

**Supplementary Table S1.** Scholarly Output by Middle Eastern and Arab Countries.

Country	Number of total scholarly outputs	Adjusted number of scholarly outputs*
Iran	804289	160925
Egypt	327649	108923
Turkey	783062	74231
Tunisia	119010	28636
Morocco	99321	27614
Algeria	101631	22155
Iraq	100229	16728
Jordan	66652	15088
Saudi Arabia	345802	13842
Israel	404976	11529
Sudan	14446	11501
Yemen	9545	8913
Palestine	12603	8841
Syrian Arab Republic	10395	8457
Lebanon	47639	6488
United Arab Emirates	101341	2011
Oman	31012	1446
Cyprus	42677	1330
Libya	8853	872
Kuwait	31660	870

Qatar	48886	652
Mauritania	957	534
Bahrain	11699	420
Djibouti	406	195
Comoros	219	139

*Note. Publication activity was adjusted for population size and gross domestic product (GDP) retrieved from the online databases of the World Bank. An adjustment index (AI) was calculated using the following formula:  $AI = [\text{total number of scholarly outputs for the country} / \text{GDP per capita of the country}] * 1,000$ . Where  $\text{GDP per capita} = \text{GDP} / \text{population of the country}$ .*

**Supplementary Table S2.** Percentage of scholarly outputs in Scopus Q1, Q2, Q3, Q4, and top 10% journals by country and by region.

Country	Scholarly Output	Q1	Q2	Q3	Q4	Top 10%
Algeria	101631	23.43%	22.57%	20.59%	12.51%	7.63%
Bahrain	11699	26.32%	21.57%	14.83%	15.93%	9.34%
Comoros	219	38.36%	21.46%	16.44%	14.16%	7.76%
Cyprus	42677	41.48%	20.51%	11.37%	6.19%	14.84%
Djibouti	406	44.09%	18.97%	13.30%	4.68%	10.84%
Egypt	327649	33.84%	24.76%	16.86%	10.61%	13.82%
Iran	804289	32.45%	24.81%	18.95%	10.27%	12.12%
Iraq	100229	16.07%	15.72%	20.75%	27.76%	8.68%
Israel	404976	53.82%	18.93%	8.04%	3.60%	15.16%
Jordan	66652	29.24%	24.28%	18.35%	11.76%	10.60%
Kuwait	31660	33.87%	21.54%	15.95%	8.06%	10.70%
Lebanon	47639	39.31%	22.23%	13.11%	6.57%	11.81%

Libya	8853	23.29%	19.00%	16.58%	11.53%	10.39%
Mauritania	957	36.57%	20.69%	21.94%	8.88%	7.63%
Morocco	99321	22.88%	20.23%	22.71%	15.11%	8.83%
Oman	31012	32.18%	22.43%	16.44%	9.86%	12.72%
Palestine	12603	34.23%	25.47%	16.79%	7.98%	13.91%
Qatar	48886	45.73%	19.82%	10.34%	5.00%	19.41%
Saudi Arabia	345802	41.00%	24.55%	15.43%	6.46%	18.82%
Somalia	771	33.33%	21.01%	27.37%	7.39%	7.52%
Sudan	14446	30.96%	22.46%	19.24%	8.97%	10.26%
Syrian Arab Republic	10395	28.80%	22.11%	23.43%	12.46%	8.74%
Tunisia	119010	27.82%	23.43%	18.25%	10.34%	8.19%
Turkey	783062	28.42%	24.81%	20.71%	12.73%	8.77%
United Arab Emirates	101341	37.76%	19.26%	11.79%	6.27%	14.76%
Yemen	9545	35.74%	25.66%	17.46%	9.35%	16.51%
Middle Eastern and Arab Countries	3303079	40%	27.1%	20.6%	12.4%	18.4%
European Union	13799739	52.9%	21.6%	14.8%	10.7%	28.3%
North America	14791083	61.7%	21.1%	11.3%	5.8%	28.3%

**Supplementary Table S3.** The most prevalent research subject areas in the total scholarly output produced by Middle Eastern and Arab countries based on Scopus All Science Journal Classification (ASJC).

