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Academic reputation quality and research: an analysis of Latin-American universities in the world higher education institution rankings from the perspective of organizational learning theory

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ABSTRACT

The purpose of the research is to theorise about the determinants of academic reputation and the moderating effects of aspiration performance in Latin-American universities present in three of the most important rankings in the world: The Times Higher Education, QS World University Rankings, Academic Ranking of World Universities (ARWU). To achieve the research purpose, a time series panel is performed. Our general model trying to evaluate the effect of aspirational performance 15 on the relationship between Faculty quality (Research and Teaching) and Academic Reputation in Latin American Countries was specified. The database considered in the research includes the universities classified in the Times Higher Education ranking (THE), QS World University Rankings (QS), and Academic Ranking of World Universities (ARWU) from 20 2011 to 2022. Concerning the results, it was possible to verify that the ranking of performance in research and the ranking of performance in quality does not have a significant relationship with academic reputation. While ranking performance in quality and research according to the category of countries, a positive and robust impact was observed. 25 Similarly, it was found that the regions' moderating effect on the relationship between quality and research and its impact on the academic reputation of higher education institutions. As a general conclusion of the article, it is possible to show that regional dynamics of the location of university institutions define the strategy from which the institution's 30 performance is improved. Therefore, the importance of the influence of environmental actors on performance is identified.

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Regional performance;
academic reputation;
research performance;
quality

Introduction

The European research council has earmarked twenty-five million euros to support research projects in disciplines such as physical, life, social, and humanities. Much of these efforts have been allocated to projects in countries such as Belgium, Czechia, Cyprus, Denmark, Greece, Finland, Iceland, Ireland, Luxembourg, Norway, Portugal, Slovenia, and Sweden. However, some countries double receipts for research funding, such as Germany, France, Israel, Italy, Netherlands, Spain, UK (European research council 2022).

According to Robertson (2010), the dynamics of higher education institutions worldwide are determined by five key aspects: the first is related to the need to obtain credentials that give value to the institution's performance. The second is in the challenges of teaching based on competencies,

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entrepreneurial skills and development of job skills. The third aspect is the need to be linked to local, regional and national needs. The fourth point is the need to find external financing sources to increase the institution's added value linked to quality (branding). Finally, the fifth aspect is related to the inclusion of the institutions in the companies' commercial activity, which allows them to generate value for the products they offer.

On the other hand, the current dynamics respond to the globalisation processes that make universities a brand that allows the creation of an identity in a competitive market. Therefore, higher education institutions provide information to position their quality, including power, value and personality (Desai 2012). The previous will determine the need for universities to use a type of social licence that allows them to build a good reputation in the local contexts in which they operate that allows them to achieve their objectives related to high-quality standards (Parsons and Luke 2021).

This mentioned condition raises multiple questions about how educational institutions have consolidated themselves as pioneers in educational quality and research products. There is still little literature that allows considering empirical studies on how academic institutions can take advantage of the generation of knowledge and experiences to improve their performance (Deemer, 2017). One perspective that allows an analysis of the learning processes conducted by organisations to respond to the demands of the environment is the organisational learning theory. Unfortunately, authors in the field have pointed out that the existing studies are anecdotal. Moreover, their results are weak, making very few contributions (Kezar 2005; Jeris 1998).

Anand and Brix (2021) define that organisational learning has been immersed in the dynamics of private organisations, especially those related to business firms. However, there is a need to investigate other types of organisations more focused on the public good, such as higher education institutions. This area's development is still scarce (Rashman, Withers, and Hartley 2009). The preceding can explain the idea that organisations oriented towards public welfare are undervalued. Additionally, learning is not a fundamental aspect of companies to ensure their business success.

Finally, this research attempts to answer how higher education institutions have developed strategies and make decisions according to identifying the best in their sector. Similarly, quality and research are critical elements for organisational development in the educational context, and success is necessary to understand the adopted strategies. In this way, the research presentation is articulated as follows: In the first part, an analysis of the most relevant literature in the field of research is conducted. The methodology used and the presentation of the results have been related in the second part. Second, an explanation of the methodology and the analysis technique used to observe the behaviour of the variables in the future is made. Finally, the results and conclusions of the investigation are established. Finally, the results, conclusions, and main implications of the analysis are presented, which allow us to glimpse some elements of the research.

