

# Revealing the Impact of Researcher and Institutional Collaborations Through Normalized Indicators

Jeffrey Dougherty, Marisa Ruccolo, Solutions Specialists – Scientific & Academic Research

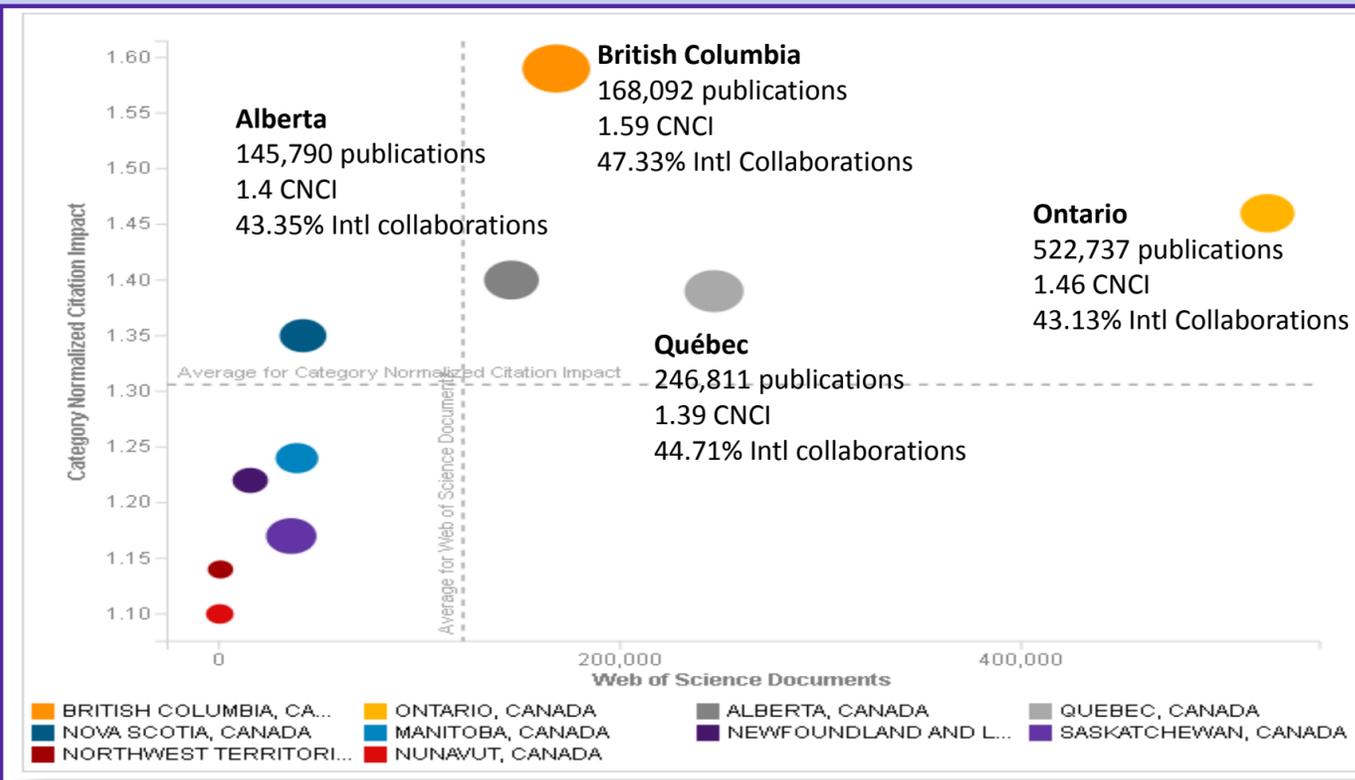
**Abstract:** InCites Benchmarking & Analytics can identify the increase of Category Normalized Citation Impact, correlated with a higher percentage of international collaborations, over a quantitative publication output. The data stems from all indexes of the Web of Science Core Collection (including ESCI) and all document types. A brief literature review reinforces this trend in various parts of the globe: From 46 countries in Africa (Adams et al. 2014) to Russia's collaboration with stronger economies (Markusova et al. 2012), Brazil's collaboration with foreign journals (Strehl et al. 2016) and a US study on impact variation for US researchers' mobility (Payumo et al. 2016).

## Normalization: Putting Citations in Context

<b>Field/Discipline:</b> Citations vary significantly across disciplines			<b>Time:</b> Citations grow over time at various rates			<b>Document Type:</b> Citation behaviors vary by type of publication		
Category Normalized Citation Impact	Journal Normalized Citation Impact	Average Percentile	% Documents in Top 1%	% Documents in top 10%	ESI Hot & Highly Cited Papers	% Hot Papers	% Highly Cited Papers	

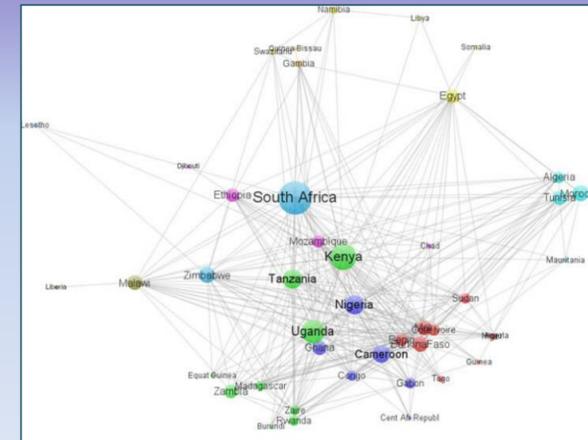
### Canadian Provinces (2008-2018) – Output/Impact/International Collaborations

Although Ontario has more output with 522,737 publications and 43% international collaborations, British Columbia has a slightly higher CNCI with less than a third of the publications (157,894) and a higher percentage (47%) of international collaborations.

