Philosophy of *Economics Rules*

Introduction to the symposium

N. Emrah Aydinonat [*]

TINT - Centre for Philosophy of Social Science,
Practical Philosophy, Faculty of Social Sciences,
University of Helsinki, Finland

Draft. 17 July 2018

Abstract: Economists have long been criticized for their use of highly idealized models. In *Economics rules: Why economics works, when it fails, and how to tell the difference* [Oxford: Oxford University Press, 2015] Dani Rodrik responds to this criticism by offering an account of models that emphasizes the diversity of models in economics. Rodrik's account presents a rare opportunity for economists and philosophers of economics to engage in a mutually beneficial exchange that could improve our understanding of the power and limits of economics, and the rights and wrongs of the dismal science. The symposium on Rodrik's *Economics Rules* is the first attempt to seize this opportunity.

Keywords: economics, philosophy of economics, criticism of economics, history of economics, Dani Rodrik, symposium

JEL Codes: B40, B41

1 Introduction

Dani Rodrik's (2015) *Economics Rules* presents a rare opportunity for economists and philosophers of economics to engage in a mutually beneficial exchange that could improve our understanding of the power and limits of economics, and the rights and wrongs of the dismal science. The present symposium is the first attempt to seize this opportunity. It consists of articles by philosophers of economics that critically discuss Dani Rodrik's (2015) *Economics Rules*, and a response from Rodrik.

Why is *Economics Rules* an intriguing book for philosophers of economics? There are some obvious reasons: it concerns economic methodology, it is written by a prominent economist, it is well-thought and well-written, and so on (Aydinonat, 2015, 2016). In addition to these obvious reasons, I think, its following features make it particularly attractive for philosophers of economics. First, Rodrik takes critics of economics seriously and responds to them sincerely. Second, Rodrik follows the tradition of many great economists in engaging in a critical reflection on economics. Moreover, his contribution contains ideas from philosophers of economics. Third, Rodrik's account of models underscores some of the topics in philosophy of economic models that need more attention. Fourth, *Economic Rules* opens channels for better communication between economists, their critics, philosophers of economics and historians of economics. In this introduction, I will briefly outline these features of the book.

2 Taking critics seriously

Consider the following titles. (1) Here is why economics is built on a monumental mistake. (2) Failed economics: tyranny of mathematics and enslaved by the wrong theory. (3) Orthodox economics is empirically invalid and theoretically flawed. (4) Economists understand little about the causes of growth. (5) Economists still lack a proper understanding of business cycles. The first three of these are titles of articles from the *Evonomics* website.[1] The latter two were published in *The Economist* (Print editions, 12 & 19 April 2018). This is just a tiny sample from the vast variety of blog posts, articles and books that criticize economics. Critics are diverse—they include social scientists, philosophers, journalists—but there seems to be a common theme to their criticism: economic models are vastly unrealistic and for this reason they cannot have much explanatory value or policy relevance. Economists are not generally impressed by this line of criticism. Moreover, many economists think that critics are misinformed about the current state of economics (e.g., Auld, 2013; Coyle, 2017; Smith, 2017). Perhaps for these reasons, many economists do not think that they need to take the *questions* raised by the critics seriously.

Most critics are concerned with questions concerning the epistemic value and policy relevance of models. These questions are not confined to economic models but are important questions about the use of models in science in general: about how we can gain knowledge of the world by way of studying highly idealized models and about how we can use this knowledge in practice. "Hey, this is how science works" is not a meaningful response to these questions, and "the world is complex, we need to simplify" can only be a part of an answer. Going beyond these simplistic answers will be beneficial for the advancement of economics, because it will provide us with an enhanced understanding of the power and limits of our models and help us to assess better their proper and improper uses in explanation, prediction and policy-making.

