Publishing and Writing in Agricultural Economics

3 Journals / Journal quality / Impact factors & Co

- Agricultural Economics journals
- Economics journals
- Interdisciplinary journals
- General journal quality considerations
- Citation based journal quality measures
  - Impact Factor (IF) / aggregate IF / 5-year IF / …
  - Cited half-life, Total Cites, Immediacy Index…
- Expert based journal rankings
Academic Journals

- **Definition:**
  Peer reviewed periodical in which scholarship related to an academic discipline is published (non-peer reviewed: “professional magazines”)

- **Contain original research, reviews, book reviews…**

- **Typically published by professional publishing companies providing editorial service and making profit (subscriptions, submission fees, page charges)**

- **Development in recent years: Open access journals**
  - [https://open-access.net/DE-EN/open-access-in-individual-disciplines/economics-and-business-studies/](https://open-access.net/DE-EN/open-access-in-individual-disciplines/economics-and-business-studies/)
Agricultural Economics Journals

- *AgEcon* Journals in the Social Citation Index (SCI) Through Web of Science
  - Agricultural Economics
  - Agr Econ Czech
  - AgrEkon
  - American Journal of Agricultural Economics
  - Annual Review of Resource Economics
  - Applied Economic Perspectives and Policy
  - Australian Journal of Agricultural and Resource Economics
  - Canadian Journal of Agricultural Economics
  - China Agricultural Economic Review
  - Custos e Agronegocio
  - European Review of Agricultural Economics
  - Food Policy
  - German Journal of Agricultural Economics
  - International Food and Agribusiness Management Review
  - ITEA-Informacion Tecnica Economica Agraria
  - Journal of Agricultural Economics
  - Journal of Agricultural and Resource Economics

- The list of relevant journals for agricultural economists is much longer…see for example Berg et al. 2008 or University of Connecticut library
Economics Journals

- Again, JCI offers a limited list of currently 344 economics journals through Web of Science.
- A much longer journal list (more than 750 including a lot of regional journals) is provided by EconLit at http://www.aeaweb.org/econlit/journal_list.php.
Interdisciplinary Journals

- Since we often work at the boundary to the disciplines of agricultural sciences, environmental economics, energy economics,…journals of these disciplines and those explicitly interdisciplinary are relevant as well.

- Again, University of Connecticut library offers a useful search tool to find such journals….
General journal quality considerations

- Journal “quality” in terms of “usefulness” is a fundamentally subjective characteristic
- It might mean something different to every researcher depending on
  - Fit to own research (theoretical, applied, regional or content related focus…)
  - “visibility” in the relevant (sub-) discipline
  - Readership that is addressed by the journal
- However, some general notion exists that research is more valuable the more other researchers are interested in it
- Journal quality could be defined by the degree of potential attention for a given research paper
“Prestige” of journals

- Each discipline and sub-discipline has one or a few dominant journals with the highest “prestige” as viewed by the scientific community
- They get the largest number of submissions and are read by a large share of researchers in the discipline
- They can be very selective in choosing papers
- Examples:
  - *American Economic Review* (Economics)
  - *American Journal of Agricultural Economics* (Agricultural Economics)
  - *Ecological Economics* and *Journal of Environmental Economics and Management* (Environmental and Resource Economics)
  - *Agriculture Ecosystems & Environment* (Multidis. Agric.)
The role of the peer review process

- A journal may be small because its content is associated with a smaller (sub-) discipline
- Smaller journals’ publishing process not necessarily of lower quality
- Scientific quality implies absence of obvious errors, use of state-of-the-art methodologies, good style…
- Rigour of the peer review process has a strong relation to quality of published articles
  - Number of reviews (generally two or three)
  - Double or at least single blind reviews
  - Composition of editorial board and the reviewers (the latter sometimes listed in the last volume of a year: see for example European Review of Agricultural Economics)
  - Perceived rigour of review process can also be a criterion for ranking of journals (see, for example Berg et al. 2008)
Impact factor (IF)

