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Research Article

The Academic Structure of Management Information Systems in Türkiye: A Descriptive Analysis of Institutional Distribution and Co-Authorship Pattern

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Abstract – This study maps the academic structure of Management Information Systems (MIS) in Türkiye using cleaned YÖK Academic profile data compiled in April 2026. The dataset covers academics and universities in Türkiye and identifies 705 academics whose current department is MIS across 94 universities, 42 cities, and seven regions. Descriptive statistics are combined with a conservative co-authorship analysis based only on YÖK-resolved profile records for publications, books, and proceedings. Results show concentration in Marmara and Central Anatolia, a rank profile led by assistant professors and research assistants, and institutional placement mainly in economics-administrative sciences, business, and applied sciences faculties. Co-authorship is most frequent with business, computer engineering, industrial engineering, education, economics, and software engineering. Because YÖK Academic profiles are dynamic and self-updated, the findings should be read as an April 2026 descriptive baseline.

Keywords: academic mapping, co-authorship, interdisciplinary collaboration, management information systems, Türkiye

Introduction

Management Information Systems (MIS) has long been defined by a productive tension between focus and breadth. Culnan (1986) showed that the intellectual development of MIS could be traced through patterns of co-citation, which means that the field's identity has always been partly visible in the relationships among scholars and topics. Benbasat and Weber (1996) later framed diversity in information systems (IS) research as both a persistent feature and a governance problem for the discipline. This article extends that line of inquiry from journals and ideas to academic staffing, asking where MIS academics are located in Türkiye and with which departments they produce scholarly work.

The institutional location of MIS matters because the field sits between management, organization, computing, analytics, and socio-technical inquiry. Benbasat and Zmud (2003) argued that the information systems discipline needs a communicable core because weak boundaries can make the field difficult to recognize. Baskerville and Myers (2002) offered a complementary view by arguing that information systems should not only borrow from reference disciplines but can also serve as a reference discipline for others. These two positions make the Turkish MIS context especially interesting: if MIS is both a field with a recognizable core and a field that connects outward, its academic map should show both institutional concentration and cross-departmental collaboration.

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A national MIS academic map is needed because universities, graduate programs, research teams, and funding bodies make capacity decisions without a consolidated view of where the field is located and which adjacent disciplines support its knowledge production. The contribution is empirical and infrastructural. Rather than evaluating research quality, this study creates a transparent descriptive April 2026 baseline for understanding the academic capacity and co-authorship profile of MIS as a higher education field in Türkiye.

Research Questions

RQ1. How are MIS academics in Türkiye distributed across universities, cities, and geographic regions?

RQ2. What academic rank structure characterizes MIS departments in Türkiye?

RQ3. In which faculty types and institutional units are MIS departments located?

RQ4. Which non-MIS departments and faculties appear most often in the co-authored work of MIS academics?

Theoretical Background

Information systems scholarship is often described as a pluralistic field. Vessey et al. (2002) found that IS research varied across reference discipline, level of analysis, topic, research approach, and method, which suggests that disciplinary diversity is not incidental but structural. Taylor et al. (2010) argued that a healthy applied discipline must meet the dual demands of focus and diversity, and this argument is directly relevant to MIS departments that must serve both professional education and scholarly inquiry. In the Turkish context, the question is therefore not simply whether MIS is interdisciplinary, but how that interdisciplinarity is institutionally organized.

Recent IS debates also emphasize the need to move beyond mid-range theoretical borrowing. Grover and Lyytinen (2015) argued that IS research should push toward the edges of the field by using richer data and by theorizing more directly about information, technology, and social behavior. A national academic map can support this agenda because it reveals where the field has staffing capacity, which faculties host that capacity, and which neighboring departments contribute to knowledge production. The unit of analysis in this article is therefore not only the individual academic but also the institutional and collaborative environment around that academic.

Academic mapping and bibliometric reasoning provide practical tools for making such environments visible. Zupic and Čater (2015) described bibliometric methods as a way to examine the structure of management and organization research, while Donthu et al. (2021) argued that bibliometric analysis is useful when a field needs an overview of its intellectual and social structure. Aria and Cuccurullo (2017) also emphasized structured computational workflows for summarizing large scholarly datasets. The present study is not a citation-network or thematic science mapping study; it adapts this descriptive logic to academic staffing and departmental co-authorship.

