### Labor Economics with STATA

Liyousew G. Borga



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## Research Tip Doing Scientific Literature Search

Liyou Borga

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#### Outline

Purposes of a Literature Review

2 Starting a Literature Review: The Basic First Steps

Structuring and Writing Up of a Literature Review

4 How (where) to find the relevant literature?

Before any research planning or data collection it is imperative to review the literature relevant to your research question.

The main reasons why you need to do this can be summarized as:

- To gain a full and in-depth understanding of a subject.
- To see if your intended research subject has been done before and avoid duplication.
- To avoid any errors made in similar research.
- To enable you to place your study within its context (i.e., so that you can show how your research will add to the existing sum of knowledge).
- To provide you with ideas to help you define or amend your own research topic.
- To provide you with information with which to compare and contrast your findings.

What a literature review is:

- An overview of what we know and of what we do not know about a given topic
- Not necessarily exhaustive, but up-to-date and includes all major work on the topic
- Intellectual context for your original research
- Motivation for your original research

What a literature review is not:

- A "laundry list" of everything written on a topic, where each source gets its summary paragraph
  - Lacks organization guided by thesis or research questions
  - Lacks synthesis of literature
  - Lacks critical evaluation of literature
- An annotated bibliography
- A literary or book review

#### What a literature review is not:

- "Popular" publications should not be included e.g. Newspapers, news magazines, or industry or popular publications.
- Even well respected publications, such as the Wall Street Journal, or The Economist are not appropriate sources for a literature review. (However, these sources may be useful to the researcher as background information during problem formulation)

The necessary first step:

• Select a topic and formulate a few well-defined research questions

• Brainstorm a list of search terms related to your topic and then search for sources

• Briefly review sources and use what you learn to refine your topic and research questions

The necessary first step:

- Select a topic and formulate a few well-defined research questions Examples:
  - Human capital formation (far too broad)
  - The technology of skills formation (still a bit broad)
  - Empirical estimation on the technology of skill formation (manageable)
- Brainstorm a list of search terms related to your topic and then search for sources

• Briefly review sources and use what you learn to refine your topic and research questions

The necessary first step:

• Select a topic and formulate a few well-defined research questions

- Brainstorm a list of search terms related to your topic and then search for sources
  - Keyword searches
  - Text/bibliographic databases
  - Reviewing reference sections
- Briefly review sources and use what you learn to refine your topic and research questions

The necessary first step:

• Select a topic and formulate a few well-defined research questions

• Brainstorm a list of search terms related to your topic and then search for sources

- Briefly review sources and use what you learn to refine your topic and research questions
  - Working backwards
  - Identifying core literature, the "classics"
  - Search out this preceding literature
  - (In simple terms) once you found a very suitable paper, look at what papers they are citing

- It is often useful to start reading with the most recent publications. This allows:
  - Focusing more quickly on current knowledge,
  - Recent research often includes references to relevant earlier research
- First read the abstract or summary to determine relevance and whether to review the article.
- As you read, keep in mind that the central purpose is to identify and describe the relevance of the study to your research

After taking in so many papers:

- How do we make sense of it all?
- How do we convey the sense that we've made to someone else?

#### How to structure a literature review?

- Seek common themes that tie together more than one paper.
- see if you can you lump papers together in multiple ways?
  - Is there an order within each strand?
  - Is the chronological development important?
  - Do authors agree with one another in their conclusions, or do they contrast with each other?
  - Do they agree on methodology?
  - Are there papers that fit in more than one strand of literature?
- Now that you've figured it out, tell the tale!
- You don't have to go into great detail about every paper. A sentence or two is often (but not always) enough

Some of the key issues one needs to evaluate:

- Is the research question significant and is the work original and important?
- Have the instruments used been demonstrated as reliable and valid?
- Do the outcome measures relate clearly to the variables with which the investigation is concerned?
- Does the research design fully test the hypothesis?
- Are the subjects representative of the population to which generalizations are made?
- Did the researcher observe ethical rules?
- Has the research reached such a stage that publication is justified and the results are meaningful?

A checklist of things to look out for:

- Introduction ...... Why did they start the research?
- Methods ..... What did they do?
- **Results** ..... What did they find?
- Discussion ...... What do the results mean?

