

Being highly internationalised strengthens your reputation: an empirical investigation of top higher education institutions

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Abstract In an educational context characterised by globalisation, reputation constitutes a crucial issue for today’s higher education institutions. Internationalisation of higher education is often seen as a potential response to globalisation and, consequently, higher education has become increasingly internationalised during the past decade. In this paper, we investigate the relationship between internationalisation and reputation in top higher education institutions. Results reveal that internationalisation positively influences a university’s reputation but also moderates the relationship between the institution’s reputation and its institutional performance with regard to research quality, teaching quality and graduate employability.

Keywords Internationalisation · Reputation · Higher education · University rankings

Introduction

Higher education trains highly skilled workers and contributes to the research base and capacity for innovation that determine competitiveness in a knowledge-based global economy (OECD 2009). Over the past 25 years, the international dimension of higher education has become more central to the agendas of international organisations, national governments, institutions of higher education and their representative bodies, and student organisations and accreditation agencies. In global knowledge economies, the relevance of higher education institutions has been described as “more important than ever as mediums for a wide range of cross border relationships and continuous global flows of people, information, knowledge, technologies, products and financial capital” (OECD 2009, p. 18). In this context, an increasing emphasis has been placed on the internationalisation of higher education. Internationalisation can be described as “the process of integrating an

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international, intercultural or global dimension into the purpose, functions or delivery of postsecondary education” (Knight 2003, p. 2). Internationalisation has progressively moved from a reactive to a pro-active strategic issue and from added value to mainstream, and it has seen its focus, scope and content evolve substantially (De Wit 2011).

The internationalisation of higher education has contributed to the emergence of global university rankings (Stolz et al. 2010). These higher education ranking systems (HERSs) are perceived as having “cemented the notion of a world university market” (Marginson and Van der Wende 2007, p. 306), in which higher education institutions are measured according to a global scale, therefore introducing the notion of competition among those institutions as a new paradigm in most countries (Altbach 2006). Such rankings have a powerful influence over all stakeholders in the knowledge service industry (Marginson 2007; Tofallis 2012). Rankings appear to have a particularly potent effect on decision-making in professional schools and other postgraduate programmes (Sauder and Espeland 2009; Sauder and Fine 2008). These rankings have a strong impact on students applying to selective universities (Hou et al. 2012). A university’s ranking position provides evidence of its academic quality, and a degree obtained from a university with a higher ranking position is more valuable in the market, aiding students in finding jobs after graduation (Morrish and Lee 2011). Thus, university rankings simplify the complex world of higher education with regard to two important characteristics: institutional performance and institutional reputation (Williams and Van Dyke 2008).

Although the international dimension of higher education is recognised as significant for educational stakeholders, there are no prior empirical works that have studied the relationship between the internationalisation of higher education and universities’ reputation. Henceforth, considering the importance of the internationalisation component of higher education and the relevance of HERSs, we investigate whether institutional performance in internationalisation translates into an improved reputation in top universities. To further this aim, we take two datasets from the Times Higher Education Supplement (THES) (2011) rankings as the basis for our analyses: the world universities ranking and the reputation ranking. Therefore, despite little emphasis having been placed on internationalisation in university rankings, in this investigation we observe that internationalisation may help strengthen an institution’s reputation. Indeed, our results reveal that the internationalisation of higher education institutions has a direct and positive influence on their corporate reputation. Furthermore, internationalisation exerts a moderating role on the relationship between a higher education institution’s reputation and its institutional performance with regard to research quality, teaching quality and graduate employability.

This work is structured into four additional sections following this introduction. The second section explores the internationalisation of higher education institutions. The third section briefly discusses the concept of reputation and its relationship to the variable internationalisation and serves to present the research hypotheses. The methodology and results are analysed in the fourth section. Finally, the fifth section summarises the main conclusions and limitations and points out several lines for future research.

