

2024

Using Importance-Performance Analysis for Measuring University Reputation and Setting Priorities

Mohammad Alkalash

Ain Shams University, mohammadalkalash@edu.asu.edu.eg

Ibrahim Alkalash

Ain Shams University, ibrahimalkalash@edu.asu.edu.eg

Follow this and additional works at: <https://scholarworks.uaeu.ac.ae/ijre>



Part of the [Higher Education Administration Commons](#)

Recommended Citation

Alkalash, M. N., & Alkalash, I. N. (2024). Using importance-performance analysis for measuring university reputation and setting priorities. *International Journal for Research in Education*, 48(4), 289-330. <http://doi.org/10.36771/ijre.48.4.24-pp289-330>

This Article is brought to you for free and open access by Scholarworks@UAEU. It has been accepted for inclusion in *International Journal for Research in Education* by an authorized editor of Scholarworks@UAEU. For more information, please contact j.education@uaeu.ac.ae.

Using Importance-Performance Analysis for Measuring University Reputation and Setting Priorities

Cover Page Footnote

Funding: The authors did not receive support from any organization for the submitted work. Competing interests: The authors have no competing interests to declare that are relevant to the content of this article. The authors are responsible for the correctness of the statements provided in the manuscript.



المجلة الدولية للأبحاث التربوية International Journal for Research in Education

المجلد (48) العدد (4) أكتوبر 2024 - Vol. (48), issue (4) October 2024

Manuscript No.: 2156

Using Importance-Performance Analysis for Measuring University Reputation and Setting Priorities

استخدام تحليل الأهمية والأداء في قياس سمعة الجامعة وتحديد الأولويات

Received	May 2023	Accepted	Nov 2023	Published	Oct 2024
الاستلام	مايو 2023	القبول	نوفمبر 2023	النشر	أكتوبر 2024

DOI : <http://doi.org/10.36771/ijre.48.4.24-pp289-330>

Mohammad Naser Alkalash

Ain Shams University,
Egypt

mohammadalkalash@edu.asu.edu.eg

Ibrahim Naser Alkalash

Ain Shams University,
Egypt

ibrahimalkalash@edu.asu.edu.eg

محمد ناصر الكلاش

جامعة عين شمس -
مصر

إبراهيم ناصر الكلاش

جامعة عين شمس -
مصر

Abstract

This study aimed to measure the university reputation using the importance-performance analysis (IPA) to determine the strengths and weaknesses in the aspects of the university reputation from the students' point of view and to identify the priorities for improvement based on the priority index. Data were drawn from a sample of 354 students through a questionnaire. The results indicated that many of the areas that require more focus and resource allocation, which are the quality of education, the efficiency of the faculty, community service projects, and the provision of educational resources and equipment, The results of the Priority Index presented the most pressing areas that the university leaders should deal with immediately to improve their university reputation. This study contributes to the theory of marketing for higher education by introducing IPA as a useful quantitative tool used in higher education research to measure the reputation of universities and set priorities.

Keywords: Organizational Reputation, University Reputation, Importance-performance Analysis (IPA), Measuring University Reputation, Improve Reputation

مستخلص البحث

هدفت هذه الدراسة إلى قياس سمعة الجامعة باستخدام تحليل الأهمية والأداء (IPA) لتحديد نقاط القوة والضعف في جوانب سمعة الجامعة من وجهة نظر الطلاب، وتحديد أولويات التحسين على أساس مؤشر الأولويات. وتم استخلاص البيانات من عينة مكونة من (354) طالباً من خلال استبانة. وقد أشارت النتائج إلى وجود العديد من المجالات التي تتطلب المزيد من التركيز وتخصيص الموارد، وهي؛ جودة التعليم، وكفاءة أعضاء هيئة التدريس، ومشاريع خدمة المجتمع، وتوفير الموارد والتجهيزات التعليمية. وبيّن مؤشر أولوية التحسين المجالات الأكثر إلحاحاً والتي يجب على قيادات الجامعة التعامل معها بشكل فوري لتحسين سمعة جامعتهم. وتساهم هذه الدراسة في نظرية التسويق للتعليم العالي من خلال تقديم (IPA) كأداة كمية مفيدة تستخدم في أبحاث التعليم العالي لقياس سمعة الجامعات وتحديد الأولويات.

الكلمات المفتاحية: السمعة التنظيمية، سمعة الجامعة، تحليل الأهمية والأداء، قياس

سمعة الجامعة، تحسين السمعة

Introduction

Higher education is a rapidly growing sector all over the world and competition among higher education institutions (HEIs) is fierce to survive and gain a competitive advantage. Universities today are in a continual race for excellence and access to a well-known global reputation and status that provides them with multiple advantages (Wong & Sultan, 2021). Reputation is essential for HEIs; therefore, universities seek to enhance their reputation in the educational market, which has become competitive. This imposed on universities the requirement to build a reputation among stakeholders to differentiate themselves from their competitors and maintain a unique position in the market (Qazi et al., 2021).

A reputable university is described as having a prestigious status within the community, the trust of parents, and other stakeholders, and respectable leadership. Moreover, students believe that the university's image has a positive impact on them as graduates of this university (Khoi, 2021). Gotsi and Wilson (2001) define reputation as "the overall evaluation of a company by its stakeholders over time.". A further definition of reputation by Davies (2015), who describes reputation as "describing our opinion or impression we have of a firm, created by and resulting from the interaction of all the experiences, impressions, beliefs, feelings, and knowledge that we have with and about a company".

A good reputation enables the university to attract the best staff and highly skilled students and secure research funding that drives the university to excellence in research performance (Morrisey, 2012). Customers are attracted to purchase services and products from organizations with a positive brand image. Similarly, joining universities that have uniquely built their reputation is the demand of future generations looking for prestigious universities (Golgeli, 2014). In the absence of sufficient information about the university, the image and reputation of the university play a vital role in the decisions that students make, as it has a direct impact on the satisfaction

of students who want to join a university that has a better reputation, which will eventually lead to tangible and intangible benefits for the university (Panda et al., 2019).

Brand reputation management has a significant role in building relationships between the university and key stakeholders and influences the brand value of universities in the global higher education market (Beneke, 2011). As a result, the issue of measuring reputation took immense importance in the university marketing process, and higher education marketing research began working on developing standards to measure the reputation of universities. During the past two decades, many studies have presented measures of the reputation of organizations, the first of which was 'The Reputation Quotient Measure' (Fombrun et al., 2000) and 'the RepTrak scale' presented by The Reputation Institute. Later, researchers have begun to develop measures of university reputation based on measures in the business world (Telci & Kantur, 2014; Jie & Hasan, 2019; Panda et al., 2019; Qazi et al., 2021) to measure the dimensions and factors affecting university reputation and identify the most influential factors and weaknesses that universities suffer from. Several measures of the university's reputation were applied in many previous studies, and the results of the measurement were reached without clarifying what should be worked on. As the previous studies did not show what methods should be followed to benefit from the results of measuring reputation and did not specify what are the priorities and the most important areas that should be focused on in the process of improvement, thus, the role of this study came to present the importance - performance analysis (IPA) as an effective tool to measuring reputation and identifying the most important results and method deal with these results to address the weaknesses in the university reputation and to give decision-makers the compass that determines the way and direction of marketing and managing the brands of their universities. In addition to using the improvement priority index to identify

the most pressing areas that must be dealt with by decision-makers to improve the university reputation. In light of the review of studies in this field by researchers, despite the application of importance and performance analysis in many other management topics and the proof of its effectiveness, thus far, previous studies have not applied this tool in measuring reputation. Therefore, the current research will be the first to use this tool to measure the reputation of universities in order to show the benefits of this tool in the matter of reputation and how it is applied and addressed to aspects of reputation and determine the priorities of the intervention to improve the reputation. The study aims to:

- a. Measuring the most important dimensions of the university's reputation using the importance-performance analysis tool from the students' point of view through a questionnaire.
- b. Explaining how to use the IPA technique as an effective tool for measuring the university's reputation by mentioning its benefits and implementation steps and representing the results of the reputation questionnaire on a quadrant analysis network.
- c. Setting priorities for improving the university's reputation based on the results of the (IPA) and the improvement priority index, as the results will show the most important aspects of the reputation that require rapid intervention and the least important aspects.

The paper progresses in the following sequence: literature review followed by methodology, findings, discussion, and conclusion.

Literature review

Reputation is very important for educational institutions as service organizations, just like productive organizations. Their primary goals are to educate students, develop their behavior, and create new opportunities for them in society through high-quality education. The reputation of

educational institutions is formed as a result of trust-based cooperation between multiple stakeholders. It may be damaged as a result of any possible crisis of trust between the parties (Christensen et al., 2019).