Co-authorship is a limited but useful indicator of research collaboration. Katz and Martin (1997) noted that collaboration has multiple forms and cannot be reduced to authorship alone, yet authorship provides a visible record that can be compared across large datasets. Newman (2001) operationalized scientific collaboration networks by connecting researchers who had written papers together, and this operational logic is adopted here at the department level. Wagner et al. (2011) explained that bibliometric traces such as co-authorship can illuminate interdisciplinary research but should be interpreted alongside their limits. Yegros-Yegros et al. (2015) further showed that interdisciplinarity can have different effects depending on whether the knowledge distance is proximal or distal, which makes the departmental identity of collaborators analytically meaningful.

Method

The study uses a cleaned profile dataset compiled from the YÖK Academic platform in April 2026. The Council of Higher Education (n.d.) provides YÖK Academic as a public academic search environment. The April 2026 archive used in this article was designed to cover all universities in Türkiye and the academics listed under those universities on the platform at the time of collection. Because YÖK Academic profiles are dynamic, later profile updates may change individual counts, titles, affiliations, or publication records.

The authors compiled structured profile records for universities and academics and then standardized the fields required for this analysis. The cleaning process removed duplicate records within the same academic's own profile categories, preserved records that occurred under different academics, and retained source metadata for verification. The analytical workflow then produced aggregate tables for the MIS subset, university distribution, rank distribution, faculty placement, and co-authorship summaries.

The inclusion criterion was deliberately strict. An academic was included only when the current department field in the basic academic record contained the Turkish label for Management Information Systems Department. Turkish character variants and uppercase spelling variants were normalized during matching. Records where MIS appeared only in education history, thesis title, publication text, or other profile fields were excluded. For example, a scholar who completed a MIS degree but currently worked in business, computer engineering, or another department was not counted as an MIS department academic.

University-city information was joined from the compiled institutional metadata, and each city was assigned to one of Türkiye's seven geographic regions. University type was coded as state or foundation based on the institutional status in the compiled university metadata. The final MIS table was checked for missing city, region, and university-type values; no missing values were found among the 705 included records. The ten largest university rows, all seven regional rows, the university-type table, and the rank table were inspected for face validity, and no post-hoc manual corrections were made after this check. Academic rank was reported in two forms: the raw YÖK title and a grouped English rank that removes parenthetical YÖK notes. Faculty and department labels were translated into English for reporting, but the underlying grouping was based on exact administrative labels rather than a fully harmonized taxonomy.

The collaboration analysis used articles, books, and proceedings in each MIS academic's structured profile record. Works were de-duplicated by DOI when available and otherwise by normalized title, year, venue, and category. Records with missing DOI were therefore retained when title-year-venue information was sufficient for a deterministic fingerprint. For each work, YÖK-resolved authors in the authors_detailed field were matched to the academic index by their author ID. Self-pairings were excluded, and a work with several non-MIS co-authors from different departments contributed one work-level count to each represented collaborator department. Thus, unique works in a collaborator-department table mean works involving that department, not mutually exclusive national publication totals.

For example, if one MIS academic published one paper with one business co-author and one computer engineering co-author, the paper contributed one unique work to the business row and one unique work to the computer engineering row in the collaborator-department table. It also contributed one MIS-to-business co-authorship edge and one MIS-to-computer-engineering co-authorship edge. If two co-authors came from the same non-MIS department in the same paper, the unique-work count for that department increased by one, while the collaborator and edge counts reflected the matched individual co-authors.

The analysis also tracked unresolved authors. Authors listed only as other_authors were counted separately because the dataset does not provide their current department. Duplicate author profiles, name changes, and incomplete authors_detailed fields could not be fully resolved beyond the YÖK

author IDs available in the archive. For this reason, the co-authorship findings should be interpreted as conservative profile-based indicators of formal scholarly collaboration, not as a complete collaboration network or a measure of teaching, project, advising, or informal collaboration strength.

Findings

The findings are organized around institutional distribution, regional concentration, academic rank, faculty placement, and interdisciplinary collaboration. Table 1 summarizes the analytical dataset and the main derived collaboration indicators.

Table 1 gives the scope of the April 2026 archive and the derived co-authorship indicators used in the descriptive analysis. The collaboration rows refer only to co-authors whose current department could be matched to the academic index. Here, an edge means one observed pairing between a MIS academic and a matched non-MIS co-author within a scholarly work after self-pairings were excluded.

