

Publication Trends by Indonesia and Malaysia Affiliated Researchers About Public Policy, Technology, and Economics

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Abstrak. Makalah ini memberikan hasil investigasi tentang banyaknya artikel penelitian yang ditulis oleh peneliti Indonesia dan Malaysia terkait tiga hal, yaitu kebijakan publik, teknologi, dan ekonomi. Penelitian ini berfokus pada artikel-artikel yang terindeks Scopus dalam periode sepuluh tahun 2010-2019. Hasil kajian menunjukkan bahwa peneliti Indonesia kurang produktif dari awal periode dimana pada akhir periode, peneliti Indonesia menerbitkan lebih banyak artikel secara internasional untuk kategori kebijakan publik, teknologi, dan ekonomi. Lebih lanjut, secara total untuk topik apapun di akhir periode, peneliti Indonesia menerbitkan lebih banyak artikel dibandingkan dengan peneliti Malaysia. Namun demikian, jika dilihat dari proporsi banyaknya artikel yang terbit terhadap jumlah penduduk, proporsi Indonesia masih berada di bawah proporsi Malaysia.

Kata kunci: artikel penelitian; kebijakan publik; teknologi; ekonomi

Abstract. This paper aims to investigate the number of research articles authored by Indonesia and Malaysia affiliated researchers on three issues, namely, public policy, technology, and economics. This study focuses on articles indexed by Scopus in ten year period 2010-2019. The data shows that Indonesia affiliated researchers are less productive in the beginning of the period. At the end of the period, Indonesia affiliated researchers produce more articles published internationally for public policy, technology, and economics issues. Furthermore, in total for any topics at the end of the period, Indonesia affiliated researchers publishes more articles. However, if the number of published research articles is compared to the number of the populations, Indonesian researchers are still left behind Malaysian.

Keywords: research articles, public policy, technology, economics

1. Introduction

Since 2014, the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia has stipulated an operational guidance for the promotion of academic ranks of lecturers that motivates

lecturers to publish their research results internationally (<http://pak.ristekdikti.go.id>). Moreover, international publications are targeted to be indexed by reputable databases, such as Scopus and Web of Science, including journals and conferences.

Publication trends based on countries and fields have been investigated by a number of researchers. The following studies are referred to some of the publication. Bah, *et al.* [1] studied the publication trend in Gambia. Rizzoli, *et al.* [2] and Wondirad [3] presented their research on publication trends in social sciences. Publication trends in natural sciences have also been investigated by several researchers, such as Liou [4], Niforatos [5], as well as Olson and Bae [6]. Chang, *et al.* [7] discovered the publication trends in science education research. Some others have studied publication trends and productivity based on geographical region, such as in Malaysia [8] and Vietnam [9].

In a number of occasions, officers of the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia compared the publication productivity of Indonesian affiliated researchers with those of other neighbouring countries', especially that of Malaysian ones. This can be traced from some sources, such as the website of the Ministry (<https://risbang.ristekdikti.go.id/publikasi/berita-media/2019-publikasi-ilmiah-indonesia-teratas-di-asia-tenggara>). Their comparisons motivated this research paper.

This paper, aim to investigate the number of research articles published internationally and indexed by Scopus (<https://www.scopus.com>). The study is limited to articles authored by Indonesia and Malaysia affiliated researchers, and article with issues on public policy, technology, and economics issues. These three issues are chosen to be considered because, according to the authors' judgement, public policy and technology support the development of a country's economy. The observation shows that the trend of the number of research articles for these three issues in the two countries increases with a note that Indonesia's was left behind Malaysia's.

This paper is structured as follows: research methodology is described in Section 2, results and discussion are provided in Section 3, and conclusion of this paper is in Section 4.

2. Research Methodology

In this research, the data was gathered from Scopus on 3 January 2020 at 20.00 Western Indonesia Time. The data was viewed using the *Document search* tool available in Scopus. In total, there were eight data sets.

Six data sets were harvested using the following method:

1. Data set for the number of documents about public policy authored by Indonesia affiliated researchers indexed by Scopus for the period 2010-2019 was taken using the keywords 'public policy' in the Article title, Abstract, Keywords fields and 'Indonesia' in the affiliation country field.
2. Data set for the number of documents about public policy authored by Malaysia affiliated researchers indexed by Scopus for the period 2010-2019 was taken using the keywords 'public policy' in the Article title, Abstract, Keywords fields and 'Malaysia' in the affiliation country field.
3. Similar techniques to Steps 1 and 2 above were also used to harvest the data about 'technology' and 'economics'.

