

2021 STM Report: Global Research Trends and Transformation in Open Access Publishing

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“Despite the challenges presented both before and during COVID-19, there are multiple indications of growth and resilience across the scholarly publishing sector. 2020 will likely be a record year for submissions due to the increase in research and articles related to COVID-19 – many of which publishers provided free access to, ensuring that relevant and timely research and data reached the widest possible audiences as quickly as possible.”, said Philip Carpenter, Interim CEO of STM at the publication of the 2021 STM Report,

[STM](#) (the Association of Scientific, Technical and Medical Publishers) recently published the latest edition of ‘[The STM Report](#)’. This report is a comprehensive overview of the scientific and scholarly publishing market. It reveals significant publisher-driven growth in Open Access (OA); explores the variances across different markets of the global economy. Here, we have summarized the report based on data from Outsell, Delta Think, Simba Information, etc.

Steady Growth in Global Scholarly Publishing Market

The global scholarly publishing market continued to grow steadily from a value of \$27 billion in 2018 to \$28 billion in 2019. Outsell, Inc. reported that the global STM market contracted to \$26.5 billion in the year of the pandemic. However, Outsell, Inc. forecast that the global market will regain its pre-pandemic value of \$28 billion by 2023.

As the books and [journals in print format](#) were hit hard by the pandemic, Social Science and Humanities (SSH) journals and online content continued to grow at compound annual growth rates of 1.7% and 3.8% respectively between 2018 and 2020. OA has shown a rapid growth with revenues projected to increase at 11.5% and output at 12.5% from 2019-2022.

Overall, China continues to remain the world's most prolific producer of publishable research output. Meanwhile, India, Russian Federation, Spain, Italy, Brazil, and Australia all have shown steady growth since 2018.

Digital Dominance

Despite the fall in print publication as a repercussion of the pandemic, digital format continues to dominate the global publishing market. [Digital publication](#) in the scientific and technical segment accounted to a rise of 89%, representing an increase of over 10% since 2019. In 2020, Outsell, Inc. also found that the total market value of journals has fallen. According to Outsell, Inc., 2020 will likely be a record year for number of submissions due to the surge in research and publication relating to COVID-19. Furthermore, it forecasts that the market value of Medical Information and Solutions segment will overtake the Scientific and Technical Information and Solutions segment by 2024.

Outsell, Inc. data shows an increase of 10% for digital formats in the Sci-Tech segment in 2020. The category of 'other' lost 4% and print lost 6% of market share.

Growth in New Scholarly Journals

The estimated growth of new scholarly journals is 2 to 3% annually. Since 2015, the yearly number of peer-reviewed, active, scholarly journals within Ulrich's Web report an average annual growth rate of 2.3%. Moreover, English language journals alone register an average growth of 2.5% over the same period.

Scopus listed 25,648 as total number of [active journals globally](#) in October 2020. Similarly, Web of Science, records 24,974 journals in October 2021. Ulrich's Web shows records for over 48,000 active, scholarly peer-reviewed journals in all languages (35,000 of these are in the English language).

Global Market Growth of Industry Segments

Scientific and Technical Information and Solutions

According to Outsell, Inc. the Scientific and Technical Information and Solutions segment accounted to \$13.8 billion in 2020 falling from \$14.9 billion in the previous year. A growth rate of 1% is projected for this segment in 2021.

Medical Information and Solutions

The Medical Information and Solutions segment overall declined by -2.4% from previous year to \$12.8 billion for 2020, according to Outsell, Inc. A compound annual growth rate from 2018 to 2024 at 3.1% for this segment is expected. In addition, both digital and print formats grew at a rate of 2%.

Furthermore, Outsell, Inc. predicts that Medical Information and Solutions segment will reach greater market value than Scientific and Technical Information and Solutions by 2024.

Social Sciences and Humanities (SSH)

Simba Information reported that the total market value of the Social Sciences and Humanities (SSH) publishing market in 2020 was \$4.5 billion. It has receded by -1.5% since 2019 with a compound annual growth rate between 2018-2020 of -0.08%. Additionally, Simba Information also estimates that journals will overtake books as the largest SSH publishing activity by 2025.

Significant Growth in Open Access Market

Despite the rapid growing Open Access (OA) market, it is not yet the dominant model. Delta Think reported over 30% of all scholarly articles published as paid-for Open Access, accounting for just over 7% of the total journal publishing market value. Delta Think anticipates a 2019-2022 CAGR of over 12.5% in OA output and 11.5% in OA market value.

Spike in Article Submissions

On average, the growth rate in articles published continued to increase between 5 and 6.5% in 2021. The Scopus data of 2020 available via SCImago displayed 4.2 million records under the category 'citable documents'. Furthermore, the Dimensions database of 2020 reported 4.7 million records under the category 'articles'.

The predicted growth in STM articles submitted each year is 3% annually. However, the year 2020 may have been a record year for article submissions. Christos Petrou's analysis in The Scholarly Kitchen reported that the market grew by 200,000 papers or 8.1% in 2020. The growth in 2020 would have been just below 5%, if it weren't for COVID-related papers.

Dearth of Funds

The unprecedented effect of COVID-19 has resulted in funding bodies announcing cutbacks. Cancer Research UK, that funds about half of all UK cancer research announced to cut its research budgets by up to 10%. Likewise, the Canadian Cancer Society reported a drop in donations of up to \$100 million in the coming year.

Research Output on the Global Landscape

According to the Institute for Scientific Information, the global research landscape has witnessed a paradigm shifting transformation in recent decades. A [progressive change in research](#) conducted in AsiaPacific, Latin America and Middle-East, North Africa, and Turkey (MENAT) is significant. What validates this trend is the growth in number of papers produced by authors affiliated with institutions in China, India, Russian Federation, Italy, Spain, Australia, and Brazil. However, the year of global pandemic may have disrupted this trend. According to papers submitted, the United States, the EU, and Japan are more specialized in health sciences; whereas, China and India are more specialized in engineering.

Key Takeaways

The 2021 STM report reports strong growth in OA publishing, which is projected to continue in succeeding years. It is found that around a third of all global research, articles are now published as OA with some countries. The UK is on track for 90% of their researchers' output to be published OA within a year. This is due to business model and operational innovations. Furthermore, STM will launch the next supplement, which will focus on Open Access in Spring 2022.

Digital platforms enabled easy publication and access of research papers amidst the global pandemic. It will overtake print journals and books in coming years. The report shows that China remains the world's most prolific producer of publishable research output. However, India, Russian Federation, Spain, Italy, Brazil, and Australia all have shown strong growth since 2018. Let us know your thoughts on this year's STM report in the comments section below!

Find the complete STM Report [here](#).

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