

Contents lists available at [ScienceDirect](#)

European Journal of Political Economy

journal homepage: www.elsevier.com/locate/ejpe

A model of the representative economist, as researcher and policy advisor

Martin Paldam

Aarhus University, Department of Economics and Business, Fuglesangs Allé 4, DK-8210 Aarhus V, Denmark

ARTICLE INFO

Jel:
B4
D24

Keywords:
Rational economist
Publication bias

ABSTRACT

Econ is the representative academic economist who behaves as predicted by economic theory. The paper considers an important parameter β . It assumes that economic theory predicts the sign on β , and that an empirical literature of M papers exists about β . Two cases are considered: (C1) Econ is in the academic career writing a paper with a new estimate of β . (C2) Econ is advising the Minister who is in charge of a policy using β . Economic theory gives a clear prediction in both cases: The size of β will be exaggerated in (C1) and even more in (C2).

1. Introducing econ, the representative academic economist

A small literature compares economists to others – it concludes that economists are more rational.¹ Economics is a theory about rational behavior, which helps us to predict the behavior of others, so it should help us even more to predict the behavior of *Econ*, the representative academic economist, who is faculty at a university or similar. The paper models *Econ*'s behavior in two cases,² which deal with a parameter β that is important for some policy.

- (C1) *Econ* is in the *academic career*, and works on a paper giving a new estimate of β . The paper is written for the scientific ‘market’.
 (C2) *Econ* is *advisor* to the Minister in charge of the policy using β . In the case modeled, *Econ* comes from academia, and wants to keep the option of returning open. The Minister wants a one-page memo on β . The memo is written for the political ‘market’.

Any estimate depends on the data sample on which it is estimated. The data represents something general and the special *conditions* in the country and time-period of the sample. The true value of β is the *ceteris paribus* estimate, which can only be found when controls for the special conditions are used. This works in the reverse in the two cases: (C1) The researcher has to include such controls. (C2) The advisor has to assess β given the *relevant* conditions, when the policy is active. This is one difference between research and policy advice.

Estimates of β are presented as (b, t) , which is the estimate of β and its *t*-ratio, referred to as the *size* and the *fit* of the estimate respectively. To simplify, it is assumed that the choices of *Econ* are based upon (b, t) only. Thus, the choice has two dimensions, precisely as in the *basic textbook theory* that is our joint frame of reference. It is, of course, a heroic simplification, but we know a great deal about its strengths and weaknesses, so they do not need to be discussed at present. I think that most of us believe that it is a useful story about

E-mail address: mpaldam@econ.au.dk.

URL: <http://www.martin.paldam.dk>

¹ It is done by polls and experiments comparing students of economics and other students (Marwell and Ames, 1981, Carter and Irons, 1991 and Kirchgässner, 2005, who gives a fine survey of the literature). Independent psychological research has recently confirmed these findings (Vedel and Thomsen, 2017).

² The two cases should allow the reader to model other cases.

<http://dx.doi.org/10.1016/j.ejpoleco.2018.03.005>

Received 26 October 2017; Received in revised form 8 March 2018; Accepted 12 March 2018

Available online xxxx

0176-2680/© 2018 Elsevier B.V. All rights reserved.

the representative self-interested agent. Thus, it must be a more useful story about the representative self-interested economist.

Section 2 considers Econ's preferences (for b and t) in the two cases. It also looks at the β -knowledge that Econ has to acquire in both cases: In (C1, research) Econ has to add a *new twist* to the β -knowledge, so he should demonstrate that he has the knowledge. In (C2, advice) he is chosen for his knowledge.

Section 3 looks at case (C1). The analysis concentrates on empirical research,³ where Econ has to solve two problems of research strategy that both have a basic solution in economic theory. First, he has to optimize his effort. Optimal effort is where his marginal benefit from making estimates equals marginal cost. This is likely to require many estimates. Second, he has to choose the best one for publication. It is the one where Econ's utmost indifference curve touches his production possibility frontier. Normally he supplements the best estimate with robustness experiments giving similar results. The solutions to the problems predict that Econ's choices are too good; *i.e.*, his decision will result in *publication bias* defined as a systematic difference between the published estimates and the true value – the bias *exaggerates* the result.