The literature dealt with the reputation of organizations and formed the base through which researchers began to study the reputation of universities and know their real role in achieving the status of the university. Although reputation is a necessary component of a customer relationship, it cannot replace a valuable experience that the customer can experience in his relationship with an organization; thus, customer satisfaction driven by positive experience can help establish a positive reputation and motivate the organization to provide the best service (Helm et al., 2010). García-Rodríguez (2021) shows that satisfaction and a positive reputation led to loyalty. In the context of HEIs, Zyryanova et al. (2020) state that attracting international students and increasing their numbers is strongly reflected in the university reputation and increases trust in the university at the international level in higher education markets. Reputable universities attract talented employees to work for them (Tröndle & Schindler, 2021). Talented employees will work for the success of the institution and will eventually develop strong relationships with stakeholders. Moreover, employees in reputable institutions feel the dignity of working in a well-known organization, attracting more qualified employees to increase productivity, all of which encourage employees to engage with the organization (Esenyel, 2020). To achieve a reputation that cannot be imitated, more qualified faculty members and experienced academic leaders are being attracted to be part of the university. Another indicator of internationalization that is a pillar that has a strong impact on improving the image, state, and competitiveness of the university is the increasing number of international students and faculty accepted. Moreover, many international students choose an institution with a good heritage that will be associated with their degrees, experience, and research history as well.

(Delgado-Márquez et al., 2013; Tröndle & Schindler, 2021; Rashid & Mustafa, 2021; Ma, 2021)

Reputation Measurement

Measuring the reputation of organizations has taken a variety of directions and has received increasing interest and extensive research in the literature related to strategic management and marketing research. Berens and van Riel (2004) identified three different trends for measuring relationships between organizations and stakeholders: "social expectations, corporate personality, and trust". Social expectations were one of the most common streams in research that addressed reputation measurement. The most famous was "The Reputation Quotient Scale" (RQ), developed by Fombrun et al. (2000), this model consists of six dimensions of corporate reputation: "Emotional appeal, products and services, social and environmental responsibility, vision and leadership, workplace environment and financial performance". and the "RepTrak scale" was constructed by the Reputation Institute, these two scales were a starting point for several studies that began to develop reputation scales that are suitable for various commercial, industrial sectors, and higher education.

Chun (2005) identified three schools of thought within the reputation model: evaluative, impressionistic, and relational. The evaluative school measures reputation by evaluating a company's accomplishments, which can be seen as social expectations, for example, "commitment to charitable and social causes." The Impressionist school looks at reputation as the overall impression of a company from different perspectives, while the relational school focuses on the perspectives of both "internal" and "external" stakeholders.

The interest in the reputation of universities increased driven by the emergence of international rankings of universities. Academics began to search for methods to improve reputation, and as a result, interest began to

find mechanisms to measure reputation to manage it. The measurement of reputation in institutions of higher education relied in its infancy on measures of reputation in the business sector, as it was a leading sector in interest and drawing attention to the reputation of the organization, and many researchers tried to test the application of these measures in universities. In addition to the dimensions that were measured in business organizations, some of these studies examined many factors and critical dimensions that reflect the special nature of universities, such as "the university's heritage, institutional ethics, and the university environment. (Telci & Kantur, 2014; Jie & Hasan, 2019; Panda et al., 2019; Qazi et al., 2021; Dursun & Altin Gumussoy, 2021).

The literature on university reputation revealed the most crucial factors affecting the reputation of HEIs and demonstrated that the quality of research and teaching positively affects the reputation of the best universities (Delgado-Márquez et al., 2012; Rashid & Mustafa, 2021). Furthermore, Sirkeci and O'Leary (2022) concluded that the positive reputation of the university's research performance greatly affects the students' choice of the university at all levels. Another factor was emotional appeal, including trust, respect, and admiration for the university, all of which are crucial factors in the establishment of the university reputation; this shows that any improvement in the quality of services increases the emotional appeal (Dursun & Altin Gumussoy, 2021). Another dimension that reflects the special nature of the university is the university environment, where the quality of the campus and facilities can affect the image of the university among current and prospective students (Khoi, 2021).

The advantages and positive benefits of organizational reputation and its future implications for universities have been the focus of many studies. Garvanova (2020) suggested that the university's reputation is an intangible strategic resource that achieves the university a unique position and a competitive advantage in the higher education market and generates

trust among stakeholders at the local and international levels. Moreover, Heffernan et al. (2018), Moslehpour et al. (2020), and Kaushal et al. (2021) believe that students' satisfaction with the services provided by the university and increasing their loyalty to the university is one of the most significant benefits that the good reputation of the university can bring. According to Lo (2014), a good reputation can help to attract the best local and international students with outstanding abilities and distinguished staff with high qualifications and skills. Angulo-Ruiz et al. (2016) confirm that the competitive reputation is taken into account as an essential point through which students choose the university in the future. The information that universities seek to publish always on the web pages about their ranking in the international ranking systems for universities has been one of the most popular and reliable sources for the selection of the university by international graduate students. (McNicholas & Marcella, 2022). Civera et al. (2021) argue that reputable universities charge higher tuition fees because students perhaps interpret high tuition fees as an indication of the quality of the university, which leads to an increase in the financial resources of the university. Haski-Leventhal (2020) notes that successful universities require leaders with a unique set of abilities and interpersonal skills, the most important of which is the ability to communicate and negotiate with others. The current research shares with other research the focus on the following factors:

Quality of Service.

Since promoting knowledge and understanding through teaching and research is the primary purpose of the university, any services or degrees offered by the university will be judged on their quality by stakeholders. Accordingly, it is important to provide quality products and services to attract more new students (Angliss, 2021). For O'Neill and Palmer (2004), service quality in higher education refers to 'the difference between what a student expects to receive and his perceptions of actual service'. Students

seek high-quality education by deciding to choose a university that provides evidence of service quality, as the increasing cost of education has created a new generation of students who are more aware as clients than ever before (Wong & Sultan, 2021). As previously stated, the quality of service has a direct and important impact on reputation (Bakrie et al., 2019). In other words, good service is a feature of educational institutions that are able to enhance a unique reputation.

Social Responsibility.

Higher education institutions play an essential role in society in the formation of future generations and the preparation of future professionals, with the aim of moving towards sustainability. The role of education for sustainable development has become globally recognized, also thanks to the European Union's strategy for sustainable development and the United Nations Millennium Development Goals that put universities on It is the most appropriate role to spread the principles of sustainability; therefore, it is the duty of higher education institutions to adopt and promote the principles of sustainability (Alshuwaikhat & Abubakar, 2008).

Academic interest in the social responsibility of universities began in the late 1990s, with an initial focus on the responsibility of universities to protect the environment in response to the global call for sustainable development. Universities must go beyond the basic functions of teaching, research, service, and act voluntarily to further the common good and concern for the associated societal environment (Lo et al., 2017). Universities can be considered "small cities" that may have severe impacts on the environment due to their activities and the movement of resources and people within the campus (Ragazzi & Ghidini, 2017). The study by Vasilescu et al. (2010) demonstrates that enhancing the commitment and active citizenship of students and faculty members and urging them to provide social services to their local community for sustainable development

is one of the social responsibilities of the university, which can play a significant role by creating a generation that believes in its role in community service. Several studies have suggested different models of social responsibility for universities, such as the model proposed by Dima et al. (2013), which consists of six dimensions, most of which focus on cooperation between the university and other universities, cooperation with schools and companies, as well as the implementation of social, cultural, and environmental projects related to the community surrounding the university. Latif (2018) suggests that for a university to be socially responsible, it must have many responsibilities; legal, ethical, charitable, and societal participation have been identified as voluntary responsibilities. It is thought that universities that fail to provide a high performance of social responsibilities will have difficulty surviving. According to Taamneh et al. (2022), all social responsibility practices have a significant and positive impact on improving organizational reputation. (Rasoolimanesh et al., 2021) also confirm that the university's brand reputation is influenced by its social responsibilities and that loyalty to the university is enhanced by positive practices.

Emotional Appeal.

The emotional appeal arises as a result of the feelings of trust, admiration, and respect that stakeholders have towards the organization and is one of the factors that contribute to improving the university reputation (Dursun & Altin Gumussoy, 2021). Furthermore, Sisco (2016) argues that if the public does not view the organization favorably, individuals will be reluctant to join or deal with it, whether through recruitment, investment, or loyalty to it, and public respect means how the stakeholders value the organization over a period of time, which is an internal and external process that includes individuals and the surrounding community. In an academic context, the emotional appeal between stakeholders and the

university depends on first-hand experience or information that comes from others and leads to the formation of an effective emotional bond that includes trust, respect, admiration, and good feelings towards the university, which can eventually lead to the creation of a positive image of the university (Aledo-Ruiz et al., 2021). In addition, the bond between faculty and the student has been the most influential in creating emotional brand attachment. (Sharif & Sidi Lemine, 2021).

