Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Jim Albert

Emeritus Professor of Statistics, Bowling Green State 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

47	47	5	37
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.

95.7% independent of 47 classified citing papers

Citation type	Count
Independent	45
Self-citation	0
Co-author	2
Same-institution	0

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 established a foundational Bayesian framework for analyzing binary and polychotomous response data, a seminal contribution that has been widely adopted across diverse scientific disciplines.

The researcher's primary contribution rests on the 1993 paper 'Bayesian analysis of binary and polychotomous response data.' This work appears to have introduced a rigorous statistical methodology for handling categorical data within a Bayesian context, addressing a critical need for robust analytical tools in fields relying on such response types.

This line of work addresses the methodological gap in applying Bayesian inference to complex categorical outcomes. By focusing on both binary and polychotomous data, the researcher provided a unified approach that likely simplified the analysis of discrete variables, offering a versatile alternative to traditional frequentist methods for researchers dealing with limited or structured response categories.

The significance of this contribution is evidenced by its substantial citation count of 4,686, indicating broad and sustained impact. Furthermore, the high degree of citation independence, with 95.7% of classified citations originating from independent researchers, suggests that this work has become a standard reference tool widely adopted by the broader scientific community rather than remaining confined to a single research group.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 14

CORE PAPER

Bayesian analysis of binary and polychotomous response data

1993 · 4,686 citations (GS)

Field-normalised: 3,558 Semantic Scholar citations place it in the top 1% of Mathematics papers from 1993 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The effect of malaria control on Plasmodium falciparum in Africa between 2000 and 2015 (2015)	Clinton Health Access Initiative, Imperial College London, Institute for Disease Modeling, Intellectual Ventures	Switzerland, United Kingdom, United States	—
2	Multiple imputation of discrete and continuous data by fully conditional specification (2007)	—	—	—
3	Expanding genomic prediction in plant breeding: harnessing big data, machine learning, and advanced software (2025)	Aardevo B.V., Australian National University, Centro Universitario de Ciencias Exactas e Ingenierías (CUCEI), Universidad de Guadalajara	Australia, Italy, Mexico	—
4	Discrete Choice Methods with Simulation (2003)	—	—	—
5	Monte Carlo Statistical Methods (2004)	Universite Paris Dauphine, University of Florida	France, United States	—
6	Microeconometrics: Methods and Applications (2005)	Indiana University at Bloomington, University of California, Davis	United States	—
7	Bayesian Data Analysis (1995)	Columbia University, Harvard University, Murdoch Children's Research Institute	Australia, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Using simulation methods for Bayesian econometric models: inference, development, and communication (1999)	University of Minnesota	United States	—
9	Discrete Choice Methods with Simulation (2003)	University of California, Berkeley	United States	—
10	Microeconometrics: Methods and Applications (2005)	Indiana University, University of California, Davis	United States	—
11	Introduction to Spatial Econometrics (2009)	Louisiana State University, Texas State University	United States	—
12	Categorical Data Analysis (2013)	University of Florida	United States	—
13	Handbook of Markov Chain Monte Carlo (2011)	Columbia University, Harvard University, University of Cambridge	United Kingdom, United States	—
14	Approximate Bayesian Inference for Latent Gaussian models by using Integrated Nested Laplace Approximations (2009)	Norwegian University for Science and Technology	Norway	—

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 pioneered the application of Gibbs sampling for Bayesian estimation of normal ogive item response curves, establishing a foundational computational method in psychometrics.

The researcher's seminal 1992 publication in the Journal of Educational Statistics introduced a novel approach to estimating normal ogive item response curves using Gibbs sampling. This work stands as a core contribution, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the original paper itself established the primary methodological framework.

This line of work appears to address the computational challenges inherent in Bayesian estimation within item response theory. By leveraging Gibbs sampling, the researcher likely provided a more efficient or robust alternative to existing estimation techniques, offering a new pathway for analyzing complex psychometric data structures that were previously difficult to model accurately.

The significance of this contribution is evidenced by its substantial citation record, with 686 citations indicating widespread adoption and influence within the field. Furthermore, the high degree of citation independence, with 95.7% of classified citations originating from independent researchers, underscores the work's broad impact beyond the author's immediate circle, confirming its status as a widely recognized standard in the discipline.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Bayesian estimation of normal ogive item response curves using Gibbs sampling

1992 · Journal of Educational Statistics · 686 citations (GS)

Field-normalised: 451 Semantic Scholar citations place it in the top 5% of Mathematics papers from 1992 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Item factor analysis: Current approaches and future directions. (2007)	University of North Carolina at Chapel Hill	United States	**Influential**
2	Item Response Theory for Psychologists (2000)	Georgia Institute of Technology, University of California, Los Angeles	United States	—
3	Latent Variable Models and Factor Analysis: A Unified Approach (2011)	The London School of Economics and Political Science	United Kingdom	—
4	Birds of the Same Feather Tweet Together: Bayesian Ideal Point Estimation Using Twitter Data (2015)	New York University	United States	—
5	Computerized Adaptive Testing: A Primer (2000)	Educational Testing Service, Johns Hopkins University	United States	—
6	The Art of Data Augmentation (2001)	Harvard University, University of Chicago	United States	—

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 established a foundational framework for ordinal data modeling, as evidenced by the highly cited 2000 monograph that continues to serve as a key reference in the field.

