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**INTERNATIONAL UNIVERSITY RANKINGS
AND THE EXPERIENCE OF THE THREE
STATE UNIVERSITIES OF SÃO PAULO,
BRAZIL**

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ABSTRACT

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In the early 2000s, the release of the Shanghai Jiao tong Academic Ranking of World Universities (ARWU) was the beginning of the global phenomenon of international university rankings. They influence the decisions of students, researchers, public opinion, and the broader society (Leal et al., 2018) as well as policies in HE and investment decisions and institutional management (Santos e Noronha, 2016; Righetti, 2016).

University of São Paulo (USP), São Paulo State University (UNESP), and University of Campinas (UNICAMP) are three of the most important universities in Brazil, being responsible for around a third of the scientific production in the country (Marques, 2019). Given the relevance of university rankings and those three institutions, this research seeks to understand, through the discourse and perceptions of university managers how international university rankings affect the three state universities of São Paulo. It uses stakeholder theory (Freeman, 1984) to frame the analysis, with a focus on how managers perceive the effects of rankings on stakeholder relationships, and what actions universities might take to manage the impact of rankings in their relationship with key stakeholders.

To answer the proposed research questions, this study follows a qualitative approach with semi-structured interviews with managers at the selected universities. The managers included in the interviewee groups were mostly top and mid-level managers, including the rectors of each of the chosen universities, as well as the directors of the planning units and the coordinators of the units that monitor rankings and control indicators as those three key managers should be the most directly involved in using university rankings.

This study showed that rankings are not yet important to the financial security of those universities, but they do affect how politicians perceive the quality and legitimacy of those universities. They also have an important effect on university international partnerships and are widely used by other HEIs. However, rankings have a limited impact on universities' relationship with the broader society, mainly because they remain mostly detached from indicators of social relevance. Within the universities, managers recognize that rankings have several methodological issues, but they still influence some university activities such as how institutional data is collected and organized. They also see rankings being used internally to inform decisions on matters that are in line with their missions and goals.

Keywords: University Rankings, Stakeholder Theory, Brazil, São Paulo.

The originality of this thesis has been checked using the Turnitin Originality Check service.

Table of contents

I. Introduction	5
A. Research problem and Gap	5
B. Research Purpose and Questions	5
C. Methodology of the study	6
D. Structure of the study	7
II. International university rankings	8
A. Why have rankings emerged, how have they been used, and by whom	8
B. Conceptual and methodological criticisms on international rankings	10
C. The use of university rankings by students and policymakers	14
• Rankings and student choice	14
• Impact on policies	15
D. The use of rankings in universities	16
• Changes in university activities inspired by rankings	16
• Managers and academics perceptions about university rankings	20
E. Synthesis of literature review and research gap	22
III. Higher education in Brazil and the three state universities of São Paulo	23
A. Overview of the Brazilian Higher Education System	24
B. Introduction of USP, UNESP and UNICAMP	25
• History and quick facts	26
• Governance and Funding	27
C. Legitimacy crisis in Brazilian public universities	29
D. University rankings in Brazil	29
E. University Rankings in the state universities of São Paulo	31
IV. Analytical framework	33
A. Stakeholder Theory	34
B. Stakeholder theory in higher education institutions and uses for this research	36
V. Methodology	37
A. Philosophical Assumptions	37
B. Description of the research design	39
C. Data collection	40
D. Ethics Procedures	41
E. Data analysis protocol	42

BRAZILIAN UNIVERSITIES' EXPERIENCES WITH RANKINGS	4
F. Limitations of the study	44
VI. Results	45
A. Manager's perceptions on the impacts and uses of rankings by external stakeholders	45
• University Rankings and university funding	45
• Rankings and university relationship with key stakeholders	47
B. Manager's perceptions on the impacts and uses of rankings by internal stakeholders	52
• Managers critics to rankings	52
• Rankings as tools for institutional learning	55
○ Rankings, institutional research, and data	57
○ Rankings and university's internationalization policies	59
VII. Discussion and conclusion	60
References:	68

I. Introduction

A. Research problem and Gap

Since their emergence in the early 2000s, international university rankings have increasingly gained prominence and space in Higher Education (HE) debates. They have now a wide impact on several stakeholders of universities, with a powerful influence on students and policymakers, as well as other higher education institutions (HEIs). They affect the decisions of students about where to study and how much they are willing to pay for education (Thiengo et al., 2018; Tozini, 2017). In policies, they influence how governments distribute funds for HEIs (Parker, 2013; Vieira & Lima, 2016; Santos & Noronha, 2016; Thiengo et al., 2018), and how they evaluate universities (Finardi & Guimarães, 2017; Thiengo et al., 2018; Vanz et al., 2018).

International university rankings also influence how decisions are made inside HEIs. One study conducted with 171 HEIs in Europe found that 86% of the institutions monitored their position on rankings (Hazelkorn, Loukkola & Zhang, 2014), and “over 70% of respondents said they used rankings to inform strategic, organizational, managerial or academic actions” (Hazelkorn, 2014b). This means, “HEIs are increasingly altering their management to meet ranking criteria, to increase their scores and consequently attract more students and public and private funds” (Righetti, 2016, p.137). Many universities have integrated rankings in their strategic plans and have created institutional research units to monitor rankings results and devise strategies to change their positions (Hazelkorn, 2009; Altbach & Hazelkorn, 2017; Buela-Casal et al., 2007).

While rankings have been widely researched in the past 15 years, the aspect of managers' perspectives on rankings is still under-researched, as it will be shown in the literature review of this study. There is a lack of case studies to understand the influence of rankings inside the university, from the perspective of those who work and lead those institutions, going beyond the analysis of institutional documents. Some previous studies that focus on managers' perceptions about university rankings highlight that views of rankings within universities can be varied and not unified (Kehm, 2016, p.88). Some studies also highlight regional differences in rankings attitudes, with Latin American university leaders being mentioned as often critical or skeptical about international university rankings (Bernasconi & Véliz, 2016, p.49). Leaders are also frequently hesitant to put rankings as a direct goal of their institution (Bernasconi & Véliz, 2016).

Another research gap is that many of the studies on the topic of university rankings come from European and North American countries, and university rankings remain understudied in regards to the Brazilian higher education system, (Calderón, Pfister & França, 2015; Righetti, 2016). Most of the literature in Brazil about rankings evaluate the performance of Brazilian institutions in the rankings (Santos, 2015; Vanz et al., 2018; Santos & Noronha, 2016), or is focused on presenting the history and methodology of those instruments (Vieira & Lima, 2016; Finardi & Guimarães, 2017).

B. Research Purpose and Questions

With the context and research gaps presented briefly above, the purpose of this research is to understand, through the discourse and perceptions of university managers, how international university rankings affect the three state universities of São Paulo. University of São Paulo (USP), São Paulo State University (UNESP), and University of Campinas (UNICAMP) are three of the most important universities in Brazil, being responsible for around a third of the scientific

production in the country (Marques, 2019). These three institutions are currently involved in a joint project called “Metricas.edu” initiated in 2017 that seeks to create a new framework of indicators to measure their performance and improve their international profile (Marcovitch, 2018). In this pursuit to improve their international reputation, these universities have been actively monitoring their position on international rankings. This research seeks to understand how managers and leaders at these institutions perceive the impacts of rankings in their universities, with a focus on their relationship with stakeholders.

The research uses stakeholder theory (Freeman, 1984) to frame the analysis. Stakeholder theory has a powerful descriptive value for this research because the results of international university rankings are widely publicized, being accessible to important stakeholders such as governments, students, and the broader society. Stakeholder theory will help understand how managers perceive the effects of rankings on stakeholders of the university, and what actions universities might take to manage the impact of rankings in their relationship with key stakeholders. Rankings can affect university relationships with its stakeholders, and therefore university management can react to rankings to maintain some control over stakeholder relations.

The main research question of this project is, therefore, “How do university managers of the three state universities of São Paulo perceive the impacts and uses of international university rankings in their institutions?” To answer these larger research questions, the following sub-questions will be useful to maintain the focus of the research and ensure that all aspects of the research question are addressed:

- Do managers believe rankings affect their relationship with their resource providers?
- Do they believe rankings play a role in the university relationship with key external stakeholders such as the government and the broader society?
- How does the internal community of the university, mainly academics and employees, perceive the impacts of rankings and the possible risks of these instruments?
- How do they see rankings being used in their universities' management and activities, if at all?

C. Methodology of the study

To answer the proposed research questions, this study follows a qualitative approach with a collection of case studies of the three state universities of São Paulo. The data was collected through semi-structured interviews with managers at the selected universities. The interviewees were chosen based on purposeful sampling, “based on places and people that can best help us understand our central phenomenon” (Creswell, 2011, p. 205). The managers included in the interviewee groups were mostly top and mid-level managers, including the rectors of each of the chosen universities, as well as the directors of the planning units and the coordinators of the units that monitor rankings and control indicators as those three key managers should be the most directly involved in using university rankings. The final group that participated in the research included two managers from the University of São Paulo (USP), four of the University of Campinas (UNICAMP), and three of São Paulo State University (UNESP). Since the data collection involved Brazilian participants, this research followed the guidelines of the National Commission of Research Ethics (CEP/CONEP). The project was submitted for evaluation in June 2020, and the ethics committee approved the research plan in August 2020 with no remarks. The process can be tracked using the following code: 35847820.1.0000.0077.

The research data were analyzed using qualitative content analysis, focusing on “working with categories (codes) and developing a category system (coding frame)” (Kuckartz, 2019, p.183). To make data analysis more efficient and reliable, a software for qualitative analysis (Atlas.ti) was used in the entire process of this research, and the codes and coding frames were built on that software.

While this study brings important contributions to the field of HE, it is also important to be aware of the limits of this research, and the results presented here. The efforts of this thesis by no means represent a comprehensive and exhaustive analysis on the topic of international university rankings in Brazil. This study brings a multiple case perspective focused on the better-ranked universities in the country and focuses on managers' perceptions about international ranking. The results of this research are therefore limited to the universities analyzed and are also restricted to discussing managers' perceptions, not investigating the impact of rankings in other sectors of the university.

D. Structure of the study

This thesis is divided into seven chapters, including this introduction. The second and next chapter brings a literature review focused on international university rankings. It presents the origins, uses, criticisms, and impacts of those instruments. The chapter starts with a presentation of how international university rankings emerged and why they gained relevance, including who are the main actors using those instruments. It follows with a summary of the main criticisms directed to international university rankings found in the literature. Finally, it presents the impacts and uses of rankings by students, policymakers, and universities. The final part of the chapter presents a more specific review of studies that bring managers' perceptions of rankings.

The third chapter presents the main characteristics of the Brazilian HE system, and how international university rankings are present in this context. It begins by presenting general characteristics of Brazilian HE such as its history and some important information on enrollment rates. It then goes to present the more specific characteristics of the three state universities of São Paulo, which are the focus of this study. It focuses on the unique traits in governance and funding of those institutions. The following parts of this chapter focus on how international university rankings appear in the larger context of Brazil, and more specifically in the three state universities of São Paulo. The last part of the chapter brings a review of some studies that focused on the topic of rankings related to the state universities of São Paulo.

The fourth chapter brings a description of the analytical framework that guides this thesis. It begins by presenting the different theories that were considered for this study and then justifies why stakeholder theory was the best alternative and the chosen theory to compose the analytical framework of this research. It then presents general characteristics of stakeholder theory since its emergence, highlighting the main proposals of the theory. It then focuses on how this approach has been used in studies of HE, specifying how it will be used in this research.

The fifth chapter brings a detailed description of the methodology of this study. It begins with a brief description of the philosophical assumptions behind this research, presenting the idea of social constructivism. It then follows to present details about the research design, including data collection procedures. The chapter also presents ethical considerations taken in the research, including details of the submission of the research to a research ethics committee. The chapter ends with a description of how the data collected will be analyzed, and what are the limitations of the analysis presented.

The sixth chapter presents the results of the study, organized according to the research questions and to the themes presented in the methodology chapter. This chapter includes several citations from the interviews and already presents some brief discussions on the findings. The final discussion about the findings can be found in the last chapter, together with the conclusion. In this chapter, the main findings are repeated and summarized, to present how each research question was responded to in the study.

II. International university rankings

This chapter presents a review of the relevant literature on university rankings, bringing some of the context and history of those instruments as well as presenting the existing literature on the specific topic of university managers' perspectives on the impact and uses of university rankings in their institutions. The literature review presented in this chapter includes 54 sources, including scientific papers, theses, and book chapters. The documents were added on Atlas.ti, a qualitative analysis software to facilitate the organization of the various sources and information. The texts were coded thematically on Atlas.ti and the codes were later aggregated to compose each section of this chapter. The literature reviewed was published mainly in English and Portuguese, since understanding the Brazilian literature on rankings is important to identify the different approaches and gaps in the national context. Some of the main authors included are Lara Thiengo, Sabine Righetti, and Jacques Marcovitch from Brazil, and Ellen Hazelkorn, Simon Marginson, Philip Altbach, and Phillipe Vincke from other countries.

This chapter is organized into four main sections: (a) Why have rankings emerged, how have they been used and by whom; (b) Conceptual and methodological remarks on international rankings; (c) The use of university rankings by students and policymakers; and (d) The use of rankings in universities. Finally, a synthesis of the literature review is presented, highlighting the research gaps that motivate this research project. The first three topics (a, b, and c) provide more contextual information about university rankings. The final section (d) is more specifically related to the research question of this thesis and brings both the changes universities make inspired by rankings as reported in the literature and references that bring the perspective of those working at universities about rankings and the changes they inspire.

A. Why have rankings emerged, how have they been used, and by whom

This section will bring the origins of international university rankings, discussing in what context they emerged and for what purpose. The first university rankings mentioned in the literature emerged in the 1980s in the United States as national rankings¹. The first university ranking was promoted by U.S. News and therefore linked to the media vehicles (Righetti, 2016). The US News ranking was the first to provide easy access to university evaluations and was created to inform student choice of U.S. institutions (Righetti, 2016; Santos & Noronha, 2016).

While national university rankings have existed since the 1980s, international (or global) university rankings emerged much later, only in the 2000s. The Shanghai Jiao tong Academic

¹ Most of the literature analyzed seemed to agree that rankings emerged in the United States, but there is one doctoral dissertation that argues that there was an earlier university ranking in Brazil, published by Playboy magazine. See Gonçalves (2017). In any case, the use of rankings in the United States was pioneer in how the U.S. News ranking was systematically used to evaluate universities and programs (Cabello, Imbroisi, Falqueto, Ferreira & Arruda, 2019).

Ranking of World Universities (ARWU) is considered the first international ranking, created in 2003, which emerged from China's government's desire to have world-famous universities and decrease brain-drain (Vieira & Lima, 2016; Leal, Stallivieri & Moraes, 2018). The ARWU ranking was supposed to map the main differences between Chinese universities and the most renowned international universities (Santos e Noronha, 2016; Vieira & Lima, 2016) so that the country could 'catch up' to those benchmark institutions. Quickly, other international rankings emerged, such as THE, QS, and Webometrics, and today the literature points to around 10 international rankings (Righetti, 2016). These rankings have also created subdivisions based mainly on knowledge fields and geographic areas (Righetti, 2016). It is important to note that the main international university rankings did not emerge from specialists in the evaluation of education (Vieira & Lima, 2016; Leal et al., 2018) and the main ranking providers are from media groups or private companies. Since the emergence of ARWU, international university rankings became widely used and spread by media and universities.

Several factors influence the emergence and dissemination of international university rankings. Righetti (2016) lists six important factors: (1) a human interest in listing and classifying things, (2) the information society, which generates a need for data and information, (3) the expansion of access to HE, which increase the interest for information on universities (4) an accountability culture that also affects universities, (5) the internationalization of HE, leading to international competition, and (6) the need of internal management of universities for information on their performance relative to other players. This last point emerges from the internal management because certain information on university performance is hard to understand without a comparative perspective (Axel-berg, 2018). On these factors, we can expand the internationalization of HE (5), to the emergence and growth of a competitive market of HE at an international level. This means the growth of both globalization, and competitive, market-like, behavior in HE.

Regarding the expansion of globalization, rankings can be considered important tools (and consequences) of a globalized market of HE. Using the definition of Jane Knight (2008): "Globalization is the process that is increasing the flow of people, culture, ideas, values, knowledge, technology, and economy across borders, resulting in a more interconnected and interdependent world" (p.x). Global university rankings are directly linked to an increased flow of people (students and researchers) knowledge and resources across borders since "higher education now takes place in an international setting, with programs, staff and students transferring across national boundaries" (Parker, 2012, p.251). The process of globalization in HE means that stakeholders of HE need to be able to compare institutions in different countries and even continents, because the expansion (or fading) of national borders, allows for direct competition (Vieira & Lima, 2016).

The second aspect of the competitive market of HE is, of course, competition. Rankings allow for global comparison and, consequently, competition in a global market. "Rankings were established to create transparency about the higher education system in a competitive world market for prospective students, their parents, employers" (Berghoff & Federkeil, 2009, p.42). This means universities are not only competing for students, but also for researchers to work or collaborate in those institutions, and for funds (Vincke, 2009). Rankings respond to the need to divide the competition into groups for a better understanding of the expanding and competitive HE scenario (Santos & Noronha, 2016). They separate the 'good' universities from the 'bad' universities and in doing so, they organize the competition in HE. The top-ranked institutions are known as World Class Universities (WCU), and international organizations such as the World Bank diffused the

idea that those represent excellent institutions that should inspire others (Thiengo, Bianchetti & De Mari, 2018). The idea of the WCU became strongly related to the capability of competing in the global market of HE (Salmi, 2009; Thiengo et al., 2018).

Finally, one phenomenon that is tightly linked with the increased competition in HE and has also influenced the propagation of university rankings is the emergence, in various countries, of what is known as New Public Management (NPM). This stream of public management sees the role of the state as steering and evaluating, more than providing and students (in the context of education) and citizens, in general, are seen as consumers (Calderón & Lourenço, 2017). NPM proposes competition, evaluation of results, and increased transparency as a catalyst for quality, with high value to performance measures and accountability (Calderón, Poltronieri & Borges, 2011; Parker, 2012). In this scenario, international university rankings become the prime mechanism for assessing and evaluating performance (Calderón et al., 2011; Parker, 2012).

The release of ARWU was then the beginning of the global phenomenon of university rankings, which went from instruments to inform the choice of students to international instruments and manifestations of competition in higher education (Santos e Noronha, 2016; Hazelkorn, 2009). Therefore, much more broadly than when national rankings emerged, international university rankings now seek to inform not only students but also researchers, public opinion, and the broader society about the best HEIs (Leal et al., 2018). They now influence policies in HE but also in science in general, they influence investment decisions and institutional management, moving far beyond student choices (Santos e Noronha, 2016; Righetti, 2016). They are embedded in a scenario of competition, globalization, and performance evaluations (Calderón, et al., 2011; Parker, 2012). Their strength lies, mostly, in that they provide simple comparable classifications (Hazelkorn, 2014a), converting complex phenomena into seemingly simple and objective indicators and further converting those indicators into labels (Thiengo et al., 2018). Being seen as outside of the HE playing field, rankings get legitimacy and are believed to be objective by those searching for information on the field (Bastedo & Bowman, 2011). We will see in the next section that this is not exactly the case and that the operationalization of the concept of quality in HE can bring challenges and biases to university rankings.

B. Conceptual and methodological criticisms on international rankings

After discussing the emergence and establishment of international university rankings in the last section, this section will discuss some of the most frequent criticisms of those instruments. Despite being largely used by many HE stakeholders as shown in the previous section, there are important conceptual and methodological considerations about those instruments that need to be addressed. First, there is a conceptual issue about what these instruments represent, and what the information they bring actually means. As explained in the previous section, there is a general understanding that rankings can bring objective and neutral measurements of quality in HE. However, since there is not a way to measure the quality of HE directly, rankings have to operationalize this concept into measurable indicators, and thus they “rely instead on proxies for quality” (Gladwell, 2011, p.6). This means that “instead of measuring the quality of teaching, rankings measure the ratio between teachers and students, or the budget of the institution per student, or the number of professors or alumni with Nobel prizes” (Oliveira, 2018, p.120). The choice of the indicators that will be used in a ranking is determinant of the results of that ranking, and “by selecting, privileging and weighting indicators, each ranking presents their vision of what is quality” (Santos & Noronha, 2016, p. 214). This means that each ranking provides only a partial evaluation of universities, both in terms of being incomplete and biased (Vanz, Dominique,

Sanchez & Casado, 2018). The indicators chosen, the aggregation techniques and reporting mechanisms are not neutral or merely technical, but a political or ideological choice (Barreyro, 2008; Vincke, 2009; Gladwell, 2011). The chosen indicators and mainly the weight attributed to them can vary immensely amongst different rankings, without concrete, evidence-based justifications for these choices (Buela-Casal, Gutiérrez-martínez, Bermúdez-sánchez & Vadillo-muñoz, 2007). Rankings assess the quality of HEIs based on certain predetermined indicators that represent each ranking's partial views of quality in HE. If the idea of quality behind rankings included universities being 'fit for purpose', for example, it would not be possible to assess different institutions, which have different goals, under the same criteria. Similarly, if they considered the idea of quality related to 'value for money', rankings would consider how much an institution invests to get those results, or how much students pay for that education. Those criteria, however, are not considered in international rankings. We will see in this section which criteria and indicators are most often used by rankings and the implications of using these parameters. This section will not discuss particular methodologies of each ranking, but bring general remarks on the most frequently used indicators and the problems that might arise from using those metrics.

