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Amir Ghasemian

Amiramir13731373@gmail.com

Amir Reza Asnafi

Information Science and Knowledge Department, Shahid Beheshti University, aasnafi@gmail.com

Amin Erfanmanesh

Maritime Provinces Higher Education Commission, amin.erfanmanesh@gmail.com

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Altmetrics Study On Research Outputs In Fields of Social Sciences In Top Iranian Universities

Amir Ghasemian

MA of Knowledge and Information Science, Amiramir13731373@gmail.com

Amir Reza Asnafi

Faculty member of Knowledge and Information Science Department, ShahidBeheshti University, Tehran, I.R.Iran. a_asnafi@sbu.ac.ir

Mohammad Amin Erfanmanesh

Maritime Provinces Higher Education Commission, Amin.erfanmanesh@gmail.com

Abstract

Purpose: The purpose of the present work was Altmetrics study of research outputs in the field of social and behavioral sciences in major Iranian universities during 2010-2020.

Methodology: The research outputs of the thematic domains of social and behavior of sciences major Iranian universities indexed in the Scopus database were reviewed. This applied research was conducted with a Altmetrics approach. Scopus and Altmetrics Explorer databases were used to collect data. Data analysis was performed using descriptive and inferential statistical tests in Excel software.

Findings: Current study revealed Shahid Beheshti, Tehran, Tarbiat Modares, Tabriz, and Shiraz universities, in the field of social sciences, had the most ranks in items of Mentions and Bookmarks. In addition, in all the universities surveyed, the most mentions were on Twitter and the most bookmarks were on Mendeley.

Conclusion: Overall, the findings showed that most of the surveyed universities were not in an acceptable position in terms of social media presence and Altmetrics score, indicating the lack of familiarity of the corresponding researchers with the benefits of social media and their low participation in sharing their research outputs on social media.

Keywords: Research output, Mentions, Bookmarks, Altmetrics score

Introduction

The Web 2.0 revolution and the current advances in information technology have greatly influenced various fields of science, and the potential benefits of the Web 2.0 have changed the behavior of researchers. The wide range of access and widespread use of the Web has led researchers to use this space to share their work, increase the visibility of their research outputs, and tend to be present on social media and connected to the virtual world (6). Therefore, new approaches have been developed to calculate. These indicators, in comparison with citation,

Include any kind of informal use and reference to research outputs in various social media, including Mentions and Bookmarks (Jokar & Goltaji, 2010). Citation-based indexes and Altmetrics thought they are complementary some different with each other. Altmetrics, being not time-dependent, can show the immediate impact of research outcomes. However, citation indicators in Scientometrics techniques depend on the passage of time so that they can be studied, used and cited by the scientific community. Publishing research outputs and making them accessible through databases is a very time consuming and time consuming process. To overcome this limitation and expand Scientometrics techniques, the phenomenon of Altmetrics was introduced to make research outputs accessible to researchers and even the public through social networks and reduce time dependence in evaluating the use of research outputs (Hosseini & Taghizadeh Milani, 2020).

The purpose of social science research is to train and provide skilled and specialized workers for research, education, management and planning in various social and cultural fields. Moreover, the main emphasis of it, is to educate and promote research. Further deals with about the social problems of the country and analysis and interpretation of their roots, contexts, causes and factors, description and analysis of their extent in society and finally analysis of the information obtained from these studies to solve social problems, thus it is necessary to provide measured solutions regarding these problems and social developments,

Accordingly, and recognizing the importance of this issue, this research is attempt for the Altmetrics study of research outputs in the field of social and behavioral sciences in major universities in Iran during the years 2020-2010.

Literature Review

Mas-Bleda et al (2014) believed that evaluated the extent to which successful scientists have social web presences, focusing on one influential group: highly cited researchers working at European institutions. It also assesses the impact of these presences (5). According to Wasike (2019) research, Altmetrics is a relatively new phenomenon in researches. It measures the attention that research articles receive from nontraditional venues such as social media and the Internet. This study examined how these metrics affect both the readership and citation of articles in communication research. The study examined citation data alongside Altmetrics data from the academic social networking sites of ResearchGate and Mendeley, as well as mentions on Facebook, Twitter, and Googleplus. The results indicated that all Altmetrics were positively correlated with citation. Posting articles on sites like ResearchGate and Mendeley not only impacted readership, but also it increased the likelihood of citation. Other variables that improved readership and citation were social media mentions, downloadable articles, coauthorship, and an active online presence among scholars (12). Fang & Costas (2020) investigated the data accumulation velocity of 12 Altmetric.com data sources. DOI created date recorded by Crossref and altmetric event posted date tracked by Altmetric.com were combined to reflect the Altmetrics data accumulation patterns over time and to compare the data accumulation velocity of various data sources through three proposed indicators, including Velocity Index, Altmetrics half-life, and Altmetrics time delay. The results showed