Internationalisation of higher education institutions

While internationalisation is not a new concept, it has only recently been applied in the area of higher education (De Wit 1995; Tran 2010). In a knowledge-based global economy, a larger number of students, academics and funding agencies explore a wider range of options than in the past concerning where to study, where to teach and research, and what

work to fund (Williams and Van Dyke 2008). Consequently, the international dimension of higher education is now recognised as a key aspect for educational stakeholders.

A fundamental challenge facing researchers and practitioners in this area is managing the variety of terms related to internationalisation in higher education, such as “international education, international studies, internationalism, transnational education, and globalisation of higher education. There are more concrete subdivisions of the field: academic mobility, international cooperation, study abroad, and international exchange. More curriculum-focused terms include areas of study in education, multicultural education, intercultural education, cross-cultural education, education for international understanding, peace education, global education, transnational studies, and global studies” (De Wit 2002, p. 103).

To summarise, previous studies do not rely on a commonly accepted definition of the internationalisation of higher education and therefore place emphasis on different indicators when measuring the degree of internationalisation at higher education institutions.

Each of these indicators highlights a different strategic aspect. As a result, researchers have not reached a consensus about which indicators are most relevant. For instance, one of the most widely used indicators of internationalisation is the ratio of international students to domestic students. Using this ratio as its basis, a recent work has noted that top universities (i.e., Harvard, MIT, Yale, or Cambridge) present very high scores on this indicator. However, when the student population of such universities is disaggregated by the level of education, only 16 % of the undergraduate student population is international students, while 41 % of graduate students are from other countries (Horta 2009). Another relevant indicator of the internationalisation of higher education institutions is faculty origin (i.e., proportion of international faculty). The assessment of internationalisation of higher education in HERSs currently relies exclusively on both indicators, and world university rankings therefore pay little attention to the elements of internationalisation, given the fact that this phenomenon goes beyond those dimensions (Delgado-Márquez et al. 2011). Hence, future assessments should pay special attention to the export of higher education services, the development of cross-border higher education partnerships (exclusively based on the principle of non-profit collaboration), and cross-border collaboration in research and foreign investments in higher education institutions. To this end, according to observations by Borderless Higher Education, in 2006, there were approximately 100 foreign higher education campuses worldwide.

The factors determining the conditions for the internationalisation of higher education institutions are manifold. On a micro level, Agnew and Van Balkom (2009) identified student motivation, an institution’s demand for international experiences and the extent to which lecturers take part in international activities. On an intermediate level, a priority strategy includes noteworthy aspects such as financial support, an institution’s mission and its link to culture. The macro level covers specific state funding, the relationship between graduates and the business community, students’ preparation to join the worldwide labour force and the extent to which curricula include the construct of the international community (Ramírez-Iñiguez 2011).

In a context characterised by increasing internationalisation of higher education institutions, rankings are easily recalled and quickly become part of the common sense knowledge of higher education stakeholders. Therefore, HERSs play a key role in the current education market, which is characterised by the homogenisation of educational standards and high student and faculty mobility, among other features (OECD 2009). Marginson and Van der Wende (2007) state that “rankings have given a powerful impetus

to intranational and international competitive pressures and the potential to change policy objectives and institutional behaviours” (OECD 2009, p. 122).

University rankings simplify the complex world of higher education through two important characteristics: institutional performance and institutional reputation. In this paper, we investigate whether institutional performance with regard to internationalisation is translated into improved reputation. In the next section, we describe the construct of reputation; later, we justify why internationalisation may influence reputation.

