# A comparison of coverage and citation matching in Google Scholar, Web of Science and Scopus

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Background: It is well known that the databases most often used for bibliometric analysis and evaluations, i.e. Web of Science and Scopus, have better coverage of the research literature within some fields than others. This circumstance has implications for bibliometric analysis, partly because there are publications missing when research is being evaluated and partly because there are documents missing *citing* the evaluated publications.

Aim: The aim of the study was to illuminate some aspects of how the coverage of the databases influences the outcome of bibliometric evaluations for a research group within a field relatively poorly covered by Web of Science (and to some extent Scopus) namely embedded electronics and computer systems.

Method: A case study was done by looking at publications from a Unit of Assessment in the KTH RAE2012. Coverage and citation numbers were compared in Web of Science, Scopus and Google Scholar. The publication type and origin of a random selection of 100 citing documents in Google Scholar were manually analyzed. These citations were compared to Web of Science and Scopus, checking if each citing document and each cited document were indexed in the database, and (when both indexed) if they had resulted in a citation match.

Results: Most of the citations in Google Scholar originated from verifiable sources and they "hit" the right target document. To a large extent citations from articles and conference proceedings came from large established publishers. Scopus did cover cited and citing publications better than Web of Science, however a large part of the references in the Scopus records of the citing publications were erroneously indexed and therefore not resulting in a citation match. Several citations in Web of Science, especially to conference papers, did not match even though citing and cited publication were correctly indexed in the database.

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