Rankings Practices:
Understanding the Impact of World University Rankings on Policies and Practices in Dutch Higher Education

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I declare that this piece of writing is my own work; all use of other work and thoughts have been properly referenced.

Abstract

Since the first publications of World University Rankings in 2003, rankings got established as a phenomenon of modern academia. The emergence of funding-based research schemes, the urge for accountability and the globalizing academic market in which universities must compete for resources and students generated an interest in tools to indicate quality and status of higher education. Rankings, in this sense, disperse necessary market information and function as a legitimization for quality, reputation and international outlook. Through the application of quality indicators and data weightings, rankings agencies set the standard for a different notion of quality and excellence. This means that although university rankings claim to evaluate research performance and quality of teaching, they test how responsive to auditing institutions are and how they match with rankings' performance indicators. However, rankings have contradictory implications, because quality indicators that are criticized such as reputation and international outlook contribute to good rankings' performances. The aim of this thesis is to investigate how these tensions are negotiated and to what extent university rankings influence higher education policy in the Netherlands. To evaluate this, I investigated practices of data submission, analysis and communication in Dutch academia. Beyond the framework of strategic rankings policies, policy officers fall back on different repertoires to give meaning to their approach to rankings related practices. To analyze these repertoires, I employed an ethnographic approach and conducted interviews with researchers and policy officers from Dutch research institutions. I subsequently contextualized this ethnographic data with data from the government, university websites, newspapers and institutional policy documents. Extending beyond the experiences of policy officers, researchers and students, this research is of interest to policymakers, higher education managers and politicians providing insights into the subject of rankings and the wider implications of rankings' practices and excellence-driven policies in public research universities in the Netherlands.

Acknowledgements

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Abbreviations and terms

ARWU - Academic Ranking of World Universities, also known as Shanghai Ranking. This ranking was first published by the Shanghai Jiao Tong University in 2003, making it the first world university ranking.

CWTS - Centre for Science and Technology Studies, a research institute at Leiden University that publishes the Leiden Ranking.

Policy officer – The policy officers at universities in this research don't work on rankings on a full-time basis. Apart from rankings' duties they have different tasks and according job titles. In the interest of clarity they are referred to with the general term *policy officer*.

QS - Quacquarelli Symonds. From 2004-2009 known as *Times Higher Education–QS World University Rankings*, from 2010 QS publishes university rankings independently as the *QS World University Rankings*.

THE - Times Higher Education, publisher of the *Times Higher Education World University Rankings* since 2004.

U-Multirank – This multidimensional ranking was launched in 2011 and is an initiative of the European Commission with accessible, transparent and comparable information to facilitate study choices. The underlying motivation was to create a ranking that challenged the existing rankings and their shortcomings.

University – *University* refers to all higher education institutions awarding higher degrees and undertaking research, irrespective of their name and status in national law. In the Dutch context this only refers to public research universities (*universiteiten*), and not to universities of applied sciences (*hogescholen*). Also referred to as institution.

VSNU – *Vereniging van Universiteiten*, the Association of Universities in the Netherlands.

WUR - World University Rankings, mostly the Times Higher Education World University Rankings or QS World University Rankings.

1   Introduction

Studying at university means spending hours in the library, meeting friends and colleagues and trying to pass the required exams. If we zoom in on this, it matters what you can find in that library, what the student population looks like and what the quality of teaching at that university is. These characteristics may or may not correlate with metrics such as research output, student versus staff ratio and the percentage of international students, that are the indicators for World University Rankings. The first World University Rankings were published in 2003 and have become ubiquitous in the domains of research and teaching evaluation, marketing, and student recruitment. According to rankings agencies' websites, studying at a highly ranked university goes with several other advantages; high employment rates, prosperous careers, and attractive salaries after graduating. To make these advantages achievable for everyone and stimulate lower ranked universities to keep up with the world's best institutions, rankings agencies encourage active rankings participation and offer analytical tools to analyse scores in further detail, tools for marketing and recruitment purposes and consultancy services (QS Quacquarelli Symonds Limited, 2019a, 2019b).

World University Rankings, of which the Times Higher Education (THE), the Quacquarelli Symonds (QS) and the Academic Ranking of World Universities (ARWU-Shanghai Ranking) are best known, are "perceived and used to determine the status of individual institutions, assess the quality and performance of the higher education system and gauge global competitiveness" (Hazelkorn, 2015, p. 6). This quote indicates that World University Rankings not only inform prospective students on their study choice, they also act on the level of national and global academia and possess market characteristics. As higher education rapidly becomes globalized, rankings indicate countries' level of research and capacity of higher education on the global science market to facilitate processes on the international academic and professional labour-market (Hazelkorn, 2015, 2017). Thus, to understand rankings, we need to look at the links between academia and the global science market.

The global science market appeared in the second half of the twentieth century when society transformed from an industrial to a knowledge-producing society and knowledge became the source of wealth-creation (Stephan, 2011). This society creates and sells "scientific and technological knowledge … as a means of enhancing growth and productivity", according to the OECD (Hazelkorn, 2015, p. 3). To stimulate and maintain the processes of economic growth, there's a need for continuous investments in research facilities and academic staff. As a result,

science took on a prominent role as the engine of this knowledge-driven society (Berman, 2011). Public research funding, however, is anything but stable and subject to global (geo)political and economic trends (Stephan, 2011). An important source of universities' income to keep investing in the academic market is income from tuition fees. The increasing dependence on tuition fees and the competition for talented students and researchers led to the development of marketing strategies in which universities try to distinguish themselves from other institutions in quality and identity.

These changes in the business model of academia were co-produced with changes in academia's position in society. Shifts in resources led to a different market position that came with a transformation in relations of dependency and reliance. Research investments imply, as investments in capitalist systems do, accountability from the universities. Governments and funding agencies want to know how their money is spent and how their investment is returned (de Rijcke, Wallenburg, Wouters, & Bal, 2016; Power, 1997; Sirat, Azman, & Wan, 2017). To answer this accountability demand, faculties and universities started to be regularly audited. This means that internal achievements are made externally verifiable through the application of generic auditable standards of performance (Power, 1997). However, to build reputation, research audits were not appropriate to display how universities in their entirety perform on the world university market. Tables of research output and financial audits were by no means suitable for prospective students and their parents, who wanted a simple overview of the student population, research subjects, and tuition fees compared to others.

Although practices of rankings and auditing largely overlap, auditing practices in academia diverged into two types of audit that take place in different organizational realms and have different target groups: research audits and commercial university rankings. Whereas university rankings depart from the same concept of quality management and are based on comparable indicators, university rankings differ considerably from scientific audits. Scientific audits are executed on request of the governments or universities to get insights in performances to sustain management and organizational policies. The results of these audits can be used for evaluations and policy building in human resources, research groups or funding agencies. Researchers are audited based on their research output and therefore individual actions are not required, contrary to World University Rankings for which universities submit their institutional data and thus exert influence on their participation. Even though World University Rankings claim to measure the level of research and teaching too, they rely on non-scientific methodologies and emphasize indicators on market information such as reputation. Contrary to scientific audits, World University Rankings don't focus on assessments of research and scientific impact but aim at dispersing market incentives

to reach prospective students and are therefore less used to research policies. Furthermore, rankings agencies possess a commercial attitude and offer services to strengthen their market position and largely rely on income from advertisements, summits, and other marketing related activities.

Due to fluctuations in research funding and the growth of academia, from the 1970s universities established stronger ties with other parties that could provide necessary funding and equipment. In their quest for funding, universities had to negotiate their research aims in agreement with funding parties. These agreements possess steering elements such as agreements on research goals, methods, resources or a timespan in which results should be published (Latour & Woolgar, 1979; Stephan, 2011). In addition to the steering pressure imposed in competitive funding practices, practices of measuring and ranking also impact organizational processes in universities. Evaluation and control mechanisms generate tensions that, in combination with the incentives of good results, seduce to answer the demands of the auditing body. Sociologists Michael Sauder and Wendy Nelson Espeland describe that this demand is answered through assembling tight links between institutional pressure and organizational activities (2009). To optimize audit performances, auditees adopt the generic quality indicators implied by the auditing bodies and, through this lens, revalue their performance. Looking at this internalization of rankings' results, actors are continuously coerced to optimize their results and, as an act of reactivity, adapt their organizational practices (Sauder & Espeland, 2009). This means that although university rankings claim to evaluate the quality of research and teaching, they test how responsive universities are to auditing practices and how universities match with global rankings' performance indicators. In this sense, rankings neglect the importance of built up tacit, experiential and implicit knowledge and ignore universities' unique profile (Shore, 2008; Strathern, 2000). Hence audits redefine the understanding of quality and excellence, they transform one's relation to academic performances, their institution, their work, and themselves (Sauder & Espeland, 2009; Shore & Wright, 1999).

Organizational shifts have different consequences for actors in academia, who experienced a role transformation from students, researchers, and administrators into customers, sellers, and facilitators (Power, 1997). Yet, rankings place auditees in a network of hierarchical relations that are mutually dependent and subsequently exert disciplinary forces. The notion of disciplinary power is associated with the French philosopher Michel Foucault. Foucault argues that disciplinary power individualizes bodies by placing them them in a network of relations (Sauder & Espeland, 2009). Rankings, in this case, take the shape of a *dispositif*: "Having the quality or function of directing, controlling, or disposing of something; relating to direction, control, or disposal. Something that disposes or inclines" (Raffnsøe, Gudmand-Høyer, & Thaning, 2014b, p. 1). World

University Rankings, in this sense, exert control over academic practices. They cause a discriminatory competition for excellence and apply ambiguous methodologies and arbitrary indicators that are used to evaluate academic research and teaching performances. Moreover, institutional data from public institutions are used to ensure the market position of commercial ranking agencies to generate profit. However, universities need marketing tools that distribute signs of excellence, compare entities and disperse other market incentives to ensure research funding and the influx of students.

Although rankings answer a market demand, they are critically evaluated by academics, higher education bodies and universities (Delft University of Technology, 2019; Deuze, 2019; Johnson, 2006; Marope & Wells, 2013; Vennekens, van den Broek-Honingh, & Hofman, 2019; Vereniging van Universiteiten, 2019b). Several initiatives are launched to enhance understanding of issues related to university rankings and academic excellence and propose methods to rank responsibly, revise the calculation of research metrics or introduce a weighted system to take differences between institutions into account (Hicks, Wouters, Waltman, de Rijcke, & Rafols, 2015; IREG Observatory on Academic Ranking and Excellence, 2019a). However, these initiatives re-evaluate rankings and improve rankings' metrics, but do not question the tension that is generated between the demand for (scientific) accountability and the need to compete on the global science market.

To investigate rankings practices on an institutional level, this research focuses on rankings practices at research universities in the Netherlands. Notwithstanding extensive research into the development of commercial university rankings (Hazelkorn, 2009, 2015, 2017; Marginson & van der Wende, 2007; Marope, Wells, & Hazelkorn, 2013), fieldwork concerning country specific rankings (Elsbach & Kramer, 1996; Morriss & Henderson, 2008), and ethnographic studies on research evaluations among research groups in the Netherlands (Degn, Franssen, Sørensen, & de Rijcke, 2018), there is a knowledge gap when it comes to the administrative and organizational practices concerning university rankings in public academia. To further examine these practices, we come to understand how World University Rankings position itself in public academia and how their impact can be addressed. Current research on rankings in higher education institutes focuses primarily on practices to achieve the highest ranks, academic excellence, reputation, and an increasing growth in publications and citations. Since all these elements have mainly to do with the financial resources of the institutions (Hazelkorn, 2009), a focus on the smaller and more equally funded Dutch research area would provide a fruitful starting point for in-depth investigation into the practices and rationale involved in ranking participation.

How actors are affected by disciplinary forces depends on their interests, incentives and relation to others that are controlled by the same entity. To find out how ranking-related tensions are negotiated in academia, we need to look at actors and their actions. Through focusing on elements of practices, we can assemble a network of interests and relations that tell us more about the impact that rankings have in academia. I do this based on ethnographic data from observations and interviews conducted in the spring of 2019. Yet, rankings' participation requires several practices such as collecting, selecting and submitting the data that come with tensions of different interests and incentives. Consequently, I chose to omit scientific audits and focus on commercial rankings that generate the most attention in the Netherlands: The Times Higher Education World University Rankings, the QS World University Rankings, the Academic Ranking of World Universities (ARWU) and the CWTS Leiden Ranking.

The desire to study rankings started from a personal experience. My fascination for rankings practices started from a job as policy assistant at the Rankings Office of Maastricht University. Through this job I got acquainted with rankings on institutional, national, and international level and observed two annual rounds of World University Rankings. Yet I was still studying, the dual role as supplier and consumer of rankings sparked my interest in the global business that hides behind the honour of being 'World's Best University'. To make my research feasible, I address the impact of university rankings on the organizational level of universities by focusing on ranking practices in Dutch universities.

I chose an ethnographic approach to break apart generalizations about ways of thinking and doing to formulate the rationale behind rankings practices and disclose the impact of World University Rankings on policy making. Doing ethnographic research makes it possible to observe actors, ideas, and behaviour integrated in the context that ascribes meaning to them and to evaluate how those actors come to understand their social world. Through observations on Open Days I gathered data on the communication of rankings' results to prospective students and their parents and observed the role of rankings as voiced by current students and alumni. To understand the rationale behind rankings participation and the impact of rankings on policy making, I conducted open interviews with policy officers from seven Dutch research universities.[1]

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[1] An extensive section on methodology and data, and a list of interviewees can be found in chapter six. An overview of the interviewees, their expertise and affiliation is listed in Appendix B. The topic guides that are used for the interviews can be found in Appendix C and D, and the coding scheme in Appendix E.

The interviews concerned interviewees' experience with university rankings and were based on questions regarding a selection of three topics, depending on the interviewee's function and expertise:

- Rationale for (active) participation in World University Rankings;
- Practices on data submission and reception, analysis, and communication of ranking results;
- Perspectives on institutional policy on rankings.

To understand how World University Rankings impact higher education policies, it is necessary to study rankings practices and to include scholarship on organizational practices (Sauder & Espeland, 2009). To understand how Dutch academia is organized, I consulted the VSNU, the body that represents academic education and research in the Netherlands. The VSNU has a consultative function to its member universities and has a bridging function between the universities and the Dutch government. The consultation of the VSNU provided me with insight into the precarious balance between research, education, and politics. Also located in The Hague, I visited the Rathenau Instituut, a Dutch organisation for technology assessment that informs society, policy makers and the government on technological, scientific, and societal developments. The Rathenau Instituut provided me with necessary information on the development of scientific policy in the Netherlands.

The aim of this thesis is to analyse how universities negotiate demands from the global academic market in their approach to rankings practices. Assembling narratives of researchers, policy officers, and students, I construct a multi-layered analysis to identify the different interests and incentives of rankings participation in the Dutch academic realm. This multi-layered approach distinguishes between goals on the academic, political, economic, social and personal level to analyse tensions between different domains of interest are negotiated. Integrating the ethnographically based analysis into the theoretical context I answer the following research question:

How do World University Rankings impact higher education policies and practices in Dutch public research universities?

The theoretical body of this thesis starts with a contextual framework of the development of global academia from the 1970s onwards and the appearance of audit mechanisms. In this part, I elucidate the competitive element of academia in the global scientific market related to frameworks of

research funding and governing of academia. After this, I explain how I selected, gathered, and analyzed the data to do this. In the last three chapters, I draw on narratives of the respondents to explain how we can understand the mediating role of practices of quantification, classification, and ranking. In the last chapter, the research provides fruitful initiatives to deal with tensions of the academic market in rankings practices in a responsible way.

