

What Future for Economics? Rethinking Rationality, Models and Academic Incentives

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Abstract

The standard assumption of rationality in economics has been a theoretical convenience rather than an adequate description of human decision processes for decades. The future of economics, however, requires reframing rationality: behavioural economics has long proven that the set of elements informing choices is numerous, often unobserved, and context dependent. This reframing exacerbates the well-known statistical trade-off between overfitting vs. omitted variable bias, that is, an interpretability cost. Whilst on one hand newly available and extremely granular data sources enable new analysis and novel results, these are often limited to the assumptions of limited applicability, hindering scientific value. This paradigm shift calls for a reassessment of models, data practices and academic incentives.

Keywords

Bounded Rationality, Economics, Causal Inference, Machine Learning, Reproducibility, Transparency, Academic Incentives

1. Introduction

The standard assumption of rationality has served as a powerful organizing principle for economic theory throughout the last decades but now functions too often as a simplifying convenience rather than an accurate description of human decision processes (Kahneman, 2010). Economics should reframe rationality not as an absolute claim about internal consistency but as a bounded and contextually governed evaluative process. Such reframing demands adjustments to modelling practices, empirical setting, and academic incentives so that results are reliable, interpretable, and actionable.

Whilst economic models benefited greatly from treating agents as utility maximisers—because that assumption yields clear comparative statics and tractable

identification strategies (Arrow, 1990)—such success hid a cost. Reducing choices to a handful of observable variables systematically overlooks evaluative dimensions that matter. Social norms, identity, status concerns, ethics, habit formation, attention, and more frequently drive behaviour in ways that a narrow utility specification cannot capture. Specifically, “thin versions” of rationality assumptions (i.e., conceptions where actors’ behaviour easily aligns with theoretical expectations, as opposed to “thick versions”) have long been critiqued (Korobkin & Ulen, 2000). In such a way, models may fit data in a narrow sense but neglect the mechanisms that matter for reliable policy action. The consequence is a literature that can forecast short-run patterns in some contexts yet routinely fails when interventions change the configuration of unobserved evaluative elements.

2. Review: Data Availability and a Methodological Trade-Off

Following digital development, data availability soared: beyond having “more”, data became also extremely specific, i.e., granular. The newly available data perfectly married the idea that individuals pursue coherent aims using heuristics and information structures shaped by context, cognition, and social environment. Rationality became better understood as a process that integrates multiple types of inputs: material payoffs, cognitive constraints, normative expectations, identity-based goals, and strategic anticipations about others, to name a few. Recognizing this plurality changed the modelling question from “*Do* agents maximize?” to “*Which elements* do agents integrate and with what weights in a given decision environment?” Treating weights and choice sets as context-specific objects of inference, rather than fixed primitives, opened a path to models that, in principle, are both empirically grounded and policy-relevant.

The idea that economic agents based their choice on a number of (now easier to measure) variables lent its hand to a great increase in research output. Furthermore, academia parameters for success always included the number of publications and citations, exacerbating the issue further (Hamilton, 1990).

This mechanism is not sustainable in the long run. Empirical practice faces a concrete trade-off. Increasing the number of observed covariates and exploiting machine learning tools often improves predictive accuracy but reduces statistical power for estimating causal effects and undermines interpretability. Parsimonious structural models emphasize identification of causal mechanisms, but risk omitted variable bias when relevant evaluative dimensions are unobserved. High-dimensional models capture complex associations but can overfit, produce unstable effect estimates, and make policy prescriptions opaque.

The technological constraints that once justified severe model simplifications are largely gone. Computational resources and granular microdata are widely available. While we acknowledge there are methodological attempts at merging the strengths of both worlds (such as the growing field of causal machine learning), current developments are marked by a growing fragmentation, complicating integration and collective progress. An ever-growing number of publications doc-

uments narrowly specified micro-dynamics without synthesizing how those dynamics inform broader explanations or practice. Incentive structures favour incremental, publishable units over synthetic contributions that integrate evidence and propose generalizable mechanisms. A similar issue of alleged over-simplification was faced by late 1930s economists, and culminated with the consolidation of a new theory, the Theory of Games and Economic Behaviour (Von Neumann & Morgenstern, 2007).

But what happens now? The described pattern leads to three related issues. First, replicability and external validity often remain untested because marginal contributions are published without systematic validation. Second, teaching and curriculum risk becoming misaligned with the kinds of judgment economists must exercise in policy contexts. Third, hiring, promotion, and funding incentives reward volume and novelty over robustness, reproducibility, and societal relevance.