It might be tempting to ignore the critics' concerns if one thinks that they are uninformed about recent developments in economics. However, even if this were true, pointing this out does not help us understand the explanatory value and policy relevance of economic models. If there are contemporary models that work, it is still important for us to understand why and how they work. Moreover, questions about theoretical models cannot be dismissed simply by appealing to the presumption that there has been an "empirical turn" in economics (Hamermesh, 2013; cf. Cherrier, 2016; Backhouse and Cherrier, 2017). The presumed empirical turn does not reduce the number of questions concerning models. On the contrary, the number of questions is multiplied because empirical models also employ many unrealistic assumptions, and additional issues emerge about the use of data and experiments in economics.

In sum, independently of whether critics of economics are right or wrong, or of whether they are misinformed or not, much can be learned from taking the questions concerning epistemic value and policy relevance of our models more seriously. In *Economics Rules*, Dani Rodrik (2015) takes the critics seriously and recognizes the importance of their questions. The book has been written based on the premise that there is much to be gained from an informed discussion of how economics works and improved communication between economists and others. Moreover, Rodrik understands that it is to everyone's advantage that how economics works is widely understood and appreciated. After all, economics dominates the policy scene, and politicians and citizens need assurance that economics is not a flawed science.

[1] http://evonomics.com

3 Following the tradition of 'philosopher economists'

It might be fair to say that most economists are unmoved by philosophical theorizing about economics, but it is not true that economists have ignored the questions concerning economic methodology altogether throughout the history of economics. In fact, debates concerning economic methodology are nearly as old as the science of economics itself. John Stuart Mill's (1844) *On the Definition of Political Economy; and on the Method of investigation Proper to It*, Nassau Senior's (1836) *An Outline of the Science of Political Economy*, John Cairnes' (1875) *The Character and Logical Method of Political Economy*, John Neville Keynes' (1890 [1917]) *The Scope and Method of Political Economy*, and Lionel Robbins' (1932) *An Essay on the Nature and Significance of Economic Science* are prominent examples of works that dive deep into methodological questions. The history of economics is full of methodological debates—such as the *Methodenstreit*, the cost-controversy, the marginalism debate, and the realism-of-assumptions debate—that played important roles in shaping how economics is practiced today.[2] Whether abstraction and idealization are proper methods for the science of economics was an important question in these debates.

The best-known essay in the history of these debates is Milton Friedman's (1953) *The Methodology of Positive Economics*. Friedman argued that 'realism' of assumptions does not matter, and that a model/theory should be judged by the success of its results or predictions.[3] Most economists found comfort in this and took him to say that assumptions do not matter as long as the model works (Mäki, 2009). Friedman's article sparked a major debate. Ten years after Friedman's essay, a philosopher of science, Ernest Nagel (1963) targeted Friedman's argument in *The American Economic Review* in a section entitled *'Problems of Methodology'*. This section also contained articles by Fritz Machlup, Andreas Papandreou, Sherman Krupp, and commentaries by G. C. Archibald, Herbert Simon and Paul Samuelson. The exchange between Nagel, Samuelson and Machlup made it clear that justifying the use of unrealistic assumptions was much more difficult than it appeared in Friedman's essay (Archibald, Simon and Samuelson, 1963; Nagel, 1963; Machlup, 1964; Samuelson, 1964).

The 'realism' of assumptions debate continued. A late comer to the debate was the economist Hal Varian, who teamed up with philosopher Allan Gibbard to try to answer the fundamental question: "Can models with unrealistic assumptions, then, be of any use in understanding the world?" (1978, p. 665). Their answer involved three key ideas: i) (theoretical) models are caricatures that tell simple *stories* that can be useful because they *isolate* certain aspects of reality and depict *tendencies* in the real world, ii) confidence in a model depends on the *robustness* of its results, and iii) economists often use models to answer *what-if questions*. Gibbard and Varian's article was an overture to the later work on models in the philosophy of economics and all three of their key ideas since have been elaborated on and improved by philosophers of economics.[4]

---

[2] For comprehensive reviews of past methodological debates the reader should consult surveys such as Wade Hands' (2001) *Reflections without Rules*, Mark Blaug's (1992) *The Methodology of Economics*, and Bruce Caldwell's (1994) *Beyond Positivism*.