Country	Agricultural & Biological Sciences		Chemistry		Computer Science		Earth & Planetary Sciences		Environmental Sciences		Mathematics		Physics & Astronomy	
	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC
Algeria	7931	0.7	11033	0.9	23332	0.9	4892	0.91	8593	0.84	17023	0.93	20191	0.92
Bahrain	462	0.95	511	1.23	2472	0.84	281	0.97	774	1.23	1107	0.76	1040	1.2
Comoros	57	0.83	14	1.24	9	1.29	19	0.68	36	0.89	6	1.08	6	0.72
Cyprus	2236	1.49	2024	1.09	8333	1.31	1645	1.26	3024	1.7	4382	1.23	4970	1.93
Djibouti	69	1.58	32	0.45	15	0.84	45	0.82	45	0.76	10	0.77	18	0.57
Egypt	33501	1.29	47729	1.34	35516	1.49	13778	1.08	25287	1.4	23048	1.7	39668	1.61
Iran	72411	1.08	106449	1.21	86950	1.28	34815	1.02	58362	1.37	71457	1.21	101766	1.28
Iraq	10517	0.56	10201	0.91	18450	1.06	6530	0.87	9999	0.9	8926	1.29	15763	1.37
Israel	25103	1.37	26124	1.21	50296	1.27	15133	1.43	13785	1.29	42242	0.98	57155	1.37
Jordan	4512	1	4495	1.05	13544	1.82	1928	0.95	4377	1.03	7210	1.79	5583	1.6
Kuwait	1493	1.26	2265	1.18	4243	1.07	2648	0.9	2350	1.18	2938	1.16	2550	1.54
Lebanon	2325	1.12	2316	1.28	6996	1.21	1229	1.28	2643	1.36	3262	1.12	3174	1.33
Libya	796	0.87	884	0.91	1670	0.94	597	1.25	728	1.07	840	0.98	706	1.04
Mauritania	193	0.79	92	0.3	62	0.82	100	0.67	145	0.87	97	0.56	65	0.57
Morocco	7480	1.15	9909	1.21	21795	0.95	5108	1.39	8835	1.22	15214	0.88	13338	1.38
Oman	2852	1.44	2273	1.46	4374	1.29	2343	1.05	2793	1.66	2524	1.36	2548	1.63
Palestine	703	1.05	1312	1.28	1951	1.59	336	0.93	1163	1.11	996	1.5	1843	1.94
Qatar	1464	1.46	3603	1.6	9737	2.13	1439	1.33	2997	1.61	3513	2.05	4637	1.72
Saudi Arabia	24127	1.74	50883	1.73	54154	1.65	14517	1.45	24129	1.81	39474	1.85	47965	1.88

Somalia	59	1.03	4	1.94	57	0.92	17	0.69	49	1.4	11	1.17	8	1.33
Sudan	2702	1.06	1188	1.03	1569	1.03	559	1	985	1.01	849	1.06	1132	1.16
Syria	2205	0.58	785	0.85	795	1.62	530	0.79	1058	0.8	408	1.69	988	1
Tunisia	1177 2	1.07	10962	1	26976	0.89	3672	0.86	8861	1.06	15693	0.84	14405	0.96
Turkey	6345 2	0.9	60349	1.11	73556	1.22	25641	0.96	45020	1.35	53139	1.48	75907	1.3
United Arab Emirates	3956	1.43	5990	1.55	22801	1.73	6733	1.14	7246	1.75	8933	1.73	9139	1.57
Yemen	791	1.45	1200	1.48	1656	1.83	489	0.95	692	1.11	1313	2.37	1330	1.78

