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Competitive implications of quality assurance processes in higher education. The case of higher education in engineering in France

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ABSTRACT

Quality assurance in higher education is one of the cornerstones of the Bologna agenda and the Lisbon strategy, which aims at establishing the world's most competitive knowledge economy. Extensive literature up to now has addressed quality assurance as a regulatory and policy mechanism and has presented quality assurance and market forces as antagonistic. However, what policymakers in the field fail to see is that the 'official' quality assurance processes also have implications in terms of competition. Indeed, higher education institutions are using the results of these, in principle aseptic, non-market-related evaluation processes, as a way to achieve competitive advantage. This paper analyses the case of higher education institutions in engineering in France. The institutional websites of 163 higher education institutions have been analysed through code-based content analysis techniques and Multiple Correspondence Analysis. This study shows that the analysis of institutional websites can be used as a tool to gauge the importance of the different dimensions of quality assurance for higher education institutions in a given national system. Furthermore, a clear association has been found between the ranking position of an institution and its communication behaviour. The results have been interpreted in the light of Neoinstitutional Theory and Porter's generic competitive strategies. Practical implications for quality assurance practitioners and managers at higher education institutions have been highlighted.

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Quality assurance; marketing; higher education; engineering; France; multiple correspondence analysis; Porter's generic competitive strategies

1. Introduction

Higher education in Europe is a crucial element of the Bologna Agenda and the Lisbon Strategy, which aims at establishing the world's most competitive knowledge

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economy. The full realization of the knowledge triangle between academic education, scientific research and innovation requires both new and creative models of governance and enhanced management capacities (Powell, Bernhard, & Graf, 2012). Consequently, together with the implementation of basic structural elements, such as the European Qualification Framework and the European Credit Transfer System, the unprecedented number of reforms affecting higher education over the last decade have gone in the sense of increasing institutional freedom and autonomy along with the development of a solid quality assurance (QA) system at the European level.

The particular European approach to QA is specified in the document, 'Standards and Guidelines for Quality Assurance in the European Higher Education Area' or 'ESG' (ENQA et al., 2015). A variety of external QA activities are carried out by 'official' external bodies—a.k.a. quality assurance agencies—such as evaluation, review, audit, assessment or accreditation, implemented at programme or institutional level. These processes are regulated and applied at the national level and often have consequences in terms of official recognition, access to public funding, etc.

At the system level, QA has the primary mission of building mutual trust among Higher Education Institutions (HEIs) and other stakeholders all over Europe and should contribute to the transparency of public information (Van der Wende, 2000). At the institutional level, regardless of the specific process implemented, external QA processes should combine two fundamental objectives: accountability and continuous improvement of HEIs (ENQA et al., 2015). Indeed, beyond the regulatory or accountability facet, QA should be a management tool that enables the implementation of a systematic periodic reflection cycle and is associated with other management streams such as organizational learning or strategic management.

In parallel to the Bologna and Lisbon agendas, over the last number of years, the higher education sector has been affected by a 'marketization' process. HEIs are exposed to increasing global competition and are in the process of developing branding and reputation strategies (Hemsley-Brown, Melewar, Nguyen, & Wilson, 2016; Lafuente-Ruiz-de-Sabando, Zorrilla, & Forcada, 2018). QA in this context has been perceived as an instrument for controlling or steering universities (Ashour, 2017; Vidovich, 2002). Furthermore, there has traditionally been a tension between QA mechanisms and other market-driven transparency instruments, such as university rankings or student ratings. These have been argued to be reductionist as they tend to stress certain dimensions, cause potential negative outcomes and possibly hinder institutional improvement (Adler & Harzing, 2009; Bengoetxea & Buela-Casal, 2013; Boulton, 2011; Darwin, 2017; Federkeil, 2008; Holligan & Shah, 2017). In brief, extensive literature up to now has addressed QA mainly as a regulatory and policy mechanism and has presented QA and market customer-driven forces as antagonistic.

However, previous studies outside the higher education sector suggest that QA is a multidimensional phenomenon: it involves elements of accountability as well as internal and ethical considerations, but it also responds to a positional and competitive rationale (Bansal & Roth, 2000; Gonzalez-Benito & Gonzalez-Benito, 2005; Grochau, ten Caten, & de Camargo Forte, 2018).