Organisational learning theory and higher education institutions

One of the seminal authors in the field of organisational learning is Herbert Simon (1975). For this author, organisations are immersed in conditions of limited rationality, an idea that is related to the approaches of Cyert and March (1963) with the behaviour theory of the firm. This condition is how the knowledge generated by the firm attracted more attention to a group of researchers interested in advancing knowledge and its effect on organisational dynamics. Given the significant development from the 1990s with information systems, organisational learning was adopted by companies that allocated enormous amounts of resources to take advantage of information from the environment and thus improved their performance (Le and Lee 2021). The research and practice of organisational learning have been scarcer in higher education institutions, a gap to which this research is directed.

If the nature of higher education institutions is considered, it could be determined that they are created for knowledge generation, and therefore learning becomes natural to them. Despite this, organisations lack more profound studies about their behaviours and how they respond to

environmental pressures (Dee, & Leišytė, 2016). Several important characteristics to consider directly affect higher education institutions and modify the organisational learning of the firm. In this way, the specialisation of work, the system of cultural values in which they are immersed, and the incentive and reward systems can weaken performance and the results obtained (Kezar and Elrod 2012; Ahmad Qadri et al. 2021).

Additionally, the number of publications in the field of organisational learning in higher education institutions has been limited, especially using only one approach, such as functionalism. It is precisely in this approach where much of the criticism in this field of study falls. In addition, they have overvalued dimensions such as the improvement of efficiency and effectiveness, the detection of errors and their corrections, knowledge management, and the influence of mental models (Morgan 1979; Argyris and Schön 1978, 1996; Huber 1991; Senge 1990). On the other hand, all the responsibility for organisational learning has fallen on managers and technical experts, a dominant practice maintained over time (Witherspoon 2021).

The organisational learning theory allows us to identify how higher education institutions generate learning curves and how they take advantage of the dynamics of the environment to improve their performance. In this way, the dynamics of higher education institutions have been based mainly on indicators that determine the performance of the different stakeholders (Bondar et al. 2021). These dynamics of adaptation to the environments also include strategies that allow higher education institutions to adopt growth models similar to those of the economies in which they are immersed (Karnitis and Karnitis 2017). In addition, there is a need for different higher education institutions to create networks. This condition allows educational institutions to access information of great importance from other institutions and overcome weaknesses regarding their resources and capacities (Choi 2019).

On the other hand, these dynamics have resulted from research prioritising factors such as teaching, interlevel transactions, efficiency, and the social component. Many of these factors have been a priority in fields such as institutionalism, rationalism, and constructivism. Concerning the teaching activities in the educational system, this has been stratified, and its inequity has been more excellent year after year. This situation is due to the heterogeneity of educational resources and service quality. In this way, two needs that need to be covered are visualised in the literature: one is related to research activities and their contribution to the fields of innovation and the academic reputation of this type of organisation (Aleinikova et al. 2020), and the second one related to the Teaching activities that manages to integrate the high levels of innovation development and the business models that characterise this type of institution (Khytrova et al. 2020; Akimova et al. 2020).

In this scenario of permanent competition for resources, higher educational institutions must strive to conduct entrepreneurial strategies, establish efficiency measures and deal with hiring variable staff. The previous has generated important axes of attention in institutional development, which are related to income generation, the standardisation of processes in search of operational efficiency, and the corporatisation that has led to the confrontation between the two main actors in higher education as administrative and academic. In this way, organisational learning in terms of its objectives can be highly compromised in its sole purpose (Rhoads and Szelényi 2011; Slaughter and Rhoades 2004; Bess and Dee 2014; Kezar 2014; Marlina, Tjahjadi, and Ningsih 2021). In this way, this research proposes the following hypothesis

H1. The research experiences itself directly and positively influences the academic reputation.

H2. The teaching quality of faculty directly and positively influences the academic reputation.

A behavioural theory of the firm

The Behavioural Theory of the Firm perspective is attributed to Cyert and March (1963) in their work on decision-making in the organisational field, where they studied the results of implementing this type of process. It is one of the most widespread perspectives in organisation, strategy, and sociology. This perspective is considered a critical line to behavioural theories since it goes beyond the study of the behaviour of individuals and encompasses a macro vision of the phenomenon in which resources and decision-making processes intervene (Lu, Zhu, and He 2021).