Table 1. Analytical Overview

Indicator	*Value*
MIS Academics	705
Universities with MIS Academics	94
Cities	42
Geographic Regions	7
Distinct Faculty Labels	30
Unique MIS Works Analyzed	21,783
Resolved non-MIS Co-authorship Edges	16,095
Resolved non-MIS Collaborators	4,259

Table 2 shows that the field is geographically broad but concentrated. The two largest regions, Marmara and Central Anatolia, account for almost two thirds of the MIS academics in the dataset.

Table 2. Regional Distribution of MIS Academics

Region	Academics	Universities	Cities	Share (%)
Marmara	301	38	7	42.70
Central Anatolia	155	20	8	21.99
Mediterranean	85	10	6	12.06
Aegean	68	9	6	9.65
Black Sea	53	9	7	7.52
Eastern Anatolia	37	5	5	5.25
Southeastern Anatolia	6	3	3	0.85

Table 3 separates state and foundation universities. State universities employ a larger share of MIS academics and have a slightly higher average number of MIS academics per institution.

Table 3. Distribution by University Type

University Type	Universities	Academics	Academic Share (%)	Average Academics per University
State	52	415	58.87	7.98
Foundation	42	290	41.13	6.90

Table 4 reports grouped academic ranks.

Table 4. Academic Rank Distribution

Academic Rank	Academics	Universities	Faculties	Share (%)
Professor	127	66	21	18.01
Associate Professor	117	62	23	16.60
Assistant Professor	277	88	27	39.29
Lecturer	11	9	7	1.56
Research Assistant	173	80	23	24.54

Table 5 lists the universities with the largest MIS academic staff. The list contains both state and foundation universities, which indicates that the field has developed through both public and private higher education channels.

Table 5. Universities with the Largest MIS Academic Staff

University	Type	City	Region	Academics
Istanbul Gelisim University	Foundation	Istanbul	Marmara	20
Bogazici University	State	Istanbul	Marmara	18
OSTIM Technical University	Foundation	Ankara	Central Anatolia	17
Gazi University	State	Ankara	Central Anatolia	16
Karadeniz Technical University	State	Trabzon	Black Sea	15
Marmara University	State	Istanbul	Marmara	15
Mersin University	State	Mersin	Mediterranean	15
Adana Alparslan Turkes Science and Technology University	State	Adana	Mediterranean	14
Sakarya University	State	Sakarya	Marmara	14
Istanbul Topkapi University	Foundation	Istanbul	Marmara	14

Table 6 shows the main faculty locations of MIS departments. Faculty labels were translated for readability but were not merged into a fully normalized taxonomy, so administratively similar units may still appear as separate labels.

Table 6. Main Faculty Locations of MIS Departments

Faculty	Academics	Universities	Cities	Share (%)
Faculty of Economics and Administrative Sciences	262	35	24	37.16
Faculty of Economics, Administrative and Social Sciences	113	12	3	16.03
Faculty of Business	75	9	5	10.64
Faculty of Applied Sciences	67	8	6	9.50
Faculty of Business and Management Sciences	24	4	2	3.40
Faculty of Humanities and Social Sciences	14	3	2	1.99
School of Applied Sciences	14	3	2	1.99
Omer Seyfettin Faculty of Applied Sciences	11	1	1	1.56
Erdemli School of Applied Technology and Management	11	1	1	1.56
Faculty of Economics	10	1	1	1.42

Table 7 reports non-MIS collaborator departments. A unique work is counted under a department when at least one matched co-author from that department appears in the work; therefore, a multi-department paper can contribute to more than one department row.

Table 7. Non-MIS Departments Most Frequently Co-Authoring with MIS Academics†

Collaborator Department	Unique Works	Collaborators	MIS Academics Involved
Business Department	2326	631	291
Computer Engineering Department	929	239	149
Industrial Engineering Department	659	180	91
Educational Sciences Department	481	131	61
Computer Education and Instructional Technologies Department	374	73	52
Electrical and Electronics Engineering Department	363	95	56
Computer Technologies Department	352	94	79
Economics Department	313	124	78
Management and Organization Department	281	95	92
Software Engineering Department	260	64	70
International Trade and Finance Department	255	55	61
Mathematics Department	213	56	33
Mathematics and Science Education Department	187	51	31
Finance and Banking Department	186	47	46
International Trade and Logistics Department	172	45	44

† Note. Table 7 rows are not mutually exclusive publication totals. A single multi-author work can appear under more than one collaborator department when matched co-authors come from different departments.

