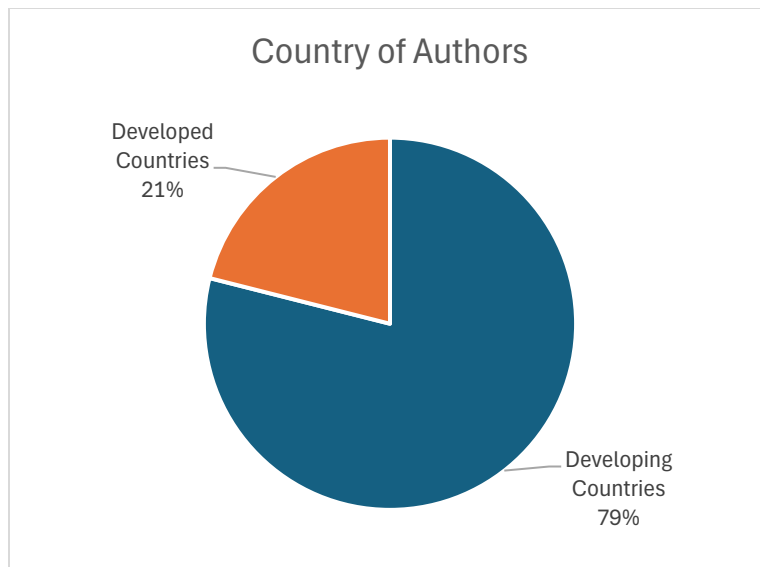


## Proportion of output co-authored with low or lower-middle income countries



According to the chart, a significant majority (79%) of Universitas Sumatera Utara's authors collaborated with authors from developing countries, while only 21% is from developed countries. This proportion indicates a strong collaborative presence from low and lower-middle-income countries, emphasizing their active participation in scholarly work and research output.

Based on the data presented regarding the frequency of countries involved, it can be concluded that lecturers from the Universitas Sumatera Utara (USU) have various international collaborations in writing journal articles. These collaborations span countries with varying frequencies of involvement, indicating a broad and diverse level of academic partnerships. Below is an explanation of the countries that frequently collaborate with USU lecturers:

**Malaysia:** This country holds the highest frequency, with 105 occurrences, indicating strong and intensive collaboration between USU lecturers and institutions or researchers from Malaysia. This could be attributed to geographical and cultural proximity as well as well-established academic relations.

**Japan:** Ranking second with a frequency of 32, Japan shows significant collaboration with USU researchers or institutions. These partnerships may be related to research in technology, science, or other areas where Japan has a strong presence.

**Saudi Arabia and India:** With frequencies of 31 and 24, respectively, these countries demonstrate substantial collaboration in research, potentially involving fields such as technology, science, education, or socio-economic studies, given their academic development and research projects.

Overall, the collaboration of Universitas Sumatera Utara lecturers in writing international journal articles involves countries from various parts of the world, showcasing openness to global partnerships. This not only enhances the quality and scope of research but also strengthens international academic networks and contributions to various fields of knowledge. Such collaboration has the potential to elevate the university's reputation on the global stage and create opportunities for further research and broader scientific development.

List of Author's Countries Collaborated with Authors of Universitas Sumatera Utara

No	Country	Number of Collaborated Authors
1	Malaysia	105
2	Japan	32
3	Saudi Arabia	31
4	India	24
5	China	23
6	Iraq	23
7	Taiwan	21
8	Thailand	17
9	Australia	16
10	Singapore	16
11	United States	15
12	Russia	15
13	United Kingdom	14
14	Uzbekistan	13
15	Jordan	12
16	South Korea	11
17	Iran	10
18	Peru	10
19	Slovakia	8
20	Viet Nam	8
21	Bulgaria	5
22	Ecuador	5
23	Nedherlands	5
24	Pakistan	5
25	Turkey	5
26	Bangladesh	4
27	Colombia	4
28	Egypt	4
29	Ethiopia	4
30	France	4
31	Nigeria	4
32	Poland	4
33	Afghanistan	3
34	Canada	3
35	Germany	3
36	Ireland	3
37	Philippines	3

No	Country	Number of Collaborated Authors
38	Sri Langka	3
39	Sweden	3
40	Switzerland	3
41	Yemen	3
42	Belgium	2
43	Brazil	2
44	Kazakhstan	2
45	Latvia	2
46	Oman	2
47	South Africa	2
48	Sudan	2
49	Ukraine	2
50	Albania	1
51	Bahrain	1
52	Czech	1
53	Finland	1
54	Greece	1
55	Italy	1
56	Jamaica	1
57	Lebanon	1
58	Libya	1
59	Morocco	1
60	Rwanda	1
61	Uganda	1
<b>Total</b>		<b>532</b>