

## Chapter 9

# Capturing Scholarly Communication in Southeast Asia: A Bibliometric Perspective

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### ABSTRACT

*One of the objectives of the Association of Southeast Asian Nations (ASEAN) is to promote scientific and research collaboration in order to raise the level of competitiveness in Southeast Asia. Bibliometrics can play an important role in informing science and scholarship policy evaluation and recommendations in this region. Bibliometric researchers have been observing scholarly activities in this region since the 1980s. However, the number of scholarly publications in this region has been relatively low compared to the rest of the world. Most of these bibliometric studies focus on benchmarking research performance between these countries, although they vary in many regards, for instance, in the countries/regions of interest, data sources, and analytical techniques. Evaluation studies of collaboration within this region are evidently rare and mostly focus on collaborations with non-ASEAN countries. By connecting the results of these studies through different periods and methodological perspectives, this chapter discusses the challenges and knowledge gaps in this research area in order to identify potential research topics and approaches for future studies.*

### INTRODUCTION

Researchers in science and technology studies have been studying scholarly communication as a means of understanding the evolution and dissemination of scientific knowledge for decades. Bibliometrics,

a quantitative evaluation of publication and citation data, has been used as a primary technique to capture many scholarly activities. (Leydesdorff & Milojevic, in press; Smith, 2012) The contribution of bibliometrics is not only limited to the understanding of individual involvement in a scholarly community but is also extended to the management of research programs and science and technology

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policies. (e.g., Leydesdorff & Van den Besselaar, 1997; Lepori & Reale, 2012)

A recent trend in bibliometric research has been particularly geared towards the evaluation of an individual's research performance by striving to develop robust individual indicators to measure scholarly communication activities as well as to examine communication patterns among scholars in particular disciplines (i.e., co-citation analysis). Limited numbers of published studies have focused on the application of such technique to assist science and scholarship policy development on either a regional or international scale.

This chapter is fundamentally inspired by this observation and attempts to shed some light on this issue by reviewing a number of evaluative studies of scholarly communication activities in Southeast Asia (a.k.a. SE Asia). The institutionalization of the SE Asia region as the Association of Southeast Asia Nations (ASEAN) has presented the opportunity to enhance the research performance of scholars in this region. Bibliometrics has been used to investigate the patterns of scholarly communication in SE Asia for decades but the body of knowledge in this topic has been growing sporadically. This chapter aims to provide a state-of-the-art and overall landscape of scholarly communication in this region as well as to discuss some areas for future research development in terms of methodological perspectives and research issues and, especially, to assist the development of appropriate science and scholarship policy recommendations and strategies.

## **SCHOLARLY COMMUNICATION AND BIBLIOMETRICS**

The operational scope of scholarly communication in this chapter corresponds to what Borgman and Furner (2002; p. 6) proposed: “the communicative activities” of authors of scholarly works, excluding those who make a judgment as to the relevance of particular documents (e.g., editors, peer review-

ers, indexers, and readers). From this definition, it is apparent that the most conventional form of scholarly works is the document. Bibliometrics is considered as “the field whose concern is with the measurement specifically of properties of documents, and of document-related processes.” (p. 7) Therefore, bibliometrics can be utilized as an approach to observe the communicative activities of authors.

Adopting Borgman and Furner's typology of bibliometric studies of scholarly communication (2002), three facets are applicable to the development of a conceptual framework for this review of literature including communication behavior, scope, and level of aggregation.

The communication behavior facet is the main construct of interest. According to Borgman and Furner's typology, authors' communication behavior can be explained through their four different exhibited roles as writers, linkers (i.e., “choosers of documents to cite, acknowledge, or otherwise point, link, or refer to”) (p. 6), submitters (to journals or other publication sources), and collaborators.

The works included in this review employ an evaluative analysis as a frame of study. The evaluation of writing in this context concerns research productivity, the demographics of authorship, and the authors' writing styles. The evaluation of linking refers to actions of citation that informs certain characteristics of document's quality (e.g., journal impact and usage). The evaluation of submission indicates the authors' choices of medium to distribute their works (e.g., journal titles and journal disciplines). Collaboration is mostly evaluated by observing the level of association between two or more scholars in a particular work or project. It is important to note that some measures or evaluation techniques may capture multiple communication behaviors at a time.

Scope and level of aggregation are the two additional facets from Borgman and Furner's topology that are used to indicate the inclusion and exclusion criteria of bibliometrics studies.

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