Since rankings are not neutral, and there is not a universal definition of quality, the first problem that emerges is that they will create one partial vision of what the best universities are but fail to acknowledge that quality is a subjective concept and that there may be different ways to be excellent. This means that the ideological and political choices presented before are often not explicit (Gladwell, 2011), giving the impression that rankings are making a neutral comprehensive assessment of the quality of universities. By ignoring the biases of these instruments, and presenting the institutions on rankings frequently named "best universities" (or variations of that name), "global rankings suggest that there is in fact only one model that can have global standing" (van der Wende & Westerheijden, 2009, p.71).

Moreover, even though each ranking brings its own set of indicators, there is a convergence in what activities and institutions are valued by all the most prominent rankings (Buela-Casal et al., 2007). There is a general understanding that they all tend to prioritize research activities, providing essentially, what is an incomplete, but still rather homogenous vision of universities. This means that even though each ranking uses a particular set of indicators, they all tend to favor the same type of university, because of how they are too narrowly focused on research performance (Hazelkorn, 2009; Righetti, 2016; Leal et al., 2018; Thiengo et al., 2018; Buela-Casal et al., 2007; Altbach & Hazelkorn, 2017). So not only each ranking points to one single model of university, but they all, generally point to the same model of research-intensive institution. However, "research is just one of the several functions that modern universities are called upon to perform" (Goglio & Regini, 2017, p.326), which means that quality of teaching and third mission activities are highly overlooked by international university rankings (Leal et al., 2018; Badat, 2010; Oliveira, 2018; Vincke, 2009, Buela-Casal et al., 2007; Altbach, 2015). "Because of the overemphasis on research, international experience highlights emergent tensions between a university's mission and values, and efforts to enter and/or climb in the rankings" (Altbach & Hazelkorn, 2017, p.9). By overvaluing research over other university activities, valuing one single model of HEIs, university rankings can contribute to a diminishing diversity in HE, with institutions becoming increasingly similar to each other, at the expense of activities undervalued by rankings such as community outreach (Righetti, 2016). This "can seriously undermine universities with important social, intellectual, and cultural roles related to their local, regional, and national societies" (Badat, 2010, p.3). A study by Lee, Vance, Stensaker & Ghosh (2020) analyses the strategic plans of different HEIs and concludes that "top globally ranked institutions are generally less explicit about their

commitment to the third mission relating to their geographic setting compared to mid/low and unranked institutions” (p.236), a result that is in line with the bias brought by the choice of indicators in international rankings.

Research, as one of the main components of most rankings, is generally measured through bibliometric data of scientific production, usually using data on the number of publications and impact (citations) of those publications (Righetti, 2016). While bibliometric data on scientific production can be considered as a reliable and transparent type of indicator (Righetti, 2016), they can also significantly favor certain countries and knowledge areas. Geographically, these indicators “favor universities from English-language nations, because English is the language of research” (van der Wende & Westerheijden, 2009, p.73). Publications in English will have a broader area of influence and, thus, more potential citations, which impacts directly on university rankings, to the detriment of countries where most of the research is published in other languages (Finardi & Guimarães, 2017). This is further intensified because most of the big research databases used by rankings are focused on articles published in English (Gracio, Rosas & Guimarães, 2018). English-speaking countries are further favored by rankings because they avoid the misattribution of the research produced by their institutions caused by having different names attributed to the same institution when translating is necessary (Gracio et al., 2018). This is frequently an issue for other countries because each researcher might translate the university name slightly differently, meaning that when rankings collect data from one institution in international databases, they might leave out several publications that were listed at different, but similar institutional names (Vincke, 2009).

Regarding different knowledge areas, university rankings do not “take into account the fact that the volume of scientific production can vary considerably between fields” (Vincke, 2009 p.15). Areas of knowledge such as Humanities tend to have fewer international publications in peer-reviewed journals when compared to Sciences, which means that universities with a strong focus on Sciences will generally perform better in rankings (van der Wende & Westerheijden, 2009; Vincke, 2009; Badat, 2010; Gracio et al., 2018). Research production indicators may also favor research topics with international appeal, discouraging, to a certain level, university engagement with local concerns (Lee et al., 2020) by leading “research activity away from regional/national issues and engagement and towards areas that are of international interest” (de Rassenfosse & Williams, 2015, p.942).

In addition to research performance, another frequent indicator of quality used in international rankings is reputation (Buena-Casal et al., 2007; Altbach & Hazelkorn, 2017). Reputation is often assessed through surveys with stakeholders or leaders of HE, where they rank institutions according to their perception or nominate the ones they believe to be the top institutions. This type of data is very different from bibliometric indicators, and the main criticism of reputation surveys is the inaccuracy of the responses. As put by Altbach (2015), reputation surveys come close to being popularity contests. Marginson (2017) adds that these instruments, instead of reflecting real performance, represent the opinions from the respondents about the performance of institutions. This is not necessarily representative of actual performance, and hence we can say that reputation is based on anecdotal impressions (Gladwell, 2011). An experiment conducted in the United States asked lawyers to rank law schools across the country and included some fake schools from famous institutions (Gladwell, 2011). Surprisingly, some of the fake law schools ended up being ranked at the top (Gladwell, 2011). There is also some questioning about the profile of the respondents (Vincke, 2009). Even if one believes HE leaders would be able to make accurate ratings about fellow institutions, there is no guarantee that the sample that

responded to the survey is done properly (Vincke, 2009). There is also a risk that respondents sometimes cheat in reputation surveys to favor their institution and harm possible competitors (Bastedo & Bowman, 2011).

Another widely discussed issue with international rankings is that they treat universities as one homogenous unit, when in reality “large comprehensive universities are containers of smaller units whose research and teaching performance may vary widely” (Goglio & Regini, 2017, p.321). This means that certain excellence areas within a university will not necessarily be reflected in international rankings (Santos & Noronha, 2016). Rankings, thus, negate any internal differentiation of institutions, acting as a homogenizing force (van der Wende & Westerheijden, 2009; Santos & Noronha, 2016).

In addition to the criticism presented on the choice of methodology, indicators, and weighting of indicators, some authors also point out the problems in the way rankings expose their results to the wider community, and how they can suggest, or at least fail to avoid misinterpretations. Rankings often communicate the position of universities in groups, especially those further from the top positions. Even when institutions are given specific positions, often the difference between positions is extremely small, and the difference in the actual scores of universities in different positions can vary, meaning sometimes a 20-position difference can be smaller than a 2-position difference (Axel-Berg, 2018). However, ranking results are often used without these considerations in mind, and often institutions with very similar performances are presented as having different positions (Santos & Noronha, 2016). This means that the apparently simple-to-understand results of rankings are often misinterpreted, and different positions do not necessarily reflect the better or worst quality of institutions, being often more related to statistical artifacts and display of results (Buela-Casal et al., 2007; Axel-Berg, 2018). International rankings are also frequently revisiting their methodologies, which makes any comparison between results of different years from the same ranking inaccurate (Righetti, 2016; Axel-Berg, 2018; Leal et al., 2018), even if this is very frequently done by the media, governments, and HEIs themselves. These methodological changes also affect the position of universities on rankings, even when nothing changes in the actual performance of the institution (Altbach & Hazelkorn, 2017).

However, university rankings are not all the same, even though the most famous international university rankings do tend to convert in methodologies and assumptions about what constitutes a good and bad university (Buela-Casal et al., 2007). Rankings can evaluate higher education institutions as a whole, or by field of knowledge. They can also be international, regional, or national in their scope. While some rankings attempt to create ultimate lists of the "best", others have a more narrow scope focusing on issues such as sustainability.

Befitted to a wider view of the role of universities, sustainability rankings have emerged to change the competition scenario in HE. The Times Higher Education Impact Ranking was created in 2018 and uses the Sustainable Development Goals (SDGs) of the United Nations (UN) as the benchmark to evaluate university activities in areas that go from access and inclusion to their contribution to the development of renewable energy sources. Besides covering a broader range of universities' activities, the Impact Rankings allows each institution to submit data for three SDGs of their choice to compose their final average and ranking. This means it allows for some degree of differentiation amongst HEIs. Another university ranking focused on sustainability issues is Green Metrics, launched in 2010 by University Indonesia. This ranking focuses specifically on conditions and policies related to Green Campus and Sustainability.

Besides sustainability rankings, another emergent alternative to traditional rankings is multidimensional rankings such as the U-multirank. In 2011, a communication of the European

Commission recommended the launching of the U-multirank, a project "implemented by a consortium of research organizations—CHERPA Network Consortium for Higher Education and Research Performance Assessment under a two-year project funded by the European Commission" (Douglass, 2016, p.27). This new ranking emerged from the assumption that "higher education institutions play different functions that cater to different users and should be assessed separately." (Goglio & Regini, 2017, p.327). It seeks to clarify how well those institutions perform within their institutional profiles (Jongbloed & Kaiser, 2011). The U-multirank tool is user-driven, meaning that it allows users to select the dimensions that are most relevant to them. It can be used by HEIs "to identify complementary and like-minded cooperation partners" (European Commission, 2013, p.12), and by students to select institutions that match their needs and desires.

Therefore, despite the conceptual and methodological problems, rankings remain a powerful tool of comparison and are highly used by university students, governments, and other stakeholders, as recognized by several authors (Van der Wende & Westerheijden, 2009; Baty, 2014; Douglass, 2016, Hazelkorn, 2014a). There is also some variety in their methods, and new rankings have emerged which address some of the issues found in the most common international university rankings. A survey conducted by Thomson Reuters with 350 respondents from the academic community (including staff and students) revealed that 85% of the respondents classified rankings as useful (from somewhat useful to extremely useful) (Adams, Baker & Smith, 2010). Righetti (2016) divides the impact of rankings on three main groups: students, universities, and public policies. The following sections of this literature review will present how rankings affect and are used by students, policymakers and finally, universities themselves, the latter being directly related to the research questions of this thesis.

C. The use of university rankings by students and policymakers

This section brings a collection of the literature on how students and policymakers use rankings to make decisions, create policies and ultimately evaluate universities. It is divided into two subsections, the first presenting the specific relation between rankings and student choice, and the second bringing cases and possibilities for using rankings in public policies.

- **Rankings and student choice**

The impact of rankings on student choice is one of the most discussed in the literature, as informing student's choice is traced to be the main reason behind the emergence of the first university rankings, back in the 1980s in the US (Righetti, 2016). Rankings have a powerful influence on the decisions of students about where to study and also how much they are willing to pay for that education (Thiengo et al., 2018).

In the United States, Monks & Ehrenberg (1999) analyzed the impact of national rankings way before international rankings emerged in 2004. The authors considered the U.S. News & World Report's rankings and showed that even before rankings gained as much relevance globally, in the U.S, they were already influencing students' decisions about where to apply and where to enroll (Monks & Ehrenberg, 1999).

Some studies show that rankings do not exert the same amount of influence on all types of students. Bastedo & Bowman (2011) highlight that out-of-state students (in the case of US institutions) are more vulnerable to university rankings than in-state students. Similarly, Hazelkorn says that "international postgraduate students are major consumers of global rankings" (2009, p.6). These studies indicate that local students (in some contexts from the same state or the same

country) tend to have more information, even if anecdotal, about universities in their regions, and rankings tend to be the most influential for students that seek universities outside of their living regions.

Some rankings emerged specifically to guide student choice, as the CHE ranking, in Germany. “It includes indicators on teaching and learning, resources and facilities, on research activities as well as information that is important for this target group but is not related to the performance of universities (such as local rents, size of the universities, etc.)” (Berghoff & Federkeil, 2009, p.49). When looking at the impact of the CHE ranking, Berghoff & Federkeil (2009) highlight that rankings have a bigger impact on the decision of students with high professional ambitions, such as those applying for engineer degrees. Even though the CHE ranking’s methodology is different from that of most international university rankings, these findings help understand the possible effects of rankings on students’ choices.

A survey done in Brazil to identify the motivations of students to study abroad showed that 46,9% out of the 679 students surveyed said rankings were important for choosing their host university (Tozini, 2017). Some of the findings in this study corroborate the ideas of Berghoff & Federkeil (2009) regarding the profile of students that consider rankings on their decisions. Tozini (2017) found that the majority of students that were oriented by rankings had high performance in the university’s admission examinations. The study also points that nearly half of the ranking-oriented students were engineering majors (Tozini, 2017).

With this review on the impact of rankings on student decisions, it is clear that the literature, in general, agrees that rankings are a major force influencing student decisions, but also that rankings seem to affect even more certain groups of students. The foreign, or out of state student, with high ambitions for their careers and seeking for graduate-level studies seems to be the most vulnerable to the information provided by international university ranking.

- Impact on policies

Even though most governments are “reticent to acknowledge the full extent to which rankings provide the justification and/or evidence for policy” (Hazelkorn, 2009, p.4), the literature show several examples of how certain governmental policies are at least partially based on the results of university rankings. The impacts of rankings on policies for HE are mainly twofold: how governments distribute funds for HEIs (Parker, 2013; Vieira & Lima, 2016; Santos & Noronha, 2016; Thiengo et al., 2018), and how they evaluate universities (Finardi & Guimarães, 2017; Thiengo et al., 2018; Vanz et al., 2018).

The distribution of governmental funds is often linked to the idea of concentrating resources or promoting excellence programs to foster the emergence of world-class universities in a specific country or region (Hazelkorn, 2009). These initiatives seek to provide funds and support so that some institutions can transform themselves and increase positions in international rankings, creating a more differentiated system of HE in the country but achieving world recognition (Santos & Noronha, 2016). Excellence initiatives can be seen in countries such as Japan, China, Taiwan, and South Korea, and countries such as Malaysia and Taiwan have explicitly set the goal to have universities ranked in the Top 100 (Wai Lo, 2011).

Perhaps the most famous example of this type of policy happened in Europe, after the release of ARWU in 2003. What is known in the literature as the ‘shanghai shock’ (Dobbins, 2012), refers to the realization that European universities, particularly the French ones, were not frequently ranked in the top positions, igniting a widespread reaction of governments to reverse

this situation (Douglass, 2016). “The weak representation of European higher education in (...) global ranking systems coincides with wider concerns over Europe’s competitive position as a knowledge economy” (van der Wende & Westerheijden, 2009, p.77). There was a generalized perception that developed economies needed to perform extremely well on those rankings, meaning that many European economies such as Germany and France were seen as considerably disadvantaged in that respect (Douglass, 2016).

The policies to strengthen European performance on rankings often involved “proposals for the further concentration of funding in networks and centers of excellence” (van der Wende & Westerheijden, 2009, p.77). France, Spain, Denmark, Germany, and the UK all launched excellence programs that would concentrate resources in specific institutions (de Boer et al, 2017; van der Wende & Westerheijden, 2009; Douglass, 2016; Goglio & Regini, 2017). In Germany, in 2005, the Excellenzinitiative aimed at identifying the country’s top institutions, with the main criteria being research performance, and had an initial budget of 1.9 billion euros (Douglass, 2016; Goglio & Regini, 2017). In France, in 2006, the initiative of the *pôles de recherche et d'enseignement supérieur* also tried to improve the country’s ranking performance through the creation of excellent institutions (Boudard & Westerheijden, 2017). These initiatives “illustrate the response in Europe to global competition and clearly indicate the important role played by the global rankings of universities” (van der Wende & Westerheijden, 2009, p.77).

The effects of these funding policies and excellence programs can generate a self-reinforcing cycle. This is highlighted by Righetti (2016) and Finardi & Guimarães (2017) who point out that universities with high publication records will be featured in the top positions in rankings, which might lead them to receive additional governmental funds. With more funding available, those institutions might be able to increase even more their scientific production, making the cycle start again (Righetti, 2016). However, despite the importance of rankings in excellence programs, Bastedo & Bowman (2011) highlight the limits of the influence of rankings in the basic budget of universities, which tends to be more stable and less affected by the volatility of ranking results.

Besides its effect on funding policies, rankings also influence government policies for evaluating the quality of HEIs. Rankings act as control mechanisms and can even be used for accreditation and classification of universities, as it is done in Macedonia, Romania, Jordan, and the Check republic (Thiengo et al., 2018). Rankings are also used to assess the quality of institution from other countries for possible partnerships, with countries that restrict internationalization funds to well-ranked universities in other countries, and even countries such as Denmark that use rankings as part of immigration criteria, favoring graduates from well-ranked institutions (Hazelkorn, 2014a).

D. The use of rankings in universities

This section will present to what extent and how universities change their activities based on university rankings. The first section will focus more broadly on the changes frequently reported in the literature, also presenting some frequent criticism brought by the literature on rankings to the effects of those changes on university mission and quality. The second part of this section will bring the perspective of those working at universities about rankings. Considering that this research focuses on university managers' perspectives of university rankings, this will bring some of the existing studies on that same topic.

- Changes in university activities inspired by rankings

The impact of rankings on universities cannot be underestimated. Bastedo & Bowman (2011) defend that rankings affect universities more than any other stakeholder, even though their purpose was originally mostly directed to informing students and policymakers. Universities take rankings so highly into consideration because the effects of gaining or losing positions are real and cannot be ignored. They have become a tool for universities to attract talents, collaborations between institutions, private and public funds, and thus have great importance for an institution's international competitiveness (Righetti, 2016; Thiengo et al., 2018). They affect university funds because not only they affect policies and fund distribution, but they can also affect students' interests and even the tuition price students are willing to pay. Monks & Ehrenberg (1999) showed that the pricing behavior of institutions was significantly affected by a change in rankings position, meaning mainly that institutions that declined on rankings would offer more generous financial aid to attract more students.

One of the most important studies that show the importance of university rankings to HEIs was the 'Rankings in Institutional Strategies and Processes' (RISP) project, conducted with 171 HEIs in Europe (Hazelkorn, Loukkola & Zhang, 2014). The study found that 86% of the institutions monitored their position on rankings, and "over 70% of respondents said they used rankings to inform strategic, organizational, managerial or academic actions" (Hazelkorn, 2014b).

This means, "HEIs are increasingly altering their own management to meet ranking criteria, to increase their scores and consequently attract more students and public and private funds" (Righetti, 2016, p.137). As put by Vincke, "even if the rankings do not reflect reality today, they will do so tomorrow, because they will have become the reference that universities turn to for their policy" (2009, p.23). Therefore, the impact of rankings on universities is so deep that they can shape what HE will look like in the future because universities adapt and change to look more like the model valued by rankings.

Many universities have integrated rankings in their strategic plans and have created institutional research units to monitor rankings results and devise strategies to change their positions (Hazelkorn, 2009; Altbach & Hazelkorn, 2017; Bucla-Casal et al., 2007). These institutional research units are a big part of universities' reactions to rankings, and they are usually well funded and supported (Hazelkorn, 2009). They monitor ranking results (Righetti, 2016) and are responsible for guaranteeing there is enough precise data about the institution's performance (Hazelkorn, 2009). Some authors highlight that this approach can bring benefits to institutional learning and improvement (Oliveira, 2018; Berghoff & Federkeil, 2009). They mention that "universities and departments take the ranking as a starting point for the analysis of their strengths and weaknesses" (Berghoff & Federkeil, 2009, p.49). However, the impact of global rankings on this can be limited, since they do not always disclose the actual scores of universities in each criterion, and they usually only provide information at the institutional-level, making it hard to understand departmental diversity. Multidimensional rankings such as the CHE (and the more recent and CHE-inspired U-multirank) can be more useful for institutional learning. In any case, institutional research offices are often making the connection between global rankings and the strategic management of universities.

The monitoring of rankings and internal indicators of the university can be used to inform the changes made in the institution to maximize their ranking scores. "The simplest and most cost-neutral actions are those that affect the brand and institutional data, and choice of publication or language (Hazelkorn, 2009, p.277). Activities of organizing institutional data and marketing strategies, and incentivizing publications in English can thus be considered neutral in that they do not present big risks to universities' missions (Hazelkorn, 2009). The first two are common

strategies in most countries, while the latter is emerging in non-English speaking countries as a way to get more citations and visibility to their publications. Thiengo et al. (2018) identified that some Brazilian HEIs have developed strategies such as financing the translation of papers produced by the academic community and providing English courses for students and academics.

Rankings can also be used as benchmarking for universities to compare their indicators and learn from what others do well. Sheil (2016) shows how the Australian university analyzed used rankings for benchmarking: “the GRUP report provided sufficient benchmark data from other top 301–400 universities to reveal that Griffith was underrepresented with respect to doctoral enrollments. This informed its decision in 2010 to substantially increase its investment in the number of doctoral scholarships” (Sheil, 2016, p.27). Hazelkorn (2009) however, warns that rankings should only be used as a benchmark tool if the indicators set by them are appropriate to the goals of that HEI, meaning it still does not make sense to compare performance on indicators that are not helping to advance an institution’s missions. However, as shown before, rankings indicators tend to view universities' missions narrowly and thus will rarely be fit for all institutions.

Some of the most frequent changes pointed by the literature in university’s activities involve restructuring teaching, research and resources internally, generally to favor research in the fields that are more productive according to ranking metrics (Hazelkorn, 2009). The impact rankings have on universities teaching and research activities is generally controversial, with two main risks for universities: (1) focusing on manipulating individual indicators without actually improving quality, and (2) diverting from their original missions and purposes.

The first risk of university ranking behavior emerges when improving ranking positions becomes more important than improving the quality of the institution’s activities. The new mission of the university would then be to ahead in rankings (Oliveira, 2018). When this behavior emerges, universities “set aside their main duty with quality of education and their services to society” (Leal et al., 2018), and “the pursuit of knowledge becomes a secondary conduit towards the pursuit of high rankings rather than an end in itself” (Parker, 2013, p.16). Institutions become overly focused on meeting individual indicators, and lose sight of longer-term results (Parker, 2013). One example of this is university mergers, which have become increasingly more common, and allow universities to increase ranking positions without actually changing anything on how they conduct teaching and research (Vincke, 2009). Mergers are an instrument for improving rankings because “volume remains a major driver of rankings success for universities in the 350–500 range” (Sheil, 2016, p.24).