Reputation of higher education institutions and internationalisation

A considerable number of recent articles have attempted to establish a definition for corporate reputation (e.g., Barnett et al. 2006; Brown et al. 2006). Barnett et al. (2006) summarised definitions from 49 articles and books on corporate reputation. Although they found some unusual conceptualisations of the construct, including reputation as an unconscious perception, they state that definitions are generally in accord with the dictionary definitions of reputation—for example, overall quality or character as seen or judged by people in general. Barnett et al. (2006) recommended against facet-based, omnibus definitions and suggested that reputation may be viewed as a global assessment of a corporation and may be defined in terms of observers’ collective judgments of a corporation—judgments that are evaluative in nature. This conceptualisation implies that corporate reputation relies on a general, global assessment; reputation is reflected in consensus judgments and is evaluative (i.e., good vs. bad) (Roberts and Dowling 2002). In conclusion, corporate reputation is generally concerned with the next question: what do stakeholders actually think of an organisation?

Corporate reputation accumulates and represents the history of the firm’s interaction with various stakeholders. Therefore, corporate reputation can only be built over a long period of time (Srivastava et al. 2001), making reputation a significant source of sustainable competitive advantage for a firm because it is time-consuming for competitors to match an established reputation. Therefore, it is important to point out that corporate reputation is not fixed, but rather a temporal component that reflects overall evaluations of a company over time. This temporal component is investigated in different works. Elsbach (2006) defined reputation as “enduring status categorizations of the quality of an organization as perceived by external audiences and stakeholders” (p. 17). Gioia et al. (2000) identify the concept of reputation as a lasting, cumulative, and global assessment. Bennett and Kottasz’s (2000) examination of practitioners’ views of corporate reputation revealed that nonacademics similarly conceptualise reputation as being composed of opinions developed over time. Although reputation is difficult to change and does not fluctuate on a daily basis, it can be altered abruptly as a result of, for example, calamitous events. Indeed, current theory about reputation suggests that corporate reputation is a global, temporally stable, evaluative judgment about a firm that is shared by multiple constituencies (Highhouse et al. 2009). Gaining reputation as an educational institution is a long and arduous process requiring a commitment to excellence in the delivery of education and quality research output (Arambewela and Hall 2009).

Furthermore, corporate reputations and brand names provide quality signals (Bolton et al. 2004). Reputation is regularly used as a screening mechanism by service suppliers. A firm’s perceived good reputation has been linked to positive customer attitudes towards the company’s products (Bartikowski and Walsh 2011), superior customer loyalty (Caruana and Ewing 2010; Roberts and Dowling 2002), and satisfaction (Davies et al. 2002).

Additionally, a superior corporate reputation showcases the company as the best place to work, thereby attracting the best employees, enhancing its intellectual capital, and growing its tacit knowledge (Brown and Whysall 2010).

An educational institution's excellent reputation may translate into several benefits (Wilkins and Huisman 2012). It may help institutions attract top tier teachers (Lemmink et al. 2003) and positively affect students' priorities in social and academic life (e.g., their perception of safety, life style, racial discrimination, friends and family, climate and culture, study programmes and courses, facilities and support services, teaching quality, teaching staff and methods, and recognition of courses) (Arambewela and Hall 2009; Park 2009). A university's good reputation is also attractive to students (Bourke 2000) because it is expected that such image and prestige will create better career opportunities for them. Research findings show that a student's positive (affective and cognitive) university image and reputation provide him or her satisfaction with the university (Palacio et al. 2002), and the student's initial assessment of the reputation of the course or university in which he or she enrolls may affect the decision to drop out. It is known that top universities (e.g., Oxford and Cambridge) experience very low withdrawal rates (Select Committee on Education and Employment 2001), although statistically significant links between reputation and retention have yet to be found. Thus, reputation might be a critical determinant of student attitude toward a course or university in the early stages of a programme when the student has no experience upon which to base an assessment of the merits of the programme or institution (Davies 2000). The reputation of the institution acts as a mediating variable between student satisfaction and loyalty (Helgesen and Nettet 2007). Other works have stressed that the reputation of the university also has a positive impact on student loyalty through the mediating variable student satisfaction (Thomas 2011).

Previous literature has stressed that certain factors may affect a university's reputation (Arpan et al. 2003): size of the institution, location, appearance, scope of offerings, faculty excellence, extent of endowments, student diversity, campus morale, athletic prowess, service to the community, and institutional visibility, among others.