For some time, this perspective held the behavioural processes at lower levels of the organisation of individuals and groups in total ignorance. The previous condition is because decision-making processes consider important economic variables and commitments of different stakeholders within the organisation (Maslach et al. 2015). For scholars in the field, this theory has been linked to the learning process developed within the organisation, which determines the behaviour of each of the members of the organisation and the type of strategies adopted (Augier 2013; Lu, Zhu, and He 2021). Some studies have determined that the behavioural theory of the firm is parsimonious and allows a glimpse of the complexity of organisational analysis. Therefore, this dynamic type will require a theory that integrates the different elements of the behavioural process (Maslach et al. 2015). This integration goes hand in hand with the ability of the behavioural theory of the firm to allow us to consider a representation of what organisations do. Many present ideas are based on how people think about organisations, and many of their actions are paradoxical (Dong et al. 2021).

From learning to the experience from others

An essential element is how organisations try to adapt to their environment. They make decisions to be able to conduct improvements in their performance and thus explore market opportunities more adequately (March 1991). Thus, the search for new alternatives is considered locally, considering the best practices of the institutions surrounding it. In this way, the experience of those who are part of the environment that surrounds them will directly influence learning in the long term (Miner and Haunschild 1995). The research results have shown that the exploitation carried out by the institutions as an experience or learning curve will produce a result that, in the long term, would reduce its cost or the time to implement it. Thus, in this way, the experience of an organisation is not the only source of learning, but the experience of other organisations also becomes valuable capital for improving their performance (Greve 1998; Baum, Li, and Usher 2000). In this way, decision-makers will look for models of action that allow them to focus on similar situations (Baum and Dahlin 2007).

In this case, the present study allows us to understand the process from which the current performances and the gaps identified by the educational institutions determine the practices adopted. In this way, the critical learning process and the academic reputation are related to the expertise carried with research and teaching, representing aspects that can be improved. In this case, to the extent that they are more focused on research, they have a greater capacity to generate an impact on the environment. This previous condition is because the institution could obtain resources to improve its performance. While teaching allows them to access formalisation or standardisation processes within the institution (Lee 2011).

In the research aspect, much of the literature has focused on comparative metrics between institutions. For Bai et al. (2020), impact as one of the measures in the research field integrates various levels of analysis. Other studies mention the impact of measurement through networks. This form of quantification encompasses a structural measurement model through citations over time that is materialised in academic networks, performance in terms of teaching quality, university rankings and the achievement of resources. Many scholars in the field of education mention that these metrics are sensitive and can fall into manipulation. In this way, we identify the determinants of academic reputation and moderation effects in regional performance considering the rankings of the Times Higher Education, QS World University Rankings, and Academic Ranking of World Universities (ARWU).

An important aspect to highlight is that even though research on organisational learning has had a higher priority in successful experiences, there are also failures in the learning process (Baum and Dahlin 2007). Now the study of failures is one of the least studied but even as valuable as successful cases. In this regard, causal inferences will demand many processes that allow observing the positive and negative performance results. A line of research emerges that has focused on failures. Thus, these studies begin to consolidate from a learning failure perspective (Sitkin, 1992). It gives way to more complex analysis processes that allow the insertion of new study variables.

In other contexts, the flaws are not so easily observable; in the sector of higher education institutions, it may be more evident, especially when generalisable information is available through various organisations. In the present case, the information on higher education institutions is highly generalisable, especially if databases allow sufficient information to conduct inferential analyses that allow observing behaviour locally, regionally, and at the regional level. In this sense, this research proposes the following hypothesis:

H3. The other research experience has a direct and positive influence on academic reputation.

H4. The other teaching quality faculty experience directly and positively influences academic reputation.

Finally, this research will contribute to the gaps found in the literature. The first is related to the need for studies on higher education institutions that allow us to investigate the learning processes that they develop to respond to the dynamics of their markets. The second is the need to contribute to identifying the factors that affect their performance.

Methodology

(ARWU, QS, and THE)

The time-series panel is estimated using data from Latin American Higher Education (418 Universities) from 2011 through 2022 (5016 observations in our dataset). Academic reputation was the dependent Variable. The residuals showed first-order autocorrelation after pooling repeated observations from the same universities. As a result, we estimate random-effects panel data GLS models with robust standard errors to rectify the autocorrelation of disturbances caused by constant effects (Greene, 2000; Wooldridge, 2002). Additionally, we included a moderation factor to measure the aspiration in each higher education institution with the regional performance compared with the best own country variable:

$$AP_{uij,t} = OP_{uij,t} - BP_t$$

AP = aspirational performance, OP = Own performance, BP = best performance in the count, U_i = each Higher education institution, j : each country in Latin-American and t = time between 2011 and 2022.

