

RESEARCH

National and International Research Collaboration across GCC Universities: Impact on Institutional Research Performance and Global Ranking

Tatiana Karabchuk*United Arab Emirates University, corresponding author*Email: tkarabchuk@uaeu.ac.ae

ORCID: 0000-0001-5794-0421

Aizhan Shomotova*Khalifa University*Email: aizhan.shomotova@ku.ac.ae

ORCID: 0000-0002-1168-9224

Mostafa Mohamad*Zayed University*Email: mostafa.mohamad@zu.ac.ae

ORCID: 0000-0001-7172-1110

ABSTRACT

PURPOSE: This paper examines how national and international research collaboration links with universities' performance and their global rankings in the Gulf Cooperation Council (GCC) region.

DESIGN/METHODOLOGY/APPROACH: The empirical analysis is based on the bibliometric data from SciVal (2019-2024). This allowed us to apply Ordinary Least Squares (OLS) regression modelling to define predictors of research performance indicators and ranking among 114 universities in GCC countries.

CITATION: Karabchuk, T., Shomotova, A. and Mohamad, M. (2026): National and International Research Collaboration across GCC Universities: Impact on Institutional Research Performance and Global Ranking. *World Journal of Entrepreneurship, Management and Sustainable Development (WJEMSD)*, Vol. 22, No. 6, pp. 545-567.

RECEIVED: 29 November 2025 / **REVISED:** 17 March 2026 / **ACCEPTED:** 19 March 2026 / **PUBLISHED:** 15 September 2026

COPYRIGHT: © 2026 by all the authors of the article above. The article is published as an open access article by WASD under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

FINDINGS: We found that international and national collaborations are strong predictors of citation impact, research visibility, and publication quality for ranked universities, while non-ranked universities experience much smaller impact.

ORIGINALITY/VALUE: The paper provides the first comparative statistical analysis linking collaboration patterns with global rankings in the GCC countries and empirical evidence, demonstrating the impact of national/international collaboration on institutional visibility, and highlighting the limitations of existing ranking systems in the region.

PRACTICAL IMPLICATIONS: This paper will guide university administrators and leadership in establishing national/international collaboration priorities to climb global rankings.

KEYWORDS: *National and International Collaboration; Research Performance; QS Ranking; Gulf Universities; Gulf Cooperation Council Countries.*

INTRODUCTION

Over the past two decades, for most universities in the Gulf Cooperation Council (GCC) countries, including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE), achieving higher positions in global rankings such as the Quacquarelli Symonds (QS) World University Rankings became an ultimate strategic national goal. According to previous studies, one of the main contributors to the global ranking is collaboration on research (Kim and Kim, 2025; Adams and Szomszor, 2024; Zhang *et al.*, 2022; Bustamante-Ruiz *et al.*, 2025). Studies across diverse contexts suggest that collaborative networks enhance both the quality and visibility of research output by enabling knowledge exchange, increasing citation impact, and facilitating access to international funding opportunities (Duarte *et al.*, 2025; Heiser, 2023). Current literature discusses mainly Western and Asian universities' experiences, while little empirical evidence exists on the Middle East and GCC countries. This paper seeks to answer to what extent international collaboration among universities in the GCC predicts research outcomes and how much it contributes to the global university rankings.

The GGC region has recently exhibited significant progress in research capacity; however, there is a drastic difference between ranked and non-ranked universities. Only a few universities are listed in the global rankings, while those not ranked might have similar research output. As previous research demonstrated, international visibility and citation-based metrics do not take into account contextually relevant or regionally impactful research (Aboelenein *et al.*, 2022).

Therefore, this research examines the link between national and international research

collaboration and universities' performance and global rankings in GCC countries. The paper provides the first comparative statistical analysis based on 114 universities' sample SciVal data, publicly available for the GCC region. Applying regression modelling of research output indicators to test the link with national and international collaboration, the study compares the situation between globally ranked and non-ranked universities. The paper concludes with an evidence-based recommendation for university administrators and leadership to establish national/international collaboration as a priority if they want to climb the global rankings.

LITERATURE REVIEW

Publications co-authored internationally receive significantly more citations than those in national collaborations (Velez-Estevez *et al.*, 2022; Leonard *et al.*, 2022). Multi-authored papers are more likely to be published in higher-impact journals (Q1 and Q2), demonstrating a significant rise in both quality and citation counts (Zhang *et al.*, 2022; Benavent-Pérez *et al.*, 2012). Moreover, there are associations between international collaborations and higher research productivity (Abramo *et al.*, 2017) and improved research quality and innovation capacity (Shen *et al.*, 2023; Bustamante-Ruiz *et al.*, 2025; Munshi and Singla, 2025). Overall, international research collaborations enhance research performance indicators, especially for universities in developing or emerging economies (Geng *et al.*, 2023; Adams and Szomszor, 2024). At the same time, Aboelenein *et al.* (2022) warn that overreliance on expatriate researchers and international partners may limit local institutional capacity and underestimate the importance of balanced collaboration strategies.

Generally, international collaboration has been consistently associated with higher-quality publications and increased citation impact, serving as a gateway for universities to engage with the worldwide academic community (Duarte *et al.*, 2025). As a result, global ranking systems reward universities that show strong international collaboration, high citation impact, and research reputation (Kim and Kim, 2025). In this context, joint research directly contributes to ranking success.

University partnerships improve competitiveness and visibility, positively influencing Times Higher Education (THE) and Quacquarelli Symonds (QS) performance indicators such as “research influence” and “international outlook” (Izharuddin and Sukoco, 2024). However, assessing the impact and extent of international collaboration on research effectiveness and university ranking is methodologically challenging.