The potential for QA mechanisms to generate benefits in terms of marketing advantage is a popular topic of study in certain sectors outside higher education

(Bilbao & Valdés, 2016; Deselnicu, Costanigro, Souza-Monteiro, & McFadden, 2013; Fearne, Hornibrook, & Dedman, 2001; Lukić, 2011; Verbeke & Viaene, 1999; Walley, Parsons, & Bland, 1999; Yu, Hudders, & Cauberghe, 2018). In the field of higher education, the competitive dimension of QA has been stressed in a context of cross-border accreditations. A notorious example is the reflexion around the motivations for HEIs in the field of business management to increasingly pursue field-specific international accreditations, particularly AACSB and EQUIS. It has been found that, in parallel to the quality improvement exercise, there are inherent motivations for HEIs to pursue these certifications which stem from the urge for organizational legitimacy, status, and reputation (Alajoutsijärvi, Kettunen, & Sohlo, 2018). Other than that, the marketing and competitive implications of QA in higher education remain largely unexplored.

The question under analysis in this paper—one not explored so-far in academic literature—is whether the 'official' Bologna-related national QA processes have competitive and positional implications. And if such were the case, in which way does this competitive facet interacts with the official Bologna objectives of the QA agenda: mutual trust and transparency at the system level, and accountability and internal enhancement at the institutional level. In order to give an answer to these questions, the institutional web pages of 163 HEIs in the field of education in engineering operating in France have been analysed through coded-based content-analysis techniques. The associations between the identified communication strategies and potentially relevant HEI characteristics have been investigated using Multiple Correspondence Analysis.

The remainder of this article is structured as follows. The following section presents the research objectives and the research questions. It is followed by an explanation of the research framework. Then, the methodology is presented, followed by a brief general overview of the institutional and QA context of higher education in engineering in France. The results of the study are subsequently presented. After that, the results are discussed and the research questions are addressed. Finally, the last section describes conclusions, implications for practice and some possible future developments.

2. Research objectives

The goal of this paper is to contribute, through the study of the case of French engineering higher education institutions, to the reflection around the links and interactions between the fields of Quality Assurance and marketing in higher education, a line that has not yet been sufficiently explored. Our work is of an exploratory nature, as, to the best of our knowledge, it is the first of its kind in this domain; it focuses on the communication strategies adopted by a population of higher education institutions operating in France regarding QA assurance outcomes, in particular the accreditation awarded by the Official engineering accreditation body, CTI (Commission des Titres d'Ingénieurs). CTI accreditation is legally required for all HEIs that wish to deliver the official engineering degree in France (CTI, 2018).

The case of French higher education institutions is of particular interest due to the large number and diversity of institutions operating in this domain. As of September

2018, there were 201 officially-recognized engineering HEIs in France, very diverse in terms of organizational nature, size, resources and academic outreach (CTI, 2018).

The study addresses the following research questions:

RQ1- What institutional communication strategies are put in place by the chosen HEI population regarding official national QA processes? Specifically, do any of these communication strategies reflect a competitive or positional rationale?

RQ2- How do the sector (public/private) and the reputation (measured through the ranking position) of the institution affect the adoption of competitive communication strategies?

RQ3- How do the different communication strategies, and particularly those that would reflect a competitive logic, relate to the objectives of the Bologna QA agenda: trust and transparency at the system level, accountability and internal enhancement at the institutional level?

3. Theoretical framework

Our research requires a theoretical framework concerning the possible types of expected outcomes of QA processes that could have a translation in HEIs' communication strategies. Three basic possible outcomes have been considered: relational, internal and competitive.

Relational outcomes correspond to the achievement of legitimization and better relationships with stakeholders. In particular, relational outcomes refer to the compliance with formal regulations and rules, but also informal norms, guidelines and beliefs that are implicitly or explicitly accepted within a certain community. These regulations and beliefs can be interpreted in terms of Neoinstitutional Theory (Meyer & Rowan, 1977) and in particular can be related to the concept of Institutional Isomorphism (DiMaggio & Powell, 2000). This theory tries to explain how and why spheres of activity, such as higher education, are populated with organizations that look more alike than they differ (McFarland & Gomez, 2013). In many regards, all these settings conform to widely held institutional beliefs or 'rationalized myths' about what higher education entails, which 'provide models, schema, and guidelines for governing and guiding behaviour in social situations' (Scott, 2005). QA is indeed a powerful rationalizing agent, conveying rules and guidelines capable of shaping the sector.

Internal outcomes translate in an intrinsic improvement of the organization. It is grounded in the fact that QA can be a transformative experience for an HEI, leading to significant changes in the organization and its core processes. These changes are often of a qualitative and more profound nature: they go beyond the mere observation of rules and procedures, and rather relate to the culture and identity of the organization. Indeed, beyond the regulatory or accountability facet, QA should be a management tool that enables the implementation of a systematic periodic reflexion cycle, and it is associated with other management streams such as organizational learning or strategic management (Cheong Cheng, & Ming Tam, 1997).