Table 8 aggregates the same co-authorship evidence at the collaborator-faculty level. Faculty labels may overlap with department labels in administrative meaning, so the table should be read as an institutional-location summary rather than a standardized field taxonomy.

Table 8. Non-MIS Faculty Groups in MIS Co-Authorship

Collaborator Faculty	Unique Works	Collaborators	MIS Academics Involved
Faculty of Economics and Administrative Sciences	2075	714	294
Faculty of Engineering	1224	351	186
Faculty of Business	810	183	125
Faculty of Engineering and Natural Sciences	760	168	110
Faculty of Education	519	204	79
Faculty of Applied Sciences	428	79	80
Faculty of Science	379	91	73
Faculty of Economics, Administrative and Social Sciences	305	98	80
Faculty of Health Sciences	230	91	67
Faculty of Technology	225	56	37

The geographic distribution is highly uneven. Marmara contains 301 MIS academics, which corresponds to 42.70% of the national MIS academic workforce in the dataset. Central Anatolia follows with 155 academics, or 21.99%. Istanbul alone hosts 240 academics across 31 universities, and Ankara hosts 99 academics across 11 universities. This dominance may reflect the wider concentration of Turkish higher education and technology-oriented employment opportunities in the two largest metropolitan regions, but those explanatory factors were not directly tested in this dataset. The smallest regional count is in Southeastern Anatolia, where three universities employ six academics.

The university-type distribution shows that state universities employ 415 MIS academics in 52 institutions, whereas foundation universities employ 290 MIS academics in 42 institutions. These values correspond to 58.87% and 41.13% of MIS academics, respectively. The average number of MIS academics is 7.98 in state universities and 6.90 in foundation universities. The ten largest MIS academic staff include both state and foundation universities, indicating that the field has developed through public and private higher education channels.

The academic rank profile is weighted toward early and mid-career positions. Doctoral faculty members are the largest group with 277 academics, followed by 173 research assistants, 127 professors, 117 associate professors, and 11 lecturers. This structure suggests that the field combines a substantial senior core with a large early-career cohort. However, rank distribution alone cannot determine doctoral supervision capacity, curriculum leadership, or research quality, so these implications should be examined with program-level data.

Faculty placement confirms that MIS in Türkiye has a business-facing identity. The Faculty of Economics and Administrative Sciences alone contains 262 MIS academics, or 37.16% of the total. When closely related faculty labels are considered, economics-administrative-social sciences, business, applied sciences, and business-management sciences units form the main institutional homes of the field. At the same time, exact faculty labels vary considerably, which reflects the

administrative diversity of Turkish higher education institutions and limits direct comparison unless a future study develops a normalized faculty taxonomy.

The co-authorship tables show that MIS academics most often publish with departments close to business, computing, and quantitative methods. Business is the leading non-MIS collaborator department with 2,326 department-level unique works and 631 collaborators. Computer engineering follows with 929 department-level unique works, while industrial engineering contributes 659. Because a single work can include co-authors from several departments, these department-level unique-work counts should not be summed as if they were mutually exclusive publication totals.

Discussion

The findings indicate that MIS in Türkiye has a broad national footprint but a clear metropolitan center. The field appears in 94 universities and 42 cities, yet Istanbul and Ankara together host 339 of 705 academics. This concentration should be understood as both a field-specific and a system-level pattern: Istanbul and Ankara include many universities, graduate programs, foundation institutions, public agencies, and technology-oriented labor markets, although these contextual explanations were not tested as predictors in the present dataset. As policy suggestions derived from the descriptive pattern, regional capacity-building should not rely only on isolated departmental hiring. Joint graduate courses, co-supervision agreements, visiting scholar schemes, regional MIS research clusters, and shared data laboratories could connect smaller departments to the senior staffing and co-authorship capacity concentrated in the largest cities.