Our general model trying to evaluate the effect of aspirational performance on the relationship between Faculty quality (Research and Teaching) and Academic reputation in Latin American Countries was specified as follows:

$$\begin{aligned} AR_{it} = & \beta_0 + \beta_1 RPR_{it} + \beta_2 TQR_{it} + \beta_3 RPR_{iteo} + \beta_4 TQR_{iteo} + \beta_5 RP_{it} \\ & + \beta_6 RPR_{it} * RP_{it} + \beta_7 TQR_{it} * RP_{it} + \beta_8 TRPR_{iteo} * RP_{it} \\ & + \beta_9 TQR_{iteo} * RP_{it} + \beta_{10} Size + \beta_{11} Age + \epsilon_{it} \end{aligned}$$

When AR_{it} = Academic Reputation, β_j are the parameters for the independent variables, t is the time between 2011 and 2022, and ϵ is an error term.

Data

Independent variables

- Own Research Experience (research performance ranking): QS ranking data related to research. The most recent five years' worth of citations from Web of Science, Scopus, and Google Scholar are combined to create this variable. Alpha cronbach: 0.85
- Own Teaching quality: QS ranking data related to teaching and faculty quality, such as the number of PhDs and relationships. This Variable was created with information on QS Ranking, the Times higher education, and the Academic Ranking of World Universities. Alpha cronbach: 0.88
- Other Research Experience (Research performance ranking in the same category): a variable is created where the research level of universities at the same ranking level is used. This Variable was created with information on the times higher education and the Academic Ranking of World Universities (AWU) Alpha cronbach: 0.91
- Others Teaching quality (ranking of the faculty in the same category) creates a variable where the level of research of universities at the same level of the ranking is used. This Variable was created with information on Times Higher Education and the Academic Ranking of World Universities. Alpha cronbach: 0.84

The variables *Others Research Experience* and *Others Teaching quality* are created when comparing (Benchmarking) these levels in research or teaching with the best university in a region. In this sense, higher education institutions will have the level of Benchmarking given as follows:

Others Research Experience = Research level of the best regionally – own research level

Others Teaching quality = Teaching level of the best regionally – own Teaching level

Dependent

- Academic Reputation: It assesses the quality of education and research in universities world-wide. QS ranking associated academic reputation and employer reputation.

A factorial analysis is performed to integrate the data, taking into account the three rankings that combine these variables and are accepted internationally as reliable indicators of university classification. Combining these three rankings as a data source enables the use of a more significant number of universities within the study and data for all years. This factorial analysis seeks to reduce and leave only one Variable to be measured for each parameter. The variables used to measure each element in our study are included in the factorial analysis. Once completed, the creation of the factors that the programme generates and that allow for the consolidation of several variables grouped by their embedded values is kept. In every instance, the factors reported Alpha cronbach values that were higher than 0.8 demonstrated a high level of internal consistency

Moderation

- Higher education institution Aspirations (Regional development compared with the best of the country): Concerning each institution's future aspirations, a calculation is made in this Variable. It is assumed that each university aspires to reach regional benchmarks in short- to medium term. As a result, the regional development that the best university in a region hopes for is assumed to be nonexistent. However, the other universities in that region will have aspiration levels equal to the gap between the best university in the region and their current level.

- Higher education institutions defined as the best in a region will have an aspiration level of zero because they are the point of reference for other institutions. In this sense, higher education institutions will have the level of aspiration given as follows:

$$\text{Aspiration level} = \text{aspiration level of the best regionally} - \text{own aspiration level}$$

Control

- Size and Age: We calculate size as the total number of students and incorporate the age of institutions to reflect academic reputation experiences gained before our observation period

We calculated the Hausman specification test to check the adequacy of the presented panel regression models. The results show that random effect estimates are consistent, efficient, and independent of previous higher education institution effects (Hausman test:5.43, p-value <0.5)

Results

Tables 1a and 1b display descriptive data for all variables, such as means, standard deviations, and correlations. The findings of our model are shown in Table 2. Three models were estimated: Model 1 is the basic model, including the control variables. Model 2 introduces the immediate effects of academic reputation determinants (Research and Teaching Quality), both personal and others' experiences, which are significant and positive. According to our statistics, the means of research and teaching quality increase over time and at a growing pace as their own and other experience grows. The coefficients for own research and teaching experience are significant and positive. This result suggests that academic reputation grows, just at a moderate pace, as one's own teaching and research experience grows.