- Especially the natural sciences have tried to measure journal quality with quantitative measures early on.
- The most used quantitative measure is the Impact Factor (IF)
  - Definition: Average number of citations by articles in indexed journals in a given year of articles published in the journal in the preceding 2 years.
  - Calculation of Food Policy 2015 impact factor: $509 = \text{number of citations in 2015 by articles in indexed journals of all articles published in Food Policy in 2013 and 2014}$; $249 = \text{number of articles published in Food Policy in 2013 and 2014}$; $\text{IF} = \frac{509}{249} = 2.044$
  - Invented by Eugene Garfield, founder of the Institute of Scientific Information, today provided by Thomson Reuters, a large US scientific information company.
IF evaluation

Advantages

- Wide international coverage with more than 10000 journals in Science and Social Science
- Objective measure (rules are clear)
- Widely available (although not free)

Disadvantages

- Short term nature of measure: citations more than two years after publication not relevant
  → makes it not very useful for economics, where use of new research by others takes a much longer time than in natural sciences
  → Five year impact factor now reported
- Wide acceptance of IF gives quite some power to Thomson Reuters who decide what journal is in and what journal is out (“indexed” or “not indexed”)
IF evaluation

Disadvantages continued

- Bias towards English language journals; Applied and regional journals are underrepresented
- Does include “self citations” which can be quite a large share, → however, transparent in web of science and not all self citations are bad….
- IF is rather volatile for smaller journals (one or two big hits can make a difference and the absence of those as well)
IF evaluation

Misuse

- Use of IF to evaluate single publications or productivity of researchers → journal IF does not imply large number of citations for individual articles (for example: In Nature, 90% of all citations in 2004 were related to 25% of its papers)

- Use of IF to compare journals of different disciplines → The absolute value depends on the size of the discipline

However aggregate impact factor for a subject category allows to compare a specific journal with the category average…see, for example, subject category economics in Journal Citation Reports
Cited Half-Life (CHL)

- Definition: Median age of articles of a journal cited in the current JCR year

- Example: A CHL of 8 in year 2015 means that 50% of the citations relate to the years 2007-2014. The other citations refer to older articles

- A high CHL indicates a long run relevance of articles → a lot of “classics” are published in the journal which have a long lasting impact on the profession

- Problem: younger journals or those recently gaining in “quality” cannot have a high CHL even if the articles currently published are very relevant to the profession
Total Cites / Immediacy Index …

- **Definition of Total Cites**: Simply the total number of cites to articles in a journal in a given year
  - Reflects size of journal and size of readership

- **Definition of Immediacy Index**: Number of citations to the articles in the journal published in the current JCR year
  - Even less relevant than IF for journals in economics

- Detailed citation structure tables allow to identify related journals and impact weighted by quality of citing journals

Looking at some of the things discussed in the JCR …
Conclusions on citation based measures of journal quality in (ag-)economics

- Are transparent and reproducible, i.e. in this sense objective
- Leave out a large body of publication outlets relevant to economists (non-indexed journals, WPs, book chapters, textbooks, professional magazines…)
- Relevance and absolute values differ between disciplines
- But even within disciplines implied rankings might not be sufficient for sub-disciplines (see Barrett et al. 2000)
- Do not replace the actual evaluation of specific journal articles to assess their contribution to the literature
Expert based journal ranking

- Expert based journal rankings allow to take into account a broader range of characteristics (citations, review process, relevance…)
- Often combine results of interviews of researchers in a discipline with citations based measures
- Effort to produce and regularly update such rankings is considerable
- Often used to evaluate output of researchers from specific institutions trying to gear ranking to the objectives of the institution
- A relatively new ranking for agricultural economics based on interview of German speaking researchers in this field has been provided by Berg et al. (2008) or Herrmann et al. (2011)…
Ag-Economics ranking (Berg et al. 2008)