The number of publications with international collaboration and co-authorship is an essential metric in global ranking systems (Danquah *et al.*, 2025). Both the QS and THE ranking systems incorporate aspects of international collaboration as part of their research reputation and citation components. Universities with strong international partnerships experience significant enhancements in QS ranking. Collaborations between academia and industry enhance applied

research and improve the university's global rankings (Danquah *et al.*, 2025). Such an impact on global ranking metrics varies regionally. Therefore, European and Anglophone universities gain more from international collaboration compared to Latin American or regional partnerships, where the effect remains minimal (Benavent-Pérez *et al.*, 2012). In Africa, international collaboration is mainly used as a mechanism for academic capacity building, access to funding, and improving global competitiveness (Menon and Suresh, 2021). In response, this paper adds value to the current debate on global ranking and university performance from the regional perspective based on evidence from GCC.

GCC universities have increasingly recognised research partnerships as a vital mechanism for achieving global competitiveness and advancing national innovation goals. Research collaboration, both national and international, plays a pivotal role in enhancing research output, visibility, and academic reputation, which are counted for the global rankings (Albusaidi *et al.*, 2025; Zaidan *et al.*, 2025). International collaboration significantly improves the quality of outputs, such as publications in top-tier journals and articles in the top 10% citation and view percentiles, but it does not substantially increase the overall volume of scholarly output. However, Segumpan and Zahari (2021) argue that while collaboration boosts quantitative indicators, ranking systems often fail to reflect the qualitative and societal dimensions of research productivity in the non-Western context.

Collaborations among GCC countries, especially between universities, industries, and government agencies, have enhanced the capacity for applied research and innovation (Albusaidi *et al.*, 2025; Zaidan *et al.*, 2025). Despite major institutional expansion and investment, research productivity can remain constrained by structural and organisational conditions (Karabchuk *et al.*, 2022; Aboelenein *et al.*, 2022). Al-Sinani *et al.* (2020) identify a clear rise in international research collaboration across GCC countries and show that the United States is the dominant collaborator.

National and regional-level research collaboration has been crucial for developing local research ecosystems and enhancing research output. For example, Saudi Arabia and Qatar have a strong research collaboration that has contributed to significant improvements in research productivity and academic reputation (Al-Marzouqi and Arabi, 2022). Nonetheless, national collaboration alone might not be sufficient to elevate institutions to the top ranks of global rankings due to factors such as organisational limitations, dependence on expatriate faculty, and varying policy contexts.

Typically, Gulf universities ranked higher for their higher collaboration intensity and stronger citation impact in comparison to those that are not ranked (Al-Marzouqi and Arabi, 2022). They benefit from strong funding frameworks, internationalisation strategies, and partnerships with well-known institutions worldwide. Non-ranked universities often rely on local collaborations and face challenges such as insufficient research facilities and limited networks. However, global accreditation and partnerships with branch campuses facilitated certain advancements. Programmes for academic mobility and accreditation frameworks enhance the research capabilities of institutions and gradually integrate non-ranked institutions into global research ecosystems (David *et al.*, 2017).

Although research collaboration enhances ranking metrics, global systems such as QS and *THE* might not fully reflect the entire range of collaboration advantages in the GCC. Rankings focus on citation-based metrics that conform to Western academic frameworks, and most of the time overlook regional and societal contributions of research (Segumpan and Zahari, 2021). In emerging economies such as GCC countries, universities contribute to society development and innovation, which should be represented in the evaluation of the university performance (Mohamad, 2025; Zaidan *et al.*, 2025). Policy efforts in the GCC countries encourage collaboration to achieve national development goals, an overlooked aspect in global ranking measurements (Albusaidi *et al.*, 2025). Therefore, a ranking methodology that incorporates collaboration diversity and regional engagement would offer an equitable assessment of GCC universities. In conclusion, this literature review shows that research collaborations in the Gulf region have a significant impact on research productivity, visibility, and global ranking performance indicators. Their partnerships have been improving citation impact and institutional reputation, while national policies and funding frameworks have facilitated them.

RESEARCH METHODOLOGY

This paper examines how national and international research collaborations influence university research performance and global rankings in the GCC region across 114 universities (Table 1) in Saudi Arabia, the United Arab Emirates, Qatar, Oman, Kuwait, and Bahrain.

Open access bibliometric data from SciVal of 21 indicators on collaboration, citation impact, and QS rankings (Arab Region and National) were used for empirical analysis. Since the research is based on publicly available university-level statistical data, no ethical approval is required.

Table 1: Number of Universities Registered in Scopus Database, SciVal, by GCC Countries, 2019-2024

Country	Number of universities registered in Scopus	Percentage
Bahrain	9	8
Kuwait	5	5
Oman	13	11
Qatar	6	5
Saudi Arabia	47	41
UAE	34	30

Source: Calculated based on SciVal data

The research framework implies regression modelling to test the hypotheses, based on the university-level indicators of their research performance. The study conceptualises research performance and ranking as a function of two primary factors: collaboration type and geographic scope.

The research tests the following hypotheses:

H1: National and international collaboration significantly enhances research output and citation performance.

H2: National and international collaboration significantly predicts global ranking improvements.

H3: National and international collaboration will have more importance for ranked universities than for non-ranked universities.