In addition, we believe that a key aspect in the current context of a higher education system characterised by a global knowledge economy is the internationalisation of universities. This hypothesis has led us to analyse the relationship between higher education reputation and internationalisation. On the one hand, internationalisation tends to increase the permeability of established borders and respond to the demands of the dominant world educational market. But on the other hand, some of the functions of higher education—e.g., strengthening national cultures, fostering critical capacities and contributing to the development of more egalitarian societies in regional contexts—are hindered in the quest for inclusion in international education spaces and the advantages that they bring (Ramírez-Iñiguez 2011).

In the 3rd Global Survey Report of the International Association of Universities (IAU), published in September 2010, “enhancing international profile and reputation” is identified as the third most important reason for the internationalisation of higher education institutions (Beelen 2011). Altbach and Knight (2007) mention that certain countries are admitting more and more international students into their universities to gain prestige and generate income. Internationalisation may contribute to accruing additional funds or raising the university's profile and visibility on national and international levels. In some countries, international students receive no public subsidies for higher education services. Compared with domestic students, international students therefore often generate more income for higher education institutions, which encourages these institutions to become entrepreneurial on the international education market. It is important to note that countries

in which public authorities confer high autonomy to educational institutions for setting prices seek to increase the reputation of their higher education sector. In this sense, top American universities such as Yale and Harvard undertake important investments and efforts in their internationalisation processes as strategic responses to the current globalised era to pursue improvements of their educational agendas.

In the European Union, for example, academic internationalisation is a part of economic and political integration. Currently, the Bologna Plan has standardised academic issues to ensure compatible structures, transferable credits and equality in qualifications. In the Bologna Declaration of 1999 and the Lisbon Strategy of 2000, the two dimensions of internationalisation meet: cooperation and competition. First, both processes emphasise that there should be more cooperation to develop a European area for higher education and research: A Europe of knowledge. Second, there is a considerable emphasis on the argument that this cooperation is required to face competition from the United States, Japan and, increasingly, China and other emerging economies. In short, academic internationalisation is a priority for European institutions because it will enable universities to compete with third-country institutions. Higher levels of internationalisation will attract a greater number of highly qualified students and faculty, which will enhance the quality and competitiveness of a country's higher education institutions. With the coordination of academic degrees, the mobility of students, faculty and researchers "will be increased, and therefore the less competitive universities may lose a large portion of their students and their human capital" (Alves and Raposo 2007, p. 796).

Nonetheless, in certain cases, internationalisation may undermine reputation. This is due to the fact that universities may focus on internationalisation in terms of quantity instead of on quality and, hence, on attracting more and more international faculty and students to obtain higher scores in the rankings (Delgado-Márquez et al. 2011). In any case, top-ranked universities do not use this kind of massive internationalisation strategies. These universities are usually known as research universities (Marginson 2006) and share a common student structure that relies heavily on graduate student population and on its strong internationalisation. The research capability of these top universities itself is fueled by student selectivity processes that ensure the recruitment of the most promising candidates. Furthermore, the internationalisation of the student population at graduate level is associated to the internationalisation of the academic staff.

This in turn implies that the internationalisation strategies of these top universities follow the same rationale as that of the student structure. That is, the international population is mostly concentrated at educational levels that support the research activities of these universities, thus fostering their scientific performance and institutional reputation both nationally and internationally (Marginson 2006).

Moreover, among the methodological criticisms to rankings, reputational surveys are open to the charge that they often recycle reputation ("halo effect") due to the peer review process, which means a bias in favour of long established universities. Nonetheless, top-ranked universities carry out internationalisation strategies that are purpose driven in search of an increase of their research levels (Marginson 2006). As stated by prior literature, research is already the most important single determinant of global university reputation and the only indicator available that is unambiguously merit based (Marginson and Van der Wende 2007). Therefore, provided that research quality is enriched by selective internationalisation processes, it is expectable that internationalisation contributes to strength reputation in top universities.