Universities sometimes alter their staffing policy to hire more foreign or award-winning professors to improve ranking metrics (Righetti, 2016). Kim (2017) describes some institutional policies in Korea that, seeking to hire foreign professors, decided to ban professorship applications from Korean nationals. This can also be considered an example where altering an individual indicator became more important than providing quality since this very restrictive policy might keep away competent scholars from Korea simply because they would not serve the purpose of improving ranking results.

When universities put rankings as their main goal, the second risk emerges, that not only they will abandon the pursuit of quality, but their missions and purposes to adapt to rankings. Since rankings generally put research over the other missions of universities (Hazelkorn, 2009), a blinded pursuit of better positions in those rankings can put universities’ contributions to society at risk. Therefore, while rankings are considered an important tool of legitimacy for universities (Vieira & Lima, 2016), they can potentially divert HEIs away from their social contract with society, reducing the relevance of universities in society and making all institutions similar to each other,

and to the criteria of rankings (Righetti, 2016). They seem to converge in mission and services, generally presenting a focus on competition and revenues, and leaving the agenda of social impact to a secondary role (Parker, 2012). Since third mission activities, as shown before are less valued by rankings, it is expected that the social commitment of universities is the most affected by this blind pursuit of better ranking positions. A study evaluated the strategic plans of 78 universities to find that “top globally ranked institutions are generally less explicit about their commitment to the third mission relating to their geographic setting compared to mid/low and unranked institutions” (Lee et al., 2020, p. 236)

When universities set aside the quality and their institutional purposes to pursue rankings, their activities are turned to improving indicators valued by rankings. Since those indicators are more focused on research activities, and value particularly publications in the natural sciences over humanities, pursuing those indicators can lead to undesirable effects. Because of the disproportionate valorization of certain knowledge fields, universities are led to alter the balance of research in certain areas, undermining basic research or research in the social sciences and humanities, since they tend to be less cited (Righetti, 2016). This means rankings could have the power, to a certain extent to be an agenda-setting agent, influencing knowledge areas, and topics approached in HE (Wai Lo, 2011).

As put by Rhoads, Li & Ilano (2014) “the quest for global recognition and reputation thus threatens more localized considerations universities ought to address as part of their contribution to the public good. By public good, we largely refer to social responsibilities” (p.28). With indicators that tend to value the publication of papers in English, comes a preference for papers on topics that appeal to a wider international audience, that they can get bigger visibility and be published in international journals (de Rassenfosse & Williams, 2015). By focusing the research agenda on ‘hot topics’ internationally, universities undermine the role of science and technology (S&T) in local and regional development.

Sursock & Smidt, (2010) in a report for the European University Association named “Trends 2010: a decade of change in European higher education” mention some possible impacts of university rankings in several different aspects of higher education. The study is not an empirical analysis of how rankings affect HE stakeholders, but it brings interesting reflections on the impact of rankings in policies and institutions. Regarding the impact on institutions, Sursock & Smidt, (2010) demonstrate apprehension to the possible over stimuli for competition between HEIs, with potential effects of homogenization, and lack of interest in cooperation, with possible negative effects on the Bologna process. They also mention the possible disconnection between what is measured and what is important for quality in HEIs (Sursock & Smidt, 2010).

Of course, even if institutions are determined to alter their activities to meet rankings indicators, no institutional efforts can guarantee that a university will be able to change its position on rankings. A “university’s position can be affected, positively or negatively, by what other institutions have done or lacked doing about the indicators used by rankings”(Santos & Noronha, 2016, p.200) since rankings indicate a university position relative to other institutions. Their position might also be affected by methodological changes, as explained before (Altbach & Hazelkorn, 2017). The changes in university rankings are also not immediate, especially when considering indicators of reputation since as seen by Sheil in a study based in an Australian university: “measurable results from programs of transformation precede reputational acknowledgment by as much as 10 years” (Sheil, 2016, p.25). This means that while pursuing better ranking scores demands a lot of effort and huge financial investments, “it is almost never worth either the resources required or the substantial changes in mission or academic programs

necessary” (Altbach & Hazelkorn, 2017, p.8). Considering the possible undesired consequences for knowledge production and social impact of pursuing rankings, it's clear HEIs need to be critical about how they choose to participate in this rankings race. The following section will present how university managers and academics perceive some of the changes presented here, and whether they see such a big impact from university rankings or not.

- Managers and academics perceptions about university rankings

Since the research questions of this project involve perceptions of university leaders about the influence of university rankings, this section will bring studies that also show the impact of rankings from the perspective of the people working at universities. The main source for this section is a book edited by Maria Yudkevich, Philip G. Altbach, and Laura E. Rumbley (2016) that brings eleven case studies each in a different country about how universities react to rankings. In many of these chapters, the authors did interviews with managers and academics, and present their perspectives on the changes and impact of university rankings. Several of those case studies are incorporated in this section of the literature review, mainly the one by Bernasconi & Véliz (2016) that presents the case of Chile, thus relating to the Latin American context also common to this research. With a different methodology, Hazelkorn (2008) brings findings from a survey conducted with support from the OECD and the International Association of Universities (IAU), which presents the views of university leaders and managers from 41 countries.

When dealing with perceptions about rankings, it is important to note that: “the university is not a unified actor’ (Prof). (...) Even within the faculties and departments, views of and attitudes toward rankings (...) are split” (Kehm, 2016, p.88). Therefore, even when there are unified policies for rankings in a university, there can be different perspectives within the institution. Kehm (2016) discusses this phenomenon in one of the chapters of the book by Yudkevich, Altbach & Rumbley (2016) where the German case is discussed. In this chapter, the author conducted seven interviews with leaders and professors of the University of Siegen.

Kehm further analyzes this phenomenon concerning how people in different roles, within and outside of the university, tend to have different perspectives on rankings. The author points out that: “As probably is the case in more countries than just Germany, rankings—be they global or national—are loved by politicians and institutional leaders but mistrusted and criticized by many academic staff and learned societies” (Kehm 2016, p. 80). This puts academics separately from university leaders as to how these two groups perceive university rankings, and the author further mentions the possible differences between disciplines: “Although the central leadership team encourages the faculties to participate in the CHE Ranking, resistance from the disciplines is high and many refuse to participate at all” (Kehm, 2016, p.91). This analysis is, of course, particular to the German case, and may vary depending on the context and on policies regarding academics and university leaders, how their career progression is coordinated amongst other factors.

Another of the case studies presented in the book by Yudkevich et al. (2016) brings a slightly different perspective on how people in leadership positions at universities might perceive university rankings. The chapter written by Bernasconi & Véliz (2016) brings the case study of the Pontifical Catholic University of Chile (PUC), involving ten interviews with people from the central administration and some of the faculties at the university. This study brings a different view of rankings by the university leaders than what was presented in the German case:

In Latin America, global university rankings are often met with skepticism by leaders of the most established universities. Many rectors argue that rankings are biased and unfair to universities in Latin America, as they overly and simplistically reward research alone (especially ‘big science’),

and that they operate from a different concept of mission than that which prevails in Latin American universities (Bernasconi & Véliz, 2016, p.49).

Beyond perceptions of how good, important, or fair university rankings are, the literature also brings findings of how managers perceive the impact of rankings in terms of which changes they attribute to university rankings, and what possible or actual uses they see for university rankings in their institutional context. Managers seem to be generally aware of the possible downsides of blindly pursuing rankings that were mentioned in the previous section. Sheil (2016) also presents a case study bringing how rankings affect Australian universities, focusing on the case of Griffith University. The author interviewed the Vice-Chancellor and President of Griffith in 2014, who said “ If I were to be guided purely by rankings, then many of the ‘jewels in the crown’ at Griffith University, such as music and visual and fine arts, would have been jettisoned long ago, resulting in an impoverished institution”(Sheil, 2016, p.23). This is a recognition by university management of the risk of diverting institutional activities and missions while pursuing rankings that do not account for all, not even most, of the activities performed by those institutions (Wai Lo, 2011; Righetti, 2016).

Therefore, leaders are frequently hesitant to put rankings as a direct goal of their institution. The study done by Bernasconi and Véliz (2016) shows that managers are clear when saying that PUC does not “strategically plan with an eye on its showing in the global or local rankings” (Bernasconi & Véliz, 2016, p.58). One dean interviewed in the same study says: “Not that you work for the rankings, that would be ridiculous. You’re in this institution to work for a mission, a distinct educational mission, but the recognition found in rankings is rewarding and confirmatory of what one is doing” (Bernasconi & Véliz, 2016, p.58). The studies reviewed here show that there will rarely be an interview with university managers that will point to rankings taking over the management strategies of that institution. That can be from a reluctance of admitting how influential rankings are, since as put by Hazelkorn (2008), “there may be little public acknowledgment by HEIs that they have purposely designed a strategy to improve their rankings, but there is growing evidence to the contrary” (p.208). Alternatively, this can be from the fact that university managers are indeed aware of the possible traps of pursuing rankings and try their best to use them cautiously.

This perspective of cautious use of rankings was present in other cases than that of Chile. In the study by Sheil (2016) in Australia, one university leader says that rankings are important “but they are just one measurement amongst many. Don’t pin everything on them” (Sheil, 2016, p.43). Another manager points out the need for universities to “continually evaluate whether such influences [of rankings] are consistent with its long-term vision” (Sheil, 2016, p.23). The study by Sheil (2016) further reveals that while interviewees are attentive to ranking results and indicators, assessments conducted by the government or the institution itself are considered more important than ranking results (Sheil, 2016, p.26).

There is also an indication that leaders do not see all aspects and metrics used by rankings the same way. Hazelkorn (2008) shows that university leaders were more critical to rankings using indicators such as “alumni or private giving, investment, Nobel or similar prizes” (p.212). A case study in Malaysia reveals that university leaders in the chosen HEI were particularly critical about rankings overvaluing scientific production in English, and demonstrated concern for their institution in this aspect (Azman & Kutty, 2016). On the other hand, managers were generally more supportive of metrics regarding “teaching quality, student-faculty ratio, graduate employment, research (including publications, citations, and income), Ph.D. students, finance, student life, selectivity, mission, and the library”(Hazelkorn, 2008, p 212).

Still, managers' cautious and occasionally critical approach to university rankings does not mean that they do not recognize the benefits and uses of those instruments in their institutions. "Despite growing concerns about technical and methodological issues, there is a strong perception among university leaders that rankings help maintain and build institutional position (...) students use rankings to 'shortlist' university choice, (...) and stakeholders use rankings to influence their own decisions" (Hazelkorn, 2008, p.195).

Therefore, it can be said that institutional leaders take rankings seriously, and use them in their management and planning (Hazelkorn, 2008, p.199). Something that frequently appears in the literature is the recognition by university leaders of the positive outcomes of using rankings for institutional learning, finding areas that it is not performing well, and making decisions regarding those indicators. Managers from Chile recognized the importance of rankings for this purpose:

The administrators we interviewed believe rankings may help the institution see what it is not doing well. (...) One example is the indicator in the QS ranking that measures the impact of the university's website: PUC had not realized how important it was for its global presence that it kept a vibrant website until this became evident in the rankings. In order to improve upon this dimension, PUC established a project to enhance the visibility of the university on the web" (Bernasconi & Véliz, 2016, p.60).

These studies show that university managers generally seem to be aware of the potential damage of pursuing university rankings, but that they are also aware of how to use them in certain situations that can bring benefits to their institutions. Therefore, while university leaders and rectors frequently express a desire to improve ranking positions (Righetti, 2016), this section brings a more optimistic view that those leaders do not seem to put rankings above all else in their institutional policies. It is important to note that the studies presented bring only certain regions and institutions, meaning their findings cannot be generalized and leaving a gap for this type of study to be further developed and expanded to new regions and institutions.

E. Synthesis of literature review and research gap

As shown in the literature reviewed in this section, the impacts of rankings are wide and varied, affecting mostly the behavior of students, universities, and policymakers. They are capable of influencing institutional pricing policies, student choices, the focus of universities in certain research topics, how public money is distributed between institutions, and much more. The discussions on the impact of rankings on university behavior have been growing over the past decade, as the importance and use of rankings also grows. Several authors show how much university stakeholders and administrators make use of rankings (de Rassenfosse & Williams, 2015; Hazelkorn, 2014b; Sursock & Smidt, 2010; Hazelkorn, 2009). However, it was also shown that rankings are still not well accepted by many within the academia, and many scholars point out that the results of those instruments are biased and not accurate representations of the quality, frequently favoring universities from the global North and English-speaking countries (van der Wende & Westerheijden, 2009; Righetti, 2016; Yudkevich, Altbach, & Rumbley, 2016; Finardi & Guimarães, 2017; Morosini et al., 2017; Gracio et al., 2018). For being so highly influential, but also so controversial, university rankings became known as an "inevitable" phenomenon (Altbach, 2015; Marginson, 2017).

However, while this literature review was extensive, and shows that rankings are deeply researched, the aspect of managers' perspectives on rankings is still underdeveloped in the field.

There is a lack of empirical, qualitative case studies to better understand the influence of rankings inside the university, and how behavior changes happen. Further, many studies included in this literature review come from European and North American countries, and university rankings remain understudied in regards to the Brazilian higher education system, (Calderón, Pfister & França, 2015; Righetti, 2016). Most of the literature in Brazil about rankings evaluate the performance of Brazilian institutions in the rankings (Santos, 2015; Vanz et al., 2018; Santos & Noronha, 2016), or is focused on presenting the history and methodology of those instruments (Vieira & Lima, 2016; Finardi & Guimarães, 2017). Therefore, not only there is a general global need for a better understanding of managers' perspectives on university rankings, but also Brazil is a country where rankings have been particularly neglected in higher education research. This research gap is partially because only very few universities from Brazil are featured in international rankings, as will be discussed in the next chapter, which presents the context of the case studies selected for this research.

This literature review was meant to introduce the topic of university rankings, bringing some of the context and history of those instruments as well as presenting the existing literature on the more specific topic of this research: university managers' perspectives on the impact and uses of university rankings in their institutions. The contextual information about university rankings is important to create the story behind this research and to provide the reader with the information necessary to make the most of the findings presented in this research, even if such readers might have little previous knowledge about university rankings. The second part of the literature review, less contextual and more specifically related to the research question of this thesis, will be used throughout the analysis of the results of this research. The existing information presented by the literature will be contrasted to what is found in this research in the final chapters of this thesis. The review of the general literature contrasted with the literature that presents managers perspectives on rankings also brings interesting findings that managers perceptions are generally aligned with the specialized literature, as put by Hazelkorn (2008) “Their experience — as the ‘foot soldiers’ of this new HE world — is replicated throughout the literature, hence the gap between their perception and the reality is actually quite narrow” (p.213). The results from this research will show if this is also true for the case studied, or if managers' perceptions from the selected universities are more divergent from the literature.

III. Higher education in Brazil and the three state universities of São Paulo

This chapter will present the context where the institutions selected to compose the case study of this research are immersed. It is divided into four subsections. The first subsection (A) “Overview of the Brazilian Higher Education System”, presents a general background on the development and challenges of higher education in Brazil. The second section (B) “Institutional Context of USP, UNESP and UNICAMP” brings an important focus on the institutions selected for this research narrowing down the focus of what was previously presented in the national context, and presenting the particularities of those institutions. The third section (C) “University rankings in Brazil” introduces how Brazilian universities feature on international rankings. Finally, section (D) “University Rankings in the state universities of São Paulo” brings a more direct discussion of how these universities feature in international rankings.

A. Overview of the Brazilian Higher Education System

Higher education in Brazil is a very recent phenomenon. Unlike many other Latin American countries that, colonized by Spain, had their first universities in the 16th century, Brazil's first HEIs were created only in the 19th century, when the royal family of Portugal, then the metropolis of Brazil, settled in Rio de Janeiro (Righetti, 2016; Oliven, 2002; Neves & Martins, 2016). Before the creation of these first HEIs, and soon after the creation of the first HEIs, only the Brazilian elite, mainly sons of Portuguese families, had access to higher education, and many of them went to Portugal for their studies (Oliven, 2002). However, even when those HEIs were created, they consisted mainly of professional schools and isolated faculties of specific knowledge fields, with research activities being nearly non-existent (Oliven, 2002). Those institutions were created "with the exclusive goal of providing professionals to meet the functions needed by the Portuguese court" (Neves & Martins, 2016, p.96). The first universities of Brazil were founded only a century later, and before 1930, the existing HEIs remained alien from research activities and composed of isolated schools (Neves & Martins, 2016).

In the second half of the 20th century, Brazilian HE began to grow, a movement that happened mainly through the expansion of the private sector (Neves & Martins, 2016). This sector gained momentum particularly after 1970 and kept growing with a business-oriented mindset, culminating in the recognition of for-profit universities in the late 1990s (Neves & Martins, 2016, p.98). Those for-profit institutions nowadays constitute about 40% of private HEIs in Brazil, and some are even present in the stock market (Neves & Martins, 2016). With this expansion of the private sector, unlike other Latin American countries, Brazil maintained its public universities restricted in access, while expanding access to HE mainly through a private sector with sometimes-dubious quality (Calderón & Lourenço, 2017, p.93).

The Brazilian system of HE of today thus has the vast majority of students (75%) enrolled in private institutions (INEP, 2019) since they were the main channel of massification in Brazil. The differences between the private and the public sector are strong, characterizing two "well defined and distinct segments (Neves & Martins, 2016, p.99). Private universities are generally not focused on research, and "93% of the graduate programs are located in public institutions, and those are responsible for 97% of the scientific production of the country" (Grupo assessor, 2007, p.7). The different intensity of research activities is also reflected in a difference between the professors of public and private universities. While in public HEIs 50% of the professors have doctoral degrees, in private universities this number is only 18% (Neves & Martins, 2016). Private universities also concentrate programs in the evening, while public universities generally offer programs during the day, a difference that matters when students need to work (Neves & Martins, 2016).

Both private and public HEIs² respond to some level of governmental regulation regarding their activities of research, teaching and outreach, the level of qualification of their professors, the opening and accreditation of degrees and courses (Neves & Martins, 2016), but private and public sectors of HE in Brazil differ greatly in their funding system. Private universities rely heavily on

² The diversity of the Brazilian HE system cannot be reduced to public and private divisions (Stallivieri, 2007). Within private HEIs there are not only universities, but also other forms of HEIs that are not necessarily linked to research and perform mostly teaching activities. There are also private for profit and a range of not for profit private institutions, including some confessional schools. Within the public system there is also a division between universities and other types of HEIs, as well as a division between the levels of government responsible for those institutions, that can be federal, state or municipal. This research focuses on public universities of the state of São Paulo, but for more information on the architecture of the HE system in Brazil, consult Stallivieri (2007).

tuition fees³, while public universities are not allowed, by law, to charge tuition fees in most cases and are generally maintained with public funds (Neves & Martins, 2016). Universities, students, and research centers can also apply to receive funds from funding agencies: “the financing of research in Brazil happens through sponsor agencies linked directly or indirectly to public ministries that are: CNPq, Finep, Capes, FNDCT, BNDES, beyond state funding agencies that constitute the FAPs – Foundations for Support of Research⁴” (Dudziak, 2018, para.16).

These differences between the two segments are reflected in the fact that there is generally “no competition between public and private institutions for students. (...) Competition for students happens mainly between private HEIs” (Soares, 2002, p.123). There are some exceptions within the private sector of elite private institutions, that are more recently competing with public universities, but this remains a minority and not the general character of the private sector of HE in Brazil. The general characteristic of these HE segments remains of selective public institutions and a massified private system that absorbs most of the country’s demand (Salto, 2018).

With the expansion of the private sector, Brazilian HE today is large in numbers, being the largest higher education system in Latin America (Salto, 2018). It is currently composed of over 2600 HEIs, out of which 2306 are private institutions and only about 300 are public (INEP, 2019). Those private institutions respond for about 75% of current enrollments (INEP, 2019). Despite being large in numbers, the Brazilian HE system is rather small in participation. With more than 2600 HEIs (INEP, 2019) and 8.6 million enrollments, still, only about 20% of youth attend HE (INEP, 2019) a number that is low even when compared to other Latin American countries (Salto, 2018).

The low participation of Brazilian youth in higher education is further aggravated by the deep inequalities present in the system:

Despite representing 54% of the college-age cohort (18-24), those who declared themselves as "pretos" or "pardos" in the Census surveys, which we will refer to collectively as “blacks,” makeup only 32% of enrollments in HE, while whites, who are 44% of the college-age group make up 66% of those attending college. (Pedrosa et al, 2014, p.10).

In Brazil, therefore, while “the enrollment growth is noteworthy (...) the persistence of enormous social inequalities regarding access and completion of higher education remains an urgent challenge to be solved” (Neves & Martins, 2016, p.118). Both public and private institutions are still faced with these challenges, since the overall enrollment rate of the country is still low, and there is still a socioeconomic division among those who participate in the public and private sectors of HE.

B. Introduction of USP, UNESP and UNICAMP

This section will introduce the institutional context of USP, UNESP and UNICAMP. The section is divided into two subsections, the first contains some general characteristics and history of those institutions and the second subsection discusses the governance and funding schemes of those institutions.

³ While they rely heavily on tuition fees, they also receive public funding through tax exemptions linked to the institutions offering scholarships to underrepresented groups of students. (Salto, 2018).

⁴ Those are some of the governmental funding agencies in Brazil that finance research projects in universities. CNPq, Finep, Capes, FNDCT and BNDES are linked to the federal government and the FAPs are linked to state governments. FAPESP is the funding agency linked to the state government of São Paulo.