To test the hypotheses, the study applied regression modelling to assess how different forms of collaboration (national, international, academic, corporate, medical, and government) contribute to research output, research impact, visibility, and how all that is linked with global university rankings. OLS regression analysis was applied with multiple dependent variables, measuring 1) the research output of the universities (five variables), 2) research impact and visibility (five variables), and 3) university rankings (four variables).

Research output variables include:

1. scholarly output;
2. scholarly output growth %;
3. output in top 10% citation percentiles (%);
4. output in top 10% views percentiles (%);
5. publications in top 10% journal percentiles by CiteScore Percentile (%).

Research impact and visibility (citations) variables include:

1. citation count;
2. citations per publication;
3. cited publications (%);
4. field-weighted citation impact (FWCI);
5. number of citing countries.

University ranking-related variables include:

1. QS ranking in the Arab region;
2. QS ranking at the national level;
3. academic reputation QS scores;
4. research networking QS score.

Regression models were assessed against the same list of independent variables for each of the research efficiency indicators mentioned above, estimating five models for research output and five models for research impact and visibility. Then, we add research output indicators to the list of independent variables while estimating predictors of four QS ranking scores. The main tested independent variables were the type of collaboration (international, national, institutional, or single authorship) and sector of collaboration (percentage of academic only, academic-corporate, academic-government, and academic-medical).

FINDINGS

This section of the paper presents the outcomes of the empirical regression modelling of the predictors of research output, research impact, and QS ranking. Overall, all the estimated models explain a large proportion of variance (R^2), confirming that collaboration structure and national research ecosystems are decisive determinants of bibliometric success and ranking potential in GCC higher education.

National/International Collaboration and Research Output/Impact

Results highlight a strong and positive link between international and national collaborations and universities' scholarly output and research impact, as both international and national collaboration significantly increase the number of publications and total citation counts (Table 2). It reflects how cross-border and domestic academic networks stimulate research productivity and visibility. However, these same forms of collaboration are associated with negative coefficients for output in top-viewed percentiles, suggesting that while

Table 2: Regression Analysis Coefficients of Research Output and Research Impact among the Universities in the GCC region, SciVal, 2019-2024

	Research output indicators					Research impact indicators				
	Scholarly Output	Scholarly Output growth	Output in Top 10% Citations Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)
International Collaboration (%)	481.4*	24.27	0.777*	-1.516**	0.567	9954.0*	0.0468	-0.673	-0.145	0.677
National Collaboration (%)	414.6*	22.32	0.555	-1.517**	0.536	9452.4*	0.0705	-1.975	-0.158	0.803
Institutional Collaboration (%)	334.0	17.66	0.568	-1.814**	0.486	7999.3	-0.0396	0.136	-0.155	0.514
Authors	3.501***	-0.00266	0.000166	-0.000200	0.000411	60.66***	-0.00000424	0.00726**	-0.0000136	0.000162
Authors (growth %)	-1.333*	1.540***	0.00188	0.00928***	0.00422	-16.36	-0.000156	0.00239	-0.0000847	-0.00489
Academic Only Collaboration (%)	-398.1	-23.04	-0.501	1.677**	-0.475	-8951.2*	0.0598	1.842	0.154	-0.412
Academic-Corporate Collaboration (%)	-182.7	-30.04	-0.170	0.801	1.740*	262.3	0.228*	1.045	0.188*	-0.576
Academic-Government Collaboration (%)	-477.8*	-18.13	-0.417	1.138*	-0.361	-10048.6*	0.0298	1.436	0.114	-0.282
Academic-Medical Collaboration (%)	-287.5*	-13.22	-0.444	0.860*	-0.664	-6569.8*	-0.0413	2.312	0.0802	-0.287
Academic-other collaboration (%)	-325.4	-12.67	-0.341	1.494***	-0.104	-6316.6	0.0352	2.881	0.0746	-0.370

Research output indicators										Research impact indicators				
Scholarly Output	Scholarly Output growth	Output in Top 10% Citations Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)					
International collaboration impact	21.26	-4.054	0.0606	-0.140	0.137	862.9	0.639***	-0.926	-0.0154	-0.0332				
Academic Only Collaboration Impact	-82.99	3.935	0.579***	1.034***	0.556	695.0	0.233***	2.441*	0.0306	0.768**				
Academic-Corporate Collaboration Impact	-3.615	-0.152	-0.00848	-0.0167	0.00868	-41.09	0.00264	0.0989	0.000704	0.00768				
Academic-Government Collaboration Impact	28.68	2.770	0.0292	0.00214	-0.0598	371.5	0.0448**	0.132	0.0235	0.0649				
Academic-Medical Collaboration Impact	-4.988	-0.481	0.00603	0.0363	0.0124	-62.39	-0.0124***	0.0348	-0.00376	-0.0247				
Bahrain	-959.4	-39.37	-3.425	16.62**	-3.377	163.0	0.639	-33.13**	-0.0898	-7.729**				
Kuwait	-422.7	-10.98	1.566	10.64**	8.917	2233.3	-0.507	2.591	-0.230	0.425				
Oman	-1750.5**	-171.4*	-1.192	9.044**	0.750	-16342.3	-0.115	-29.06**	-0.0246	-1.865				
Qatar	-730.9	-264.7	-1.246	-7.210	9.011	5856.0	-0.191	-19.62	0.210	0.608				
Saudi Arabia														
UAE	-766.5	-12.47	-2.563*	9.736***	1.057	-6165.2	-0.484	-15.50	-0.0384	-0.897				
_cons	-3428.4	0.139	-10.82	1.211	-0.812	-85402.1	-9.049***	23.78	0.862	45.93***				
N	112	112	109	112	112	112	112	112	112	112				
r2	0.934	0.839	0.702	0.635	0.519	0.939	0.998	0.760	0.899	0.612				

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' calculations, based on SciVal data

collaborations expand volume, they do not always enhance online attention or societal reach for GCC universities. We can therefore confirm hypothesis H1, that international and national collaboration positively predicts research output and research impact.