Finally, competitive outcomes are linked with the achievement of competitive advantages; i.e. differential advantages which enable the HEI to attract students and

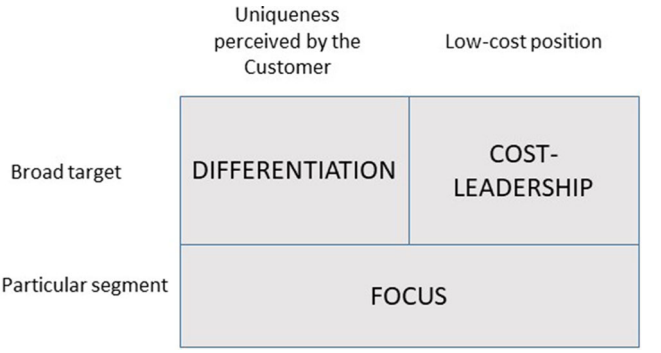

Figure 1. Porter's generic competitive strategies. *Source*: Porter and Advantage (1985).

other key resources. Competitive outcomes have been previously considered in marketing literature as one of the possible consequences of QA processes. In particular, the work of Gonzalez-Benito and Gonzalez-Benito (2005), which investigated the motivations for implementing ISO environmental quality labels, identified competitive motivations, as well as ethical and relational factors. It could be argued that a QA certification could be the basis or at least an important element to build a specific competitive strategy. In this study, we refer to the well-known topology of competitive strategies proposed by Porter (Porter & Advantage, 1985). This topology is depicted in Figure 1.

Figure 2 shows the operating model used as a basis for this paper. HEIs characteristics, such as whether it belongs to the public and private sector and its reputation, would influence the expected outcomes of QA processes for these institutions. Different expected outcomes should be associated with different communication strategies towards the public, which, in our working hypothesis, should mirror the expected outcomes framework.

4. Methodology

In order to address the research questions, the institutional web pages of 163 HEIs in the field of education in engineering have been analysed. The analysis of institutional web pages is a popular method to analyse different aspects of corporate strategy (Llopis, Gonzalez, & Gasco, 2019; Pant & Pant, 2018; Slivar & Križman Pavlović, 2012; Smith, 2017). The chosen population corresponds to the full list of institutions appearing in the 2018 ranking by *L'Étudiant*, a leading higher education journal. This listing represents one of the most influential sectorial rankings in France. The database was composed between 10th September and 15th October 2018.

The data were analysed according to the following stages. In the first stage, descriptive analysis of the data and qualitative content analysis of institutional web pages were conducted. The analysis focused on specific passages concerning CTI's accreditation posted on institutional websites (in the form of 'News' or 'Press releases', or as part of the description of the programme or of the HEI). The information collected was systematically analysed using content analysis techniques (Weber, 1990). Content analysis is a technique for analysing the content of a text; content

might include words, symbols, pictures or any other format that can be communicated. It has been extensively used in social sciences and particularly in marketing research (Chun & Davies, 2001; Ghose & Dou, 1998; Pitt, Abratt, Bendixen, & Ankomah Opoku, 2007; Pitt et al., 2007).

A crucial step in content analysis is codifying the text (or content) of a piece into various groups or categories depending on selected criteria. In this case, the codes were established 'a priori' from the theoretical framework explained above, considering three categories: Relational, Internal or Competitive. A list of inclusion criteria was inductively developed by the authors, linked to typical communication statements for each category or communication strategy (see Table 1). The codes were assigned to the text by two independent researchers; discrepancies were discussed until a consensus was reached and a predominant category or communication strategy was assigned to each institution.

In the second stage, the associations between the identified communication strategies and HEI characteristics were investigated using Multiple Correspondence Analysis (MCA). MCA is an exploratory data analysis technique that enables the detection and representation of associations between multiple categorical variables. It does so by representing the variables in a low- generally two- dimensional space. It is an extension of Correspondence Analysis (CA), which is used to analyse relationships between two categorical variables. CA and MCA have been extensively used over the last decades in business and marketing research (Greenacre, 1991; Hoffman & Franke, 1986; Opoku, Abratt, & Pitt, 2006; Pitt et al., 2007; Rutter, Lettice, & Nadeau, 2017). Its usefulness in uncovering structural relationships between different variables and to facilitate interpretation of data has been acknowledged in literature (Brien, 1993; Inman, Shankar, & Ferraro, 2004).

Figure 2. Operating model used in this study. *Source*: Own elaboration.

Table 1. List of inclusion criteria for each communication strategy in content analysis.

Internal (INT)
- Improvements in the teaching and learning processes are presented as a result of the QA process.
- The QA process is presented as a transformative and learning experience for the organization.
- Both weak and strong points found in the evaluation are openly presented.
- The QA process is presented as a piece of a wider quality agenda.