[3] In fact, Friedman's argument was relatively nuanced, but also messy. It contained realist flavors (Mäki, 1986) as well as instrumentalist ones (Boland, 1979).

[4] Early philosophers of economics were mostly interested in applying general ideas from philosophy of science to economics (e.g., see Blaug, 1992; Caldwell, 1994). Nevertheless, some of them the focused specifically on the epistemic value of unrealistic models (Hausman, 1992; Mäki, 1992, 1994b, 1994a). For a review of the earlier work see Wade (2001). For a critical review of the research on models and representation see Morgan and Knuuttila (2012). For a review of the recent trends in economic methodology see Mireles-Flores (2018). The

Rodrik's attempt to overcome the difficulty of justifying the use of unrealistic assumptions in economics could be considered to be the most recent contribution to the 'realism' of assumptions debate. His account clearly contains hints of Friedman, Samuelson, Machlup, Gibbard and Varian. It also carries flavors from the works of philosophers of economics such as Uskali Mäki and Nancy Cartwright (Aydinonat, 2015, 2016). Rodrik follows them in seeing the value of models in their ability to isolate and focus on certain causal mechanisms, and conceptualizing models as thought experiments. He thinks that the *critical assumptions* of a model must approximate reality. He also entertains the idea that models help us answer *what-if* questions and depict *tendencies*. Along with these recognizable essences, he introduces an important idea and argues that the strength of economics comes from its *diversity of models*.

In Rodrik's account, models are like *fables* in that each model carries a *context-specific* message about the real world. The trick is to choose from among these models when needed. Thus, according to Rodrik, both explanation and policy making requires model selection: selecting the right (set of) model(s) for the task at hand. *Economic Rules* tries to show how economists work with a diverse set of models and how they select from among them in explanatory and policy contexts. Because Rodrik emphasizes the context specificity of models, the book pays attention to the history of economics as well as the context of explanation and policy making to make sense of the uses and abuses of models in economics.

4 Reorienting the discussion

We have come a long way since Friedman (1953). Thanks to philosopher economists and philosophers of economics, we have a better understanding of the use of unrealistic assumptions and the epistemic value of models. Nevertheless, there are important topics that have received relatively little attention in the literature. First, most of the discussion focuses almost exclusively on how a model relates to its real-world target. The context of modelling, history of a model and how a model relates to other related models and explanations have not received enough attention (however see Mäki, 2011; Morgan, 2012; Ylikoski and Aydinonat, 2014). Second, most accounts simply ignore the complexity of moving from the model world to the real world; i.e., applying a model, explaining with a model, and using a model for policy purposes, etc. Third, neither economists nor philosophers of economists have paid much attention to how models are misused (or abused) and to model failures (however see Hutchison, 1994; Mäki, 2012b, 2017; Fernández, 2018). And finally, derivational robustness analysis has not yet received enough attention (however see Kuorikoski, Lehtinen and Marchionni, 2010, 2012; Odenbaugh and Alexandrova, 2011; Lehtinen, 2016, 2017).

Although it does not directly delve into these issues, *Economics Rules* delivers an opening to reorient the discussion on economic models in the right direction. First, its arguments concerning the diversity of models and the context-specificity of each model underscore the need for more attention to the context and history of modelling as well as to the relation between models, explanations and policies. Second, Rodrik shows that moving from theoretical models to explanations and policy suggestions is not a simple matter. *Economics Rules* makes it clear that we cannot ignore the complexity of these processes. Third, throughout the book Rodrik tells us that one should not confuse *a* model with *the* model. That is, one should not forget the limitations of individual models, nor interpret a given

following collections are also useful resources: de Marchi (1992), Backhouse (1994), Davis, Hands and Mäki (1997), Hausman (2007) and Mäki (2012a). For an overview of the old and new philosophy of economics see Kincaid and Ross (2009).