Furthermore, academic-only collaboration demonstrates positive effects on high-impact metrics, including top-10% citation and views percentiles, as well as citations per publication and cited publications. This suggests that discipline-focused, purely academic networks yield more influential, visible outputs compared with cross-sectoral partnerships. By contrast, academic-corporate and academic-government collaborations have mixed or negative associations with research output and citation outcomes. This might indicate that industry or policy partnerships in the GCC region remain nascent and less research-intensive.

The indicator of “authors’ growth” showed a strong positive association with total output, output growth, citations count, and output in 10% top-views percentiles, meaning that expanding research teams contributes to faster output growth and higher digital visibility.

National/International Collaboration and QS Rankings

The regression modelling discloses that international and national collaboration plays a significant role in shaping universities’ ranking performance in the Arab region and at the national level. Universities with stronger cross-border research engagement are more likely to perform better in national rankings (Table 3). Conversely, scholarly output growth is negatively associated with both regional and national rankings, indicating that rapid expansion in output volume may not translate into quality gains or recognition in ranking metrics. The number of cited countries consistently predicts higher rankings and QS scores across the four models, implying that a wider geographical citation reach is a robust indicator of international visibility and impact; this is also included in the ratings’ estimations.

With regard to academic reputation and research network scores, collaboration factors did not appear to be significant. Scholarly output and the number of citing countries contribute most to the QS rankings indicators. Importantly, international collaboration impact is positively associated with national ranking, highlighting how high-impact global partnerships enhance a university’s national reputation. Variables such as academic-corporate and academic-government collaborations exhibit insignificant effects, suggesting that in the Arab region, university-industry or university-government ties have yet to translate into higher prestige or network visibility. Consistent insignificant coefficients for any type of national/international collaboration on rankings scores indicate that institutional capacities and national research ecosystems remain critical moderators of performance outcomes. Despite insignificant relationships between variables, the tested models explain a substantial share of variance (R^2 varies from 50% to 80%).

Role of National/International Collaboration at Ranked and Non-Ranked Universities

For universities that are not represented in the global rankings, regression models reveal that international, national, and institutional collaborations remain a decisive predictor of basic research productivity, although their effect on high-impact outcomes is limited (Table 4). All three types of collaboration show strong positive coefficients for scholarly output, yet these same variables have negative and significant associations with top-viewed outputs and with FWCI, indicating that while collaboration expands quantity, it does not necessarily enhance citation efficiency or visibility.

Academic-only collaboration exerts negative effects on quantity but significantly improves top-viewed output. Likewise, academic-government and academic-medical collaborations show negative associations with output but positive ones with FWCI and visibility, suggesting that cross-sector partnerships produce research that resonates more within global citation networks. With regard to the impact measuring indicators, our estimations showed that international collaboration significantly improves citations per publication.

For universities included in the global QS rankings, the regression results show that international, national, and institutional collaboration are powerful and consistent predictors of both research output and impact (Table 5). International co-operation shows a significant positive association with research output, citation numbers, and citations per paper, while also boosting production in the top 10% of citation percentiles and publications in the leading 10% of journals. These results suggest that globally recognised universities transform international partnerships into increased research output and enhanced bibliometric impact, a trend not seen in the unranked institutions.

National and institutional collaborations lead to a similar yet slightly less pronounced trend, boosting publication and citation totals, but displaying smaller coefficients for high-impact outputs. The number of authors remains a strong indicator of total publications and international citation impact, underlining that established research ecosystems are founded on extensive, interconnected groups. The study concludes that collaboration at national and international levels results in quantifiable bibliometric success for ranked universities, demonstrating a significant positive correlation between research performance and internationalisation.

Regarding collaboration types, the results show that academic-only collaboration is negatively associated with both output and citation count, yet its impact variable shows a significant positive association with the top 10% citation outputs, citations per publication, and percentage of cited publications. Therefore, ranked universities can change high-quality academic collaborations into globally recognised outputs, even if total volume decreases in comparison to non-ranked universities. Academic-government and academic-medical collaborations present mixed results. There are negative associations between these collaborations and output, and citation counts, but significantly enhanced field-weighted citation impact and cited publication share, highlighting that cross-sector research in ranked universities tends to be more selective but higher in visibility and relevance.

Finally, the exceptionally high explanatory power of the regression models confirms that collaboration structure, research scale, and institutional capacity nearly fully account for the bibliometric success of globally ranked GCC universities. In contrast to non-ranked peers, these institutions demonstrate an efficient conversion of collaboration into global research impact, positioning them as regional anchors in the Arab higher education research landscape.

