

Neglect Of 'Theory' In Quantitative Research Method In International Relations

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Introduction

Quantitative research has become indispensable in International Relations because it allows scholars to compare large numbers of cases, estimate relationships, evaluate uncertainty, and test claims about war, trade, alliances, sanctions, institutions, and political behavior. Yet statistical sophistication does not remove the need for theory. A model can identify an association without explaining why it exists, what the variables represent, or under which conditions the relationship should change. John Mearsheimer and Stephen Walt's critique of "simplistic hypothesis testing" addresses this problem. Their concern is not that numerical analysis should be abandoned but that some quantitative work gives greater attention to significance tests and available datasets than to causal mechanisms and broader explanations of world politics (Mearsheimer & Walt, 2013). The strongest response is therefore not a choice between theory and method. International Relations research improves when theoretical reasoning defines concepts and mechanisms, while quantitative design disciplines those claims with systematic evidence. Theory identifies what should matter; method determines how confidently the proposed relationship can be supported.

What Theory Contributes

Theory does more than produce a prediction that one variable will correlate with another. It defines the actors and structures considered important, explains the mechanism connecting cause and outcome, establishes scope conditions, and identifies evidence that could challenge the argument. A study of alliance formation, for example, should explain why leaders perceive threats, how they evaluate potential partners, and when balancing, neutrality, or another strategy becomes plausible. Theory also shapes measurement. Concepts such as power, democracy, legitimacy, polarization, state capacity, and threat cannot be observed directly, so researchers construct indicators that capture only particular dimensions. Military spending may reflect resources while missing readiness, geography, alliance support, or political willingness to use force. A democracy index may combine elections, rights, and institutional constraints in ways that affect results. Construct validity is therefore part of the substantive argument rather than a preliminary technical issue. Without a theoretical account of what a measure represents, numerical precision can create confidence around a concept that has been defined poorly.

The Problem of Mechanical Hypothesis Testing

Mearsheimer and Walt criticize a style of research in which scholars generate narrow hypotheses, search for available variables, and estimate statistical relationships without developing a substantial explanation. Publication incentives can encourage this approach because technically novel models and statistically significant findings are easier to package as discrete contributions than difficult theoretical synthesis. Data availability may then shape the research question: scholars study what has already been coded rather than what is most important to understand. Christopher Achen's warning about "garbage-can regressions" is relevant because adding many control variables can appear rigorous while obscuring causal logic (Achen, 2002). A control can introduce bias when it lies on the causal pathway, is influenced by the outcome, or represents a selection process. The solution is not to use fewer variables automatically but to explain why each variable belongs in the model. Good quantitative research begins with a causal structure that determines what should be measured and compared rather than using statistical software to discover an explanation after the coefficients are known.

Causal Inference, Prediction, and Methodological Choice

Modern quantitative International Relations uses experiments, matching, instrumental variables, regression discontinuity, panel designs, difference-in-differences, network analysis, and machine learning. These tools can improve inference, but each depends on assumptions that theory helps justify. An instrumental variable must influence the outcome through the proposed treatment rather than another pathway; a difference-in-differences design requires a plausible comparison trend; and experiments may identify an effect in one population without establishing broad external validity. Prediction creates a related distinction. A model may forecast protest or conflict effectively because it uses variables that are close in time to the outcome, yet those same predictors may provide weak evidence about underlying causes. Explanatory studies should therefore specify causal estimands and mechanisms, while predictive research should emphasize out-of-sample accuracy, calibration, and error. Both goals are legitimate, but they answer different questions. Methodological sophistication becomes meaningful when researchers state which question they are trying to answer and select tools whose assumptions fit the theoretical process rather than treating one estimator as universally superior.

Mixed Methods and Cumulative Knowledge

International Relations is especially suited to combining statistical analysis with case studies, archival research, interviews, formal models, and process tracing because major political events are historically embedded and often relatively rare. A cross-national model can establish the scope of a

pattern, while carefully selected cases can examine sequence, decision-making, and mechanisms that aggregate data cannot reveal. Mixed methods are valuable only when the components address the same theoretical question. A case study should investigate the process implied by the statistical relationship rather than function as an illustrative anecdote. Cumulative research also requires shared definitions, transparent coding, replication, serious attention to null findings, and explicit scope conditions. Contradictory results can be theoretically useful when researchers ask why an effect appears in one region, regime type, or period but not another. Open data and reproducible code improve verification, but transparency alone cannot determine whether the question matters. A fully reproducible model can still measure the wrong concept. Cumulative knowledge therefore depends on both methodological openness and theoretical coherence.

Limits of the Critique

The argument that International Relations has “left theory behind” can itself be overstated. Middle-range theories that explain a specific institution or mechanism may produce more cumulative knowledge than grand frameworks designed to interpret nearly every international outcome. Quantitative scholars also theorize through research design, measurement models, formal derivation, and the explicit identification of causal assumptions, even when their work does not resemble traditional debates among realism, liberalism, and constructivism. Empirical anomalies can generate theory rather than merely test it, and methodological advances have exposed hidden assumptions in earlier scholarship. These objections do not defend mechanical significance testing or post hoc storytelling. They suggest instead that theory can exist at different levels of ambition. A useful study need not explain the entire international system, but it should explain why its variables matter, how the proposed process operates, and what evidence would revise the claim. The debate is therefore less about choosing grand theory over quantitative research than about ensuring that technical analysis remains connected to substantive political explanation.

Conclusion

The neglect of theory is a genuine problem when quantitative International Relations becomes a sequence of statistical tests disconnected from concept formation, causal mechanisms, historical context, and cumulative explanation. The appropriate remedy, however, is not to reduce the role of quantitative evidence. Statistical methods can force scholars to specify expectations, compare many observations, estimate uncertainty, reveal heterogeneity, and discover patterns that selected historical cases might miss. The strongest research begins with a substantive puzzle, defines its concepts, proposes a mechanism, identifies plausible alternatives, and then chooses data and methods appropriate to the claim. After estimation, the findings should return to theory: they may strengthen an explanation, narrow its scope, reveal a missing mechanism, or require revision. Theory and method therefore perform different but complementary functions. Theory explains why evidence should matter, while method determines how strongly that evidence supports the proposed

relationship. International Relations advances when neither becomes an end in itself and when technical precision serves a clearly articulated explanation of political behavior.

References

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