- History and quick facts

USP, UNESP, and UNICAMP are owned by the state government of São Paulo, the richest and more populated of the 27 states in Brazil. São Paulo is a financial and intellectual hub in Brazil, and “more than 40% of Brazilian research papers have an author affiliated to an institution in São Paulo” (Cross, Thomson & Sinclair, 2017 p.40). These three universities are some of the most important producers of science in Brazil, being responsible for about 35% of the Brazilian scientific production (Marques, 2019). They have almost 70 thousand graduate students combined (Naoe, Pacheco, Bernardes, Dias & Escobar, 2019), which represents almost half of the graduate students of the country (Geocapes, 2020). Figure 1 below shows the important impact of these institutions in Brazil considering their scientific production:

Figure 1: Research Performance of Brazilian leading universities 2011- 2016

University	Web of Science Documents	Category Normalized Citation Impact	% Documents in Top 1%	% Documents in Top 10%	% Industry Collaborations	% International Collaborations
Universidade de Sao Paulo	54,108	0.93	1.06	7.96	0.83	35.83
Universidade Estadual Paulista	20,023	0.79	0.69	6.10	0.30	27.77
Universidade Estadual de Campinas	17,279	0.94	1.22	8.35	1.11	30.57
Universidade Federal do Rio de Janeiro	16,203	0.93	1.11	8.18	1.85	38.70
Universidade Federal do Rio Grande do Sul	14,611	0.89	0.86	6.76	0.98	30.39
Universidade Federal de Minas Gerais	13,294	0.88	0.67	6.24	0.90	31.22
Universidade Federal de Sao Paulo	10,667	0.93	1.05	6.15	1.24	28.78
Universidade Federal do Parana	8,233	0.67	0.44	5.31	0.84	27.45
Universidade Federal de Santa Catarina	7,908	0.91	0.66	6.79	1.09	32.41
Universidade do Estado do Rio de Janeiro	6,433	1.01	1.45	8.98	1.04	39.33
Universidade Federal de Pernambuco	6,420	0.73	0.48	5.51	0.76	30.51
Universidade Federal de Vicosa	6,373	0.63	0.56	4.33	0.60	20.76
Universidade de Brasilia	6,218	0.89	1.13	6.10	0.77	33.07
Universidade Federal de Sao Carlos	5,794	0.72	0.50	6.28	0.62	29.19
Universidade Federal de Santa Maria	5,750	0.65	0.24	4.96	0.45	18.89
Universidade Federal do Ceara	5,621	0.76	0.75	6.12	0.66	29.41
Universidade Federal Fluminense	5,441	0.71	0.70	5.99	1.43	30.42
Universidade Federal de Goias	4,217	0.74	0.81	5.90	0.88	23.33
Universidade Federal da Bahia	4,198	0.81	0.88	6.77	0.69	31.23
Universidade Estadual de Maringa	4,067	0.61	0.44	4.50	0.59	18.83

Source: Cross et al., 2017 p.42

The University of São Paulo is the oldest and biggest of all three universities. It was created in 1934, making it one of the first universities in the country. It was a pioneer in terms of bringing research to HE in Brazil, being considered the first research-intensive university in the country (Oliven, 2002). It opened many different fields of research previously not present in Brazil and for that, USP had to invite many scholars from abroad to establish its faculties and research centers (Granzotto, 2010). USP currently has 59.000 undergraduate and 29.000 graduate students distributed in eight campuses in different cities of the state of São Paulo (USP, 2019).

The São Paulo State University is, by contrast, the youngest of the three. It was created in 1976 from the junction of separate institutes of higher education spread through the state of São Paulo (Granzotto, 2010). Due to this history of unifying previously independent schools, UNESP is a truly multicampus university, with currently 24 campuses spread mainly in small and medium cities of the state of São Paulo including 40.000 undergraduate and 14.000 graduate students (UNESP, n.d.). In 2014, UNESP became the first of the three universities to implement affirmative social and racial quotas, intending to have “50% of the vacancies with students from the public

education system, reserving 35% of these vacancies for students who declared themselves to be black, brown or indigenous” (UNESP, n.d., para.6).

Established in 1966, the University of Campinas was created to provide the country with appropriate graduates to fill the needs for technology and economic growth (Granzotto, 2010). It is the smallest of the three state universities of São Paulo, both in the number of students (40.300) and campuses (3). Like the other two, it is very selective in its admissions, having received over 73.000 applications for only 3.300 places (UNICAMP, 2017). It has the highest proportion of graduate students amongst the three universities, with 19.500 undergraduate students and 17.000 graduate students (UNICAMP, 2017).

- Governance and Funding

When compared to other institutions in the country, the three state universities of São Paulo have some advantages in terms of funding and autonomy. These universities are currently granted 9.75% of the Tax on the Circulation of Goods and Services (ICMS), which is passed on to them monthly by the state, and then divided between the three universities (Cabral & Queiroz, 2020; Alves, 2019). This tax is dependent on the level of consumption of goods and thus the economic health of the state of São Paulo. The amount universities receive is directly affected by the amount collected by the state. This means these universities need to establish some good management practices such as creating a savings fund when tax collection increases to prevent facing challenges during economic crises (Alves, 2019). While this was not always true for these universities, rectors seem to be aware of the challenges and responsibilities that come with this funding scheme (Alves, 2019). Like most public universities in Brazil, the three state universities of São Paulo also receive funds from support agencies such as CAPES and Cnpq at the federal level, and FAPESP at the state level.

Since 1989, these universities have been granted a level of autonomy unlike most public Brazilian HEIs, including autonomy on their financial management (Cabral & Queiroz, 2020; Alves, 2019). This level of autonomy was granted in a process of political disputes between the government and these three universities, where the government ultimately conceded autonomy to avoid further battles with those institutions (Kohtamaki & Balbachevsky, 2019, p. 329). The financial aspects of their autonomy mean that they will always receive the assigned funds with no condition to performance, and will be responsible for ensuring that these funds are used properly to maintain their activities, with some limits for example on their ability to charge tuition fees (Kohtamaki & Balbachevsky, 2019, p.33). Their autonomy is also extended to internal policies and management and so they are free to decide on recruitment and careers, for example (Kohtamaki & Balbachevsky, 2019, p.33).

The autonomy of these three institutions is mediated by the Council of Rectors of the State Universities of São Paulo (CRUESP), where those three institutions share their plans and discuss decisions, to have a somehow coherent approach and to be able to back their decisions into those well-informed discussions (Cabral & Queiroz, 2020). This council includes the rectors of the three state universities, as well as two members of the government (Decree nº 24.951, 1986). The objectives of CRUESP are (1) strengthen the interaction between the state universities of São Paulo, (2) propose possible ways for them to act together, (3) To join efforts to the development of those universities, (4) advise the governor in matters of higher education, and (5) analyze and propose solutions for issues related to teaching and research in the state universities of São Paulo

(Decree nº 24.951, 1986). This means that while those institutions are autonomous, they are also fundamentally connected, and they make many decisions and positions collectively.

These universities have similar policies regarding internal governance, that are, to a certain level common to many public universities in Brazil but that is intensified in the State universities of São Paulo due to the characteristics of their financial and administrative autonomy (Cabral, Terra & Muzy, 2020). Some important governance characteristics of those universities are: professors and professional staff are hired as civil servants, university leadership is a non-professionalized function with managers being chosen through elections, central leadership is relatively weak, and university governance is mainly led by interests of internal groups (Cabral et al., 2020; Balbachevsky, 2015; Durham, 2005). These characteristics are linked to traditional university governance where collegiality has more presence than managerial and bureaucratic ideals, even though in many countries university reforms are leading to an increase in corporate ideals in university governance (Sahlin & Eriksson-Zetterquist, 2016).

An important aspect present in those universities is that they generally hire professors and professional staff through public *concours*, and those hired generally become civil servants (Freitas, 2010). This has many consequences for the daily activities of universities, and while it brings important benefits, it also brings a certain rigidity to these institutions, since hiring and firing becomes a complicated process. Public servants usually have stability in their jobs, and their salaries cannot be reduced easily, which means these universities compromise a big part of their budgets with their employees (Durham, 1998), including professors, support staff, and even retired employees, that still receive benefits paid by those universities (Cabral et al., 2020).

A second point worth noting is that in those universities, managers are generally professors that assume temporary jobs as university leaders or rectors on top of their regular duties as researchers and teachers. This means that, while they generally have a good understanding of university activities, they are not trained for managerial jobs, and their main profession is not that of being university managers (Freitas, 2010). Management in those universities holds, therefore a “non-professionalized trait, where senior academics fill the key positions in the university’s administration on a non-permanent basis” (Kohtamaki & Balbachevsky, 2019, p. 336).

“From the bottom rung of the departments up to the rectorship, university authorities are chosen through electoral processes where academics and, amongst them, full professors, play a central role” (Kohtamaki & Balbachevsky, 2019, p. 336). The elections are held under democratic ideals where professors, staff, and students vote (Durham, 2005). With a large number of academic units in those universities, researchers estimate they hold about one election per day (Cabral et al., 2020, p.246). In the same way that rectors and department leaders are elected, decision-making in those universities is in many cases linked to the academic senate, where representatives of students, staff, and professors vote (Durham, 2005). This idea of democratic governance and university management led by the interests of specific groups within the organization is not always seen as a positive for universities. Researchers like Durham (2005) argue that university governance should be directed to achieving organizational goals such as teaching, learning, and social engagement, instead of adopting this democratic ideal of interest groups within the organization. Durham (2005) also argues against the lack of hierarchy in university decision-making that is derived from the overemphasis on the egalitarian participation of different groups in university management. She noted that different groups would have different levels of competence when making decisions on certain topics, making some degree of differentiation beneficial for achieving the goals of universities (Durham, 2005). An important idea put by Durham (2005) is that universities exist to

fulfill specific goals to society and not as organizations to promote the interests of specific groups, and the governance model should reflect those organizational goals.

C. Legitimacy crisis in Brazilian public universities

Universities around the world have been recognizing the growth of a legitimacy crisis in HE: “pick up almost any newspaper on almost any day, and it will show that repeatedly in recent years we seem to have failed to make the case to our communities and our media. And occasionally, we’ve scored our own goals by appearing insular, privileged and self-serving” (Wareing & Grant, 2020, para.4). There is a general trend of questioning public investments in higher education, and Brazilian universities are not immune to these criticisms, affecting public universities in the country, with questions on the management of universities themselves, but also to the returns of those investments to the general society.

The state universities of São Paulo have also been facing increasing criticism by the government, and to a certain extent by society, regarding how much money they spend and what results and impacts they bring. Governmental bodies have been positioning themselves against the direct transfer of state taxes to universities, arguing this hinders the ability of the state to change the intensity of investments in certain sectors depending on that moment’s priorities (Protti, Luque & da Cruz, 2012). They also argue that universities have been mismanaged and are not spending resources wisely. In 2019, the Legislative Assembly of the State of São Paulo (Alesp) opened a parliamentary inquiry commission (CPI) to investigate possible irregularities in the management of resources in the three state universities of São Paulo. While this can be an appropriate way to verify if public institutions are using public resources responsibly, the process was permeated by hostilities towards public universities and some politicians and university professors arguing that the commission was installed without a defined investigation question, and that was becoming a place to break university autonomy (Veja, 2019). In any case, the commission showed that the state universities of São Paulo have a lot to improve in terms of communicating their roles and activities with the broader society (Agopyan, 2019).

Regarding the returns brought by universities, this is a well know discussion in many countries, intensified in Brazil because public universities are generally free of tuition, but highly selective in their admission, and thus “the whole society would be transferring a large amount of resources to public universities that cater mostly to the richest segments of the population” (Protti et al., 2012, p.2). This criticism shows a misunderstanding of university's activities, reducing them to teaching institutions. As seen before, public universities in Brazil are the main producers of science in the country, but there remains a misunderstanding of their role and value by governments and society.

This crisis scenario is important to understand the context when studying the perceptions of managers about the importance of rankings in Brazil. If rankings can be considered status signals for universities, this scenario will increase their attention to ranking results. As put by Brankovic, “the more contested the quality is, the more attention audiences, but also organizations, pay to status signals” (2018, p. 696). The results of this research should explore this idea in the aspect of the uses of rankings for external communication and policies of universities.

D. University rankings in Brazil

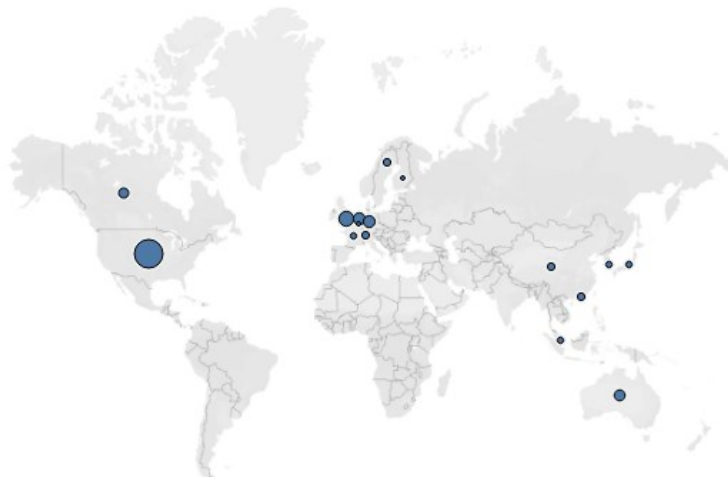
As shown in the literature review, the inclusion in this global market of HE through university rankings does not benefit all universities and countries in the same way. There is a clear

geographical division in the performance of global rankings, where universities from the Global North and English speaking countries dominate the top positions, at the expense of the Global South (van der Wende & Westerheijden, 2009; Righetti, 2016; Yudkevich et al., 2016; Finardi & Guimarães, 2017; Morosini et al., 2017; Gracio et al., 2018). As shown before, this North/South imbalance is partly due to the methodology and indicators of most rankings, which depict one particular vision of quality in HE (van der Wende & Westerheijden, 2009; Righetti, 2016; Finardi & Guimarães, 2017; Morosini et al., 2017; Gracio et al., 2018). Latin American universities generally find themselves excluded from the international instruments that promote visibility and measure performance (Santos, 2018).

Another possible factor for the poor performance of Latin American and Brazilian universities in international rankings is that they tend to play a special role that goes far beyond teaching and research (Ordorika & Lloyd, 2013), with an amplified social role that goes from strengthening institutions to solving the countries' issues (Ordorika and Pusser, 2007; Ordorika and Rodríguez, 2010 In Marope et al. (2013). Those roles are rarely assessed by international rankings, as put by Leal et al. (2018) "community outreach, considered to be one of the purposes of higher education in Latin America, has been totally neglected" (p.68). These universities invest a lot of money and effort in community outreach, and that investment is generally not valued by university rankings. In Brazil, universities are legally obliged to maintain research, teaching, and third mission activities, and the legislation reinforces the mandatory nexus between those activities (Righetti, 2016).

This situation is illustrated by the map below, which shows the geographical distribution of the top 100 institutions in the Times Higher Education World University Ranking:

Figure 2: Top 100 universities - THE World University Ranking



Source: Elaborated by the author using data from THE World University Ranking 2019

As seen in Figure 2, Latin America had no universities featured in the top 100 of Times Higher Education World University Ranking 2019. This is reflected in how Brazilian institutions are positioned globally. In the 2014 edition of THE World University Rankings and the ARWU ranking, only two Brazilian universities feature in both classifications, with six featured in the ARWU and two in THE (Santos & Noronha, 2016). Those featured institutions were all public, and private universities in Brazil are generally not featured in any of the main lists, partially due

to them being generally more focused on teaching and less research-intensive, as shown previously in this chapter⁵ (Grupo assessor, 2007).

Some studies that try to understand why Brazilian HEIs have such a low performance on international university rankings find that issues related to the English language, internationalization, and impact of publications are the main barriers for better performance (Finardi & Guimarães, 2017). While Brazil features well in terms of the volume of academic publications globally, the impact of such publications is low, and the language of publication is a big factor in this low performance (Finardi & Guimarães, 2017). The low levels of English proficiency are an important obstacle to Brazilian universities, as it not only hinders publication impact but also the attraction of students and professors from abroad, which are generally included in internationalization measures in university rankings (Finardi & Guimarães, 2017). Most Brazilian universities do not score any points in rankings criteria of international faculty, not international students (Vanz et al., 2018). Santos & Noronha (2016) further highlight that the main difference between the top-ranked Brazilian university and the top rank American university is on indicators related to internationalization.

Due to the high impact of rankings for universities attracting students and researchers (Righetti, 2016), the poor performance of Brazilian universities can negatively influence the flow of students internationally, especially in a context where Brazil is traditionally sending students abroad, and not receiving them (Morosini et al., 2017). This could lead to not only brain drain but also money drain, coming from potential tuition fees, funds for academic cooperation, and externalities of HE. Hazelkorn shows several examples of countries that restrict internationalization funds to well-ranked universities in other countries, and even countries such as Denmark that use rankings as part of immigration criteria, favoring graduates from well-ranked institutions (2014a, p. 14).

Interestingly enough, rankings were even included in a public policy in Brazil called Science Without Borders, where university rankings, particularly THE and QS, were defined as one of the criteria for choosing where to send students (Righetti, 2016). Had this criterion been used by other countries, very few Brazilian universities would receive international students and funds. It can also be said that the criteria of funding and quality assurance agencies in Brazil such as CAPES have a large convergence with rankings criteria, mainly regarding the use of bibliometric data and research production indicators (Marcovitch, 2018). Some studies also show that several Brazilian universities such as UnB and UFABC include improving international university rankings as an explicit goal in their strategic plans (Thiengo et al., 2018). Therefore, despite many criticisms, university rankings are still influential in Brazil, both at the institutional and governmental levels.

E. University Rankings in the state universities of São Paulo

The performance of the state universities of São Paulo on international university rankings became well known and discussed after 2011 when USP was classified in the 178^o position of THE World University Ranking (Righetti, 2016, p. 170). From that moment on, international rankings became frequently discussed in Brazil (Righetti, 2016). Even without many Brazilian institutions featuring on the most famous global rankings, the state universities of São Paulo are some of the best-ranked institutions of the country. The high-quality science produced by those universities is

⁵ While private universities participate little on global rankings, they have strong interests in participating in national rankings and display their results publicly as part of their advertisement strategies (Barreyro, 2008)

certainly a factor in their good performance, and some studies also show that the best performing institutions in Brazil are generally close to large urban centers, specifically, proximity to the city of São Paulo (Cabello et al., 2019). The state universities of São Paulo all have at least one campus less than 150km from São Paulo.

This positive achievement is further evidenced by the fact that two of those universities (USP and UNICAMP) explicitly mention their rankings performance in their institutional websites, as a part of the key information given in the English version of the website, one that is meant to be used by prospective international students and partners.

The importance of university rankings to those institutions is also shown by their participation in the “Metricas.edu” project, a public policy and research project developed in partnership with the Council of University Rectors of the State of São Paulo (CRUESP) in 2017, set to finish in 2022. The goal of the project is presented as defining the indicators that could best represent to society the contributions of these public universities (Marcovitch, 2018) being directly linked with a quest for public recognition and dialogue with key stakeholders such as the government and society, an important goal given the deteriorating scenario presented in the previous section. The study puts a strong emphasis on university rankings and monitors the results of the three universities on all of the most important international rankings, publishing a report yearly on their website. As put in the introduction of the first book resulting from this project “this study points directions for these institutions that are already leaders in their own country (...) to become even more present in rankings that measure academic excellence throughout the world” (Marcovitch, 2018, p.9).

The “Metricas.edu” project shows recognition of rankings but proposes that universities should reverse the logic where rankings evaluate universities and instead appropriate the rankings that best suit their missions and use them for internal institutional improvement (Marcovitch, 2018). The project thus proposes a critical use of rankings by those universities, one where they recognize the importance and potential of those instruments and use them selectively to improve their activities and communication to society. One important initiative of the project is to organize the university’s data, to make it more easily understandable and available. The three participating universities have created intelligence centers with this purpose, and they aim to go beyond the traditional publication of statistical reports (Marcovitch, 2018). These ideas of selective use for institutional learning and organization of data are widely documented in the literature presented in the previous chapter.

Since monitoring, and even featuring, in university rankings is a recent thing for the state universities of São Paulo, there is not much specific literature on the topic, as explained in the previous chapter. There is, however, one very important study conducted by Righetti (2016) where she interviewed the rector of USP at the time, Marco Antonio Zago. The findings of that interview will be integrated throughout the results chapter and contrasted with the perceptions of current managers and rectors. This study was already mentioned in the literature review of this thesis for the extensive work on analyzing the role and state of international rankings in Brazil, but the empirical part with the interview could not be presented before the context of the Brazilian HE system and the state universities of São Paulo, thus that part will only be integrated into the forwarding parts of this thesis.

The interviews with Zago revealed that, at the time, the impact of rankings at USP was mostly restricted to monitoring results and using them for marketing efforts (Righetti, 2016). The rector at the time did not declare explicitly wanting to improve the university’s ranking positions, and neither conducting efforts to hire foreign professors or award bonuses for professors with high

impact publications, which were responses frequently reported in the literature (Righetti, 2016). Zago was overall critical of rankings and negative towards the possibilities of using rankings in the management of USP, mostly recognizing the benefits of rankings as being only bringing international visibility. At one point the former rector mentions "I will not set a team to plan how we can improve on rankings. I can leave that to the next rector" (Righetti, 2016, p.165). The current rector and successor of Zago, Vahan Agopyan, did not set a team simply to pursue rankings but did create an institutional research office that is, amongst other things, in charge of monitoring ranking results. This movement of creating offices that monitor ranking results was not present in 2016 when Righetti interviewed the rector, but came strong in the following years, with all three state universities creating some offices with a similar purpose. The managers of those offices were included amongst the interviewees for this thesis, as will be explained in Chapter 5.