The pattern of own experience coefficients in Table 2 demonstrates that, while universities learn how to improve their academic reputation via accumulated research and teaching experience,

Table 1a. Mean and standard deviation.

	Mean	SD
Academic Reputation	65.31	21.1
Own Research Experience	54.68	31.45
Other Research Experience	43.45	19.79
Own Teaching Quality	67.59	31.97
Other Teaching Quality	65.35	34.65
Higher education institution Aspiration	23.21	14.31

Table 1b. Correlation's matrix.

	Academic Reputation	Own Research	Other Research	Own Teaching	Other Teaching	Higher education institution Aspiration
Academic Reputation	1.0000					
Own Research	0.3669	1.0000				
Other Research	0.0000	0.0027	1.0000			
Own Teaching	0.1727	0.9405	0.1840	1.0000		
Other Teaching	0.0000	0.0127	0.0291	0.1027	1.0000	
Higher education institution Aspiration	0.4945	0.1290	0.4184	0.4904	0.4883	1.0000
	0.6121	0.1026	0.2329	0.0000	0.0000	
	0.0000	0.0000	0.0600	0.0000	0.0000	

Table 2. Moderation effects of the Higher education institution aspiration.

Variables	Model 1	Model 2	Model 3
Constant	32.555*** (10.605)	20.665*** (3.565)	43.795*** (3.445)
Controls: size	5.291** (4.826)	2.987** (5.160)	3.237** (2.123)
Controls: age	0.347 (1.236)	1.111*** (3.443)	1.790*** (3.513)
Predictors: Performance Gap		13.957*** (13.633)	12.363*** (12.446)
Predictors: Own Experience		0.013*** (0.043)	0.022*** (0.0312)
Predictors: Own Experience2		0.014** (2.01)	0.041** (2.18)
Predictors: Experience from Others		0.013*** (2.001)	0.031*** (2.11)
Predictors: Experience from Others2		0.011*** (2.178)	0.026*** (2.23)
Interaction: Own experience X aspirational performance			0.221*** (2.345)
Interaction: Own Experience2 X aspirational performance			0.191*** (2.31)
Interaction: Experience from Others X aspirational performance			0.31*** (2.34)
Interaction: Experience from Others2 (lag) X aspirational performance			0.33*** (2.99)
R2	0.46	0.722	0.58
N X T	5016	5016	5016

universities simultaneously learn from their own experience. Furthermore, the trend of others' experience coefficients implies that while universities learn from their individual experiences, learning from each other's experiences results in a system-level improvement cycle that benefits all universities.

Based on the results obtained and presented in Table 2, Figure 2 display the moderation effects of the Higher education institution aspiration (regional development compared with the best of own country) on two relationships: 1. experience in research both own and other universities in the same category and 2. Experience in teaching both own and other universities in the same category.

The Y axis displays the academic reputation values for each independent variable value (own experience in research, other experience in research, own experience in Teaching quality faculty, other experience in Teaching quality faculty). According to Aiken (1991), it is necessary to calculate

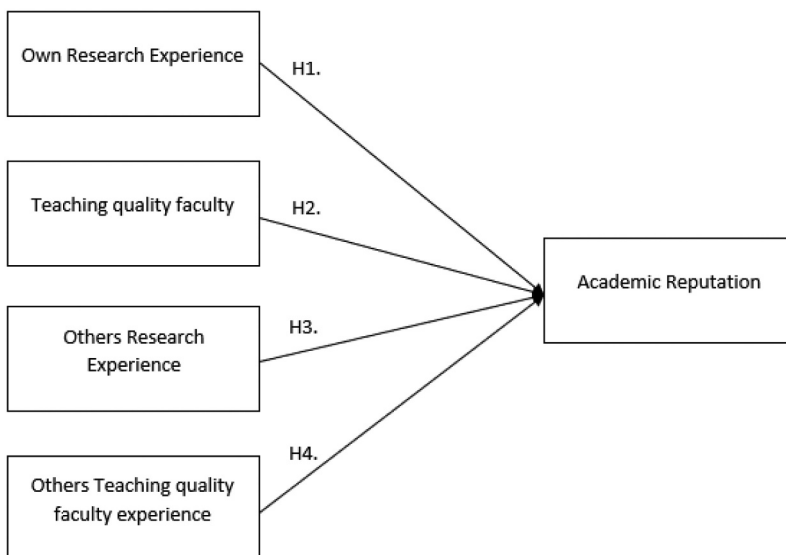


Figure 1. Conceptual relations between research variables.

