

Journal of Agricultural and Resource Economics

Style Guide

Submitted manuscripts should be no longer than 35 pages (including the reference list, tables, and figures). Double-space all text, including the abstract, acknowledgments, footnotes, and references. Make sure that the manuscript follows the style and formatting requirements outlined below.

The *Journal of Agricultural and Resource Economics* follows the *Chicago Manual of Style*, 17th ed., by the University of Chicago Press and *Garner's Modern English Usage* for style, grammar, and punctuation. The journal uses American English (US) spelling, style, and grammatical conventions. Where not addressed directly, defer to Webster's Third New International Dictionary for correct spelling. The following are commonly queried or commonly confused points.

Title Page

In a separate PDF file, provide the title of the manuscript and author(s)' name(s) centered and in boldface type. At the bottom of the same page, provide professional title(s), institutional affiliation(s), acknowledgments of colleague reviews and assistance, and institutional support as an unnumbered footnote. Please be sure to fully acknowledge any USDA funding source, including grant or project number(s).

The following items must be included on the title page, which must be separate from the manuscript.

A) Title

A precise, concise description of results gathered and/or analysis performed, no more than 15 words long.

- Avoid useless words and phrases (e.g., “influence of,” “effect on,” “evaluation of,” “results of,” “impact of,” etc.).
- Spell out abbreviations.
- Capitalize the first and last words of the title.
- Capitalize all other words except for articles (e.g., “a,” “the”), conjunctions (e.g., “and,” “but,” “or”), and prepositions (e.g., “in,” “on,” “after,” “of”) unless they are used adjectivally or adverbially (e.g., “Look Up,” “Turn Down”) or used in pairs (e.g., “With or Without,” “Above and Below”).
- Capitalize the second half of hyphenated words (e.g., “Spatial-Dynamic Benefits,” not “Spatial-dynamic Benefits”) unless the first half is a prefix (e.g., “Re-estimate,” not “Re-Estimate”).
- Always lowercase the second part of a species name (e.g., *Cephus cinctus*).

B) Running Title

An abbreviated version of the title, no more than 40 characters, which will appear on the front cover and in the header of odd-numbered pages.

C) Author Names

The full name(s) of the author(s), on one line, separated by commas. Do not include degree abbreviations, professional titles, or contact information.

D) Author Affiliations

Authors' full name followed by position title, departmental affiliation, and university or other organization. Do not include mailing address, telephone number, or email address.

- Authors should be presented in the same order as listed above.
- Do not capitalize position title.
- Capitalize department and university name (or company name if relevant).
- Indicate corresponding author parenthetically after the author's name.

For example:

“Marion W. Gushee (corresponding author) is an assistant professor of agricultural business and economics in the Department of Agricultural Science at Western Texas A&M University.”

If there are multiple authors from same institution, group them together (i.e., do not repeat the institution information); this may override the original order of authors:

“Benjamin M. Johnson is a graduate student, Leslie James Tompkins (corresponding author) is an associate professor, Vasyl Szpak is an assistant professor, and Nikolai Shmelov is a graduate student in the Department of Agricultural Economics and Agribusiness and Russell C. Gourley is a professor in the Department of Chemical Engineering at the University of Arkansas.”

In some cases, it may be preferable to indicate authors' affiliation at the time the work was produced:

“B. Mae Tayntor is a former graduate student in the Department of Agricultural and Applied Economics, University of Georgia.”

E) Acknowledgments

Conflicts of interest, credit, acknowledgment, or thanks for material or informational assistance. Acknowledge any USDA or other funding source, including grant or project number(s).

Use first person and full names (e.g., “We thank Karl Johnson for his many insights.”). Do not include titles (e.g., Dr., Prof., secretary), formal address (e.g., Mr., Mrs., Miss, Ms.), or degree abbreviations (e.g., PhD, MD).

Abstract Page

Include an abstract of 100 words or less, followed by up to eight key words (or short phrases) listed in alphabetical order. To ensure anonymity in the review process, authors should not identify themselves on the abstract page or in any headers.

A) Title

Repeat the title of the manuscript at the top of the abstract page.

B) Abstract

A concise, self-explanatory, summary of the article, no more than 100 words. Do not duplicate the title in the abstract. Do not include citations, footnotes, or references to tables and figures in the abstract. Do not include references unless absolutely necessary. Begin page numbers on the abstract page (page 1).