Competitive (COMP)
- The programme is presented as providing competitive advantages for graduates (enhanced employability, enhanced recognition by professional bodies).
- The HEI or programme is presented as providing distinctive educational experiences (international exchanges; laboratories; internships in industry).
- The HEI or programme is presented as 'excellent' or 'better than its peers'.

Relational (REL)
- Communications are brief and factual and concentrate on compliance with regulation.
- The HEI or programme is presented as member of a professional or academic community.

Source: Own elaboration.

5. Institutional and QA context of higher education in engineering in France

The engineering profession is not regulated in France (there is no order of engineers nor a similar professional organization); however the academic title 'Titre d'ingénieur diplômé' is regulated by the French National Education Code. The engineering degree is placed at level 7 of the European Qualifications Framework (EQF), and it is thus equivalent to a Master's degree and confers direct access to doctoral studies. Regarding the programme's level of specialization, there is a strong tradition in France of generalist engineering education ('ingénieur generaliste'). However, increasingly, HEIs in France are also developing programmes within a variety of engineering specializations.

Engineering degrees are offered by a variety of institutions, generically called Engineering Schools ('Écoles d'Ingénieurs'). These institutions differ widely in nature: they can be run by the private or public sector, may be part of a university or an independent organisation, and may be overseen by different ministries (Higher Education, Food and Agriculture, Economy, Industry, Defence, Telecommunications, Environment) or even a local authority. They are very diverse in terms of size and resources, as well as in academic outreach. They are organized in regional networks, the so-called 'Communautés d'Universités et Établissements' (COMUE).

Engineering degrees must be compulsory accredited every five years by CTI. Upon CTI's accreditation, HEIs in engineering are authorized ('habilitées') by the French Ministry of Education to grant a particular Engineering degree ('Diplôme d'ingénieur'). Established by French law in 1934, CTI is an independent non-profit organization recognized as the official accreditation authority in charge of overseeing engineering education in France. Its missions are: the evaluation and accreditation of programmes in the fields of engineering and applied sciences; the development of educational quality in engineering; and the promotion of engineering curricula and careers in France and abroad. Upon demand by foreign institutions, CTI is also authorized by French law to accredit engineering programmes abroad.

CTI is composed of 32 members, appointed upon legislative order, coming from different sectors (public and private higher education institutions, employer organizations, professional engineering associations, and trade unions). It is thus a balanced organization in terms of professional and academic participation. CTI is a full member of ENQA (European Association for Quality Assurance in Higher Education) since 2005, and it is registered in EQAR (European Quality Assurance Register) since 2010. CTI is also a founding member of ENAEE (European Network for the Accreditation of Engineering Education).

CTI's QA process includes three stages:

- A self-assessment stage by the HEI, which results in a self-assessment report
- An evaluation stage by a group of experts, including a site visit
- An accreditation stage by CTI's plenary assembly, which results in an accreditation decision

Possible results of a CTI procedure are:

- Accreditation for the maximum duration (5 years), if the programme substantially complies with all criteria
- Accreditation for a shorter period (normally, 2 or 3 years), if some important problems are detected
- One year accreditation (for existing programmes) or no accreditation (mainly for new programmes), if critical compliance problems are detected

CTI publishes a report which includes the outcome of the accreditation decision. Following widely accepted European good practices, the report also includes a contextualized analysis of the institution and the programme, normally in the form of a SWOT analysis, and includes specific recommendations for improvement. Indeed, regardless of the specific process implemented, Bologna-related QA instruments should be applied not only with a regulatory or control spirit, but should also contribute toward creating a true quality culture within higher education institutions and foster internal institutional improvement (ENQA et al., 2015).

As of October 2018, there were 201 accredited engineering schools in France offering 506 different engineering degrees. Around 38,000 engineers are graduated each year, for a total population of 163,000 engineers (CTI, 2018).

6. Results

6.1. Sample profile

HEIs in the sample have been characterized according to the sector they belong to (public/private) and reputation. Concerning reputation, institutions were grouped according to their position in the 2018 *L'Étudiant* ranking. Three groups were established after the analysis of the ranking dynamics and following the criteria of two experts in the field: top, medium and low-ranking institutions. The working sample of 163 engineering HEIs represents 81% of the total engineering higher education institutions in France. It includes both public (77%) and private institutions (23%), representing all French academic regions. They include top schools (14%), as well as HEIs in the medium (64%) and low ranges (22%) of the *L'Étudiant* ranking.

6.2. Communication strategies

Content analysis of institutional web pages provided an answer to RQ1 and confirmed that three distinct communication strategies, regarding CTI's accreditation process, were being implemented by HEIs in France. These strategies mirror the expected outcomes framework referred to in the Theoretical Framework section:

6.2.1. Communication strategy linked to relational outcomes (REL)

Institutional messages in this category are expressed in objective and factual terms: they explain that a particular engineering programme is accredited by CTI and complies with current regulations. The programme is hence presented as part of the 'official' engineering community in France. This type of messages often includes a

technical note on the nature of CTI, the French legal framework and the accreditation framework. Content tends to be brief and often includes links to official sources.