IV. Analytical framework

The analytical framework in research is important to help organize the large amounts of data collected, particularly in qualitative research, and find the pieces of that data that build a coherent narrative about the topic explored. It is the lenses through which the topic will be analyzed and presented. Together with the research question, the analytical framework helps to identify the most relevant pieces of that data and select what will be included in the analysis, finding the 'treasures' in a pile of data.

Many different frameworks can be used to look at one research object, meaning that there is not one single suitable theory to be used when dealing with one specific topic. To find the most suitable framework for this study and to help respond to the question of how university managers perceive the uses and impacts of university rankings, this research used a data-driven method. This means that the interviews conducted were open-ended, and sought to answer the research question without a predefined analytical framework. Therefore, several frameworks of analysis were considered during the course of this research, and the chosen one was decided after conducting a preliminary analysis of the data. This is important because in qualitative research, especially when following constructivist paradigms, it is not always interesting to narrow down the interview questions too much in the direction of a certain theory, so this approach allowed for the interviewees to bring points that could not have been foreseen by the researcher, and the final product of the research can be considered a mutual and interactive construction.

Three possible theories were considered during the course of this research: Strategic Management, Resource Dependency Theory, and Stakeholder Theory. After an initial analysis of the data, it was clear that one thing was present in every interview: how rankings help or hinder universities' relations with their stakeholders. This pushed the choice of the analytical framework towards Stakeholder Theory, which will be presented in this section. It is important to briefly justify the choice for Stakeholder theory over the other two frameworks considered.

Resource Dependency Theory (RTD), brings the key idea that "the need for resources, including financial and physical resources as well as information, obtained from the environment, made organizations potentially dependent on the external sources of these resources"(Pfeiffer & Salancik, 2003, p.xii) and that organizations would then act "strategically to manage their resource dependencies" (Pfeiffer & Salancik, 2003, p.xii). It considers that universities would act to secure important resources and try to reduce dependency on sources that could hinder their organizational

survival. This theory could help explain why universities consider rankings in their management assuming that rankings can mediate important resources in the form of paying students, partnerships with other HEIs, and governmental funds, as shown in the literature review (Thiengo et al., 2018; Monks & Ehrenberg, 1999; Tozini, 2017; Righetti, 2016; Parker, 2013; Vieira & Lima, 2016; Santos & Noronha, 2016). While this point of view is valid, it brings limited possibilities for analyzing Brazilian public universities since, as explained in Chapter 3, their funds come from governmental budgets that are not related to performance and they do not charge tuition fees from their students. The direct impact of ranking in their resources is, therefore, very limited and this theory alone would be insufficient to explain why those universities monitor rankings.

Strategic Management is a broad concept that is highly used both in business (Halachmi, Hardy & Rhoads, 1993) and public sectors (Huges, 2003; Poister, Pitts & Edwards, 2010; Bryson, Berry & Yang, 2010; Bryson, Edwards & Slyke, 2018), and increasingly, in higher education (Brewer, Brewer & Hawksley, 2000). The more traditional views that pioneered the field were mainly concerned with the idea of strategic management linked to planning, order, and purpose. As Strategic Management gained prominence, it was often contrasted with the reality of organizations, with emerging questions of the validity of a managerial vision based on planning and purposeful action. While the literature on Strategic Management has evolved past the ideas of planning, implementing, and evaluating, it has also become too broad and loosely connected to be able to constitute an adequate analytical framework for this research. Additionally, as presented in Chapter 3 of this research, the governance in the state universities of São Paulo is largely based on collegiality, and not on a strong steering, purposeful of strategic leadership, which means Strategic Management would have little explanatory value to managers in those universities. The chosen perspective of Stakeholder Theory is inserted in the general literature on Strategic Management, but it is more specific and brings important characteristics for the analysis of universities, as it will be shown in the next sections.

A. Stakeholder Theory

With the above explanations for why other possible theories were not chosen for this research, it is now important to understand more about Stakeholder Theory and why it was chosen to be the analytical framework for this research. This theory is frequently linked to the book "Strategic Management: A Stakeholder Approach" by Freeman (1984). It arguably brings a perspective on management that is more sensitive to the organization's environment (Fontaine, Haarman & Schmid, 2006). According to Freeman: "The stakeholder approach is about groups and individuals who can affect the organization, and is about managerial behavior taken in response to those groups and individuals" (1984, p.48).

Stakeholder theory involves the fundamental idea that an organization should be concerned with its stakeholders and that managing an organization involves managing those stakeholders, as opposed to a view of the organization that focuses on shareholders only, where an organization is concerned solely with making a profit for its shareholders (Donaldson & Preston, 1995). The idea behind the origin of Stakeholder Theory was "to build a framework that was responsive to the concerns of managers who were being confronted with unprecedented levels of environmental turbulence and change" (Fontaine et al., 2006, p.10). This context of environmental turbulence is well known to university managers, as shown by the legitimacy crisis presented in Chapter 3, which is another reason why stakeholder theory fits very well into this research, as it dialogues with managers' concerns.

The earlier definitions of stakeholders present in the literature of Stakeholder Theory presents them as "any group or individual who can affect or is affected by the achievement of the firm's objectives" (Freeman, 1984, p.25). There are stakeholders within the organization itself (internal), such as employees, and outside (external) stakeholders, such as customers, business partners, local communities, governments, and more (Fontaine et al., 2006). Managers can be considered stakeholders by some authors, or they can embody the organization's actions and responsibilities (Fontaine et al., 2006). In this research, while the managers are in a position to understand the organization, they are also internal stakeholders because high management in the state universities of São Paulo is generally composed of academics elected by the university community, as explained in Chapter 3. Therefore, while they might ideally act as an embodiment of the organization, the managers interviewed are not disconnected from their identities as university professors, and thus their perceptions of university rankings are directly linked to the university's relation with academics as an internal stakeholder. This double role was already explored in Chapter 3 and will be further developed in the results of this research.

This theory has been widely spread and used in organizational studies, but it is important to distinguish the use of Stakeholder Theory from the use of the concept of stakeholders, as many studies mention stakeholders without bringing the theory to the analysis (Fontaine et al., 2006). Using stakeholder theory means not only looking at the stakeholders of an organization but also recognize that "prosperity depends on the ability of the companies to manage strategic stakeholders and the principal function of managing stakeholder is to take into account and to arbitrate stakeholders requests even when there are contradictory" (Fontaine et al., 2006, p.34).

When applied to the studies in higher education fields, stakeholder theory considers how universities are managed both in the sense of stakeholders' rights, benefits, and participation and in keeping organizational survival (Fontaine et al., 2006). Managers would be expected to identify, understand, and organize the stakeholders of their organizations, which involves "mapping the stakeholders, providing a detailed list of the specific groups and companies related to each category of stakeholders, and a corresponding list of interests" (Fontaine et al., 2006, p. 18).

Stakeholder theory can be seen from a descriptive point of view, as well as an instrumental and normative point of view. This means that the theory can be used to describe organizational practice (descriptive), to suggest a way to achieve organizational goals (instrumental) and to provide guidelines for the functioning of an organization (normative) (Donaldson & Preston, 1995). For this research, the use of Stakeholder Theory is mainly descriptive, meaning it will be used as the framework to describe how university managers perceive the uses and impacts of rankings in their university.

Stakeholder theory also proposes for each stakeholder group to be further classified based on their level of support to the organization and how the organization should act towards them (Fontaine et al., 2006). This addition to how organizations think about their stakeholders brings the concepts of power, related to the level of influence of a stakeholder, legitimacy, related to the perception that that group's actions are desirable and appropriate, and urgency, related to the need for immediate action (Mitchell et al., 1997, Kohtamaki, 2015; Jongbloed, Enders & Salerno, 2008). These attributes are referred to as stakeholder salience, and they determine how organizations prioritize stakeholders (Kohtamaki, 2015), as the more a stakeholder possesses these three attributes, the more managers in an organization perceive the necessity of acting towards them (Jongbloed et al., 2008).

B. Stakeholder theory in higher education institutions and uses for this research

While Stakeholder Theory emerged in the business context (Freeman, 1984; Donaldson and Preston 1995), it has become widely used in the field of higher education. According to Jongbloed et al. (2008), universities had to rethink their role in society and their relationship with stakeholders and communities to ensure their survival in the modern, knowledge-based economy. Universities are becoming more socially embedded, with growing demands and expectations that they will contribute to social and economic development, reducing inequalities, supporting the dynamics of enterprise innovation, country development, and other dimensions. The importance of a university's relationship with its stakeholders is directly linked to the constantly growing demand that enlarges the public mission of universities (Jongbloed et al., 2008). University's value is now more than ever dependent on its relationship with stakeholders (Jongbloed et al. 2008), and at the same time, "the number and variety of external interests with which the higher education institutions deal with, seek support from, and, ultimately, rely upon has literally exploded" (Jongbloed et al. 2008, p.321). This means stakeholder management can have an enormous significance for university management, and it is an important part of avoiding legitimacy crises as presented in Chapter 3.

The uses of stakeholder theory for higher education institutions are many. From a descriptive perspective, "stakeholder theory may be useful in higher education to help explain the attention paid to the various communities in the environment and the relationships between a university and its communities" (Jongbloed et al. 2008, p.310). From the instrumental perspective, stakeholder theory "implies transforming HEIs into strategic agents addressing their ability to respond to increasingly diverse external demands and measurable outputs relevant for society" (Kohtamaki, 2015, p.266).

However, applying stakeholder theory to higher education requires some specific adaptations from the uses in business organizations (Jongbloed et al., 2008). One very important feature of universities is their governance usually brings certain specific characteristics such as the fact that central management is usually not as strong as in business organizations, and a large number of decisions and initiatives are taken at the departmental level, and even by professors and researchers individually. This means a large part of understanding stakeholders in HE is analyzing internal stakeholders such as the academic community and administrative staff (Jongbloed et al., 2008, p.311). "Stakeholder influence theories are likely to help identify and assess the external and internal demands a given higher education organization deals with" (Falqueto, Hoffman, Gomes & Mori, 2020, p.1040).

Some common external groups of stakeholders for HEIs involve the state and federal government, parents, secondary education providers, alumni, ministry of education, financial aid agencies among others. Internally, there are the governing board, senior administrators, faculty, administrative staff, support staff, students (Burrows, 1999). Following the idea of stakeholder salience, the government is usually an important stakeholder of universities, being often their main funder and regulator and possessing the three characteristics of powers, legitimacy, and urgency concerning universities (Jongbloed et al., 2008 p.310). Society is also frequently mentioned as an important stakeholder of universities, particularly of public universities, following the idea of public accountability (Falqueto et al, 2020). The definition and importance of each stakeholder are also dependent on the context of the organization. Even though some stakeholder groups are frequently mentioned in HE, each university establishes unique relationships with its stakeholders that are shaped by its funding model, goals, and specific characteristics. In this sense, a study by

Falqueto et al. (2020) analyzed one Brazilian university (UnB) and found that the society was not as influential in that institution's strategic plans as it is generally assumed in the literature. In their research, Falqueto et al. (2020) recognized the importance of the government and its different regulatory agencies, they also regarded the importance of academics and managers but claimed they have less power than the government and placed relationships with society as important, but not greatly influential. Nevertheless, stakeholder relationships are dynamic, and universities should reassess these relationships and the strategies they devise from them (Falqueto et al, 2020; Freeman, 1984).

Stakeholder theory has a powerful descriptive value for this research because university managers show a concern for the effects university rankings can have on their relationship with key stakeholders. Since university rankings are widely publicized, important stakeholders such as governments, students, and the broader society have access to the information they release about universities, which can alter their relationship with these organizations. Stakeholder theory, therefore, fits this analysis in that it will help understand how managers perceive the effects of rankings on how the many stakeholders of the university interact with them, and what possible actions these managers see universities taking to make sure rankings do not negatively disrupt their relationship with their stakeholders. The use of the theory is based on the idea that rankings affect university relationships with its stakeholders, and therefore university management reacts to rankings to maintain some control over stakeholder relations.

V. Methodology

This chapter will describe the choice of methods and research design made to respond to the research questions previously established. It details the procedures of data collection and data analysis, making the research process transparent and preparing for a better understanding of the research results, which will be presented in the next chapter.

A. Philosophical Assumptions

The first part of this chapter is a reflection and explanation of the underlying philosophical assumptions of this research. Perhaps a more pragmatic view of the research process might argue this section is not always a necessary part of a master's dissertation, but here I take the stand that philosophical implications are always present, even if sometimes they are not made explicit. These assumptions are reflected in the methodological choices of this research, and even on the research topic itself. This section is meant to show awareness and reflection on the research process. The choices of the method, theory, and procedures were thought of to compose coherent research, where the research questions, the methodology, and the theory make sense together. It is important to note that constraints of time and even knowledge of the researcher are still in play, and may have influenced the choice of one method or theory over the other, but this section is meant to show that the research process was not based solely on convenience.

For this research, the main philosophical assumption is that of Social Constructivism⁶. This section will explain the impact of this philosophy from the perspectives of the ontology, meaning perspectives about reality, and epistemology of the research, meaning how knowledge is formed (Saunders; Lewis; Thornhill & Bristow, 2015). It is important to make clear what Social Constructivism is, and how it differs from other existing research philosophies, mainly how it is

⁶ For this research we approach ontological and epistemological perspectives from the Social Constructivist paradigm, but it is important to note that different theorists can have different approaches on this.

different from a Positivist perspective of research since this was for a long time the main philosophy on science.

As science and scientists gained attention and funding during and after the Second World War, the Positivist view of science production gained similar attention and credibility. The main beliefs surrounding science production were that there was an objective reality to be discovered by scientists so long as they applied the scientific method and certain principles of conduct (Saunders et al., 2015). Science was not affected by the individual values of the scientist, and sociologists such as Robert Merton (1942), contributed to explain how a scientist with personal beliefs and values could promote value-free, objective research (Velho, 2011). He set four behavioral norms that were supposedly followed by scientists and that ensured science was objective (Merton, 1942). The reality, for positivists, is external to the scientists, and it exists in the same way, universally, regardless of what we might think of it (Creswell, 2009). This philosophy is mainly connected to the natural sciences, but it is also present in the social sciences, in which case Positivism means researchers see society the same way natural scientists see nature (Bryman, 2015).

The perspective used in this research project, Social Constructivism, is, in many ways, the complete opposite of Positivism. The idea that science is not completely objective or detached from the scientists' values gains space with the studies of the physicist Thomas Kuhn (1962), who argues that scientific paradigms or grand theories are dependent on social interactions between scientists, and not only based on their truth or explanatory value (Sismondo, 2004). This vision allowed Social Constructivism to gain strength as an interpretation of science not only within the social sciences or within humanities but also questioning the assumed objectivity and neutrality of natural sciences.

Social Constructivism rejects the idea that scientists are merely unveiling a universal truth or reality. Because for Social Constructivists, nor is there a universal reality to be uncovered (ontology), nor can scientists conduct completely objective, value-free research (epistemology) (Saunders et al., 2015). The ontological position in Social Constructivism posits that there are "multiple, apprehensible and sometimes conflicting social realities that are the products of human intellect" (Guba & Lincoln, 1994, p.111). The epistemology of Social Constructivism is that knowledge is value mediated (Guba & Lincoln, 1994), meaning the researcher's assumptions do interfere in the results, and it is interactively created in the sense that "any form of intervention is already a context for new knowledge to be produced, (...) when a researcher enters an organization and asks investigative questions, they are already provoking reflective processes" (Camargo-Borges & Rasera, 2013, p.5).

To illustrate a Social Constructivist view of reality we can use an analogy of rankings themselves as a form of knowledge production. Rankings use certain methods to classify universities and attribute scores and positions to each institution. If we use a Positivist paradigm to think about rankings, we could say that there is an objective reality of university quality, with some being better than others (ontology), and that if rankings are scientific, they are a form of knowledge creation that would simply unveil this difference between institutions (epistemology). Looking at the same situation from a Social Constructivist perspective, we can assume that the differences of quality between institutions are dependent on how social actors (students, professors, and others) view them, and that means no one characteristic is inherently better than other, but that multiple realities coexist about which university is better (ontology). In this perspective, University Rankings, as a form of knowledge, are not unveiling an objective reality, but are constructing a new perspective on reality together with social actors, since the release of

those results affects the way actors see universities, and might influence future perspectives on quality. This is a metaphor to make understanding the chosen philosophy easier, it considers universities as the object, and university rankings as the research, or knowledge created.

With no further metaphors, the rest of this chapter will show more details about how the choice of Social Constructivism is reflected in this research. It will detail the methodology and point out where the methodology choice is influenced by the research paradigm. This means showing that Social Constructivism is reflected in the research design being qualitative instead of quantitative and on the use of interviews instead of analysis of strategic planning documents, for example. It is important to note that, even though this research is backed by a Constructivist view of science, the research design is also influenced by practical considerations, as put by Bryman:

All social research is a coming-together of the ideal and the feasible. Because of this, there will be many circumstances in which the nature of the topic or the subjects of an investigation and the constraints on a researcher loom large in decisions about how best to proceed (2012, p.41).

B. Description of the research design

Before detailing the research design, it is important to recall the questions this research seeks to answer. The purpose of this research is to understand how managers of the three state universities of São Paulo perceive the impact and use of international university rankings in their institutions. This larger research question is then broken down into four separate sub-questions, about the impact and use of rankings:

- Do managers believe rankings affect their universities' resources?
- Do they believe rankings play a role in the university relationship with key external stakeholders such as the government and the broader society?
- How does the internal community of the university, mainly academics and employees, perceive the impacts of rankings and the possible risks of these instruments?
- How do they see rankings being used in their universities' management and activities, if at all?

To answer those questions, and following the research philosophy outlined above, this project follows a qualitative approach. Qualitative research “has rejected the practices and norms of the natural scientific model, and positivism in particular, in preference for an emphasis on how individuals interpret their social world” (Bryman, 2016, p.33). This choice is therefore coherent with the focus on managers' perspectives on university rankings, since it focuses on their perception of rankings, and does not try to achieve some objective, external view of those instruments. As put by Fraenkel & Wallen, “Qualitative researchers are concerned with process as well as product. Qualitative researchers are especially interested in how things occur” (2011, p. 423).

Within the qualitative realm, this research consists of a collection of case studies of three Brazilian universities. These are the three state universities of the state of São Paulo, in Brazil. The Social Constructivist paradigm influenced the amount of attention given to the case description of those universities, outlined in Chapter 3. Understanding contextual and cultural factors is important to understand deeply how the managers of these three universities see rankings impacts and use in their institutions.

C. Data collection

The chosen methodology involves semi-structured interviews with the managers of USP, UNESP, and UNICAMP. These three institutions were chosen because their important scientific production makes them the better-ranked institutions of the country, as explained in Chapter 3. This means that, while most Brazilian HEIs are not even featured in international rankings, those three appear in most league tables, making it possible to monitor their performance over time, and increasing the chances that they will develop strategies to improve this performance. Their research-intensive profile means that their missions are at least partially compatible with the research focus of most international university rankings, making them the most interesting case in Brazil to understand the uses and impacts of international university rankings.

Within these institutions, the interviewees were chosen based on purposeful sampling, “based on places and people that can best help us understand our central phenomenon” (Creswell, 2011, p. 205). Since the objective of this research is to understand managers perspectives regarding rankings, the goal is to interview the rectors of each of the chosen universities, as well as the directors of the planning units and the coordinators of the units that monitor rankings and control indicators as those three key managers should be the most directly involved in using university rankings.

Interviewees were contacted via email. Their email contacts were retrieved from university websites. The original list of interviewees consisted of three people for each university involved. However, the rector of the University of São Paulo (USP) did not respond to contact attempts, which left USP with two participants. Additionally one of the interviewees of the University of Campinas (UNICAMP) suggested that another participant joined the interview, leaving UNICAMP with four participants. The final list of the interviewees is the following:

Table 1 - Description of the participants of the research

Name	Position within the university	University
Marcelo Knobel	Rector	Unicamp
Emerson José Ferri	Manager of GePlanes - technical consultancy for strategic management and planning	Unicamp
Rosângela Maria Correia Neves	Responsible for rankings at the Vice-rectory for University Development (PRDU)	Unicamp
José Antônio Brum	Advisor at the Vice-rectory for University Development (PRDU)	Unicamp
Luiz Gustavo Nussio	Coordinator of the General Management of the university (CODAGE)	USP
Aluisio Cotrim Segurado	Coordinator of the Institutional Research Office (Egida)	USP
Sandro Roberto Valentini	Rector	UNESP
Cleopatra Planeta	President of the Commission for Institutional Evaluation and University Rankings	UNESP
Rogério Luiz Buccelli	Chief Strategic Planning Advisor	UNESP

The semi-structured interviews were guided by the interview questions, to help the researcher maintain the original plan and make sure that all aspects are approached during the interview. The open-ended questions should also allow the participants to bring to the interview some other aspects that could not have been foreseen by the researcher.

D. Ethics Procedures

Since the main source of data for this research are interviews with Brazilian participants, it was necessary to get approval from the Brazilian committee of ethics before starting data collection. The resolution nº510/2016 (Resolution nº510/2016, 2016), passed in 2016 by the National Health Council of Brazil, determined that research projects that collected data directly from human being would need to go through the approval by the ethics committee, something that was already done in medical and biological research, but that was still not common for social sciences and humanities projects that involved interviews or focus groups:

This resolution determines the norms applicable to research in Humanities and Social Sciences that involves the use of data directly obtained from the participants, or that contains information that can make the participants identified, or that might incur risks higher than those present in their everyday lives (Resolution nº510/2016, 2016, p.1).