- Motivated by deficiencies of IF based rankings for evaluations within universities and research institutions involving several disciplines
- Tries to take multidisciplinary nature of agricultural economics research into account by including journals of neighbouring disciplines
- Ranking based on interviews of researchers because
  - Citation databases do not exist for all relevant journals
  - It allows to include a broader set of criteria to define “quality”
- Two dimensions of journal quality (scale 1 to 10):
  - The rigour imposed by editors and referees in the review process
  - The perceived quality of the published articles
Ag-Economics ranking (Berg et al. 2008)

- German speaking researchers selected from member lists of professional organisations → 310 of 570 provided usable completed questionnaires
- Initial set of journals compiled from publication lists of research institutions and Science Council list used for evaluation (270 journals)
- Index was calculated which weights both quality dimensions equally – conditions for inclusion apply:
  - Regular readers could evaluate quality of articles
  - Authors could evaluate review process
  - Referees could evaluate both dimensions
  - Journal inclusion in ranking if at least 10 evaluations and submission in time horizon (after 2000) occurred

→ Index values for each journal between 0 and 10
Ag-Economics ranking (Berg et al. 2008)

Abb. 1: Verteilung der bewerteten Zeitschriften auf die Rating-Kategorien (n=160)

- A+ (>= 8): 4%
- A (7.00 - 7.99): 17%
- B (6.33 - 6.99): 22%
- C (5.67 - 6.32): 24%
- D (5.00 - 5.66): 20%
- E (< 5): 13%
## Ag-Economics ranking (Berg et al. 2008)

### Tabelle 2: Top 50-Rangliste für Agrarökonomiker relevanter Zeitschriften

<table>
<thead>
<tr>
<th>Rang</th>
<th>Name der Zeitschrift</th>
<th>Zahl der Bewertungen</th>
<th>Indexwert</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>American Economic Review</td>
<td>92</td>
<td>8,95</td>
<td>A+</td>
</tr>
<tr>
<td>2</td>
<td>Journal of Econometrics</td>
<td>31</td>
<td>8,48</td>
<td>A+</td>
</tr>
<tr>
<td>3</td>
<td>The Economic Journal</td>
<td>41</td>
<td>8,36</td>
<td>A+</td>
</tr>
<tr>
<td>4</td>
<td>American Journal of Agricultural Economics</td>
<td>237</td>
<td>8,29</td>
<td>A+</td>
</tr>
<tr>
<td>5</td>
<td>Journal of Economic Dynamics and Control</td>
<td>18</td>
<td>8,26</td>
<td>A+</td>
</tr>
<tr>
<td>6</td>
<td>Review of Economics and Statistics</td>
<td>34</td>
<td>8,25</td>
<td>A+</td>
</tr>
<tr>
<td>7</td>
<td>Journal of Applied Econometrics</td>
<td>28</td>
<td>7,96</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>Journal of Economic Behaviour and Organisation</td>
<td>42</td>
<td>7,82</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>Marketing Science</td>
<td>15</td>
<td>7,81</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>European Review of Agricultural Economics</td>
<td>269</td>
<td>7,79</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>The Journal of Development Economics</td>
<td>40</td>
<td>7,73</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>Journal of Productivity Analysis</td>
<td>20</td>
<td>7,70</td>
<td>A</td>
</tr>
<tr>
<td>13</td>
<td>Sociologia Ruralis</td>
<td>61</td>
<td>7,64</td>
<td>A</td>
</tr>
<tr>
<td>14</td>
<td>American Journal of Sociology</td>
<td>20</td>
<td>7,60</td>
<td>A</td>
</tr>
<tr>
<td>15</td>
<td>Economic Development and Cultural Change</td>
<td>48</td>
<td>7,46</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>Economics Letters</td>
<td>38</td>
<td>7,44</td>
<td>A</td>
</tr>
<tr>
<td>17</td>
<td>Journal of Environmental Economics and Management</td>
<td>30</td>
<td>7,41</td>
<td>A</td>
</tr>
<tr>
<td>18</td>
<td>Ecological Economics</td>
<td>87</td>
<td>7,36</td>
<td>A</td>
</tr>
<tr>
<td>19</td>
<td>Journal of Marketing</td>
<td>29</td>
<td>7,32</td>
<td>A</td>
</tr>
<tr>
<td>20</td>
<td>Kölner Zeitschrift für Soziologie und Sozialpsychologie</td>
<td>28</td>
<td>7,32</td>
<td>A</td>
</tr>
<tr>
<td>21</td>
<td>Agronomy Journal</td>
<td>12</td>
<td>7,29</td>
<td>A</td>
</tr>
</tbody>
</table>

```
32  Australian Journal of Agricultural and Resource Economics  95  7.28  A
```
## Ag-Economics ranking (Berg et al. 2008)