Effective research design begins by explicitly declaring the primary objective. If prediction is the goal, flexible high-dimensional methods with out-of-sample validation are appropriate. If causal explanation or policy intervention is the goal, pre-registered identification strategies, careful use of instruments, natural experiments, and parsimonious structural assumptions remain essential. Of course, hybrid strategies are possible too, but the discipline should move from implicit trade-offs to transparent methodological choices tied to clear objectives.

As a practical example, consider research on a product demand. A parsimonious model using income, price, and a simplified preferences model leads transparent policy levers: subsidies, price regulation, and information campaigns. A high-dimensional approach that incorporates online purchasing behaviour, social network metrics, device-level micro traces, and numerous demographic interactions, may improve short-term prediction of purchase. The former model risks leaving behind important factors that determine choice. The latter approach, however, often fails to reveal which interventions generalize across populations or remain effective when policy changes alter the information environment. A balanced research program should compare both approaches, use causal identification to validate mechanisms suggested by the high-dimensional model, and prioritize the parameters that reliably predict outcomes under policy counterfactuals.

3. Discussion and Conclusion

What could be done next? There are a number of strategies that we propose, some of which may be intuitive and already under consideration in some parts of the scientific community, others less so. The crucial step is to recognize the problem facing the social sciences, and economics in particular, and to adopt a multifaceted approach to address it:

- Separate evaluation for research and teaching: tenure and promotion systems should evaluate teaching and research excellence independently. Formal recognition of pedagogical innovation and student outcomes could reduce pressure

to maximize publication counts at the expense of instructional quality.

- Redefine scientific quality metrics: replace single-dimensional publication counts with composite metrics that weigh reproducibility, methodological transparency, causal robustness, comparative validation across contexts, and theoretical contribution. Assign explicit credit to replications, pre-registered studies, and null results that test important mechanisms. These metrics could be used to define a “quality” score, both as a single or multiple indicators.
- Incentivize synthesis and integration: create journals, special issues, and funding streams dedicated to meta-analyses, theory-building syntheses, and policy translation that connect micro-level findings to generalizable frameworks. Reward authors who consolidate fragmented literatures into coherent narratives that identify where mechanisms generalize and where they do not.
- Reform evaluation panels and grant review: ensure multidisciplinary review committees that include methodologists, applied economists, and educators. Mandate that panels explicitly report how they balanced novelty, reproducibility, teaching contributions, and policy relevance in their assessments.
- Promote transparency and reproducibility: make open data and open code standard requirements for publication and funding whenever ethical and legal constraints permit. Require clear replication materials and standardized reporting formats for identification strategies and robustness checks. Whilst the problem of data availability has long been recognized (Vines et al., 2014), it is seldom a standard requirement (Tedersoo et al., 2021).
- Train for methodological trade-off literacy: update undergraduate and graduate curricula to better understand research design and activities (Webster & Kenney, 2011); this can teach young researchers when to prioritize prediction, identification, or interpretability. Integrate training in causal inference, machine learning, theory construction, and communication of uncertainty. Teach students to design studies around well-defined policy or theoretical objectives and to justify methodological choices accordingly.

We recognise that such needs result in a large coordination problem, with all the issues that follow, for example: some players (scholars, editors, journals) may not be incentivised to change (incentives misalignment); the first player to make such changes may be disfavoured (first-mover disadvantage); players may not trust each other (miscoordination risk, uncertainty, asymmetric information).

Economics should not abandon rigor; it should broaden it. Rigor must encompass not only internal mathematical consistency but also empirical transparency, robustness to contextual variation, interpretability for policy, and pedagogical value. The future of the discipline depends on explicitly managing the trade-offs between granularity and simplicity, aligning incentives to reward synthesis and reproducibility, and training economists to choose methods that match clearly stated objectives. This reorientation will restore economics to its role as a discipline capable of producing explanations that are both reliable and actionable.

The proposals that are contained in this letter are by no means exhaustive, nor

they try to be prescriptive norms. They are merely proposals, that we hope may spark interest in academics who may begin a more comprehensive approach to this problem.

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Declaration

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Conflicts of Interest

The author is currently employed by Capgemini Italy. The author declares that there are no non-financial interests to disclose in relation to this manuscript. The research presented in this study was conducted independently, and all aspects of the study, from design to publication, were conducted autonomously, with no influence from the author's employment at Capgemini Italy. The views and opinions expressed in this manuscript are solely those of the author and do not reflect the official policy, position, or views of Capgemini Italy.

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