



# Jurnal Pendidikan Manajemen Perkantoran (JP Manper)



Journal homepage: <http://ejournal.upi.edu/index.php/ipmanper>

## Strategic Landscape in Higher Education: A Decadal Bibliometric Analysis of Competitive Dynamics (2013-2023)

Riske Faldesiani\*, Agus Rahayu, Heny Hendrayati

Program Studi Doktorat Manajemen,

Fakultas Pendidikan Ekonomi dan Bisnis, Universitas Pendidikan Indonesia,

Jl. Dr. Setiabudi No.229, Bandung, Jawa Barat, Indonesia

\*Correspondence: E-mail: [riske.faldesiani@upi.edu](mailto:riske.faldesiani@upi.edu)

ABSTRAK	ARTICLE INFO
<p>This study aims to review the literature on competitive dynamics in Higher Education Institutions (HEIs). The method used in this study is the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) through a bibliometric approach with computational mapping analysis using VOS Viewer. The study period used as literature data material is articles and conference papers indexed in Scopus from 2013 to 2023. The keywords used were "higher education institution" and "competition". Of the 347 references deemed relevant, data reduction was performed with inclusion and exclusion criteria. The 10 articles with the highest number of citations were analyzed. The results of this study provide an overview for further research related to higher education strategies in facing competitive dynamics.</p> <p>© 2024 Pendidikan Manajemen Perkantoran</p>	<p><b>Article History:</b> <i>Submitted/Received 14 November 2023</i> <i>First Revised 15 December 2023</i> <i>Accepted 01 January 2024</i> <i>First Available online 10 January 2024</i> <i>Publication Date 10 January 2024</i></p> <hr/> <p><b>Keyword:</b> <i>competitive dynamics,</i> <i>higher education,</i> <i>literature review,</i> <i>strategy</i></p>

## **1. INTRODUCTION**

### **1.1. Competitive Dynamic**

Competitive dynamics refers to the analysis of competition at the action and response level, predicting how firms will act or react against opponents. It focuses on understanding engagements where firms enact their strategies, test opponents' capabilities, defend their reputations, and signal their toughness. This approach complements traditional industry structure analysis and strategic groups approach, providing a more focused analysis of interfirm rivalry (Saadatmand et al., 2018). The urgency of competitive dynamics in industrial strategy arises from the continuously shifting boundaries and ambiguity in the competitive arena. The ICT industry, for example, has seen the breakdown of traditional equilibriums and the emergence of new models of competition, requiring companies to adapt their competitive strategies to shape the new scenario (Davide, 2011). Understanding competitive dynamics is essential for firms to identify their competitors, analyze the intensity of competition within an industry, and navigate the dynamics of competitive aggressiveness, imitation, and differentiation (Alberto, 2012).

The history of the theory of competitive dynamics can be traced back to the 1980s when it originated in the field of strategic management abroad (Zhang & Gao, 2014). However, Chinese researchers paid attention to dynamic research much later. Over time, significant lines of work have emerged in the strategic management, including industrial organization, the resource-based view, and dynamic capabilities (Karwowski, 2014). Competitive dynamics research has been challenged to broaden its boundaries and expand the conception of competition. A framework consisting of five defining dimensions has been proposed, including aims of competition, mode of competing, roster of actors, action toolkit, and time horizon of interaction (Saadatmand et al., 2018a).

The recent history of competition theory includes a focus on classifying mechanisms of coexistence rather than developing models that can predict or understand changes in abundance (Chen & Miller, 2013). The theory of competitive dynamics has evolved to incorporate various perspectives and approaches, such as the analysis of attacks and counterattacks interaction among enterprises (Abrams, 2022), the maldistribution of profits leading to financial fragility, and the trend towards dynamic frameworks of strategy and competition.

Competitive dynamics have a significant influence on industrial strategy (Saadatmand et al., 2018b) (Tony, 2017). Scholars have explored various perspectives on competition and strategy, including industrial organization, the resource-based view, and dynamic capabilities (Davide, 2011). The ICT industry, for example, has experienced continuously shifting boundaries, leading to the need for new competitive strategy dynamics (Mithas et al., 2013). The industry environment plays a crucial role in shaping firms' digital business strategy, with factors such as industry turbulence, concentration, and growth influencing the divergence or convergence of digital strategic posture (Roy & Raju, 2011). Additionally, the dynamic strategic interactions among competitors in a market can be influenced by demand factors in the product market. Understanding and responding to competitive dynamics is essential for firms to develop effective industrial strategies that can adapt to changing market conditions and outperform competitors.

### **1.2. Competitive Dynamic in Higher Education**

The concept of Competitive Dynamics in Higher Education refers to the strategies and actions taken by higher education institutions to ensure their competitiveness in the market. It involves the development of goals, principles, functions, methods, and tools that enable

universities to maintain a competitive advantage (Pirogova, 2023). Higher education institutions are facing increased competition in various areas, and they need to find new sources and ways to gain a competitive advantage (Krücken, 2021). The concept of competition and competitiveness in education is interdisciplinary, encompassing economic, social, legal, cultural, and managerial aspects (Melnychenko, 2022). The market of higher education in the United States has distinctive features, such as a wide spectrum of institutional arrangements, stark segmentation in selectivity and resources, and high variance in tuition pricing (Trunina et al., 2021). The study program is considered a competitive advantage for higher education institutions, and the synthesis of elements from the Business Model Canvas and quality evaluation criteria can be used to create a quality study program (Michael, 2020).

Competitive dynamics in higher education refers to the factors and processes that influence the competitiveness of higher education institutions (HEIs). These factors include organizational learning, transformational leadership, knowledge management, entrepreneurship culture, and innovative behavior (Hendry, 2019). The market of higher education in the United States has distinctive features such as institutional arrangements, funding sources, selectivity levels, instructional resources, and tuition pricing, which contribute to the debate on the quality and cost of higher education (Michael, 2020). Employability is a contested concept within higher education, with changes in the graduate labor market and work practices leading to a re-evaluation of the purpose and value of higher education (David, 2018). Marketing reserves and marketing competence play a role in determining the competitiveness of HEIs, with the need for modernization and development of training and production complexes (Voronov et al., 2018). In the digital world, the competitiveness of teachers in higher education requires mobility, digital competencies, adaptability, participation in scientific networks, and continuous professional development (Vachkova et al., 2022).

This study sought to answer the following research questions:

1. What are the key themes and trends in the literature on competition in Higher Education Institutions over the past decade?
2. How has the research focus evolved over the past decade??
3. What are the most influential publications and authors in the field of competition in higher education during the past decade??
4. What types of competitive strategies have been explored in the literature concerning higher education institutions?