model as the only model of a phenomenon of interest. He considers the latter to be a misuse of models. Moreover, his examples illustrate that going beyond a general understanding of model failures requires close attention to be paid to how particular models fail in achieving a given task. In short, *Economics Rules* encourages us to study the uses and misuses of models as well as their failures. Finally, although Rodrik does not pay much attention to robustness, clarifying what he means by critical assumptions requires a closer study of robustness analysis. So, the book is inviting in this respect too. Of course, *Economics Rules* is a book for the general reader. It neither goes deep into the philosophical questions about these matters, nor does it solve all the problems it addresses. Nevertheless, it provides many inspiring ideas that require further work and an opportunity for us to engage in a debate that could lead to a better understanding of models and modelling in economics.

5 Opening the communication channels

Finally, *Economics Rules* opens the communication channels between economists and their critics, and between economists and philosopher of economics. It also encourages us to improve the communication between historians of economics and the rest (economists, critics, and philosophers of economics). The first is obvious, so let me focus on the latter. In the previous section I said that philosopher economists and philosophers of economics improved our understanding of the epistemic value of unrealistic models. After reading this you might have wondered why you do not see this in the discussions on economic methodology. One might in fact be surprised because most of what is written on economic methodology does not build on what we already know. Curiously, it includes work done by philosophers of economics too. However, perhaps one should not be surprised, because lately the communication channels between historians of economics and the rest have not been hale and hearty. This needs to change. Economists, their critics, and philosophers of economics all need history of economics. If we are going to build on what has been already said, we need to know it. Because Rodrik's discussion spans from history of economic thought to economic methodology, it also provides an opportunity for us to open a channel for more history of economics.

6 The symposium

The present symposium aspires to make further progress by taking Rodrik's ideas seriously, and scrutinizing and refining them critically. In what follows you will read closer analyses of important aspects of Rodrik's account. I hope that this symposium will stimulate your curiosity and facilitate further work on these topics with special attention to the context of modeling, history of models, diversity of models, model selection, the relationship between models and explanation/policy, justification of unrealistic assumptions, misuse of models and appropriate disciplinary behavior in economics, model failures, and derivational robustness analysis.

Acknowledgements. I would like to express my thanks to John Davis, Wade Hands, Uskali Mäki and Jack Vromen for their helpful comments and suggestions.

7 References

Archibald, G. C., Simon, H. A. and Samuelson, P. A. (1963) 'Problems of Methodology - Discussion', *The American Economic Review*, 53(2), pp. 227–236. Available at: http://www.jstor.org/stable/1823866.

Auld, C. (2013) *18 signs you're reading bad criticism of economics*. Available at: http://chrisauld.com/2013/10/23/18-signs-youre-reading-bad-criticism-of-economics/ (Accessed: 1 June 2018).

Aydinonat, N. E. (2015) 'Dani Rodrik's Economics rules: the rights and wrongs of the dismal science. New York: W. W. Norton & Company, 2015, 272 pp.', *Erasmus Journal for Philosophy and Economics*, 8(2), p. 94. doi: 10.23941/ejpe.v8i2.203.

Aydinonat, N. E. (2016) Using and Abusing Models in Economics A Review of Rodrik's Economics Rules. doi: 10.13140/RG.2.1.3622.8880/1.

Backhouse, R. E. (ed.) (1994) *New Directions in Economic Methodology*. London: Routledge.

Backhouse, R. E. and Cherrier, B. (2017) 'The Age of the Applied Economist: The Transformation of Economics since the 1970s', *History of Political Economy*, 49(Supplement), pp. 1–33. doi: 10.1215/00182702-4166239.

Blaug, M. (1992) *The Methodology of Economics: Or, How Economists Explain*. 2nd edn. Cambridge: Cambridge University Press.