that Altmetrics data sources exhibit different data accumulation velocity. Some Altmetrics data sources have data accumulated very fast within the first few days after publication, such as Reddit, Twitter, News, Facebook, Google+, and Blogs. On the opposite spectrum, research outputs are at relatively slow pace in accruing data on some data sources, like Policy documents, Peer review, Q&A, Wikipedia, Video, and F1000Prime. In addition, most Altmetrics data sources' velocity degree also changes by document types, subject fields, and research topics. The type Review is slower in receiving Altmetrics mentions than Article, while Editorial Material and Letter are typically faster. In general, most Altmetrics data sources show higher velocity values in the fields of Physical Sciences and Engineering and Life and Earth Sciences. Within each field, there also exist some research topics that attract social attention faster than others (1). Other researches in this field include (9), (10), (11), (13), (2) which emphasized the importance of social media and the use of Altmetrics metrics.

Purpose of the research

This study aimed at investigating on the status of research outputs of thematic fields of social sciences and behavior in large universities of Iran in social media using Altmetrics indices during the period 2010-2020

Methodology

The present an applied study was performed using Altmetrics indicators on all research outputs in the subject areas of social and behavioral sciences, including "subject areas of psychology", "economics, econometrics and finance", "business, management and accounting", "social sciences", and "decision sciences", by category The subject of Scopus database in major Iranian universities during 2010 to 2020. Research data were collected from 15 May to 30 May 2020 from the Scopus and Altmetric Explorer citation database. The method of data collection was direct reference and obtaining standard outputs from the Scopus and Altmetric Explorer databases. First, the search results analysis section was used to search for documents related to major Iranian universities and to limit the search to subject areas and year of publication. In this section, the number of research outputs in the thematic areas of social sciences and behavior of top Iranian universities were searched and retrieved. The digital object identifier of the articles was then transferred to Altmetric Explorer and the data on Mentions and Bookmarks were retrieved. In addition, the relevant university's share in the thematic field of social sciences and behavior of outputs with Altmetric Explorer score, outputs information with at least one reference was stored from the altimeter explorer database. The data were then analyzed using descriptive statistics (with Microsoft Excel software).

Findings

Table 1 shows the status of social and behavioral research outputs of Shahid Beheshti University with Altmetric scores in different fields during 2010-2020. In terms of the number of outputs mentioned in social media, the subject area of social sciences with 132 outputs was mentioned in the first place, and the subject area of business, management and accounting, with 28 outputs was mentioned in the fifth and last place. The data also showed that in terms of the total number

of Mentions and Bookmarks, the subject area of social sciences with 3512 Mentions and Bookmarks was in the first rank, and economics, econometrics and finance with 363 Mentions and Bookmarks were in the last rank. In addition, in terms of average Mentions and Bookmarks, the subject areas of business, management and accounting with an average of 127.1 was in the first place, and the subject areas of economics, econometrics and finance, with an average of 17.2 was in the last place. In terms of total Altmetrics scores, the subject area of psychology with 430 was in the first place, and the subject area of economics, econometrics and finance with 13 was in the last place. In addition, in terms of Altmetric score, the subject area of psychology with an average of 4.94 had the highest average, and the subject area of economics, econometrics and finance with an average of 0.61 had the lowest average.

Table 1. Status of Research Outputs in Fields of Social and Behavioral Sciences of Shahid Beheshti University with Altmetric Score in the Fields of Social and Behavioral Sciences during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
2.05	273	26.6	3512	132	539	712	social Sciences
0.61	13	17.2	363	21	113	124	Economics, econometrics and finance
4.94	430	49.7	4331	87	220	225	Psychology
0.92	47	26.03	1328	51	288	304	Decision science
2.4	29	127.1	1526	12	217	238	Business, management and accounting

Table 2 shows the level of Mentions and Bookmarks of research outputs of Shahid Beheshti University in various social media during the years 2010-2020. As can be seen from the data in Table 2, it can be stated that in the field of social sciences, with 276 Mentions and 3191 Bookmarks in Mendeley, in the field of economics, econometrics and finance with 14 Mentions in Twitter and 348 Bookmarks in Mendeley, in the field of psychology with 599 Mentions on Twitter and 3709 Bookmarks in Mendeley, in the field of decision science also with 59 Mentions in Twitter and 1267 Bookmarks in Mendeley, and in the thematic field of business, management and accounting with 58 Mentions, and 1467 Tokens got the highest values.