### Tabelle 3: Top20-Rangliste agrarökonomischer Zeitschriften

<table>
<thead>
<tr>
<th>Rang</th>
<th>Name der Zeitschrift</th>
<th>Zahl der Bewertungen</th>
<th>Indexwert</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>American Journal of Agricultural Economics</td>
<td>237</td>
<td>8.29</td>
<td>A+</td>
</tr>
<tr>
<td>10</td>
<td>European Review of Agricultural Economics</td>
<td>269</td>
<td>7.79</td>
<td>A</td>
</tr>
<tr>
<td>22</td>
<td>Australian Journal of Agricultural and Resource Economics</td>
<td>95</td>
<td>7.28</td>
<td>A</td>
</tr>
<tr>
<td>26</td>
<td>Agricultural Economics</td>
<td>266</td>
<td>7.16</td>
<td>A</td>
</tr>
<tr>
<td>30</td>
<td>Journal of Agricultural Economics</td>
<td>197</td>
<td>7.07</td>
<td>A</td>
</tr>
<tr>
<td>53</td>
<td>Food Policy</td>
<td>169</td>
<td>7.01</td>
<td>A</td>
</tr>
<tr>
<td>56</td>
<td>Journal of Agricultural and Resource Economics</td>
<td>100</td>
<td>6.61</td>
<td>B</td>
</tr>
<tr>
<td>57</td>
<td>Agriculture and Human Values</td>
<td>25</td>
<td>6.52</td>
<td>B</td>
</tr>
<tr>
<td>63</td>
<td>Canadian Journal of Agricultural Economics</td>
<td>98</td>
<td>6.49</td>
<td>B</td>
</tr>
<tr>
<td>64</td>
<td>Agricultural Finance Review</td>
<td>19</td>
<td>6.41</td>
<td>B</td>
</tr>
<tr>
<td>69</td>
<td>Journal of Agricultural and Food Industrial Organization</td>
<td>26</td>
<td>6.41</td>
<td>B</td>
</tr>
<tr>
<td>70</td>
<td>Journal of Agricultural and Food Economics</td>
<td>27</td>
<td>6.31</td>
<td>C</td>
</tr>
<tr>
<td>71</td>
<td>Journal of Food Products Marketing</td>
<td>11</td>
<td>6.30</td>
<td>C</td>
</tr>
<tr>
<td>78</td>
<td>Review of Agricultural Economics</td>
<td>107</td>
<td>6.30</td>
<td>C</td>
</tr>
<tr>
<td>78</td>
<td>Agribusiness: An International Journal</td>
<td>101</td>
<td>6.16</td>
<td>C</td>
</tr>
<tr>
<td>87</td>
<td>Food Quality and Preference</td>
<td>26</td>
<td>6.08</td>
<td>C</td>
</tr>
<tr>
<td>88</td>
<td>Agricultural and Resource Economics Review</td>
<td>48</td>
<td>6.07</td>
<td>C</td>
</tr>
<tr>
<td>89</td>
<td>Agrarwirtschaft</td>
<td>385</td>
<td>6.06</td>
<td>C</td>
</tr>
<tr>
<td>102</td>
<td>Acta Agriculturae Scandinavica - Section C Food Economics</td>
<td>36</td>
<td>5.79</td>
<td>C</td>
</tr>
<tr>
<td>103</td>
<td>Cahiers d’Economie et Sociologie Rurales</td>
<td>66</td>
<td>5.78</td>
<td>C</td>
</tr>
</tbody>
</table>