C) Additional Keywords

A list of up to eight keywords or phrases not already used in the title. List these alphabetically, separated by commas. Only capitalize proper nouns. Choose keywords to indicate the content and/or method of the manuscript. Avoid general or broad words and phrases such as “yield” or “growth.” Keywords should not repeat words or phrases that appear in the title.

Article Text

Begin the manuscript at the top of a new page. Suggested manuscript length is no more than 35 pages (including references, tables, and figures). The text should be single-column format, 12-point Times New Roman font, double-spaced, with continuous line numbering—including abstract, acknowledgments, footnotes, and references. Allow 1” margins on all sides. Do not justify right margins or use end-of-line hyphenation features.

A) Headings

Provide concise, descriptive headings for each section and subsection. The *Journal of Agricultural and Resource Economics* does not prescribe specific headings (e.g., “Materials and Methods,” “Results and Discussion”). The introduction should include a heading (“Introduction” is acceptable).

Headings (12-point font) should be capitalized using the main title guidelines.

- Level 1: Centered, bold
- Level 2: Left-justified, italicized
- Level 3: Left-justified, plain typeface

B) Footnotes

Use superscript Arabic numbers within the text, numbered consecutively throughout the manuscript. Place footnotes at the bottom of the page on which the footnote is referenced. If using Microsoft Word, use the automatic footnote feature.

C) Math/Equations

Display all but very short mathematical expressions centered and on a separate line. Label all displayed equations on the left margin with consecutive Arabic numerals in parentheses. Write all equations using LaTeX, MathType, Equation Editor, or equivalent. Under no circumstances should equations be submitted as images. These will need to be rewritten by the authors.

JARE follows the National Institute of Standards and Technology guidelines for typefaces for symbols in scientific manuscripts (see <https://physics.nist.gov/cuu/pdf/typefaces.pdf>). Use *italic* typeface for variables and *italic boldface* for vectors and matrices—both within equations and within the text. Equations referenced in the text must be labeled and the equation number enclosed in parentheses (e.g., “equation (5),” “equilibrium (2)”). Do not capitalize “equation.”

When variables (or other entities) are “equal to 1,” if applicable, add “and 0 otherwise.” Do not write out “one” and “zero” in these instances.

D) Citations

Parenthetical citations should use the author(s) name, followed by a comma and the year of publication (Johnson, 1992). Separate multiple parenthetical citations using semicolons (e.g., Johnson, 1992; Bekkerman, 2003). Use “et al.” (no italics, note punctuation) for sources with four or more authors (Smith et al., 2007). For sources with three or fewer authors, write out all of the authors’ names in the text.

When listing two or more citations parenthetically in the text, list chronologically first, then alphabetically if necessary (e.g., “Jones and Perkins, 1996; Kader, 2001; Smith, 2001”).

When one author or set of authors has more than one publication in a year, use “a,” “b,” “c,” etc. to distinguish (e.g., “USDA, 2017a,” “USDA, 2017b,” “USDA, 2017a,b,” “Johnson, 1996b”).

Quotations must appear exactly as written in the original published work (misspellings in the original work must be included as written and followed by “[sic]”).

Appendices and Online Supplements

Appendices and online supplements may be submitted with the manuscript. Appendices should include information that may be needed to understand the assumptions and/or conclusions discussed in the manuscript but that are too long to include in the main text. Examples include short mathematical proofs, variable description tables, and additional results tables, among others. Reference each appendix at least once in the text. Appendix footnotes continue numbering from main text. Tables, figures, and equations should be labeled A1, A2, etc. Multiple appendices are A, B, etc.

Supplementary materials are those that may interest and be of import to readers but are not necessary to understand the assumptions and/or conclusions of the manuscript. Examples include lengthy mathematical derivations, tables with robustness results, and survey instruments, among others. Supply supplementary online information as a separate file. Refer to tables and figures in the text as Table S1, figure S2, etc., or more generally as “the online supplement (www.jareonline.org).” Online supplements will not be copy edited. Color figures are acceptable in supplemental material.

References

Begin the reference section on a separate page. All citations in the text must be included in the references, and all references must be mentioned in the text. Check the reference list against literature citations in the text before submitting the manuscript for publication. Ensure that working papers and in-press articles have not been published before submitting your work. Papers submitted using LaTeX *must* include a .bib file or equivalent and use the \cite command.