Table 2. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Shahid Beheshti University in various social media during 2010-2020

Wikipedia	news	Facebook	Mendeley	Twitter	Subject area
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5	4	18	3191	276	social Sciences
-	-	1	348	14	Economics, econometrics and finance
3	7	7	3709	599	Psychology
2	-	-	1267	59	Decision science
-	-	1	1467	58	Business, management and accounting

Table 3 indicates the status of research outputs of the University of Tehran using Altmetrics scores in the fields of social and behavioral sciences during the years 2010-2020. Findings indicate that the subject area of social sciences with 586 outputs had the highest, and the subject area of economics, econometrics and finance with 163 outputs had the lowest rate of presence on social media. In terms of the total number of Mentions and Bookmarks outputs, the subject area of social sciences with 23849 Mentions and Bookmarks, had the highest rate, and the subject area of economics, econometrics and finance, with 5151 Mentions and Bookmarks, had the lowest rate. Also, the average Mentions and Bookmarks in the subject area of psychology, with 58.9, had the highest average, and in the subject area of economics, econometrics and finance, with 31.6, the lowest average. In the total Altmetrics score section, the subject area of social sciences with a total Altmetrics score of 1754, and the subject area of economics, econometrics and finance, with a total altimeter score of 205, obtained the highest and lowest values, respectively. In this regard, the mean Altmetrics score of the subject area of psychology with 5.1, the highest average, and the subject area of decision science with the average Altmetrics score of 0.84, obtained the lowest values.

Table 3. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of Tehran with Altmetrics Score in the Fields of Social and Behavioral Sciences during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
2.99	1754	40.6	23849	586	2536	3548	social Sciences
1.25	205	31.6	5151	163	640	776	Economics, econometrics and finance
5.14	854	58.9	9786	166	471	483	Psychology
0.84	206	42.2	10256	243	1065	1173	Decision

							science
0.94	318	51.4	17302	336	1529	1702	Business, management and accounting

Table 4 shows the level of Mentions and Bookmarks of research outputs in the field of social sciences and behavior of the University of Tehran in various social media during the years 2010-2020. Findings indicated that in the subject area of social sciences, Twitter with 1592 cues, and Mendley with 21969 cues, in the subject area of economics, econometrics and finance, with 154 cues on Twitter, and 4939 cues in Mendeley, as well as in the subject area of psychology. With 800 Mentions on Twitter, and 8877 Mentions on Mendeley, as well as in the subject area of decision-making science, with 231 Mentions on Twitter, and 10009 Mentions on Mendeley, and finally in the subject area of business, management and accounting with 255 Mentions on Twitter and 17026 Mentions in Mendeley, they received the most Mentions and Bookmarks.

Table 4. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Tehran University in various social media during 2010-2020

Wikipedia	News	Facebook	Mendeley	Twitter	Subject area
32	61	72	21969	1592	social Sciences
5	7	10	4939	154	Economics, econometrics and finance
11	36	31	8877	800	Psychology
4	5	5	10009	231	Decision science
5	12	14	17026	255	Business, management and accounting

Table 5 shows the status of research outputs in the field of social and behavioral sciences of Allameh Tabatabai University with Altmetrics score in the fields of social and behavioral sciences during the years 2010-2020. Findings show that the subject areas of social sciences with 104 outputs, and decision science with 24 outputs, obtained the highest and lowest outputs mentioned in social media. Also, in terms of the total number of Mentions and Bookmarks in the subject areas of business, management and accounting, with 6028 Mentions and Bookmarks, and economics, econometrics and finance with 1508 Bookmarks, marked the highest and lowest values. In this regard, the subject areas of decision-making sciences with an average of 169, and social sciences with an average of 33.5, had the highest and lowest mean of Mentions and Bookmarks. The findings also reveal that the subject areas of social sciences and economics, econometrics and finance, with a total altimeter score of 316 and 18, had the highest and lowest values. Furthermore, the subject areas of psychology with an average of 6.1, and economics, econometrics and finance with an average of 0.64, had the highest and lowest Altmetrics scores.

