Description of data, methods and indicators in KTH Annual Bibliometric Monitoring

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1   Data and Method

The Annual Bibliometric Monitoring at KTH are calculated at several levels, for the whole of KTH, for KTH's Schools, for Departments and for individual researchers. The access to the results at the individual level is restricted: only the individual herself/himself and managers above of the individual (e.g. head of Department, dean, vice dean) have access to the results.

KTH's local publication database DiVA is used as primary source for the presented statistics. Citation and collaboration statistics are based on Web of Science data.[1] All statistics are based on publications that have been registered in DiVA and that are affiliated to KTH in DiVA. This limitation has been made at all levels. If a Department is the result of the merging of two or more Departments, all publications published by the merged Departments have been counted for the new Department. The same apply for Departments which have changed location in the organizational structure. This has only been done for the presentation at the Department level.

Fractionalization: The statistics includes both indicators calculated as *full counts,* i.e. each publication/citation is counted as 1 regardless of the number of authors co-authoring the publication, and as *fractional counts* (or as *weighted* when calculating means), i.e. the author's fraction of each publication/citation is counted as $1/n$, where n is the number of authors of the publication. A unit's fraction is calculated as m/n, where m is the number of authors affiliated to the unit. However, if an author is affiliated to several units (Schools/Departments) within KTH, the author's fraction is equally distributed between the units. A unit's fraction is then calculated as the sum of its author fractions.

Fractionalized counts/weighted averages is used for some indicators since its makes the figures more comparable over time, a growing number of co-published publications would otherwise cause an inflation of the publication output. For co-publishing indicators fractionalized counts can underestimate the level of co-publishing. Therefore full counts are used for such indicators.

Self-citations and citation window: For all citation statistics, self-citations are excluded, defined as citations where the citing and the cited document have at least one common author name. For all indicators (except C3, see description below), citations are counted with an open window until the time for the analysis (last data update in the database), hence all citations from documents registered in the database at this point in time have been counted (including citation from conference indexes).

Publication types: For the counts of publications in DiVA (Table 1) the following document types have been included: Article, peer review; Article, other; Conference paper, peer review; Conference paper, other; Book; Anthology (editor); Chapter in book; Article, book review;

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[1] Science Citation Index Expended (SCIE), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (AHCI), Conference Proceedings Citation Index - Sciences (CPCI-S) and Conference Proceedings Citation Index - Social Sciences & Humanities (CPCI -SSH).

Proceeding (editor); Report; Doctorate thesis; Licentiate thesis. Conference papers are counted as "peer review" if they have this status in DiVA and have been published as full papers in a proceeding, book or a series.

For the three year window citation counts (Table 2), publications of the Web of Science document types "Article", "Proceedings paper", "Review", "Letter" and "Editorial" have been included.

The field normalized citation statistics includes "Article" and Review" only.

For all citation statistics, the value for each year refers to the year of the *cited* publications (not the year of the *citing* publication). E.g. if the value of the citation count is 100 for a given year, the publications published that year have received 100 citations within the given citation window.

2   Denotation and description of bibliometric indicators

Short name	Description
P full	Full count of publications.
P frac	Fractional count of publications.
C full	Full count of citations.
C frac	Fractionalized count of citations.
C3 frac	Fractionalized count of citations with a three year window. The indicator shows the number of citations received from publications published the same year and the two following years. Since older publications have had more time to get cited than new publications, time series of citations counts using an open window are not appropriate. By using a fixed citation window of three years comparisons over time can be made.
WoS coverage	Share of publications covered by Web of Science
cf	Mean field normalized citation rate. This indicator normalizes for the variation of citation pattern between subject fields. Each publication is compared to a reference group of publications, i.e. publications within the same Web of Science subject category, published the same year and of the same document type (article or review). This is done by dividing the number of citations of each publication with the average number of citations for the reference group of publications, which results in a normalized citation rate. The indicator value expresses the field normalized average citation rate of the unit's publications. It follows from the definition of cf that the mean field normalized citation rate of all records in the Web of Science database is 1. A citation rate above one indicates

	that the set of publications is cited above world average, e.g. a citation rate of 1.2 indicates that the publications are cited 20 percent above world average.
Ptopx% (expressed both as count and share)	The number/share of publications among the x percent most cited. The same reference group as for the field normalized citation rate is used for the indicator. Publications can partly belong to the x percent most cited publications if several publications have the same citation value as the percentile limit or if the publication has been classified into multiple fields with different percentile limits.
jcf	Mean field normalized citation rate for journals and serials. This indicator shows the citation impact of the journals in which the unit has published. It is calculated as an average of the field normalized citation rate of the set of journals in which the analyzed unit has published. If the unit has published multiple articles in the same journal, the journal's citation rate is counted one time for each article. This journal indicator is normalized for field differences by the same principles as the field normalized citation rate (cf). For a publication published in the year x, the value of the journal is based on the years x-1 to x-5.
JtopX% (expressed both as count and share)	The number/share of publications that have been published in journals which are among the X percent most cited. The same reference group as for the journals' field normalized citation rate (jcf) is used for the indicator. The journals in the topX% category publish X percent of the publications in the reference group. A journal can partly belong to the topX% percent if it stretches over the percentile limit or if it has been classified into multiple fields with different percentile limits.
International co-publishing	This indicator shows the number of publications that has been co-published between two or more countries. The default presentation of this indicator is by full counts.
Swe. non-univ. co-publishing	This indicator shows the number of publications that has been co-published between a university and Swedish non-university organizations. The default presentation of this indicator is by full counts.