- Do not abbreviate departments, journal titles (e.g., “*Journal of Agricultural and Resource Economics*,” not “*J. Agr. Res. Econ.*”), or agencies (e.g., “U.S. Department of Agriculture,” not “USDA”).
- Italicize the titles of journals, books, and reports (e.g., “*Journal of Agricultural and Resource Economics*”).
- Where relevant, give full pagination (e.g., “1101–1102,” not “1101–2” or “1101–02”).
- Use both volume and issue number, regardless of whether a journal paginates consecutively throughout the year.
- For U.S. cities, include 2-digit state abbreviation (e.g., “New York, NY,” “Boston, MA”). For international cities, include full name of city and country (e.g., “Amsterdam, Netherlands,” “Toronto, Canada”).
- Unpublished data or information received personally should be noted parenthetically rather than cited [e.g., “(R.L. Johnson, unpublished data)” or “(A. Bekkerman, personal communication)”].
- If a paper or manuscripts has been accepted for publication, cite the work as “(forthcoming).”
- Where no date is available (generally for websites or unpublished material), use “n.d.”

For authors using citation management software (e.g., Zotero, Mendeley), a .csl style file can be downloaded at <http://www.zotero.org/styles>. Search for *Journal of Agricultural and Resource Economics*.

A) Author Names

List references alphabetically by authors’ name, then chronologically (if an author or group of authors has more than one listed source).

- Do not use ampersands (&) in a list of authors. Instead, use the word “and.”

- Do not use “et al.” in the reference section. Write out all of the listed authors.
- Do not use a long dash to indicate an identical author.
- One author:
 Bekkerman, A.L.
- Two authors:
 Bekkerman, A.L., and R.S. Johnson
- Three or more authors:
 Bekkerman, A.L., R.S. Johnson, and M.W. Gourley

Do not abbreviate corporate or organizational authors or publishers/organizations:

- Centers for Disease Control (not CDC),
- U.S. Department of Agriculture (not USDA).

Where the author and publisher/organization are identical, the publisher name may be abbreviated.

B) DOIs and Web Addresses

Where available (generally for journal articles and some books/book chapters), DOIs (digital object identifiers) *must* be included.

Web addresses should only be included if the information would otherwise be difficult to find or access or is liable to change (as in databases). Where a web address is given, a date of access is necessary. A web address is never necessary if a DOI is available.

C) Examples

Article in an Academic Journal

Richards, T. J., and S. F. Hamilton. 2012. “Obesity and Hyperbolic Discounting: An Experimental Analysis.” *Journal of Agricultural and Resource Economics* 37(2): 181–198.

Mishra, A. K., and B. K. Goodwin. 2006. “Revenue Insurance Purchase Decisions of Farmers.” *Applied Economics* 38(2): 149–159. doi: 10.1080/00036840500367724.

Forthcoming Article

Bekkerman, A., and D.K. Weaver. 2018. “Modeling Joint Dependence of Managed Ecosystems Pests: The Case of the Wheat Stem Sawfly.” *Journal of Agricultural and Resource Economics*, forthcoming.

Book

Use the shortest version of the publisher name possible (e.g., “Elsevier” rather than “Elsevier Scientific,” “Penguin” rather than “Penguin Press,” “Wiley” rather than “John Wiley & Sons,

Ltd.”). In cases of university presses, use the full name (e.g., “Cambridge University Press,” “MIT Press,” “University Press of New England”).

Constantinides, G., M. Harris, and R. Stulz, eds., *Handbook of the Economics of Finance*, Volume 1B: Financial Markets and Asset Pricing. Amsterdam, Netherlands: North-Holland.

Greene, W. H. 2003. *Econometric Analysis*. 5th ed. Upper Saddle River, NJ: Prentice Hall.

Book Chapter

Camerer, C. F. 1992. “Recent Tests of Generalizations of Expected Utility Theory.” In W. Edwards, ed. *Utility Theories: Measurements and Applications*. Dordrecht, Netherlands: Springer, pp. 207–251. doi: 10.1007/978-94-011-2952-7_9.

Stohs, S. M., and J. T. LaFrance. “A Learning Rule for Inferring Local Distributions over Space and Time.” In J. P. LeSage and R. K. Pace, eds., *Spatial and Spatiotemporal Econometrics*. Advances in Econometrics 18. Amsterdam, Netherlands: Elsevier, pp. 295–331.

Conference Paper

Ward, C. E., M. K. Vestal, and Y. Lee. 2014. “Relationships between Alternative Marketing Arrangement Prices for Fed Cattle and Hogs, 2001–2013.” Paper presented at the annual meeting of the Western Agricultural Economics Association, Colorado Springs, CO, June 22–24.

Xie, J., Z. Gao, and L. House. 2013. “The Puzzle of Valuation Gaps Between Experimental Auction and Real Choice Experiments: Do Purchase Intention and Price Bargaining Preference Matter?” Paper presented at the Agricultural and Applied Economics Association annual meeting, Washington, DC, August 4–6.