2   The sphere of ranking practices

Rankings appear in different guises, but they all rank institutions on common quantitative indicators according to a preconceived methodology. Although some rankings emphasise different indicators to measure quality, rankings agencies claim to measure the quality of education, teaching and research. Higher Education expert Alex Usher describes rankings in the broadest sense as "any comparison of institutions using common quantitative indicators where the results can be used to indicate a ranked order of institutions given the results of one or more of these indicators" (Usher, 2016, p. 24). From this definition, I investigate three constitutive elements to understand what rankings are, how they rank, and how their performances end up outside their point of origin. These three elements are: *quantitative indicators, ranked order* and *comparison of institutions*.

In this chapter I start with an analysis of practices of quantification and classification. In order to be perceived as a reliable measuring instrument, rankings compare institutions based on an overwhelming quantity of numbers, ratios and charts. Additionally, rankings agencies provide tools for in-depth analysis to underline rankings' validity. Although numbers are often used as a form of rhetoric to overcome distrust and provide authority, the deployment of quantification is not, as some scientists and accountants tend to say, a matter of facts and objectivity (Porter, 1986, 1992). In the first section of this chapter I look closer at the authority that can derive from numbers and explain the tension that arises from the *quantitative indicators* in university rankings.

After this section I focus on the notion of a *ranked order*. The *ranked order* of university rankings relates to the absolute demarcation inherent to quantification and classification. The distribution of quantified elements in demarcated boxes draws arbitrary boundaries that implicate meaningful categorial differences between elements. To evaluate World University Rankings, it's necessary to find out how these distributions and demarcations can be addressed to further analyse how organizational tensions arise from rankings results and are negotiated within universities.

In the last section of this chapter I look into practices of *comparison*. Comparative practices are used to identify similarities or differences between two elements. To do this, these elements need to be comparable: they need, to certain extent, share characteristics that are relevant to compare. However, the value and attributes of institutional higher education data are estimated on different administrative and measuring frameworks which calls the possibility and reliability of comparison in World University Rankings into question. To address this tension field, I examine the effects of unified data definitions on the comparison of universities in section 2.1.3.

2.1   What are rankings and what do they do?

2.1.1   Quantitative indicators

One of the focal points of this thesis is to investigate how actors that are involved in rankings practices negotiate tensions that come with World University Rankings. A considerable part of these tensions is due to the fear of misrepresentation and subsequentially being undervalued. This fear of misrepresentation is based on the lack of control over institutional data that are classified according to quantitative indicators as set by rankings agencies. Quantification and the use of statistical methods are extensively researched by Theodore M. Porter. Being one of the foundation scholars to research constructivist accounts of quantification, Porter elucidates the development of statistics as fundamental components of thinking and doing in his book *The rise of statistical thinking 1820-1900* (Porter, 1986).

For centuries people have been collecting numbers on population and health in order to substantiate and rationalize governance. The appearance of statistical methods in the 19th century made it possible to attribute meaning to these collections of numbers. With the application of statistical methods distributions of data, rates on likelihood, and causality of affairs, entered the realm of administration and governance. Now, numbers did not only provide historical information, but could also be used to make predictions for the future and substantiate directions of governing. As from then, numbers on health condition and life expectancy affected the way people look at their body and wellbeing. Employability rates and educational degrees in one's milieu predicted deviance risks and life courses.

Along these lines, quantification practices are not free from values. Through the attribution of meaning to numbers people can be defined as sick, mad, or criminal. People who define quantitative indicators and classifications thus exert the power to govern societal processes and steer personal actions and decisions (Porter, 1986). The pressure to cope with such externally implied indicators is linked to discipline rather than learning and evaluation (Power, 1997; Sauder & Espeland, 2009). The notion of *discipline* is extensively researched by Michel Foucault. According to Foucault, disciplinary power is an integral part of modern society that is exerted through institutions such as schools, hospitals and prisons. Building on this scholarship, Ian Hacking further evaluated the impact that discipline has on the way that people make sense of their lives and construct their social world (Hacking, 1998). Disciplinary mechanisms through practices of evaluation constantly affect how we construct our social world (Espeland & Sauder, 2007; Sauder & Espeland, 2009). The constant mediation through these mechanisms places object on an interval with other quantified elements as individualized bodies in a network of relations. The quantified separation between those elements defines a rank: an unfixed place in a dimension where variable scores intersect (Sauder & Espeland, 2009). Along this rationale, rankings' performances

can't be evaluated distinctly, but have to be investigated as elements in a network of relations.

2.1.2   A ranked order of institutions

Rankings with a fixed number of ranks apply subjective boundaries that play a decisive role in administrative processes. But, if one closely looks at the constitution of ranking lists the differences in score between rank 100 and rank 101 might be very small. However, what is of importance here, is that ranks have a significant *symbolic* impact for their users. Some universities only handle applications from students from highly ranked universities, thus being omitted from rankings' range of excellence blocks the way for admissions, grants and application processes, (Maldonado-Maldonado & Cortes, 2017). Although most rankings are called *World University Rankings*, they focus mainly on a Top-100 of less than 1% of the current 15,000 institutions in the world. This is illustrated in Figure 1 on the next page in which a rankings' top-50/100/200/400/800 is displayed as proportion of all of the world's universities (Robertson and Olds, 2017, pg. 57). As a result, the pitfall of focusing on rankings is to be fixated on a rather small range of objects that is taken out of the context to what they are related.

The rigidity of fixed ranks is illustratively explained with the Phenomenon of the 41st chair by sociologist Robert Merton (Merton, 1968). The Phenomenon of the 41st chair refers to the forty members of the *Académie française*, the prestigious French Academy. These forty people who are outstanding in politics, arts, literature and other areas, are chosen for life and called the *immortals*. Merton explains that due to the limitation of forty chairs brilliant people, maybe even more talented than the forty of the Academy, are withheld membership of this eminent learned society (Merton, 1968). Subsequently, the list of people 'on the 41st chair' includes prominent figures such as Jean-Paul Sartre, Émile Zola, René Descartes, and Nobel prize winner Romain Rolland. Following this argument, rankings do not just display a hierarchical order, but imply significant symbolic powers through which they exclude objects from incentives and recognition.
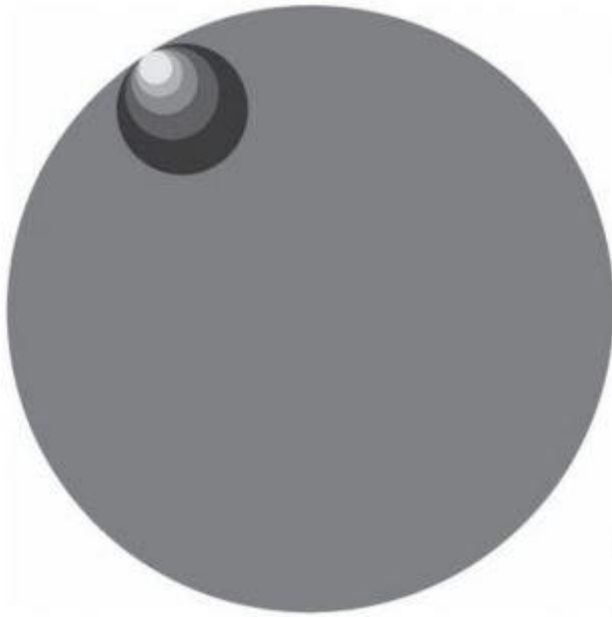
Figure 1: Proportion of universities in World University Rankings

2.1.3   Comparison of institutions

The example of the 41st chair also highlights the problem of comparing different entities. Taking the French Academy as an example, comparisons of outstanding achievements of diverse nature have certain limitations. Correspondingly, the comparison of universities on a global scale involves limitations that need to be addressed.

The most significant limitation of comparing academic performances is the transformation of data that are subject to comparison. Scores and ranks of World University Rankings are calculated with universities' data that are classified according to categories that are determined by the rankings agencies. When universities submit their data, they lose authority and control over their meaning and value. One can say that ranking agencies *revalue* institutional data based on generic indicators that they define themselves. "What is being tested would seem to be the performance and productivity of academics, but 'everyone knows' that what is being tested is how amenable to auditing their activities are or how performance matches up to performance indicators" (Strathern, 2000, p. 310). Through the application of generic definitions on aggregate data, universities' mission, core, and unique features such as educational methods, disappear. According to interviews with respondents from highly ranked business schools in *Business Week*, rankings cause identity threats and call the school's unique identity values into question (Elsbach & Kramer, 1996). Rankings, in this regard, affect the self-image of universities.

Institutional data are administered and stored based on numerical and categorial standards, that differ per country. Not all universities and public databases have the requested data available in the format that rankings agencies require. If data are not or wrongly submitted, rankings agencies apply conservative estimates for the affected metric that negatively affect the score (Times Higher Education World University Rankings, 2018). Besides this, unfamiliarity with lesser-known bibliometric systems can lead to biases in measuring citations and publications. The choice of ranking agencies to use data supplied by governments or accreditation bodies prompts misinterpretation of less-dominant academic structures and a detriment for countries with less centralized administration systems (Usher, 2016).

Besides this, the comparison of universities in World University Rankings reinforces inequalities between systems of academic governing. Through data selection from a limited selection of fields and in a traditionalist way, elite universities and industrially developed countries benefit from the advantage of accumulated wealth and investment. Because rankings reflect the higher education structure that they emerge from, data definitions of World University Rankings misrepresent academic structures that differ from the dominant Anglo-Saxon model and subsequently provide Anglo-Saxon universities with considerable advantages (Maloo, Altbach, & Agarwal, 2017).[2] Phil Baty, Chief Knowledge Officer of Times Higher Education, admits that universities with relative accessibility of public data have considerable advantages, and that this is the reason why some rankings are greatly dominated by UK institutions (Baty, 2019). Rankings, in this sense, reflect the world economy and the position of global science (Hazelkorn, 2017).

Being appointed as excellent provides highly ranked universities and, to a lesser extent, well performing countries with symbolic power (Cantwell, 2017). Because highly ranked universities define standards for excellence, this symbolic power also exerts geopolitical power that shapes domestic higher education agendas. In this way, rankings exert control on organizational structures and steer research agendas in the way to better match with the higher education systems favored by the rankings. This power mechanism mediates thinking about academic excellence and reinforces the strength of dominant higher education systems.

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[2] Although the ARWU is founded in China, its aim is to evaluate whether Chinese universities could compete with highly ranked universities in the United States and consequently focuses on the Anglo-Saxon model for higher education (Usher, 2016).

3   Academic capitalism

Rankings emerge from the global science market and a way of thinking that is called academic capitalism. Academic capitalism is an aggregate of scientific fact-finding and the pursuit of economic profit and was coined by STS-scholar Edward Hackett in 1990 (Hackett, 2014). The interconnectedness between economics and science is researched by economist Paula Stephan in her work *How economics shapes sciences* (2011). In her work, Stephan elaborates on the interconnectedness of scientific research and economic profit with a focus on science and engineering in the United States. Although the focus of this thesis is on Dutch academia, present-day research takes place on a global scale which makes Stephan's work highly valuable to understand the interrelatedness of the production, evaluation and continuation of scientific research. Building on this scholarship, in this chapter I will analyse how the notion of economic profit, scientific recognition, and prestige, changed global academia. I explain what can be understood as academic capitalism and how this changed how research is done, valued and evaluated and finally to what extent rankings play a role in this capitalist transformation.

Knowledge is a public good, characterized by its non-excludable and non-rivalrous nature. Goods that are non-excludable are freely accessible and no one can be excluded from using it. Non-rivalry means that once something is created, everyone can use it without a diminution of the value of the good. In other words; the non-rivalrous nature of knowledge means that sources of knowledge are not exhausted once shared (Stephan, 2011). As there are no monetary incentives to a public good, knowledge can't be profitable. To avoid an economic market failure in which less research is produced than is socially desirable, researchers were stimulated in creating and sharing knowledge through a reward system .

This reward system is based on *priority* and *prestige*. In this reward system, priority means that researchers share their findings in a timely manner to claim their findings (Knorr-Cetina, 1982; Stephan, 2011). Through the act of sharing knowledge, they build on their own prestige from which evolve rewards such as research facilities or memberships of scientific committees (Stephan, 2011). Contrary to public goods, priority and prestige are excludable and have a rivalrous nature that makes them profitable. This reward system, through which researchers transform their economically irrelevant goods into desirable incentives, is further explained in section 3.1.1.

3.1   Research funding

Although priority and prestige might encourage research, they do not provide the necessary resources to do research. Research requires laboratories, staff and resources that need to be funded. Traditionally, research was funded by governments because private firms could not take on all necessary research to prevent market failure. According to Stephan, there were two incentives for public research support. The first reason is the need to answer societal demands that can't be answered by the market such as improved health care or a strong national defence, from which the latter in particular played an important role from the Second World War (Stephan, 2011). The second reason for public support of research is the pursuit for economic profit. To understand this, one needs to distinguish between basic research and downstream research.

Economic growth is sustained by basic research; years of investigation that in the end might lead to new processes or products but involve risks and uncertain outcomes. Due to the uncertain timespan and outcomes, basic research is less likely to be funded by individuals, companies or the industry. Governments support basic research, because without monetary incentives knowledge would spill over to competitors who use it for less than the original costs (Stephan, 2011). However, the results of basic research have to be transformed into new processes and products answering market demands. It is at this point that the industry gets involved to build on processes of upstream research and development. Development, the transformation of research into products and processes, has long taken place in the industrial realm because the expertise that is necessary for these processes is already there. But more important, industry also has the necessary financial means to "feed the genie that will keep the country competitive: Science" (Stephan, 2011, p. 10).

Government funding and support from industry have always been fluctuating. (Geo)political events such as the launch of the first Earth-satellite *Sputnik* by the Soviet Union in 1957 led to a considerable growth in research investments in the United States (Stephan, 2011). New universities emerged and others expanded to teach a growing student body, mostly baby-boomers coming to age (Stephan, 2011). On the contrary, the Vietnam war put the public research investments on hold in the 1970s. Due to these financial fluctuations universities had to look for other ways of research funding and reached out to industry. Industry does not only provide necessary research funding, but stronger university- industry connections also mean prosperous career opportunities for excellent PhD-students.

The uncertainty of available research funding has several repercussions on the organizational structure of universities and the job content of researchers. With an ongoing growth in students and research demands, universities are constantly pursuing research funding and integrated grant applications in the duties of academics. On this level, the ongoing quest for funding leads to time consuming processes of writing grant proposals writing for, to a great extent, 'safe' and short-term projects. These short-term projects and targets from stakeholders from business and industry result in a lack of creativity to be able to present applicable results in a timely fashion. However, as Stephan explained, personal motivation for research is largely situated in the realm of non-monetary incentives and reputation. As research is funded and organized towards economic targets, to what extent do these personal incentives still play a role for researchers? What effect has the market turn in academia on academics and how are these effects negotiated? In the following section I investigate the incentives to do research in present-day academia building on the notions of priority and prestige (Stephan, 2011).

3.1.1   Puzzles, repertoires and credit

The terms priority and prestige existed already before market related competition in academia. As formulated by philosopher of science Thomas Kuhn, the quest to solve puzzles and become the first expert puzzle-solver is one of the main motivations to do research (Stephan, 2011, p. 17). Researchers rather compete for highly valued research performances and peer recognition than for monetary incentives (Frey & Osterloh, 2011; Hagstrom, 1965). As explained in the previous section, the global political and economic developments in the twentieth century altered the aims of research and its incentives, and subsequently the attitude of researchers.