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Country	Chemical Engineering		Energy		Engineering		Materials Science	
	n	FWC	n	FWC	n	FWC	n	FWC
Algeria	6243	0.99	8599	0.94	36163	0.95	17322	0.89
Bahrain	352	0.9	667	1.14	2325	0.85	978	1.13
Comoros	6	1.84	5	1.59	17	1.31	3	1.8
Cyprus	1315	1.3	1856	1.46	8318	1.4	2465	1.12
Djibouti	15	1.47	20	1.4	36	0.72	22	0.57
Egypt	19756	1.53	17116	1.49	68656	1.49	44543	1.41
Iran	60298	1.26	44510	1.51	197062	1.3	102965	1.25
Iraq	5553	1.19	5042	1.42	28033	1.08	13485	1.29
Israel	12385	1.13	5003	1.34	49796	1.15	29957	1.1
Jordan	2538	1.2	2784	1.24	14301	1.51	5046	1.3
Kuwait	2020	1.53	3000	1.17	6413	1.26	2479	1.24
Lebanon	1259	1.4	1765	1.42	8793	1.22	2481	1.22
Libya	517	1	732	1.03	2199	1.03	867	1.06
Mauritania	24	0.48	44	0.68	101	0.85	79	0.49
Morocco	3929	1.13	5794	1.31	22870	1.02	12033	1.19
Oman	1723	1.28	2547	1.45	6302	1.32	2317	1.34

Palestine	501	1.19	634	1.26	2487	1.66	1423	2.3
Qatar	3034	1.6	3866	1.66	11848	1.85	4683	1.64
Saudi Arabia	28312	1.75	22173	1.78	74664	1.82	51948	1.76
Somalia	6	0.87	18	0.77	51	1.12	10	0.73
Sudan	556	1.19	580	1.21	2317	1.13	875	1.12
Syria	426	1.01	576	1.16	1342	1.23	796	1.13
Tunisia	6393	1.1	5433	1.03	29625	0.96	14002	0.92
Turkey	30650	1.09	26424	1.48	128387	1.21	70249	1.11
United Arab Emirates	5762	1.6	9587	1.63	28459	1.57	9013	1.52
Yemen	477	1.37	379	1.56	1879	1.76	1434	1.77

Country	Biochemistry , Genetics and Molecular Biology		Dentistry		Health Professions		Immunology and Microbiology		Medicine		Neuroscience		Nursing		Pharmacology, Toxicology and Pharmaceutics		Veterinary	
	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC
Algeria	5152	0.95	27	0.33	281	1.2	1800	0.95	6159	2.47	328	0.99	327	0.76	2529	0.84	805	0.97
Bahrain	779	1.51	58	1.65	95	1.16	245	1.37	3983	3.02	138	1.89	274	1.19	268	1.1	24	0.97
Comoros	21	0.89	-	-	1	0.83	34	0.6	84	1.92	-	-	4	1.73	9	0.51	10	0.66
Cyprus	3346	1.61	130	1.11	747	1.24	798	2.07	8491	2.1	851	1.38	1021	1.44	869	1.07	174	1.09
Djibouti	33	1.26	-	-	1	-	34	1.38	134	1.14	2	1.21	1	0	45	0.76	8	5.52
Egypt	40706	1.25	2934	1.04	2619	0.67	12406	1.18	79062	1.15	3987	1.12	3295	1.06	23999	1.4	7377	1.27
Iran	79931	1.07	6704	0.8	10007	0.84	25922	0.89	190369	0.89	12455	0.94	12473	1.03	38643	1.12	9251	0.92
Iraq	11014	0.63	637	0.6	602	1.12	2051	0.77	14807	0.99	699	0.93	441	1.26	9913	0.38	2228	0.7
Israel	53600	1.52	2662	1.5	4952	1.25	14120	1.73	115567	1.91	17732	1.35	5496	1.77	8087	1.38	2145	1.36
Jordan	4842	1.17	1053	1.33	909	1.41	1212	1.57	13257	1.9	665	1.52	2220	1.49	3643	1.14	644	1.12