Table 3: Regression Coefficients of Ranking Indicators at the Universities in the GCC Region, SciVal, 2019-2024

	QS University ranking 2024, Arab Region	QS University ranking 2024, National	Academic reputation QS scores	Research networking QS score
International Collaboration (%)	3.893	0.581	-2.536	-1.244
National Collaboration (%)	2.550	0.316	-2.810	-1.397
Institutional Collaboration (%)	1.790	0.218	-1.255	-0.516
Authors	-0.00352	-0.00127	0.00130	-0.00114
Authors (growth %)	0.0515	0.0167**	-0.0453*	-0.0125
Academic Only Collaboration (%)	-3.920	-0.517	3.019	1.500
Academic-Corporate Collaboration (%)	-2.342	-1.157	-1.579	-1.086
Academic-Government Collaboration (%)	-3.889	-0.558	1.856	0.667
Academic-Medical Collaboration (%)	-2.687	-0.245	1.862	0.650
International collaboration impact	8.724	1.482*	-0.617	1.527
Academic Only Collaboration Impact	-1.414	0.193	0.187	0.617
Academic-Corporate Collaboration Impact	0.0549	-0.00668	0.00206	-0.00558
Academic-Government Collaboration Impact	-0.0717	0.0526	0.332	0.200
Academic-Medical Collaboration Impact	0.0897	-0.00856	-0.105	-0.0982
Scholarly output	-0.00142	-0.0000951	0.00355	0.00452
Scholarly output growth	-0.0421*	-0.0117***	0.0137	-0.000459
Output top10CP	3.094	0.365	0.358	0.536
Output top10VP	-0.303	-0.107	0.339	-0.0234
Publications top10% journals	-1.098	-0.100	0.876	0.0715
Citations count	-0.0000126	-0.00000336	-0.000160	-0.000160
Citations per publication	-10.90	-2.011	-0.0265	-2.563
Cited publications %	-0.310	-0.192	-0.903	0.483
Number of cited countries	0.750***	0.139***	0.416**	0.432***
FWCI	-5.127	-0.472	-7.838*	-4.506
Bahrain	-18.71	-9.184*	-7.168	-5.225

QS University ranking 2024, Arab Region		QS University ranking 2024, National		Academic reputation QS scores		Research networking QS score	
Kuwait	-9.818	-12.30***	11.58	-9.202			
Oman	-2.526	-11.78***	-8.111	-4.833			
Qatar	-36.52	-13.95***	29.83	22.17*			
Saudi Arabia							
UAE	-30.55	-7.902**	0.548	-3.439			
Constanta	23.53	10.45	-18.97	-101.1**			
N	109	109	109	109			
r2	0.483	0.618	0.621	0.808			

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' calculations, based on SciVal data

Table 4: Regression Analysis Coefficients for Research Output and Research Impact of Non-Ranked Universities in the GCC, SciVal, 2019-2024

Research impact										
Research output					Research impact					
Scholarly Output	Scholarly output growth	Output in Top 10% Citation Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)	
International Collaboration (%)	247.6*	59.54	0.444	-2.695**	1.180	6760.1*	0.0748	1.668	-0.170**	1.427*
National Collaboration (%)	247.1*	56.80	0.310	-2.812**	1.207	6887.6*	0.118	0.770	-0.193**	1.687*
Institutional Collaboration (%)	279.1*	51.17	-0.0302	-3.827**	0.687	8078.4*	0.00673	2.173	-0.202**	1.575
Authors	1.899***	0.0157	0.000936	0.00187	0.00260	42.17***	0.0000737	0.0147**	0.0000512	-0.00109

	Research output					Research impact				
	Scholarly Output	Scholarly output growth	Output in Top 10% Citation Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)
Authors (growth %)	0.180	1.487***	0.00489	0.00848*	0.00543	1.476	0.0000129	0.0150	-0.000302	0.000921
Academic Only Collaboration (%)	-257.1*	-59.48	-0.327	2.857**	-1.265	-7083.9*	0.00904	-1.484	0.192**	-1.457*
Academic-Corporate Collaboration (%)	152.8	-96.60	1.088	3.484*	2.562	6419.5	0.315	-1.016	0.172	-1.752
Academic-Government Collaboration (%)	-243.0*	-52.66	-0.289	2.023*	-1.186	-6957.9*	-0.0140	-1.609	0.136*	-1.126*
Academic-Medical Collaboration (%)	-247.8*	-14.94	-0.563	0.796	-1.379**	-7834.5*	-0.110	0.919	0.122*	-0.424
Academic-other collaboration (%)	-12.57	-12.62	-0.0347	0.000208	0.253	2.608	0.675***	-0.973	-0.0830****	-0.000922
International collaboration impact	55.16	16.81	0.388	0.423	0.157	1621.0	0.230**	1.746	0.0742*	0.880**
Academic Only Collaboration Impact	-1.158	-1.843	-0.00471	0.00783	0.0305	2.955	0.00473	0.0204	-0.000552	-0.0151
Academic-Corporate Collaboration Impact	1.837	8.539	0.105	0.115	-0.123	178.4	0.0505	0.0394	0.0366**	0.0278

Research output										Research impact			
Scholarly Output	Scholarly output growth	Output in Top 10% Citation Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)				
Academic-Government Collaboration Impact	11.19	0.954	-0.0308	-0.145	0.0663	79.59	-0.0349	0.381	0.0145	0.0645			
Academic-Medical Collaboration Impact	-1.370	-1.462	-0.0309	-0.00221	-0.0374	-9.496	0.00187	0.0465	-0.00278	-0.0293			
Bahrain	-221.3	-195.0	0.0757	21.65**	-0.821	-10629.2	1.212	-12.86	0.0223	-5.152			
Kuwait	-1839.3*	-221.7	-4.435	4.352	-7.805	-63866.4*	-1.647	-3.711	0.515	-12.91***			
Oman	-323.5	-334.7	1.949	3.536	4.427	-12646.2	0.276	-14.40	-0.0134	0.181			
Qatar	-1383.8	-592.3	-7.306	-6.119	2.842	-36577.9	0.0448	-27.98	0.837	-7.248			
Saudi Arabia													
UAE	-273.5	-92.27	-1.181	5.451	-1.241	-11118.8	0.0146	-4.640	-0.174	3.262			
_cons	175.7	132.6	4.075	18.72	18.19	889.7	-8.226**	86.87*	0.365	61.78***			
N	48	48	45	48	48	48	48	48	48	48			
r2	0.926	0.866	0.763	0.749	0.673	0.875	0.999	0.826	0.950	0.654			