University environment.

Khoi (2021) describes the environment as the educational conditions on campus that contribute directly or indirectly to the development of teachers and students. Recent research has suggested that universities seeking to improve their reputation should provide a quality learning environment with all the necessary resources to enhance the level of student satisfaction (Qazi et al., 2021). In addition, a reputable university should go beyond its local borders to bring together students from different countries and cultural backgrounds to play a contributing role in its image, which should be rich in diversity and help students achieve their personal goals (Badri & Mohaidat, 2014).

Students' direct educational experience influences students' behavior towards the university. Thus, to enhance the reputation and investment in it, academic institutions are required to meet the current needs of students (Sung & Yang, 2008). In the same context, many scholars explained that the elements of the educational environment on the campus, including infrastructure, facilities, and equipment, can be considered critical factors that determine the student's perception of the image or reputation of the university (Nguyen & LeBlanc, 2001; Lafuente-Ruiz-de-Sabado et al., 2018; Aghaz et al., 2015). In other words, a positive campus life with a large campus helps students engage and create pleasant memories at the

university (Plewa et al., 2016). Collectively, the above studies confirm the role of the university's positive environment in creating a good reputation for the university among current students and motivating potential students to join the university.

Finally, in light of the foregoing, it can be concluded from the above that a reputable competitive university is able to obtain a strong status in the individual sectors of global education, achieve international competitive advantages in scientific research, provide high-quality educational services in accordance with international standards, perform important social tasks for society through its social responsibilities, obtain a high status in international university rankings, build an international reputation and have a successful internationalization experience.

Reputation and University Ranking

Over the past two decades, increasing attention has been paid to university rankings and global reputation rankings by many universities and higher education leaders worldwide, with the aim of these educational institutions to improve the qualities that are constantly evaluated in various university rankings. Ranking is a relatively recent phenomenon in university governance, which began as a media-based attempt (originating in the United States and then spreading to Europe) to assess which universities are the “best” according to a scale that began in a national context and then evolved into a global benchmarking and comparison model for universities worldwide (Mats, 2020). There is clearly a strong link between research output and reputation building in practice, and research excellence - as defined by ranking systems - is widely seen as the most important driver of a university's national and global standing and ranking. The crucial point is that rankings are important in developing the organizational reputation of higher education institutions, as they can collect and select information in order to establish and disseminate reputation, and that the phenomenon of

"Reputation race" pushes different higher education institutions to excellence, Institutions of higher education with traditional academic performance are encouraged by the rankings to imitate reputable institutions (Lo, 2014; Komotar, 2019).

Strategic planning in emerging universities focuses on directing the organization's energies and resources in line with the requirements of classification systems and increasing research output whenever it is important (Overton-de-Klerk & Sienaert, 2016). That the university's reputation as excellent does not have an expiration date, given that the reputation is a general or personal judgment, which may depend on experiences, recommendations, or marketing strategies pursued by universities, the positive reputation of the university may continue far beyond the decline of any position in the ranking or other quality assessments. (Tröndle & Schindler, 2021)

World rankings show how globalization has turned higher education into a marketable good. Given the importance of higher education in human capital development and economic growth, the quality of higher education and university research has become a vital indicator of national competitiveness. Worldwide, rankings have become a political tool and proxy for competitiveness, as countries and higher education institutions adopt policies and strategies to maximize their reputation and prestige (Hazelkorn, 2014).

Universities strive to build networks of partners to develop their potential through innovation projects and to promote distinguished resources and competencies, and by improving their positive reputation, universities aim to find new ways to distinguish themselves on the international map and gain greater visibility, and as a result, universities expand the volume of their international activities, by establishing study abroad programmes, exchange of students and technical staff between

universities, expansion of foreign language programs and international education programmes, institutional cooperation between universities in different countries (Cattaneo et al., 2016). Thus, attracting faculty members and international students and increasing the number of foreign students studying is the main indicator of the international activity of the university, which is one of the important indicators that affect the reputation of the university and enhance confidence in the university at the international level (Zyryanova et al., 2020). The first ranking of universities known as the Shanghai Ranking (ARWU) appeared in 2003, then the Times Higher Education University Ranking appeared, based on collaboration between (THE) and Quacquarelli-Symonds (QS), which continued until 2009, and in 2010 (THE) began Working with "Thomas Reuters" and changing its methodology, while QS established a university ranking system known as "QS World University Ranking", several international ranking systems appeared, and the reputation index was present in some ranking standards such as (THE) ranking, (QS) ranking, and (QS) ranking. (U.S. News) ranking (Chattopadhyay, 2019; Anowar et al., 2015), and this reflects the nature of the mutually influencing relationship between reputation and global rankings of universities. Inclusion of one educational institution in the ranking can give national and international visibility and help build reputation, especially for emerging economies and lower-ranked institutions (Hazelkorn, 2014).

Reputation and Digital Transformation

Studies highlight the importance of the digital advancement of universities for students, as universities with a higher degree of digital progress appear to be more acceptable and positively affect students' academic experience and support their success in their study programme. In fact, digital technologies - especially blended learning solutions - lead to better quality teaching. Thus, it may enhance the actual efficiency of the

university in educating students, as digital progress improves the university's learning environment (Colin & Mahr, 2017; Plewa et al., 2016).

The Covid-19 crisis prompted the acceleration of the digital transformation process in many universities around the world, as education was one of the most affected sectors, and the digital transformation provided universities with the opportunity to make good progress and make great efforts to provide quality education for future generations (Díaz-García et al., 2022). Universities are trying to think about how best to apply technological innovation, digital transformation is crucial for universities to succeed in the coming years (Liebowitz, 2022).

Digitization has led to an increase in globalization, facilitating the free exchange of information and the rapid exchange of expertise and knowledge. Under these circumstances, the competition of universities to attract students and investment increases dramatically. Therefore, digital transformation plays a significant role in establishing the reputation of a higher education institution and managing it effectively (Akhmetshin et al., 2021). Colleges and universities are using technology to improve their reputations by developing more online learning programs to provide low-cost degrees, enrich teaching, and conduct research. Popular and relatively new academic programs in cybersecurity, robotics, and artificial intelligence are examples of how technology is driving new curricula as well as supporting the presentation of the curriculum (Grajek & Brooks, 2020). For current students, the university website is a source of information, for example, providing information about admission requirements or class schedules. (Plewa et al., 2016). Therefore, the university's marketing department should ensure that the university has a professional appearance online and that the website provides all the details and information that stakeholders need (Colin & Mahr, 2017).

The rapid development of technology has provided new tools for the development of all kinds of educational institutions in the world. It is the universities that are able to fulfill the mission of innovation and entrepreneurship that will have a good reputation among all stakeholder groups. Therefore, the university's digital transformation is one of the factors that increase the university's competitiveness and thus its prestigious capital (Akhmetshin et al., 2021).

Digital marketing is especially embodied in websites, blogs, or social media platforms, as it has the potential to create a positive impact when an organization communicates with its target audience (Morais et al., 2021). Websites, electronic newsletters, and the use of digital technology in higher education marketing are increasingly important, as prospective students tend to use websites and social networking sites extensively, such as YouTube, Twitter, and Facebook, and thus online marketing may have a positive impact on prospective students' choice of university. And that the increasing competition for students and the desire to learn about the programs has prompted universities to allocate more efforts and resources to communicate on the Internet (Constantinides & Zinck Stagno, 2011). Where there is ease in distributing and obtaining information through digital marketing media, different interactions and responses can be obtained through social media because it has a multi-tasking function (Kusumawati, 2019).

The emergence of new types of media, such as online social media, has brought about dramatic changes in the ways organizations manage their reputation (Matešić et al., 2010). Online reputation management is essential for higher education institutions. Imminent students and their parents or guardians search extensively for universities online before applying (Zyryanova et al., 2020). Many studies have proven the importance and role of digital marketing in communicating and improving the image of universities and that universities need attention on social media, the

website, and the search engine when they require to form a positive image of the university. When the university provides a better performance of digital marketing, it is possible to obtain an image and reputation better for the university (Sawlani & Susilo, 2020).

Methodology

Importance-performance analysis (IPA)

The first introduction of importance-performance analysis (IPA) was in the field of marketing by Martilla and James (1977). The IPA matrix consists of two dimensions, with the x-axis depicting 'performance' and the y-axis depicting 'importance', as shown in Fig. 1. IPA has been used as an effective tool in assessing service quality, satisfaction, and performance in educational institutions and non-profit organizations (O'Neil & Palmer, 2004; Douglas et al., 2006; Angell et al., 2008; Iacovidou et al., 2009; Wu & Jimura, 2019).