Table 5. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of Allameh Tabataba'i University with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
3	316	33.5	3491	104	483	662	social Sciences
0.64	18	53.8	1508	28	147	187	Economics, econometrics and finance
6.1	294	79.7	3828	48	217	224	Psychology
1.33	32	169	4079	24	136	165	Decision science
2/9	153	116	6028	52	275	320	Business, management and accounting

Table 6 shows the level of Mentions and Bookmarks of research outputs in the fields of social sciences and behavior of Allameh Tabatabai University in different social media during the years 2010-2020. According to the findings of Table 6, the subject of social sciences, with 490 Mentions on Twitter and 2929 Bookmarks on Mendeley, the subject field of economics, econometrics and finance, with 26 Mentions on Twitter and 1842 Mentions and Bookmarks on Mendeley, as well as the subject field of psychology with 389 Mentions on Twitter and 3419 Bookmarks in Mendeley and the subject area of decision-making science with 13 Mentions on Twitter and 4018 Bookmarks in Mendeley, and finally the subject area of business, management and accounting, with 228 Mentions on Twitter and 5747 Bookmarks in Mendeley, the highest number of Mentions and Bookmarks on social media Earned different.

Table 6. The extent of Mentions and Bookmarks research outputs in the thematic areas of social sciences and behavior of Allameh Tabataba'i University in various social media during 2010-2020

Wikipedia	news	Facebook	Mendeley	Twitter	Subject area
7	-	32	2929	490	social Sciences
-	-	-	1482	26	Economics, econometrics and finance
1	2	7	3419	389	Psychology
28	-	2	4018	13	Decision science
28	-	4	5747	228	Business,

					management and accounting
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Table 7 shows the status of research outputs in the fields of social and behavioral sciences of Tarbiat Modares University with Altmetrics scores during the years 2010-2020. Findings indicate that the fields of social sciences with 183 research outputs and psychology with 51 outputs, had the highest and lowest outputs mentioned in social media. The subject areas of social sciences with 8037 Mentions and Bookmarks, and economics, econometrics and finance with 2409 Mentions and Bookmarks, had the highest and lowest Bookmarks. Furthermore, the average Mentions and Bookmarks in the subject areas of business, management and accounting with an average of 66.6 and economics, econometrics and finance with an average of 19.1, received the highest and lowest average Mentions and Bookmarks. In terms of total altimeter score, the subject area of psychology with a total score of 598, and the subject area of decision science with a total score of 76, had the highest and lowest Altmetrics scores. Furthermore, the subject areas of psychology with an average altitude score of 11.7 and decision-making and business sciences, management and accounting with an average of 1.3, had the highest and lowest average Altmetrics scores.

Table 7. Status of Research Outputs in Fields of Social and Behavioral Sciences University of Trabiati Modares University with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
1.6	311	43.9	8037	183	747	1040	social Sciences
2	127	19.1	2409	126	283	330	Economics, econometrics and finance
11.7	598	62	3158	51	147	151	Psychology
1.3	76	60.2	3374	56	330	362	Decision science
1/3	115	66.6	5602	84	451	521	Business, management and accounting

Table 8 shows the level of Mentions and Bookmarks of research outputs in the feilds of social sciences and behavior of Tarbiat Modares University in different social media during 2010-2020. Findings show that the fields of social sciences with 447 documents on Twitter and 7552 documents in Mendeley, the fields of economics, econometrics and finance with 70 documents on Twitter and 2319 documents in Mendeley, the subject area of psychology with 259 documents on Twitter and 2804 cues in Mendeley, the science of decision-making with 64 points on Twitter and 3497 bookmarks on Mendeley, and the subject area of business, management and accounting with 93 Mentions on Twitter and 5486 bookmarks on Mendeley, had the highest presence on social media.