- Continually link your discussion of the literature back to your thesis and research questions
- Link studies to one another; stress relatedness of research on your topic
- Prioritize Classics: Identify "classic" studies and discuss them accordingly (i.e., with more detail, and with an eye for their influence)
- Evaluate Gaps: Identify shortcomings of particular studies and/or the body of research as a whole; be critical!
- Frontier: Identify areas for further research; where can research on your topic go from here?

- Be mindful of your audience
  - be scholarly, but avoid jargon
  - manifest your grasp of the literature
  - show where your research fits
- Subheadings can help to clarify structure of review (for full-length literature reviews)
- Use direct quotations sparingly; paraphrase studies

#### Similarity:

- *also, again, in addition to, additionally, similar to, similarly, alike, like, agree, agrees with,* ...
- Disagreement:
  - *contradicts, counter, opposite, differs, debate, at odds, on the other hand, disagree, disagrees with, . . .*

Evaluation:

• *classic, pioneering, important, influential, lacks, fails to consider, ignores, overlooks, limited by/to, confined to, restricts attention to, ...* 

#### Works Consulted: Citation Issues

Citation Tool used to manage the search results

- Choose your citation tool before conducing your literature reviews
- RefWorks, EndNote, iCite, BibTex

When to Cite

- In general, you need to give credit with a citation anytime you use someone else's ideas.
- Appropriate citation practice is of crucial importance. Failure to cite properly is plagiarism
- If you use someone else's ideas without using the same wording, use a general citation such as "according to Friedman (1986), ..."
- If you use another author's exact words, enclose the passage in quotation marks and cite the source, including page number. Lengthy passages should be indented

How to Cite

- Nearly all economics journals use the "science" citation convention of citing author and year in the text
- Every work cited in the text must appear in the list of references at the end of the paper

#### Where do I search for literature on my topic?



Probably you are already familiar with various search interfaces that are suitable for literature research.

- Web search engines can be a great starting point for your research, especially academic search engines such as Google Scholar.
- Almost all web search engines come with the disadvantage that we do not know which sites and sources they actually search.
- In order to obtain reliable and quotable on-topic information and to make sure that you do not miss important publications, the services of a university library are essential.

#### **Google Scholar**

Google Scholar is publicly available and covers all subjects.

- It sorts articles the way researchers do, weighing the full text of each article, the author, the publication in which the article appears, and how often the piece has been cited in other scholarly literature
- It has the simple Google search, in addition to a more advanced search option which allows searching by keyword, author and publication.
- It is also possible to limit by date and by specific broad subject areas.
- It also provides a link to the article (which may or may not be freely available), the number of times cited and links to citing articles, related articles and alternate versions.

Note of Caution: Google Scholar is not a recognized scholarly source and some of its citations are inaccurate or redundant. As such, it is advised that it be used as a finding aid.

#### **Google Scholar**

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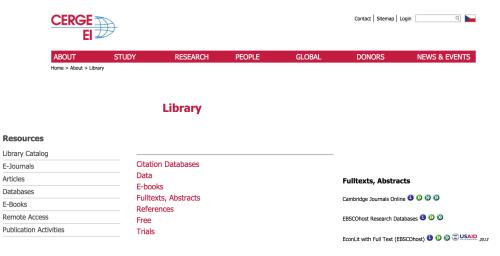
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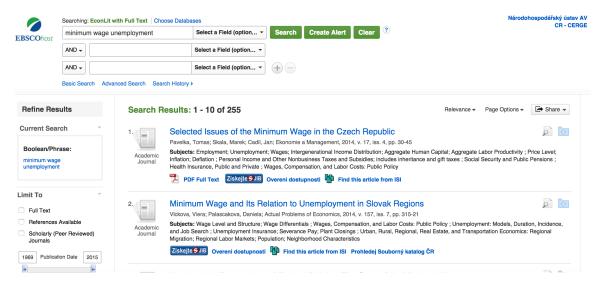
The CERGE-EI Library

- Offers a multitude of bibliographic databases for subject specific search
- Has a rich resource of economic literature, journals and contemporary economic literature
- So how do you find the right database for your subject in the library?