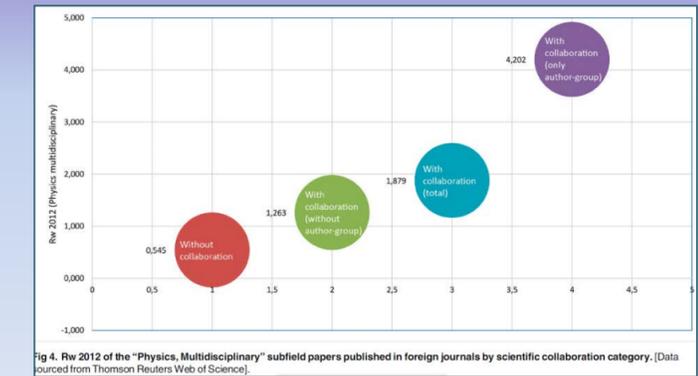


## Normalized Indicators and International Collaborations: A literature review

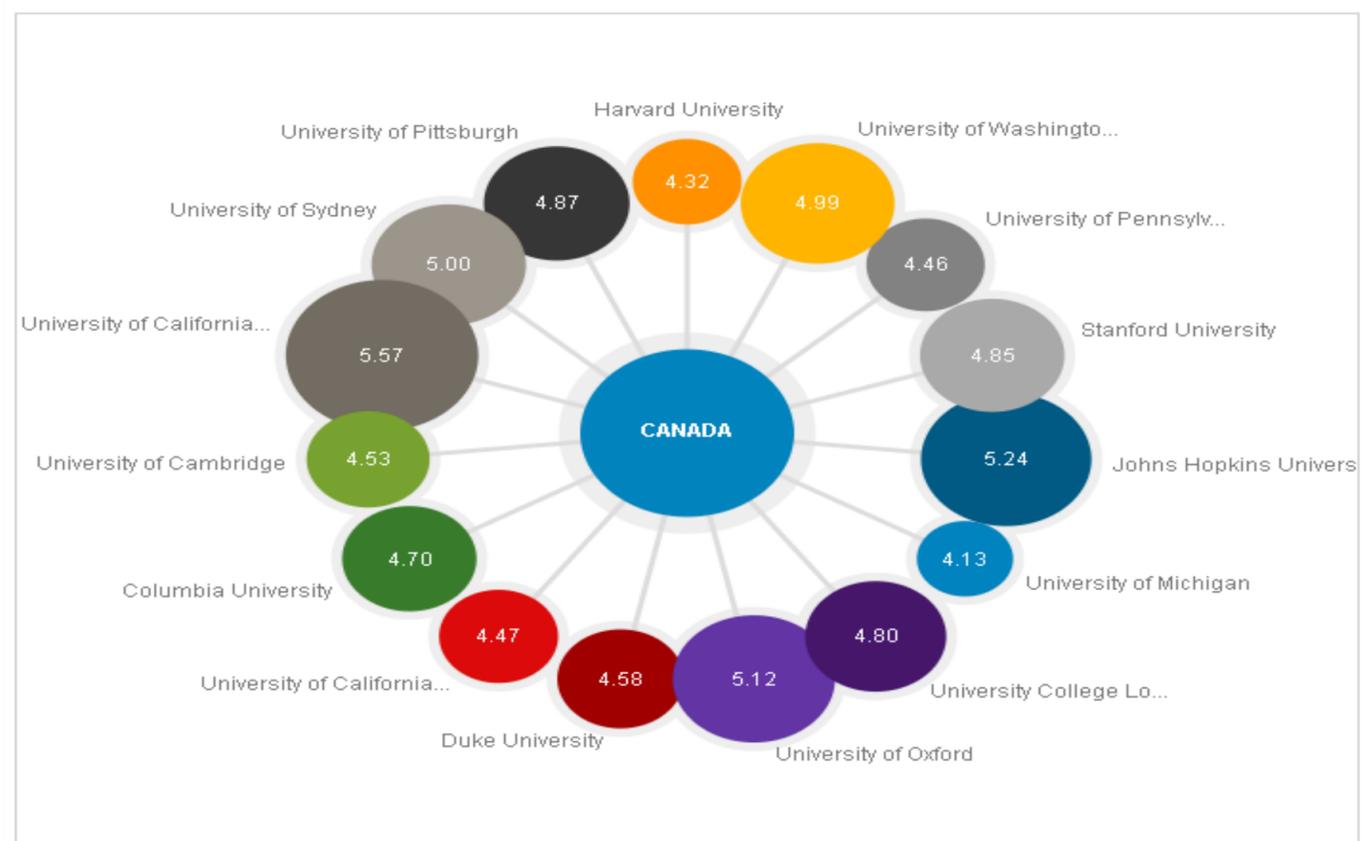
Adams et al. (2014): Coauthorship relations between 46 countries within Africa in 2011



Strehl et al. (2016): Brazilian Physics papers published in foreign journals



### Top Intl Academic Collaborators by CNCI + Canadian Universities 2008-present



InCites dataset updated Oct 31, 2018 includes Web of Science content indexed through Aug 31, 2018



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