6.2.2. Communication strategy linked to internal outcomes (INT)

Institutional messages in this group present CTI accreditation as a collective and transformative process. They emphasize the team effort conducted during the self-evaluation process and the positive outcomes in terms of developing a quality culture and an internal dialogue among all internal stakeholders within the institutions. This type of statements frequently present the full analysis of the evaluation panel—in terms of the strong and weak points detected—together with the recommendations. Institutions in this group understand the CTI evaluation process as a piece of a wider quality agenda. They often communicate about the subsequent initiatives, the action plan and the improvement prospects.

6.2.3. Communication strategy linked to competitive outcomes (COMP)

Institutional messages in this group use CTI accreditation as a lever to convey a competitive advantage. Two different communication sub-strategies have been identified:

- Messages which particularly stress the advantages for graduates and students resulting from the certification (enhanced professional competences, professional recognition, enhanced possibilities for student and professional mobility, etc.). They often stress the significance of the accreditation for an HEI in a particular situation, such as when it is the first institution in a certain region or field to obtain the right to grant the official engineering degree.
- Messages that interpret the CTI accreditation in terms of having achieved an excellence label. In this type of statements, the HEI or programme is presented as being 'excellent' or 'better' than its peers or belonging to an elite group. HEIs tend to present the strong points detected in the evaluation process, while not communicating the weak points nor the recommendations conveyed. In the same vein, where applicable, HEIs tend to particularly stress the fact that they obtained a 'full accreditation' (for the maximum duration).

6.2.4. No communication (NOCOM)

Finally, in certain cases, HEIs publish no explicit statement about CTI accreditation and its implications on their institutional websites.

Table 2 shows the frequency and percentage of HEIs that were found to apply each communication strategy in the sample under study.

Table 2. Frequency and percentage of HEIs in each communication strategy.

Communication strategies	Frequency	%
Competitive (COMP)	21	12,9
Internal (INT)	16	9,8
No communication (NOCOM)	17	10,4
Relational (REL)	109	66,9
Total	163	100,0

Source: Own elaboration.

6.3. Multiple correspondence analysis

MCA analysis was conducted in order to address RQ2 and study the underlying relationships between the ranking of an institution, the sector it belongs to (public/private), and the communication strategies it employs.

The variables under study were positioned in a two-dimensional space. The two constructed dimensions account for 94.7% of the total variance in the original data. The eigenvalues explain portions 1.5 and 50% for the first dimension and 1.341 and 44.7% for the second dimension.

The discriminant measures depicted in Figure 2 show that both the communication strategies implemented by the institutions and the Ranking position have an important and similar participation in the construction of the dimensions. Communication and ranking are both very close to each other in the constructed space showing that a pattern of relationship can be established between them. The influence of the institution belonging to the public or private sector is comparatively less important to the constructed variables.

The communication strategies are depicted together with the ranking position and the public and private sector in the perceptual map shown in Figure 3. The plot shows that a top ranking position is in the same quadrant and very close to 'No communication'. A low position in the ranking is located very close to 'Communication strategies linked to competitive outcomes'. These are both in the same quadrant as the 'Private' sector although the distance is comparatively larger. 'Communication strategies linked to relational outcomes' is located very close to a medium position in

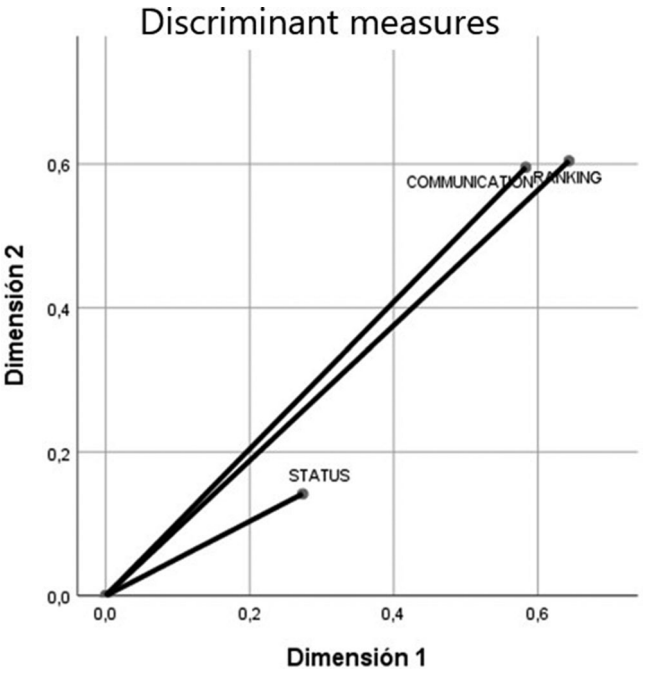

Figure 3. Construction of dimensions. *Source*: SPSS output.