Dissertation or Thesis

Meas, T. 2014. *The Effects of Country of Origin Image and Patriotism on Consumer Preference for Domestic Versus Imported Beef*. Master’s Thesis. Lexington, KY: University of Kentucky.

Zapata, S. D. 2012. *The Theoretical Structure of Producer Willingness to Pay Estimates, in Three Essays on Contingent Valuation*. Ph.D Dissertation. Clemson, SC: Clemson University.

Government Report

Agence de l’Eau. 2013. *Qualité des Eaux et Produits Phytosanitaires sur le Bassin Adour-Garonne: Situation 2012*. Toulouse, France: Agence de l’Eau Adour-Garonne. Available online at <http://www.eau-adour-garonne.fr/fr/toute-l-actualite/annee-2013/e-trimestre-2013/contamination-pesticides.html>.

Agriculture and Agri-Food Canada. 2013. *Canadian Farm Fuel and Fertilizer: Prices and Expenses*. Market Outlook Report 5(1). Winnipeg, Canada: Agriculture and Agri-Food Canada.

- Ainslie, C. 1929. *The Western Grass-Stem Sawfly: A Pest of Small Grains*. Technical Bulletin 157. Washington, DC: U.S. Department of Agriculture, Bureau of Entomology.
- Centers for Disease Control and Prevention. 2003. *National Health and Nutrition Examination Survey*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Available online at <https://www.cdc.gov/nchs/nhanes/index.htm>. [Accessed Jan. 10, 2014].
- Carlson, A., and E. Frazao. 2012. *Are Healthy Foods Really More Expensive? It Depends on How You Measure the Price*. Economic Information Bulletin EIB-96. Washington, DC: U.S. Department of Agriculture, Economic Research Service.
- Howden, L., and J. Meyer. 2011. *Age and Sex Composition: 2010*. Census Brief C2010BR-03. Washington, DC: U.S. Department of Commerce, Bureau of the Census.
- U.K. Department for Environment, Food and Rural Affairs. 2002. *Origin of the UK Foot and Mouth Disease Epidemic in 2001*. London, UK: DEFRA.
- U.S. Department of Agriculture. 2008. *U.S. Agriculture and Forestry Greenhouse Gas Inventory: 1990–2005*. Technical Bulletin 1921. Washington, DC: USDA, Office of the Chief Economist, Global Change Program Office.

Magazine and Newspaper Articles

Where available, include volume, issue, and pagination information. Otherwise, include web address and access date. Include city name for regional newspapers that do not include the name of the city in the newspaper title.

- Atkins, E. 2014. “Grain Farmers Growing Their Debt Loads in Wake of Rail Backlog.” *Globe and Mail* [Toronto, Canada]. Available online at <https://www.theglobeandmail.com/report-on-business/grain-farmers-growing-their-debt-loads-in-wake-of-rail-backlog/article18047592/>. [Accessed Sept. 2, 2016].
- Cummings, I. 2012. “Horse Slaughter: Company Picks New Location for Plant, with Different Result.” *Kansas City Star*: A1.
- Newport, A. 2013. “Surprising Factors Can Affect Auction Prices for Beef Calves.” *Prairie Farmer*. Available online at <http://www.beefproducer.com/story-surprising-factors-affect-auction-prices-beef-calves-14-102247>. [Accessed May 23, 2017].
- Reyes, L. C. 2009. “Overcoming the Toughest Stress in Rice: Drought.” *Rice Today* 8(3): 30–32.

Non-Government Report

- Hilliers, V. N. 2005. *Storing Foods at Home*. Extension Publication EB1205. Pullman, WA: Washington State University.
- World Trade Organization. 2012. *United States — Certain Country of Origin Labelling (COOL) Requirements*.” Dispute Settlement DS384. Geneva, Switzerland: World Trade Organization.

Software

SAS Institute, Inc. 2013. *SAS Systems for Windows* 6.1. Cary, NC: SAS Institute, Inc.

Working Paper

Amir, R. 2003. “Supermodularity and Complementarity in Economics: An Elementary Survey.” CORE Discussion Paper No. 2003/104. Tucson, AZ: University of Arizona. Available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=981364.

Athey, S., and S. Stern. 1998. “An Empirical Framework for Testing Theories about Complementarity in Organizational Design.” NBER Working Paper 6600. doi: 10.3386/w6600.