IPA is a practical and useful management method that can help decision-makers easily identify the strengths and weaknesses of the organization and assess customer satisfaction with the products and services provided by the organization (Ormanovic et al., 2017). And the use of this tool in this study to show its role in measuring the reputation of the university and its benefits in setting priorities and allocating the organization's resources in the most important aspects of the dimensions of the university's reputation.

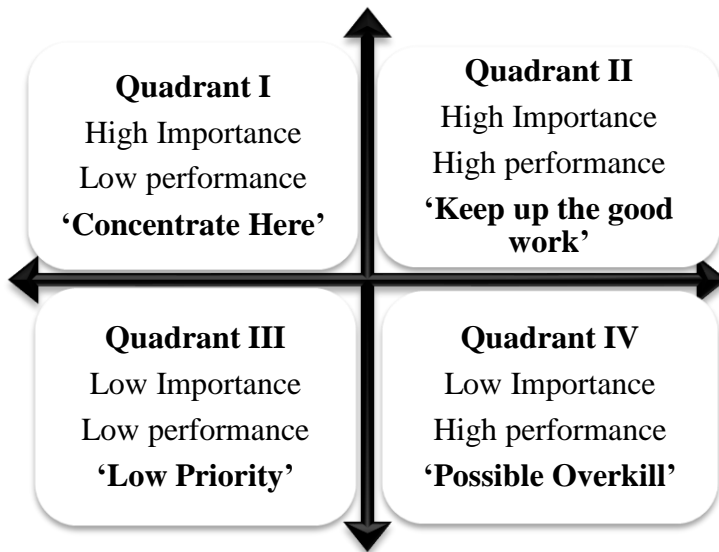
This tool has been used by many studies to analyze the internal environment, find out where the deficiencies in the capabilities of the organization are, measure stakeholder satisfaction, develop plans to improve the quality of services or products (Lai & To, 2010; Taplin, 2012; Wu & Hsieh, 2012; Sörensson & von Friedrichs, 2013; Lee et al., 2015; Ramírez-Hurtado, 2017; Godeiro et al., 2018).

The importance-performance analysis is carried out through the following steps:

- Determining what attributes to measure.
- Development of the attribute list.
- Separate the importance measure and the performance measure.
- Position the vertical and horizontal axes on a grid.
- Analyse the importance-performance grid.

Figure 1

The importance–performance analysis matrix. (Martilla & James, 1977).



The four areas of IPA matrix.

- **Quadrant (I)** contains items that are important to stakeholders, but the performance of the organization is low. This requires placing them at the top of the organization's work priorities in terms of allocating resources and efforts.

- **Quarter (II)** In this quarter are items that are particularly important to stakeholders, and the organization is implementing high levels of performance. By continuing to work diligently on the procedures and efforts followed by the organization in these areas, the advantages through which it can compete with others can be maintained.
- **Quarter (III)** here are located items that are not of the organization's interests, not even stakeholders, as these areas should remain at the bottom of the organization's task list because they are not considered aspects that require to be addressed quickly.
- **Quadrant (IV)** Here are the items that consume the resources of the organization, and the organization performs well, but stakeholders who are looking for tangible benefits from the organization do not consider it important. As a result, the organization will require to reconsider the resources being depleted in these areas and redirect its capabilities and potential to other areas of high importance.

Improvement Priority Index

The priority index was calculated to determine areas requiring immediate resources for improving university reputation. In reputation improvement efforts, priority is given to items that have low-performance scores but are highly important from the point of view of stakeholders.

The priority index is calculated in three steps.

- 1- Giving a rank to all performance means from the highest means to the lowest means, where the highest performer gets rank (1).
- 2- Giving a rank to all the importance means from the lowest average to the highest means, where the means of the lowest importance get the rank (1).

- 3- Derive the priority index by adding the rank of performance (step 1) to the rank of importance (step 2), then arrange the items in the order, starting with the item with the highest score in the priority index.

Items at the top of the Priority Index list have low performance and high importance scores, reflecting underperformance of reputation items, which stakeholders consider important in their assessments of the university reputation. The items at the bottom of the list have high performance and low importance scores, reflecting aspects of high performance that stakeholders consider less important. It must be emphasized that the items at the bottom of the list are still important to stakeholders but are less important compared to the items at the top of the list, the items in the middle of the list are either high performance and high importance or low performance and low importance (Gesell, 2001).

Participants

The study population consists of all students from a Syrian public university. The sample includes undergraduate (fourth-year students) and postgraduate (Masters - PhD) students, due to the ability of these students to understand the dimensions of the scale and their experience of the conditions and details of the university environment and the progress or improvement achieved by the university. The questionnaire was randomly delivered to students on campus. Respondents were informed that their responses would remain confidential and that their identities would be unknown. 375 forms were distributed, and incomplete responses and outliers were removed from the data. There were 354 valid questionnaires for statistical analysis. The participants characteristics are presented in Table 2. The sample included 354 respondents, 48.3% were males, 51.7% were females, the age group (20-25) was the largest group with 70.6%, then the group (26-30) was 26%, and the university students were 57% and postgraduate (Masters - PhD) by 43%. (Table 2).

Instrument

The questionnaire was used as the research instrument to achieve the objectives of this study. The questionnaire is divided into two parts. The first section includes demographic questions, and the second section consists of four dimensions of reputation measurement, including 19 items distributed as follows: the first dimension is service quality (5 items), the second dimension is social responsibility (6 items), the third dimension is emotional appeal (3 items), and the fourth dimension is the university environment (5 items).

Using a four-point scale, the responses were obtained from the individuals participating in the survey regarding their views on the reputation of the university. This scale was used to avoid choosing neutral opinions and reduce biased responses. The importance of each item was measured using (1= unimportant; 2= less important; 3=important; 4=very important). The performance was measured using (1 = Strongly disagree; 2 = I do not agree; 3 = Agree; 4 = Strongly agree). The questionnaire was built on the basis of previous research, as shown in Table 1.

Table 1

Sources of measurement items.

Dimension	Items	Source
Quality of Services	5	Fombrun et al. (2000), Alessandri et al. (2006), Panda et al. (2019), Dursun & Altin Gumussoy (2021)
Social Responsibility	6	Fombrun et al. (2000), Latif (2018), Dursun & Altin Gumussoy (2021)
Emotional Appeal	3	Fombrun et al. (2000), Jie & Hasan (2019), Dursun & Altin Gumussoy (2021)
University Environment	5	Telci & Kantur (2014), Qazi et al. (2021)

Results

A reliability test was performed on a sample of 30 students to calculate the internal consistency of the reputation scale using Cronbach's alpha coefficient, and the results showed that Cronbach's alpha for all items

of the scale was above 0.7, which confirms the reliability of the scale, which is presented in Table 3.

Table 2
Sample characteristics.

(N= 354)		Frequencies	Percentage
Age	20-25	250	70.6 %
	26-30	92	26 %
	30-40	12	3.4 %
Gender	Male	171	48.3 %
	Female	183	51.7 %
Educational level	Undergraduates	202	57 %
	postgraduate (Masters - PhD)	152	43 %

Table 3
Reliability analysis.

Dimension	Cronbach's Alpha		
	items	Importance	Performance
Quality of services	5	0.80	0.77
Social Responsibility	6	0.71	0.76
Emotional appeal	3	0.90	0.90
university environment	5	0.87	0.85

Importance-performance analysis

The results of the analysis of importance and performance for the dimensions of reputation at the university are presented in Table 4, which contains the means of perceived importance and the perceived performance of each item from the point of view of students. The results of a paired sample t-test showed that the mean differences between the means of importance and performance for each item were statistically significant ($p < 0.01$). For the IPA grid, the importance and performance scores on the matrix are shown in Fig. 2, where importance is plotted on the vertical axis and performance is plotted on the horizontal axis. The results of the IPA grid are interpreted as follows:

The First quadrant, 'Concentrate Here,' in this quadrant are the items related to the quality of services at the university. Qs2: 'The university offers high-quality education'; Qs3: 'The university has high-quality faculty'. This

indicates the low performance of the quality of education and the quality of faculty members and their high importance in the university's reputation from the students' point of view. Thus, the university should focus on improving these aspects because of its distinguished role in improving the university's reputation. Regarding the social responsibility dimension, SR4: 'The university implements projects that serve the community'. This confirms the low performance of the university in implementing projects that serve the community and the high importance of this aspect in the formation of its reputation. The emotional appeal dimension was EA1: 'I have positive feelings about the university', and EA3: 'I trust this university', the most important aspects that students believed to influence the university's reputation. The students expressed low positive feelings and trust in the university, which indicates a decrease in the university's ability to attract students and enhance their trust in the university, despite the importance of this aspect in raising the university's position and improving its image among stakeholders. Concerning the dimension of the university environment, UE3: 'The university's physical facilities are visually appealing', UE4: 'The physical environment of the university is pleasant' and UE5: 'The university provides modern equipment (computers, libraries, laboratories, etc.)' indicated the weak performance of the university in providing attractive facilities and modern educational equipment, which are very important factors in building the reputation of the university.