The rank structure suggests a field that is still expanding. Assistant professors and research assistants together account for almost two thirds of MIS academics, while professors and associate professors form a smaller but substantial senior core. This profile may indicate renewal and expansion, but it cannot by itself prove doctoral supervision capacity, senior research leadership, or curriculum quality. Those issues require program-level evidence such as doctoral program availability, adviser loads, project leadership, and graduate output. The present rank table should therefore be read as an institutional capacity signal rather than a direct performance indicator.

The faculty distribution shows that MIS is institutionally anchored in business-facing academic units. Economics and administrative sciences faculties, economics-administrative-social sciences faculties, business faculties, and applied sciences faculties account for the largest share of appointments. This pattern supports the argument that MIS in Türkiye retains a managerial and organizational identity. However, the co-authorship evidence complicates a simple business-versus-technology distinction. MIS academics frequently collaborate not only with business-related departments but also with computer engineering, industrial engineering, software engineering, electrical-electronics engineering, education, mathematics, economics, and other quantitative or technical fields.

This finding speaks directly to the theoretical identity of MIS as a discipline. The Turkish case suggests that MIS has an asymmetrical hybrid structure: it is institutionally business-facing but relationally connected to technology-intensive and analytical disciplines. In other words, disciplinary focus is maintained through administrative placement, while disciplinary diversity becomes visible through co-authorship ties with neighboring fields. This contributes to the long-standing discussion on focus and diversity in information systems research by showing that the core of MIS is not located exclusively in either business or computing. Rather, its disciplinary identity is produced through the combination of managerial institutional location and technology-oriented collaborative practice.

The co-authorship evidence makes this interdisciplinary profile more concrete. Business is the most frequent collaborator department, which is consistent with the field's organizational roots. At the same time, engineering, computing, education, economics, finance, international trade, mathematics, and statistics point to technical, pedagogical, and quantitative neighboring areas. Because the present analysis uses frequency counts rather than full network centrality or community detection, this evidence should be described as a co-authorship profile rather than a complete collaboration network.

These findings are sufficient to show recurring disciplinary orientations, but they do not measure tie strength or network position. In this sense, MIS in Türkiye can be described as business-anchored but technologically and analytically networked.

Conclusion, Limitations and Future Research

This article mapped the academic and co-authorship structure of Management Information Systems in Türkiye using cleaned national profile data. The results show 705 MIS academics across 94 universities, with a strong concentration in Marmara and Central Anatolia. The field is primarily located in business-facing faculties, but its YÖK-resolved co-authorship profile reaches into computing, engineering, education, economics, quantitative sciences, and health-related units. The map therefore portrays MIS as a boundary-spanning academic field whose institutional home is managerial, but whose formal scholarly co-authorship is interdisciplinary.

The study has limitations. YÖK Academic profiles depend on institutional and individual updating practices, so missing or outdated profile entries may affect counts. The cleaning decisions remove within-profile duplicates but cannot fully solve missing affiliations, incomplete authors_detailed fields, duplicate author identities, name changes, or profile update bias. Co-authorship captures formal scholarly output but not teaching collaboration, project participation without publication, advising, informal intellectual exchange, or collaboration strength. Department and faculty names are administrative labels, so exact textual differences can split substantively similar units. Despite these limits, the dataset is large, transparent, and suitable for establishing a national descriptive baseline.

Future research can build on this baseline in three ways. First, longitudinal datasets can show whether MIS staffing is spreading beyond the largest metropolitan regions. Second, publication-level content analysis can identify whether collaboration with different departments corresponds to different research themes. Third, network measures such as centrality, clustering, and community detection can reveal which universities and departments function as bridges in Turkish MIS scholarship. These extensions would move from descriptive mapping toward a fuller sociology of the field.

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Data Availability Statement

The dataset used in this study was compiled by the authors from the YÖK Academic platform in April 2026 and is not deposited as a public download. Because the raw profile-level records were compiled from a dynamic public platform and may include identifiable academic profile information, the raw dataset is not publicly redistributed.

To support transparency and aggregate-level auditability, non-sensitive supplementary materials may be made available by the corresponding author upon reasonable request. These materials include the analysis code used to generate the reported tables, a codebook and variable definitions, a summary of cleaning and standardization decisions, and the aggregate or derived tables underlying the reported results. Access to these materials is subject to institutional, legal, and ethical data-sharing conditions, and does not constitute public redistribution of the raw YÖK Academic profile dataset.

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