How this unfolded on the personal level is comprehensively explained by sociologist of science Steven Shapin in his work *The scientific life: A moral history of a late modern vocation* (2008). In his work, Shapin outlines the virtues and attitudes of scientists over time from academic and societal perspective. Although Shapin focuses largely on scientists and not on scholars, his work sheds an interesting light on the basic attitudes of researchers in general. These basic attitudes are employed in *repertoires* that can be defined as sets of behaviour, skills, figures of speech and aims. Repertoires externalize one's *ethos*: a generic set of values and norms that is binding on the individual (Amossy, 2001; Mulkay & Gilbert, 1982, 1984). According to sociologist Robert Merton, the roles applied to scientists have been created by the public image of science. "Both the self-image and the public image of scientists are largely shaped by the communally validating testimony of significant others that they have variously lived up to the exacting institutional requirements of their roles" (Merton, 1968, p. 56).

Building on this scholarship, Shapin describes how scientists' repertoires were increasingly affected by the pursuit of, on the one hand, knowledge-making, and on the other hand the production of scientific output and services (Shapin, 2008). Shapin identifies this repertoire as the *scientific entrepreneur* employed by "one who is both a qualified scientist and, like all commercial entrepreneurs, a risk taker" (p. 210).

Certain elements of the repertoire of the *entrepreneurial scientist* in the 1970s are mirrored in *Laboratory Life: The Construction of Scientific Facts* by STS-scholars Bruno Latour and Steve Woolgar (1979). For two years, Latour and Woolgar executed an anthropological study at a scientific laboratory in which they observed daily practices, analysed formal and informal written material and interviewed members of the laboratory. The aim of the book is to deconstruct the process of scientific fact-finding *in situ;* how it happens. This analysis includes an investigation in what drives scientists' actions. Why do they switch between research topics, hold different positions or move between laboratories? According to them, especially young scientists expressed their motivation in economic and business terms and seemed driven by rewards to investment. Yet economic terms are used, they might be referring to *credit*, argue Latour and Woolgar.

The notion of credit was explicitly mentioned in the observations and interviews of Latour and Woolgar and was generally specified in four different ways. Credit could be exchanged, shared, stolen and be accumulated or wasted and, to the scientists, referred to much more than just the 'recognition of merit' (pp. 192-194). Following from the interviews, credit can also be linked to business matters, accessibility, belief and power that can be deployed for further research activities. Examples of credit are laboratory space, autonomy, communication networks or data sets that should be reinvested in the cycle of fact production. According to Latour and Woolgar, the production of new and credible information and the expansion of this reproductive cycle is the centrepiece of academic capitalism. According to them scientists are "*not* interested in the truth, nor their subject matter, nor in surplus information per se." (Knorr-Cetina, 1982, p. 105, italics in original). As a result, academic careers are shaped within a market in which one tries to coincide commodities, research funding and excellent scientists at the same place and time to continue a reproductive cycle of credit.

Through this reproductive cycle academia responds to the pursuit of economic profit to concentrate research on topics that enhance credit and economic performance (Slaughter & Leslie, 2001; Stephan, 2011). This includes competition for money either from student tuition fees, external funding agencies, partnerships with the industry or other activities that are

profitable (Slaughter & Leslie, 2001). This way of governing has repercussions on the personal level. In the 1990s Edward Hackett opened the debate on the working atmosphere for scientists in the United States. In this discussion came to the fore that scientists felt alienated, experienced dissatisfaction about their research, suffered from the eroding conditions of employment and experienced a pressure of continuous competition (Hackett, 2014). However, these experiences do not apply to everyone. If one has insights in the credit cycle and is able to gain some credit, it will be easier to accumulate benefits.

3.1.2   Matthew effect

The accumulation of benefits is coined as the Matthew effect. On the individual level, this effect applies to accumulated advantage for the ones who have already established a good reputation, but at the same time a limitation for others who don't have an established name yet, and widening a gap of inequality (Knorr-Cetina, 1982; Merton, 1968). Having insight in the cycle of credit, researchers make strategic choices to gradually accumulate credit and benefit from the Matthew effect. Besides personal interest, these strategic choices indicate commercial interest taking the future opportunities in the research field at certain institutions into account (Latour & Woolgar, 1979).

The Matthew effect also manifests in academic prizes and grants. For as most prizes and grants are awarded to individuals, individual researchers optimally benefit from the Matthew effect (Merton, 1968; Stephan, 2011). "Once a Nobel laureate, always a Nobel laureate"; once awarded a prestigious prize, a decline in reputation is not very likely (Merton, 1968, p. 57). In the lists of academic prize winners and members of national academies of research stands out that prize winners, to a great extent, have been educated at similar or same institutions. Regardless of their scholarly productivity, these prestigious alma maters or memberships of elite institutions bring academics additional rewards independently from their knowledge (Mulkay, 1976). Academic prizes not only contribute to one's prestige, it also affects the allocation of rewards to one's work and the way that their ideas and finding are communicated. As work of leading scientists is socially approved, their work raises more attention and reinforces disparity (Merton, 1968). Because of the research quality and reputation of institutions, prestigious schools can be highly selective and apply selective entrance requirements. They can impose considerable tuition fees to sustain the quality of research, thereby reinforcing the Matthew-effect by educating excellent students.

3.1.3   Accountability in academia

Continuous research investments to preserve a profitable credit cycle pose the problem how the acceleration and expansion of this process could be measured and maintained. In addition, funding agencies and governments wanted to know how their money was spent. The need to check up on people and their behaviour evolved from a natural and unconscious process, says Michael Power, professor in Accountancy and the first to thoroughly investigate auditing processes. "It is through the giving and monitoring of the accounts that we and others provide ourselves, and of our actions, that the fabric of normal human exchange is sustained" (1997, p. 1). Yet, there are no societies built on pure trust without any form of checking. Accounting processes are only made explicit in cases of disputes, accidents and mistrust when conduct of others becomes subject of verification calling the matter of mutual trust into question (Power, 1997; Strathern, 1997).

Originally a practice in the realm of finances and accounting, audit practices spread to a wide variety of contexts in the 1980s and 1990s. To make internal achievements externally verifiable, audits were introduced to evaluated quality and profitability through the application of generic auditable standards of performance (Power, 1997). According to Power, an audit is an "independent examination of, and expression of opinion on, the financial statements of an enterprise" (1997, p. 4). The audit explosion, a term coined by Power, started when audits shifted away from the realm of finances and entered new domains with different repertoires of meaning. The term audit went through a *conceptual inflation:* the word lost connection with its meaning and started to be used in a variety of fields for a range of activities. This inflation led to different meanings and new sets of practices in audit processes (Shore & Wright, 2000, p. 59). Following this audit explosion, techniques and values of accountancy have evolved to be the central organizing principle in the government and management of human conduct (Power, 1997). In contemporary capitalism the management of quality became omnipresent on the pretext of transparency and user empowerment to facilitate decision making (de Rijcke et al., 2016).

Audit processes gradually entered the academic realm in the 1960s. These audits were introduced for accountability purposes and were initiated by governments, national councils on the quality of higher education and universities themselves (Power, 1997; Shore, 2008; Shore & Wright, 1999). With the foundation of the Science Citation Index (SCI) by Eugene Garfield in 1960 departments and researchers could be rated on measures of their scholarly output (Usher, 2016). Bibliometric indicators such as citations, publications and impact factors

became powerful frameworks that display dominance and hierarchy per research area. As explained in chapter one, World University Rankings differ considerably from scientific audits in aim, audience, methodology and validity. However, as scientific audits and World University Rankings both depart from corresponding practices of auditing and evaluation they exert similar power and generate comparable tensions that need to be addressed. In this section, audit practices are approached as a recent phenomenon in present-day academia not referring to scientific audits or World University Rankings specifically.

To facilitate auditing processes, indicators such as *research quality*, *teaching performance* and *institutional effectiveness* were framed to suggest an open, transparent and participatory process and eliminate possible objections (Shore, 2008; Shore & Wright, 1999). Standardized measures to audit the spending of research funds had a twofold aim; on the one hand they focused on financial control and on the other hand on the quality of research output. This "new theology of 'quality, efficiency and enterprise'" led to substantial institutional changes to answer to standardized measures of output (Power, 1997, p. 98). As auditability means to measure at an appropriate level of detail, models were introduced to standardize quantifiable output indicators such as patents publications, and citations. This emphasis on research output steered towards a focus on applied research with a high certainty on outcomes (Power, 1997). The incentives that come with good audit results encouraged universities to mirror audit requirements in the most favourable way. To facilitate this, universities developed organizational departments and invested in new organizational relations (Power, 1997; Shore, 2008).

Standardized systems of measurement that are directly related to one's work have considerable implications for scientific staff, who are often judged by scientific output (Lave, 1986). Terms such as *benchmark, efficiency* and *accreditation*, that previously belonged to the realm of finances, entered the domain of academia and re-invented academics as units of data. Making all research output auditable led to perverse mechanisms to teach less and publish more encouraged a competition between peers (Espeland & Sauder, 2007; Hazelkorn, 2009; Power, 1997; Sauder & Espeland, 2009; Slaughter & Leslie, 2001). Practices of quantification, classification and benchmark shape a framework in which people assess their peers and themselves. In other words, these practices affect how people construct their social world and mediate how people relate to themselves (Shore & Wright, 1999).

This section highlighted how the distribution of funding and exchanges of reward in academia steer academic policies, careers and the mission of universities. The way in which academic capitalism manifests itself in national context is further shaped by country-specific policy frameworks for government funding and accountability. For this thesis, the focal point is ranking practices as they occur at the fourteen public Dutch research universities.[3] Since the universities paramount in this thesis receive equally distributed government funding and operate within a rather small and closely-knit educational landscape, a case study on Dutch research universities will sharpen the analysis on ranking practices as the dependent variables for the institutions are rather similar.

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[3] See for an overview of these universities Appendix A: Overview Dutch public research universities.

# 4	An STS perspective

Practices of auditing and ranking are truly a phenomenon of contemporary society and are omnipresent in a wide variety of contexts in which they came to be generally accepted (de Rijcke et al., 2016; Power, 1997). In this research I look at World University Rankings, a phenomenon that is situated at the intersection of science development and emerging global market technologies. Rankings link the worlds of science, technology, modernity and capitalism and should thus be studied from an approach that offers space to draw connections between those worlds. An STS approach offers theoretical frameworks and methods from different disciplines to study how the worlds of scientific research and technological innovation are affected by changes in society, politics, economy and culture that, consecutively, influence the realm of science and technology. Such a multidisciplinary theoretical approach to the study of rankings provided me with an extensive body of literature from the fields of history, sociology, philosophy, and organizational studies that connect concepts such as classification, quantification, comparison, and accountability. Studying the interaction between these divergent developments within the field of Science and Technology Studies combines elements from an extensive body of STS-scholarship on epistemological shifts (Knorr-Cetina, 1982; Latour, 1987; Latour & Woolgar, 1979), the rise of statistical thinking (Porter, 1986), the development of capitalist thinking in academia (Hackett, 2014; Stephan, 2011) and the public image of science (Merton, 1968; Shapin, 2008). To investigate rankings, the field of STS provides a wide range of methodologies from different research areas to investigate practices and personal repertoires in a wider context of methodological concern and validity and offers tools to investigate how we are to understand practices of ranking in universities.

Looking at practices can tell us something about why and how actors do what they do. Practices are sets of doing and behaviour that give meaning to one's actions and consequently construct actors' living world (Nicolini & Monteiro, 2016). Deconstructing practices offers insights in processes of decision-making and underlying elements such as power, intentions and the creation of identity and social order (Latour & Woolgar, 1979). These non-linear processes reveal ideas, matters of dispute, doubt, and agreement that indicate actors' different interests and incentives. An STS-approach to study practices of ranking reveals how individuals and groups negotiate inconsistent directions of action and how they align their vision on an organizational basis. Ethnographic studies of scientific practices (Latour, 1987; Latour & Woolgar, 1979) provide insights in the complex connections between practices, the

communication of scientific findings, and a variety of rewards in the scientific realm. The studies of Latour and Woolgar contribute to the understanding of academia as an assemblage of intentions and incentives that are constantly mediated by tensions from external and internal actors and provided a fruitful starting point for studying practices in Dutch academia.

From an STS perspective we can analyze how elements from the economic and financial realm such as audits and benchmarks permeate present-day higher education. These elements undergo a transformation in meaning and identity and subsequently steer the development of higher education. These mechanisms of control and verification aim to enhance trust, verification and transparency but affect research agendas, staff policy and distribution of assets and consequently the topics, pace and resources of research (Merton, 1968; Power, 1997; Stephan, 2011; Strathern, 1997). Due to the entanglement of funding acquisition, student recruitment and evaluation practices, academic work is largely shaped by external supervision and public assessment (Knorr-Cetina, 1982). Looking at the interaction of these mediating forces, my research provides insights in the realm of modern academia and consequently the interaction between scientific and economic worlds and their corresponding aims, norms and powers. Investigating where the world of science, economics and academia meet, this research will shed a light on how a pursuit of constant economic growth and relevance of reputation determines practices of ranking and policymaking on the administrational level of Dutch higher education management.

Investigating interactions between science and society provides an alternative way of thinking about tensions in technology transfer that have been conceptualized as tensions between the *traditional* and the *entrepreneurial* academic researcher (Nelson, 2012; Shapin, 2008). Changing relations between state, government and industry created new types of relations and a way of entrepreneurial science that were connected to answer market demands and foregrounded individual assets such as reputation and prestige. This modern *entrepreneurial science* as a new way of producing knowledge is studied in STS by, among others, John Ziman (1977), Helga Nowotny (2006), and Steven Shapin (2008). Shapin researched how the development of modern academia effected norms and values on the level of academic practices, science communication and the outward appearances of research in society. These new interactions, that make invisible ties and relations visible, show how rankings were initiated and progressed into the academic realm.

Shifting away from administrative practices, practices of ranking branch off to other university departments opposing prevalent organizational norms and values. In addition to examining new types of relations between policy officers, a practice approach will also expose how practices of supervision and control reveal new ways of interaction between organizational different departments and types of work (de Rijcke et al., 2016; Strathern, 2000). Rankings mediate ideas about excellence and encourage a global competition that widens the gap between a small group of institutions that mirrors the perception of excellence as set by the rankings agencies and institutions that are governed based on different value systems (Hazelkorn, 2017). These shifting perceptions of good education affect policy goals and hamper institutional diversity (Sauder & Espeland, 2009).

Although rankings are certainly an international phenomenon, a case study into rankings practices in the Netherlands examines how the Dutch national higher education system responds to the globally changing relations between state, market and society regarding the domestic political, economic and social environment. The study analyses the contradictory implications that come with participating in commercial university rankings within the system of publicly funded academia. It evaluates how these conflicting contexts have evolved over time and how contradictions and tensions coming with rankings practices are negotiated by policy officers and researchers in the Dutch academic realm.

5   Studying practices

5.1   Practices

It would be possible to study how institutions approach university rankings based on their policy guidelines and annual reports. Deadlines for data submission and publication dates of rankings can be found online and analyses of results are listed in the annual reports and on websites of most of the institutions. However, organizational structure in policy documents and institutional publications do not provide the underlying aims, intentions and incentives of rankings participation that are hidden in informal structures of motivations, ideas, and sequences of actions (Sauder & Espeland, 2009). These structures can be studied to look at practices, sets of doing and behaviour that are connected through shared understandings, mutual beliefs, common languages and sets of tools that are constantly negotiated in interaction with others. Therefore, studying social practices goes beyond the examination of the experiences of the individual actors (Nicolini & Monteiro, 2016).