Furthermore, while it is true that economical constraints have generally decreased the number of public scholarships for international students to top-ranked universities, these

institutions, unlike others, do not have difficulties in attracting students, as these are driven by the positional goods that the courses taken at those universities are able to offer them in the labor and academic markets (Horta 2009). Previous works have also found that students who have the financial ability to pay full fees and are not reliant on government or other grants—who are effectively free to choose—are more likely to attend higher ranked colleges (even by a few places) than grant-aided students (Hazelkorn 2009).

Thus, we consider that internationalisation may have a direct effect on top universities' reputation. Moreover, higher levels of internationalisation may increase the visibility of top universities and, consequently, foster a greater influence over other factors related to institutional performance and reputation (e.g., research quality, teaching quality and graduate employability). On the basis of this statement, we postulate the following hypotheses:

H1 Internationalisation of a top higher education institution positively influences the institution's reputation.

H2 Internationalisation of a top higher education institution positively moderates the relationship between the institution's reputation and its institutional performance.

Methodology and results

Sample

The final sample consisted of the top 50 universities worldwide, according to the World Reputation Ranking (2011). For each university, we gathered data for 8 years (2004–2011) on each university's internationalisation score and its institutional performance concerning research quality, teaching quality and graduate employability.

Figure 1 shows a comparison among universities comprising the sample by geographical area. Several points may be highlighted. The vast majority of the 50 top-ranked universities worldwide are located in the US, and these universities' average reputation is considerably higher than that of universities located in Europe or other geographical areas. Nonetheless, out of the three groups, European higher education institutions seem to be more internationalised, especially as a result of successfully widespread internationalisation programmes such as Erasmus, which ensures considerable internationalisation rates at undergraduate levels thanks to easily-accessible funding. However, when turning to the variable institutional performance, US universities again exhibit higher average scores, which reflect their superior levels of quality in teaching, research and graduate employability.

Measures

Reputation of higher education institutions

To measure a university's reputation, we used reputation scores published by the Times Higher Education World Reputation Rankings. These rankings, based on the results of a worldwide survey of experienced university academics, measure a university's reputation for excellence in both teaching and research.

The results of the first Times Higher Education World Reputation Rankings were obtained by means of an invitation-only survey of tens of thousands of academics around

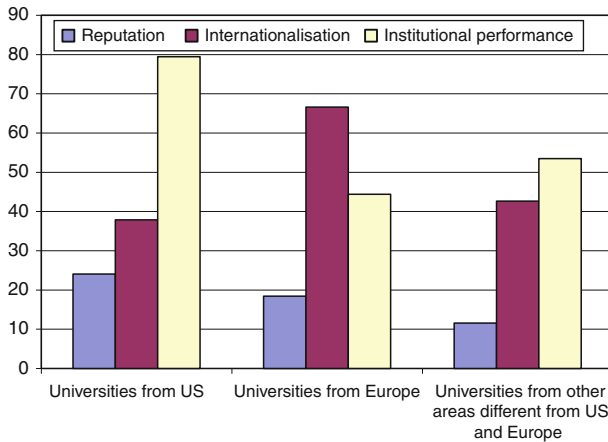


Fig. 1 Comparison among universities by geographical origin

the world, according to the United Nations' estimates of global academic researchers by geographical area. The survey was distributed between March and May of 2010, and 13,388 people from 131 countries provided usable responses. The survey asked experienced academics to highlight what they believed to be the strongest universities for teaching and research in their own fields. The two scores are combined at a ratio of 2:1, giving more weight to research. Reputation scores are based on the number of times an institution was cited by survey respondents as being “the best” in their narrow fields of expertise. Each respondent was allowed to nominate a maximum of 10 institutions. The number-one ranked institution, Harvard University, was selected most often. The scores of all of the other institutions are expressed as a percentage of Harvard's score, which is set at 100.