Website

U.S. Census Bureau. 2012. “Foreign Trade Statistics.” Washington, DC: U.S. Department of Commerce. Available online at <http://www.census.gov/foreign-trade/statistics/index.html>. [Accessed July 18, 2013].

U.S. Department of Agriculture. n.d. “Quick Stats.” Washington, DC: U.S. Department of Agriculture, National Agricultural Statistical Service. Available online at http://www.nass.usda.gov/Quick_Stats/. [Accessed Dec. 29, 2017].

Tables

In manuscripts submitted for review, either embed each table in the text where it is cited or place each table on a separate page following the references. For accepted manuscripts submitted in .doc(x) format, supply each table as a separate spreadsheet (one table per sheet) in an Excel workbook. Present only the data that should be formatted for print. In LaTeX documents, either embed tables where they are cited or place them after the references.

Number tables consecutively using Arabic numerals in the order in which they appear in the text. All tables must be referred to in the text. Capitalize the word “Table” when citing (e.g., “Table 1,” not “table 1”).

Tables should be self-contained and complement, not duplicate, information contained in the text. Place explanatory matter, including definitions of abbreviations, in a notes section beneath the table. The table, title, and notes must be concise and understandable without reference to the text. If data come from another published or unpublished paper, the original source should be cited in the notes. Use the following standard language to indicate significance:

- “Single, double, and triple asterisks (*, **, ***) indicate [statistical] significance at the 10%, 5%, and 1% level.”

Use the notes section to explain parentheses, brackets, footnotes, abbreviations, or data descriptions used in each table. Use alphabetical notes (a, b, c, d, e, etc.) as needed. Use asterisks only to identify significance.

Capitalize table and column titles according to the rules for the manuscript title. Column headings should be brief, with units of measurement in parentheses. Parenthetical information in column titles (such as measurements) should be lowercase. Column titles should be bold. All other text (including row labels) should be capitalized in sentence style (only the first word capitalized). Do not use bold, italic, or underlined text in row labels. Each cell should contain a single row of data (e.g., do not include a coefficient and its standard deviation in the same cell. Each figure should have its own cell).

Use minimal formatting. Do not use vertical lines to separate columns. Each table must have a consistent number of decimal places. In cases where more than four decimal points are required, scientific notation is preferred.

Figures

In manuscripts submitted for review, either embed figures in the text where they are cited or place each figure on a separate page following the tables.

For accepted manuscripts, figures can either be submitted as individual worksheets (one figure per sheet) in an Excel workbook or as individual image files (acceptable formats are .PNG and .JPG). Individual image files should be greyscale and of high resolution, with a minimum dpi of 300 (600 dpi is preferable for maps and photographs). Maps or photographs *must* be submitted as separate files. Do not embed figures in a Word document. In LaTeX documents, either embed figures where they are cited or place them after the tables.

Individually submitted figures should be no more than 5 inches wide. All text within the image must be Times New Roman, not bold or italic. Axis titles are 12-point font, sentence case. Axis labels are 10-point font, lowercase. Legends are either 10- or 12-point font, whichever works better. Figure background should be white, and the figure should not have a border.

Figures that will appear in print must be in greyscale to facilitate printing. All references to color (e.g., solid red line, shaded green area, etc.) must be changed to reflect this limitation. Figures in the online supplement may be in color.

Number figures consecutively using Arabic numerals in the order in which they appear in the text. All figures must be cited in the text. Capitalize the word “Figure” when citing (e.g., “Figure 3,” not “figure 3”). Use of two-part figure numbers (e.g., “Figure 2a” and “Figure 2b”) is discouraged except where all of the parts can fit on a single manuscript page.

Figure titles should be concise and capitalized according to the rules for the manuscript title. Place explanatory matter, including definition of abbreviations, in a notes section beneath the table. If data come from another published or unpublished paper, the original source should be cited in the notes. It is not necessary to cite “authors’ calculations” (or similar) as a source. Do not place figure title or caption within the figure graphics box.