Kuwait	2259	1.48	525	0.89	344	0.75	849	2.03	8381	2.2	463	1.03	414	1.62	1052	1.06	139	2.34
Lebanon	4596	1.19	632	0.88	626	1.12	1538	1.26	18654	1.91	1021	1.21	1187	1.48	1618	1.41	153	1.25
Libya	700	1.96	175	1.46	44	0.44	248	1.06	1649	4.27	46	0.87	61	1.93	457	1.13	182	0.78
Mauritania	49	1.05	1	0	4	-	78	0.97	309	1.2	19	1.53	9	0.71	11	0.53	21	1.36
Morocco	6142	1.14	417	0.75	582	1.4	2153	1.18	20199	1.08	860	1	561	0.75	2331	1.12	456	1.13
Oman	2349	1.44	46	0.32	209	1.21	687	1.37	7287	1.74	318	1.51	523	2.47	1055	1.22	210	0.98
Palestine	978	1.38	61	0.91	137	1.22	292	1.42	2971	3.09	136	1.56	250	1.42	684	1.05	81	0.73
Qatar	4564	1.57	237	1.19	1970	2.28	1169	1.87	13861	2.17	851	1.67	761	1.71	1372	1.29	127	1.47
Saudi Arabia	39940	1.56	6046	1.01	3540	1.37	9529	1.27	69214	1.38	4362	1.4	3762	1.4	20072	1.35	2213	1.62
Somalia	36	0.8	-	-	5	1.21	47	0.85	465	0.87	9	0.78	35	1.43	17	1.41	23	0.47
Sudan	1873	0.91	165	0.56	155	0.7	1254	0.93	4817	1.2	167	0.94	266	1.72	870	0.94	620	1.08
Syria	1052	0.87	508	0.67	73	0.53	291	0.9	2600	1.49	71	0.87	84	0.95	766	0.87	160	0.56
Tunisia	10703	1	252	0.65	1250	1.64	4214	0.93	25384	1.25	1034	1.4	647	1.17	2736	0.97	799	1.24
Turkey	64452	1.06	11221	0.99	10774	0.95	17467	1.07	288186	0.88	15966	0.88	11520	0.97	21541	1.1	13069	0.62
United Arab Emirates	7271	1.36	1154	1.25	997	1.78	1840	1.44	17471	1.86	1480	1.35	1115	1.66	3151	1.2	591	1.23
Yemen	790	1.8	368	1.17	48	1.18	308	0.96	1973	3.98	94	1.82	68	1.29	424	0.9	99	2.07
Country	Arts and Humanities		Business, Management and Accounting		Decision Sciences		Economics, Econometrics and Finance		Multidisciplinary		Psychology		Social Sciences					
	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC	n	FWC				
Algeria	993	0.67	1270	0.65	2691	0.77	578	1.03	1095	1.18	183	1.47	3396	0.78				
Bahrain	228	1.26	1219	1.18	730	0.78	584	1.68	160	1.05	186	1.43	1413	1.16				
Comoros	2	-	2	0.4	1	0.5	1	-	8	1.75	1	0	11	1.41				
Cyprus	2523	1.54	2581	1.72	1067	1.29	1763	1.26	688	2.01	1835	1.38	7604	1.42				
Djibouti	6	0	3	-	3	0.54	1	-	12	2.67	-	-	30	1.24				