Boland, L. A. (1979) 'A Critique of Friedman's Critics', *Journal of Economic Literature*, 17(2), pp. 503–522. Available at: http://www.jstor.org/stable/2723302.

Cairnes, J. E. (1875) The Character and Logical Method of Political Economy. New York: Harper & Brothers.

Caldwell, B. J. (1994) Beyond Positivism: Economic Methodology in the Twentieth Century. Revised Ed. London: Routledge.

Cherrier, B. (2016) *Is there really an empirical turn in economics?*, *Institute for New Economic Thinking Blog*. Available at: https://www.ineteconomics.org/perspectives/blog/is-there-really-an-empirical-turn-in-economics (Accessed: 1 June 2018).

Coyle, D. (2017) *Economics in Transition*, *Project Syndicate*. Available at: https://www.project-syndicate.org/onpoint/economics-in-transition-by-diane-coyle-2017-06.

Davis, J. B., Hands, D. W. and Mäki, U. (eds) (1997) *The Handbook of Economic Methodology*. Cheltenham: Edward Elgar.

Fernández, M. V. (2018) *The Use of Models in Economics*. Erasmus University Rotterdam.

Friedman, M. (1953) 'The Methodology of Positive Economics', in *Essays in Positive Economics*. Chicago: The University of Chicago Press, pp. 3–43.

Gibbard, A. and Varian, H. R. (1978) 'Economic Models', *The Journal of Philosophy*, 75(11), pp. 664–677.

Hamermesh, D. S. (2013) 'Six Decades of Top Economics Publishing: Who and How?', *Journal of Economic Literature*, 51(1), pp. 162–172. doi: 10.1257/jel.51.1.162.

Hands, D. W. (2001) Reflection Without Rules: Economic Methodology and Contemporary Science Theory. Cambridge: Cambridge University Press.

Hausman, D. M. (1992) *The Inexact and Separate Science of Economics*. Cambridge: Cambridge University Press.

Hausman, D. M. (ed.) (2007) *The Philosophy of Economics: An Anthology*. Cambridge: Cambridge University Press.

Hutchison, T. (1994) The Uses and Abuses of Economics: Contentious Essays on History and Method. Routledge.

Keynes, J. N. (1917) *The Scope and Method of Political Economy*. 4th edn. London: Macmillan & Co.

Kincaid, H. and Ross, D. (eds) (2009) *The Oxford Handbook of Philosophy of Economics*. Oxford: Oxford University Press.

Kuorikoski, J., Lehtinen, A. and Marchionni, C. (2010) 'Economic Modelling as Robustness Analysis', *The British Journal for the Philosophy of Science*, 61(3), pp. 541–567. doi: 10.1093/bjps/axp049.

Kuorikoski, J., Lehtinen, A. and Marchionni, C. (2012) 'Robustness analysis disclaimer: Please read the manual before use!', *Biology and Philosophy*, 27(6), pp. 891–902. doi: 10.1007/s10539-012-9329-z.

Lehtinen, A. (2016) 'Allocating confirmation with derivational robustness', *Philosophical Studies*. Springer Netherlands, 173(9), pp. 2487–2509. doi: 10.1007/s11098-016-0625-3.

Lehtinen, A. (2017) 'Derivational Robustness and Indirect Confirmation', *Erkenntnis*. Springer Netherlands. doi: 10.1007/s10670-017-9902-6.

Machlup, F. (1964) 'Professor Samuelson on Theory and Realism', *The American Economic Review*, 54(5), pp. 733–735. Available at: http://www.jstor.org/stable/1818571.

Mäki, U. (1986) 'Rhetoric at the expense of coherence: A reinterpretation of Milton Friedman's Methodology', *Research in the History and Economic Thought and Methodology*, 4, pp. 127–143.

Mäki, U. (1992) 'On the Method of Isolation in Economics', *Poznan Studies in the Philosophy of the Sciences and the Humanities*, 26(special issue (ed. C. Dilworth) Idealization IV: Intelligibility in Science), pp. 319–354.