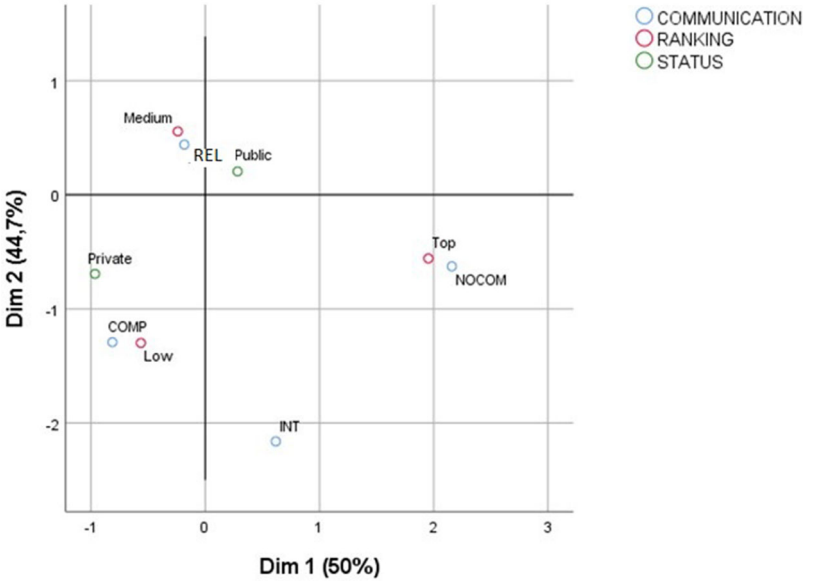

Figure 4. MCA variables bi-plot. *Source*: SPSS output.

the ranking. Finally 'Communication strategies linked to internal outcomes' appear in a relatively isolated position in the graph (Figure 4).

7. Discussion

7.1. Associations between institutional ranking, sector and communication strategies

The exploratory analysis conducted allows a discussion around RQ2, i.e. the possible associations that could be established between communication strategies, institutional ranking and sector. It shows that for most institutions in the sample, QA seems to primarily be a matter of accountability and fulfilling regulations. This is consistent with Neoinstitutional Theory perspective and the view of certain authors of QA as a mere collection of 'rituals of verification' (Hoecht, 2006). However, it is also shown that for certain institutions, QA is indeed used as a lever to build a competitive advantage.

The most clear underlying associations in this analysis can be established between communication strategies with a competitive intention and institutions in low ranking positions, and between top ranking institutions and the absence of explicit communications about QA processes and outcomes. It is clear that CTI accreditation is more important for certain institutions than for others. École Polytechnique, ranked first by *L'Étudiant*, devotes very little attention to CTI's accreditation on its website (only a few search results and not even a specific press release on its website), whereas it stresses its position as 'the first Engineering School in France'.

In the opposite side of the spectrum, other institutions refer to CTI accreditation as an important achievement. This is the case of a private engineering HEI in the aeronautics sector, which boasts of being 'the first officially-recognized engineering

HEI' in its geographical region and states that it is confident the CTI accreditation will give it 'new momentum'. In a similar vein, another private HEI in the field of computer sciences stresses the importance of CTI's accreditation and hopes that 'young candidates will feel confident enough' to choose it once the accreditation has been obtained. Several HEIs that implement programmes following the 'apprentissage' path, i.e. vocational-oriented programmes developed partly within a company (Day, 2001) show a similar behaviour.

Institutional statements linked to internal QA dynamics do not seem to have a clear association with the sector (public/private) or with the ranking of the institution. We suggest that the ability of the institution to foster a true quality culture is probably related to different aspects, such as the management and leadership strategies put in place in each institution. Furthermore, the method used in this study, the analysis of messages in public institutional websites, is probably not the most suitable one to perceive the internal dynamics of the institution.

7.2. Competitive implications of QA

Competitive communication is essentially implemented by institutions in the sample through two types of messages. On the one hand, QA is used to strengthen institutional legitimacy and present the institution as a respectful full-member of a highly-reputed community. Low reputation institutions could have a stronger interest to leverage QA as an essential point of parity (Keller, Sternthal, & Tybout, 2002), i.e. a requirement that must be met if students are to perceive these institutions as a credible player within the field of education in engineering. In a way, CTI accreditation is used by low-ranking institution to argue that the educational service they provide is in fact equivalent to the one provided by institutions with a higher reputation. As the latter are often more difficult to access for prospective students due to higher financial costs or entry requirements, this behaviour could be interpreted in terms of Porter generic competitive strategies as being part of a cost-leadership strategy (Porter & Advantage, 1985). In the case of vocational-oriented programmes, it could be argued that CTI certification could be rather a part of a hybrid strategy, a combination of the two traditional single strategies considered by Porter: cost-leadership and differentiation. Indeed, these programmes provide an innovative and more inductive pedagogical experience while at the same time being more accessible in terms of cost. They concentrate in a specific segment- students from disadvantages backgrounds-traditionally excluded from engineering higher education in France.