## **2. METHODOLOGICAL PROCEDURES**

The SLR process allows for (i) identification, (ii) mapping and (iii) analysis of relevant research, to evaluate a specific aspect of the research topic and create opportunities for new discussions of the findings presented in traditional reviews ((Tranfield D, 2003); (Kitchenham B, 2004); (Biolchini JC, 2007); (Zahoor et al., 2020); (Kraus et al., 2020)). Based on these authors, for this study, the SLR process was composed of three stages: (i) identification with PRISMA methods, (ii) mapping with VOS Viewer, and (iii) analysis.

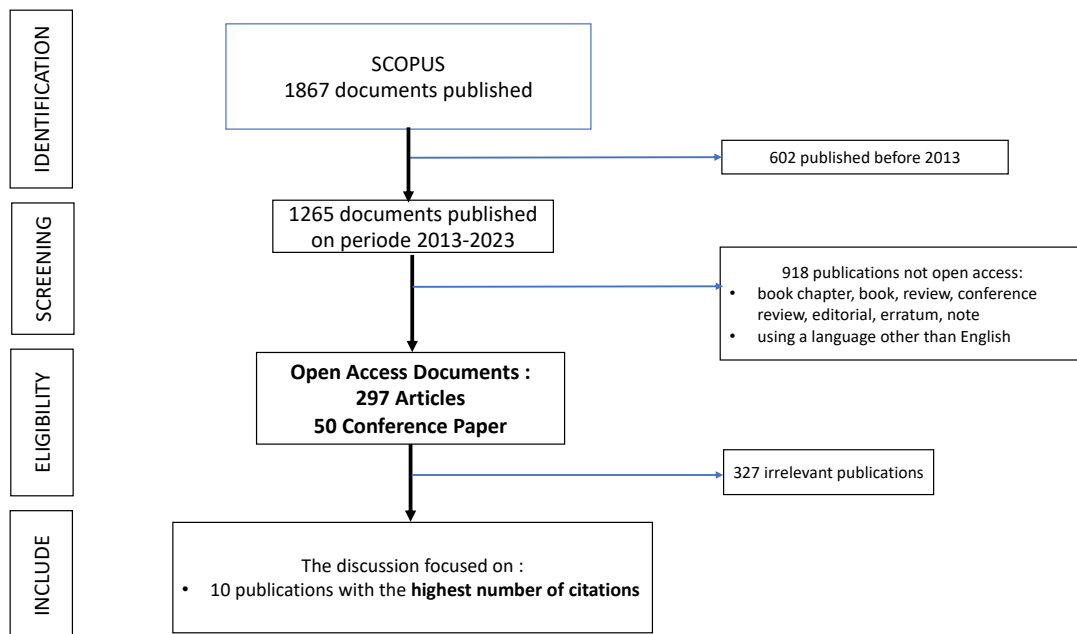


**Figure 1** Literature Framework

**2.1. Identification With PRISMA Methods**

This stage was based on the guidance of experts and the theme central to the research corpus selection process, involving a textual analysis to determine the key search terms to be used (Aarts J, 2014). Firstly, having defined the strings to guarantee the originality of this study, we searched the Scopus. The Scopus Core Collection databases were eligible due to their wide coverage of scientific literature (A. A. Chadegani, 2013; I. C. Chersan, 2020).

This research uses the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) method. The data source used is Scopus, by entering keywords namely "higher AND education AND institution AND competition". The results obtained were 1867 documents. Then with the publication year filter from 2013 to 2023, 1265 documents were obtained, and only 347 publications could be accessed. The next step is to filter the search results by selecting articles and conference papers in English from Journals and Seminar Proceedings. The results obtained were 297 journal articles and 50 conference papers. More details can be seen in Figure 2.



**Figure 2.** PRISMA Diagram of Competition in Higher Education Literature

## 2.2. Mapping with VOS Viewer

The analysis framework of this research focuses on exploring articles on Competition in Higher Education, using certain keywords. Journal articles were obtained from the Scopus database, totaling 347 documents, with 297 journal articles, and 50 conference papers. The results were downloaded in RIS (Research Information System) format. The next step, the RIS of the entire journal was entered into VOS Viewer Software to produce a graphical representation of the Bibliometric map.

The VOS Viewer software displays three keyword-based mapping visualization models, which consist of first, Network Visualization is used to identify the strength of an item against other items, Overlay Visualization illustrates the use of items in the literature over time, Density Visualization is used to show the density of items displayed. At this stage, the bibliometric analysis only focused on keyword linkages between articles and conference papers with the same theme. By using VOS Viewer, we can perform bibliometric analysis by mapping patterns, showing the position of the research scope, and showing the clustering of the literature by dividing it into different colors.

## 2.3. Analyzing the Data

The next step was to collect and analyze articles by focusing only on articles and conference papers. The analysis was conducted on 10 publications with the highest number of citations. Articles with the highest number of citations were analyzed because they tend to be representative of the most significant and impactful research contributions in the field of science. Articles with a high number of citations indicate that the research has been widely cited by other researchers, which can be interpreted as recognition by the scientific community of the quality, relevance, and significant contribution of the research.

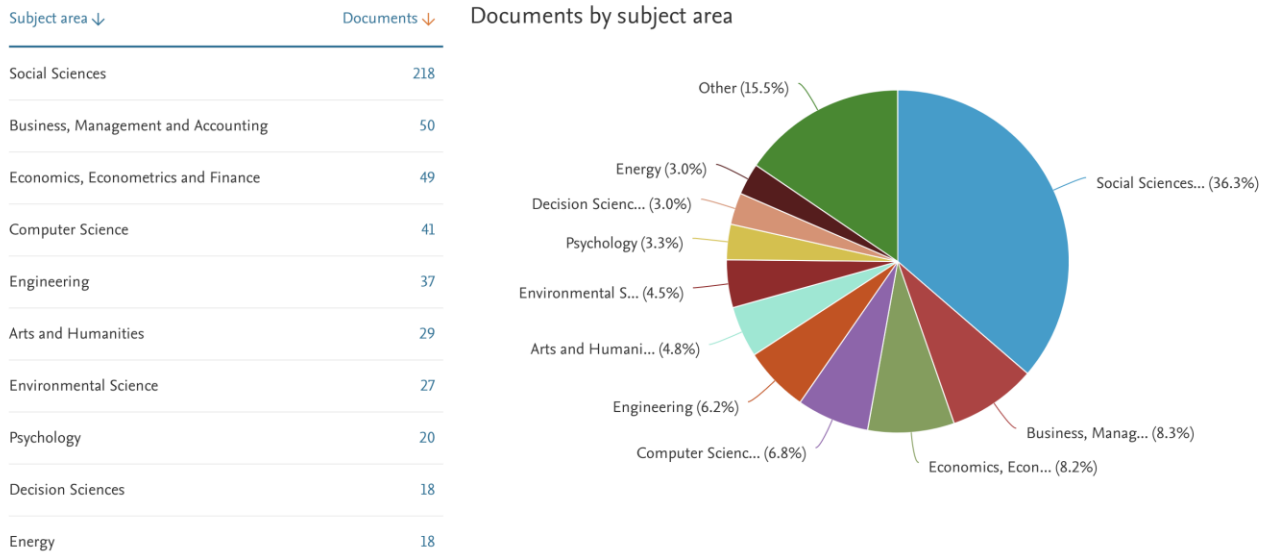
## 3. RESULT AND DISCUSSION

### 3.1. Research Publication Trends of Competition in Higher Education

Based on the search for publication results with the theme Competition in Higher Education in the Scopus database from 2013 to 2023, 347 publication results were obtained. That is, 297 are categorized as journal articles and 50 are categorized as conference papers.

