

Comments on: *A replication recipe: list your ingredients before you start cooking* by Andrew C. Chang. Discussion Paper 2017-74, Economics-Ejournal.

This analysis recommends that an economist who seeks to replicate all or part of a published article should, prior to starting the effort, create a personalized plan (“recipe”) for the effort. The plan should include three elements: the “flowtime” of the replication, a time allocation, and a statement of the scope of work. Chang argues that, absent these “the amount of flowtime and budget that you could invest in a replication could grow uncontrollably.” Chang’s advice likely will be of value to graduate students and newer researchers, but seasoned researchers are more likely to smile: few research projects evolve as initially planned.

My first comment is that the first two items seem to be the same. For example, businessdictionary.com (as useful perhaps as the typical web site) defines “flowtime” as “Period required for completing a specific job or a defined amount of work.” The Oxford English Dictionary does not include the term, confirming its primary existence as business jargon. (Of course, in a bureaucratic setting, each researcher might be required to submit, for management approval, a statement of proposed work effort. A clear time allocation can be an essential part of achieving a satisfactory job performance rating.) The third item seems straightforward and noncontroversial: a person, of course, should have a clear objective before beginning replication—Is it rational to do otherwise? As Chang notes, the objective might be to reproduce all or a subset of the article’s estimates, to explore an assertion or suggested extension buried in a footnote, or learn-by-example an econometric technique used in the article. I often have done this last item. The current version of the Rats econometric package (9.1), for example, includes nearly 100 “paper replication example” programs, each showing the code needed to reproduce all or an important subset of the estimation in a significant article. The package, in addition, includes hundreds of worked-out code examples for 30 econometrics textbooks. I am unaware of any other econometric software package that includes a comparable material.

My second comment is motivated by the comment that “the amount of flowtime and budget that you could invest in a replication could grow uncontrollably.” The wording strikes me as unusual. A replication effort is not a cancer that grows uncontrollably. Economists, hopefully, understand the differences among sunk costs, investment, and achievement of an objective. As rational economists, we must assume that the researcher “takes stock” at regular intervals and re-optimizes her future time allocation: When is the optimal stopping time? Chang’s advice, to a person familiar with either professional project planning or Gary Becker’s theory of the allocation of time, might, again, seem unusual. A researcher typically is engaged simultaneously in a number of activities, including work-for-pay, household production, personal interactions, and unstructured leisure. Because the future, by definition, is unknown, a rational person builds such a personalized plan based on current-period “prices” (including opportunity costs) plus all available historical data and experience (the last perhaps proxying for the economist’s notion of economic “structure”). Given this perspective, what is new under-the-sun in this paper?

Finally, I wish to stretch Andrew’s recipe a bit, perhaps beyond his intent, and comment on the “pre-commitment” literature. His recipe, to my mind, if cast in stone prior to beginning the task, resembles the commitment literature. Pre-commitment often is proposed absent any economic analysis, that is, without a set of prices or specification of the tradeoffs (that is, the FOCs). What is the benefit to the researcher of pre-commitment? What is the gain? What is the loss if the researcher violates the pre-commitment contract? If pre-commitment is to be taken seriously, and the rewards are small (as is likely), then presumably the penalties for violations must be large. Yet, this violates the well-known

serendipity principle in scientific research and Kuhn's (1970) theory of the evolution of science. In brief, except for funding situations where pre-commitment might bind the researcher to spend grant funds as the grantor expects, pre-commitment is antithetical to scientific research.

Chang suggests a replication work schedule for Haurin and Rosenthal (2007). This is well done. I offer no suggestions for improvement.

References

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