Practices offer an insight in the way through which human activity constructs the living world and the way it shapes its inhabitants' perception and behaviour. In other words, practices are the bricks on which meaning and identity are built. Through ordinary activities, practices and their aggregations arise "matters such as social order, knowledge, institutions, identity, power, and inequalities" (Nicolini & Monteiro, 2016, p. 2). In this way, practices facilitate the construction of a comprehensive network of actions, actors, rationales, ideas and structures. Studying practices in institutional settings informs us on the interests of individuals, groups, the organization and how those interests overlap, interact and diverge depending on rewards and incentives (Hammarfelt, de Rijcke, & Wouters, 2017). Particular to communities is that they define their own routines, processes and narratives. In this sense, examining practices can tell us something about the working and authority relations of groups.

Describing common motivations and goals is an important way in which actors constitute and stabilize networks and resources that are essential for developing technologies and build on a rationale for their actions (Latour, 2005; Nelson, 2012). However, investigations in organizational performances revealed that groups, although they share practices and knowledge, do not always share interests (Lave & Wenger, 1991). Lesser and Storck describe *communities of practice* that engage on a regular basis in common endeavour with diverging goals and rewards (2001). Yet, when incentives of group members align, these communities are rather evaluated as *communities of interest* displaying team-like characteristics and work towards common goals (Degn et al., 2018).

5.1.1   What are practices?

There is no exact definition attributed to practices. To address this lack of epistemological unity, researchers in the field of Organizational Studies Davide Nicolini and Pedro Monteiro assembled a list of attributes that most scholars agree on, each elucidating a different approach to the research object (Nicolini & Monteiro, 2016, p. 2). In defining practices in this research, I hold to my reformulation of practices based on definitions from Schatzki (2002) and Latour (2005) as cited in Nicolini and Monteiro (p. 3):

> Practices are phenomena holding a number of subcomponents that possess a "teleo-affective dimension" (Schatzki) and are "inherently associated with a performative understanding of reality" (Latour) and can't be isolated.

The key elements of this definition are the *teleo-affective dimension* and the *performative element*. For Schatzki, the teleo-affective dimension is a guiding element of practices and refers to the structure that connects common ends of an assemblage of multiple practices. This structure functions as a guide to give meaning to the aggregation of practices that goes beyond the sum of separate actions (Nicolini & Monteiro, 2016). The second aspect of the definition is the performative element. Through the performance of practices actors approach their world and immerse it with meaning; actors construct their reality on which decisions and further actions are based through actions, not through things (Nicolini & Monteiro, 2016).

5.1.2   Strategies to study practices

Nicolini and Monteiro offer four different ways to study practices according to different approaches and aims. The first approach, the situational approach, focuses on practices in a demarcated space "with orderly scenes of action" (2016, p. 11). These practices take place in demarcated settings such as restaurants and meetings, and consequently tell something about the performance of actions; the practice *in situ*. The second approach is the genealogic approach and focuses on the 'life course' of practices by delineating the foundations and disappearances of practice regimes disregarding direct human intentionality. This approach does not focus on accomplishments of actions, but rather on the evolution of discrete practices. The third approach is called the configurational approach and can be employed to examine how practices, performances, and aims are connected on the basis of spatial-temporal connections. To investigate these connections Nicolini and Monteiro include background and contextual elements that can take place at different sites and different times.

In this research, rankings practices are examined according to the fourth approach: the dialectical approach, which is an aggregation of the three other approaches. Through the dialectical approach one focuses on the manner in which the balance within practice configurations is arranged. Central in this approach are the contradictions, tensions and power (im)balances that are produced through practices and the manner in which the balance between the different actors is negotiated. Because this approach does not limit the space and time of the observed practices and does not define a certain aim or end to the action, it fits the aim of this research best (Nicolini & Monteiro, 2016).

The theoretical framework of this study of rankings practices is based on three concepts that can be found in the disciplines of sociology, discourse studies, philosophy and organizational studies. The first concept that I introduce is rational choice theory. This theory is derived from the domain of sociology and works around the first sub-question: *Why do Dutch universities participate in rankings?* The choice for this theory is based on the pattern of individual interactions that lies under social organisations and the exchange of rewards in the accomplishment of actions (Homans, 1958). As rankings participation is desired on the one hand yet problematic and persuasive on the other hand, underlying interactions disclose considerations that construct these contradictory perspectives. In section 5.2 on rational choice theory I explain the approach to analyze decision-making processes in the context of rational deliberation.

The second theoretical concept is a concept from discourse studies and is called *interpretive repertoires*. Repertoires are based on modes of self-representation and refer to an individual's habitual behaviour, narration, skills and ways of expression. The focus on repertoires adds to the focus on rational choice theory in which I concentrate on the content and logic coherence of the narratives. Repertoires give, contrary to the focus on the final decision in rational choice theory, room to contradiction and conflict (Nelson, 2012). Investigating repertoires provides the opportunity to examine how persuasive tensions concerning rankings participation are negotiated by actors involved in the process. The repertoires on which the actors draw shed a light on their involvement in practices and processes of rankings, their sense of participation and responsibility, and their idea of contribution to final results. Mapping this assemblage of narrations generates an idea of how actors negotiate tensions that come with rankings' processes and will subsequently answer the second sub-question: *How do policy officers in Dutch academia negotiate the impact of World University Rankings?*

The third concept functions as a vehicle to include the subcomponents involved in practices in an equal way and is designed by the French philosopher and social theorist Michel Foucault. Foucault's *dispositif* includes the component of power and the distribution of power relations within a network of objects, actors, ideas and institutions. The added value of this concept to the ethnography is that it impartially brings all meaningful entities together (Raffnsøe, Gudmand-Høyer, & Thaning, 2014a). The dispositive will contribute to the overall analysis of the impact of university rankings on Dutch higher education policies to answer the research question: *How do World University Rankings impact higher education policies and practices in Dutch public research universities?*

5.2   Rational choice theory

Within universities, actors have different interests in rankings participation and expect different rewards. How are the several concerns taken into account and what turns out to be decisive? The data that I collected from the interviews are an assemblage of reflections on tasks and rationales based on institution's mission and personal ideas. Based on these data, my aim is to employ rational choice theory to look at decision-making processes and identify the components and actors that together construct the rationale for rankings practices.

The rational tradition was known as the utilitarian tradition in the 18th and 19th century and was a common term in the realm of philosophy and economy. In the 1950's, the rational tradition entered the young discipline of sociology through the *social exchange theory* formulated by sociologist George Homans (Collins, 1994). According to this teleological theory, individuals will always choose for what maximizes their utility and profit based on a reasonable deliberation; what needs to be exchanged to agree on mutual satisfaction? In order to make the right decision, all opportunities and obstacles should be presumed.

However, due to the cognitive limitations of the human brain and available time, seeking optimal decisions leads to an endless deliberation and creates a paradox that makes choosing impossible (Ryle, 2009 [1949]). To overcome this, political scientist Herbert Simon coined the term *bounded rationality*. Instead of striving for optimal agreements, decision-makers rather strive for satisfactory decisions with the resources at hand (Simon, 1991). To optimize this type of decision-making within an organization, it is important to know where all necessary knowledge and expertise are stored (Friedland & R. Alford, 1991; Simon, 1991). In order to locate these resources and get access to it, people exchange knowledge, skills and assets (Homans, 1958). Because rationales are based on knowledge from different contexts that shape interests and preferences, approaching rationales for rankings participation from a

framework of rational choice theory requires to look at the available knowledge, resources and the connections between decision-makers within the organization. The pitfall of the focus on the utilitarian individual is approaching the actor as an isolated individual without a social context (Friedland & R. Alford, 1991). To overcome this pitfall, I approached the data as an assemblage of different narrations instead of separate case studies.

Finally, Dutch higher education funding is divided in a proportionate and democratic way and consequently creates ties of dependence between universities and the government. This context requires an investigation of the group dynamics and interaction between the universities and their representative body, the VSNU. How does their informal rankings network influence rankings participation? Do the universities aim at the same results? To what extent do rankings results reinforce ideas of competition?

5.3   Repertoires

Using oral histories to probe personal intentions, ideas and experiences, in this research I focus on the self-representation of policy officers and researchers and their narration on rankings practices based on interviews and ethnographic observations. To analyse those experiences, I rely on the concept of *interpretive repertoires* (Nelson, 2012).

Early work on repertoires was conducted by sociologists Mulkay and Gilbert, who worked on the discourses of scientists describing research processes (1982, 1984). In their 1982 work, Mulkay and Gilbert argue that the urge for scientific action is identified through different repertoires in which scientists construct their social world. In this study, they identify different repertoires that are alternately deployed, depending on the audience and the degree of familiarity with the research area. Mulkay and Gilbert offer a way of thinking about the different ways in which actors negotiate mistakes, expectations and other tensions to construct their social world and represent a wider community or entity. They concluded that researchers often deploy strategic repertoires on *correct belief* and *error* to strengthen the image of the unanimous scientific community (1984). These repertoires reinforce "the traditional conception of scientific rationality" (1982, p. 165).

Among the scholarship who build on Mulkay and Gilbert's work on scientific repertoires is the historian and sociologist of science Steven Shapin. Shapin identifies two different repertoires that scientists make use of in his work *The Scientific Life: a moral history of a late modern vocation* (2008). Central in Shapin´s work is the question to what extent academics are different from non-experts and why they are granted authority to interpret the

scientific construction of the world. Shapin examines this based on scientist's self-representation, i.e., the behaviour and narratives scientists deploy in fashioning public selves. He analyses how scientists constantly negotiate their self-representation and position themselves relative to transformations in academia that are the results of changing affiliations between research, industry, and government. Following this argumentation, Shapin's work can be connected to Paula Stephan's analysis on the connections between economics and science (Stephan, 2011). As global academia is subject to market related fluctuations, Shapin's work would add a solid theoretical background to identify how these transformations affected academics' self-representation.

To define a methodological approach of studying repertoires, I relied on the work of Nicole Nelson. Nelson contributes to scholarship on repertoires with a case study on oral histories of the development of the gene gun (Nelson, 2012). She identifies two interpretive repertoires that are employed by an assemblage of actors to give meaning to their contribution and personal rewards for results. Although actors in organisations follow up on the practices as decided on higher organizational level, actors apply emphases and classify actions in a personal way based on preferences, moral considerations and interests related to their professional roles. What makes university rankings useful to people, when, to whom and how should results be presented? How do actors identify their role in rankings practices? To what extent do actors recognize and use the commercial value of rankings? How are these entrepreneurial tensions related to ideas of academic capitalism ? In this research, interpretive repertoires offer different views on accounts of interests, utility, validity and prolongation of rankings practices. Determining the deployed repertoires gives insight in the negotiation of the actors involved with the strained and sometimes controversial element of university rankings in the larger realm of modern academia (Slaughter & Rhoades, 2004).

5.4   Foucault's dispositive

Interpretive repertoires tell us something about how individual actors constitute their actions which are driven by various underlying motivations and mechanisms. Those latent structures originate from institutional, national or international levels and are initiated by animate and inanimate sources such as economies, governments, markets, personal values or rewards. As a result, interdependency between these entities enforce power in different directions. In this sense, all elements form a web of interconnected interests, policies, institutions and performances that construct social relations between individuals. To understand the heterogenous elements of this web and the power relations between the different elements, the

third theoretical framework of this research is the *dispositive* (*le dispositif*), a key conception of the work of Michel Foucault.

The dispositive is one of the concepts in Foucault's work on disciplinary power. Foucault's idea of disciplinary power does not refer to powerful individuals or concepts, but is exerted through relations: "[it is] continuous, diffuse and comprises complex relations enacted through subtle practices and banal procedures" and is a "central, constitutive feature of modern selves" (Sauder & Espeland, 2009, p. 69). The dispositive itself is the network that can be established between these elements and functions as a "mapping of the networks of social reality" (Raffnsøe et al., 2014b, p. 1). Foucault defined the term as follows:

> What I am trying to pick out with this term [le dispositif] is … a thoroughly heterogeneous ensemble, consisting of discourses, institutions, architectural planning, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic proportions – in short, the said as much as the unsaid. Such are the elements of the dispositive. (Foucault in Raffnsøe et al., 2014b, pp. 1-2)

From a Social Sciences perspective, the possibility of establishing a network between elements of different registers such as class, ideas and discourses sheds a new light on the prevalent ideas of organizational and societal structures. Without omitting those concepts, Foucault focuses on the articulation of those concepts through mundane activities of the elements in the dispositive.

Applying the dispositive to the heterogenous elements from the ethnographic data that I gathered provides the opportunity to reveal links between different levels of aggregation and distance (Rabinow & Rose, 2003). It makes it possible to look at elements that can potentially occur from discursive and non-discursive interaction and thus provides insights in future developments and possibilities. The dispositive in this sense presumes strategic initiatives and intentions that actively shape power relations within organizations (Raffnsøe et al., 2014a). A further argument to build on the idea of rankings as a dispositive is to map rankings' potential and understand actors' responses to them (Sauder & Espeland, 2009). Actors' motivations for these responses suggest power and authority, but to generate action one should not only *have* power but *exert* it to others. "When you simply *have* power – in *potentia* – nothing happens and you are powerless; when you *exert* power – in *actu* – *others* are performing the action and not you (Latour, 1986, pp. 264-265, original emphasis). This means that concrete action depends on the connections and capacity within the dispositive. Deploying the dispositive will thus not only outline how power is exerted, but also where power in *potentia* is situated.

Drawing on interpretive repertoires and accounts of practices, the dispositive will reveal how power structures are negotiated within the network, how dominance and hierarchy are materialized, and subsequently how they are transformed into performances.

To understand the network of the dispositive, this abstract concept can be visualized through a metaphor. Metaphors can be used to introduce concepts that are less known by comparing them with better known objects, and are frequently used in STS (Bourdieu, 1977; Czarniawska, 2009). In the case of the dispositive, one can opt for the metaphor of a web. A spider's web consists of carefully woven threads on a span that the spider can't crawl himself; the spider has to wait for a breeze that catches the first thread and leaves it on a surface where it sticks in order to continue building his web. The threads not only connect all parts of the web, but also make it possible to walk by other intersections and move through the web. A web symbolizes both captivity and connectedness but at the same time has a temporal dimension; it can easily be ruined by external factors. How, by whom and when is the web constructed? What type of interaction flows across the threads of the web? How are the different parts of the web connected?

6   Research methods and data

6.1   Interviews

6.1.1   Interviewees

To study rankings practices in the Netherlands *in situ* from an STS perspective I chose an ethnographic approach. Considering my job at the Rankings department of Maastricht University, this approach departs from my personal experiences and would be in part autoethnographic (Doing, 2009). From my experience, I wanted to reveal what rankings practices are, how they are executed and how we are to understand rankings practices in the academic realm.

When it came to arranging the fieldwork, the expertise and network of my supervisor Hans Ouwersloot were very helpful. Hans provided me with useful literature and interesting contacts I could approach for interviews. In addition to interviews with policy officers from Dutch universities, Hans advised me to talk with rankings' researchers and people that work on the intersection of science policy and government. The first reason to contact researchers and people working on the science-politics intersection is to get insight in this dual role and accompanying tensions. How do these actors transfer the call for accountability and excellence from the government to the institutions and how do they formulate feedback on workload and transparency in reverse?

The second reason to get in touch with the sector association and research institutes is to support expertise on the appearance and development of rankings in Dutch academia from the perspective of science and research policy. I approached the Rathenau Instituut, an organisation that supports the formation of public and political opinion on socially relevant aspects of innovation, science, and technology through research and dialogue. The Rathenau Instituut also publishes reports on demand of government bodies in which policies on research, education and teaching in the Dutch academic realm are analysed and evaluated. To substantiate interviewee's testimonies on the appearance of rankings, the research documents of the Rathenau Instituut and the interview with Head of Research Barend van der Meulen provided a framework of policies and government resolutions from which the appearance of rankings practices in Dutch universities can be studied.

