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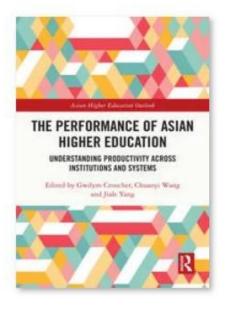
UNIVERSITY RESEARCH PRODUCTIVITY IN CAMBODIA: AN ANALYSIS OF SCOPUS-INDEXED PUBLICATIONS

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Chapter

University research productivity in Cambodia: An analysis of Scopusindexed publications By Vutha Ros, Kimkong Heng

Book The Performance of Asian Higher Education

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Research aim

- Research productivity = research and scholarly publications
- University research productivity in developing countries like Cambodia is **underdeveloped**, despite government and institutional initiatives.
- No bibliometric data on research productivity from Cambodia universities/higher education institutions (HEIs).
- To analyze Scopus-indexed publications from Cambodian HEIs between 1999 and 2019 (20 years)

Research questions

- 1. To what extent have publications by HEIs increased compared to other non-HEIs in Cambodia?
- 2. Which HEIs have the most significant number of publications?
- 3. Which fields have the most significant number of publications?
- 4. Which fields attract the most funding for publications?

Higher education and research capacity in Cambodia (literature review)

- Dramatic expansion/development in higher education
- 8 HEIs and about 900 lecturers and 5,000 students in early 1990s.
- 130 HEIs, 16,400 lecturers/staff, and about 200,000 students in 2022.
- Research-promoting projects (HEQCIP and now HEIP).
- University research grants (RUPP)

Measuring research productivity in Cambodia (literature review)

- Modest research output by Cambodian universities
- Only 15% of publications from Cambodian academics (n = 483) were international publications.
- Few could publish in peer-reviewed (international) publications.
- Lack of research on university research productivity in Cambodia

Methodology

- Data extracted from Scopus database.
- Scopus, launched in 2004, is the largest abstract and citation database for peer-reviewed literature.
- Scopus is used by leading university ranking bodies such as Times Higher Education and QS.
- Scopus-indexed publications from Cambodia between 1999-2019.

Methodology – cont.

- The analysis was conducted in April-May 2020.
- Various publications were included: articles, books, book chapters, conference papers, reviews, editorials, etc.
- Divided the analysis into two periods: 1999-2008 and 2009-2019.
- Analysis of publications by Cambodian/foreign authors affiliated with Cambodian HEIs.
- **28 Cambodian HEIs** were found in Scopus database.

Results

Types of document	Total number	
Article	3,600	
Review	235	
Conference paper	215	
Book chapter	212	
Letter	110	
Note	56	
Editorial	32	
Book	19	
Erratum	17	
Short survey	8	
Data paper	3	
Undefined	4	

Table 3.1 Number of Scopus-indexed publications from Cambodia between 1999 and 2019

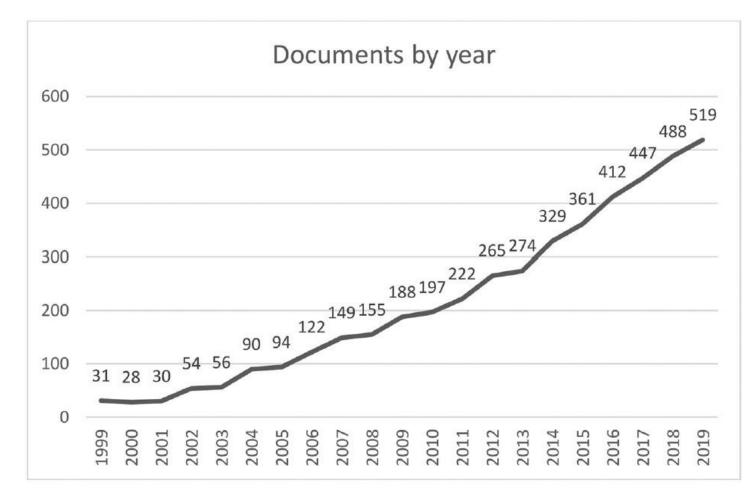


Figure 3.1 Growth in Cambodia's scientific output between 1999 and 2019

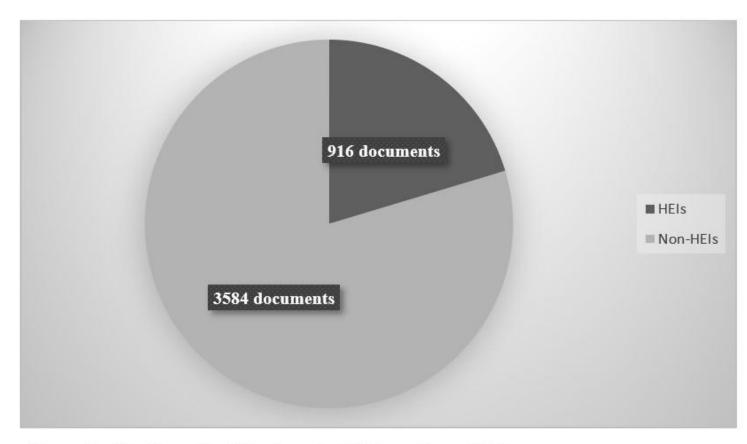


Figure 2: Number of publications by HIEs and non-HEIs

Table 3.2 Number of Scopus-indexed publications by year

Year	No. of publications	
2019	174	
2018	165	
2017	121	
2016	87	
2015	66	
2014	66	
2013	41	
2012	41	
2011	30	
2010	24	
2009	22	
2008	18	
2007	14	
2006	10	
2005	10	
2004	6	
2003	4	
2002	7	
2001	4	
2000	4	
1999	2	
1998	Not analysed	