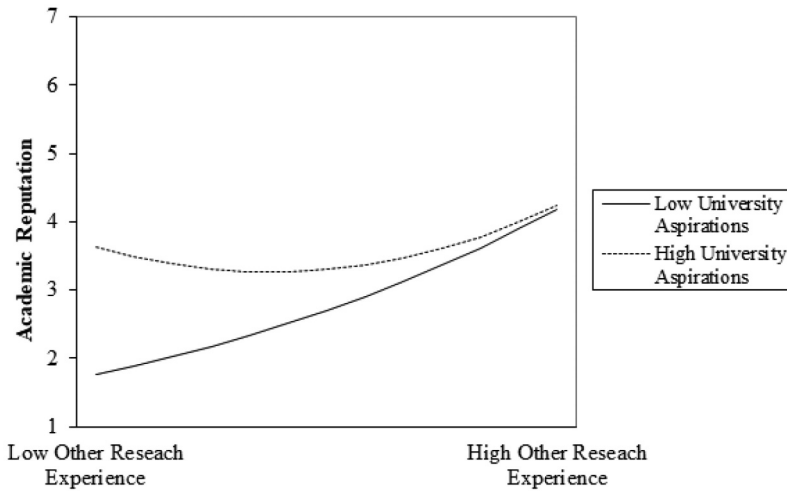


Figure 2. Academic reputation by research experience (regional aspiration).

the low and high values for each relationship. A low level is attained with one negative standard deviation of the moderation variable. One positive standard deviation is utilised for high values.

Figures 1 and 2 depict the moderating of the Higher education institution aspiration (regional development compared to the best in the own country) on the link between own research experience and other research experiences and the relationship between own Teaching quality faculty experience and other Teaching quality faculty experiences. In general, as the higher education institution’s desire rises, so does the positive effect on research experience and teaching quality faculty, both one’s own and that of others.

The results reveal that the influence of own experience on Academic Reputation supports the idea that the accumulation has an inverted U-shaped relationship, as illustrated in Figures 1 and 2. Furthermore, the effect of other Universities’ experiences showed a U-shaped relationship, although with a lower slope.

Figures 1, 2, 3, 4 and 5 show the influence of higher education institution desire on the links between one’s own and others’ experience, as well as Academic reputation for both Research and

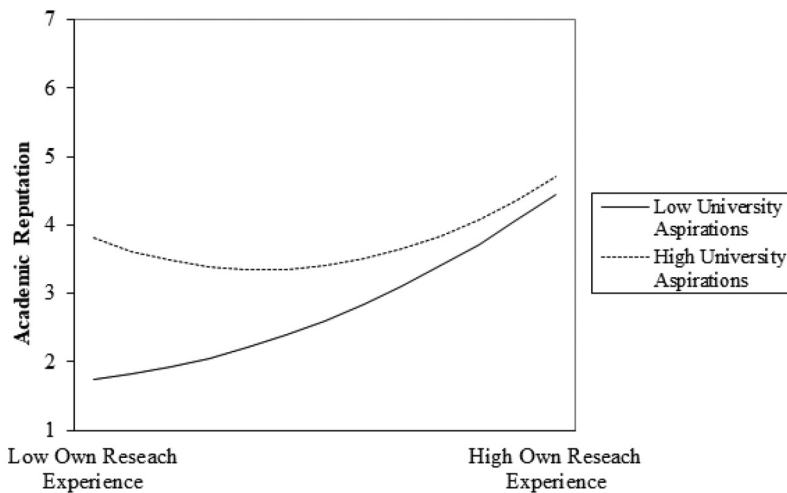


Figure 3. Academic reputation by research experience (regional aspiration).

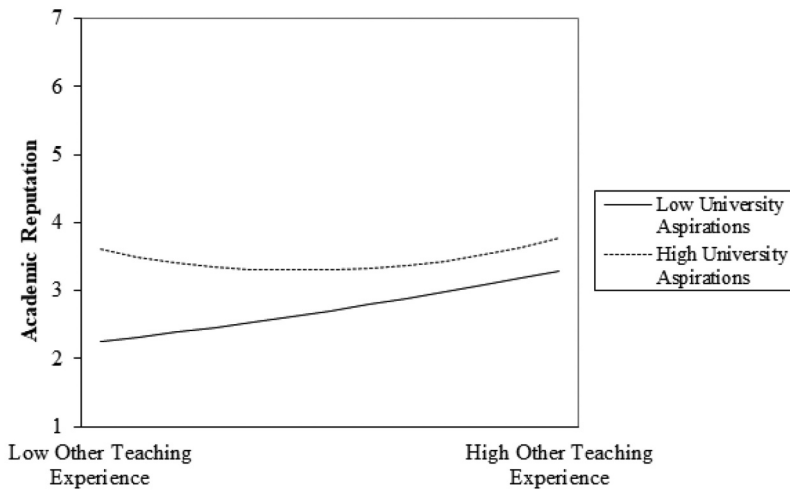


Figure 4. Academic reputation by research experience (regional aspiration).