All policy officers I interviewed explained that rankings fall under their responsibility in the context of their current function. They don't work on rankings on a full-time basis and apart from rankings' duties have different roles and according job titles. In the interest of clarity

I refer to them as *policy officers*. Although it might have been easier to only speak about rankings practices, I could thus not strictly decide to limit the interview to this topic. On the other hand, this fragmentation was an advantage because the variety of duties and practices in different academic administrational layers gave an interesting insight into the similarities and differences of the institutional policies on rankings. The different set of practices as described by my interviewees is therefore not analysed as separate case studies, but as an assemblage of empirical data.

6.1.2   Interview means

Although I preferred to meet my interviewees and conduct face-to-face interviews, this was not always possible due to time and travel limitations. Skype interviews were a good alternative to face-to-face interviews due to the lack of travel time and the remaining added value of non-verbal signals and interview setting. However, Skype requires both sides to have an updated Skype account and good internet connection which did not always coincide at the interview time. To overcome this, I provided the interviewees with my phone number and proposed to switch to phone calls if a Skype interview would not work.

The advantage of phone interviews is the limitation of interviewer effect and the lack of facial expressions and gestures which makes the interviewers listen more carefully. Besides this, interviewers are not forced to simultaneously use polite visual aids to encourage interviewees to speak. However, this is a disadvantage at the same time, because interviewers can't pick up on non-verbal notes of the interviewees (Seale, 2012).

6.1.3   Interview style

For the interviews I chose the style of responsive interviewing. Using this style, interviewees are treated as partners instead of subjects, which emphasizes a sense of collegiality (Rubin & Rubin, 2011). Through the emphasis on a relationship of trust, I wanted to create a friendly atmosphere in which the interviewee and I could speak freely about issues that came to our minds. The semi-structured interviews were conducted based on topic guides that can be found in Appendix C and D. The topic guides functioned on the one hand as checklist to verify that the necessary topics were covered and on the other hand as guideline to avoid suggestive routing through the interview. When I drafted the topic guides I focused on the regimes of practices within institutions and the extent of collaboration within national and international university networks. Interviewees were asked to describe practices on rankings' data collection

and publication processes in relation to rankings policies in their institution and the different ties they built with external actors to communicate, analyse and take action on rankings results.

My work as a student assistant for the Rankings Office of Maastricht University and acquired experience with rankings provided a basis of shared knowledge and common vocabulary which supported a smooth start of the interviews. However, conducting autoethnographic research has certain limitations. I prevented myself from 'going native' and emphasize personal accounts and experiences to avoid the risk of taking information for granted (Anderson, 2006; Latour & Woolgar, 1979). Speaking out of turn or interrupting when interviewees remain silent might fill in gaps of information that steer the direction of the interview to a particular direction and risked narrow-mindedness in addition to being rude.

Table 1: List of interviewees

Name	Function	Institutional affiliation
Zoé den Boer	Student Recruitment Advisor International Students	Maastricht University
Reinout van Brakel	Director Accountability	VSNU (Association of Dutch universities)
Wouter ter Haar	Executive Staff Strategy & Information	University of Amsterdam
Joseph Martin	Teaching Associate	University of Cambridge
Barend van der Meulen	Head of Research	Rathenau Instituut
Eric de Munck	Policy officer Education & Student Affairs - Quality & Strategic Information	Wageningen University and Research
Merle Rodenburg	Head Business Intelligence and Policy Officer Research	Eindhoven University of Technology
Jules van Rooij	Senior Advisor Research Policy and Institutional Research, Coordinator Research Assessment	University of Groningen
Cathelijn Waaijer	Policy Officer	Leiden University
Richard de Waard	Policy Advisor Academic Affairs	Utrecht University

6.1.4   Transcribing and coding

I informed my interviewees that the interview would be recorded and transcribed and that I would not publish quotes from the conversations without their permission. Additionally, interviewees were told that they could stop the interview or withdraw from the research at any time. After the interviews, I transcribed the conversation and sent it to the interviewee to provide the possibility to check for errors and typos. I also sent the interviewees a short biography and asked for their approval on it. These biographies can be found in Appendix B.

For this research I conducted ten interviews that each lasted between 23 and 66 minutes. Nine of these interviews were recorded, transcribed and coded. The interview with Joseph Martin had the character of an informal conversation and was not transcribed. As Martin shared his experiences as an assessor for THE, he is not involved in rankings practices on the organizational level. Besides this, he is affiliated with the University of Cambridge which falls outside the geographical realm that this research focuses on.

To write up my conclusions, I approached the data inductively from the perspective of Grounded Theory to stay close to the empirical material (Mortelmans, 2013; Seale, 2012). Grounded Theory was founded by Barney Glaser and Anselm Strauss in the 1970s and is built on two concepts; categories should emerge from data instead of being forced on them, and the researcher should see relevant data in consultation with reflecting on theoretically acquired knowledge (Kelle, 2007). Important in Grounded Theory is to go back to the data constantly whilst in the process of iterative data analysis to get *grounded* in the data (Bernard, 2017; Kelle, 2007). According to Grounded Theory, I immersed myself in the data through repeatedly reading interview transcripts and interview notes to enhance sensibility for recurring patterns (Seale, 2012).

From rereading the empirical material, I drafted a coding scheme that can be found in Appendix E. Although Grounded Theory does not imply a hierarchically classification of categories, I chose to apply different codes to categories and processes which led to some mutually exclusive subcategories, which already provided me with an insight in coherence of the data. As a researcher I am aware of my previously acquired knowledge and skills derived from my work and literature study. To deliberately integrate the theory in the coding process, I relied on the concept of *theoretical coding* by Glaser. This implies the application of abstract theoretical concepts such as causes and conditions to connect codes (Kelle, 2007). These connections construct a relational model in which the coded concepts are related to the research object that provided the structure for the written analyses of the research.

6.2   Observations

Most policy officers I talked with have a great deal of autonomy in their job. Because of this, it was hard to grasp how rankings' elements end up in other places of the university and were transformed during processes of sharing and communication. Because observing practices differs substantially from practices that are recounted in the past (Nicolini & Monteiro, 2016), to get insight in organizational connections concerning rankings practices I conducted observations at Open Days. Here I observed how policy guidelines and management aims on rankings' communication were performed *in situ.*

I visited three open days of Dutch research universities to see to what extent rankings and rankings' outcomes come to the fore in presentations to prospective students and their parents. On these open days, I had informal talks with students, study advisors and alumni. I also asked questions and participated in in-class conversations during information sessions. During these open days, I did not introduce myself as a researcher and I wanted to keep my level of activity low not to impact my observations too much (Rubin & Rubin, 2011). Doing more observations would have made the ethnographic data richer and more comprehensive, but the Open Day season is rather short, strictly demarcated by admission deadlines and many open days are planned in the same weekends. Due to these limitations visiting more universities was not possible.

6.3   Institutional data

The framework of government policies and national administration of higher education in the Netherlands is arranged on sets of numbers, statistics and figures on which policy lines and aims are established. Because the framework of science policy of this research is partially built on interviews and documents retrieved from the VSNU and the Rathenau Instituut, numerical data and figures are, where possible, retrieved from these data. Other sources I consulted are the Dutch government (*Rijksoverheid*) and documents from universities' websites.

Data on government funding are retrieved from the VSNU. The data that I used were last updated in June 2018 and are based on the most recent funding letters sent to the VSNU universities by the Ministries of Education, Culture and Science (OCW) and Economic Affairs and Climate Policy (EZ). Financial data are adjusted for the 2018 wage and price inflation by the indexes of the Netherlands Bureau for Economic Policy Analysis (CPB) and Statistics Netherlands, the Dutch central agency for statistics (*Centraal Bureau voor de Statistiek, CBS*). Financial data retrieved from the Rathenau Instituut up to 2017 are derived from annual

accounts of universities in the Netherlands, analysed by an agency of the Netherlands Ministry of Education Culture and Science (DUO) and were last updated on 28 January 2018.

For the number of students that are currently enrolled in the Netherlands I consulted Statistics Netherlands and retrieved the data of academic year 2018-2019. For less aggregated data on student numbers I relied on a dataset of the VSNU that uses data from 1CijferHO and EP-Nuffic, the Dutch organisation for internationalisation in education. This dataset includes student numbers from all the VSNU universities except the Open University up to 2017. These students numbers do not include the number of students from outside the EEA because they are not taken into account for direct government funding (Vereniging van Universiteiten, 2019a).

Data of universities are, if not otherwise specified, retrieved from their websites. Although I tried to find data of corresponding academic years and cohorts, data definitions do not always correspond, and websites are not always up to date. I tried to avoid inconsistency and clearly mention data sources in the concerning sections.

7   Rationale for rankings participation

In the previous chapters I identified what rankings are and how rankings practices within universities can be studied. In this research, I look how rankings practices emerged, are negotiated, and shaped in Dutch research universities. This research is based on ethnographic data from observations and interviews and is situated in the context of Dutch academia. The data that I collected are an assemblage of narratives and personal reflections on all types of practices concerning university rankings. The theoretical tools that I employ to examine this are rational choice theory, interpretive repertoires, and the concept of the dispositive as articulated by Michel Foucault. All three are extensively discussed in chapter five.

The framework of rational choice theory focuses on the underlying social interactions involved in processes of decision making; it identifies the personal interests and rewards that determine a final choice. Rational choice theory makes it possible to disentangle individual actions that reveal matters of agreement, dispute or contradiction and identifies interpersonal connections and reliance. Repertoires, meanwhile, do not focus on results or outcomes, but on actors' narration of practices and the way in which they give meaning to their actions. It is through repertoires that the attitudes and roles of individual actors come to the fore. Applying these concepts, in this chapter I focus on processes of decision making and modes of self-representation to find out: *Why do Dutch universities participate in World University Rankings?*

This chapter is divided in two parts. In the first part I outline the process of decision making as it started from the first launch of a global university ranking in the early 2000s. Although this can be perceived as a top down process, it is directed in different directions along the way. Once we have identified the actors and the perceived objectives for rankings participation, I look at how the objectives and reality align in the second part of the chapter.

7.1   The first launch of World University Rankings

Active ranking engagement started around 2003 with the first publication of the ARWU Shanghai Ranking, a Chinese ranking in which universities are ranked without soliciting the universities' participation in the ranking. Because universities were not actively involved in this ranking, policy officers adopted a 'wait and see' approach. They reported results to the Executive Board and added critical side notes about methodological weakness or heavy reliance on inadequate surveys. With the release of the THE-QS World University Rankings,

that request institutional data submission and thus imply a sense of responsibility for the score, this reactive approach of the policy officers suddenly changed.

7.1.1   The Executive Boards

Interest in rankings and 'developing adaptive strategies' takes mainly place at the level of research managers and deans (de Rijcke et al., p. 260). Policy officers, for their part, are quite indifferent to unsolicited inclusion in rankings and follow the rankings that received the most media attention. However, in 2004 the Executive Boards stipulated active rankings participation. One policy officer explains how his approach to rankings transformed from reactive to proactive:

> The first time I was asked to advise on the ARWU was in 2005 I think. I believe it started two years earlier, in 2003, but in 2005 I got to know it. Maybe because that ranking requires no active cooperation and we were in the Top-100 the first two times, but from 2005 we were in the range 101-150. ... And that was noticed. I can remember, my first advice to the Executive Board was that the methodology of this ranking does not make sense ... so my first advice was to ignore it. That wasn't such a welcomed advice, because the members of the Board were apparently more aware of the importance of this kind of rankings for international reputation.

For the Executive Boards disappointing results demanded a thorough study of the methodology and an extensive analysis of the results to maximize the use of rankings as powerful tools for marketing and international reputation. Executive Boards, as mentioned by the policy officers, were much more aware of the value of *soft policy instruments* such as knowledge of branding and networking to respond to the transformation of relations between the state, economy and academia (Hutton, 2007). Prompted by the Executive Boards, policy on rankings participation was taken to a higher degree when a small administrative body was founded on the national level under supervision of the VSNU. When the policy officers started to share their deliberations and experiences in this group they departed from a collective 'wait and see approach'. Rankings were not important to them, but the demand from the Executive Boards to actively participate in World University Rankings was given precedence over possible objections from the policy officers. "We had to follow because we can't escape it anyway," recalls a policy officer.

VSNU's small administrative body consists of policy officers and institutional researchers who encounter rankings practices in their work on one of the Dutch research universities, and outlined a national strategy for rankings participation (Vereniging van Universiteiten, 2019c). The choice to collectively focus on the THE WUR, the QS WUR, and the ARWU was made primarily by the Executive Boards and based on the international publicity that these rankings receive. The bibliometric CWTS Leiden Ranking completes this list, although participation in this ranking doesn't demand data submission and the ranking itself doesn't receive much publicity. However, the CWTS Leiden Ranking is considered as methodologically strong and supplies reliable bibliometric information that serves the needs of academic staff.

7.1.2   National and international peers

In addition to the VSNU working group on national level, collaboration with peers is further extended to international university networks. Networks that came to the fore are based on strategic and research collaboration (Coimbra Group; EuroTech Universities; League of European Research Universities), common sustainable and diversity goals (Aurora Universities Network), or similarity in age and development (Young European Research Universities). The shared focus on research or organizational strategy in the networks foreground the focus on methodology of the rankings, because the universities try to opt for the rankings that highlight their profile and expertise. Recognizing these opportunities of collaboration facilitates the adaptation of the global knowledge economy and academic capitalist ways of governing (Hutton, 2007). In this sense, universities draw on a joint approach in which they complement each other in opportunities for research and education.

What other universities do is not only important in case of marketing and reputation; some decisions to participate in rankings are based on solidarity. This is illustrated by an example of the revised decision on participation in U-Multirank, a situation in which an Executive Board neglected the advice of its policy officer. In this example, solidarity with national peers is preferred over methodological validity, additional workload and a shared approach within an international network.

> All universities in the COIMBRA network, including ours, quit their active participation in U-Multirank following a critical position paper co-authored by me. However, when [the University of] Twente, a major party involved in the construction of U-Multirank, celebrated a lustrum later that year, our Board was informally requested to reconsider its decision. We then continued our participation, out of solidarity.

From this quote we encounter practices concerning university rankings in a more operational way; i.e. writing critical position papers and advising the Executive Board. Looking at the rationales of the policy officers who are largely responsible for the practices that follow from the decisions of Executive Boards and management teams provides us with understanding of rankings practices and policies from an experiential point of view.

7.1.3   The policy officers

The testimonies of policy officers learned that universities leave rankings responsibilities as decided by the Executive Boards primarily to the policy officers. Responsibility in this sense means submitting data, analyzing rankings' results and distributing these analyses to the Executive Board, faculties and policy officers responsible for marketing and communication. Some policy officers described a feeling of excitement in the early years of rankings, that gradually disappeared when the rankings market started to overflow in the late 2000s. "Initially, all rankings were analysed, and results were always reported to the Executive Board. "Now, there are simply too many," a policy offer says. After fifteen years of commercial rankings none of the policy officers has an overview of the rankings market because there are "too many rankings" and "everyday new rankings appear", as policy officers refer to invitation emails that they receive on daily basis.