On the other hand, some institutional messages use QA to build a positive image of the institution beyond the fulfilment of regulatory standards, which implies misleading the public on the nature and outcomes of their certification. The QA process is presented as a certification of 'excellence', while the truth is that CTI's accreditation only ensures conformity to a minimum programme profile and quality standard—it conveys no further meaning beyond this minimum threshold. Some elements of the evaluation are taken out of context and emphasized—i.e. the strong points—while others are not mentioned—the weak points and recommendations. In fact, all CTI evaluations result in an account of strong points, weak points and recommendations.

These are related to the specific context of a given institution and enunciated in a spirit of improvement. Leveraging these fit-for-purpose elements to argue superior performance in the face of competitors is not legitimate. CTI's accreditation is not conceived with the objective of ranking institutions or their programmes. Furthermore, there has traditionally been a tension between official Bologna-related QA mechanisms, such as CTI accreditation, and university rankings or student ratings. The latter have been argued to be reductionist, as they stress only certain dimensions, cause potential negative outcomes and possibly hinder institutional improvement (Adler & Harzing, 2009; Bengoetxea & Buela-Casal, 2013; Boulton, 2011; Darwin, 2017; Holligan & Shah, 2017). In terms of Porter's generic competitive strategies, this behaviour could be interpreted as an element in the implementation of a differentiation strategy (Porter & Advantage, 1985).

7.3. Competitive communication strategies and the Bologna agenda

QA reports and outcomes are meant to be relevant to students, families and other stakeholders, such as employers or public administrations (ENQA et al., 2015). However, a 2014 study on the quality and readability of public QA reports in several countries all over Europe identified several recurrent issues (Udam, Lauri, & Bach, 2018). The findings of this study suggest that the current external evaluation reports are not always easily readable and understandable by potential users. Information found in QA reports is extensive but presented in a format that is too technical and not useful enough for supporting decision making processes (i.e. choosing an HEI). Students and other higher education users rely on rankings, family opinions and other 'non-official' sources of information that provide comparative information on educational programmes and institutions.

The reported problems of transparency suggest that the QA sector suffers from a certain degree of 'marketing myopia'. Indeed QA reports are not sufficiently oriented to the intended audience. Introducing a 'marketing view' into QA processes could help to increase the relevance and awareness of QA processes among the general public.

In response to RQ3, competitive communication could have synergistic effects with the objectives of the Bologna agenda, and, more particularly, they could contribute toward the cause of transparency. Engineering HEIs make an effort to communicate on the effects of the QA outcomes for students and other users. In doing so, they contribute to develop a more readable and user-oriented higher education system. On the other hand, when institutions offer a distorted image of the institution through a misleading interpretation of a QA outcome, both transparency and mutual trust are undermined.

At the institutional level, accountability and improvement could be reinforced due to the powerful incentives for low reputation institutions to legitimate their access to the competitive arena and to improve their level of quality in order to obtain the certification. On the other hand, once a basic level of quality is attained, this type of 'parity' logic does not provide clear incentives to continue the improvement cycle towards excellence.

Additionally, competitive tensions could have an impact over the mutual trust and openness needed for the evaluation process to be a (self) critical and transformative

Table 3. Interactions between competitive communication strategies and the Bologna agenda.

Effects of competitive communication strategies	Bologna objectives	
	System level (transparency and trust)	Institutional level (accountability, enhancement)
Positive	Increased clarity and transparency over the effects of the certification for the students ('customer' or 'user' perspective).	Incentives for low reputation institutions to increase quality level and compliance with regulations to obtain a positive QA outcome.
Negative	Distorted image of the institution, which is presented as 'excellent' or 'better'. Use of the QA result to establish an artificial ranking of institutions.	Lack of incentives to continue enhancement beyond compliance. Improper use of context-bond fit-for-purpose elements can have an impact over the evaluation as a self-critical exercise.

Source: Own elaboration.

exercise. Institutions could have the incentive to hide their weaknesses and transform the QA process into a merely promotional exercise.

Table 3 shows a synthesis of the possible interactions between the identified competitive communication strategies and the Bologna objectives at the system and institutional levels.