From the above, it is clear that the dimensions in this quarter were low-performance and did not reach the level of expectations, despite their paramount importance in the formation of the university's reputation, which requires giving it a top priority in any strategy to improve the university's reputation in the future.

The second quadrant, 'Keep up the good work,' includes items Qs1: 'My university offers good value products/services for money', Qs4: 'Your university staff have students' best interests at heart' and Qs5: 'Your university staff provide prompt service to students'. The social responsibility

items were SR2: 'The university implements a number of initiatives to improve the quality of life on campus', SR6: 'The university engages with community groups, including supporting social events that are relevant to the achievement of the university's mission', the emotional appeal dimension was EA2: 'I admire and respect the university', and the university environment dimension was UE2: 'This university is a safe place to study'. All these items have achieved a high level in performance and importance, and this requires the university to maintain its performance level in these items.

The third quadrant, 'Low Priority,' includes Items SR3: 'University participates in voluntary and charitable activities within their local community', SR5: 'The university fulfils its responsibility to society', and UE1: 'The university has a good campus'. All these items were of low performance and low importance from the students' point of view at the university. This indicates that these items do not significantly affect the university's reputation.

Fourth quadrant, 'Possible Overkill,' The only item was SR1: 'The university is environmentally friendly', indicating that students are not very interested in this aspect; however, they believe that the university is doing well in preserving the environment and not implementing any activities or projects that harm the environment. Thus, this aspect is not of significant importance in the formation of the university's reputation among students.

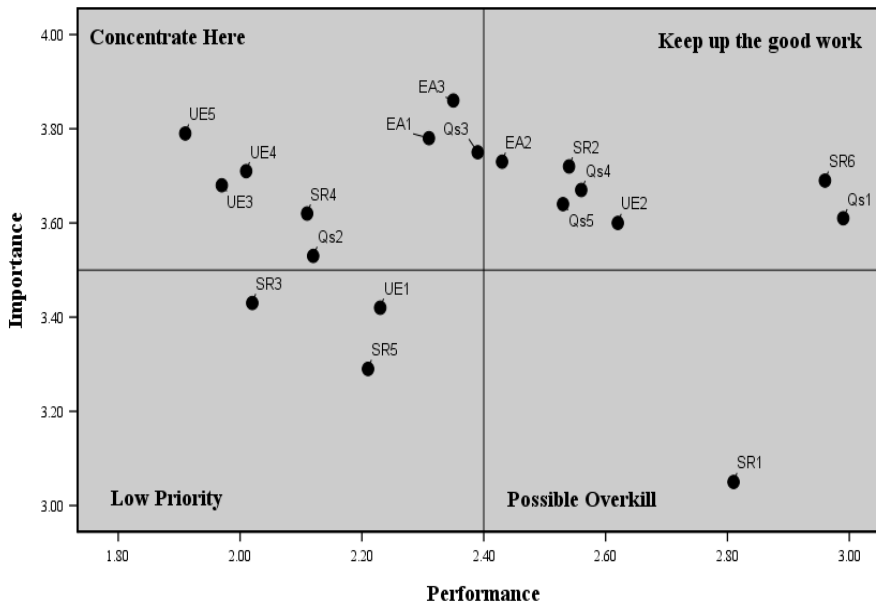
Table 4

Importance and performance ratings for reputation dimensions.

Dimension	Item Cod	Items	Importance		Performance		Gap (I-P)	t-test
			Mean	SD	Mean	SD		
Quality of services	Qs1	The university offers good value products/services for money.	3.61	0.48	2.99	0.59	0.61	15.03
	Qs2	The university offers high quality education.	3.53	0.50	2.12	0.49	1.41	40.00

Dimension	Item Cod	Items	Importance		Performance		Gap (I-P)	t-test
			Mean	SD	Mean	SD		
Social Responsibility	Qs3	The university has high quality faculty.	3.75	0.43	2.39	0.48	1.36	39.87
	Qs4	The university staff have students' best interests at heart.	3.67	0.47	2.56	0.56	1.11	30.95
	Qs5	The university staff provide prompt service to students.	3.64	0.48	2.53	0.50	1.10	31.97
	SR1	The university is environmentally friendly.	3.05	0.22	2.81	0.41	0.24	9.78
	SR2	The university implements a number of initiatives to improve the quality of life on campus.	3.72	0.44	2.54	0.49	1.18	34.97
	SR3	University participates in voluntary and charitable activities within their local community.	3.43	0.49	2.02	0.16	1.41	51.07
	SR4	The university implements projects that serve the community.	3.62	0.49	2.11	0.31	1.50	49.22
	SR5	The university fulfils its responsibility to society.	3.29	0.45	2.21	0.40	1.08	35.38
	SR6	The University Engages with community groups, including supporting social events which are relevant to achievement of the university's mission.	3.69	0.46	2.96	0.49	0.72	20.65
Emotional Appeal	EA1	I have positive feelings about the university.	3.78	0.41	2.31	0.46	1.47	45.32
	EA2	I admire and respect the university.	3.73	0.44	2.43	0.49	1.29	36.06
	EA3	I trust this university.	3.86	0.34	2.35	0.47	1.51	47.60
University Environment	UE1	The university has a good campus.	3.42	0.49	2.23	0.42	1.18	34.52
	UE2	This university is a safe place to study.	3.60	0.49	2.62	0.48	0.98	27.14
	UE3	The university's physical facilities are visually appealing.	3.68	0.46	1.97	0.49	1.70	46.89
	UE4	The physical environment of the university is pleasant.	3.71	0.45	2.01	0.30	1.70	60.48
	UE5	The university provides modern equipment (computers, library, laboratory, etc.).	3.79	0.40	1.91	0.39	1.87	62.25

Figure 2
Importance-performance grid for reputation dimensions.



Improvement Priority Index

The priority index included all items of performance and importance, and the top five items in the performance scores were QS1, SR6, SR1, UE2, and QS4. The five lowest-performing items were UE5, UE3, UE4, SR3, and SR4. The five most important items were EA3, UE5, EA1, QS3, and EA2. The five least important items were SR1, SR5, UE1, SR3, and QS2. As indicated in (Table 5). Combining this information, the priority Index showed that the greatest requirement for improving reputation relates to the following areas: First: providing an educational environment, tools, technology, and laboratories that serve students. Second: providing an enjoyable and attractive environment that encourages students to come to the campus. Third: working to increase the confidence of stakeholders in the university. Fourth: attracting highly qualified faculty. Fifth: implementation of projects that serve the community by the university.

Table 5*Priority Index.*

Rank	Item Cod	Importance		Performance		Priority Index
		Mean	Rank	Mean	Rank	
1	UE5	3.79	18	1.91	19	37
2	UE4	3.71	13	2.01	17	30
3	UE3	3.68	11	1.97	18	29
3	EA3	3.86	19	2.35	10	29
4	EA1	3.78	17	2.31	11	28
5	QS3	3.75	16	2.39	9	25
6	SR4	3.62	8	2.11	15	23
6	EA2	3.73	15	2.43	8	23
7	SR2	3.72	14	2.54	6	20
7	SR3	3.43	4	2.02	16	20
8	QS2	3.53	5	2.12	14	19
9	QS5	3.64	9	2.53	7	16
10	QS4	3.67	10	2.56	5	15
10	SR5	3.29	2	2.21	13	15
10	UE1	3.42	3	2.23	12	15
11	SR6	3.69	12	2.96	2	14
12	UE2	3.6	6	2.62	4	10
13	QS1	3.61	7	2.99	1	8
14	SR1	3.05	1	2.81	3	4

Discussion

The importance-performance analysis presented many results related to the university's reputation, which deserve much attention. Among the most important dimensions of reputation that were clarified on the analysis grid was the quality of service, the results showed the importance of this dimension in improving the university's reputation from the students' point of view and included the academic competence of the faculty, and the university provides services as quickly as possible to students and high-quality education that is commensurate with the cost. Students are always striving to obtain the best service that the university can provide. According to the results, there was a significant decrease in the quality of services provided by the university. This prompts the university to work on improving

its services and the efficiency of the faculty to achieve performance commensurate with the importance of this aspect and its role in improving the reputation of the university. The quality of service greatly affects the satisfaction of students and the surrounding community. Thus, it is greatly reflected in the reputation of the university, which is confirmed by Dursun & Altin Gumussoy, (2021).