Two additional data sets were harvested using the following method:

1. Data set for the number of documents about any topics authored by Indonesia affiliated researchers indexed by Scopus for the period 2010-2019 was taken using the keyword 'Indonesia' in the affiliation country field.
2. Data set for the number of documents about any topics authored by Malaysia affiliated researchers indexed by Scopus for the period 2010-2019 was taken using the keyword 'Malaysia' in the affiliation country field.

After the data has been collected into tables, the data was plotted to investigate the trend of the publication about these three issues (public policy, technology, and economics) as well as any topics for both countries (Indonesia and Malaysia).

3. Results and Discussion

This section shows the eight data sets that have been harvested from Scopus as stated in Section 2 as seen in Table 1. To investigate the trend of this data, graphical comparisons are shown in Figure 1 for public policy, Figure 2 for technology, Figure 3 for economics, and Figure 4 for any topics.

Table 1. Number of documents about public policy, technology, economics, and any topics authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019

Year	Number of documents about public policy		Number of documents about technology		Number of documents about economics		Number of documents of any topics	
	Indonesia	Malaysia	Indonesia	Malaysia	Indonesia	Malaysia	Indonesia	Malaysia
2010	18	57	192	1,658	43	119	2,903	15,804
2011	39	102	279	1,783	37	150	3,504	20,812
2012	38	123	305	2,171	66	180	4,179	23,092
2013	41	122	672	2,321	86	275	5,401	25,620
2014	45	143	540	2,617	95	266	6,871	29,095
2015	71	179	611	2,408	116	396	8,459	27,948
2016	95	214	920	2,760	156	412	12,588	30,574
2017	168	201	1,842	3,058	270	377	21,275	33,185
2018	321	218	3,298	3,583	472	378	34,093	33,385
2019	310	233	3,891	3,537	516	330	36,063	32,515

Figures 1 to 4 shows the same trend for the number of documents about public policy, technology, economics, and any topics authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019. From the beginning of the period, the number of documents (published articles) authored by Indonesia affiliated researchers are below that authored by Malaysia affiliated researchers. It is interesting that at the end of the period, Indonesia affiliated researchers publishes a greater number of documents than Malaysia affiliated researchers.

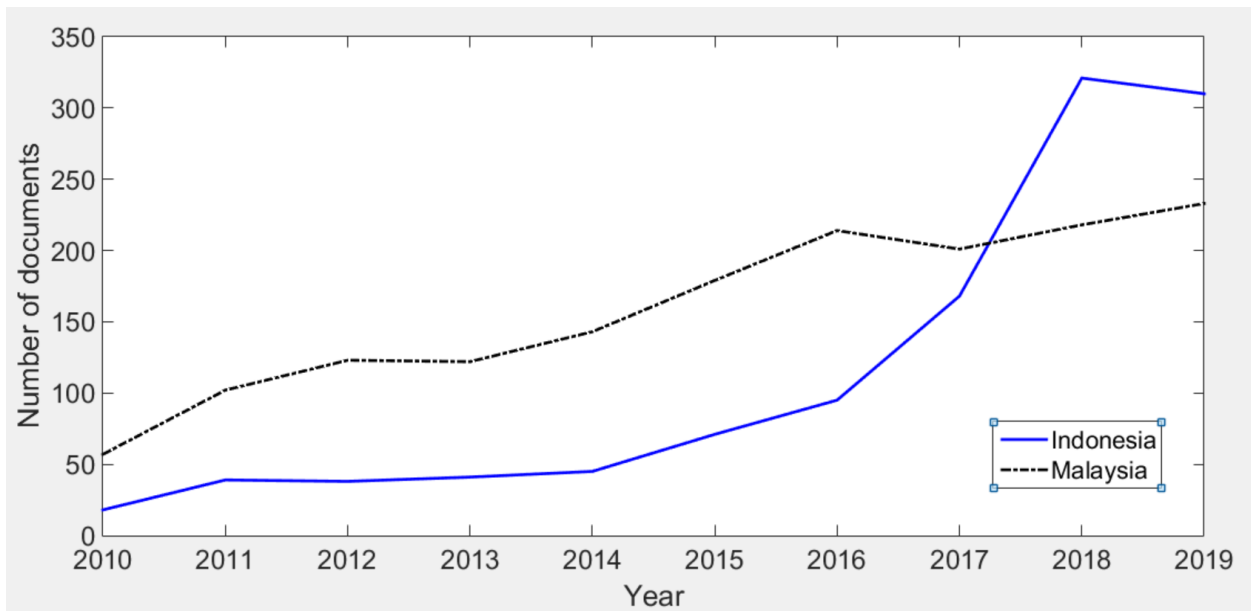


Figure 1. Trend of number of documents about *public policy* authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019