Style, Grammar, and Punctuation

A) Dates

- Spell out and lowercase centuries (e.g., twentieth century).
- Spell out and capitalize names of days (e.g., Sunday, Monday) and months (e.g., December, July).
- When indicating a specific date, use day-month-year (e.g., January 1, 2000). Set off year with commas.
- When indicating a specific month and year, do not separate the year by a comma (e.g., January 2000).
- When referring to a span of years, use the full four-year date (e.g., 1994–2004, 1979–1983).
- When referring to a decade, add an s without an apostrophe (e.g., 1980s)

B) Numbers

As a general rule, use Arabic numerals for whole numbers. Use Arabic numerals with a unit or abbreviation of measure, including currency, proportions, rates, temperatures, percentages, dates, time, pages, and numerical designations such as “model 3.” Use Arabic numerals for all mathematics where symbols are used, where arithmetic function is discussed (e.g., “divide by 6,” “less than 1,” “significantly different from 0”), and where exponents are used (e.g., 10^{10}). Spell out numbers in the following cases:

- when the number is below 10 and immediately precedes a non-SI or non-English unit of measure (e.g., “two plants” but “2 m,” “three trees” but “3 ha”);
- when a number is used as a figure of speech (e.g., “a thousand times no”);
- when numbers begin sentences (reword sentences where possible to avoid starting with a number or a series of numbers, or end the preceding sentence with a semicolon).

Other numerical issues to keep in mind:

- Use a comma in numerals of four or more digits (e.g., 1,000; 12,382).
- For decimal fractions less than 1.00, use a zero in the whole-number position (e.g. 0.01).
- Follow the same rules as for whole numbers when using ordinals (1st year, but first survey). Do not use superscripts for ordinal numbers (e.g., 1st, not 1st).
- Use numerals for percentages (unless the percent falls at the beginning of the sentence); the word “percent” should always be a symbol (%). Repeat the percentage sign when indicating a range (e.g., 3% to 5%, 3%–5%).
- Where series in the text are numbered, use i), ii), iii), etc.

- Spell out fractions when they stand alone (note hyphen) (e.g., “one-third,” “one-half,” and “two-fifths”).
- When describing binary variables, use numerals 1 and 0.

C) Capitalization

Capitalization should follow standard rules of English. Only capitalize titles when they immediately precede a personal name (e.g., “Director of Operations Andrew Jones,” but “Andrew Jones, director of operations”).

Capitalize the first word of a full sentence after a colon. Do not capitalize numerical designations such as “model 2,” “experiment 4,” etc.

- Uppercase Table X, Panel X, Figure X, Graph X, Theorem X, Lemma X, Hypothesis X, Assumption X, Proposition X (no parentheses).
- Lowercase model X, column X (no parentheses), equation (x), equilibrium (x) (use parentheses).

D) Punctuation

Apostrophe

- Avoid contractions (e.g., can’t, won’t, shouldn’t). Instead, write out (e.g., cannot, will not, should not).

Colon

- Use a colon after “follows” or “following” when introducing a list or thought (e.g., “The expected utility model is as follows:”)

Comma

- Use the serial (i.e., Oxford) comma (e.g., “Crops studied include apple, pear, and cherry.”)
- *Which* introduces nonrestrictive clauses and is preceded by a comma; *that* introduces restrictive clauses and is not preceded by a comma (e.g., “the production practice that farmers use extensively” vs. “this production practice, which farmers use extensively, degrades stream quality”).
- A comma should not precede the word “because” unless omitting it would cause confusion (as is sometimes the case when the primary clause is negative). Refer to <http://www.chicagomanualofstyle.org/qanda/data/faq/topics/Commas/faq0018.html>.

En-dash

- Use en-dash (–) to connect two (juxtaposed, separate) ideas or items, rather than a hyphen (as in a compound adjective). In Word, an en-dash is created using the Ctrl+minus keyboard shortcut.
- Use en-dash for inclusive dates (e.g., July 3–5).
- Use an en-dash in place of a hyphen in a compound adjective when one of its elements consists of an open compound or when both elements consist of hyphenated compounds (e.g., “pre–World War II,” “non–real estate debts”).

Quotation Marks

- Use double quotation marks around direct quotations.
- Periods and commas precede closing quotation marks; colons, semi-colons, question marks, and exclamation marks follow closing quotation marks (unless they are part of the quotation itself).

E) Hyphenation

In general, do not use a hyphen after a prefix (e.g., co-, non-, re-, sub-, etc.) unless doing so would cause confusion (e.g., “suboptimal,” “comovement,” “nonrestrictive,” but “re-establish”).

A compound term is a combination of two or more words that, through use together, have acquired a special meaning. Compound adjectives should generally use hyphens (e.g., “well-known problems,” “1-year-old cattle”). Use an en-dash in place of a hyphen in a compound adjective when one of its elements consists of an open compound or when both elements consist of hyphenated compounds (e.g., “pre–World War II,” “non–real estate debts”).

Never use a hyphen for a two-word modifier if the first word ends in “ly” or if the word is “very” (e.g., “freshly harvested tomatoes” and “very high frequency”).