Internationalisation of higher education

Internationalisation enters our analysis as an independent variable or predictor to test our hypotheses. Values of internationalisation have been obtained from the World University Ranking, published in THES. This ranking focuses on the 200 top-ranked universities. The variable internationalisation is measured through two non-subjective indicators: percentage of international students and percentage of international staff. Because this ranking is published annually, we have gathered information on the internationalisation of universities for the past 8 years (2004–2011). The degree of internationalisation of each university is calculated as an average of the indicators of internationalisation over the past 8 years.

Institutional performance with regard to research quality, teaching quality and graduate employability

Values of institutional performance have been obtained from the World University Ranking, published in THES for a 8-year period (2004–2011). Research quality is characterised by two items: Global Academic Peer Review and Citation per Faculty. Global Academic Peer Review is based on an online survey distributed to academics worldwide.

Respondents are not allowed to evaluate their own institution nor respond more than once (only their most recent response is counted). Different weights are applied by geographical area and discipline to ensure as accurate a representation as possible. The source used to assess citations per faculty is Scopus, the world's largest abstract and citation database of research literature (World University Rankings).

In THES, teaching quality is measured through the Student-Faculty Ratio. While this proportion may not constitute a perfectly accurate measure of teaching quality, it is the most globally available and accessible measure of commitment to teaching.

Finally, the graduate employability analysis is based on a global online survey distributed to employers. Geographical weightings are applied to ensure a fair representation of all of the regions of the world.

Control variables

To control for a university's origin, we introduce two dummy variables into the analysis. The first variable's value equals one if a university is located in any state within the US and zero otherwise. The second dummy variable equals one if a university is located in any European country and zero otherwise. It is important to note that those universities from outside the US and Europe are implicitly gathered with the introduction of these two control variables. Thus, we do not include an additional third control variable to avoid collinearity problems, the existence of singular matrices and, consequently, the lack of solution.

Results

Moderated hierarchical regression analyses (Cohen and Cohen 2003) are used to estimate the effect of internationalisation on top universities' reputation. The correlation of the independent variables is examined using both bivariate correlation and variance inflation factors (VIFs). The former show that the correlation of all independent variables is <0.7 (see the descriptive statistics and correlation matrix in Table 1). The VIF analysis reveals no sign of multicollinearity, and the VIF values of all independent variables range between 1.165 and 1.735, far below the acceptable upper limit of 10 (Hair et al. 2006, p. 230). Both tests suggest that the regression estimates are not degraded by the presence of multicollinearity.

The results from the moderated hierarchical regression analyses are shown in Table 2. Variables were entered in three blocks: (1) control variables, (2) internationalisation of higher education and institutional performance regarding research quality, teaching quality and graduate employability, (3) the interaction term. As indicated in step 1 (Table 2), the results showed that neither of two control variables significantly explains the reputation of higher education institutions.

In step 2, the set of variables (internationalisation and institutional performance) has a good explanatory power in predicting reputation [adjusted R square = 0.513 and R square change is statistically significant ($p < 0.001$)]. Specifically, the internationalisation of higher education predicted universities' reputation ($\beta = 0.406$, $p < 0.01$), which lends support to hypothesis H1. Also, the institutional performance with regard to research quality, teaching quality and graduate employability is also positively associated with reputation ($\beta = 0.741$, $p < 0.001$).