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' calculations, based on SciVal data

Table 5: Regression Analysis Coefficients for Research Output and Research Impact of QS-Ranked Universities in the GCC, SciVal, 2019-2024

	Research output					Research impact				
	Scholarly Output	Scholarly output growth	Output in Top 10% Citations (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)
International Collaboration (%)	565.5***	6.413	0.807***	-0.160	0.616**	9001.8***	0.130***	0.831	0.00542	0.397*
National Collaboration (%)	405.6*	-9.210	0.669**	-0.338	0.152	8279.1**	0.0765	0.287	-0.000317	0.471*
Institutional Collaboration (%)	330.2*	3.094	0.571***	-0.425	0.600*	5264.6**	0.0541	1.281	0.00553	0.232
Authors	3.549***	0.0125	-0.000215	0.0000380	0.0000496	61.12***	0.00000601	0.00334*	-0.0000365*	-0.000289
Authors (growth %)	-3.185	1.887***	0.000175	0.00400	0.00579	15.10	-0.000292	-0.00902	-0.0000268	-0.0146***
Academic Only Collaboration (%)	-221.7*	-0.348	-0.267*	0.0685	-0.424*	-4175.8*	-0.0251	-0.148	0.0133	0.0511
Academic-Corporate Collaboration (%)	-223.6	-1.721	-0.306	0.533	0.911	-780.0	0.138	-0.959	-0.00118	0.0136
Academic-Government Collaboration (%)	-338.3*	-5.154	-0.250	-0.561	-0.0279	-5879.2**	0.00193	1.203	0.0174	0.493**
Academic-Medical Collaboration (%)	-125.1*	3.915	-0.174**	0.175	-0.353***	-2050.4*	-0.0572***	0.650	0.0111	-0.149*

Research output										Research impact			
Scholarly Output	Scholarly output growth	Output in Top 10% Citation Percentiles (%)	Output in Top 10% Views Percentiles (%)	Publications in Top 10% Journal Percentiles by CiteScore Percentile	Citation Count	Citations per Publication	Number of Citing Countries	Field-Weighted Citation Impact	Cited Publications (%)				
Academic-other collaboration (%)	166.8	5.628	-0.0774	-0.0669	0.266	1832.9	0.675***	-2.046	0.0212	-0.338			
International collaboration impact	-116.1	-19.65	1.086**	0.342	0.470	5729.0	0.168**	3.578	0.0165	1.205***			
Academic Only Collaboration Impact	-5.751	0.338	0.000304	0.00980	-0.0207	-10.16	0.000290	0.124	0.000961	0.00931			
Academic-Corporate Collaboration Impact	-92.86	-2.253	-0.0540	0.0597	-0.213*	-1176.8	-0.00875	0.907*	0.00279	0.136*			
Academic-Government Collaboration Impact	25.50	0.668	0.0247*	0.0160	0.0357*	359.5	0.000974	-0.194**	0.000399	-0.0315*			
Academic-Medical Collaboration Impact	0.191	-0.305	0.00147	-0.0187	0.0238**	-23.20	0.00172*	-0.0328	0.0000394	-0.00317			
Bahrain	906.7	-91.03	0.130	8.461	-0.804	59665.3	0.566	-13.06	0.343	-6.165			
Kuwait	589.1	23.40	3.646	14.47	12.80***	42520.4	0.0137	-5.768	0.0451	0.117			
Oman	-2894.2**	-179.3**	-2.949	11.44*	0.681	-24599.2	-0.161	-21.05	-0.0740	-3.060**			
Qatar	-2285.7	112.5	-5.117	1.419	15.04***	-30230.6	1.480**	-11.80	0.0912	-6.700			
Saudi Arabia													
UAE	-0.888	38.41	-1.962	12.91***	7.530**	10583.6	0.00670	-5.558	0.129	-3.892***			
_cons	-25639.6*	-177.2	-37.05**	31.05	-7.795	-494365.1**	-8.077**	63.25	-0.578	28.14*			
N	64	64	64	64	64	64	64	64	64	64			
r2	0.952	0.927	0.787	0.715	0.751	0.965	0.995	0.819	0.793	0.918			

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' calculations, based on SciVal data

CONCLUSIONS

This study investigated how national and international research collaborations shape research performance and QS ranking outcomes among 114 universities in the GCC (2019-2024), using SciVal bibliometric data and 21 indicators of output, impact, and ranking. Drawing on theories of scientific collaboration, citation, and the internationalisation of higher education, the authors estimated a series of OLS regression models to assess how different collaboration types (national, international, institutional, and sectoral partnerships) affect scholarly output, citation impact, visibility, and QS Arab Region and national rankings. The results showed that both international and national collaborations significantly increase publication volume and citation counts, confirming that collaborative networks are key drivers of research productivity and impact, although they do not always translate into higher top-viewed outputs or field-weighted citation impact.

