Guidelines for the Research Paper

The major assignment for this class is the research paper. The goal of this assignment is to get you thinking about issues raised in class. In particular, the paper should make you think about how the work we do in class relates to a real-world issue. For the paper, you should apply the materials of the course to a current issue in science and technology policy. The problem may be one that has been addressed in policy circles, or one that hasn’t been addressed, but that you think should. You may choose to argue that a problem is being addressed incorrectly, or even that it shouldn’t be addressed at all (e.g. that the problem is not serious enough to justify government intervention). Several suggestions for topics are listed at the end of this handout. Your paper should begin with a brief description of your issue, and include a review of the theory that is relevant to your topic. The main portion of the paper should apply the theory to the topic at hand in a way that allows you to draw your own conclusions about the topic of your paper.1

The research paper will be due at the beginning of our last class meeting Tuesday, April 29. It should be between 10 and 15 pages, double-spaced. To get you thinking about a topic, a short (one-page maximum) statement of your topic will be due on Tuesday, March 4. The short paper should state what your question is, why it is of interest (to you and others), and include some preliminary ideas of how you will proceed. You are encouraged to come talk with me about paper ideas well before the March 4th deadline. Even though this is not due until March 4, you should begin preliminary research on a topic soon! The late due date is to give students a chance to see what topics covered in class interest them, and to allow time to do some preliminary research on these topics.

I have included information on locating sources and on potential topics. The list of topics should help you get started; however, you are encouraged to come up with a topic on your own. You are more likely to write a successful paper on a relatively narrow topic (e.g. should software be patentable?) than on a broad topic (e.g. are patents good or bad?).

Finally, note that the paper requirement for Ph.D. students is slightly different. Rather than simply analyzing a policy question, Ph.D. students should prepare a research proposal. The purpose of this assignment is to get you thinking about doing your own research, and to force you to think more carefully about the methods used by economists. Note that I do not expect you to carry out your proposal by the end of class. One semester is not enough time to do Ph.D. quality research. Rather, your paper should:

1) State the question that you propose to address (note that for most of you, the question is likely to be inspired by a policy issue, although that isn’t necessary),
2) Summarize the existing literature on this topic,
3) Show how your proposed research contributes to the literature in this area, and
4) Propose how you would go about answering your question.

1 Note that you are free to cite the views of others in your paper. However, the final paper must be in your own words, and any references to the works of others, whether directly quoted or merely paraphrased, must be cited. Be aware that failure to properly acknowledge the contributions of others can be considered plagiarism and will be severely punished.
Helpful Resources

To get started, you may find it helpful to check current events magazines, such as the Economist. In addition, the Journal of Economic Perspectives, which is the source of many of the articles on the reading list, is written to be accessible to a wide audience, and often have articles pertaining to technology issues. One specialized journal that is of particular use is Research Policy. This journal aims at a multidisciplinary audience. This is one of the journals available through the library in electronic form. In addition, general-interest economic journals such as American Economic Review often include articles related to science and technology. In particular, the RAND Journal of Economics publishes several articles a year on science and R&D. Be warned, however, that these articles are often technical in nature.

To find journal articles, the best place to look is on EconLit. This is available on-line from the SU library. To access it, go to: http://libwww.syr.edu/
Once there, click on: Databases
which will give you access to the various databases available through SU. EconLit is on this list.

Also available on the databases page is the Expanded Academic Index from InfoTrac. This indexes current event articles from newspapers and magazines. One of its best features is that you can download copies of articles from the Economist. Use the link: Expanded Academic ASAP
in the database menu to access this resource.

If you are looking for statistics, the Internet can be a great help, if you know where to look. In particular, when using the Internet, pay close attention to the source of your information. Many groups with specific agendas have sites on the Internet. **Be aware of the policies being advocated at a particular site when examining their information and considering its credibility.** Should you need any assistance in finding a topic or a source, please do not hesitate to ask. When looking for data, the following are some useful sources:

- Perhaps the most useful page for economists is Resources for Economists on the Internet, found at: http://econwpa.wustl.edu/EconFAQ/EconFAQ.html

- The U.S. government also has many useful sites. For starters, the National Science Foundation’s Division of Science Resources Statistics has several useful publications. Their home page is: http://www.nsf.gov/sbe/srs/

- A wide range of US patent data is available through the US Patent and Trademark Office (USPTO), at: http://www.uspto.gov/
  A searchable database of US patents can be found at: http://www.uspto.gov/patft/index.html
  If you are simply interested in aggregated statistics (e.g. patent counts by year, for certain firms, etc.), you might also check the statistical reports prepared by the USPTO. These can be found at: http://www.uspto.gov/web/patents/stats.htm

- International patent data is available from a couple of sources. This data may be more difficult to comb through, as it helps to be familiar with the nature of the data from each country. However, I’m happy to help any interested students use the data.
  First, international patent data can be found in the INPADOC/Family and Legal Status database. A link to this database is available on the electronic database page of the Syracuse University library.
  Alternatively, the European Patent Office provides a free patent database containing information from over 50 countries. The database is available at: http://ep.espacenet.com/

- Links to these, as well as many other useful sites, can be found on the useful links section of the class home page: http://classes.maxwell.syr.edu/ppa730-05/index.html
Suggested Research Paper Topics

Some suggestions for paper topics are included below. This is not meant to be a comprehensive list, but rather a way to get you thinking about potential topics. Your topic need not come from this list, and I would encourage you to consider topics not on the list that meet your personal interests.

Should software be patentable?
Should business practices be patentable?
Should discoveries about the human genome be patentable?
Is harmonization of patent policies good or bad for developing countries?
What role should government R&D play? Should it only focus on basic research, or is applied government R&D also appropriate?
Is the US Court of Appeals devoted specifically to patent cases a good idea? How has it affected R&D in the US? Should other countries follow the US example?
How can intellectual property rights keep up with the digital age?
Should the Digital Millennium Copyright Act (DMCA) be reformed?
Compare and contrast the science and technology policies of two countries. Do any differences seem appropriate? Are their lessons each country can learn from the other?
What can developing countries do to encourage technology transfer? What can developed countries do to encourage technology transfer?
Should the US adopt a patent opposition system, such as is used in Europe?
Should tax credits for R&D be expanded?
What effects do government laboratories have on research? Here you might choose a specific laboratory and do a case study of the effects of that lab.
What effect does university research have on science? Should the level of university funding be changed?
Over the past 20 years, more university research funding has come from private sources, such as industry. Does this trend have an effect on the results of university research? Does it affect the overall level of technological progress?
Should the role of government laboratories be expanded?
What role does environmental policy play in encouraging the development of new technologies?
Should the government finance research on alternative energy resources? On fuel cells for cars?
Should the government encourage more joint research ventures, or are the dangers of decreased competition too significant?
Should the consumer price index (CPI) be adjusted for quality changes due to technological advances?
What role can technology transfer play in helping to alleviate global warming?
Should Internet sales be taxed?
What role, if any, should the government play in providing Internet access to citizens?
Should the government of South Africa be allowed to declare a national health emergency and invalidate patents for HIV drugs?
How can health care policy keep up with technological advances that provide greater quality of care, but that come at great expense?