*) Der Rang bezieht sich auf die vollständige Liste
### Ag-Economics ranking (Berg et al. 2008)

**Tabelle 4: Wichtige interdisziplinäre Zeitschriften und solche aus Nachbardisziplinen**

<table>
<thead>
<tr>
<th>Rang</th>
<th>Name der Zeitschrift</th>
<th>Zahl der Bewertungen</th>
<th>Indexwert</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Agronomy Journal</td>
<td>12</td>
<td>7.29</td>
<td>A</td>
</tr>
<tr>
<td>23</td>
<td>Agriculture, Ecosystems and Environment</td>
<td>51</td>
<td>7.26</td>
<td>A</td>
</tr>
<tr>
<td>43</td>
<td>Agricultural Systems</td>
<td>75</td>
<td>6.80</td>
<td>B</td>
</tr>
<tr>
<td>61</td>
<td>Computers and Electronics in Agriculture</td>
<td>23</td>
<td>6.45</td>
<td>B</td>
</tr>
<tr>
<td>77</td>
<td>International Journal of Agricultural Resources, Governance and Ecology</td>
<td>27</td>
<td>6.20</td>
<td>C</td>
</tr>
<tr>
<td>86</td>
<td>Renewable Agriculture and Food Systems</td>
<td>17</td>
<td>6.09</td>
<td>C</td>
</tr>
<tr>
<td>92</td>
<td>British Food Journal</td>
<td>33</td>
<td>6.04</td>
<td>C</td>
</tr>
<tr>
<td>104</td>
<td>Journal of Sustainable Agriculture</td>
<td>32</td>
<td>5.75</td>
<td>C</td>
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<tr>
<td>109</td>
<td>Agroforestry Systems</td>
<td>16</td>
<td>5.57</td>
<td>D</td>
</tr>
<tr>
<td>114</td>
<td>Quarterly Journal of International Agriculture</td>
<td>149</td>
<td>5.52</td>
<td>D</td>
</tr>
<tr>
<td>127</td>
<td>Journal of Agricultural Education and Extension</td>
<td>10</td>
<td>5.47</td>
<td>D</td>
</tr>
<tr>
<td>124</td>
<td>Precision Agriculture</td>
<td>17</td>
<td>5.33</td>
<td>D</td>
</tr>
<tr>
<td>127</td>
<td>European Journal of Agricultural Education and Extension</td>
<td>18</td>
<td>5.29</td>
<td>D</td>
</tr>
<tr>
<td>135</td>
<td>Agricultural and Food Science</td>
<td>10</td>
<td>5.12</td>
<td>D</td>
</tr>
<tr>
<td>139</td>
<td>Journal of Agriculture and Rural Development in the Tropics and Subtropics</td>
<td>15</td>
<td>5.00</td>
<td>D</td>
</tr>
</tbody>
</table>

*) Der Rang bezieht sich auf die vollständige Liste
Ag-Economics ranking (Berg et al. 2008)

Conclusions

- First ranking of journals relevant for Ag-Economists
- Includes other than AgEcon journals
- Reveals implicit perception of quality (and relevance) of German speaking Ag-Economists
- Ranking correlated with but certainly not equivalent to other (disciplinary) rankings

Critique and word of caution

- Also this ranking can be misused
- Scientific journals do not include all relevant scientific writing (transfer to non-academic world!)
- Some journal did not receive enough evaluations

See recent international survey: Rigby et al. 2014
<table>
<thead>
<tr>
<th>Journal rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verband der Hochschullehrer für Betriebswirtschaft</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Journal quality</th>
<th>Impact factor</th>
<th>Cited half-life</th>
<th>Other Citation Measures</th>
<th>Journal rankings</th>
</tr>
</thead>
</table>