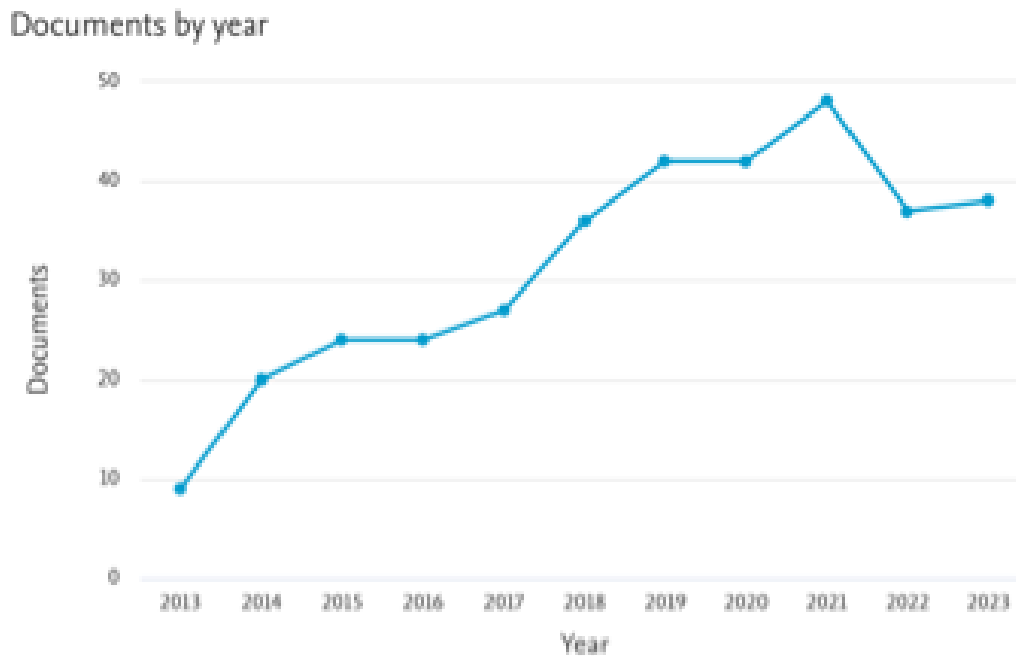
Most of the research, 36.3%, is in the field of social sciences. The next 8.3% were in business, management, and accounting; 8.2% were in economics, econometrics, and finance. The rest of the research is divided into other fields such as computer science (6.8%); engineering (6.2%); arts and humanities (4.8%); environmental science (4.5%); psychology (3.3%); decision sciences (3.0%); and energy (3.0%). For more details, please see Figure 3.

In general, the publication trend of Competition in Higher Education in the last 10 years has developed from year to year. From only 9 publications in 2013, the number continues to increase every year until it reaches its peak in 2021 with 48 publications. This could be due to an increase in the number of studies in various fields related to the covid 19 pandemic in 2020. In 2022, the number of publications on Competition in Higher Education decreased to 37 publications. And slightly increased again in 2023 with as many as 38 publications. This shows that there are still fluctuating developments related to various factors that influence the number of publications on Competition in Higher Education. The trend of research publications on Competition in Higher Education can be seen in Figure 4.



**Figure 3.** Category of publications of Competition in Higher Education Literature based on subject area.

Source: Scopus 2023



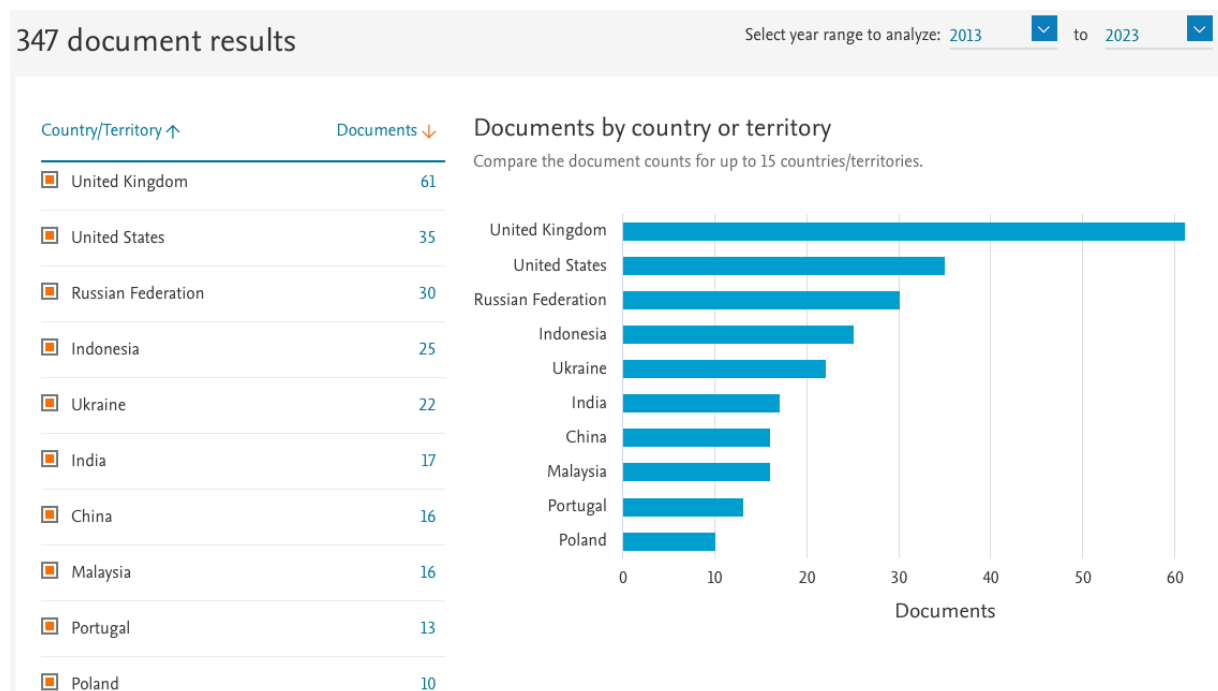
**Figure 4.** Trends in the publication of Competition in Higher Education Literature

Source: Scopus 2023

The increase and decrease in the number of publications on Competition in Higher Education over the past 10 years is likely to be influenced by several factors. In general, there is an increase in the number of publications from year to year from 2013 to 2021. This indicates an increase in attention and awareness about the importance of competition in higher education, especially in 2020 when there was a drastic increase related to the number of studies conducted in the context of the COVID-19 pandemic. This pandemic can have a significant impact on the higher education system, including competition between

educational institutions. A lot of research is being done to understand how the pandemic affects the competitive dynamics between institutions.