Table 8. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Trabiati Modares University in various social media during 2010-2020

Wikipedia	news	Facebook	Mendeley	Twitter	Subject area
2	-	19	7552	447	social Sciences
-	5	4	2319	70	Economics, econometrics and finance
3	66	13	2804	259	Psychology
8	1	3	3497	64	Decision science
-	3	8	5486	93	Business, management and accounting

Table 9 shows the status of research outputs in the fields of social and behavioral sciences of the University of Isfahan with Altmetrics scores during 2010-2020. The data in Table 9 show that the subject area of social sciences had the highest presence on social media with 103, and the subject area of economics, econometrics and finance with 13 outputs had the lowest presence on social media. The subject areas of business, management and accounting with 3609 Mentions and Bookmarks, and the subject areas of economics, econometrics and finance with 473 Mentions and Bookmarks, respectively, obtained the highest and lowest values, respectively. In this regard, the mean of Mentions and Bookmarks in the subject area of business, management and accounting, with an average of 83.9 had the highest and in the subject area of decision science, with an average of 20.4 had the lowest average. The findings also show that the subject area of social sciences with a total of 219 Altmetrics scores had the highest value, and the subject area of decision science with a total of 20 Altmetrics scores had the lowest value. Furthermore, the subject area of psychology with an average of 3.7 had the highest mean Altmetrics score and the subject area of decision science with an average of 0.7 had the lowest average.

Table 9. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of University of Isfahan with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
2.12	219	43.3	3536	103	683	902	social Sciences
1.6	22	32	417	13	162	191	Economics, econometrics and finance
3.7	197	62.6	3256	52	163	172	Psychology
0.7	20	20.4	573	28	293	327	

							Decision science
1.66	70	83.9	3609	43	411	451	Business, management and accounting

Table 10 shows the level of Mentions and Bookmarks of research outputs in the fields of social sciences and behavior of the University of Isfahan in various social media during 2010-2020. Findings show that in the subject area of social sciences, the highest number of Mentions and Bookmarks were in Twitter, 185, and in Mendeley, 3242 Bookmarks, in the subject area of economics, econometrics and finance, with 17 Mentions in Twitter and 394 Bookmarks in Mendeley, respectively. In the field of psychology with 173 Mentions on Twitter and 3040 Bookmarks in Mendeley, and also in the subject field of decision-making sciences, Twitter with 17 Mentions, and Mendeley with 555 Bookmarks, and finally the subject field of business, management and accounting, with 48 Mentions in Twitter and 3556 Bookmarks. In Mendeley, gained the most social media presence.

Table 10. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of University of Isfahan University in various social media during 2010-2020

Wikipedia	news	Facebook	Mendeley	Twitter	Subject area
18	15	30	3242	185	social Sciences
-	1	4	394	17	Economics, econometrics and finance
1	1	24	3040	173	Psychology
-	-	-	555	17	Decision science
-	5	-	3556	48	Business, management and accounting

Table 11 shows the status of research outputs in the fields of social and behavioral sciences of Ferdowsi University with Altmetrics scores during 2010-2020. Findings indicate that the subject areas of social sciences and economics, econometrics and finance, with 149 and 41 research outcomes mentioned in social media, respectively, had the highest and lowest values. The subject area of business, management and accounting with 3764 Mentions and Bookmarks, and the subject area of decision science with 1613 Mentions and Bookmarks, received the most and the least Mentions and Bookmarks. Furthermore, the subject area of business, management and accounting with an average of 56.1, and the subject area of social sciences with an average of 17.2, had the highest and lowest average of Mentions and Bookmarks. Also, in terms of total Altmetrics scores, the subject area of social sciences with a total of 252 points, and the subject area of decision science with a total score of 21, had the highest and lowest scores. Furthermore, the subject areas of psychology and decision science with an average of 6.1 and 0.42, obtained the highest and lowest mean of Altmetrics scores.

Table 11. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of Ferdowsi University with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
1.8	252	17.2	2563	149	630	795	social Sciences
1.2	50	43.4	1783	41	172	200	Economics, econometrics and finance
6.1	257	54.8	2305	42	177	181	Psychology
0.42	21	32.2	1613	50	357	383	Decision science
1.35	91	56.1	3764	67	322	346	Business, management and accounting

Table 12 shows the level of Mentions and Bookmarks of research outputs in the fields of social sciences and behavior of Ferdowsi University in different social media during the years 2010-2020. Findings show that in the subject area of social sciences with 377 cues on Twitter and 4845 cues in Mendeley, and also in the subject area of economics, econometrics and finance with 106 cues and 1673 cues in Twitter and Mendeley, also in the subject area of psychology with 380 Mentions on Twitter and 1916 Bookmarks in Mendeley, and moreover in the subject area of decision-making sciences with 19 Mentions and 1582 Bookmarks on Twitter and Mendeley, finally in the subject area of business, management and accounting with 155 Bookmarks on Twitter and 3589 Bookmarks in Mendeley, the most They received the amount of presence on social media.