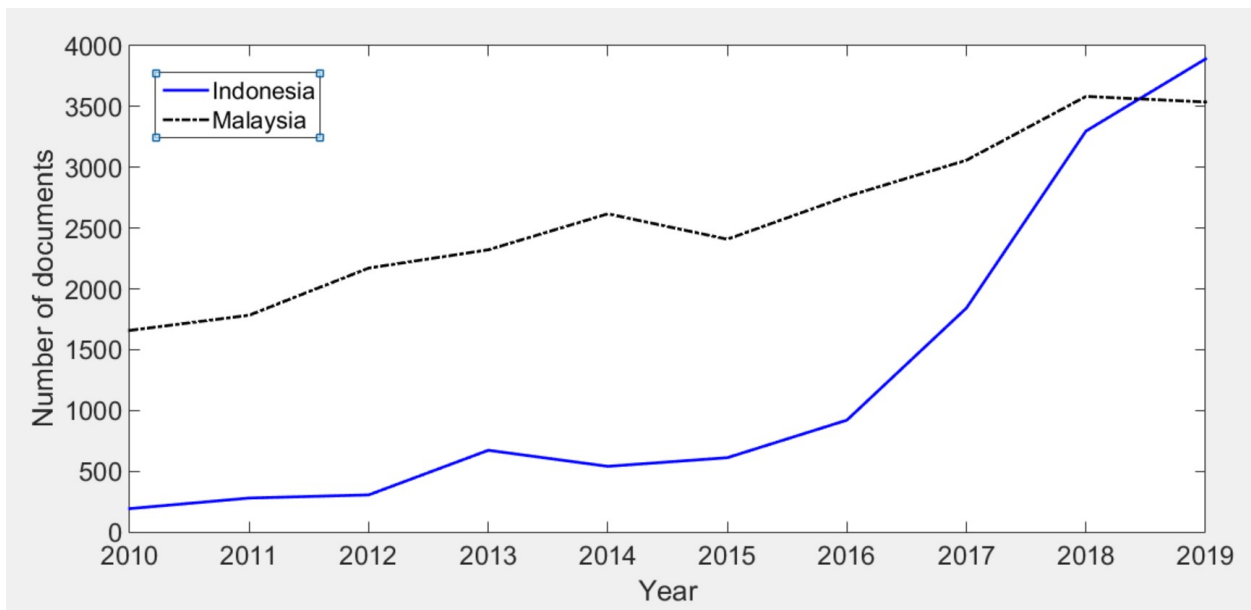


Figure 2. Trend of number of documents about *technology* authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019

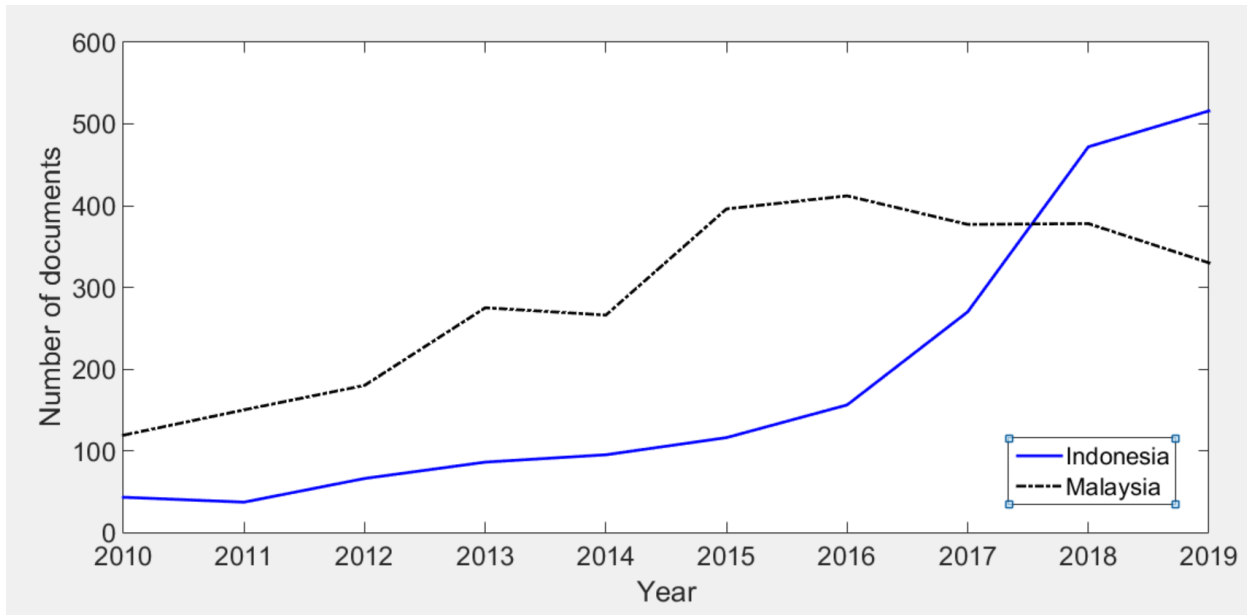


Figure 3. Trend of number of documents about *economics* authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019