Fluctuations in the number of publications can also be influenced by external factors such as changes in education policy, technological developments, and global issues affecting the higher education sector. It also shows the competitive dynamics among educational institutions which may encourage further research on this topic.



**Figure 5:** Publications by nations/countries in Competition in Higher Education Literature  
Source: Scopus 2023

Based on the results of the search for Scopus-indexed publications on Competition in Higher Education, it was found that the country that produced the most publications over the past 10 years was the United Kingdom with 61 publications, followed by the United States with 35 publications, Russian Federation with 30 publications and Indonesia with 25 publications on Competition in Higher Education. Publications by nations/countries in Competition in Higher Education can be seen in Figure 5, it shows that in these countries, research topics related to Competition in Higher Education have developed and are in great demand.

### 3.2. Systematic Literature Review with PRISMA

Based on the search for publication results on Competition in Higher Education in the Scopus database from 2013 to 2023, 347 publications were obtained with 297 in the form of journal articles, and 50 in the form of conference papers. To see the most relevant contributions in this study, from 347 documents that have been obtained by the PRISMA method, 10 publications that have the highest number of citations in the period of 2013 to 2023 were selected. Citation analysis is used to determine the number of times a person's work is cited by others (D. R. Aulianto dan W. Nashihuddin, 2020). The results can be seen in Table 1



**Table 1.** Article Publication of Competition in Higher Education Literature with the Most Number of Citations

No.	Author/Year	Publication Title	Number of Citations	Publisher
1	Guerrero, Maribel., <i>et al</i> (2015)	<i>Economic impact of entrepreneurial universities' activities: An exploratory study of the United Kingdom</i>	337	Elsevier B.V.
2	Rutter, Richard Nathan., <i>et al</i> (2016)	<i>Social media interaction, the university brand and recruitment performance</i>	128	Elsevier
3	Kromydas, Theocharis (2017)	<i>Rethinking higher education and its relationship with social inequalities: Past knowledge, present state, and future potential</i>	101	Palgrave Macmillan Ltd.
4	Nazarko, Joanicjusz Šaparauskas, Jonas (2014)	<i>Application of dea method in efficiency evaluation of public higher education institutions</i>	98	Taylor and Francis Ltd.
5	Seeber, Marco., <i>et al</i> (2016)	<i>Why do higher education institutions internationalize? An investigation of the multilevel determinants of internationalization rationales</i>	86	Springer Netherlands
6	Alshurideh, Muhammad Turki., <i>et al</i> (2021)	<i>Factors affecting the use of smart mobile examination platforms by universities' postgraduate students during the COVID-19 pandemic: An empirical study</i>	65	MDPI AG
7	Postiglione, Gerard A. (2013)	<i>Anchoring globalization in Hong Kong's research universities: Network agents, institutional arrangements, and brain circulation</i>	56	Routledge



No.	Author/Year	Publication Title	Number of Citations	Publisher
8	Morley, Louise Crossouard, Barbara (2016)	<i>Gender in the neoliberalised global academy: the affective economy of women and leadership in South Asia</i>	55	Routledge
9	Kok, Seng Kiat McDonald, Claire (2017)	<i>Underpinning excellence in higher education—an investigation into the leadership, governance, and management behaviours of high-performing academic departments</i>	54	Routledge
10	Urbina-García, Angel (2020)	<i>What do we know about university academics' mental health? A systematic literature review</i>	43	John Wiley and Sons Ltd
<b>Total Citation</b>			<b>1023</b>	

Source: Scopus 2023

Table 1 shows 10 publications Competition in Higher Education with the highest number of citations from 2013 to 2023. The research article conducted by Guerrero et al., (2015) with the title "Economic impact of entrepreneurial universities' activities: An exploratory study of the United Kingdom" received the highest number of citations (337 citations). The purpose of the study is to understand the economic impact of entrepreneurship-oriented university teaching, research, and entrepreneurial activities. An interesting result of this study is that the economic impact of entrepreneurial universities in the United Kingdom, particularly the Russell Group, can be explained by the success of entrepreneurial spin-offs. On the other hand, a control group consisting of other universities in the country shows that the highest economic impact is related to knowledge transfer (knowledge capital). The impact of this study contributes to the understanding of the role of entrepreneurial universities in economic growth. By showing that universities' teaching, research, and entrepreneurial activities have a positive economic impact, this research can help shape higher education policy and provide guidance for universities to focus more on these aspects to increase their contribution to economic and social development.

Meanwhile, Rutter et al., (2016) in their research entitled "Social Media Interaction, the University Brand and Recruitment Performance" (128 citations), question the extent to which brand presence can help institutions with lower reputations compete effectively in recruiting students. The research aims to understand the extent to which universities utilize branding activities, particularly on social media, as a strategy to overcome significant competition in recruiting students. The results show the positive impact of using social media, especially when institutions get positive responses in the form of many Likes on Facebook and Followers on Twitter. Active interaction on social media was shown to have a strong positive effect. This

research provides insights into the strategic role of social media in university brand strategy and its impact on student recruitment performance. The implications include further understanding of how branding on social media can help universities, especially those with lower reputations, compete more effectively in a competitive market. This research is directly related to strategies in the competitive dynamics in higher education. The use of social media as a branding tool can be considered as part of the strategy to increase attractiveness and differentiate universities in an increasingly tight market. This underscores the importance of communication and branding strategies in the context of competition among higher education institutions.

"Rethinking Higher Education and its Relationship to Social Inequality: Past Knowledge, Current State, and Future Potential" by Keramidis (2017) with 101 citations, became the third top-ranked most cited article over the past 10 years. This research aims to explore the purpose of higher education and its institutional characteristics, highlighting the differences between instrumental and intrinsic conceptual frameworks. The article also tries to provide new insights into how certain educational traditions may shape current policies. The results show that the policy of focusing on the labor market in higher education has turned this institution into an ever-evolving competitive arena, where education is regarded as a currency that can be converted into labor market value. Education is used as a tool for economic advancement, moving away from its original role of providing a context for human development. This research highlights the impact of labor market-focused policies on higher education, turning it into a place of increasingly fierce competition. Its relationship to strategy in the competitive dynamics in higher education includes the transformation of educational institutions into markets, where reputation and degrees are regarded as currency for gaining value in the labor market. The implication is the need for a shift towards a hybrid model that recognizes the intrinsic purpose of higher education alongside its instrumental purpose, to create a more inclusive and equitable education system.