Table 12. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Ferdowsi University in various social media during the years 2010-2020

Wikipedia	news	Facebook	Mendeley	Twitter	Subject area
1	3	12	4845	377	social Sciences
-	-	-	1673	106	Economics, econometrics and finance
-	1	6	1916	380	Psychology
-	-	3	1582	19	Decision science
-	-	4	3589	155	Business, management and accounting

Table 13 displays the status of research outputs of Tabriz University with an Altmetrics score in the subject areas of social and behavioral sciences during the years 2010-2020. As shown in terms of social media presence, the subject area of social sciences with 81 outputs has the highest

presence, and the subject area of decision science with 24 outputs has the lowest rate of presence in social media. In terms of the total number of Mentions and Bookmarks, the field of social sciences with 2478 Mentions and Bookmarks, and the field of decision-making sciences with 218 Mentions and Bookmarks, obtained the highest and lowest values, respectively. Moreover, the subject area of psychology with an average of 37.9 has the highest average, and the subject area of decision making science with an average of 9 has the highest and lowest mean of Mentions and Bookmarks. In the section of total Altmetrics score, and average Altmetrics score, the subject area of business, management and accounting, with a total of 283 Altmetrics scores, and an average of 5.8, the highest rate and the subject area of decision making science with a total score of altimeter 2, and 0.08 lowest score.

Table 13. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of Tabriz University with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
0.92	74	30.5	2478	81	364	422	social Sciences
3.5	222	27.3	1696	62	163	175	Economics, econometrics and finance
2/4	74	37.9	1138	30	88	90	Psychology
0.08	2	9	218	24	144	156	Decision science
5.8	283	34.9	1677	48	148	167	Business, management and accounting

Table 14 shows the level of Mentions and Bookmarks of research outputs in the subject areas of social sciences and behavior of Tabriz University in different social media during the years 20120-2020. According to Table 14, the findings show that in the field of social sciences, the highest rate of Mentions and Bookmarks is on Twitter with 85 Mentions, and in Mendeley with 2358 Mentions, in the subject area of economics, econometrics and finance, on Twitter with 33 Mentions, and in Mendeley with 1617 Bookmarks, in the same field in the subject field of psychology, with 81 Mentions in Twitter and 1031 Bookmarks in Mendeley, also in the thematic field of decision science, with 2 Mentions in Twitter and 26 Bookmarks Mendeley, and finally in the subject field of business. , Management and Accounting, with 33 points on Twitter and 1,590 Bookmarks on Mendeley, scored the most points.

Table 14. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Tabriz University University in various social media during 2010-2020

Wikipedia	News	Facebook	Mendeley	Twitter	Subject area
26	2	5	2358	85	social

					Sciences
7	24	10	1617	33	Economics, econometrics and finance
-	1	23	1031	81	Psychology
-	-	-	26	2	Decision science
7	34	9	1590	33	Business, management and accounting

Table 15 indicated the status of research outputs of Shiraz University with an Altmetrics score in the fields of social sciences and behavioral sciences during 2010-2020. Findings indicate that the subject areas of social sciences and business, management and accounting, in terms of the number of outputs mentioned in social media, with 186 and 27 outputs, respectively, obtained the highest and lowest values. In terms of the total number of Mentions and Bookmarks, the subject areas of social sciences and business, management and accounting, with the values of 7912 and 954 Mentions and Bookmarks, respectively, gained the most and the least in this section. In this regard, in the mean point of Mentions and Bookmarks, the subject area of psychology with an average of 42.6 and the subject area of decision making science with an average of 21.7, had the highest and lowest average. In terms of total altimeter scores, the subject areas of social sciences with a total of 688 and economics, econometrics and finance with a total of 51, had the highest and lowest values. In this regard, the subject areas of social sciences and business, management and accounting, with an average altimeter score of 3.6 and 1, had the highest and lowest values respectively.