The comparative regression analysis of QS-ranked and non-ranked universities in the GCC region reveals a clear institutional divide in how national/international collaboration contributes to research performance. Among globally ranked universities, international, national, and institutional collaborations consistently proved to be positive and statistically significant predictors of research output and research impact. These institutions display a high capacity to convert collaborative activity into quality-adjusted impact. It might reflect more mature research ecosystems with established international networks, access to competitive funding, and effective research management structures. Conversely, universities that are not ranked similarly gain advantages from teamwork regarding heightened publication and citation numbers, yet these effects do not influence citation efficiency or field-adjusted impact. In their situation, working together seems mostly extensive rather than intensive, highlighting an increase in output without comparable increases in reputation or power.

Moreover, while both groups show positive associations between author numbers and research productivity, only globally ranked universities demonstrate collaboration efficiency. That is, the ability to produce fewer but more influential outputs through targeted partnerships (e.g., academic-only or medical collaborations linked to top 10% citation percentiles). Non-ranked institutions receive limited contribution to their global recognition, even though they might have applied broad team expansion strategies. Overall, the comparative findings highlight that collaboration alone is not sufficient for global ranking success; rather, what differentiates ranked from non-ranked universities is their institutional capacity to transform collaboration networks into sustained research excellence and international visibility.

REFERENCES

- Aboelenein, M., Salnikova, D., Karabchuk, T. and Shomotova, A. (2022): Universities research performance in the United Arab Emirates and Oman: Challenges of higher education systems. *Journal of Higher Education Policy and Leadership Studies*, Vol. 3, No. 4, pp.28-48. Available at: <https://nchr.elsevierpure.com/en/publications/universities-research-performance-in-the-united-arab-emirates-and/>
- Abramo, G., D'Angelo, A.C., and Murgia, G. (2017): The relationship among research productivity, research collaboration, and their determinants. *Journal of Informetrics*, Vol. 11, No. 4, pp.1016-1030. Available at: <https://doi.org/10.1016/j.joi.2017.09.007>
- Adams, J. and Szomszor, M. (2024): National research impact is driven by global collaboration, not rising performance. *Scientometrics*, Vol. 129, No. 5, pp.2883-2896. Available at: <https://doi.org/10.1007/s11192-024-05010-6>
- Albusaidi, S., Alabri, K., Chinnathambi, K. and Al Masruri, S. (2025): How are the policy initiatives being enacted to strengthen regional higher education in the GCC received and implemented? *Educational Process: International Journal*, Vol. 17, p.e2025339. Available at: <https://doi.org/10.22521/edupij.2025.17.339>
- Al-Marzouqi, A.H. and Arabi, A.A. (2022): Research performance of the GCC countries: A comparative analysis of quantity and quality. *Heliyon*, Vol. 8, No. 11, p.e11309. Available at: <https://doi.org/10.1016/j.heliyon.2022.e11309>
- Al-Sinani, S., Hossain, F., Kumasey, A.S., and Kravariti, F. (2020): International research collaboration: contemporary trends and trajectories from GCC Countries. *South Asian Journal of Policy and Governance*, Vol. 43, No. 1, pp.1-23. Available at: <https://sjpgjournal.org/index.php/sjpg/article/view/34>
- Benavent-Pérez, M., Gorraiz, J., Gumpenberger, C. and de Moya-Anegón, F. (2012): The different flavors of research collaboration: A case study of their influence on university excellence in four world regions. *Scientometrics*, Vol. 93, No. 1, pp.41-58. Available at: <https://doi.org/10.1007/s11192-012-0638-4>
- Bustamante-Ruiz, S., Silva-Peralta, Y., Ramírez-Valdivia, M. and Barzola-Monteses, J. (2025): Influence of International Cooperation on Co-authorship of Scientific Articles and its Impact on Citation Indicators. In 23rd LACCEI International Multi-Conference for Engineering, Education, and Technology: *Engineering, Artificial Intelligence, and Sustainable Technologies in service of society*. Hybrid Event, Mexico City, 16-18 July. Available at: https://laccei.org/LACCEI2025-Mexico/full-papers/Contribution_1906_final_a.pdf
- Danquah, M.M., Onyancha, O.B. and Avuglah, B.K. (2025): Patterns and trends of university-industry research collaboration in Ghana between 2011 and 2020. *Information Discovery and Delivery*, Vol. 53, No. 1, pp.90-108. Available at: <https://doi.org/10.1108/IDD-11-2022-0122>
- David, S., Taleb, H., Scatolini, S., Al-Qallaf, A., Al-Shammari, H. and George, M. (2017): An exploration into student learning mobility in higher education among the Arabian Gulf Cooperation Council countries. *International Journal of Educational Development*, Vol. 55, pp.41-48. Available at: <https://doi.org/10.1016/j.ijedudev.2017.05.001>