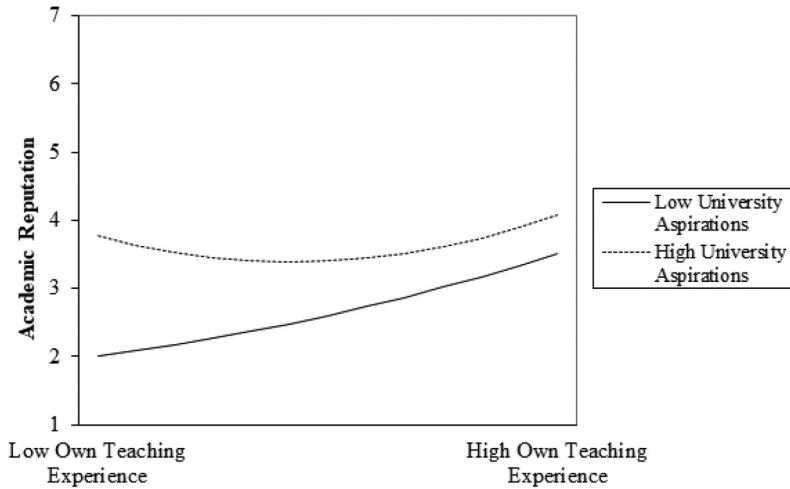


Figure 5. Academic reputation by research experience (regional aspiration).

Teaching quality Faculty. As the graphs demonstrate, personal experience boosts academic reputation when the higher education institution is close to its aspirations. Similarly, other universities boost their Academic Reputation the greatest when their performance is lower short of their goals. Moreover, as predicted by theory, this influence becomes negative as the gap between aspiration and achievement grows.

Figures collectively support the conclusion that as performance deviates from ambition levels, universities' emphasis switches from learning from their own experience to learning from the experiences of others. The data also highlights two other important points: One difference is that the interaction effects are more evident for one's own experience than for the experience of others.

The previous consideration is consistent with the assumption that performance away from aspirations relates to more improvements to boost Academic reputation. In addition to creating such changes, Universities turn outside their own bounds to learn from others' experiences. The other is that the learning curve for Academic Reputation is more influenced by accumulating own

experience than accumulating others' experience. Thereby, experience in research is more relevant than experience in Teaching quality faculty with adequate levels of Academic Reputation. The previous condition is possible if it emphasises the importance of identifying the type(s) of experience likely to invest in cost associated with learning further in this activity to prevent incorrectly concluding that learning is not arising.

Conclusions

The study's conclusions have significant academic and policy implications. Academic reputation, like performance measures, is essential in any firm and necessitates diverse strategic initiatives. We show evidence about learning practices. Therefore, academic reputation is influenced by both the own learning process and the experiences of others. These findings feed the academic discussion around accumulating one's experience to improve one's performance and using information about others to acquire additional experience.

Within the gaps found in the literature, it was possible to provide specific elements of analysis that would allow for generating a complete vision of the learning processes. In this case, higher education institutions, through the different comparison models such as world rankings, generate the need to understand the different variables associated with an academic reputation, such as research and quality and their effect on academic reputation (performance)

We confirm that teaching experience makes it possible to improve one's academic reputation over time. Since the learning process manages to correct errors, communicate successes, and link the educational community, the need to seek the experience of other similar universities in teaching. According to our results, the experience of other universities is relevant for learning because it becomes a reference source of information to improve internally. This experience can materialise from the dissemination of new pedagogies, trends in education, and new practices in the teaching-learning process, among others.

On the other hand, in research, it is possible to demonstrate the relevance of our own experience and the experience of other universities in the same category. Over time, research is a learning process that is refined to obtain better results (a more significant number of articles in high ranking and the number of citations). In the case of our own experience, a growing learning curve is established over time because the higher education institution obtains a more excellent reputation as its research is more evident within the academic community. Therefore, its growth curve shows no inflexion points.