During these fifteen years, policy officers developed approaches in which they give meaning to the demands of the Executive Boards and the invitations of the rankings agencies. These repertoires are shaped by university's strategies, the availability of staff and the development of universities' performances in World University Rankings over the years. Due to the overgrowth of rankings and the lack of available staff, universities have made organizational choices to handle all necessary ranking practices with the resources at hand. The amount of time spent on rankings practices by policy officers varies between two days a week to three weeks a year, with peaks around data submission deadlines and depending on the demands of the Executive Boards. Not all Executive Boards have the same interest in rankings

and don't require close monitoring of all separate developments. One of the policy officers explains that his institution monitors ranking processes in a general way to save time and not to overload the Executive Board. In his institution the workload to gather data is divided among policy officers of different administrative departments, such as Business Intelligence for student data and the university library for bibliometric information. This university's working group takes distance from single rankings and writes an annual report with an overview of the results and progression overtime.

Confronted with a lack of staff, a number of policy officers are responsible for ranking practices on their own and as a result minimize the workload to primarily the four rankings the VSNU working group agreed on. "When I started, I slogged through all methodologies to understand the rankings' mechanisms. Now I simply repeat the same process every year to maintain continuity and minimize the workload, because I do it all on my own," explains a policy offer with a double function in two administrative departments. With this approach, policy officers evaluate how the university is represented based on the selection of data by the rankings agencies and function as intermediaries between rankings agencies and Executive Boards. In this rather practical approach, policy officers take distance from the rankings through explicitly stating that rankings are the lens through which rankings evaluate excellence and performances on rankings shouldn't be taken par value. To build further on this approach and its rationale, I call this the *utilitarian repertoire*.

The utilitarian repertoire differs from a second approach to rankings in which policy officers say to strive to optimize rankings participation; a rather *entrepreneurial repertoire*. This repertoire is employed by the policy officers who primarily voiced objections to the rankings from an academic point of view. Falling back on an entrepreneurial repertoire, they detach World University Rankings from scientific activity and approach rankings to optimize advantage of commercial, marketing and entrepreneurial opportunities. To exploit these opportunities in an optimal way, they have analysed rankings methodologies thoroughly and fulfil a leading role in the VSNU working group.

> I spend as little time as possible on that. In the past ten years I can handle data submission for most rankings on my own in about two, three weeks a year at most. (…) But in those first years that we were not in the Top 200 (…), I may have spent some six weeks to two months full-time on data submissions and analyses.

Neglecting bad rankings methodologies, Executive Boards of institutions where an entrepreneurial repertoire comes to the fore have formulated bold strategies and occasionally steer rankings practices themselves. However, as the realm of rankings is constantly transforming, the Boards and policy officers constantly have to negotiate their approaches. Thus far, in the decision-making trajectory we have encountered deliberation between values for strategic and research collaboration, the importance of reputation, and deliberations on methodological validity. This assemblage of opinions, expressions of solidarity and the urge for collaboration reflect individual, institutional, national and global ideas of higher education management concerning rankings approaches. Inquiring into the actors involved in rankings' practices and policies reveals a contradiction between these external market pressures and internal operational constraints. How do universities negotiate these tensions and draw a policy in which these objectives align? To examine how these tensions are negotiated within universities, we look at an example of a recently launched ranking in the Netherlands.

7.1.4   The case of *SustainaBul*

In the rationales for ranking participation three points of consideration stand out. I explain these concerns taking participation in SustainaBul as an example, a Dutch ranking that measures to what extent Dutch higher education institutions are sustainable (Studenten voor Morgen, 2019). This ranking was recently launched and is based on active institutional data submission. As a result, participation is based on a decision-making process in which each actor strategically considers interests for his organizational position. The three considerations on which a decision is negotiated are:

1. For the Executive Boards: Marketing and reputation opportunities.
2. For national and international peers: Focus of the ranking; what is relevant and fits the institution's mission and values?
3. For the policy officers: Workload involved in data gathering and submission.

SustainaBul offers the possibility to present the university as actively engaging in sustainability goals; a prominent element in present-day marketing. The emphasis on distinctiveness and building on a particular identity helps organizations to attract, industry, researchers and students (Hutton, 2007). "We do not specifically want more students, actually, but rankings can function well to display our unique institutional character," shares a policy officer.

However, most policy officers are too short on time to answer to new ranking demands and base their advice to the Executive Boards on rankings participation to a great extent on additional workload. Yet, the call for participation in SustainaBul mostly comes from the Executive Board, Green Teams, and the environmental department. Practices related to collection and submission of data on sustainability are mostly the responsibility of Green Offices, or other units related to operational processes rather than institutional research. As a result, these rankings practices take place in a different administrative realm. Although the policy officers are informed of rankings that fall outside their duties, these niche-rankings were barely addressed in the interviews. Results of sustainability rankings are often listed on a separate 'sustainability' webpage and, contrary to results of World University Rankings, not on the prominent homepage. This indicates that rankings such as SustainaBul is more useful for marketing purposes and methodologically more reliable, but that it possesses less symbolic power than commercial World University Rankings.

A few policy officers shared that rankings such as SustainaBul embody the right construction of university rankings. SustainaBul meets methodological standards, answers marketing demands and doesn't require an extensive workload. The attractive rankings display and the clear methodology of SustainaBul are easily understandable which makes this ranking highly appropriate for profiling and marketing purposes. From the methodological point of view, the second consideration in the deliberation process, SustainaBul is a safe and reliable choice. The data that universities submit should be sustained with policy documents, establishing a sense of trust and reliability. Because SustainaBul only ranks Dutch universities, the ranking is based on the Dutch higher education structure that make results nationally comparable and universities will always be 'highly ranked'. This makes SustainaBul a reliable and attractive ranking and appropriate to draw sustainability policy on, as a policy officer argued. For the Executive Boards, participating in this ranking is thus highly desirable.

7.2   Incentives for rankings participation

The presumed rationale behind rankings participation is based on different objectives that target different audiences and are therefore distributed in particular ways. Based on scholarship on rankings and the experiences of the interviewees, rankings are used by prospective international students and their parents as a selection instrument, by governments, funding agencies and the media as a source of strategic information and by university offices as a marketing tool and to support policy decisions (Robertson & Olds, 2017; Sirat et al., 2017;

Waltman et al., 2012). In the next section is investigated to what extent target audiences play a role in ranking policies and practices at the universities involved in this research.

7.2.1   A selection tool for a financial supplement

Based on the assumption that rankings are used as marketing tools for student recruitment, I visited Open Days of Dutch universities. Here I learned that rankings don't play a meaningful role in active student recruitment for bachelor programmes. Inquiry at information sessions and Q&A sessions with students showed that students, teachers and policy officers are not concerned with rankings related to study programmes and were not prepared to answer questions on ranking content. Teachers and students explained that a slide on rankings was desirable as communicated via Marketing & Communication departments, but explanation did not go into detail and did not raise questions from the audience.

> When it comes to rankings, the professor speaks in general and vague terms. He speaks about 'researchers evaluated as best', 'external audits' and 'being internationally respected' for a 'broad range of expertise'. He does not explain any ranking from the slides of his presentation. (fieldnotes)

Questions from prospective students and their parents mainly concern practical matters such as workload, student housing, study costs and sport facilities. These questions can be explained by looking at the regionally bounded study choices of Dutch students, says Barend van der Meulen, head of Research at the Rathenau Instituut and Endowed Professor Evidence for Science Policy at CWTS. Due to the national system of finances and quality assurance, the level and costs of study programmes are fairly comparable and many students choose to stay close to home. This is not very likely to change, as students leave their parental homes later because of their fear to build up huge study debts (Central Agency for Statistics, 2019). Although competition for students does not take place on the domestic level, the number of enrollments is highly important for universities and functions as a perverse incentive: a stimulus with undesired outcomes.

The perverse incentive in Dutch academia is the lumpsum funding; public money per enrollment (*Rijksbijdrage)*. In the period 2000-2017 this funding per student declined with 25%, while the number of students increased with 68% as is illustrated in Figure 2 (Vereniging van Universiteiten, 2019a). Because the amount of money is fixed and redistributed among the universities according to the number of students, universities have to 'share the same pie' every

year, an expression used frequently by the interviewees and the media. "This means that poverty is redistributed every year", says Ben Jongbloed, researcher at the Centre for Higher Education Policy Studies, "because, contrary to the student body, the pie never grows" (Bouma, 2019b). The incentives for a larger student population have, in this sense, undesired outcomes.
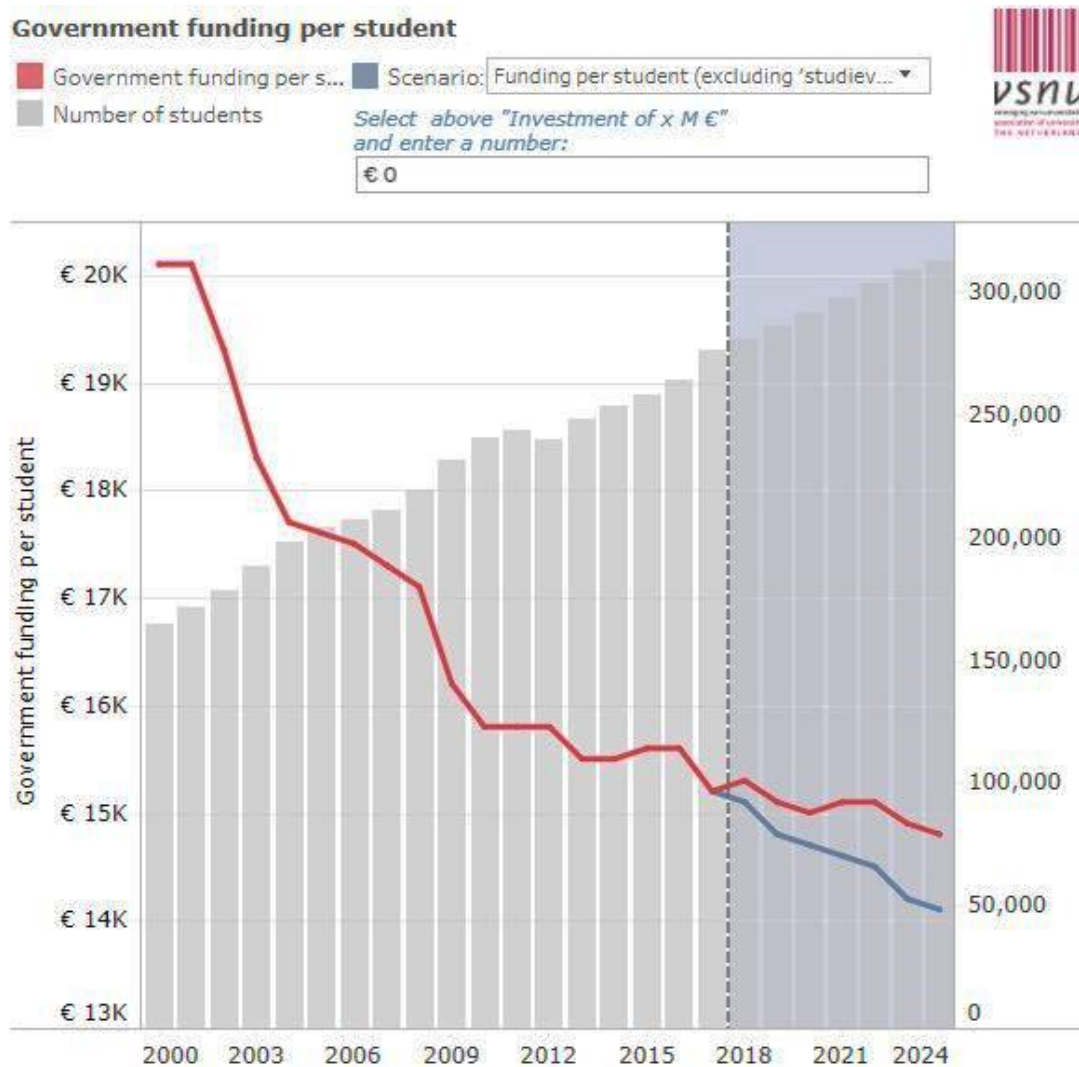
Figure 2: Government funding per student 2000-2018

With the lumpsum as means of financing higher education the Dutch government enforced marketization of the universities. Eelco Runia, previously associate professor, explains how the perverse incentives from this lumpsum caused him so much frustrations he ultimately quit his job. In addition to funding per enrolled student, universities receive money when students graduate. According to Runia, universities "are happy with students twice: when they come and when they graduate. Those are the moments that they generate profit. In the meantime, it is important to guide them to the exit as quickly as possible" (Runia, 2019). He argues that this incentive comes at cost of the evaluation of quality.

> In our faculty you got your hours [paid] for supervising a thesis once the thesis was successful. This made it attractive to, when in doubt, let the student pass. ... As a result, the Board of Examination wanted to check theses awarded with 6.0. This had the paradoxical result that lecturers didn't graded work as 6.0, but as 7.0. (Bouma, 2019a)

The decline in government funding comes with a decline in admissions from domestic students due to demographic shifts and the greying population (Hazelkorn, 2009; Hazelkorn, Loukkola, & Zhang, 2014). The offer of 480 undergraduate (a share of 28%) and 850 graduate programmes (a share of 76%) entirely taught in English, an international environment, a globally competitive fee, and highly ranked universities make the Netherlands fairly attractive in the global competition for foreign students (Steehouder & van Donselaar, 2019; Study in Holland, 2019a, 2019b). President of the University of Groningen (RUG) Sibrand Poppema admits that foreign students are recruited to maintain a stable student body:

> This year [2016] marks the first years that the RUG has attracted less Dutch students, and that trend is only going to develop further in the coming years. We are a regional university in a region experiencing retrenchment. The amount of young Dutch people is declining, especially the amount of young people in the northern provinces. We need international students for stability. It's that simple. (Boomsma, 2016)

However, universities primarily recruit foreign students for financial reasons, because students from non-EEA countries pay a considerable higher tuition fee than students from EEA countries and, as a result, their enrollment functions as a source to complement institutional income.[4] Consequently, present-day higher education management in the Netherlands does encourage competition for international students.

7.2.2   The role of rankings in foreign student recruitment

World University Rankings are indispensable in the competition for foreign students. These rankings give quick overviews of Dutch academia and compare them on recognizable indicators. Besides this, they provide additional information on tuition fees and campus facilities that prospective students are looking for. Consequently, universities need to be visible in university rankings and try to settle in the rankings' reputation cycle for student recruitment.

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[4] The EEA is the European Economic Area; the countries of the European Union supplemented with Iceland, Liechtenstein and Norway. For admission to Dutch universities, Swiss students (non-EEA) have the same rights as students from EEA countries.

> Having [a good reputation] is also easier to attract good people. You have the name. People really want that status, academics really struggle to get started at a good university, one that is high on rankings too …. It is more like a flywheel effect. They [ranking agencies] say that you are good, so you have a good reputation, so people want it [work and study at your institution]. And you are highly ranked, so that circle continues. And that is much harder if you are at rank 250.

The importance of international reputation and institutional branding for Executive Boards turns out to be a key element. Important actors in distributing rankings' results are the Marketing & Communication departments who inform the press and maintain social media channels, but also the members of Executive Boards who announce rankings' results in their personal capacity, for example on personal Twitter accounts. Policy officers who rather draw on the entrepreneurial repertoire don't hesitate to employ rankings results to other offices if that might be beneficial for the university. Practices to brand the university in international admission sessions are therefore tailored to the demands of the public and the general idea that 'good universities do good in rankings, of whatever kind'. Student Recruitment Advisor Zoé den Boer admits that people are interested in the methodology behind the rankings, but "parents like to see rankings". As the main goal of student recruitment is to brand the university or country, recruitment teams and admission officers do not stress the methodology of the rankings. They define which rankings fit their promo-talk best according to the situation in which they are representing their institution.

> We don't emphasize our rankings positions, but in China we always add it. ... Although I feel awkward about giving a promo-talk and I don't know the methodology behind it, I chose [this ranking] because it feels the most honest. It shows that we're not some shitty university.