- Duarte, I., Santos, H.G.D. and Rodrigues, M.L. (2025): A general analysis of the impact of international collaboration on the citation indices of scientific publications from 60 institutions across five continents. *Anais da Academia Brasileira de Ciências*, Vol. 97, No. 1, p.e20241035. Available at: <https://doi.org/10.1590/0001-3765202520241035>
- Geng, Y., Chen, L., Li, J. and Iqbal, K. (2023): Higher education and digital Economy: Analysis of their coupling coordination with the Yangtze River economic Belt in China as the example. *Ecological Indicators*, Vol. 154, p.110510. Available at: <https://doi.org/10.1016/j.ecolind.2023.110510>
- Heiser, R.E. (2023): The Emergence of the Open Research University through International Research Collaboration. *The International Review of Research in Open and Distributed Learning*, Vol. 24, No. 3, pp.99-124. Available at: <https://doi.org/10.19173/irrodl.v24i3.7328>
- Izharuddin, M. and Sukoco, B.M. (2024): Strategic alliances and global competitive actions: Unveiling collaborative pathways in higher education ranking. *Industry and Higher Education*, Vol. 39, No. 3, pp.291-303. Available at: <https://doi.org/10.1177/09504222241287068>
- Karabchuk, T., Shomotova, A. and Chmel, K. (2022): Paradox of research productivity of higher education institutions in Arab Gulf countries: The case of the UAE. *Higher Education Quarterly*, Vol. 76, No. 4, pp.759-785. Available at: <https://doi.org/10.1111/hequ.12347>
- Kim, T. and Kim, T-K. (2025): Global Inequality in Research: A Quantitative Analysis of 1628 Institutions in THE World University Rankings 2025. *IEEE Access*, Vol. 13, pp.161262-161278. Available at: [DOI: 10.1109/ACCESS.2025.3609563](https://doi.org/10.1109/ACCESS.2025.3609563)
- Leonard, A., Hamutumwa, N., and Mabuku, M. (2022): A bibliometric analysis of how research collaboration influences Namibia's research productivity and impact. *SN Social Sciences*, Vol. 2, No. 10, p.225. Available at: <https://doi.org/10.1007/s43545-022-00528-z>
- Menon, S. and Suresh, M. (2021): Factors influencing organisational agility in higher education. *Benchmarking: An International Journal*, Vol. 28, No. 1, pp.307-332. Available at: <https://doi.org/10.1108/BIJ-04-2020-0151>
- Mohamad, M. (2025): Technological Innovation Ecosystem for Sustainable Development: Multi-cases from Federal Universities in UAE. In Saeed, S.T. (Ed.): *Universities and the SDGs: Empowering Change in the MENA Region*. Available at: <https://doi.org/10.1108/978-1-83708-210-020251004>
- Munshi, A. and Singla, A. R. (2025): Determinants of collaborative research partnerships for innovation in food science. *Global Knowledge, Memory and Communication*, in press. Available at: <https://doi.org/10.1108/GKMC-07-2024-0458>
- Segumpan, R.G. and Zahari, J.S.A. (2021): Global rankings as yardstick of quality of higher education: Voices from Gulf-based academics. In Segumpan, R.G. and McAlaney, J. (Eds): *Higher Education in the Gulf* (pp.64-79). Routledge. Available at: <https://doi.org/10.4324/9781003174172>

- Shen, H., Lin, H., Han, W. and Wu, H. (2023): ESG in China: A review of practice and research, and future research avenues. *China Journal of Accounting Research*, Vol. 16, No. 4, p.100325. Available at: <https://doi.org/10.1016/j.cjar.2023.100325>
- Velez-Estevez, A., García-Sánchez, P., Moral-Muñoz, J. A., and Cobo, M. J. (2022): Why do papers from international collaborations get more citations? A bibliometric analysis of Library and Information Science papers. *Scientometrics*, Vol. 127, No. 12, pp.7517-7555. Available at: <https://doi.org/10.1007/s11192-022-04486-4>
- Zaidan, E., Wazen, C. and Al-Saidi, M. (2025): Vehicles for change? Public universities, development plans, and the post-carbon transition in the Gulf states. *Research in Globalization*, p.100294. Available at: <https://doi.org/10.1016/j.resglo.2025.100294>
- Zhang, D., Ding, W., Wang, Y., and Liu, S. (2022): Exploring the Role of International Research Collaboration in Building China's World-Class Universities. *Sustainability*, Vol. 14, No. 6, p.3487. Available at: <https://doi.org/10.3390/su14063487>

BIOGRAPHY



Dr Tatiana Karabchuk is an Associate Professor of Economic Sociology and Demography, Department of Government and Society, College of Humanities and Social Sciences, and a research fellow at the Human Capital Research Centre at UAE University (UAEU); ranked #1 in the UAE in Demographic Studies (AD Scientific Index, World Scientist and University Rankings 2022). Tatiana authored more than 40 academic articles in peer-reviewed journals, including *Journal of Family and Marriage*, *International Migration Journal*, *European Journal of Higher Education*, *Higher Education Quarterly*, *Post-Soviet Affairs*, *Journal of Happiness Studies*, *Mind & Society*, and *Current Psychology*.



Dr Aizhan Shomotova is a dedicated scholar specialising in higher education, human capital, digital literacy, wellbeing, and the integration of generative AI in higher education. She is currently a faculty member at Khalifa University, a Fellow of the Higher Education Academy (FHEA), and served as a faculty instructor and course co-ordinator, and as chair of the committee at the College of Interdisciplinary Studies, Zayed University. Her research has been published in top-tier Scopus-indexed Q1 journals. She is an Associate Editor of the Q1-Scopus Indexed *Journal of Further and Higher Education* and a reviewer of top leading journals in education and social sciences. She has participated in leading international conferences and has organised high-impact academic events.



Dr Mostafa Mohamad is a scholar and industry expert in Digital Transformation, AI for Business, FinTech, Digital Innovation, and Business Analytics. Before joining Zayed University, he had 20 years of academic experience at Manchester Business School, Newcastle Business School, Leeds Business School, and Salford Business School. He has a record of 81 peer-reviewed publications in Q1 and Q2 Scopus-listed journals mainly in Information Systems (IS) journals such as *Technological Forecasting and Social Change* and *Management Information Systems Journal*. He served as a director of PG programmes, a director of Admissions, and a deputy DBA director. He also led significant research funding for Virtual Reality, Machine Learning, Artificial Intelligence, FinTech and Technology transfer.