"Application of dea method in efficiency evaluation of public higher education institutions" by Nazarko & Šaparauskas (2014) has 98 citations. The research aimed to conduct a comparative efficiency study of 19 universities of technology in Poland. The focus of the research was to analyze potential input, output, and environmental variables that describe the HEI efficiency model. The results showed the extent to which each university achieved efficiency, considering the greater influence on outcomes compared to the number of resources. The results can guide management policies and practices to improve efficiency and service quality among higher education institutions. This research shows that comparative efficiency assessment can be a substitute tool for market competition in improving public funds management and service quality in HEIs. By understanding the extent to which an institution achieves efficiency, HEIs can inform their strategies in the face of competition among peer higher education institutions. The efficiency achieved by institutions can be a strategic factor in the competitive dynamics of the higher education sector.

Next the article by Seeber et al., (2016) with the title "Why do higher education institutions internationalize? An investigation of the multilevel determinants of internationalization rationales" has 86 citations. The purpose of this study is to identify and understand the basis of internationalization chosen by HEIs, as well as the factors that influence the selection of the basis.

The results show that HEIs integrated in a global context tend to view internationalization as an instrument for prestige. The national context does not have a great influence, and competition for resources is more important than the number of resources themselves. Organizational goals and the influence of students, faculty members, and middle managers

partly predict the significance of a particular base. This research can provide valuable insights into the context of strategy in competitive dynamics in higher education. An understanding of how global and internal factors influence the selection of internationalization bases can assist institutions in developing their competitive strategies in the global marketplace of higher education.

Alshurideh et al., (2021) with the article “Factors affecting the use of smart mobile examination platforms by Universities’ postgraduate students during the COVID-19 pandemic: An empirical study” has 65 citations. The purpose of this study is to extend the Technology Acceptance Model (TAM) by considering the intention to use mobile examination platforms and the preconditions of such intention, specifically in the higher education environment of the United Arab Emirates. The results showed that all study hypotheses received support, confirming the effects of the TAM extension factors (content quality, service quality, information quality, and system quality) in the context of higher education in the United Arab Emirates. This research illustrates how universities, amidst intense competition, can utilize technology, such as mobile examination platforms, to enhance students' learning experience and gain a competitive advantage in the use of learning technology.

The article with the title “Anchoring Globalization in Hong Kong's Research Universities: Network Agents, Institutional Arrangements, and Brain Circulation” by Postiglione (2013) has 56 citations. The purpose of this study is to examine how Hong Kong universities transitioned from undergraduate educational institutions to high-level research universities within 30 years, focusing on the roles of network agents, institutional arrangements, and brain circulation in recruiting and retaining international scholars and scientists. The results show that key factors such as network agents, institutional arrangements, and brain circulation play an important role in transforming Hong Kong universities into high-quality research entities. This capacity is strengthened through the recruitment and retention of international scholars and scientists. This research contributes to the understanding of how international competition can propel universities towards high-level research status. Strategies involving networking agents, institutional arrangements, and brain circulation can guide universities in developing countries to face global competition and root innovation in their local culture.

Research with topics related to gender was conducted by Morley & Crossouard (2016) with the title “Gender in the Neoliberals Global Academy: The Affective Economy of Women and Leadership in South Asia” which has 55 citations. This study aims to explore women's involvement in leadership in higher education institutions in South Asia, particularly about the neoliberal transformation that affects the values and culture of leadership in these institutions. The results found that there is a strong affective economy of leadership in HE in South Asia. Leadership is associated with affect such as competitiveness, aggressiveness, misbehavior, stress, and anxiety, which are reinforced by the patriarchal and corporatized culture in these higher education institutions. Its difficulty and toxicity cause many women to reject or confront leadership as an object of desire. This research contributes to an understanding of how competitive values in a neoliberal context affect the way women engage with leadership in higher education. It raises further questions about the impact of competitive dynamics on women's leadership and participation in corporatized higher education environments.

“Underpinning Excellence in Higher Education—An Investigation into the Leadership, governance and Management Behaviors of high-performing Academic Departments” by Kok & McDonald (2017) has 54 citations. The purpose of this study was to investigate the correlation between behaviors, attitudes, and competencies at the academic department

level with the overall performance of the department. The results identified eight common themes that contribute to excellence in academic departments. These include change management, research and teaching, communication, strategy and shared values, leadership, departmental culture, rewards, and staff. The behaviors associated with each of these themes were used to construct the Underpinning Excellence model. This research can provide practical guidance for academic departments to improve their performance in the face of international and national competition. The focus on change management, research and teaching, communication, and other aspects identified can help academic departments build strategies to compete effectively in a turbulent environment.

The tenth-ranked article with the highest number of citations is the article written by Urbina-Garcia (2020) with the title "What do we know about university academics' mental health? A systematic literature review" with 45 citations. The purpose of this study was to review the international literature to determine the most used measures in investigating the influence of the university environment on academics' mental health, including their main stressors, coping strategies, and lived experiences. The results showed that there is strong evidence that the university environment causes high levels of stress and burnout and low levels of well-being in academics. However, research on the perceptions and lived experiences of academic staff is very limited. In addition, the coping strategies used by academics to cope with the demands of the job are also poorly understood. This research has important implications in the context of global competition in higher education. An environment that emphasizes competition and high expectations can be a stressor for academics. Universities need to consider policies and supports that support the mental well-being of academic staff to maintain their competitiveness and productivity.