This procedure is now organized by the National Commission of Research Ethics (CEP/CONEP) and all submissions are done online⁷. The researcher must present information such as the research proposal and a description of data collection procedures, highlighting how participants were selected, how the data will be collected and used, making clear why it is necessary to involve those participants and which value will it add to the research. The researcher needs to provide specifications on what type of protections participants would be given and inform which compensations will be available in case participants feel harmed by their participation in the research, The term of consent presented to participants and the interview questions were also presented, as well as a description of the research budget, planned outcomes, and results of the research. To comply with such procedures, the consent forms were signed, collected, and saved, as well as interview transcripts, and they should be stored safely for at least five years in case there is any questioning about whether the procedures were followed or not.

In the term of consent given to participants, there was a summary of the methods of the research, including how the data will be used and which protections are available to participants. The interviewees had the right to disagree with any of the procedures of the interview, and the interviews only moved forward with what is agreed by the participant. Each participant was asked if they consented to the recording of the interview and the display of their name and position in the results. All participants agreed with both, though some requested to see the final text with the extracts of their interviews before consenting to be identified. When this was requested, there were only included extracts previously approved by participants.

The project was submitted for evaluation in June 2020, when the research was already at a stage that the interview questions and participants were defined, as required by the committee. This was done some time in advance to allow for possible delays in the approval without harming the data collection schedule. The ethics committee approved the research plan in August 2020 with no remarks. The process can be tracked using the following code: 35847820.1.0000.0077.

⁷ The web address for CEP/CONEP is the following: <http://conselho.saude.gov.br/plataforma-brasil-conep?view=default>

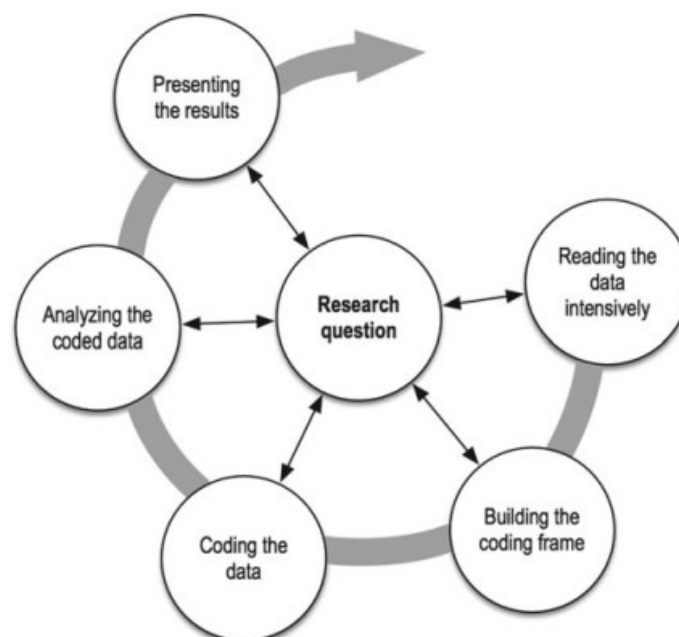
E. Data analysis protocol

The research data were analyzed using qualitative content analysis, also referred to as thematic analysis (Kuckartz, 2019). This type of analysis focuses on “working with categories (codes) and developing a category system (coding frame)” (Kuckartz, 2019, p.183). Coding is the most important part of data analysis in qualitative research. Coding the documents, whether they are transcripts or articles, “is to make sense out of text data, divide it into text or image segments, label the segments with codes, examine codes for overlap and redundancy, and collapse these codes into broad themes”(Creswell, 2011, p.243).

For this research, the coding was based on thematic codes, meaning that the interview transcripts were segmented based on the topics or arguments they referred to (Kuckartz, 2019), such as “interpretation of ranking results” or “rankings as a consequence of universities activities”. The creation of the codes was data-driven (or inductive), which means there were no preexisting codes based on the literature, theory, or research questions (Kuckartz, 2019). The codes were created according to the themes found in the interview transcripts and later organized into broader topics according to the research questions and the analytical framework.

While the first round of coding was data-driven, the data analysis process involved several other steps such as the combination of the initial codes into larger themes, which was guided by the research questions and the analytical framework. This additional step of organizing the codes is important to make sure that the theory and the research questions guide the interpretation of the data, making it possible to construct results that are coherent with the purpose of this research. Figure 3 illustrates how in qualitative content analysis the researcher should always refer to the research questions to make sense of the data collected. Since during interviews participants may bring several unexpected topics to the conversation, this is important to make sure that the analysis is coherent and that the data gathered contributes to answering the research questions proposed.

Figure 3: The phases of qualitative content analysis



The final coding frame, considering the first inductive analysis and the subsequent steps of organizing those codes to answer the research question is illustrated in Table 2. This is the basis for the results of this research, presented in the next chapter, which is organized according to the themes presented here, guided by the analytical framework with the presence of Stakeholder Theory. The analysis focused on internal and external stakeholders, considering mainly the government, the broader society, and managers themselves, who are also professors at those universities.

Table 2 - Codes and themes used in the data analysis

Research question	
Do managers believe rankings affect their relationship with their resource providers?	
Theme	Thematic Codes
University Rankings and the financial resources of the three state universities	Inevitability of rankings Resources The legitimacy of the public university Institutional pride
Research question	
Do they believe rankings play a role in the university relationship with key external stakeholders such as the government and the broader society?	
Theme	Thematic Codes
Rankings in the universities' relation with the government and society	Interpretation of ranking results Representation by the media Politicians Broader Society
Research Question	
How does the internal community of the university, mainly academics and employees, perceive the impacts of rankings and the possible risks of these instruments?	
Theme	Thematic Codes
Managers critics to rankings impacts	Fraud Inadequate Metrics
Research Question	

How do they see rankings being used in their universities' management and activities?

Theme	Thematic Codes
Rankings as tools for institutional learning	Institutional learning Benchmarking Use in Management New Metrics
Rankings, institutional research, and data	Data organization Use in management Data collection within the university
Rankings and university internationalization policies	Internationalization Change in activities due to rankings

To make data analysis more efficient and reliable, a software for qualitative analysis was used in the entire process of this research. The chosen software is Atlas.ti because of its availability to Tampere University's students and the researcher's previous experience with the software. The software was used both in the literature review and in the analysis of the transcripts from interviews. By including the literature in the software, and coding it, the analysis of the transcripts gains depth, since it becomes easier to create a dialogue between the data and the literature. Using qualitative software does not guarantee the quality of the analysis, but when the tools provided by that software are well utilized, they allow for a better understanding of how the same topic appears in different documents and allows the researcher to easily access the context, or the paragraph of a certain occurrence in a document, as well as allowing the researcher to make comments or memos in the documents. All of these features can increase the quality of the analysis and "strengthen the validity of the inferences that are being made from the data" (Stemler, 2000, p.2).

F. Limitations of the study

The results of this research have some limitations that need to be addressed. The first limit concerns the choice of conducting a study focused on the case of the state universities of São Paulo. Since the analysis will be restricted to USP, UNESP, and UNICAMP, the results and interpretations cannot be extrapolated to other institutions that were not analyzed. A second limitation concerns the choice of focusing on managers' perceptions, and the consequences of that choice, such as focusing on semi-structured interviews as the main source of data. Since the focus of this research was on managers' perceptions, the results presented cannot be said to represent all efforts and interpretations present in the universities analyzed. Universities mention rankings in multiple different documents such as strategic plans and internal media. A study of those documents could bring different findings than the ones presented here.

VI. Results

This chapter brings the results from the interviews with managers and seeks to connect their responses to the larger research question of how managers of the three state universities of São Paulo perceive the impact and use of international university rankings. The findings from the interviews were analyzed using the Atlas.ti software, and organized in thematic codes, as explained in Chapter 5. The basic premise taken is that, according to stakeholder theory, rankings have an impact on a university's relationship with key stakeholders, and therefore universities monitor and take action on university rankings to ensure proper stakeholder management and guarantee support from key communities. This means this chapter will describe how managers perceive the impact of rankings on their internal and external stakeholders, and later what are the actions taken due to this impact of rankings.

This chapter presents four sections organized according to the sub-questions described below:

- Do managers believe rankings affect their relationship with their resource providers?
- Do they believe rankings play a role in the university relationship with key external stakeholders such as the government and the broader society?
- How does the internal community of the university, mainly academics and employees, perceive the impacts of rankings and the possible risks of these instruments?
- How do they see rankings being used in their universities' management and activities, if at all?

These research questions can be grouped under two main perspectives derived from stakeholder theory: how managers perceive the impacts of rankings in the relationship with its external stakeholders, and how they perceive ranking's impact on internal stakeholders, including the actions taken by university internally concerning rankings. The impacts on external stakeholders will include topics regarding the two first sub-questions, meaning whether rankings affect university resources and relationships with key external stakeholders. The perceived impacts of rankings on the internal organizational life will include the perceptions of internal stakeholders and the use of rankings in university management.

A. Manager's perceptions on the impacts and uses of rankings by external stakeholders

- **University Rankings and university funding**

In many countries, university rankings can be used by stakeholders that provide important or even the main resources of a university, as shown in the literature review in Chapter 2. Either by attracting fee-paying students, partnerships with other organizations, or through government policies that use rankings as indicators, university rankings impact universities relationships with key resource providers around the world (Thiengo et al., 2018; Monks & Ehrenberg, 1999; Hazelkorn, 2009; Tozini, 2017; Righetti, 2016; Parker, 2013; Vieira & Lima, 2016; Santos & Noronha, 2016).

However, in Brazil, the context provided in Chapter 3 shows that international university rankings do not have a direct influence on how public universities in Brazil relate to stakeholders that provide their resources, which in the case of USP, UNESP and UNICAMP is mainly the state

of São Paulo. This limited impact of rankings on the financial resources of the three universities (mainly coming from the state) was highly recognized in the interviews:

“Rankings have not been considered in our state funding model so far” (Rector, UNESP).¹

"Roughly 90% of our funding comes from the state. Looking back since the moment when rankings were initially presented, there has not been any increase in our budget due to the rankings. For instance, we did not have any change in the budget for having the area of odontology well ranked or having the best theoretical physics institute in our university." (Rector, UNESP).

"USP is not financially benefited for being placed in a better position and is also not harmed if it gets ranked worse than before. Our relationship with the government has been established for about 30 years, and we know the amount we will receive. (...) I do not believe that in the short term there will be any additional benefit to USP from the government due to its positive results in rankings." (Coordinator of the General Management of the university, USP).

“At UNICAMP our resources depend on the ICMS⁸. Our debates are currently devoted to those resources because with the COVID pandemic the funds from ICMS were severely lower. (...) This is much more present in our planning than university rankings nowadays” (Manager of GePlanes, UNICAMP).

“Rankings make us stand out and look good in the media. However, our funds come from CAPES, FAPESP, and FINEP.⁹ So those institutions have a bigger influence on our activities.” (Manager of GePlanes, UNICAMP).

This model of funding provides a degree of independence of the universities from the rankings, acting as a gatekeeper for a possible exaggerated influence of rankings in universities activities, which could happen had rankings been an important resource mediator. This can be considered healthy, especially considering that the indicators chosen by rankings are not always the best for those institutions, and this independence allows institutions to use indicators the way that fits them best (Oliveira, 2018).

However, while the majority of funds received by the three universities come from a relatively stable agreement with the government and are not dependent on their performance, the security and reliability of this agreement are not as stable anymore. As shown in Chapter 3, public universities in Brazil have received several threats and attacks from politicians and certain groups of society. There were recently proposals to change their financing and accountability measures. In this scenario, while funding is still guaranteed and stable managers generally acknowledge that there is a sense of insecurity with the future. From this sense of insecurity comes a growing need to dialogue with society and the government, to ensure that there is a clear understanding of the role and importance of public universities in Brazil.

"We have had financial autonomy for over 30 years. This is something that only the São Paulo state universities have. This situation bothers many people including some stakeholders. We have been threatened many times for having autonomy, most recently by the CPI and the Law project 529, which would force the three universities to return their surplus to the government. However, we

⁸ ICMS is the acronym for Tax on the Circulation of Goods and Services. It is a state tax imposed on the general consumption of goods and services.

⁹ As presented in Chapter 3

need this surplus for the moments when tax collection is lower than expected. This is a good practice that is managing our financial autonomy with quality. Therefore, it is important to have the society and all taxpayers acting in our favor and, therefore, we need to show them what are the positive impacts of our universities in the society including the social impact" (Rector, UNESP).

"Our funding model bothers every government in power. Having to mandatorily distribute a defined percentage of a tax to certain institutions is not something public managers like. So, our relationship with the government has always been tricky, and we constantly have to prove our worth" (Chief Strategic Planning Advisor, UNESP).

"We received some attacks recently. (...) So, it is very much on our agenda to prove our worth to society, including within the state of São Paulo" (Manager of GePlanes, UNICAMP).

"Our university has gained consciousness, in 2020 that it needs to communicate better with society. The lack of such communication left us in a position of great vulnerability. (...) There is a lack of causality for society about what the university is doing for them. This has created a distance between the population and us. The common citizens see us as a burden and not with pride" (Coordinator of the General Management of the university, USP).

While it is clear that rankings do not play a direct role in securing the main sources of funding at those universities, it is also clear that there is general uncertainty as to whether this funding model will prevail much longer. With this uncertainty comes the need for further dialogue with the government and with society, and while rankings have not yet been included as a criterion for governmental funding, they are widely publicized, and both politicians and the broader society might be influenced by such results. The next section of this chapter will explore what the role of rankings may be in this dialogue, and thus in ensuring university resources even if indirectly and in the long term.

- **Rankings and university relationship with key stakeholders**

The state government of São Paulo and the society can be seen as the two main stakeholders of USP, UNESP, and UNICAMP, and those institutions are now devoting efforts to strengthen their relationship with these actors. These two groups cannot be considered unitary stakeholders, meaning that they involve many different communities (Jongbloed, Enders & Salerno, 2008). This distinction can be referred to as identifying stakeholder categories that can contain many groups within them, instead of separating each constituent group (Freeman, 1984; Burrows, 1999). The government and society are examples of categories of stakeholders. The interaction of universities with certain groups of the government might be different from the relationships it establishes with other governmental groups. While this research considers government only at the state level, and not the national level government, there are still heterogeneous groups within that frame. Similarly, the reference to broader society as a stakeholder here tries to incorporate mainly the groups of society that are not directly participating in HE as students or employees, meaning those who are benefited mainly from the externalities of HE, and who still contribute to financing those institutions through taxes. That is also by no means a homogeneous stakeholder group, but while the classification of these two groups and virtually every group described here, does not reach the most specific level of division to provide homogeneity in each stakeholder, it does offer enough distinction for the objectives of this research, considering time and methodological constraints. Defining what the stakeholder groups of an organization are can be complicated, and each group

can always be subdivided into smaller, more cohesive groups (Fontaine et al., 2006). However, while subdividing means the groups will be more homogenous, it can also bring some overlaps between groups, and make analysis almost impossible due to high complexity (Fontaine et al., 2006).

Considering then the government and the external society as two important groups of stakeholders for the universities, and considering stakeholder theory, it can be argued that universities are increasingly devoting more effort to build up a relationship with these groups, and the ranks are perceived as instrumental in this direction. This section will explore if university rankings play a role in this relationship. Some of the interviewees point that rankings do have some importance in this communication.

"Rankings came to help. When the local media or ranking companies publish results, they show how well-positioned the three universities of São Paulo are. If someone from the government, in the higher education secretary or the secretary for economic development, is paying attention, they will see this result. However, if the people in the government are not paying attention (which is unfortunately very common in Brazil), the universities will leverage this result in their favor. (...) Recently the three universities participated in a parliamentary inquiry commission (CPI). They all used their ranking positions to try to show to politicians their performance" (Chief Strategic Planning Advisor, UNESP).

"I believe that in the state of São Paulo rankings don't have a big influence on funding because our funds are more consolidated (...) but when the media portrays ranking results and politicians read them, it can indirectly influence our relationship with the government" (Rector, UNICAMP).

"Rankings are an easy way for society to see universities. Whether it is right or wrong, it shows a number, and people like to see numbers. (...) So, as this is published in the media, it can be important in terms of how society and the government perceive the performance of universities" (Advisor at the Vice-rectory for University Development, UNICAMP).

However, the extent to which rankings help in this communication is limited, for most interviewees. Professor Aluísio Segurado (USP) warns about the misinterpretation of ranking results by politicians. He mentioned how during the CPI he tried to argue with a politician who claimed public universities were receiving public money but were not delivering good results. This politician mentioned that USP did not have enough publications amongst the top 100 most cited papers in the world:

"So, I realized that that politician had no idea about what those results meant. He seemed to believe having a paper in the top 100 most cited in the world was a trivial thing. (...) So, if rankings are not interpreted with a lot of caution, they do more harm than good in this dialogue. (...) Metrics and indicators are good foundations for arguments, but their misinterpretation can be very harmful" (Coordinator of the Institutional Research Office, USP).

The issue of misinterpreting rankings results does not affect only the dialogue with the government. It is also a problem when the broader society receives those results and numbers. This dialogue between rankings and society is frequently intermediated by the media, and several interviewees highlighted the problem of how those results are passed on to society:

"The media wants direct and easy results. Therefore, when the university goes up one position, they make a big event out of it and when it goes down it is portrayed as a horrible thing. They do not

understand and do not want to go deeper to understand what happened. I try to explain that sometimes we did not get worse but other universities improved and that the results we see now are a reflection of what we did five or six years ago. (...) There is a lack of understanding from the media as to what rankings mean. (...) The coverage is generally very superficial" (Rector, UNICAMP).

It is important to clarify to society what rankings are. To balance this publicity around them. (...) It needs to be clear to society that 'rankings represent this, but they are only this, and nothing else"(Advisor at the Vice-rectory for University Development, UNICAMP).

"Every time we interact with the general media, we try to reinforce a critical analysis of rankings. However, that message is not so attractive from the point of view of newspaper headlines. (...) What sells newspapers is a more sensationalistic approach. (...) However, it is not enough to say that we are in position x or $x+1$. What is relevant is the contextual information, not an isolated rankings result" (Coordinator of the Institutional Research Office, USP).

"When rankings are released, there is no effort to translate what they mean to the general public. (...) We need to tell this story more simply" (Coordinator of the General Management of the university, USP).

This discontent with the media coverage of ranking results was also present in Righetti's (2016) interview with the former rector of USP. Marco Antonio Zago reported that whenever USP drops a few positions on rankings the university has to do a big role in explaining to the media that this does not mean that the university is in crisis (Righetti, 2016, p.215).

When it comes to the direct relation with society, the interviewees generally agree that rankings are not good tools for communicating universities' results, due to the simplicity of the numeric positions of rankings, and the need for a more detailed interpretation of those results. They point out that the role of university rankings in universities' relation with society is limited, at best, and frequently mention the problems in the media coverage of results. Besides the problem of how the media portray results, the dialogue with society is further hindered by the excessively academic indicators that say little about the direct social impact of universities.

"If a university is ranked amongst the top 100 in the world, this does say something to society. But the indicators used on rankings are still very academic. (...) Measurements of citations, of reputation, those things are directed to the academics themselves. These indicators do not speak to the broader society outside of universities. (...) The traditional indicators used don't translate to society what universities do" (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

"One example is how the population perceives the importance of odontology courses in São José dos Campos or Araraquara. They see this importance in the services we provide. If we stop these services for any reason, such as the pandemic, they feel the difference" (Chief Strategic Planning Advisor, UNESP).

"A part of the population believes UNICAMP is only a hospital. So, what are university rankings to the broader society? Who is looking at rankings?" (Manager of GePlanes, UNICAMP).

"There are indicators centered in the university, such as how many students graduated, how many papers were published (...). Another set of indicators, one that is very interesting to the broader

society, is indicators centered on societal needs. So, all that the university has done resulted in what for the general society? (...) Has the research published improved the region's agricultural practices? Has it contributed to urban mobility? (...) The larger society might think: 'ok, USP is an excellent university, but how is it changing my daily life?'" (Coordinator of the Institutional Research Office, USP).

In this respect, the interviewees argued that sustainability rankings could be a better way to communicate the university's results to society. For one, because these universities expect to stand out even more in sustainability rankings, and because the indicators used might be more relatable to the broader society. As shown previously in this chapter, the interviewees believe academic indicators used in traditional rankings are not the best way to communicate with society.

"Maybe THE Impact Ranking can, in the future, impact our relationship with the government more than other rankings do now. However, it is still early to tell because this ranking is only in its second edition. But I believe it is a ranking that can help show the government our importance as a university" (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

"Right now, we have a big discussion around indicators of social impact, which need to be indicators that people can understand. (...) THE Impact Rankings is attempting to do this" (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

"I believe that finding the right indicators to measure our social impact will help to keep taxpayers engaged. Taxes that are, in our case, the university's main source of funding" (Rector, UNESP).

It is interesting to note, however, that while managers generally agree that international university rankings are not the best way to portray their activities to society (with a possible exception for the Impact Ranking) universities are frequently using rankings in their media communication. As shown in Chapter 3, USP and UNICAMP mention rankings in the first pages of their web portals, and as pointed by Righetti (2016) USP frequently uses rankings in its institutional marketing with at least 10 news articles found by the author that mentioned the university's positive performance on rankings in a period of just two years (Righetti, 2016, p.168). Institutional communications generally focus on the university's numerical position on rankings (Axel-Berg, 2018), which is arguably just as inducing wrong interpretations as some of the media coverage. As put in an analysis published on the Metricas project website "we cannot complain about being judged negatively based on simplistic classification results if we present the same results when they are positive" (Metricas, 2020). This does not mean universities cannot portray their ranking results, but that their institutional communications should be careful about how to present those results in a way that gives society a better understanding of what rankings mean.