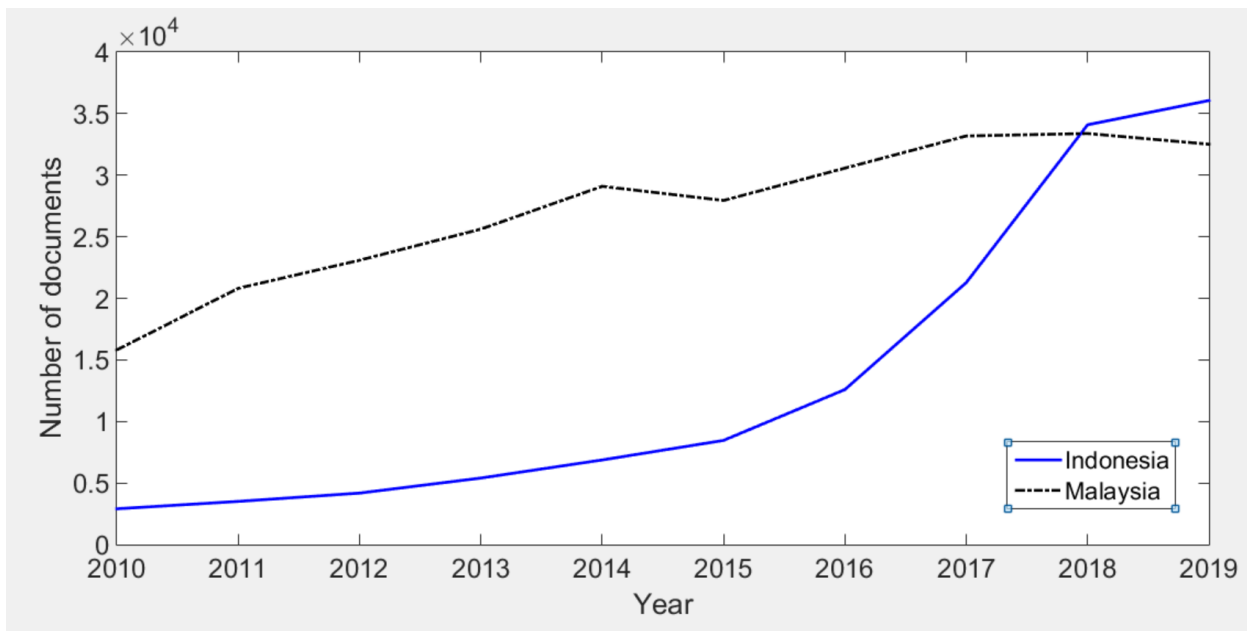


Figure 4. Trend of number of documents about any topics authored by Indonesia and Malaysia affiliated researchers indexed by Scopus for the period 2010-2019

The numbers of population of Indonesia and Malaysia in 2019 are approximately 266 million (<https://bps.go.id>) and 32.6 million (<https://www.dosm.gov.my>), respectively. In 2019, the number of documents about any topics authored by Indonesia affiliated researchers is 36,063, whereas that by Malaysian affiliated researchers is 32,515. This means that there are about 136 published articles out of one million Indonesian people in 2019. In comparison, there are about 997 published articles out of one

million Malaysian people in 2019. Based on the proportion between the number of published research articles and the country's population, Indonesia is still left behind to Malaysia.

4. Conclusion

This study presented eight data sets of number of research articles authored by Indonesia and Malaysia affiliated researchers about public policy, technology, and economics issues, as well as about any topics. The data sets were taken from Scopus for the period of ten years, 2010-2019. We obtain that from the beginning of the period, Indonesia's was left behind Malaysia's number of research publication for all issues. At the end of this period, Indonesia over took Malaysia in terms of the number of publications. However, in terms of the proportion between the number of published research articles and the country's population, Indonesia's is still left behind Malaysia's. For the future research, investigation on how public policy influences the productivity of researchers in publishing their research results internationally can be conducted.

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