8. Conclusions, implications for practice, and further developments

Through the analysis of a purposely chosen higher education population, this exploratory study has been able to show that QA processes linked to the Bologna agenda are a multidisciplinary and complex phenomenon. They are to be seen as regulatory mechanisms, as processes leading to organizational learning, and, finally, they can also be part of competitive strategies of HEIs. This study shows that the analysis of institutional statements can be used as a tool to gauge the importance of these different dimensions of QA for HEIs in a given national system.

Several lessons derived from this study could be addressed to the official French engineering QA authority, CTI. In the first place, the analysis shows that for most engineering HEIs in France, QA is just a way of complying with regulations. Very few HEIs show a perception of QA as an instrument for internal enhancement. Given the importance of fostering continuous institutional improvement for achieving the objectives of the Bologna Process, a clear message for CTI would be to consider ways through which the enhancement and organizational learning dimension could be further stressed when implementing QA processes.

Secondly, the ranking position seems to be related with stressing different dimensions of the QA outcomes as well as with different communication strategies. QA is less present (or even completely absent) in institutional statements from high-ranking institutions, which seems to indicate that it is not considered relevant. QA systems and processes should provide value for all institutions in a given national system. Another recommendation for CTI would be to investigate ways upon which greater value could be provided to high-ranking institutions through QA processes. After all, as stated by Stensaker (2008), evaluating quality while just paying attention to rules, systems and procedures may imply a failure to address key issues, such as excellence, innovation and renewal.

Thirdly, QA has a greater presence in institutional messages from medium and low-ranking institutions. QA mechanisms seem to essentially represent a matter of complying with regulations for medium-ranking institutions. However, certain low-ranking institutions use QA as a source of competitive advantage and a piece of their competitive strategy. QA is presented as having special value for users in specific situations. This is the case of HEIs that implement programmes following the 'apprentissage' path, i.e. vocational-oriented programmes developed partly within a company (Day, 2001). In this case, it seems that QA is a source of legitimacy for innovative pedagogical models that struggle to be considered as 'proper' higher education programmes by academic rankings in a strongly conservative national HEI system, such as the French system. These new pedagogical models have been heavily promoted by the French government and considered as a tool to reduce inequalities in the HE system in France. Several reports have been produced on this topic (see, for example, Dardelet, 2010). In terms of practical implications for CTI and the QA system in France, there is a clear opportunity to improve QA's social impact by identifying and better understanding the situations in which 'official' QA processes act as an alternative source of legitimacy to academic rankings.

A final lesson for CTI is that competitive motivations and dynamics should be taken into account when designing QA processes and mechanisms to avoid perverse effects. Particularly, QA practitioners should be aware that the fit-for-purpose enhancement-oriented elements included in QA processes could turn out to be problematic, since certain institutions might use these elements to artificially build an image of differential advantage. Specific communication strategies should be put in practice to counterbalance or prevent these mis-communication strategies that hinder transparency and mutual trust. QA agencies should be aware of the possible competitive tensions among institutions within their national higher education system and anticipate possible misconduct.

Regarding the possible generalization of results, this exploratory study has enabled to formulate the following hypotheses as to the interactions between QA and the competitive strategies of HEIs in a given context:

- HEIs which lack legitimacy in a given context will be more prone to use QA as a piece to build a competitive strategy.
- The fit-for-purpose elements of a QA process can be leveraged by HEIs with competitive intentions, which may engender problems of transparency.

This study also has implications for HEI managers. Several authors stress that branding and reputation strategies are still in a process of development in the higher education sector (Chapleo, 2010; Lafuente-Ruiz-de-Sabando et al., 2018; Palmer, Koenig-Lewis, & Asaad, 2016) and that higher education brands remain excessively informed by general principles of branding (Palmer et al., 2016). QA in higher education is a relatively new phenomenon in the European Higher Education Area. Our study provides specific elements to characterize the competitive implications of QA processes. HEI practitioners should be aware of these interactions and the potential role that QA outcomes could play in a branding or competitive strategy.

This study has obvious limitations derived from the fact that it is restricted to a particular national system. Furthermore, the content analysis is limited to the study of institutional websites and the statistical analysis conducted is of an exploratory nature. In the future, this work can be further developed in different directions; in particular:

- Explore the competitive implications of QA processes in other national and disciplinary contexts.
- Expand the data set and use other statistical techniques, such as PLS-SEM which enables to go beyond the exploratory stage and to estimate complex cause-effects relationship models.
- Complement the analysis of institutional communications by including other media different from corporate websites, specifically, social media.
- Use other research methods, particularly case studies, to better characterize the different institutional behaviours regarding QA processes and capture internal dynamics of the institution.
- Investigate the way in which students and families perceive the value added by QA processes, and the way in which different outcomes impact student recruitment.

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