The university environment is important in creating the university's reputation. The results revealed that providing educational supplies and equipment and technology that serve students and the educational process, providing an attractive environment and good service facilities are among the most important aspects affecting the university's reputation from the students' point of view. Therefore, it is the responsibility of the university to work on developing its environment, providing a campus, technology and supplies to improve student satisfaction and encourage them to join the university, and create a positive image of the university among potential students who contribute to building a good reputation for the university. This agrees with the results of (Nguyen & LeBlanc, 2001; Badri & Mohaidat, 2014; Lafuente-Ruiz-de-Sabado et al., 2018).

Regarding emotional appeal, the results of the study show a decrease in the university's ability to build students' and community trust and gain the respect of stakeholders, this has a negative role in creating a positive reputation for the university. The results also revealed that building the trust of stakeholders in the university is one of the key factors that has great importance in building the university's reputation, trust leads to a good reputation on a large scale, which increases the students' interest in the university, and good feelings and respect for the university have a vital role in consolidating the university's status in society and achieving a competitive advantage for this university. In summary, there is a correlation between reputation and trust. This coincides with the results of (Dursun & Altin Gumussoy, 2021)

The results related to social responsibility showed a decrease in the university's role in implementing projects that serve the community and participating in charitable and voluntary work, despite its high importance from the respondents' point of view. Therefore, the university is responsible for the continuous work to earn the trust of the community by engaging in activities that serve the community because community service is the third task of the university, which contributes to achieving a prestigious status for the university, this agrees with (Aledo-Ruiz et al., 2021; Rasoolimanesh et al., 2021)

The priority index showed the most key areas that the university should begin with to improve its reputation. According to its perceived importance and performance, it should start with the most important and least performing aspects; improving its environment, tools, and supporting resources, followed by working to build students' trust and increase their respect and good feelings towards the university. Furthermore, there is a requirement to increase the efficiency of the faculty members and their academic capabilities, followed by working to increase the university's involvement in community service, which contributes to improving the university's reputation in a way that achieves its competitive advantage.

Conclusion

This study has shown how IPA can be used as a tool to measure university reputation and prioritize improvement. This was done by identifying the most important dimensions of reputation, as mentioned in the literature and previous studies (Quality of Services, Social Responsibility, Emotional Appeal, University Environment), and a survey of students' opinions in evaluating the performance of the university in different dimensions of reputation. In addition to surveying their views regarding the importance of each of these items and their role in creating a reputation, the importance-performance analysis was applied and clarified in a two-

dimensional grid, and priorities for improvement were identified through the priority indicator, which focuses on the most important items that should have priority to be strengthened and developed by the academic leadership in its strategy to improve the university's reputation.

The use of the importance-performance analysis approach in university reputation measurement research is a valuable addition to the literature related to university reputation and its measurement by determining the importance of each item and determining its performance from the viewpoint of different stakeholders and setting priorities in the dimensions of reputation that the university should focus on in building a strategy to improve its reputation. The importance-performance analysis is one of the important tools that can help leaders to focus or redistribute their resources according to the results of this analysis.

Implications

This study makes an important contribution to the reputation management of higher education by showing how to use the importance-performance analysis as one of the useful quantitative tools that the university's brand marketers can use to measure the university's reputation and rely on the results of the analysis in determining the areas to focus on in the improvement process. Thus, this represents a starting point that helps decision-makers in building a reputation management strategy and achieving university goals.

Limitations, and Future Research

The study suffered from some limitations, as this study was conducted on a limited sample of university students, and the number of sample members can be increased to have better generalizability of the results. One type of stakeholder is current students, where the sample can be expanded to include potential students and employees to measure

reputation from the point of view of all stakeholders. These limitations can draw the attention of researchers in the field of reputation in higher education to conducting studies in measuring university reputation to include a larger number of different stakeholders (students, staff, and society) that are associated with the university, and reputation measurement can be expanded to include new dimensions such as financial performance and academic leadership.

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflicts of interest References.

References

- Aghaz, A., Hashemi, A., & Sharifi Atashgah, M. S. (2015). Factors contributing to university image: the postgraduate students' points of view. *Journal of Marketing for Higher Education*, 25(1), 104–126. <https://doi.org/10.1080/08841241.2015.1031314>.
- Akhmetshin, E., Ilyina, I., Kulibanova, V., Teor, T., & Okagbue, H. (2021). The formation of the university reputation capital under the digital transformation of the environment. *IOP Conference Series: Earth and Environmental Science*, 699(1). <https://doi.org/10.1088/1755-1315/699/1/012001>.
- Aledo-Ruiz, M. D., Martínez-Caro, E., & Santos-Jaén, J. M. (2021). The influence of corporate social responsibility on students' emotional appeal in the HEIs: the mediating effect of reputation and corporate image. *Corporate Social Responsibility and Environmental Management*, 29 (3), 578-592. <https://doi.org/10.1002/csr.2221>.
- Alessandri, S. W., Yang, S.-U., & Kinsey, D. F. (2006). An integrative approach to university visual identity and reputation. *Corporate Reputation Review*, 9(4), 258–70. <https://doi.org/10.1057/palgrave.crr.1550033>.
- Alshuwaikhat, H. M., & Abubakar, I. (2008). An integrated approach to achieving campus sustainability: assessment of the current campus environmental management practices. *Journal of Cleaner Production*, 16(16). <https://doi.org/10.1016/j.jclepro.2007.12.002>.
- Angell, R. J., Heffernan, T. W., & Megicks, P. (2008). Service quality in postgraduate education. *Quality Assurance in Education*, 16(3), 236–54. <https://doi.org/10.1108/09684880810886259>.
- Angliss, K. (2021). An alternative approach to measuring university reputation. *Corporate Reputation Review*, March. <https://doi.org/10.1057/s41299-021-00110-y>.
- Angulo-Ruiz, F., Pergelova, A., & Cheben, J. (2016). The relevance of marketing activities for higher education institutions. In T. Wu & V. Naidoo (Eds.), *International Marketing of Higher Education*. Palgrave Macmillan. https://doi.org/10.1057/978-1-137-54291-5_2
- Anowar F., Helal M.A., Afroj S., Sultana S., Sarker F., & Mamun K.A. (2015). A critical review on world university ranking in terms of top four ranking systems. In: Elleithy K., Sobh T. (eds) *new trends in networking, computing, e-learning, systems sciences, and engineering*. Lecture notes in electrical engineering, vol 312. Springer, Cham.

- Badri, M. A., & Mohaidat, J. (2014). Antecedents of parent-based school reputation and loyalty: an international application. *International Journal of Educational Management*, 28(6), 635–654. <https://doi.org/10.1108/ijem-06-2013-0098>.
- Bakrie, M., Sujanto, B., & Rugaiyah, R. (2019). The influence of service quality, institutional reputation, students' satisfaction on students' loyalty in higher education institution. *International Journal for Educational and Vocational Studies*, 1(5), 379-391. <https://doi.org/10.29103/ijevs.v1i5.1615>.
- Beneke, J. (2011). Marketing the institution to prospective students – a review of brand (reputation) management in higher education. *International Journal of Business and Management*, 6(1). <https://doi.org/10.5539/ijbm.v6n1p29>.
- Berens, G., & van Riel, C. B. M. (2004). Corporate associations in the academic literature: three main streams of thought in the reputation measurement literature. *Corporate Reputation Review*, 7(2), 161–178. <https://doi.org/10.1057/palgrave.crr.1540218>.
- Cattaneo, M., Meoli, M., & Paleari, S. (2016). Why do universities internationalize? Organizational reputation and legitimacy. In: Audretsch, D., Lehmann, E., Meoli, M., & Vismara, S. (eds) *University evolution, entrepreneurial activity, and regional competitiveness*. International studies in entrepreneurship, Springer, Cham. https://doi.org/10.1007/978-3-319-17713-7_15.
- Chattopadhyay, S. (2019). World ranking of universities: what does it entail for the future. In: Bhushan, S. (eds) *The future of higher education in India*. Springer, Singapore. https://doi.org/10.1007/978-981-32-9061-7_4.
- Christensen T., Gornitzka Å., & Ramirez F.O. (2019). Reputation management, social embeddedness, and rationalization of universities. In *Universities as agencies: reputation and professionalization*, London, Palgrave Macmillan.
- Chun, R. (2005). Corporate reputation: Meaning and Measurement. *International Journal of Management Reviews*, 7(2), 91–109. <https://doi.org/10.1111/j.1468-2370.2005.00109.x>.
- Civera, A., Cattaneo, M., Meoli, M., Paleari, S., & Seeber, M. (2021). Universities' responses to crises: the influence of competition and reputation on tuition fees. *Higher Education*, 82, 61–84. <https://doi.org/10.1007/s10734-020-00622-2>.
- Colin, D., & Mahr, S. (2017). Exploring the impact of universities' digital advancement on students' perceptions - a driver of reputation and wom behavior? *Hawaii International Conference on System Sciences*.