Table 1 Descriptive statistics and correlation matrix

Variable	Mean	SD	1	2	3	4
1. Reputation of higher education institutions	20.95	23.39				
2. Dummy variable (1 if university origin is the US; 0 otherwise)			0.201 [†]			
3. Dummy variable (1 if university origin is Europe; 0 otherwise)			−0.040	−0.568***		
4. Internationalisation of higher education	44.89	21.17	0.148	−0.403**	0.507***	
5. Institutional performance regarding research quality, teaching quality and graduate employability	67.33	38.61	0.645***	0.385**	−0.279*	−0.309*

[†] $p < 0.10$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

In step 3 we test the moderating effect of the internationalisation of higher education. Moderation occurs when the relationship between an independent variable and a dependent variable depends on the level of a third variable, usually called a moderator variable. Moderation is usually tested with multiple regression (Cohen and Cohen 2003) using equations of the following form:

$$Y = b_0 + b_1X + b_2Z + b_3XZ + e$$

Y is the institutional reputation (dependent variable), X is the institutional performance (independent variable), and Z is the moderator variable (internationalisation). The product XZ captures the interaction between X and Z such that, when X and Z are controlled, the coefficient on XZ (i.e., b_3) represents the change in the effect of X on Y for a unit change in Z (Aiken and West 1991). The interpretation of b_3 is symmetric, such that it also indicates the change in the effect of Z on Y for a unit change in X . When Z is framed as the moderator variable, it is customary to view b_3 as the change in the effect of X across levels of Z .

The coefficient of the interaction term is positive and significant ($\beta = 0.474, p < 0.001$) in step 3, giving support to hypothesis H2. Table 2 also indicates that predictive power of the model was enhanced by the addition of interaction term (adjusted R square = 0.717 and R square change is statistically significant ($p < 0.001$)).

Furthermore, Fig. 2 allows drawing two interesting conclusions with regards to the observed moderating effect. First, the relationship between institutional performance and reputation is strongest in the case of high internationalisation and weakest in the case of low internationalisation. Second, maximum dispersal of means occurred under conditions of high institutional performance. Put differently, this is equivalent to state that universities of different levels of internationalisation did not differ in reputation levels under conditions of low institutional performance, but large differences were noted under conditions of high institutional performance: universities enjoying high levels of internationalisation achieved significantly higher levels of reputation than universities having low levels of internationalisation.

Table 2 Moderated hierarchical regression analysis (dependent variable: reputation of higher education institutions)

Variables	Step 1		Step 2		Step 3	
	β	<i>t</i>	β	<i>t</i>	β	<i>t</i>
<i>Control variables</i>						
Dummy variable (1 if university origin is the US; 0 otherwise)	0.263	1.487	0.083	0.640	−0.060	−0.583
Dummy variable (1 if university origin is Europe; 0 otherwise)	0.110	0.620	0.008	0.063	0.029	0.287
<i>Institutional performance variables</i>						
Internationalisation of higher education			0.406	3.342**	0.402	4.351***
Institutional performance regarding research quality, teaching quality and graduate employability			0.741	6.603***	0.908	10.046***
<i>Interaction term</i>						
Internationalisation of higher education × Institutional performance regarding research quality, teaching quality and graduate employability					0.474	5.668***
R	0.220		0.745		0.865	
R square	0.048		0.554		0.747	
R square change			0.506***		0.193***	
Adjusted R square	0.006		0.513		0.717	

All coefficients are standardised β weights. One-tailed tests of significance were used to evaluate the significance of the beta weights for the main and moderating effects

† $p < 0.10$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Conclusions, limitations and future research agenda

In a knowledge-based global economy, the internationalisation of higher education is often seen as a potential response to globalisation. Indeed, international organisations, national governments and educational stakeholders have placed increasing emphasis on the internationalisation of higher education. Provided that reputation is used continually as a screening mechanism by service suppliers, in the current educational context characterised by worldwide competing institutions, reputation constitutes a crucial issue for any university. Higher education institutions worldwide are scored according to HERSs, whose emergence has been identified both as a cause and effect of the internationalisation of higher education. These rankings have a great influence on all of the stakeholders in the knowledge service industry (Marginson 2007).