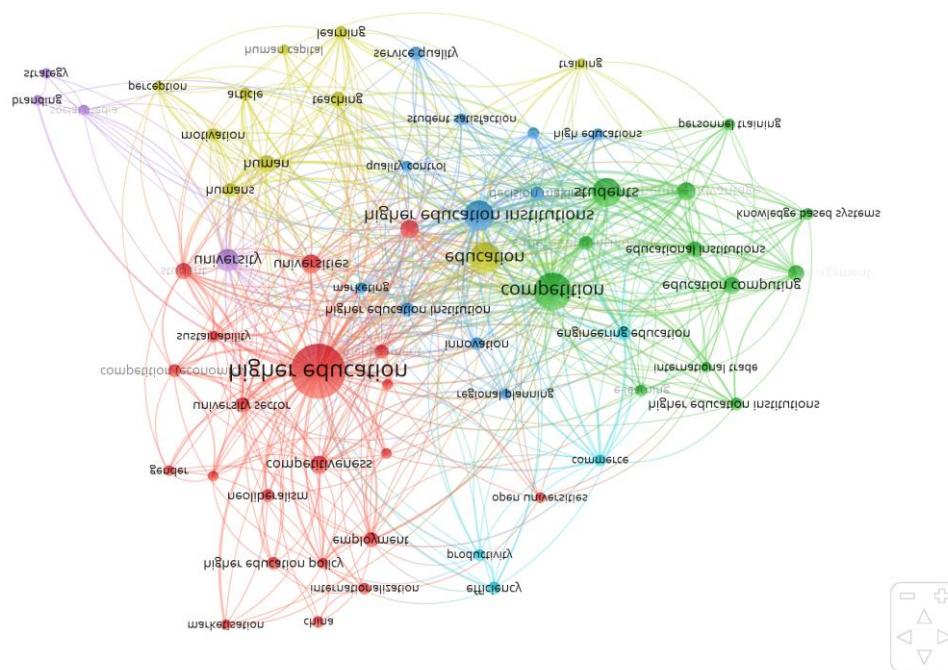
### 3.3. Bibliometric Analysis with VOS Viewer

Furthermore, to find out the mapping of publications based on network/keyword linkage, the historical development of literature over time, and visualization of density based on keywords, Bibliometric Analysis was carried out using VOS Viewer, which is presented in Figures 6, 7, and 8.

In the network visualization shown in Figure 6, each item is represented by a label and by a circle. The size of an item's label and circle is determined by the size of the item. The larger and stronger an item is, the larger the label and circle of the item will be. For some items, labels may not be displayed. This is done to avoid overlapping labels. The color of an item is determined by the cluster it belongs to. Lines between items represent links. The distance between the two journals in the visualization shown roughly indicates the relatedness of the journals in terms of citation links. In general, the closer two journals are to each other, the stronger the linkage. The strongest co-citation between journals is also represented by a line. The network mapping of the Competition in Higher Education study consists of 62 items, 6 clusters, 556 links, and a total link strength of 1115.

Based on the network visualization Figure 6, shows four research clusters categorized by certain colors, and in each cluster, several keywords with the same color can be seen. Cluster 1 discusses the theme of higher education visualized in red, while Cluster 2 discusses the theme of competition visualized by green, cluster 3 discusses the theme of higher education institutions with blue visualization color, and Cluster 4 discusses the theme of education visualized in yellow. Cluster 5 discusses the theme of university visualized by purple. Cluster 6 discusses the theme of commerce visualized by light blue. For more details, please see Table 2.

In Figure 6 it can also be seen that the most powerful items in the Competition in Higher Education literature are the items "higher education", "competition", "education", "students", and "higher education institutions". The item "higher education" with 58 links, a total link strength of 204, and 116 occurrences. The item "competition" with 50 links, a total link strength of 181, and 55 occurrences. While the item "education" with 43 links, a total link strength of 134, and 38 occurrences. The item "students" with 40 links, a total link strength of 133, and 34 occurrences. The item "higher education institution" with 41 links, a total link strength of 127, and 35 occurrences.



**Figure 6.** Network Visualization of Competition in Higher Education Literature  
Source: VOS Viewer 2023

The strength and popularity of a keyword in research publications can be influenced by various factors, including research trends, contemporary issues, and developments in the field of higher education. Careful selection of keywords by researchers can also affect the strength of keywords in research publications.

Higher education plays a central role in societal and economic development. Thus, the buzzword "higher education" is strong due to the reflection of the significance and focus of research at this level of education. With increasing competition among educational institutions, competition is becoming increasingly important in higher education. The keyword "competition" reflects attention to the study of the dynamics of competition in higher education and their impact on institutional strategies, like innovation and education quality. The keyword "education" may indicate the focus on education as a key element in the development of society. Higher education is often the subject of research because of its role in shaping individuals and its contribution to social and economic development. College education is considered essential for the formation of excellent human resources. In the context of competition in higher education, research often highlights the role of students.

Therefore, the keyword "students" reflects an interest in student experiences, recruitment policies, and retention strategies in higher education competition. The focus on students also



reflects an important aspect of higher education. The keyword "higher education institution" highlights the importance of higher education institutions as key actors in competition. Research may focus on institutional strategies, reputation, and efforts to increase traction in the higher education market. More in-depth research on institutional policies, the dynamics of competition among higher education institutions, and efforts to improve reputation and competitiveness might indicate the Importance of Higher Education Institutions.

**Table 2.** Color Grouping of Competition in Higher Education Literature

Cluster	Keywords.	Color
Cluster 1 (21 items)	China, competition (economics), competitiveness, employment, gender, higher education, higher education, policy, institutional framework, internationalization, labor, market, management, marketisation, neoliberalism, open universities, quality assurance, stakeholders, student, sustainability, sustainable development, universities, university sector	Red
Cluster 2 (12 items)	competition, competitive advantage, e-learning, education computing, educational institutions, higher education institutions (heis), international trade, knowledge based systems, knowledge management, personnel training, societies and institutions, students	Green
Cluster 3 (11 items)	decision making, high educations, higher education institution, higher education institutions, information technology, innovation, marketing, quality control, regional planning, service quality, student satisfaction	Blue
Cluster 4 (10 items)	article, education, human, human capital, humans, learning, motivation, perception, teaching, training	Yellow
Cluster 5 (4 items)	branding, social media, strategy, university	Purple
Cluster 6 (4 items)	Commerce, efficiency, engineering education, productivity	Light Blue

Source: VOS Viewer 2023

Furthermore, Figure 7 presents the development of literature from research on Competition in Higher Education from year to year. The color range is from blue (oldest), then green, and finally yellow (newest).