Whether good rankings' results have effect on student admission is not clear. One of the policy officers said that his institution experienced a growth in the admission of foreign students once their program was ranked as first in a QS subject ranking. Yet the influence of rankings on admissions came to the fore in most interviews, precise figures are not available.

Thus, if results might be of interest at any organizational level, rankings officers are willing to facilitate that and provide departments with detailed information. In this sense, rankings create new organizational ties and make unknown institutional relations visible (de Rijcke et al., 2016; Strathern, 2000).

> QS is among the worst rankings. Bad bibliometrics, little standardization, relying heavily on surveys from which you don't know who submits them, but they have very recognizable subjects ... that fit our university, faculties and research institutes so much better [than other rankings].

It is at these practices of interdepartmental knowledge exchange that different intentions and incentives meet. The policy officers who strive to distance themselves from commercial and unreliable use of institutional data can justify their rankings' practices with methodological clarification and side-notes, but this information disappears when solely scores and ranks are shared. Rankings results in this sense, get out of their control and take a life on their own in outward appearances.

7.2.3   Excellence sells, accountability counts

Policy officers agree that commercial rankings are sometimes taken out of their context with undesirable results. In their opinion, World University Rankings should not be consulted for reliable information on research performances. Although the policy officers, regardless of the utilitarian or entrepreneurial perspective they draw on, emphasize rankings' value for student recruitment, they want to avoid the introduction of rankings in the realm of scientific recruitment.

> Academics who claim to take rankings into account when choosing a future employer; you shouldn't even want to hire them if they are aware of the underlying methodologies. These obviously do not meet the standards of academic practice, which is why none has ever been accepted for publication in an academic journal. So, if they fall for that, they don't have to come to [this university]!

The indication that the entrepreneurial approach has its limitations also comes to the fore when rankings results are used by external actors. Although strongly criticized by policy officers and researchers, rankings are used by governments to indicate research quality or to substantiate reforms in higher education in response to rankings' results (Sirat et al., 2017). In the

Netherlands, the Dutch government uses rankings to illustrate 'the quality of Dutch academia'. In 2006 the Innovation Platform guided by prime minister Balkenende described its long-term vision for an international, scientific and economic competitive participation of the Netherlands on the world market. On behalf of the Dutch ministry of Economy, the Netherlands Foreign Investment Agency (NFIA) investigated the educational climate according to results of the THE, QS, and ARWU; rankings that are referred to as "three global research institutes". The NFIA concluded, based on the Top-200 of the rankings, that "the Netherlands hold a lot of top universities" (Netherlands Foreign Investment Agency, 2017, pp. 15-16). The identification of commercial agencies as research institutes and the endorsement of their results as quality indicators demonstrates the importance of excellence on a global market but at the same time has blown rankings out of proportion.

According to the Rathenau Instituut, rankings are not sufficient to evaluate national excellence policies . They simply answer the demand of accountability for government policies and funding by quickly and simply giving an overview of the position of countries or universities (Scholten et al., 2018). "They are a phenomenon that occurs on an academic market with competitive students as customers that are looking for excellent universities," says Barend van der Meulen. "Excellence is market information," Van der Meulen argues. "Can you still be a university without dispersing market incentives?", he rhetorically asks. An example of this excellence-focused policy is the individual grants that NWO offers for "excellent researchers who are more excellent than others", as Van der Meulen phrases it. This phrasing creates a tension concerning the term 'excellence' being both norm and exception. According to Van der Meulen excellence can't be a norm; one can't excel when everyone performs at the top of his game.

Problems with excellence reasoning are reflected in the distribution of research funding in the Netherlands. As public funding from the first flow of funds decreases, researchers apply for funding from independent public organizations such as the NWO (Netherlands Organization for Scientific Research). However, the market of research grants from the second flow of funds becomes tighter. To meet academics' concerns, Dutch Minister of Education Ingrid van Engelshoven has suggested that only excellent and promising academics should apply for funding to avoid the workload of unsuccessful applications and create a more stable stream of funding (van Heest, 2019a), emphasizing the focus on excellence. Since research in the Netherlands showed that career chances demonstrably increase when you obtain an NWO-grant, researchers warn for the creation of a scientific elite, a privileged group of people that defines hierarchy in Dutch academia (de Knecht, 2018; Mulkay, 1976). In the Netherlands, the

unequal distribution of rewards and facilities to control and steer activities are in hands of a small group. Research by newspaper *de Volkskrant* showed that a few individual top researchers collect the majority of the available funding; 10% of the researchers would bring in 60% of the funding in the Netherlands (van Calmthout, Kooistra, & Huisman, 2015). Research conducted at the University of Amsterdam proves that the probability to obtain a midcareer grant is increasingly higher once the applicant had received an early career grant. Figure 3 shows the effect of an early career grant on winning a midcareer grant. Applicants to the right of the funding threshold received an early career grant, while applicants with negative ranks did not (Bol, de Vaan, & van de Rijt, 2018).

Further along one's career the Matthew effect is manifested in the chance to become a full professor, which increases with a factor 1.5 when a Veni grant was obtained (Bol et al., 2018; de Knecht, 2018). This research shows that the distribution of grants reflects a Matthew effect and consequently strongly influences human resources policy at Dutch universities.
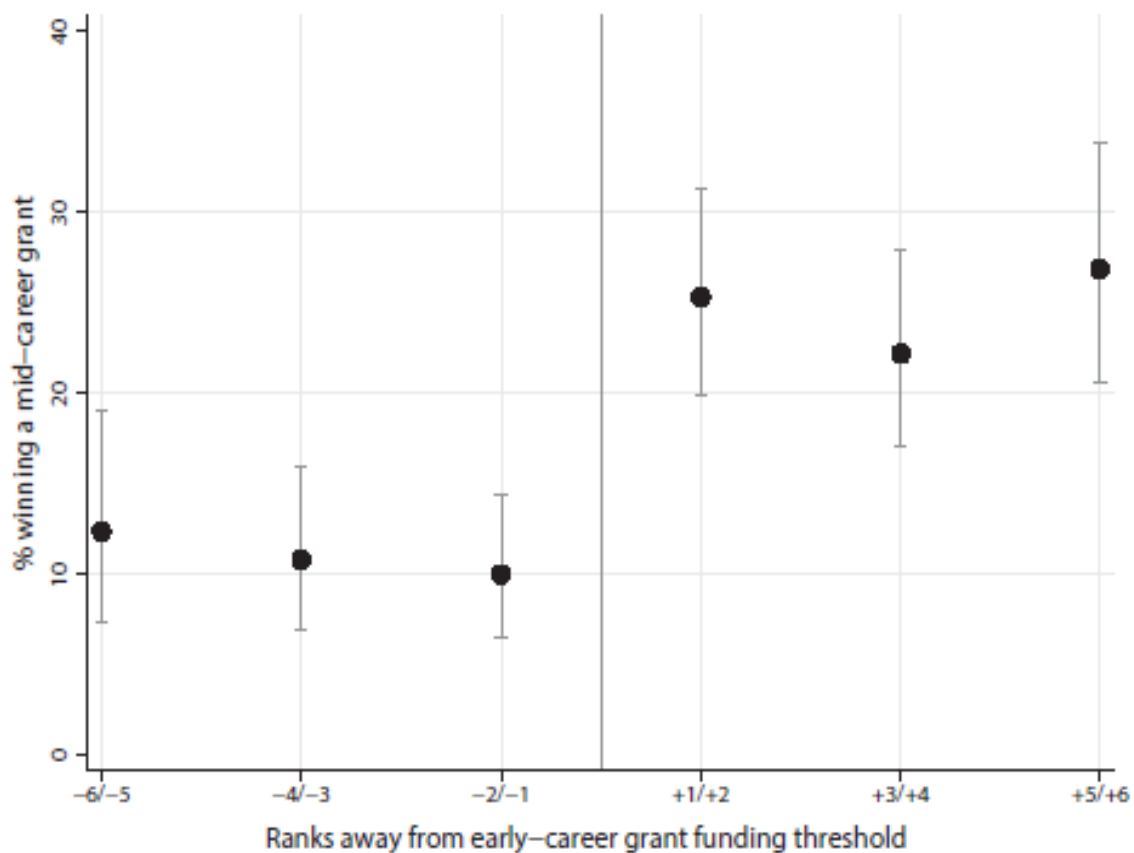

Figure 3: Effect of an early career grant on winning a midcareer grant.

With the marketization of academia from the 1970s, excellence-thinking became established as a feature of modern higher education management. "On this market, rankings function as a tool in which universities position themselves and try to distinguish themselves from other institutions. But this market is only a small part of the environment Dutch universities operate in," says Reinout van Brakel, Domain leader Accountability at the VSNU. He admits that rankings are, from this point of view, interesting for policy makers and politicians and that they are used to determine the quality of higher education and policy trajectory by default. However, universities in the Netherlands operate on the intersection of national cooperation and state funding on the one hand, and market pressure and competition for international students on the other hand. Being part of this global system and operating in this tension field makes competing in World University Rankings inevitable. "If you have to join, you better join the best you can …. Apparently, rankings do answer some demand," says Van Brakel. For this reason, the VSNU wants to stay away from steering the institutions in their ranking policies and practices. However, the focus on excellence and competition following from rankings misses the point of a publicly funded research system, says Van Brakel. "The global market is a fact, but the system of citations fails to take account for other components: the educational and societal responsibilities of a publicly funded research system." As representative of the academic sector in the Netherlands, giving accountability related to the funding universities receives is one of the main tasks of the VSNU (Minister of Education Culture and Science & Vereniging van Universiteiten, 2018). To answer the demand for a transparent view on Dutch academia supported by public money, the VSNU publishes sector overviews with data on finances, staff and education and attempts to approach the data unbiasedly with respect to institutional differences.

> We have a large degree of autonomy in the Netherlands, the government gives us [as sector] confidence to arrange things ourselves. They do give us a lot of money and then they also want to know, what happens with this money?

Barend van der Meulen (Rathenau Institute) links the development of accountability, that started in the 1980s, to the sectoral policy document Higher Education, Autonomy and Quality (*Hoger Onderwijs, Autonomie en Kwaliteit: Hoak*) that was drafted in 1985. From the 1970s onwards, Van der Meulen describes, higher education and scientific research in the Netherlands were perceived by many as being too fragmented and in need of quality improvement. As a result, the ministry took several initiatives to rationalize education and

research programmes. In the 1980s though, with new budget cuts coming, the ministry looked for a new contract with the universities, in which universities would be more autonomous and the ministry would 'steer at a distance'. These ideas were elaborated in the HOAK document, and the autonomy came with a stronger demand for accountability. In the 1990s that was further translated in a focus on excellent research and competition for research funding from the second flow of funds to sustain this excellence driven development. Excellence policies, competitive funding practices and subsequent accountability measures led to an increased pressure on Dutch academia. As stated by the Rathenau Instituut, rankings participation is one of the sacrifices made by the universities to perform better on the international science market. Excellence sells, but at what price?

From this chapter can be concluded that the interests and incentives to participate in rankings vary largely. Generally, the Executive Boards have the final say and legitimize their decisions on their competitive position on the academic world market and the advice of their policy officers, who for their part rely on peers in national and international networks and their own capacities. The rationale for rankings participation is thus an assemblage of marketing aims, collaboration objectives, methodological validity, political demands, and practical matters in which marketing aspects are preferred.

Policy officers have adapted two different repertoires to legitimize and define their approach to rankings. Drawing on the utilitarian repertoire, they strive to adapt to the intentions of the rankings agency and closely match their data with ranking agencies' data definitions. Their intention is to minimize workload and represent the university genuinely through a consistent data submission. Policy officers who fall back on the entrepreneurial repertoire are encouraged by their Executive Boards to optimize data submission to improve rankings performances. Ranking results are subsequently employed to recruit foreign students and strengthen international branding.

In this chapter was explained how rankings agenda are arranged before practices of data submission and after the publication of results. However, an extensive amount of work has to be done between these junctures. The collection and submission of data also involves deliberations and decisions and is subject to coercive and seductive forces. Contrary to the decisions on rankings participation, policy officers have a great deal of autonomy in the processes of data collection and submission. Nevertheless, the outcome of rankings is uncertain and subject to choices of data selection and submission, rankings' methodologies, and data weightings. In the next chapter I investigate how these tensions are negotiated.

8   How is the impact of World University Rankings negotiated?

In the previous chapter stood out that approaches to World University Rankings depend on governance plans and strategies set out by the Executive Boards and are largely steered by global market pressures. However, the connection between rankings and the global academic market is a peculiar one. The budget cuts in the Dutch public funding system led to the development of perverse incentives that undermine the quality of research and teaching. These incentives for improving global reputation and recruiting students from abroad are accessible through rankings participation.

For a good rankings' position, it's crucial to focus on excellence as identified by rankings indicators. To end up in the highest range of rankings lists, universities rather benefit from employing a few excellent researchers who win prizes and receive prestigious grants than improving their staff ratio or offering more study programmes. As a result, the same mechanisms that are criticized for dismantling good academic practices contribute to good scores and rising rankings' positions. Rankings in this sense create a tension field of contradictory implications and incentives that takes the shape of a dispositive; a network of elements in which power is exerted through relations, practices and procedures (Raffnsøe et al., 2014a).

This dispositive manifests itself in duties of the policy officers: practices of data collection, submission, and analysis. In institutional data submission, policy officers try to represent the university in specific ways. They define a strategy according to the aims for rankings participation; attracting students, displaying industry ties or demonstrating elements of excellence. Following from a distinguished strategy and their own perception of the institution, they expect certain results in score, rank and range and predict their position compared to the positions of their peers. The way in which individuals construct organizational processes is researched within the realm of organizational studies. Within this scholarship is researched how expectations and predictions reflect an organization's identity; its "distinguishing and central attributes, its core values, organizational culture, modes of performance, and products" (Elsbach & Kramer, 1996, p. 442). As a result, external actions such as rankings results can contest these attributes and values. As policy officers work quite independently, they have a great deal of autonomy in the organizational practices of rankings and thus in the way that they negotiate these tensions. In this chapter I investigate how the narratives of policy officers offer a way of thinking about how tensions around rankings practices and policies are negotiated on the organizational level of Dutch universities.

8.1   Data collection and submission

As outlined in the previous chapter, universities participate in rankings because they aim to position themselves on the global academic market in order to stay relevant. Policy officers determined themselves as autonomous and decisive players when it comes to their advisory and analytical role towards the Executive Boards. Besides this advisory role they also have the overview and authority over a general rankings policy which involves guidelines on data submission and processes of analysis. In the previous chapter two repertoires stood out that are negotiated by Executive Boards and their policy officers: the utilitarian repertoire and the entrepreneurial repertoire.

Drawing on the utilitarian repertoire, policy officers define their role as executive of management decisions and try to stay close to data definitions of the rankings indicators. Identifying rankings as useful to industrial or commercial partners rather than attractive for prospective students, policy officers who employ the utilitarian repertoire work effectively and apply a rigid method to collect institutional data thereby avoiding uncertainties.

> The discussion about what is possible and what not plays a role, also in the national network. It seems very clear that you should not game. Nobody does that, and it doesn't make much sense either because at a certain point you will get caught. ... We just try to match our data set as good as possible to the methodology. Yet the definitions are never 100% unambiguous and there's always room in this grey area …. Of course, you can also shape data a little to get better. But I don't believe that others do so. Certainly not within the Netherlands.