Hyphenate compound adjectives before the word they modify but not after the word (e.g., “variable-rate interest,” but “interest with a variable rate.” A compound modifier containing a numeral or spelled out number usually is hyphenated (e.g., “two-thirds majority,” “30-year-old farmer.”) Hyphenate written-out fractions (e.g., “one-half of respondents”).

F) Abbreviations

Write all abbreviations in full on their first use followed by their abbreviation (e.g., “ordinary least squares (OLS)”). The exceptions are USDA, U.K., U.S., and EU, which do not need to be spelled out in full on their first use in the text.

Abbreviate U.K. and U.S. when used as adjectives; spell out when used as nouns. Spell out the names of countries, states (in the United States), or provinces (in Canada) when they stand alone (e.g., no city is cited). Use U.S. post office abbreviations for states and provinces when they are given with the city or county. U.S. post office abbreviations are also acceptable as abbreviations in tables and figures.

G) Italics

Italicize scientific genus and species names, titles of published works, and foreign words that have not been naturalized into English. Additionally, italicize *a priori*, *ceteris paribus*, *ex ante*, *ex post*, *i.i.d.*, and *sui generis*. Do not use italics to indicate emphasis, quotations, or definitions.

Usage

| | |
|---------------------------|---|
| <i>a priori</i> | “Knowledge or justification independent of experience.” Italicize. |
| affect | To cause a change or to have an effect. Rarely used (in economics) as a noun. Compare “effect.” |
| afterward | Not “afterwards.” |
| agri-environmental | Hyphenated compound adjective. |
| agroecological | Closed compound adjective. |

| | |
|---|--|
| among | A preposition used in relating three or more things. Compare to “between.” |
| and/or | Avoid. |
| at this point in time, at the present time | Use “now” or “currently.” |
| between | A preposition used in relating two things. Compare “among.” |
| by means of | Use “by” or “with.” |
| by-product | Hyphenated compound noun. |
| <i>ceteris paribus</i> | “Other things equal.” Italicize. |
| comprise | To include or contain (e.g., “the series comprises six bimonthly issues” but six issues do not “comprise” the volume). Avoid “comprised of.” |
| continual | Repeated, but with breaks in between; chronic. Compare “continuous.” |
| continuous | Going on in time or space without interruption. Compare “continual.” |
| cost-effective | Hyphenated compound adjective. |
| cross section | Open compound noun. Hyphenate only as a compound adjective (i.e., “cross-sectional data”).state |
| data | When used in a collective sense, “data” takes a plural verb (e.g., “the data are presented in table 1”). One says “many data” or “few data,” not “much data” or “little data.” |

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| database, dataset | Closed compound nouns. |
| decision maker, decision making | Two words. Do not hyphenate (unless used as a modifier). |
| despite the fact that | Use “although.” |
| different | Avoid as an adjective. In the phrase “the procedure was used in 3 different models,” the word “different” adds nothing. |
| different from | Preferred to “different than.” |
| discrete | Distinct, separate, unrelated. (Note spelling; “discreet” means prudent or reserved.) |
| due to/ due to the fact that | Not to be used automatically as a substitute for “because of.” The phrase “yields fell due to severe frost” is incorrect; the correct form is “the decrease in yield was due to severe frost.” |
| dummy variable | Vague. Use “categorical variable” or “binary variable” where appropriate. |

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| e.g. | “For example.” Only use parenthetically. Should always be followed by a comma (e.g.,). Compare “i.e.” |
| effect | As a verb, to bring about or to cause to come into being (e.g., “effect change”). As a noun, the result of an action. Compare “affect.” |
| end result | Use “result.” |
| endo- exogenous | Note the spelling (not -geneous). |
| endpoint | One word. |
| ensure | To make certain or guarantee. Compare “insure.” |
| <i>ex ante</i> | “Based on forecasts.” Do not hyphenate. Italicize. |
| <i>ex post</i> | “Based on actual results.” Do not hyphenate. Italicize. |
| <i>F</i>-test, -ratio | Capital and italic <i>F</i> . Hyphenated. |
| fairly | Avoid (as an empty modifier: “fairly equal,” “fairly reasonable.” Perfectly acceptable as an indication that something was done with fairness.) |
| farmers’ market | Following <i>Chicago</i> , use apostrophe. |
| federal | Do not capitalize, unless part of an official name, such as “Federal Reserve Bank.” |
| firsthand | Closed compound adjective. |
| farther | Indicates physical distance. Compare “further.” |