R ank	Universities and other HEIs	Types	Number of publication 1999–2008	Number of publication 2009–2019	Total
1	Royal University of Phnom Penh	Public	19	224	243
2			14	160	174
3	University of Health Sciences	Public	10	147	157
4	Royal University of Agriculture	Public	22	104	126
5	National Institute of Education	Public	0	30	30
6	University of Battambang	Public	0	26	26
7	Paragon International University (formerly Zaman University)	Private	0	19	19
8	University of Puthisastra	Private	0	17	17
9	International University	Private	2	13	15
9	Royal University of Fine Arts	Public	3	12	15
10	IIC University of Technology	Private	0	13	13
10	Paññāsāstra University of Cambodia	Private	3	10	13
11	Royal University of Law and Economics	Public	1	9	10
12	National Polytechnic Institute of Cambodia	Public	1	8	9
12	Svay Rieng University	Public	0	9	9
13	American University of Phnom Penh	Private	0	5	5
13	Life University	Private	0	5	5
13	The University of Cambodia	Private	2	3	5
14	Preah Kossomak Polytechnic Institute	Public	0	4	4
15	Prek Leap National College of Agriculture	Public	0	3	3
15	National University of Management	Public	0	3	3
15	Build Bright University	Private	1	2	3
15	Cambodian Mekong University	Private	0	3	3
16	Limkokwing University of Creative Technology	Private	0	2	2
16	National Institute of Business	Public	1	1	2
16	Angkor University	Private	0	2	2
16	CamEd Business School	Private	0	2	2
17	Khemerak University	Private	0	1	1

Table 3.3 List of Cambodian universities and HEIs and number of publications indexed in Scopus between 1999 and 2019

Documents by subject area

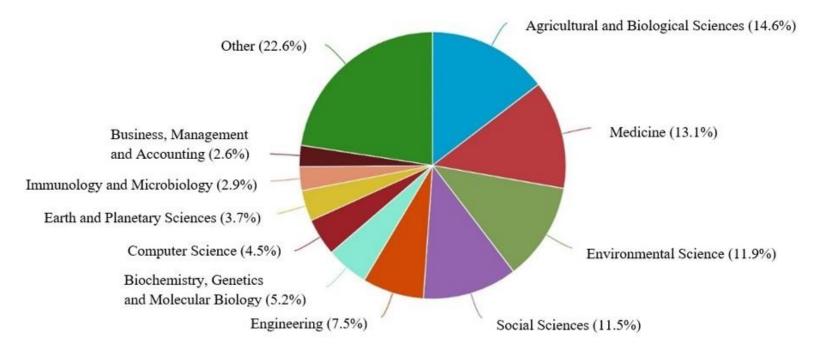


Figure 3. Cambodia's scientific output by subject areas

Table 3.4 List of top funding sponsors

No.	Institution/affiliation	No. of documents	Country	
1	Japan International Cooperation Agency	22	Japan	
2	National Institute of Allergy and Infectious Diseases	20	US	
3	National Institutes of Health	19	US	
4	Japan Society for the Promotion of Science	18	Japan	
5	United States Agency for International Development	15	US	
6	European Commission	14	EU	
7	National Natural Science Foundation of China	14	China	
8	Science and Technology Research Partnership for Sustainable Development	13	Japan	
9	Bill and Melinda Gates Foundation	11	US	
10	Eunice Kennedy Shriver National Institute of Child Health and Human Development	10	US	

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Table 3.5 List of common fields supported by the top ten funding sponsors

No.	Field	No. of documents	Funding sponsor (number of documents)
1	Medicine	64	National Institute of Allergy and Infectious Diseases (20); National Institutes of Health (19); Bill and Melinda Gates Foundation (11); Eunice Kennedy Shriver National Institute of Child Health and Human Development (10); Japan Society for the Promotion of Science (2); European Commission (2)
2	Engineering	40	Japan International Cooperation Agency (16); Science and Technology Research Partnership for Sustainable Development (10); Japan Society for the Promotion of Science (6); European Commission (3); National Natural Science Foundation of China (3); United States Agency for International Development (2)
3	Environmental science	15	European Commission (6); Japan International Cooperation Agency (4); Science and Technology Research Partnership for Sustainable Development (3); Japan Society for the Promotion of Science (2)
4	Maths	7	National Natural Science Foundation of China
5	Science	7	Science and Technology Research Partnership for Sustainable Development (4); Japan Society for the Promotion of Science (3)
6	Social sciences	2	United States Agency for International Development (1); Japan Society for the Promotion of Science (1)

Discussion and conclusion

• We strongly call for a reconsideration of the roles and aims of Cambodian HEIs concerning academic research and publication.

 Cambodian HEIs, especially universities, should prioritise research and scholarly publications indexed in globally recognised databases such as Scopus and Web of Science.

Discussion and conclusion – cont.

- Cambodia may consider transforming a few leading universities into research-oriented universities to push the development of a viable research culture.
- More attention and investment, including a public budget for research, should be channeled into research in humanities and social sciences because research in these disciplines is essential for a critical understanding of social, cultural and political issues confronting Cambodia.

Suggestions for future research

- Further research should look into the impact of publications and how Cambodian academics perceive research and scholarly publication.
- Future research should explore publications by both HEIs and non-HEIs to provide a more comprehensive understanding of research productivity in Cambodia.
- Strategies and mechanisms that support academics in resources-deficient contexts such as Cambodia to increase their research engagement and productivity are also welcomed.
- Research into how to foster a research and publication culture in Cambodian
- higher education.

Thank you for your attention.

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