In this paper, we analyse the relationship between internationalisation and reputation in top higher education institutions. Our results reveal that internationalisation positively influences a university's reputation. Furthermore, internationalisation exerts a moderating

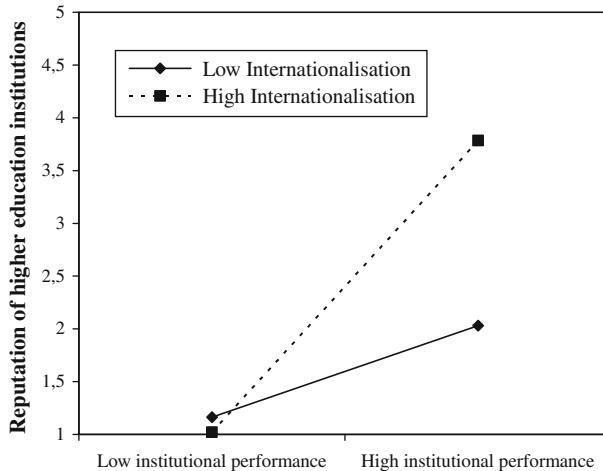


Fig. 2 Internationalisation moderates the relationship between reputation and institutional performance

role on the relationship between a higher education institution's reputation and its institutional performance with regard to research quality, teaching quality and graduate employability. These findings support the arguments of scholars who suggest that enhancement of the internationalisation profile and reputation is one of the most important justifications for the internationalisation of higher education institutions (Beelen 2011). Moreover, these results prove that certain countries are admitting increasing numbers of international students into their universities to gain prestige (Altbach and Knight 2007).

This paper tries to offer additional evidence about the importance of internationalisation for top universities in the current context of higher education, and it provides evidence about the influence that internationalisation exerts on a university's reputation. In addition, we complement previous studies that analyse the influence of different factors on the reputation of universities, such as the size of the institution, location, appearance, scope of offerings, excellence of faculty, extent of endowments, diversity of students, campus morale, athletic prowess, service to the community, institutional visibility, among others (Arpan et al. 2003).

Our results have implications for higher education institutions and accreditation agencies as well. This research encourages universities to consider that internationalisation plays a crucial role for higher education institutions due to its positive influence on reputation. Nevertheless, it is important to note that gaining reputation is a long and arduous process and requires a commitment to excellence in the delivery of education and quality research output (Arambewela and Hall 2009). However, although the international component of higher education is progressively being recognised as a key aspect, it still has little emphasis in HERSs. Henceforth, accreditation agencies should confer a greater importance on the international dimension in HERSs worldwide.

Our results also imply that governments should continue developing special design programmes and incentives to encourage the internationalisation of higher education institutions. To this end, the efforts carried out in the European Union during recent years have helped to attract a greater number of highly qualified students and faculty, resulting in subsequent improvements in quality, competitiveness and the reputation of countries' higher education institutions.

Finally, the conclusions of this study are subject to several limitations that may impact future lines of empirical research. The first weakness arises from the fact that the data considered for the measurement of internationalisation in HERSs—i.e., international faculty and international students—are too scarce to address such a complex concept. It would be useful to have access to additional variables reflecting all of the strategic aspects involved in internationalisation processes. Given the limited information yielded by HERSs, future studies may find it beneficial to collect information from universities' webpages to carry out complementary analyses on the role of internationalisation on top higher education institutions' reputation.

The second limitation emerges from the specific nature of our sample—i.e., focusing on the top-reputation universities worldwide, which calls for caution when extrapolating our results to institutions that are not within this hierarchy. Consequently, it would be worthwhile to analyse universities that are currently placed out of HERSs to check the validity of our findings for those institutions.

Finally, the last limitation is tied to the indicators used in the measurement of reputation in HERSs, whose existence has been pointed out to serve to maintain the status quo in these rankings (Bowman and Bastedo 2011). We contend that, while this viewpoint provides interesting insights, our paper serves to enrich prior literature by investigating the unexplored potential connection between internationalisation and reputation at university institutions and, thus, to show the usefulness derived from the inclusion of reputational scores in HERSs.

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