However, the general inadequacy of rankings for communicating with the government and with the broader society does not mean rankings have no impact on any stakeholder communication. Despite these criticisms, and the shield put by the governmental funds to universities, international university rankings are still closely monitored and used by many Brazilian universities, including USP, UNESP, and UNICAMP. All three universities have created special offices to monitor university rankings, as mentioned before. However, if rankings are not key in ensuring the most relevant resources, why are they given any attention? Some of the interviewees argue rankings are inevitable, an argument frequently reflected in the literature (Altbach, 2015; Marginson, 2017).

“Rankings exist and we cannot escape them anymore. Therefore, we participate, and we try to do it in the best way possible, but this does not mean changing everything. We will not be working for rankings, we have our mission and goals that are very clear, and sometimes incompatible with rankings” (Advisor at the Vice-rectory for University Development, UNICAMP).

“There is no escaping it. We can make criticisms, there are many criticisms to rankings (...), but they are a reality” (Rector, UNICAMP).

Therefore, from one perspective, universities participate and monitor rankings because they do not have a choice. Rankings will be released every year, and in many cases, universities will be included regardless of wanting to participate. Even when they can choose not to participate, many of their peers will participate, compelling them to join the race or to at least pay attention to how they are portrayed in those instruments. Besides this supposed inevitability of university rankings, many participants reported that rankings could offer benefits to universities that know how to use them. Interviewees mentioned rankings can bring institutional pride and that they can favor partnerships with other HEIs. So, even if more indirectly, rankings can mediate resources even for these public universities in Brazil.

One of the arguments presented was that rankings bring some sort of institutional pride, meaning that universities and their students like to be well ranked. This, which may seem an intangible benefit of university rankings, should not be overlooked as a driver for universities to closely monitor rankings.

“This race is one of no return. Once the university gets involved with the rankings dispute, there is a sense of institutional pride involved. Being positioned between the top of the world brings a series of authorities with direct and indirect benefits” (Coordinator of the General Management of the university, USP).

“We want to improve in rankings; it is a matter of prestige. We have a sense of competitiveness, we want to be featured in the best places, but this is of course a consequence. We are not working with this purpose” (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

Another consequence of university rankings, according to the participants, is that they influence institutional partnerships among HEIs. This is possibly the main benefit brought by university rankings, being the more tangible and direct resource. Partnerships are key for institutional survival. They bring opportunities for research collaboration, exchange of students, shared use of facilities, and more. Beyond the direct attraction of funds or students, university rankings are recognized in the literature as key in the process of choosing partners for collaboration among HEIs (Righetti, 2016; Thiengo et al., 2018). There are even countries that use rankings to restrict public funds to collaborate with internationally recognized institutions (Hazelkorn, 2014a); meaning Brazilian universities that perform well on rankings might be eligible for international funds to collaborate with other universities abroad.

"Foreign universities look at rankings to decide with which universities to partner." (Chief Strategic Planning Advisor, UNESP).

The idea that rankings attract international attention was also present when Righetti (2016) interviewed the former rector of USP. Marco Antônio Zago reported that the position of USP as the best university in Latin America had become a widely acknowledged fact internationally due to university rankings and that this opened many doors for USP to collaborate with universities across the world (Righetti, 2016). Rankings are used for the external life of universities mainly in communicating with other HEIs.

C. Manager's perceptions on the impacts and uses of rankings by internal stakeholders

• Managers critics to rankings

University managers in the state universities of São Paulo are mainly academicians, who simultaneously work at the university as professors and are elected by their peers to temporarily assume managerial posts¹⁰, as explained in Chapter 3. As presented in the analytical framework of this thesis, one of the adjustments that need to be done to use stakeholder theory in higher education is to take into consideration the collegial, bottom-heavy characteristics of universities as organizations (Jongbloed et al., 2008). This means that how internal stakeholders such as professors and employees perceive university rankings can have a big influence on how universities come to act towards these instruments. The perceptions of managers and professors can determine what amount of effort is put by universities into changing their ranking positions. As presented in Chapter 3, it is very hard, in the state universities of São Paulo, for top management to provide a unified direction to be followed by the whole university, especially if the academic community is not favorable to such direction. For that reason, it is important to understand how managers themselves perceive the possible problems and risks of university rankings, as this will have a great influence on the university's general attitude towards these instruments.

Besides the limitations presented to how rankings portrait the value of universities to society, the interviewees also mentioned being aware of many other risks and flaws with university rankings. The criticisms made to rankings are mainly in line with those presented in the literature review of this research and include mainly the inadequacy of certain indicators to the national and institutional contexts and the oversimplification of complex organizations in a few numbers and indicators.

In general, interviewees were very critical about the large number of the indicators used on university rankings that do not fit their university's context or even the Brazilian context. They point to hiring and faculty policies, funding, and others. The inadequacy of rankings to the reality of Brazilian and further Latin American universities are highly recognized by the literature, as presented in Chapter 2 (Marope et al., 2013; Ordorika and Pusser, 2007; Leal et al., 2018).

"That is the main criticism of university rankings. The so-called one size fits all. They use the same standards that do not apply to all universities in the world nor Brazil. In our context, we have other activities that are not reflected on international rankings" (Rector, UNICAMP).

"In many ways, rankings do not apply to the public university. One example I think is worth discussing is the teacher/student ratio. Having a high proportion of teachers per student may be good for the student, but from a perspective of public policy and expenditures, it's bad" (Rector, UNICAMP).

¹⁰ Only two of the interviewees included in this research were not academicians, but were professional staff.

"Rankings that give too much weight to Nobel laureates will not favor USP in any way. Of course, we would like to have Nobel laureates, but when you look at the history of the Nobel prize, there is more than a century of delay that we won't catch up anytime soon" (Coordinator of the Institutional Research Office, USP).

The criticisms related to the inadequacy of certain indicators were also reflected in an interview (Marques, 2019) given by the current Rector of USP, Vahan Agopyan, who could not be reached for this research, but whose perceptions from that interview are very much in line with what is reported in the quotes above. The rector mentioned how it would not make sense for USP to hire Nobel prize laureates, which would cost the institution a good amount of money that could be better spent on hiring young researchers, and also highlights that hiring this type of professor would probably not fit the rules of public servants followed by the state universities of São Paulo (Marques, 2019). The criticism of the criteria of Nobel Prize laureates is widespread amongst university leaders in Brazil and was also present in Righetti's (2016) interview with the former rector of USP, Marco Antonio Zago, who gave the example of the University of Buenos Aires, with 300 thousand students. He questioned what effect would a Nobel laureate have for the students in such a big university, and whether it would improve teaching (Righetti, 2016, p.219).

Some of the interviewees also argued that the inadequacy of the indicators is because rankings are formulated specifically to target universities from certain countries and contexts. The literature largely agrees that rankings provide a biased, partial view of quality in universities (Santos & Noronha, 2016; Vanz et al., 2018) and that this frequently favors countries from the global north, or English speaking backgrounds (van der Wende & Westerheijden, 2009; Finardi & Guimarães, 2017; Gracio et al., 2018).

"You have American universities, and there are rankings to show them in the light they prefer, the same for British and Chinese universities. (...) Rankings do not reflect the best universities, but the best within that selected set of indicators. And they are not formulated considering the Brazilian reality, nor de Latin American or that of the Global South" (Manager of GePlanes, UNICAMP).

"Rankings have biases; many were constructed based on American, European universities, or even Asian universities. There are other intentions behind those instruments, that are directed towards the universities of the country where that ranking is positioned (...) so, we have to understand that our reality in Brazil is very different from those universities, making it hard to compare" (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

"Rankings were historically constituted as platforms that give visibility to universities, but that follows a logic for choosing their metrics that was developed to favor the interests of certain groups. (...) When we compare their methodologies, we see that there is great variation. They give different weights to different indicators (...) so we can see that there are other factors behind this choice of indicators" (Coordinator of the Institutional Research Office, USP).

One of the most frequent criticisms is regarding the lack of third mission and social indicators in university rankings. Many of the interviewees highlighted how those activities are very important in Brazilian universities, following the Latin American context, and how rankings fail to account for their efforts in this area. The former rector of USP in Righetti (2016) also mentioned this lack of coverage of third mission activities. The interviewees also mentioned the risk of universities diverting from their social roles when rankings are overvalued in funding

policies, an issue frequently presented by the literature reviewed for this research. As mentioned in Chapter 2, teaching and third mission activities are highly overlooked by international university rankings (Leal et al., 2018; Badat, 2010; Oliveira, 2018; Vincke, 2009, Buela-Casal et al., 2007; Altbach, 2015). In this sense, Altbach & Hazelkorn (2017), argue rankings can create tensions between a university's goals and activities and what would need to be done to gain positions in university rankings.

“We want to be an excellent university, but also an inclusive one. That is a priority. (...) The wealth of an institution is also based on its diversity. Rankings don't measure that” (Advisor at the Vice-rectory for University Development, UNICAMP).

“We have some courses and degrees at UNESP that are not included in rankings but that have a big importance for our region. (...) This is a social role of the university that will not show up in rankings” (Chief Strategic Planning Advisor, UNESP).

“Rankings won't reflect the impact of USP in facing the COVID-19 pandemic in São Paulo, and what was the participation of our university hospital in avoiding the collapse of the public health system” (Coordinator of the Institutional Research Office, USP).

“We have many activities related to social services in health and basic education, would we put those things aside because they are not included in university rankings? (...) In places where rankings are over-stimulated, universities might put some activities aside to focus on others that are valued by university rankings, and that is very worrying” (Rector, UNICAMP).

Recognizing these important problems with university rankings, managers were generally positive about the more recent, alternative rankings such as sustainability and multidimensional rankings. They highlighted how THE Impact Rankings, which covers a broad range of activities performed by universities, brings a better understanding of universities' actions in social and environmental sustainability, including activities to lower inequality in Brazil. As seen before, those are very relevant to Brazilian public universities' missions. Interviewees highlighted how these rankings are compatible with their institutions' missions, and how they can be a platform for those universities to stand out globally, due to the alignment between what they measure and what those institutions already pursue.

"We are going in the direction of betting on a few rankings that are more compatible with our reality. So, this year, for example, we sought to organize our data to join these sustainability rankings" (Rector, UNICAMP).

"Now we will try to participate in THE impact ranking for the first time and I think this is a ranking where we can show our activities better. (...) Organizing our data to participate in this ranking will set us apart, as it did for USP. In these rankings, we can have an advantage over European or North American universities that are in another context" (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

"There was already a lot of effort from our side to make UNICAMP sustainable (...). Because of that, they brought to our attention those rankings that would be interesting for us to participate in (...) we decided to join because it was very related to what we were focusing on already" (Manager of GePlanes, UNICAMP).

"Latin American universities have a fundamental importance in the interaction with society when it comes to promoting social and economic development in the countries where they are located, which are mostly low to middle-income countries. Therefore, these universities have a lot to offer to society, and the activities they conduct in that sense are not always valued in rankings. So, when THE Impact Ranking presented a different perspective on rankings that privileges the universities' relationship with society, the high performance of USP was clear"(Coordinator of the Institutional Research Office, USP).

The criticisms made by the interviewees and presented in this section were mostly reflected in the literature review of this thesis. This shows that the participants were indeed well aligned with what scholars of higher education present as the most serious problems of university rankings, and that, at the same time, the literature reviewed for this research presents a good reflection of managers' challenges and perspectives.

- **Rankings as tools for institutional learning**

Nevertheless, these criticisms do not mean university managers do not see a possibility of using rankings for their benefit. The most frequently mentioned benefit of monitoring and using university rankings reported by participants was institutional learning and benchmarking. According to them, rankings can help understand how the university is performing according to certain benchmarks. This was considered by participants as a way universities can use rankings selectively, learning about their progress, where it fits their missions and goals. While some were more critical than others were, they all recognized rankings could play a role in institutional learning, a positive impact of rankings also recognized in the academic literature (Oliveira, 2018; Berghoff & Federkeil, 2009).

"In our university, we believe in rankings because they promote self-reflection that can lead to important changes. (...) We value rankings from the perspective of reflection and improving our activities in the areas we deem important." (Rector, UNESP).

"So, we learn and evolve. We start to understand what is recognized. So, I think rankings are important for international benchmarking" (Rector, UNICAMP).

"UNESP has always cared for the themes and metrics that are a part of university rankings, regardless of their existence. However, with the emergence of rankings, this became systemic. (...) What we used to do, like checking teacher-student ratios and high impact publications, now everybody is looking at it and it is possible to compare. Therefore, rankings came to help. And other indicators that we did not know or did not give much importance, we started to pay attention" (Chief Strategic Planning Advisor, UNESP).

"I think that the existence of university rankings is fundamental. They naturally have different algorithms, they measure slightly different things, but I think that without metrics it is not possible to evolve. Even if it is to be able to tell universities what they are doing well and what they are not" (Coordinator of the General Management of the university, USP).

There are many ways universities can use rankings for institutional learning, and interviewees described mainly that they provide comparison and benchmarking, and that by looking at the indicators used by rankings, universities can reflect on the indicators they use on their institutional evaluations.

Rankings are by nature instruments of comparison; therefore, it is only natural that universities use them to assess their performance against that of other institutions. However, while rankings normally include all universities in the same standard for comparison, when universities use rankings for their institutional learning, they can choose which institutions they should compare themselves to. In this way, rankings became an instrument for comparison not in their quality of providing a position to each university and comparing institutions with different realities, but they provide data for universities to choose with whom to compare. This perspective is taking into account that the external pressure on USP, UNESP, and UNICAMP to participate and thrive in rankings is relatively low, due to their model of funding not using rankings as criteria for fund allocation.

"For us, rankings have this comparative aspect of having references. That is very important. (...) Moreover, we must compare similar things (...). The rankings of universities under 50 years old are very interesting to us. In this group of universities we do stand out, we are the first in the country. So, it is interesting to follow universities that are on the same stage of development" (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

"One of the main aspects of rankings is self-reflection. Considering that we cannot base ourselves in a self-referential way, we are using rankings at UNESP to highlight our strengths and weaknesses (...) and a good starting point of reflection is the comparison with other similar universities. It would be unfair to directly compare two completely different universities" (Rector, UNESP).

"I believe rankings are a tool to help universities understand where they stand compared to other universities. However, I think that while all universities work with teaching, research, and third mission, they do it in different ways. The way those activities connect to their missions is different, so we need to learn which universities we want to be compared to. I think we cannot compare ourselves to institutions like Oxford. But we can compare ourselves to institutions that are just as good, but that is closer to our mission and reality" (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

"We work looking at domestic affairs, but then the rankings came (from American and European companies) and made us realize that we are on the right path. We are doing what we should do, but now we have international references to look at" (Chief Strategic Planning Advisor, UNESP).

"They provide references. I can see, speaking of Latin America, who is best in for example internationalization. Then we can go see which country and university stands out and approach them to do some benchmarking. If I know where I am not performing well and that they do perform well, we can exchange experiences and see where I can improve" (Manager of GePlanes, UNICAMP).

Sustainability rankings were also mentioned as bringing opportunities to identify important indicators and to learn in which areas the universities had more opportunities to improve:

"In the first year we had a good position (101-200) but when we look at individual SDGs, we can learn even more and see where we might not be performing so well, or where we need to collect and organize our data better. In Quality Education, we ranked fifth, but when we look at SDG 17 (Partnership for the goals), we rank 200-300" (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

“THE Impact Ranking has a lot of different indicators, some concerning our internal management, such as how we manage our water, our food wastage, etc. (...) We were already moving in this direction, but it came to show that now rankings will also look at this” (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

The U-multirank was also praised by some due to its flexibility and multidimensionality, which offer particularly important opportunities for institutional learning. Since the focus of the U-multirank is not on providing a list with fixed numbers that represent universities' positions, the data provided can be more easily incorporated into analysis that are adapted to the missions and goals of the institution. It was also mentioned that the researchers and groups behind the U-multirank conducted some efforts in bringing Brazilian universities to participate. They mentioned how the makers of the U-multirank came to visit the three state universities of São Paulo to explain their indicators and the new possibilities this ranking could offer. Such an effort was mostly valued by participants.

“U-multirank seeks a different approach. It does not provide universities with classification, but you can organize the indicators according to what you feel is a priority. (...) I think this is very positive and that it is a good way to measure if we are achieving the goals that we define ourselves” (Advisor at the Vice-rectory for University Development, UNICAMP).

“The U-multirank is not interested in ranking universities. It seeks to give visibility to each institution's strengths and point to where they can improve, with a multidimensional approach (...). It is very useful so that we can (...) identify similar institutions to partner with, or the opposite, seek institutions with complementary strengths to interact and learn” (Coordinator of the Institutional Research Office, USP).

In this perspective, the U-multirank comes as an alternative to the over simplicity that some of the interviewees criticized about rankings. Some managers were critical about the very nature and purpose of the most traditional rankings, which is to synthesize and organize a complex reality, providing comparable classifications and labels (Hazelkorn, 2014a; Thiengo et al., 2018):

“Rankings try to synthesize the very complex reality of university activities in a few numbers with a single final score and classification. This does not work. (...) Universities have to be understood in their complexity. (...) In this aspect, rankings are not a good direction” (Advisor at the Vice-rectory for University Development, UNICAMP).

“Universities are multidimensional. They have teaching, research, and third mission activities. When you use indicators based mainly on one dimension, you won't show their true complexity”. (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

On the larger topic of institutional learning stemming from university rankings, the interviewees reported two main examples of how their institutions learned something about themselves from rankings. In the subsections below, learning opportunities regarding data organization and internationalization are presented.

- Rankings, institutional research, and data

Participants frequently reported that gathering data for ranking agencies led to improving the university's data collection and organization policies. This phenomenon can be related to the emergence of the so-called rankings offices or institutional research units dedicated to collecting and organizing the data to be provided to university rankings, and later analyzing ranking results. As explained before, all three universities analyzed in this research created such units in the past 5 years. The literature recognizes the role of those units and the more general role of rankings in data organization within universities (Hazelkorn, 2009; Righetti, 2016; Oliveira, 2018; Berghoff & Federkeil, 2009).

“We used to have inaccurate data, stemming from different sources in the university. (...) So, in this first moment, we centralized the organization of data in one single body of the university” (Coordinator of the General Management of the university, USP).

“One aspect where I think rankings have been of much help is that the university had a lot of information that was not organized enough to be collected by rankings. (...) Therefore, we ended up creating new mechanisms for this. We did not have any idea of how many international visitors our university would get, for example. (...) Now we work to make this data collection more efficient and less bureaucratic” (Responsible for rankings at the Vice-rectory for University Development, UNICAMP).

"Participating in university rankings offered us valuable opportunities to realize that we did not have adequate tracking of certain academic performance indicators. Our university is very large (...), many of those activities are spread in smaller units, and there is not always organized data that reaches the central administration. Therefore, once we had to provide certain data to university rankings we realized that some information that is relevant to our institution is not being measured correctly. So that is an opportunity to improve our records" (Coordinator of the Institutional Research Office, USP).

We already had a data bank, but there were 10 different types of data banks. One related to undergraduate studies, one to teaching, and so on. (...) They did not interrelate. (...) There is no point in keeping a patchwork of data when there are systems capable of putting them together. (...) This was influenced by rankings. Before I would have to search many different sources within the university to provide data for a specific ranking. (Chief Strategic Planning Advisor, UNESP).

Like the more traditional rankings, sustainability rankings also have a big role in institutional learning for universities, providing relevant opportunities to organize and collect data on different topics. However, the indicators of sustainability tend to be more novel for the universities, meaning that while most universities already have some level of monitoring over their scientific production, indicators related to campus recycling, or research on the SDGs tend to be rarer. Sustainability rankings can potentially cause an even greater disruption in how universities organize and collect information:

“We didn't know how much of our residues were recycled. This helps the university to have indicators for very interesting topics” (Rector, UNICAMP).

"We ranked poorly in one goal related to the reduction of inequalities simply because we did not have the information on how many disabled students, teachers, and staff we had. It was not something we were monitoring systematically but now we have a working group focused on monitoring disabled people in our community. The same happened for gender equality,

environmental sustainability, or carbon reduction. Those were not measured in the classical metrics of university rankings" (Coordinator of the Institutional Research Office, USP).

"We recently began to participate in the Green Metrics ranking. This meant looking for several indicators and information that we did not have organized. We were paying attention to these indicators before, but not as systematically as now" (Manager of GePlanes, UNICAMP).

- Rankings and university's internationalization policies

Another area of universities' activities where rankings had a big influence was on their internationalization efforts. The institutional learning, in this case, came mainly from understanding and adopting practices used by rankings that were previously overlooked by those universities, and from perceiving comparatively their performance on internationalization once rankings were released.

"Internationalization at UNESP changed radically because of university rankings. In the 90s, our internationalization policies were entirely based on sending students abroad. (...) Rankings showed us that internationalization was also about research. So, rankings had a big influence in our concept of internationalization" (Chief Strategic Planning Advisor, UNESP).

"One aspect where rankings influence is very evident is in co-authored publications with international authors. In the last decade, USP has soared in this aspect. (...) This is highly valued by university rankings, so there is some causality there. University rankings value and stimulate this and this pushes us to pursue it" (Coordinator of the General Management of the university, USP).

Beyond influencing the very definition of internationalization and highlighting important indicators that those institutions might have missed, international rankings also raised awareness that those institutions, despite being extremely successful in most rankings when compared to other Latin American universities, were generally falling behind in their internationalization performance. It is an important example raised by participants of how university rankings were used for institutional learning.

"The issue of internationalization is one that frequently comes up. That is the area that UNICAMP performs worst. (...) This does have some influence in our planning, as that is one issue frequently lowering our performance on university rankings" (Manager of GePlanes, UNICAMP).