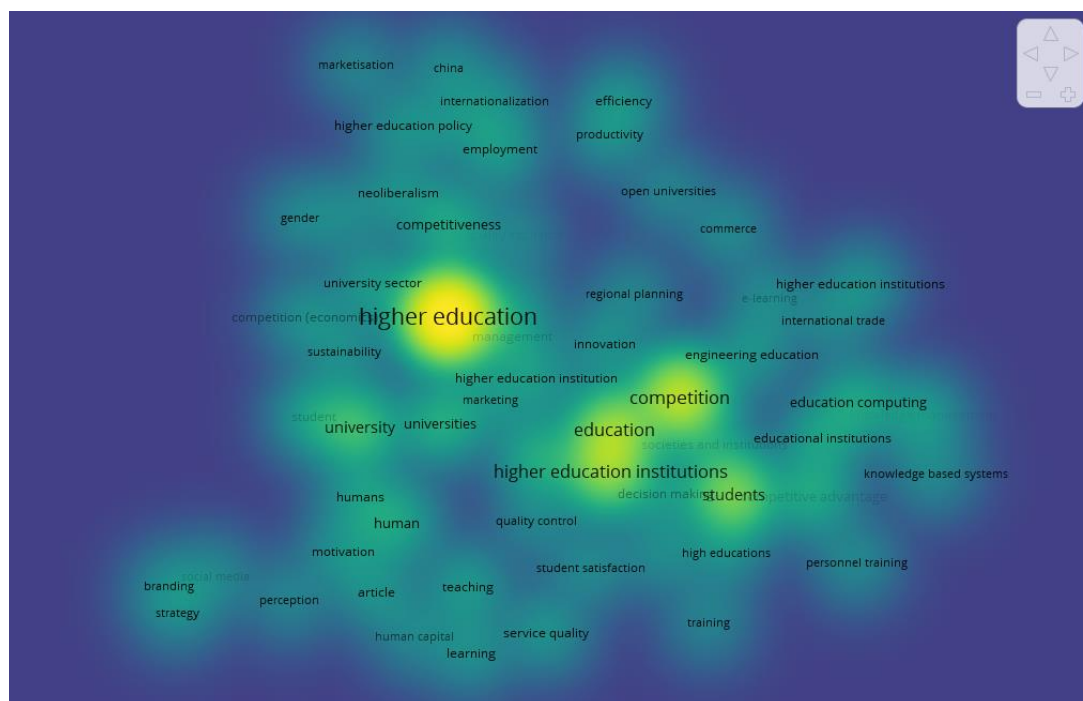
The historical development of literature in Higher Education Institution Competitive Dynamics can be seen through certain keywords used in the 2013-2023 timeframe. Before





this condition can be interpreted as the greater the chance of novelty of future research using keywords in darker areas, because it means that the use of these keywords is still relatively little used.

In Figure 8, the area around the item "higher education" is the brightest or brightest area. Followed by competition, education, students, and higher education institutions. This means that research on Competition in Higher Education mostly uses "higher education" items as a keyword.



**Figure 8.** Density Visualization of Competition in Higher Education Literature  
Source: VOS Viewer 2023

This shows that most research on competition in higher education uses the keyword "higher education" as the focus or key item in the research literature. After "higher education," the brightest areas were "competition," "education," "students," and "higher education institutions." This suggests that these keywords are also used quite frequently in the research literature on competition in higher education.

In other words, future research could try to explore and develop concepts or research topics that are less common or rarely used, as seen in the darker areas. This creates an opportunity to make new and innovative contributions to the research literature on competition in higher education. By understanding these visualizations, researchers can consider their research strategies and look for opportunities to develop concepts or ideas that have not been widely explored in the context of competition in higher education.

Based on the mapping in the three figures, it can be concluded that the literature on Competition in Higher Education is divided into six clusters, namely: higher education cluster; competition cluster; higher education institution cluster; education cluster; university cluster; and commerce cluster. The development of topics in the literature on Competition in Higher Education started before 2017 on aspects of teaching and efficiency. 2018-2019 shifted to economic competition among universities and then moved towards the structure and organization of universities. 2019-2020 went deeper into the key elements related to competition, students, and competitive advantage. From 2020 until now, the focus on service

quality and student satisfaction has become an important aspect of the effort to improve the competitiveness of higher education institutions.

Most research on competition in higher education uses the keyword "higher education" as the focus or key item in the research literature, followed by "competition," "education," "students," and "higher education institutions."

## 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

## 6. CONCLUSIONS

Based on the results of an in-depth analysis of research that has been conducted over the past 10 years on Competition in Higher Education, several conclusions can be drawn including:

1. The focus of research in the last decade shows a transition from attention to Higher Education towards a more in-depth understanding of Competition, higher education institutions, and aspects of education. Dominant keywords, such as "Higher Education," "Competition," "Education," "Students," and "Higher Education Institutions," indicate that the literature tends to prioritize understanding the role and impact of higher education institutions in competition, with special attention to students as a key element.
2. The focus of research has changed over time, from aspects of teaching and efficiency towards a deeper understanding of competition, students, competitive advantage, and finally service quality and student satisfaction. This shift reflects a response to the evolving dynamics in the higher education environment over the past decade.
3. The most influential article over the last decade was "Economic Impact of Entrepreneurial Universities' Activities: An Exploratory Study of the United Kingdom" by Guerrero et al. (2015) with 337 citations. This article gained significant attention and made a major contribution to the understanding of the economic impact of entrepreneurial-oriented university activities in the United Kingdom. Their research on the economic impact of entrepreneurial university activities is widely recognized in the literature.
4. The literature over the past decade reflects the variety of competitive strategies among higher education institutions, including a focus on entrepreneurship, branding, the changing meaning of education, operational efficiency, internationalization, the utilization of technology, the role of networks, the impact of competitive values on women's leadership, the relationship of academic department behaviors to overall performance, and the mental well-being of academics. This diversity reflects the complex dynamics and competition involving various strategic aspects within and outside higher education institutions.

## 7. REFERENCES

- A. A. Chadegani, H. S. M. Y. H. F. M. F. M. F. and N. A. E. (2013). A comparison between two main academic literature collections: Web of Science and Scopus databases. *Asian Soc Sci*, 9(5), 18–26.
- Aarts J. (2014). Intuition-based and observation-based grammars. In *English Corpus Linguistics* (pp. 56–74). Routledge.