Table 15. Status of Research Outputs in the Fields of Social and Behavioral Sciences University of Shiraz university with Altmetrics Score during 2010-2020

Average Altmetrics score	Total Altmetrics score	Average Mentions and Bookmarks	Total number of Mentions and Bookmarks	Number of outputs mentioned on social media	Number of outputs with digital object indicator	Number of research outputs in Scopus	Subject area
3.6	688	42.5	7912	186	583	756	social Sciences
1.3	51	36.2	1376	38	119	136	Economics, econometrics and finance
3.2	148	42.6	1921	45	114	115	Psychology
2.8	123	21.7	955	44	187	222	Decision science

1	27	35.3	954	27	113	148	Business, management and accounting
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Table 16 indicates the level of Mentions and Bookmarks of research outputs in the fields of social sciences and behavior of Shiraz University in different social media during the years 2020-2010. According to the findings, it can be seen that in the subject area of social sciences, Twitter is mentioned with 691 points and in Mendeley with 7107 points, in the subject area of economics, econometrics and finance, Twitter with 39 points and Mendeley with 1332 points, also in the subject area of psychology, with 139 Mentions on Twitter and 1758 Bookmarks on Mendeley, and in the subject area of Decision Science with 118 Mentions on Twitter and 823 Bookmarks on Mendeley, and finally in the subject area of business, management, and accounting, with 21 Mentions on Twitter and 930 Bookmarks on Mendeley, Obtained the highest values in terms of the number of Mentions and Bookmarks in different media.

Table 16. The extent of Mentions and Bookmarks research outputs in the fields of social sciences and behavior of Shiraz university in various social media during 2010-2020

Wikipedia	News	Facebook	Mendeley	Twitter	Subject area
22	18	37	7107	691	social Sciences
-	1	2	1332	39	Economics, econometrics and finance
5	3	9	1758	139	Psychology
2	8	3	823	118	Decision science
-	1	1	930	21	Business, management and accounting

Conclusion

In the present research, documents with no digital object identifier were excluded because the presence of articles on social media and the study of metamorphosis can only be retrieved with a digital object identifier. In this section, in terms of the total number of Mentions and Bookmarks, in Shahid Beheshti, Tehran, Tarbiat Modares, Tabriz, and Shiraz universities, the subject area of social sciences, in Allameh Tabatabaei, Isfahan, and Ferdowsi universities, the subject area of business, management and accounting, the most They allotted Mentions and Bookmarks. In addition, in all the universities surveyed, the most mentions were on Twitter and the most bookmarks were on Mendeley. Perhaps the reason for Mendeley superiority over other social media can be mentioned the ease of use and free access, etc., and Twitter is known for its publicity and media. By most sections of society (both researchers and non-researchers) has made it a suitable medium for disseminating research results, which these findings with the research of Poplitz et al. (2016), Fang et al. (2020), in terms of the most Mentions and

Bookmarks on Twitter and Mendeley, has been in line. Social networks are often the news of the day, so they attract a large audience. Audiences also help to eliminate possible shortcomings by following the content and criticizing them. Given the widespread use of social media among members of society, the appropriate and optimal use of this platform to promote information literacy is an issue that should be increasingly considered by policy makers and stakeholders.

In the section related to Altmetrics score, in the universities of Tehran, Isfahan, Ferdowsi, Shiraz, the subject of social sciences, in the universities of Shahid Beheshti and Tarbiat Modares, the subject of psychology, in Allameh University, the subject of economics, econometrics and finance, in the university Tabriz, the subject area of business, management and accounting, had the highest Altmetrics score.

In general, the findings showed that most universities in the subject areas of social and behavioral sciences did not have an acceptable status in terms of social media presence, followed by Altmetrics score, which indicates that researchers in these areas are not familiar with the advantages of social media and Their researchers' low participation is in sharing their research outputs on social media. Because the lack of digital identifier of objects on the articles makes it impossible to examine their impact based on metamorphoses and the value of the articles is ignored. The inclusion of this identifier in articles has a very colorful role in Altmetric studies, which should be emphasized more sensitively. Although the inability to access some social media in the country due to filtering can be one of the reasons for the low presence of researchers in other social media, but Altmetrics data can be used as a complement to Scientometric indicators to determine the effectiveness of research outputs. In this regard, holding training workshops to introduce Altmetrics and the ability of social networks for researchers to use the facilities of such environments to join and share their work to increase their visibility, as well as to consider incentives to attend and It is recommended to share as much as possible the research outputs of the social and behavioral sciences in the country in scientific social networks with the aim of improving the level of research, education, and management of the society.

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