- Constantinides, E., & Zinck Stagno, M. C. (2011). Potential of the social media as instruments of higher education marketing: a segmentation study. *Journal of Marketing for Higher Education*, 21(1), 7–24. <https://doi.org/10.1080/08841241.2011.573593>.
- Davies, G. (2015). Corporate reputation. In *Wiley Encyclopedia of Management*, 1–4. John Wiley & Sons. <https://doi.org/10.1002/9781118785317.weom120117>.
- Delgado-Márquez, B. L., Bondar, Y., & Delgado-Márquez, L. (2012). Higher education in a global context: drivers of top-universities' reputation. *Problems of Education in the 21st Century*, 40(1), 17–25. <https://doi.org/10.33225/pec/12.40.17>.
- Delgado-Márquez, B. L., Escudero-Torres, M. Á., & Hurtado-Torres, N. E. (2013). Being highly internationalised strengthens your reputation: an empirical investigation of top higher education institutions. *Higher Education*, 66(5), 619–33. <https://doi.org/10.1007/s10734-013-9626-8>.
- Díaz-García, V., Montero-Navarro, A., Rodríguez-Sánchez, J.-L., & Gallego-Losada, R. (2022). Digitalization and digital transformation in higher education: a bibliometric analysis. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1081595>.
- Dima, A., Vasilache, S., Ghinea, V., & Agoston, S. (2013). A model of academic social responsibility. *Transylvanian Review of Administrative Sciences*, 9(38), 23–43. <https://rtsa.ro/tras/index.php/tras/article/view/86>.
- Douglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education*, 14(3), 251–67. <https://doi.org/10.1108/09684880610678568>.
- Dursun, O., & Altin Gumussoy, C. (2021). The effects of quality of services and emotional appeal on university reputation: stakeholders' view. *Quality Assurance in Education*, 29(2/3), 166–82. <https://doi.org/10.1108/qaе-08-2020-0104>.
- Esenyel, V. (2020). Corporate reputation as a strategic management tool: through the lens of employees. *International Journal of Management and Sustainability*, 9(1), 24–42. <https://doi.org/10.18488/journal.11.2020.91.24.42>.
- Fombrun, C. J., Gardberg, N. A., & Sever, J. M. (2000). The Reputation QuotientSM: a multi-stakeholder measure of corporate reputation. *Journal of Brand Management*, 7(4), 241–55. <https://doi.org/10.1057/bm.2000.10>.

- García-Rodríguez, F. J., & Gutiérrez-Taño, D. (2021). Loyalty to higher education institutions and the relationship with reputation: an integrated model with multi-stakeholder approach. *Journal of Marketing for Higher Education*, September, 1–23. <https://doi.org/10.1080/08841241.2021.1975185>.
- Garvanova, M. (2020). The significance of reputation in choosing and recommendation a university. *Test Engineering and Management*, 83, 8545 - 8553.
- Gesell, S. B. (2001). A measure of satisfaction for the assisted-living industry. *Journal for Healthcare Quality*, 23(2): 16–25. <https://doi.org/10.1111/j.1945-1474.2001.tb00331.x>.
- Godeiro, D. P. de O., Dantas, M. L. R., Celestino, M. dos S., & da Silva, D. C. (2018). Application of importance and performance matrix to assess the quality of services provided by business incubators. *REGEPE - Revista de Empreendedorismo E Gestão de Pequenas Empresas*, 7(3), 01-29. <https://doi.org/10.14211/regepe.v7i3.704>.
- Golgeli, K. (2014). Corporate reputation management: the sample of Erciyes University. *Procedia - Social and Behavioral Sciences*, 122(March), 312–18. <https://doi.org/10.1016/j.sbspro.2014.01.1346>.
- Gotsi, M., & Wilson, A. M. (2001). Corporate reputation: seeking a definition. *Corporate communications: An International Journal*, 6(1), 24–30. <https://doi.org/10.1108/13563280110381189>.
- Grajek, S., & Brooks, D. C. (2020). A grand strategy for grand challenges: a new approach through digital transformation. *Educause Review*, <https://er.educause.edu/articles/2020/8/a-grand-strategy-for-grand-challenges--a-new-approach-through-digital-transformation> .
- Haski-Leventhal, D. (2020). Leading universities towards purpose: the role of university leadership. *The Purpose-Driven University*, June, 53–65. <https://doi.org/10.1108/978-1-83867-283-620201006>.
- Hazelkorn, E. (2014). Rankings and the global reputation race. *New Directions for Higher Education* 2014 (168), 13–26. <https://doi.org/10.1002/he.20110>.
- Heffernan, T., Wilkins, S. & Butt, M.M. (2018). Transnational higher education: the importance of institutional reputation, trust and student-university identification in international partnerships. *International Journal of Educational Management*, 32(2), 227–40. <https://doi.org/10.1108/ijem-05-2017-0122>.

- Helm, S., Eggert, A., & Garnefeld, I. (2010). Modeling the impact of corporate reputation on customer satisfaction and loyalty using partial least squares. In *Handbook of Partial Least Squares. Handbooks of Computational Statistics*, edited by Vincenzo Esposito Vinzi, Wynne Chin, Jörg Henseler, & Huiwen Wang, 515–34. Springer. https://doi.org/10.1007/978-3-540-32827-8_23.
- Iacovidou, M., Gibbs, P., & Zopiatis, A. (2009). An exploratory use of the stakeholder approach to defining and measuring quality: the case of a Cypriot higher education institution. *Quality in Higher Education*, 15(2), 147–65. <https://doi.org/10.1080/13538320902995774>.
- Jie, Ch.T., & Hasan, N.A. (2019). Student's perception on the selected facets of reputation quotient: a case of a Malaysian Public University. *Journal of Arts & Social Sciences*, 2(2), 66–76.
- Kaushal, V., Jaiswal, D., Kant, R., & Ali, N. (2021). Determinants of university reputation: conceptual model and empirical investigation in an emerging higher education market. *International Journal of Emerging Markets* ahead-of-print <https://doi.org/10.1108/ijem-12-2020-1494>.
- Khoi, B.H. (2021). Factors influencing on university reputation: model selection by AIC. In *Data Science for Financial Econometrics*, edited by Nguyen Thach, Vladik Kreinovich, and Nguyen Trung, 177–88. Cham: Springer. https://doi.org/10.1007/978-3-030-48853-6_13.
- Komotar, M. H. (2019). Global university rankings and their impact on the internationalisation of higher education. *European Journal of Education*, 54(2), 299–310. <https://doi.org/10.1111/ejed.12332>.
- Kusumawati, A. (2019). Impact of digital marketing on student decision-making process of higher education institution: a case of Indonesia. *Journal of E-Learning and Higher Education*, 1–11. <https://doi.org/10.5171/2019.267057>.
- Lafuente-Ruiz-de-Sabando, A., Zorrilla, P., & Forcada, J. (2018). A review of higher education image and reputation literature: knowledge gaps and a research agenda. *European Research on Management and Business Economics*, 24(1), 8–16. <https://doi.org/10.1016/j.iedeen.2017.06.005>.
- Lai, L. S. L., & To, W. M. (2010). Importance-performance analysis for public management decision making. *Management Decision*, 48(2), 277–295. <https://doi.org/10.1108/00251741011022626>.
- Latif, K.F. (2018). The development and validation of stakeholder-based scale for measuring university social responsibility (USR). *Social Indicators Research*, 140(2), 511–47. <https://doi.org/10.1007/s11205-017-1794-y>.

