

Instructions for Econ 100B Authors

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Abstract

The abstract is the a concise summary of the subject, conclusions, and results of your paper. This is generally accomplished in 3 to 5 sentences. Although the abstract appears at the beginning of the paper, it is easier to write at the end of the writing process, once everything else has been written. Since abstracts can appear separate from the paper (e.g., the part of a paper that is not behind a paywall), the abstract plays an important role in representing your work to a broad audience. When I start writing a paper my initial abstract is generally a stub of a sentence that reads “In this paper we will show ...” and acts as a placeholder until I get the rest of the paper written.

1 Introduction

Before getting into what goes in the Introduction, some comments on formatting and calculations. Your project paper needs to be typeset. LaTeX¹, Word, and LibreOffice are all fine for this purpose. Also, as was the case for your problem set work, your preferred computational platform (e.g., Excel, R, Stata, MatLab, ...) is fine.

The Introduction has three major components:

1. The initial paragraph(s) in which you describe what you will be reporting in the paper. This section can be written at any time since it is relatively high-level and, thus, not tightly dependent on specific aspects of the results.
2. The middle paragraph(s) in which you provide the context of your work. This is where, in a thesis or a journal paper, the literature reviews would appear with citations to relevant prior work such as [Solow \(1956\)](#) and [Swan \(1956\)](#). This section can also be written at any time due to its generality.

¹LaTeX is the standard word processor in the sciences in general and in economics in particular. It also has a companion program called BibTeX that automatically generates any bibliography format. While not required for this project, I highly recommend looking into LaTeX and BibTeX next semester.

3. A final paragraph that provides a “outline level” description of what will appear in the rest of the paper. This section clearly needs to be added toward the end of the writing process.

Anything that can be written now should be written now. It doesn’t matter that the writing will be out of order; write in the order that the information becomes available, not in the order that the reader will see when they read the paper.

2 Theory

In this section you describe your model and the key equations. Equations need to be typeset and numbered in a narrative manner. For example, the following is adapted from [Hawkins and Arnold \(2000\)](#):

The differential dynamics of anelasticity are not obtained through a direct application of lagged variables but, rather, by noting that the assumption of linearity implies a general market-product rate relationship of the form

$$\left(f_0 + f_1 \frac{d}{dt} + f_2 \frac{d^2}{dt^2} + \dots\right) r^{(p)} = \left(g_0 + g_1 \frac{d}{dt} + g_2 \frac{d^2}{dt^2} \dots\right) r^{(m)}. \quad (1)$$

In practice a wide range of relaxation dynamics have been found to be described well by the comparatively simple differential relationship

$$\frac{dr^{(p)}}{dt} + \eta (r^{(p)} - c) = J_U \frac{dr^{(m)}}{dt} + \eta J_R r^{(m)}, \quad (2)$$

where η denotes the rate at which the product rate relaxes to the equilibrium level, J_U denotes that fraction of the response that occurs instantaneously, and J_R denotes the ultimate extent of the response function ($= J(t = \infty)$). The change in the product rate with respect to time is, in this case, a function of the current product rate, the current market rate, and the change in the market rate with respect to time.

Your theory section should be complete enough for someone to be able to recreate your model from it. Adopting this a guiding principle in your scientific writing will pay huge dividends in the future.

The theory section is something you can write at any time. So do so ... *now*. The more you get written now the less there is to write in the future.

3 Analysis

In the analysis section you describe what you did in some detail. You need to discuss the coefficients that you used in your simulation. When coefficients are sourced, the source

needs to be cited. If, as in the theory section above, you approach your writing from the perspective that someone reading your paper should be able to reproduce your results, this will be relatively straightforward. Tables and graphs are your friend. The following is a table from [Lei and Hawkins \(2002\)](#)

Rating	Variable μ^*	Constant μ^*	Observed
AAA	14.7	16.1	8.0
AA	10.8	14.8	8.3
A	9.0	14.1	8.2
BBB	8.0	11.2	6.6
BB	8.4	7.2	4.7
B	5.1	5.0	3.4
CCC	3.0	3.1	3.2

Table 1: Mean time to default (in years).

And the following graph is from the lecture on the Solow-Swan model:

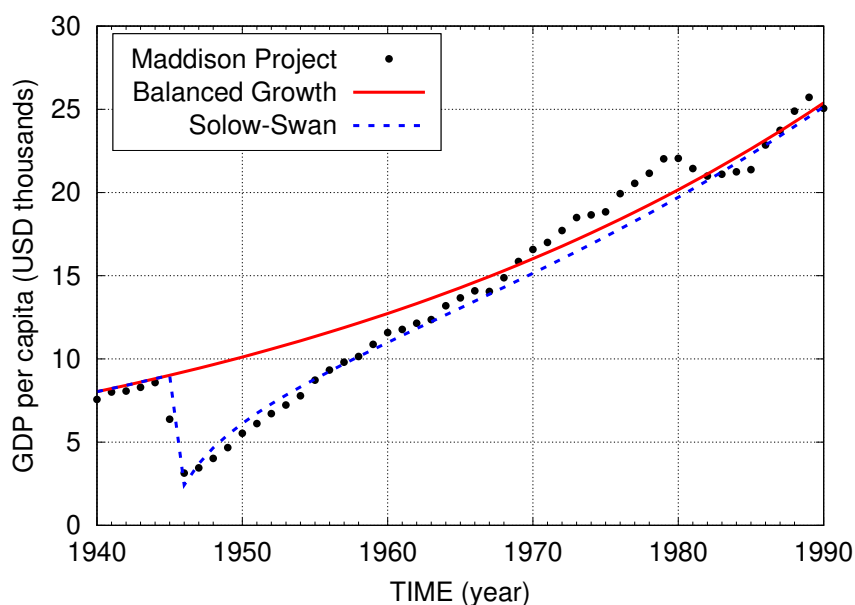


Figure 1: The Solow-Swan model applied to Germany.

My approach to writing the analysis section is to first create all of the tables and graphs that will be in this section and then to write a narrative explaining them. The analysis section will be written later in the writing process. Your discussion at this stage should be limited to what you have done. The opportunity for “compare and contrast” is in the next section.

4 Discussion and Summary

The discussion is where you do a compare and contrast. In your case it will be between your new results and the ones you generated in the problem set. In a thesis or journal paper this is where you explain to the reader how your results relate to those that have been published in the past.

The summary is the final paragraph in this section that generally begins with something like, “In summary, ...”. Once you’ve written your summary paragraph, distill it to 3-5 sentences and you’ve got your abstract.

References

- Hawkins, R. J. and Arnold, M. R. (2000). Relaxation processes in administered-rate pricing. *Physical Review E*, 62(4):4730–4736.
- Lei, T. and Hawkins, R. J. (2002). Corporate default behavior: A simple stochastic model. *Physical Review E*, 65(5):056119:1–6.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70(1):65–94.
- Swan, T. W. (1956). Economic growth and capital accumulation. *Economic Record*, 32(2):334–361.

While the citation and bibliography format of a paper is set by the journal, the Economic profession generally uses the “APA format” of the American Psychological Association. Two useful references for this style can be found at [the Purdue English department](#) and the [APA website](#). Google scholar also generates a useful set of citation styles.

Citations are the easiest thing to get started with. You’ll generally have a few that you know will be in your paper, so get them written ...now. This, the theory section, and portions of the introduction are generally the first things that I write. These together with the general outline of the paper defined by (i) the abstract and (ii) the section names will fill up a number of pages before you’ve begun to write up your new content. This provides an initial momentum to the paper that can significantly reduce the time it takes to complete the writing portion of research.