- Abrams, P. A. (2022). Introduction. In *Competition Theory in Ecology* (pp. 1–12). Oxford University Press/Oxford. <https://doi.org/10.1093/oso/9780192895523.003.0001>
- Alberto, Levy. (2012). El conflicto competitivo entre sistemas socio-técnicos complejos y la evolución de los sectores industriales. . . Pecunia: Revista de La Facultad de Ciencias Económicas y Empresariales, .
- Alshurideh, M. T., Al Kurdi, B., AlHamad, A. Q., Salloum, S. A., Alkurdi, S., Dehghan, A., Abuhashesh, M., & Masa'deh, R. (2021). Factors affecting the use of smart mobile examination platforms by universities' postgraduate students during the COVID-19 pandemic: An empirical study. *Informatics*, 8(2). <https://doi.org/10.3390/informatics8020032>
- Biolchini JC, M. P. N. A. C. T. T. G. (2007). Scientific research ontology to support systematic review in software engineering. *Adv Eng Inf* , 21(2), 133–151.
- Chen, M.-J., & Miller, D. (2013). Competitive Dynamics: Toward a Multidimensional Transcendence. *Academy of Management Proceedings*, 2013(1), 12959. <https://doi.org/10.5465/ambpp.2013.12959abstract>
- D. R. Aulianto dan W. Nashihuddin. (2020). “Bibliometrics and Citation Analysis of ‘BACA: Jurnal Dokumentasi dan Informasi’ Published During 2015-2019,” . *Khizanah Al-Hikmah: Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan*, 8(2), 149–160.
- David, W. S. (2018). A Contested Concept in Higher Education. *Journal of pedagogic development*, . *Journal of Pedagogic Development*, .
- Davide, Chiaroni. (2011). Competitive Strategy Dynamics of Oems in the Ict Industry. .
- Guerrero, M., Cunningham, J. A., & Urbano, D. (2015). Economic impact of entrepreneurial universities' activities: An exploratory study of the United Kingdom. *Research Policy*, 44(3), 748–764. <https://doi.org/10.1016/j.respol.2014.10.008>
- Hendry, Hartono. , S. S. Brodjonegoro. , E. A. Kuncoro. , D. Budiastuti. (2019). Competitiveness In Higher Education: An Empirical Study In Indonesia. *International Journal of Scientific & Technology Research*, .
- I. C. Chersan, V. F. D. C. G. and V. G. (2020). Green public procurement in the academic literature. *Amfiteatru Econ J*, 22(53), 1–82.
- Karwowski, E. (2014). The Dynamics of Competition. In *Economic Crisis and Political Economy* (pp. 88–105). Palgrave Macmillan UK. [https://doi.org/10.1057/9781137335753\\_7](https://doi.org/10.1057/9781137335753_7)
- Kitchenham B. (2004). Procedures for performing systematic reviews. *Keele UK Keele Univ* , 33, 1–26.
- Kok, S. K., & McDonald, C. (2017). Underpinning excellence in higher education—an investigation into the leadership, governance and management behaviours of high-performing academic departments. *Studies in Higher Education*, 42(2), 210–231. <https://doi.org/10.1080/03075079.2015.1036849>

- Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023–1042. <https://doi.org/10.1007/s11365-020-00635-4>
- Kromydas, T. (2017). Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential. *Palgrave Communications*, 3(1). <https://doi.org/10.1057/s41599-017-0001-8>
- Krücken, G. (2021). Multiple competitions in higher education: a conceptual approach. *Innovation*, 23(2), 163–181. <https://doi.org/10.1080/14479338.2019.1684652>
- Melnychenko, O. (2022). COMPETITIVENESS OF HIGHER EDUCATION INSTITUTIONS IN UKRAINE: EDUCOLOGICAL ASPECT. *Osvitohiya*, 11. <https://doi.org/10.28925/2226-3012.2022.11.2>
- Michael, Kaganovich. , S. Sarpça. , X. Su. (2020). Competition in Higher Education. *Research Papers in Economics*.
- Mithas, S., Tafti, A., & Mitchell, W. (2013). How a Firm’s Competitive Environment and Digital Strategic Posture Influence Digital Business Strategy. *MIS Quarterly*, 37(2), 511–536. <https://doi.org/10.25300/MISQ/2013/37.2.09>
- Nazarko, J., & Šaparauskas, J. (2014). Application of dea method in efficiency evaluation of public higher education institutions. *Technological and Economic Development of Economy*, 20(1), 25–44. <https://doi.org/10.3846/20294913.2014.837116>
- Pirogova, E. V. (2023). On the concept of university competitiveness management. *Vestnik Universiteta*, 1(1), 48–55. <https://doi.org/10.26425/1816-4277-2023-1-48-55>
- Postiglione, G. A. (2013). Anchoring globalization in Hong Kong’s research universities: Network agents, institutional arrangements, and brain circulation. *Studies in Higher Education*, 38(3), 345–366. <https://doi.org/10.1080/03075079.2013.773605>
- Roy, A., & Raju, J. S. (2011). The influence of demand factors on dynamic competitive pricing strategy: An empirical study. *Marketing Letters*, 22(3), 259–281. <https://doi.org/10.1007/s11002-010-9124-z>
- Rutter, R., Roper, S., & Lettice, F. (2016). Social media interaction, the university brand and recruitment performance. *Journal of Business Research*, 69(8), 3096–3104. <https://doi.org/10.1016/j.jbusres.2016.01.025>
- Saadatmand, M., Dabab, M., & Weber, C. (2018a). Dynamics of Competition and Strategy: A Literature Review of Strategic Management Models and Frameworks. 2018 Portland International Conference on Management of Engineering and Technology (PICMET), 1–14. <https://doi.org/10.23919/PICMET.2018.8481743>
- Saadatmand, M., Dabab, M., & Weber, C. (2018b). Dynamics of Competition and Strategy: A Literature Review of Strategic Management Models and Frameworks. 2018 Portland International Conference on Management of Engineering and Technology (PICMET), 1–14. <https://doi.org/10.23919/PICMET.2018.8481743>

- Seeber, M., Cattaneo, M., Huisman, J., & Paleari, S. (2016). Why do higher education institutions internationalize? An investigation of the multilevel determinants of internationalization rationales. *Higher Education*, 72(5), 685–702. <https://doi.org/10.1007/s10734-015-9971-x>
- Tony, D. Grundy. (2017). *Dynamic Competitive Strategy: Turning Strategy Upside Down*.
- Tranfield D, D. D. S. P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Br J Manag*, 14(3), 207–222.
- Trunina, I., Pryakhina, K., & Bilyk, M. (2021). Management of Competitive Advantages of Higher Education Institutions. 2021 IEEE International Conference on Modern Electrical and Energy Systems (MEES), 1–5. <https://doi.org/10.1109/MEES52427.2021.9598759>
- Urbina-Garcia, A. (2020). What do we know about university academics' mental health? A systematic literature review. *Stress and Health*, 36(5), 563–585. <https://doi.org/10.1002/smi.2956>
- Vachkova, S. N., Petryaeva, E. Y., Tsyrenova, M. G., Shukshina, L. V., Krasheninnikova, N. A., & Leontev, M. G. (2022). Competitive Higher Education Teacher for the Digital World. *Contemporary Educational Technology*, 14(4), ep391. <https://doi.org/10.30935/cedtech/12553>
- Voronov, A. A., Garkovenko, V. E., Safonov, A. M., & Kosnikov, S. N. (2018). Higher Education Competitiveness: Definition, Assessment and Ways of Growth. *EUROPEAN RESEARCH STUDIES JOURNAL*, XXI(Special Issue 1), 525–534. <https://doi.org/10.35808/ersj/1202>
- Zahoor, N., Al-Tabbaa, O., Khan, Z., & Wood, G. (2020). Collaboration and Internationalization of SMEs: Insights and Recommendations from a Systematic Review. *International Journal of Management Reviews*, 22(4), 427–456. <https://doi.org/10.1111/ijmr.12238>
- Zhang, J., & Gao, D. (2014). Review on the Research of Dynamic Competition Theory. *Journal of Human Resource and Sustainability Studies*, 02(04), 246–251. <https://doi.org/10.4236/jhrss.2014.24026>