Regarding the impact of the research experience of other universities, it is possible to conclude that they allow other universities to have information that positively impacts their learning curve. In general, universities learn from sector adapting (i.e. learning from others) by previous information effective techniques. However, Ortenblad and Koris (2014), Kezar (2005) and Jeris (1998) state that this process provides helpful information but only some of the information can be used or transferred to the organisation due to capacity limits. In this sense, some organisations can undervalue this experience, and there is a tendency to waste the process that other universities have gone through in research. However, the advantages restart such integration efforts of this kind of learning.

Another gap to which it is possible to contribute is the scarcity of empirical works related to higher education institutions and the possibility of overcoming functionalist approaches. This vision includes variables that go beyond the single vision of efficiency. In this case, the set of variables related to the performance of other higher education institutions, and ways of establishing aspirations in a regional context (Latin American Universities), is according to the approaches of Deemer (2016).

These aspirations allow us to analyse how universities can have regional benchmarks to mark their growth path and achieve better levels of academic reputation. Our study suggests that appointments are usually set with referents from their country or region. These aspirations are gaps between the current state of current performance and the organisational goal associated with another higher education institution (ranking level). The higher the aspirations, the more the

academic reputation associated with one's own experience in teaching and research can be improved.

Another significant contribution of this paper is that it clarifies the relationship between organisational learning theory and the behavioural theory of the firm. Two perspectives share a study objective but respond to different approaches that give a more complex vision of learning processes organisation conducted by firms.

The organisational learning theory facilitates the idea that organisations conduct learning processes based on their own experiences. However, one of this research's conclusions is that the sustained experiences of other organisations also generate this learning process. Similarly, the learning process is more effective because the organisations have similar characteristics that allow a more significant comparison. On the other hand, the moderation effect of aspirations in the improvement processes of higher education institutions becomes more evident when the level of aspiration is typical of organisations closer to each other.

Theoretical contributions

From a theoretical perspective, this study attempts to understand the determining factors in the academic reputation of universities in three of the main rankings worldwide. According to the literature, this component requires more attention, mainly due to the specific conditions of this type of institution. These conditions are focused on the quality of teaching and research. Therefore, responding to the need raised by Deemer (2016), this empirical study contributes significantly to a sector with such specific sectoral dynamics. Another essential aspect to highlight is that Organizational learning in the field of education has so far been studied and will become a course of the field in the short term (Rashman, Withers, and Hartley 2009; Anand and Brix 2021).

Empirical implications

From the empirical field, the results allow us to observe how the regional dynamics that define this type of institution's strategies are critical to consider for improving the institution's performance. Additionally, for the design of public policies in this sector, the influence of the main actors that improve the performance of higher education institutions becomes essential. The previous also considers the level of aspirations they have. The level of aspirations becomes one of the empirical contributions in the theoretical field of research. The aspirations with the unit of analysis of the behavioural theory of the firm allowed us to find a direct relationship between the aspirations that higher education institutions develop together with the institutions that become a point of reference for the sector. This dynamic shows that the propensity for collaboration between institutions is related to performance (Chang 1996; Le and Lee 2021).

In the same way as all research, this study has limitations we have recognised. The first relates to the limitations of the databases used with international higher education rankings. The previous limitation does not allow the addition of additional variables that may be important to analyse in the field of study. The second limitation relates to the period analysed since it would be convenient to analyse more extended periods and how this ranking behaves.

Future research line

Concerning future lines of research, there is the possibility of developing studies at the local, regional, and national levels. This future work allows us to see the relationships between different variables that may affect the performance of higher education institutions. Identify specific dynamics of higher education institutions that, despite not being in the first places of the rankings, do improve their performance in the processes of adaptation to the specific dynamics of their context. Finally, it is essential to investigate other approaches besides the functionalist one that allows knowing new

dynamics that escape quantitative analysis. Finally, it becomes a fundamental aspect of answering the question of how the country's culture can influence the performance of higher education institutions and the differences between those with the best positions in the rankings.

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No potential conflict of interest was reported by the author(s).

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Consent for publication

We, the undersigned, give consent for the publication of identifiable details, which can include photograph(s) and/or videos and/or case history and/or details within the text ('Material') to be published in the above Journal and Article.

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Availability of data and materials

Datasets for this research are included in <https://figshare.com/s/67fad70a6ba60ccd31e5>

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