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| further | Indicates metaphorical distance. Compare “farther.” |
| hetero-, homogeneous | Note the spelling (not –genous). |
| i.e. | “That is.” Only use parenthetically. Should always be followed by a comma (i.e.,). Compare “e.g.” |
| i.i.d. | “Independent and identically distributed.” Italicize. |
| if | Only use conditionally (e.g., “Farms struggle if their debt-to-income ratio becomes too high”). Compare “whether.” |
| imply | To suggest or indicate by inference, association, or necessary consequence rather than by direct statement. Compare “infer.” |
| in order to | Use “to.” |
| indices | Plural of “index” (for measurable quantities). |
| infer | To derive by reasoning as a conclusion from facts or premises. Compare “imply.” |
| insure | To assure against loss; to take out insurance. Compare “ensure.” |
| Internet | Capitalize. |
| linkage | Refers specifically to “the act of linking” or “a system of links.” All other meanings, use “link.” |
| lead-up | Hyphenated compound noun. |
| lefthand | Closed compound adjective. |
| meta-analysis, meta-analytical | Hyphenate to reduce confusion. |
| multifaceted | Closed compound adjective. |
| needless to say | Leave out and consider leaving out whatever follows it. |
| note that | Avoid. Usually unnecessary. Similar constructions (e.g., “It should be noted that...”) should also be avoided. |
| <i>p</i>-value | Lowercase and italicized <i>p</i> . Hyphenated. |
| per capita | Do not hyphenate, even when used as a modifier (e.g., “per capita savings”). Do not italicize. |
| percent | Use symbol (%) and not the term with numerals. |
| probit | Lowercase. |
| policy makers, policy making | Two words. Do not hyphenate (unless used as a modifier). |
| premiums | Plural of premium. |
| quite | Avoid. |

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| rather | Avoid. |
| recall that | Avoid. Usually unnecessary. |
| re-estimate | Hyphenate to avoid confusion. |
| relatively | The term implies comparison and should accompany a basis for comparison: “relative” to what? |
| respectively | “In the order given.” Only necessary when it adds clarity. |
| righthand | Closed compound adjective. |
| separate | Avoid this term as an adjective. In the phrase “the procedure was used in 12 separate trials,” the word “separate” adds nothing. |
| significant | Confine use of the term to statistical judgment. Do not use the term loosely for “important,” “noteworthy,” “distinctive,” or “major.” |
| somewhat | Avoid. |
| <i>sui generis</i> | “Of its own kind/genus” and hence “unique in its characteristics.” Italicize. |
| <i>t</i>-statistic <i>t</i>-test | Lowercase and italicized <i>t</i> . Hyphenated. |
| that | A relative pronoun introducing a restrictive (defining, limiting) clause. For example, in the sentence—“The new production practice that farmers use extensively degrades stream quality.”—the defining clause (“that farmers use extensively”) is needed to identify the practice being discussed. Compare “which.” |
| this | Do not use as a standalone noun. After explaining a certain result, a sentence such as the following might appear: “This indicates an interaction between A and B.” This what? Determining what “this” means can be difficult. Use specific nouns (e.g., “This increase indicates...”). |
| time series | Do not hyphenate (except when used as a modifier). |
| Tobit | Uppercase. |
| toward | Not “towards.” |
| U.K., U.S. | Abbreviate as an adjective (e.g., “U.S. business practices”), spell out when a noun (e.g., “business practices in the United States”). |
| utilize | To use something in a way that is not its original intended purpose. In most cases, “use” is more correct. |
| versus | Do not abbreviate as “vs.” (exception is in table/figure titles). |
| very | Avoid. |
| website | One word. Do not capitalize. |

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| whether | Indicates that two alternatives are possible (e.g., “We determine whether individuals prefer choice A or choice B”). Compare “if.” |
| whether or not | Use “whether.” |
| where | Relative pronoun referring to physical location (also acceptable as “[equation], where a is a variable describing...”). Compare “which.” |
| which | <p>i) A relative pronoun introducing a nonrestrictive (nondefining, descriptive) clause. For example, in the sentence—“The new production practice, which farmers use extensively, degrades stream quality.”—the nondefining clause (“which farmers use extensively”) merely gives additional information about its subject, which has already been identified by the adjective “new.” Compare “that.”</p> <p>ii) Relative pronoun referring to situations (e.g., “A case in which this theorem does not hold”). Compare “where.”</p> |
| willingness-to-pay | Hyphenated compound adjective. Do not hyphenate when used as a noun. (May also be abbreviated as WTP.) |
| worldwide | Closed compound adjective. |