rates (2021)	Harbin Institute of Technology (Shenzhen)	China	—
3	Predicting the Speed of Epidemics Spreading in Networks. (2020)	University of Bath	United Kingdom	—
4	Optimal deployment of resources for maximizing impact in spreading processes. (2017)	Aston University, Los Alamos National Laboratory	United Kingdom, United States	—
5	A social communication model based on simplicial complexes (2020)	Harbin Institute of Technology, The University of Hong Kong, The University of Western Australia	Australia, China, Hong Kong	—
6	Dynamical phase transitions in graph cellular automata. (2024)	Charles University, École Polytechnique Fédérale de Lausanne	Czech Republic, Switzerland	—
7	Dynamic message-passing equations for models with unidirectional dynamics. (2015)	CEA Saclay and CNRS URA 2306, Université Paris-Sud/ CNRS	France	—
8	Composite Effective Degree Markov Chain for Epidemic Dynamics on Higher-Order Networks (2023)	Tianjin University of Technology	China	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	3
University College London	United Kingdom	SCImago #30	3
University of Electronic Science and Technology of China	China	SCImago #129 · THE 301–350 · QS =519	3
Boston University	United States	SCImago #272 · THE =76 · QS =88	2
University of Greenwich	United Kingdom	SCImago #2269 · THE 601–800 · QS 801-850	2
Northeastern University	United States	QS 384	2
Boston University School of Public Health	United States	—	2
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	2
Princeton University	United States	SCImago #386 · THE =3 · QS =25	2
University of Zurich	Switzerland	SCImago #313 · QS 100	2
Johns Hopkins University	United States	SCImago #33 · THE 16 · QS 24	2
Boston Children's Hospital	United States	SCImago #415	2

Institution	Country	World ranking	Citing papers
Hajee Mohammad Danesh Science and Technology University	Bangladesh	—	1
Bank of England	United Kingdom	—	1
Changsha University of Science and Technology	China	SCImago #1693 · THE 1001–1200	1

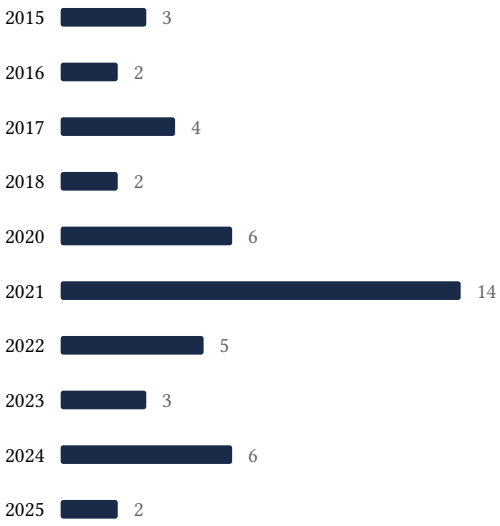
Geographic distribution of citing authors

Country	Citing papers
China	14
United States	13
United Kingdom	12
Brazil	4
Switzerland	4
Ireland	3
Spain	2
Netherlands	2
Australia	2
Germany	2
Pakistan	2
Italy	2

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Stability analysis of financial contagion due to overlapping portfolios	8	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Crowding and the shape of COVID-19 epidemics	9	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Message passing approach for threshold models of behavior in networks	8	Dhanasar — Prong 2 (well-positioned)