#### The CERGE-EI Research Library



#### The CERGE-EI Research Library



The database Web of Science is an on-line subscription-based scientific citation indexing service. Some essential facts concerning the Web of Science:

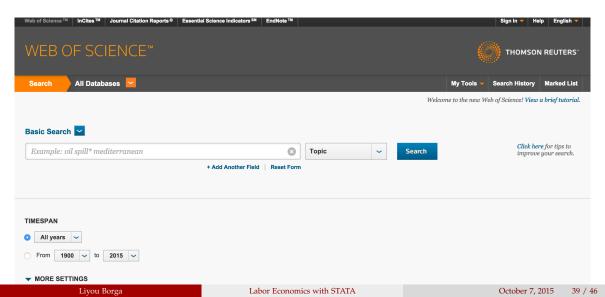
- Type of database: Citation database
- **Content:** More than 18 million entries in the section Science Citation Index Expanded (SCI); almost 3.5 million entries in the section Social Sciences Citation Index (SSCI).
- Fields of research:
  - SCI all areas of natural sciences, medicine and engineering sciences
  - SSCI all areas of social sciences including the natural scientific-oriented neighboring disciplines of social medicine and psychology.
- Reporting period: SCI 1900-; SSCI 1985-
- **Special features:** "Cited Reference Search" using this option you can analyze citations (prospectively and retrospectively)
- The Web of Science Core Collection and other databases are combined in the "Web of Science". The Web of Science Core Collection comprises three separate sources: data about the natural sciences, the social sciences and the arts & humanities.

# Start by visiting the Web of Science (formerly Web of Knowledge) cite http://webofknowledge.com/

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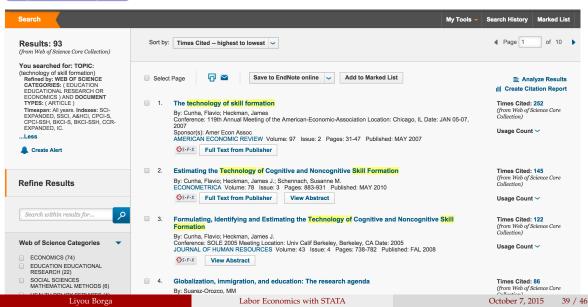
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MODE SETTINGS

#### Start by visiting the Web of Science (formerly Web of Knowledge) cite

http://webofknowledge.com/



The steps that you need to take in order to find the relevant literature on Web of Science efficiently are explained below

- Go to https://webofknowledge.com/
- Choose: All Databases > Web of Science Core Collection
- In the Search box type your keywords (e.g., minimum wage AND unemployment)
- Choose from the drop-down list next to the search line whether you want these keywords to be in: Topic, Title, Author, Editor or Publication date etc.
- To add another search line click on + Add Another Field.
- Choose Time span. (limit time to 5 years unless the topic is extremely narrow)
- Click on More settings and choose only Social Sciences Citation Index (SSCI) - 1900-present under Web of Science Core Collection: Citation Indexes (for the literature review that's what's most relevant)
- Click Search

#### Web of Science: Summary of Steps

When the search results are displayed, refine and save the results using the following:

- Choose Document type from the dropout list (e.g. "Article")
- Choose Field. From the Web of Science Categories choose Economics > Refine
- Next you can choose how to sort the papers found the drop-down list is just above the papers.
- Usually one chooses either Publication Date newest to oldest,(to track what aspects are really hot now) or Times Cited highest to lowest (to see the most influential papers)
- Check all the articles you think might be relevant (by ticking the box in-front); click on Add to Marked List - this saves you a lot of time by saving all citation info including the titles, authors, publication details and abstracts
- When done selecting papers, Go to Marked list. Chose what you want to see in your final output: Author, Abstract, Title, Source etc.
- Choose the type of document the results should be stored in. (e.g. Save to other file formats gives you options to save citations in tab-delimited, html or biblatex formats)
- Once you have read abstracts and decided which papers are relevant, get the full text and start reading

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How to obtain the full texts of articles:

## Øs-F-X

SFX - Service, Fernleihe, eXtras (Service, interlibrary loan and more)

- Many databases provide you with a link or button that you can use to access electronic full text: the link resolver SFX
- In some databases the SFX button is shown in the result list, while in others you have to go to the full de-tails of the respective article
- By clicking on SFX, a new window or tab opens listing acquisition possibilities

#### Web of Science: Summary of Steps

How to obtain the full texts of articles:

#### **KNIHOVNA**

AKADEMIE VĚD ČR

Title: The Technology of Skill Formation Source: The American Economic Review [0002-8282] Cunha, Flavio yr:2007 vol:97 iss:2 pg:31 -47

#### Full Text

- Full text available via EBSCOhost Business Source Complete
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- Full text available via <u>JSTOR Business Collection</u>
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