Mäki, U. (1994a) 'Isolation, idealization and truth in economics', *Poznan Studies in the Philosophy of the Sciences and the Humanities*, 38, pp. 147–168.

Mäki, U. (1994b) 'Reorienting the Assumptions Issue', in Backhouse, R. (ed.) *New Directions in Economic Methodology*. London: Routledge, pp. 236–256.

Mäki, U. (2009) 'Unrealistic assumptions and unnecessary confusions: rereading and rewriting F53 as a realist statement', in Maki, U. (ed.) *The Methodology of Positive Economics*. Cambridge: Cambridge University Press, pp. 90–116. doi: 10.1017/CBO9780511581427.005.

Mäki, U. (2011) 'Models and the locus of their truth', *Synthese*, 180(June 2009), pp. 47–63. doi: 10.1007/s11229-009-9566-0.

Mäki, U. (ed.) (2012a) Philosophy of Economics (Handbook of the Philosophy of Science). North Holland.

Mäki, U. (2012b) 'The failure of economics as a modelling failure', in Jasin, E. G. (ed.) *XII International Conference on Economic Development and Society*. Moscow: Higher School of Economics, pp. 359–365.

Mäki, U. (2017) 'Modelling Failure', in Niiniluoto, I., Seppälä, P., and Sober, E. (eds) *Logic, Methodology and Philosophy of Science - Proceedings of the 15th International Congress*. London: College Publication, pp. 381–400.

Marchi, N. de (ed.) (1992) *Post-Popperian Methodology of Economics*. Dordrecht: Kluwer Academic Publishers.

Mill, J. S. (1844) 'On the Definition of Political Economy; and on the Method of investigation Proper To It', in *Essays on Some Unsettled Questions of Political Economy*. 1st edn. London: John W. Parker, pp. 120–164.

Mireles-Flores, L. (2018) 'Recent Trends in Economic Methodology: A Literature Review', in *Research in the History of Economic Thought and Methodology*, pp. 93–126. doi: 10.1108/S0743-41542018000036A008.

Morgan, M. S. (2012) *The World in the Model: How Economists Work and Think*. Cambridge: Cambridge University Press.

Morgan, M. S. and Knuuttila, T. (2012) 'Models and Modelling in Economics', in Mäki, U. (ed.) *Philosophy of Economics, Handbook of the Philosophy of Science. Volume 13*. Amsterdam: Elsevier, pp. 49–87.

Nagel, E. (1963) 'Assumptions in Economic Theory', *The American Economic Review*. American Economic Association, 53(2), pp. 211–219. Available at: http://www.jstor.org/stable/1823864.

Odenbaugh, J. and Alexandrova, A. (2011) 'Buyer beware: Robustness analyses in economics and biology', *Biology and Philosophy*, 26(5), pp. 757–771. doi: 10.1007/s10539-011-9278-y.

Robbins, L. (1932) An Essay on the Nature and Significance of Economic Science. London: MacMillan.

Rodrik, D. (2015) Economics Rules: Why Economics Works, When It Fails, and How To Tell The Difference. Oxford: Oxford University Press.

Samuelson, P. A. (1964) 'Theory and Realism: A Reply', *The American Economic Review*. American Economic Association, 54(5), pp. 736–739. Available at: http://www.jstor.org/stable/1818572.

Senior, N. W. (1836) *An Outline of the Science of Political Economy*. New York: Augustus M. Kelley [Reprint 1965].

Smith, N. (2017) *So Many Critics of Economics Miss What It Gets Right*, *Bloomberg View*. Available at: https://www.bloomberg.com/view/articles/2017-07-14/so-many-critics-of-economics-miss-what-it-gets-right? (Accessed: 1 June 2018).

Ylikoski, P. and Aydinonat, N. E. (2014) 'Understanding with theoretical models', *Journal of Economic Methodology*, 21(1), pp. 19–36. doi: 10.1080/1350178X.2014.886470.