Section 4 looks at case (C2). A policy advisor is appointed to give credibility to the policies of the Minister by representing the knowledge of the 'profession'. Econ has to give advice that is both academically respectable and politically possible; *i.e.*, it is useful to the Minister. This is an Edgeworth box problem where Econ's own preferences come to play a small role in his choice. The model predicts that an able advisor will reach the *same advice* as any other able advisor. It is typically (even) larger than the average research result.

When we analyze (C1), it is assumed that Econ's research paper is presented as done by the *traditional strategy*: It starts with a theory that is operationalized to a model, which is approved – or in rare cases rejected – by a regression. Fanelli (2010) found that 86% of papers in economics confirm the theory tested.⁴ For long, it has been known that the traditional strategy is too malleable (see, *e.g.*, Leamer, 1983, De Long and Lang, 1992, and the meta-studies cited in Section 2.3), but the strategy survives amazingly well, and the many economic papers analyzed for biases are nearly always of this type. However, increasingly papers in economics use controlled experiments as in medicine (see Christensen and Miguel, 2016). This reduces biases, but they do not disappear as found in the literature on biases in research.⁵

Thus, we conclude that it is a *stylized fact* about research (not only in economics) that the average paper reports exaggerated results. My aim is to demonstrate that our theory provides robust predictions of Econ's decisions that explain this stylized fact. To make the paper easier to read all variables used throughout are listed in Table 1.

2. Econ's preferences and the β -knowledge

Section 2.1 looks at the indifference curves of researchers and advisors. Econ's work on β requires that he masters the existing β -knowledge discussed in Section 2.2. A key part of this knowledge is the β -literature that has some typical features as surveyed in Section 2.3. Section 2.4 deals with the scientific and the political 'markets', in which Econ has to sell his product.

2.1. Preferences of researchers and advisors: interests and tastes

The research decisions of Econ are directed by his preferences that are formed by the factors listed in Table 2.

Interests: Normally Econ is only marginally affected by the policies using β , and his research influences the β -knowledge marginally. In the case of policy advice, Econ may influence the policy a little more, but still not very much. Thus, in both cases Econ's own interests are almost exclusively due to (i) the effect his work on β has on his career. Sections 3.1 and 4.2 argue that the effect is substantial in both cases.

Tastes: (ii) The ideal is that Econ seeks truth. (iii) Econ may support one theoretical school or a political party. As everybody else, Econ is affected by (iv) the wish to do good in accordance with 'political correctness'. This affects his preferences as analyzed in the

Table 1

For easy reference: Variables used throughout the paper.

β	The variable of interest. The β -literature is the papers with estimates of β . The β -knowledge also contains the theories and casual observations about β .
β^R	The current state-of-the-art value for β , as per the belief of the profession. It is the reservation estimate for the search of the researcher.
b_i	Estimate i of β in the literature – referred to as the estimated <i>size</i> of β .
t_i	The t -ratio of b_i , referred to as the estimated <i>fit</i> of β .
t^R	The reservation fit for Econ's search is the 5% limit, <i>i.e.</i> , 2.
M	The number of papers in the β -literature.
N	The number of estimates in the β -literature. N/M is the average number of published estimates per paper. $N/M \approx 10$.
J_i	The number of estimates made to generate b_i . Known by author only.

Note: variables only used within half a page of their definition are not included.

³ My colleagues in pure theory claim that a similar process is at work – it is known as *t-hacking*.

⁴ He studies a sample of 2433 papers that claims to test a theory. There is a bit more than 100 papers from each of 20 sciences, allowing a comparison of the fraction of theory confirmation across sciences. The lowest fraction is found in space science (70%) and geoscience. Economics is number 14, while psychology is number 20 (91%).

⁵ At present (January 2018) Google Scholar has 3.78 million hits on 'publication bias'. I have checked the first 1'000 hits, some are methodological, but the majority are empirical studies. They overwhelmingly report bias, which is nearly always an exaggeration of results. Such studies were pioneered in medicine, but gradually most sciences have followed and found the same results; see Section 2.3 on the studies in economics.

Download English Version:

<https://daneshyari.com/en/article/11016148>

Download Persian Version:

<https://daneshyari.com/article/11016148>

[Daneshyari.com](https://daneshyari.com)