- Lee, Y.-C., Wu, H.-H., Hsieh, W.-L., Weng, S.-J., Hsieh, L.-P., & Huang, C.-H. (2015). Applying importance-performance analysis to patient safety culture. *International Journal of Health Care Quality Assurance*, 28(8), 826–40. <https://doi.org/10.1108/ijhcqa-03-2015-0039>.
- Liebowitz, J. (2022). Digital transformation for the university of the future: a perspective in computer, 55(10). <https://doi:10.1109/MC.2022.3178625>.
- Lo, C.WH., Pang, R.X., Egri, C.P., & Li, P.HY. (2017). University social responsibility: conceptualization and an assessment framework. In: Shek, D., Hollister, R. (eds) *University Social Responsibility and Quality of Life. Quality of Life in Asia*, vol 8. Springer, Singapore. https://doi.org/10.1007/978-981-10-3877-8_4.
- Lo, W. (2014). *Theorising university rankings: university rankings*. Springer. https://doi.org/10.1007/978-981-4560-35-1_3.
- Ma, A. S. (2021). Assessing the effects of university reputation and city image on international student destination choice: evidence from a flagship university in Taipei. *Education and Urban Society*, May. <https://doi.org/10.1177/00131245211013844>.
- Martilla, J. A., & James, J. C. (1977). Importance-performance analysis. *Journal of Marketing*, 41(1), 77–79.
- Matešić, M., Vučković, K., & Dovedan, Z. (2010). Should academia care about online reputation management and monitoring. The 33rd International Convention MIPRO, 852–857.
- Mats, B. (2020). Becoming world class: what it means and what it does. In: Rider S., Peters M.A., Hyvönen M., & Besley T. (eds) *World Class Universities. Evaluating Education: Normative Systems and Institutional Practices*. Springer.
- McNicholas, C, & Marcella. R. (2022). An interactive decision-making model of international postgraduate student course choice. *Journal of Marketing for Higher Education*, 1–26. <https://doi.org/10.1080/08841241.2022.2076276>.
- Morais, E.P., Cunha, C.R., & Santos, A. (2021). Understanding the value of digital marketing tools for SMEs. In: Rocha, Á., Reis, J.L., Peter, M.K., Cayolla, R., Loureiro, S., & Bogdanović, Z. (eds) *Marketing and smart technologies. Smart innovation, systems, and technologies*, vol 205. Springer. https://doi.org/10.1007/978-981-33-4183-8_62.

- Morrissey, P. (2012). Higher education and the imperative to build reputations. *Asian Education and Development Studies*, 1(2), 112–23. <http://doi.org/10.1108/20463161211240098>.
- Moslehpour, M., Chau, K. Y., Zheng, J., Hanjani, A. N., & Hoang, M. (2020). The mediating role of international student satisfaction in the influence of higher education service quality on institutional reputation in Taiwan. *International Journal of Engineering Business Management*, 12. <https://doi.org/10.1177/1847979020971955>.
- Nguyen, N., & LeBlanc, G. (2001). Image and reputation of higher education institutions in students' retention decisions. *International Journal of Educational Management*, 15(6), 303–11. <https://doi.org/10.1108/eum000000005909>.
- O'Neill, M. A., & Palmer, A. (2004). Importance-performance analysis: a useful tool for directing continuous quality improvement in higher education. *Quality Assurance in Education*, 12(1), 39–52. <https://doi.org/10.1108/09684880410517423>.
- Ormanovic, S., Talović, M., Ciric, A., & Alić, H. (2017). Importance-performance analysis: different approaches. *Acta Kinesiologica*.
- Overton-de Klerk, N., & Sienaert, M. (2016). From research excellence to brand relevance: a model for higher education reputation building. *South African Journal of Science*, 112(5/6). <https://doi.org/10.17159/sajs.2016/20150365>.
- Panda, S., Pandey, S. C., Bennett, A., & Tian, X. (2019). University brand image as competitive advantage: a two-country study. *International Journal of Educational Management*, 33(2), 234–251. <https://doi:10.1108/ijem-12-2017-0374>.
- Plewa, C., Ho, J., Conduit, J., & Karpen, I. O. (2016). Reputation in higher education: a fuzzy set analysis of resource configurations. *Journal of Business Research*, 69(8), 3087–95. <https://doi.org/10.1016/j.jbusres.2016.01.024>.
- Qazi, Z., Qazi, W., Raza, S. A., & Yousufi, S. Q. (2021). The antecedents affecting university reputation and student satisfaction: a study in higher education context. *Corporate Reputation Review*, September. <https://doi.org/10.1057/s41299-021-00126-4>.
- Ragazzi, M., & Ghidini, F. (2017). Environmental sustainability of universities: critical analysis of a green ranking, *Energy Procedia* 119. <https://doi.org/10.1016/j.egypro.2017.07.054>.

- Ramírez-Hurtado, J. M. (2017). The use of importance-performance analysis to measure the satisfaction of travel agency franchisees. *Revista de Administração de Empresas*, 57(1), 51–64. <https://doi.org/10.1590/s0034-759020170105>.
- Rashid, S., & Mustafa, H. (2021). Antecedents of corporate reputation with employees in higher education institutions: a systematic review. *International Journal of Educational Management*, 35(1), 297-309. <https://doi.org/10.1108/IJEM-06-2020-0310>.
- Rasoolimanesh, S. M., Tan, P. L., Nejati, M., & Shafaei, A. (2021). Corporate social responsibility and brand loyalty in private higher education: mediation assessment of brand reputation and trust. *Journal of Marketing for Higher Education*, September, 1–22. <https://doi.org/10.1080/08841241.2021.1973645>.
- Sawhani, D., & Susilo, D. (2020). How digital marketing helps higher education institution branding, *International Journal of Multidisciplinary Educational Research*, 9(45).
- Sharif, K., & Sidi Lemine, M. (2021). Customer service quality, emotional brand attachment and customer citizenship behaviors: findings from an emerging higher education market. *Journal of Marketing for Higher Education*, 34(1), 18–43. <https://doi.org/10.1080/08841241.2021.1949659>.
- Sirkeci, I., & O'Leary, S. (2022). The role of research reputation in choosing a UK business school and the contrasting perspectives of students and research leaders. *The International Journal of Management Education*, 20(1). <https://doi.org/10.1016/j.ijme.2021.100566>.
- Sisco, H. (2016). Public esteem. In *The SAGE Encyclopedia of corporate reputation*, edited by Craig E. Carroll, 589–90. SAGE Publications. <https://doi.org/10.4135/9781483376493.n226>.
- Sörensson, A., & von Friedrichs, Y. (2013). An importance–performance analysis of sustainable tourism: a comparison between international and national tourists. *Journal of Destination Marketing & Management*, 2(1), 14–21. <https://doi.org/10.1016/j.jdmm.2012.11.002>.
- Sung, M., & Yang, S.-U. (2008). Student–university relationships and reputation: a study of the links between key factors fostering students' supportive behavioral intentions towards their university. *Higher Education*, 57(6), 787–811. <https://doi.org/10.1007/s10734-008-9176-7>.
- Taamneh, M. M., albdareen, R. Q., Aladwan, S. A., & Taamneh, A. M. (2022). The impact of corporate social responsibility on the reputation of universities

- within developing countries: evidence from Jordan. *Journal of Public Affairs*, January. <https://doi.org/10.1002/pa.2807>.
- Taplin, R. H. (2012). Competitive importance-performance analysis of an Australian wildlife park. *Tourism Management*, 33(1), 29–37. <https://doi.org/10.1016/j.tourman.2011.01.020>.
- Telci, E. E, & Kantur, D. (2014). University reputation: scale development and validation. *Bogazici Journal*, 28(2), 49–74. <https://doi.org/10.21773/boun.28.2.4>.
- Tröndle, M., & Schindler, J. (2021). Excellence and reputation in higher education: what is it about? In *Places of Excellence*, 1–15. Springer. https://doi.org/10.1007/978-3-658-33283-9_1.
- Vasilescu, R., Barna, C., Epure, M., & Baicu, C. (2010). Developing university social responsibility: a model for the challenges of the new civil society. *Procedia - Social and Behavioral Sciences*, 2(2), 4177–82. <https://doi.org/10.1016/j.sbspro.2010.03.660>.
- Wong, H.Y., & Sultan, P. (2021). Service quality in higher education: where are we and where to go?, *The Marketisation of Higher Education*, 343–69. https://doi.org/10.1007/978-3-030-67441-0_15.
- Wu, H. H., & Hsieh, S. M. (2012). A case study of applying importance-performance analysis in orthopedic department to evaluate service quality. *International Journal of Management and Decision Making*, 12(1), 50–68. <https://doi.org/10.1504/ijmdm.2012.051041>.
- Wu, H., & Jimura, T. (2019). Exploring an importance–performance analysis approach to evaluate destination image, *The Journal of the Local Economy Policy Unit*, 34(7), 699–717. <https://doi.org/10.1177/0269094219889604>.
- Zyryanova, V. A., Goncharova, N. A., & Orlova, T. S. (2020). Developing a model of strategic university reputation management in the digitalization period in education. *Proceedings of the International Scientific Conference Digitalization of Education: History, Trends and Prospects (DETP 2020)*. <https://doi.org/10.2991/assehr.k.200509.129>.