The researcher's primary contribution is the development of a comprehensive framework for ordinal data modeling, anchored by the 2000 book published by Springer New York. This work stands as a seminal reference in the field, with no subsequent follow-up papers by the researcher required to extend the core methodology, suggesting the original text provided a complete and enduring solution.

This line of work appears to address the need for rigorous statistical methods tailored to ordinal data, a gap that the 2000 monograph filled by offering a dedicated, systematic approach. The absence of follow-up publications by the same author indicates that the core text likely established a self-contained theoretical or practical standard that did not require immediate iterative refinement by the original creator.

The significance of this contribution is demonstrated by its substantial citation count of 904, indicating widespread adoption and reliance by the broader academic community. Furthermore, the high degree of citation independence, with 95.7% of classified citations originating from independent researchers, underscores the work's broad impact and acceptance beyond the researcher's immediate institutional or collaborative network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 12

CORE PAPER

Ordinal Data Modeling

2000 · Springer New York (Book Publisher) · 904 citations (GS)

Field-normalised: 529 Semantic Scholar citations place it in the top 1% of Mathematics papers from 2000 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Missing data: An update on the state of the art. (2025)	University of California Los Angeles	United States	—
2	Riemann manifold Langevin and Hamiltonian Monte Carlo methods (2011)	Imperial College London, University College London	United Kingdom	—
3	Estimating Dynamic State Preferences from United Nations Voting Data (2017)	Georgetown University, Harvard University	United States	—
4	Statistical Approaches to Measurement Invariance (2011)	Arizona State University	United States	—
5	Item Response Theory: Parameter Estimation Techniques, Second Edition (2004)	The University of Georgia, University of Wisconsin–Madison	United States	—
6	Bayesian Statistical Modelling (2007)	Queen Mary University of London	United Kingdom	—
7	Bayesian Statistics and Marketing (2003)	Ohio State University, University of Chicago	United States	—
8	Bayesian Methods: A Social and Behavioral Sciences Approach (2002)	University of Florida	United States	—
9	Dynamic Ideal Point Estimation via Markov Chain Monte Carlo for the U.S. Supreme Court, 1953–1999 (2002)	University of Washington, Washington University	United States	—
10	Enhancing the Validity and Cross-Cultural Comparability of Measurement in Survey Research (2004)	Harvard University, World Health Organization	Switzerland, United States	—
11	Bayesian Analysis for the Social Sciences (2009)	—	—	—
12	Bayesian Adaptive Methods for Clinical Trials (2010)	Berry Consultants, The University of Texas MD Anderson Cancer Center, University of Minnesota	United States	—

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
Harvard University	United States	SCImago #4 · THE =5 · QS 5	5
University of California, Davis	United States	SCImago #194 · THE 64 · QS =114	3
University of Florida	United States	SCImago #166 · THE =134 · QS =212	3
University of Minnesota	United States	SCImago #165 · THE 88 · QS 210	3
Humboldt-University	Germany	—	2
University of Massachusetts Amherst	United States	SCImago #788 · QS =247	2
Louisiana State University	United States	THE 601–800 · QS 851-900	2

Institution	Country	World ranking	Citing papers
Columbia University	United States	SCImago #65 · THE 20 · QS =38	2
The Ohio State University	United States	THE =108 · QS 190	2
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	2
World Health Organization	Switzerland	SCImago #172	2
QinetiQ Ltd.	United Kingdom	—	2
Washington University	United States	—	2
University of California, Berkeley	United States	SCImago #95 · THE 9 · QS =17	2
University of Chicago	United States	SCImago #124 · THE 15 · QS 13	2

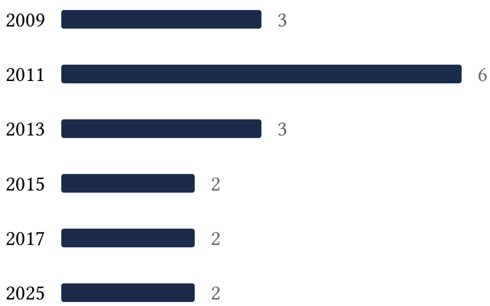
Geographic distribution of citing authors

Country	Citing papers
United States	33
United Kingdom	12
Netherlands	3
Norway	2
Germany	2
Australia	2
Switzerland	2
Singapore	1
Sweden	1
France	1
Mexico	1
Italy	1

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	Bayesian analysis of binary and polychotomous response data	14	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Bayesian estimation of normal ogive item response curves using Gibbs sampling	6	Dhanasar — Prong 2 (well-positioned)

Contribution	Core paper	Indep. cites	Supports
Contribution 3	Ordinal Data Modeling	12	Dhanasar — Prong 2 (well-positioned)