"When we look closer to university rankings, we can learn more about our university, and develop institutional policies from this learning. One area that our university does not perform so well is internationalization. (...) This is very clear on rankings. Even though we try hard, we were not able so far to stand out on internationalization performance. So, that reflection was very important to design our internationalization strategy" (President of the Commission for Institutional Evaluation and University Rankings, UNESP).

The fact that internationalization features as one of the biggest challenges for these universities on ranking performance is not completely unexpected. As the literature shows, language barriers can be a big issue for non-English speaking universities to thrive on university rankings (Finardi & Guimarães, 2017; Gracio et al., 2018). It is harder to attract students and teachers from abroad, and sometimes even to make partnerships for research since the majority of

courses in USP, UNESP and UNICAMP are in Portuguese. This is an issue recognized by some of the interviewees such as Emerson (UNICAMP) and Rogério (UNESP) who recognize the difficulties in attracting international students and professors. Given that, as put by van der Wende & Westerheijden (2009, p.73) "English is the language of research"; it is understandable that in a Portuguese speaking country, certain barriers to the internationalization of science will be present. As presented from the work of Thiengo et al. (2018) in the literature review chapter, Brazilian HEIs have begun financing the translation of papers produced by the academic community and providing English courses for students and academics, efforts which can be linked to the need for improving internationalization performance, and that reflect the language barrier with English. The difficulty faced by those universities in their internationalization efforts means that they are normally eager to learn from rankings in this area and see how their activities compare to those of other universities with similar backgrounds. The interviewees mentioned seeing how other Latin American institutions put efforts towards internationalization and attempting to benchmark with institutions that have performed well in the area on university rankings.

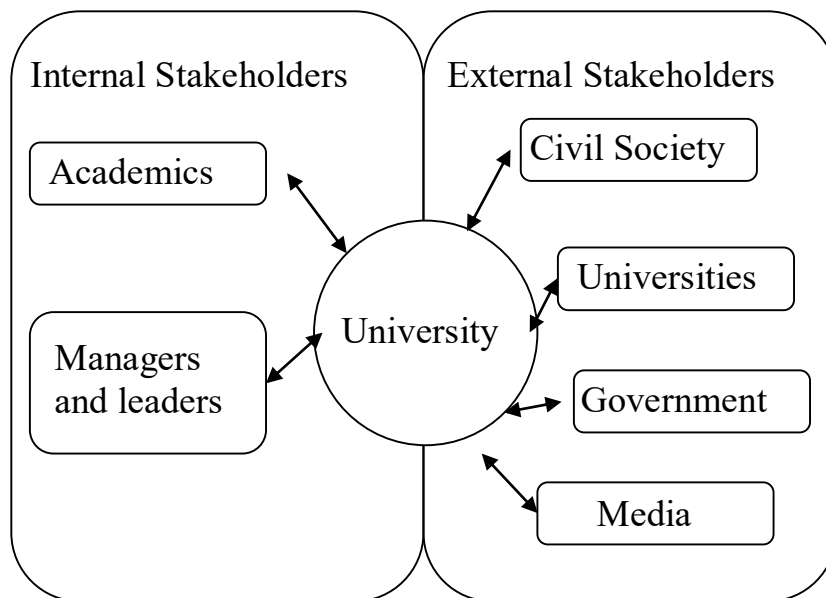
VII. Discussion and conclusion

This study indicated some of the stakeholder relations affected by international university rankings from the perspective of the managers interviewed. It sought to respond to the question of how university managers of the three state universities of São Paulo perceive the impacts and uses of international university rankings in their institutions. It considered four sub-questions related to the main research question that guided the organization of the results presented:

- Do managers believe rankings affect their relationship with their resource providers?
- Do they believe rankings play a role in the university relationship with key external stakeholders such as the government and the broader society?
- How does the internal community of the university, mainly academics and employees, perceive the impacts of rankings and the possible risks of these instruments?
- How do they see rankings being used in their universities' management and activities, if at all?

Figure 4 presents the main stakeholders discussed by managers concerning university rankings. Managers themselves were added as one of the internal stakeholders since there was a part of the results dedicated to their perceptions about rankings risks and problems. This is not a comprehensive description of all possible stakeholders of those universities, but it is restricted to key stakeholders that were mentioned in the interviews as being related to universities' ranking behavior.

Figure 4: Mapping of university stakeholder categories affected by university rankings



Source: Formulated by the author

The first stakeholder group mentioned in the interviews was the state government of São Paulo. The discussion here involved the first sub-question, regarding whether managers believe rankings affect their relationship with their resource providers. Using the idea of stakeholder salience, this is one of the most important stakeholders of the analyzed universities and it was approached in the last chapter from two different perspectives (Kohtamaki, 2015; Jongbloed, Enders & Salerno, 2008). The first was the perspective of the state as the university's main funder. Interviewees discussed how university rankings still do not have an important influence on the model of funding used by the State of São Paulo. They presented that, while current funding is stable and not related to performance on rankings, there is general insecurity on whether this model of funding will be maintained for long, and the university is facing pressures to be more socially accountable. This trend was identified in many moments throughout the thesis and is related to trends of marketization and of a diminishing role of the state in higher education (Jongbloed et al., 2008), while these trends are not yet consolidated in the relationship between the government and the state universities of São Paulo, they might become more intensified soon, and managers are aware of this possibility.

The second perspective on how rankings influence the universities' relationship with the government focuses less on the concrete mechanisms of funding and brings this accountability and legitimacy aspects of the university feeling a need to prove its worth and its value. This part relates mostly to the second sub-question, regarding whether managers believe rankings play a role in the university relationship with key external stakeholders. Managers noted that the politicians within the government read news regarding rankings as the media display them and that this sometimes leads to a misinterpretation of results. So while some believe that good ranking results can consolidate the quality and value of the state universities of São Paulo in the imaginary of politicians, other interviewees warned about the possibility of results being incorrectly analyzed. Given that Brazilian universities do not perform as well as the top North American, Asian and European universities (van der Wende & Westerheijden, 2009; Righetti, 2016; Yudkevich et al., 2016; Finardi & Guimarães, 2017; Morosini et al., 2017; Gracio et al., 2018), managers have noted that politicians might lose sight of the progress the universities have made given their context and

short existence, and interpret ranking results as unsatisfactory performance. This can help promote arguments that the state universities of São Paulo do not perform as well as they should, emerging from an overly simplistic interpretation of those results.

From that emerges a second key external stakeholder mentioned by managers, which is the media. This is an important stakeholder because it can affect how other key stakeholders such as politicians and the broader society perceive rankings. The interviewees mentioned that ranking results are often in the headlines of big newspapers in Brazil and that those tend to put too much emphasis on the position of universities in a certain year, highlighting how a certain university has gained or lost certain positions, and not promoting a more detailed debate on what those numbers mean. Managers criticized that type of media coverage on rankings, and some even mentioned actively pursuing media channels to try to promote a more well-informed view of what rankings mean. However, this research also found widely publicized headlines that celebrated gained positions on rankings from those universities' websites or news channels.

A third external stakeholder mentioned by managers was the broader society. As explained before this is more a category of stakeholders than a unitary cohesive group, but for this research, this segmentation is sufficient to show how rankings might affect the universities' relationship with those who pay taxes to support it but do not get direct participation in the university as students or employees. Their relation to university rankings is generally mediated by the media and thus is subject to the same problems of overly simplified results mentioned above. But more importantly, the issue that most managers mentioned was how this part of the society, which pays taxes but is not directly involved in the university as a student or employee, has little interest in the indicators used by most rankings, and consequently in ranking results. This is mainly due to the indicators used by rankings being mainly focused on academic production (Hazelkorn, 2009; Righetti, 2016; Leal et al., 2018; Thiengo et al., 2018; Buela-Casal et al., 2007; Altbach & Hazelkorn, 2017). For this particular group, excellence in the sense of being a world-class university is somehow less important than relevance:

“It is no longer enough to show excellence in the traditional (i.e. academic) sense of the word. The universities' strive for excellence is gradually complemented—some will even say overtaken—by their search for relevance. Increasingly universities are asked to prove their contribution to the knowledge society and to have their teaching and research play a more visible role in strengthening the innovative capacities of the economy”. (Jongbloed et al., 2008, p.319)

Therefore, managers reported a high level of concern for the society as a stakeholder, in line with the trend for public and social accountability, but reported that traditional university rankings have a limited role in the university relationship with the external society. However, managers also recognize that the international ranking scenario of today is much more diverse than when rankings first emerged, and that an analysis of its impacts on stakeholders can no longer be restricted to traditional rankings such as ARWU and THE World University Ranking. While those rankings are too recent for managers to be able to properly assess their impact, the interviewees mention that the emergence of sustainability rankings might be a game-changer in its relationship with society. According to the interviewees, sustainability rankings have the potential to improve universities' relationships with the external society for two reasons. The first would be that those rankings might bring indicators that are considered relevant to this stakeholder group, which means they might be taken into account more seriously than academic rankings currently are. The second reason is that the managers interviewed are generally positive that their university will be able to score better results on those sustainability rankings than they normally do on traditional rankings.

This perception finds support in the results of previous editions of THE Impact Ranking. USP was classified as the 14th best university globally in the 2020 edition, and UNESP featured in the 101-200 group, both well above their results in the more traditional World University Ranking, also by THE. Managers also believe sustainability rankings are more aligned with their universities' missions, and that they will value and award points for many activities that those universities practice strongly and that are largely ignored by traditional rankings.

The fourth and final external stakeholder considered here was other universities with whom the state universities of São Paulo might establish partnerships. This was the external group more influenced by university rankings from the managers' perspectives, showing that rankings are still very used by universities, and strengthening the idea that their indicator might be generally more focused on the academic community itself. While publication indicators might not be seen as relevant to the broader society, they are certainly still perceived as important by universities, and they generally still use this as criteria for choosing partners, according to the interviewees. This finding is also aligned with what was presented by previous studies on university rankings, where university partnerships are frequently mentioned as being guided by ranking results (Vincke, 2009; Righetti, 2016; Thiengo et al., 2018; European Commission, 2013).

Moving on to internal stakeholders of universities, this study also proposed the question of how does the internal community of the university perceives the impacts of rankings and the possible risks of these instruments, which is the third sub-question presented. This research considers that the managers themselves are stakeholders within the university, and thus it is important to understand how they perceive rankings personally and how they see the academic community reacting to those instruments. The interviewees showed that there is not a unified perception of rankings amongst university managers, and while some argued rankings could be very beneficial for universities and for improving the general performance of HE in Brazil, others were harsh critics of those instruments. This perspective was found in the literature review, with previous studies on the perceptions of rankings within universities reporting a similar variety in responses (Kehm, 2016). But an important finding was that, despite having different attitudes towards rankings all interviewees were aware of the potential problems with rankings methodologies, they only differ in the fact that some felt that those problems did not take away from the positive gains of those instruments, while others felt that these problems were too big to be ignored. The most frequently mentioned problems were the inadequacy of indicators concerning their universities' missions and activities and the lack of contextual sensitivity.

The table below summarizes the managers' perceptions of how rankings affect each stakeholder relationship, including their perception of rankings in the internal stakeholder groups:

Table 3: Rankings' impact on stakeholder relationships

Stakeholder	Managers perceptions of rankings effect
Government	<ul style="list-style-type: none"> -No effect on funding agreements so far -Some effect on politicians' perception about universities -Politicians' perceptions are generally based on position numbers only, which might lead to misinterpretations -Results perceived as negative might fuel negative feelings towards investing in public universities amongst politicians
Media	<ul style="list-style-type: none"> -Results used in simplistic ways to generate catchy headlines

	-A loss in ranking positions is usually broadly portrayed as a decrease in university performance -How the media portraits rankings influences other stakeholders
Broader Society	-Generally not interested in academic indicators -Looks for relevance over excellence (in the world-class sense) -Might be attracted to sustainability rankings, but it is too soon to know
Other HEIs	-Rankings frequently used to determine partnerships
University Managers	-Mixed perceptions, some were positive some negative -Generally aware of rankings' problems -Critical of the indicators chosen

Besides the perception of how rankings influence and are used by different stakeholders of the universities, stakeholder theory (Freeman, 1984) also brings the important idea that organizations should take action to manage their relationships with stakeholders. This means this research should not only identify impacts but seeing that rankings are relevant in numerous stakeholder relationships, this thesis can also understand whether universities take strategic actions to manage the impact of rankings on those relationships, diving more deeply into the ideas of considering the influence of stakeholders in organizational management. This discussion seeks to respond to the fourth and last sub-question regarding how managers see rankings being used in their universities' management and activities, if at all.

Because rankings influence stakeholder relationships (directly or indirectly), it is expected that university management might react and respond to university rankings. However, the interviewees generally did not recognize any strong movements from their universities to try to change ranking positions. This means that while rankings affect stakeholder relationships, the reaction of the state universities of São Paulo does not seem to be to chase better-ranking results to improve stakeholder relationships.

With regards to universities' relationships with the broader society, managers recognize the trend in demands for social accountability and impact and see that traditional rankings play a minor role in that relationship strengthening the idea that efforts and resources to chase better-ranking positions can have a limited impact in that relationship. However, as managers recognized the potential of sustainability rankings in this stakeholder relationship, they also recognized that their universities are consistently devoting efforts to join those sustainability rankings, which generally means collecting and organizing data on their sustainability activities. The movement of organizing institutional data was also seen when those universities first began to participate in traditional rankings, and the managers interviewed recognized that for a while now, their universities were investing in centralizing data organization and making sure that the data given to rankings are accurate. This movement of data collection and organization, both in regards to sustainability rankings and the more traditional rankings was also seen in the literature (Hazelkorn, 2009; Altbach & Hazelkorn, 2017; Buela-Casal et al., 2007).

Besides efforts to organize data, that can lead to better results in rankings, the managers interviewed generally recognized that rankings can be used by universities to learn more about their performance relative to certain indicators and other HEIs. This means that while managers

were generally against changing university activities simply to improve ranking positions, they recognize that having open access to information on their performance in certain areas can help universities identify areas where they can improve, as long as that is coherent with their mission. This was also recognized in the literature as a way universities can benefit from rankings (Oliveira, 2018; Berghoff & Federkeil, 2009). Therefore managers do not generally agree with chasing rankings but do believe that rankings can be a tool to institutional learning and achieving their own goals, at least as far as rankings provide transparent information on those areas.

The table below summarizes the reactions perceived by managers regarding university rankings. This completes the analysis

Table 4- Universities' uses of university rankings

University responses to rankings identified by managers	
Data organization	Ensure reliable and accurate data to feed ranking agencies, including those focused on sustainability indicators.
Institutional learning	Use the information provided by rankings to learn about university performance in key areas to their mission. Generate informed changes when necessary to fulfill institutional goals.

Overall, this research was able to show how the managers from the state universities of São Paulo perceive the impact and uses of rankings by key stakeholders, and how they see their institutions reacting to this effect. It showed that, while rankings are not yet important to the financial security of those universities, they do have an effect on how politicians perceive the quality and legitimacy of those universities, and because of their wide media coverage, they might also affect how other sectors of the society see these institutions. They also have an important effect on university international partnerships and are widely used by other HEIs. However, traditional rankings are still mostly restricted to indicators of academic excellence, and the managers interviewed identify a movement that demands universities show social impact and accountability over traditional indicators of academic excellence. This limits the impact of rankings on universities' relationship with the broader society, at the same time that opens space to innovative sustainability rankings to take the role of measuring progress in that arena. Finally, within the universities, managers and the academic community recognize that rankings have several methodological issues including the inadequacy of indicators that were constructed mostly without a Latin American perspective of the university. Despite those challenges, considering that rankings do influence stakeholder relationships, managers see internal movements of collecting and organizing institutional data motivated by providing accurate information to ranking agencies. They also see rankings being used internally to inform decisions on matters that are in line with their missions and goals. Therefore, while they do not recognize a movement of chasing rankings to improve stakeholder relationships, they still generally perceive the benefits of rankings for institutional learning, and universities use them to compare their progress in certain indicators.

From the interviews with managers, it was clear that the respective universities are dedicated to a certain degree to understanding and learning from university rankings, but that at the same time they manage to maintain a certain level of independence from these instruments.

University rankings are not yet (and maybe will never be) true mediators of resources for those universities. While they can attract visibility, institutional pride, and partnerships, they are not a significant part of determining how many governmental funds those institutions receive, nor are they important players in the communication with society. However, university managers do monitor rankings, as put by the former rector of USP “Every time a new ranking is released we take a look and try to modify what matters” (Righetti, 2016, p.215). The managers interviewed generally see rankings as a tool that can be used for organizations learning on certain occasions.

Managers frequently mention that rankings are seen as a consequence, not as a goal, of their actions to improve the university's performance in areas that are important and coherent to their mission. The idea of rankings as a consequence, not the goal implies that these universities will not divert their activities to improve rankings, but that rankings are a tool for improvement, and that positive results in them are a consequence of this institutional learning directed to fulfilling the university's missions. While Hazelkorn (2008) does point out that universities usually, do not openly admit to changing their strategies for rankings, this idea of rankings as a consequence is compatible with the funding scheme and independence that these universities hold.

“We are not changing our activities simply to look good in a certain picture. We are always trying to improve our activities in line with our strategic plans, based on our mission and values. That is what moves us. (...) We are working WITH university rankings, but not FOR university rankings” (Coordinator of the Institutional Research Office, USP).

Interviewees mentioned that they do not see rankings having such an effect that their universities will drop certain activities simply because they are not measured or valued by rankings. They mention understanding rankings problems and trying to be selective in how to use them. This critical, but not dismissive view of rankings is very much in line with the proposals of those studying the use of rankings in the Metrics project. As presented in Chapter 3, the project proposes that universities reverse the logic on rankings, and start to evaluate which aspects of rankings can be used for their benefit, instead of being subordinate to their criteria (Marcovitch, 2018). It is then important that universities identify and articulate the aspects of rankings that can be relevant to their internal management, considering that each ranking will bring a specific, biased view of their activities (Axel-Berg, 2018, p.43).

This research suggests that the impact of rankings is not the same for every HEI around the world. Considering that only a small percentage of universities ever feature in those instruments, this research might balance the view sometimes portrayed in the literature that rankings are an inevitable phenomenon (Altbach, 2015; Marginson, 2017). The results presented here show that even the top-performing institutions in Brazil are still somewhat protected from the effect of rankings and that managers do not recognize a strong movement of chasing international rankings in those institutions yet. They do recognize, however, that this security might change soon, following trends of increased accountability and marketization of HE. This perspective brings an interesting complement to the literature on rankings. Since most of the research on this topic is concentrated in Europe, North America, and Asia (van der Wende & Westerheijden, 2009; Righetti, 2016; Yudkevich, Altbach, & Rumbley, 2016; Finardi & Guimarães, 2017; Morosini et al., 2017; Gracio et al., 2018), this particularity of how Brazilian public universities are funded add a new dimension to the relationship of rankings on public policies. The fact that the analyzed universities do not charge tuition fees and receive most of their funds from a predefined percentage of a state tax is unique when compared to most universities in Europe, North America, or Asia. The state universities of São Paulo have not experienced any type of excellence initiative that

concentrates funds from the government, as have several European institutions (de Boer et al, 2017; van der Wende & Westerheijden, 2009; Douglass, 2016; Goglio & Regini, 2017).

The results of this study also show that stakeholder theory brings an important contribution to the study of HEIs and university rankings. The leaderships of the universities analyzed showed a significant understanding of the importance of stakeholder management for the success of their organizations. The recent challenges in legitimacy and the high dependence of universities on external funding from government entities further reinforce the need to understand stakeholder needs. The internal characteristics of governance of the state universities of São Paulo, with a focus on democratic decision making, also means that internal stakeholders have a bigger impact than in most organizations and that no change can be made without significant support from the academic body of those universities.

From the discussions presented here, it is also possible to propose some course of action for universities and policymakers in Brazil. Within universities, the study showed that leaders and managers could find ways to benefit from international university rankings, as long as they keep a critical view of those instruments, and use them as tools to advance their missions and goals, instead of changing goals to pursue rankings. It can also be beneficial to identify rankings that are more aligned with their mission and make efforts to participate in those particular rankings. For policymakers in Brazil, while there are trends to increasing pressures for accountability and demonstration of results to society, it is important to keep in mind that those need to be balanced in order not to foster exaggerated competition, or the misuse of rankings, which can lead to mission diversion as warned by managers interviewed.

The efforts of this thesis by no means represent a comprehensive and exhaustive analysis on the topic of international university rankings in Brazil. This study brings a multiple case perspective focused on the better-ranked universities in the country. There is still room to understand how those institutions that are only rarely featured in international rankings are affected by those instruments. It is also important to develop further studies regarding the national rankings that have emerged in Brazil, which were not featured in this research. Those rankings feature a much larger number of Brazilian institutions, including many more than the few institutions featured internationally. Looking at national rankings will also bring private universities to the discussion, which might alter completely the dynamics presented here. While the public universities reported in the research still have stable government funding as a gatekeeper to exaggerated market influences, private universities in Brazil have a very different reality, with the presence of many for-profit institutions.

Finally, the results of this research are limited to the universities analyzed and are restricted to discussing managers' perceptions, not investigating the impact of rankings in other sectors of the university. Further studies can be conducted on the general perceptions of internal stakeholders such as professors and students, and other studies can be developed without the focus on perceptions, looking into how rankings might be included in institutional plans and documents. The field of rankings in higher education is far from being exhausted and new developments such as sustainability rankings are only beginning to show their impact, and early perceptions show that they might play an increasingly relevant role to university management, opening a relatively unexplored field of research.

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