Egypt	3002	0.36	4799	0.98	3754	1.17	2561	0.94	7482	1.27	1028	0.25	10927	0.57
Iran	11011	1.21	13183	1.34	12004	1.11	6383	1.58	13753	1.03	7890	1.01	34325	1.06
Iraq	1324	0.64	1415	0.86	2154	1.04	701	0.79	1626	0.8	525	0.7	5697	0.59
Israel	27678	1.13	8449	1.14	5483	0.9	6753	0.97	9009	1.93	19512	1.25	49916	1.16
Jordan	3430	0.89	3827	1.21	2362	1.72	1851	1.27	1321	1.07	782	1.25	8433	1.18
Kuwait	630	0.55	1495	1.15	884	0.98	802	1.34	796	1.39	459	0.8	2566	0.89
Lebanon	1498	1.38	1818	1.51	862	1.08	1221	2.68	643	1.34	915	1.9	4341	1.19
Libya	130	0.76	304	1.28	262	1	128	1.41	186	1.26	37	1.06	485	1.38
Mauritania	9	0	12	0.48	17	0.73	6	0.28	21	0.92	4	0.6	60	0.85
Morocco	1141	0.88	2762	0.97	3793	1	1205	1.05	1056	1.7	311	1.82	4405	1.07
Oman	786	1.19	1865	1.31	925	1.46	1043	1.88	535	0.92	333	1.52	2971	1.48
Palestine	424	1.25	517	1.47	300	1.31	257	0.86	308	1.18	222	1.43	1531	0.98
Qatar	1393	1.88	1952	1.56	1353	1.7	1052	1.46	1129	1.34	538	1.43	4590	1.6
Saudi Arabia	3681	1.08	7122	1.4	5633	1.42	4295	1.58	9845	1.32	2274	1.08	15445	1.29
Somalia	26	0.35	26	0.51	13	0.15	27	0.43	17	1.4	4	0.61	141	0.52
Sudan	190	0.73	174	0.71	120	1.54	178	1.05	471	0.62	57	0.92	955	0.98
Syria	188	0.82	171	1.02	80	1.89	131	1	217	0.6	47	1.09	608	1.15
Tunisia	1052	0.84	4056	0.96	3287	0.84	3269	1.35	992	0.89	510	1.19	4393	1.12
Turkey	19567	0.9	18414	1.14	9829	1.15	14474	1.18	6282	1.04	12052	1.14	63115	0.99
United Arab Emirates	2959	1.64	8029	1.46	3866	1.58	4323	1.72	1940	1.56	1478	2.03	11288	1.51
Yemen	177	1.53	382	1.59	245	1.47	216	1.75	301	1.35	41	1.38	615	1.52

*Note. n= Number of scholarly outputs; FWC= Field-weighted citations.*



**Supplementary Table S4.** The number of scholarly outputs in each of the four Scopus's subject areas for each country in the Middle Eastern and Arab region.

Country	Physical Sciences	Health Sciences	Social Sciences	Life Sciences	Multidisciplinary
Algeria	153391	7599	9111	17740	1095
Bahrain	10507	4434	4360	1892	160
Comoros	121	99	18	121	8
Cyprus	38332	10563	17373	8100	688
Djibouti	258	144	43	183	12
Egypt	335097	95287	26071	114599	7482
Iran	864634	228804	84796	229362	13753
Iraq	121982	18715	11816	34194	1626
Israel	301876	130822	117791	118642	9009
Jordan	61806	18083	20685	14874	1321
Kuwait	30906	9803	6836	6116	796
Lebanon	33918	21252	10655	11098	643
Libya	9740	2111	1346	2247	186
Mauritania	809	344	108	350	21
Morocco	118825	22215	13617	18966	1056
Oman	29744	8275	7923	7261	535
Palestine	12646	3500	3251	2793	308
Qatar	49357	16956	10878	9420	1129
Saudi Arabia	408219	84775	38450	98030	9845
Somalia	231	528	237	168	17

Sudan	10610	6023	1674	6866	471
Syria	7704	3425	1225	4385	217
Tunisia	136022	28332	16567	30459	992
Turkey	589322	334770	137451	182878	6282
United Arab Emirates	113663	21328	31943	17698	1940
Yemen	10849	2556	1676	2407	301

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