THE NEED TO LOOK AT DISTRIBUTIONS RATHER THAN POINT METRICS

Evidence Thomson Reuters

Bloomington

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We can track the change in UK research base ‘impact trajectory’
But for much research evaluation we have a problem with skewed distributions

The research variables for which we have metrics – funding, group size, outputs, citations - are skewed and therefore difficult to picture in a simple way.
So we prefer an Impact Profile® (UK, 680,000 papers over ten years)

MODE (cited)

AVERAGE

NCI = 1.35

Percentage of output 1995-2004

RBI = 0
RBI > 0 - 0.125
RBI 0.125 - 0.25
RBI 0.25 - 0.5
RBI 0.5 - 1
RBI 1 - 2
RBI 2 - 4
RBI 4 - 8
RBI > 8

% of UK output over decade
We can functionally separate elite institutions from UK background

This is the small but critical excess of really highly cited research papers
Two units differ markedly in average normalised citation impact (2.39 vs. 1.86) because of an exceptionally high outlier in one group, but the groups have similar profiles.