Contrary to the utilitarian repertoire, policy officers who draw on the entrepreneurial repertoire take risks and strive to optimize rankings participation. Rather than just submitting institutional data, the entrepreneurial repertoire includes a sense of freedom and trust from the Executive Boards to take risks and benefit from loopholes in the methodology. Emphasizing the challenging element of this approach, policy officers and Executive Boards simultaneously identify rankings as tools that do not relate to quality and productivity measurement but as an example of marketing tactics.

> We realized that colleagues at marketing, student recruitment and international relations knew that students were very aware of rankings, and if you were not in the Top-200, Chinese students would not even receive a grant from the government to come and study. So, at a certain point it was very clear that internally, rankings had to be completely ignored, but for reputation you cannot ignore them. The game should therefore be played as smartly as possible. That's how we see it: as a game.

Approaching rankings as a game comes with uncertainty and risks and prompts gaming practices (Frey & Osterloh, 2011; Waaijer, 2018). The practices of shaping data in the quote of the utilitarian repertoire refer to famous gaming examples such as hiring highly-cited professors for two weeks a year at the King Abdul-Aziz University or an institutional policy to cite at least three colleagues at the University of Malaya (Biagioli, Kenney, Martin, & Walsh, 2019; Hazelkorn, 2017). These symbolic responses to external pressures are not automatically related to organizational practices, argue Sauder and Espeland. They rather function as a buffer: to lessen or moderate pressure following ranking practices without performing responsive changes within the organization (Sauder & Espeland, 2009).

Not all gaming practices are so audacious and, as pointed out, boundaries of gaming are rather vague. Following the methodology strictly, policy officers who draw on the utilitarian repertoire reached out to THE for clarification on data definitions. "I sometimes ask 'what do you mean by this or that?' But because [the THE ranking] is not appropriate for the Dutch higher education system you get the answer you have to see for yourself what is best." Room for speculation on data definitions is due to different ways in which universities are governed. Commercial rankings are primarily designed to serve the Anglo-American academic market and their data definitions are thus not always appropriate when it comes to the way in which Dutch academia is organized (Marginson, 2008). To encourage as many universities to participate, rankings agencies are open to inquiries on data definitions and are available for assistance. The space given by THE to optimize data definitions has been skilfully used by some Dutch ranking officers who strive to optimize rankings participation and rather employ the entrepreneurial repertoire.

8.1.1   Degrees of freedom

That the boundaries of gaming are rather vague is emblematically explained by what is referred to as *degrees of freedom* by policy officer Dr. van Rooij. Due to differences in national Higher Education systems and ambiguous definitions, international rankings always leave degrees of freedom in the selection of some of the data requested. For example, in the Netherlands PhD students can be counted either as employees and/or as students (de Goede, Belder, & Jonge, 2013, p. 3).

> For our first data submission, we explicitly asked the rankers what to do with PhD students. Then the answer was "I don't know, you should decide for yourself." ... That is when our first degree of freedom was born, and we could simply calculate what was most favorable to do.

Dr. van Rooij also actively participated in the VSNU working group which advised on how to submit data to the major international rankings. In this group, institutional researchers of the institutions shared their experiences on smart ways of submitting data, which resulted in three alternative alternatives that can be summarized as follows:

I.   Maximally to the letter.

This approach follows as much as possible the literal definition of each indicator, taking into account the apparent intention formulated by the ranking agency.

II.   The optimum approach.

One tries to estimate the effects on the outcome of alternative interpretations and chooses those resulting in the best outcome, within the boundaries of what is ethically justified and within the limits of the 'degrees of freedom'.

III.   The non-naive approach.

An intermediate alternative, somewhere in between the two other ones.

The VSNU working group has been very careful tending to be a goody two shoes. In this group, the policy officer approach rankings by drawing on both the utilitarian and the entrepreneurial repertoire, and consequently wanted to avoid any suspicion of gaming. Surprisingly, THE welcomed the Dutch proactive attitude.

> We never cheat. … In a phone call I told THE about the VSNU working group and explained how the Dutch universities tried to align their data interpretations. ... They wrote a piece about it in their magazine saying that the Netherlands did it cleverly; coordinating with each other how you can best submit your data and see: all Dutch universities have risen!

The reaction from THE utterly aligns with the entrepreneurial approach to rankings and strongly emphasizes the commercial aspect of World University Rankings. For THE it is important that universities participate in their rankings and annually submit their institutional data. How they do that is less important; it is the task of THE to construct an interesting ranking from these data that they receive for free. In the same reasoning THE often changes its methodologies and generates attention for 'methodological improvement'. This methodological mystification and institutions' concerns are additional opportunities to make money; THE organizes sessions in which these themes are discussed by supporters and opponents of the rankings in order to display their openness to criticism and improvement (Fung, Lloyd, & Roughan, 2018). As a result, the effort of the Dutch working group generated positive publicity for THE and strengthened THE's market position.

8.2   Data analysis

In the previous chapter stood out how rankings play a role for marketing and recruitment purposes and are used to indicate a certain degree of quality, although recruitment advisors are not aware of the methodology and mechanisms behind rankings. Although recruitment advisors can educate themselves on methodological considerations, these factors are not important to reach their goal: promoting the university as good, reliable and attractive to prospective students and their parents. Exploiting performances in World University Rankings is part of a marketing strategy that is used to cope with external perceptions on the organization's performances and identity. To shape these external perceptions, recruitment advisors draw on impression management. Impression management, a term coined by sociologist Erving Goffman, is about shaping the impression of others as it is in the interests of the individual (Goffman, 1959). This conduct can be controlled through anticipating on expected perceptions following public events and trying to influence one's perceptions on objects, people or ideas.

However, due to the non-transparent and inconsistent methodologies of rankings, results are often hard to indicate. For policy officers who fall back on the entrepreneurial repertoire and optimize their data submission, uncertainty and the risk of misrepresentation are higher, and policy officers who spend time on these practices want to get reward for their investment. To anticipate on expectations from academic departments and the public, policy officers developed certain strategies. A tool to get insight in rankings agencies' data procession is a data simulation spreadsheet.

> I succeeded long time ago to obtain a full copy of the underlying raw data of the QS ranking … and I can fully simulate it. I can fairly accurately predict our position following a new data submission; that is where we would have ended up in the previous ranking with our new data. Nowadays, similar expensive simulation tools are being sold commercially, among others by THE and QS.

The use of this simulation spreadsheet to predict rankings' results makes expensive data analysis tools that are sold by rankings agencies for "tens of thousands of pounds"[5], superfluous and is also available for other Dutch policy officers as an aid for further data analysis. Rankings performances are analysed by the policy officers but are also subject in the discourse of the VSNU working group. When rankings are launched, policy officers receive so called *fact-files*[6] that are shared by email

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[5] The audit tool referred to is provided by QS and costs €27,600 for a three-year subscription (Maldonado-Maldonado & Cortes, 2017, p. 167).
[6] Fact files (QS) or rankings' reports (THE) are provided by the rankings agencies after publication to give a detailed overview of the scores on different indicators compared to the previous year(s).

with the list of 'Dutch rankings contacts'[7] to provide additional information to one's performance. Policy officers can use these files for the analysis of their institution's results but can also look at the detailed scores of others, such as staff and student ratios. Because national data on student numbers and staff is easily accessible in databases and dashboards, policy officers can to a large extent determine how others have submitted their data.

> I know that a number of other universities do that much more than we do [comparing with national peers], and I occasionally get emails such as "last year you submitted this, and now it is that." I submit it consistently …. So, then I notice that others have more time for [this analysis] and also want to invest more time than we do at the moment.

Although policy officers formulated agreements on rankings participation and ensure a high degree of cooperation in the VSNU working group, they verify what others do and reveal a sense of competition between them in the World University Rankings. When we relate this competition to the 'rankings game' of the entrepreneurial repertoire, this aligns with the lack of competition for domestic students but the urge for reputation on the global academic market.

Policy officers who invest a considerable amount of time and effort in data selection, submission and analysis expressed a stronger sense of expectation and justification of the rankings' results. Even when results are analysed in detail and data submission is optimized, policy officers who possess an entrepreneurial attitude don't agree with the rank of their university and feel that the results don't do justice to reality following their data submission. Following from their optimized data approach, they expect their institution on a certain range on the ranking and justify this in comparison with the scores and performances of national and international peers. The perception of misrepresentation and unjustified scores appeared to be a complex and sensitive topic in the interviews. Policy officers admitted that the perception of 'not getting what you deserve' and 'not being where you belong' encouraged additional practices of analysis and inquiries into data optimization.

8.2.1   'The place where we belong'

Misrepresentation is mainly caused by a deteriorating score on reputational indicators. For reputation indicators in the THE and QS World University Rankings, scores are based on surveys that are outsourced to third parties. For THE, reputation represents 33% of the score yet samples

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[7] Policy officers frequently referred to this contact list in which they share issues concerning national and international rankings, data submission, rankings publications and strategic rankings policies.

of respondents are unknown and too small to be representative. For these surveys, all people affiliated with a university can be approached. Joseph Martin, teaching associate at Cambridge, confirms that he doesn't know why he was approached. "I received what seemed to me a random email, in which they invited me to become an assessor. They basically ask to list ten or fifteen universities and researchers that you consider best in your field. However, you're never asked to identify what your field is." Policy officers affirm that they have had the same experience "because I have an email address from a university" and as a result criticize the reputational part as the worst part of commercial rankings.

However, reputation turned out to be one of the most decisive elements in the rationale for rankings participation and consequently bad results on reputation enforce the most profound actions. As marketing and communication become increasingly important in academia, some universities are, separately from rankings, working on academic reputation and explore ways to improve this on an institutional level. Others still consider their approach: "It's not our preference, so to speak. But at the same time, it's something on which our score deteriorates ... so we are thinking about starting a working group on it." Through this manner, university rankings bring in new types of knowledge, such as knowledge on reputation and marketing (de Rijcke et al.). They reveal connections that were not visible before such as strong ties with departments responsible for marketing and communication, recruitment and admissions.

These new connections within universities simultaneously embody new connections in the dispositive of rankings. When new entities enter the dispositive, they mediate existing power relations and influence the repertoires that policy officers draw on. Looking at actions within the entrepreneurial repertoire in the dispositive, rankings participation is further steered to be efficiently deployed for marketing purposes through strong and powerful ties with the Marketing & Communication department. On the contrary, practices of the utilitarian repertoire are closer connected to actors in other departments such as the library to efficiently and genuinely represent the university. These repertoires interact and respond in different ways to transformations within the dispositive which makes the dispositive an unstable assemblage of power mechanisms and knowledge structures that constantly shape how rankings practices are performed.

As the policy officers work in different academic departments, they work on the intersection of managerial, operational, and executive level and subsequently have to negotiate interests from the global academic market, the national higher education realm, politics, research and teaching staff and students that often have contradictory implications. Although these political, economic, social, and academic contexts interact and respond in different ways to transformations, their connections

persist by existence of the other. Deploying the dispositive of rankings in Dutch academia not only shows us connections through which power is exerted, but also where power in *potentia* is situated. In the next chapter I will address the potential and objective of ranking practices within the dispositive to conclude how we are to understand rankings policies and practices now and in the future.

9   Negotiating academic, political and commercial values

Although Executive Boards have the final say about rankings participation, policy officers have more insights in the needs and wants of rankings, the corresponding workload, the different actors that are involved in rankings participation and the commercially driven approach of rankings agencies and experience contradictory implications from rankings participation. Due to these insights policy officers perceive rankings as a truly market phenomenon that has disconnected itself from the nature, aims, and diversity of universities in the world. In the previous chapters we have seen that policy officers negotiate these contradictions in several ways and largely draw on two repertoires: a utilitarian repertoire and an entrepreneurial repertoire. Falling back on these strategies, policy officers give meaning and direction to rankings practices and come to understand rankings as a social reality. Yet if it was up to the policy officers how World University Rankings would develop, they would opt for improved methodological transparency, insights in calculation processes, and less emphasis on reputational scores to represent universities in a more honest and veracious way. Talking about the combination of genuine representations of meaningful metrics and the provision of attractive publication material, the interviewees came up with innovative ideas about future rankings.

> It would be interesting to say that rankings do not have to be published every year, if you see that universities are pretty much in the same place every year. If you rank, do it every five years. Universities do not change every year; there are the same people who have the same type of publications. Research is not that exciting to make a ranking every year.

Admitting that this sounds attractive to some policy officers, this scenario seems very unlikely. Yet some scholars still wonder why accountability is necessary in academia (Lorenz, 2012), others propose an active way to settle a balance between academia and market-related tensions. Instead of lamenting the disintegration of the previous academic work ethic due to management thinking, academia can focus on successful use of rankings' capabilities (Degn et al., 2018).

The focus on successful use rankings is the starting point for this chapter. Based on the thought, needs, demands, objections and possibilities within the realm of rankings in Dutch academia, this chapter outlines ideas and suggestions to deal with contradictions, concerns and demands to build on sustainable rankings policies. Taking practical limitations into account, I simultaneously rephrase the approaches as recommendations to deal with rankings practices with the current resources at hand.

9.1   Academic validity and rankings' legitimacy

One of the conflicts of interest that was frequently raised was the friction between academic values, scientific research methods, and methodological validity of the rankings' agencies. Due to unscientific calculations, arbitrary data weightings, and invalid survey techniques rankings' agencies reinforce one can't draw conclusions from rankings that relate to the quality of research, teaching or education. Because these rankings methods are at odds with scientific values, rankings' expert Simon Marginson claims that it's an academic obligation to prevent being subjected by rankings agencies.

> What we should collectively do, in my view, is start to critique and discredit the bad social science at the base of multi-indicator rankings. We are universities; it is not hard for us to say what is good science and what is bad. We need to push at bad ranking methods or at least weaken their legitimacy. (Hare, 2013)

Besides the matter that many rankings include institutions without soliciting the universities' participation, the argument of unscientific approaches is outweighed by rankings' value for student recruitment and reputation. Operating in the recruitment and marketing realm, interdepartmental connections within universities can be highly beneficial; collaborations with the library can diminish workload and colleagues from Marketing & Communication can develop strategies to improve an institution's reputation. However, whereas rankings aren't scientific tools and quality instruments, policy officers and researchers testify that results are often granted scientific authority in marketing-oriented communication, policy papers and government documents.

To prevent a loss of scientific credibility and integrity, policy officers should take on the task to communicate on rankings in a proper way. Policy officers can function as intermediaries to inform users of rankings' results such as the Executive Board, the Marketing & Communications department, and recruitment advisors, on the context of rankings and their methodologies. This means that rankings communication comes with an indication of the data, methodology and validity of the rankings and how the rankings results can be interpreted. In this way universities can justify participation in an honest way ("we can't avoid being ranked, but we are conscious of the arbitrariness") and can advise on how to use rankings efficiently in other organizational contexts.

To negotiate academic and commercial values, universities can opt for rankings that apply valid methodologies and adapt to the needs of valorization and societal engagement. Initiatives to link academic and commercial values are proposed by IREG, Observatory on Academic Ranking and Excellence (IREG Observatory on Academic Ranking and Excellence, 2019b). IREG is a non-profit organization of universities, ranking agencies and representatives of other higher education bodies and strives to enhance awareness and understanding of university rankings and academic excellence. To reach these goals, they drafted the Berlin principles, a framework that is set up to enhance and finetune rankings methodologies to measure quality and good practice and serves as the methodological foundation for new rankings' initiatives (IREG Observatory on Academic Ranking and Excellence, 2006). According to IREG it is time for a new generation of rankings. President of IREG Luiz Claudio Costa says that current rankings do not fulfill the need to examine links between universities and society. Furthermore, IREG wants to investigate whether indicators for teaching quality can be improved and subsequently wants to shift the focus away from research and international reputation (Higher Education Discovery, 2018). The first initiative that answers these demands was launched in 2018. The Moscow International University Ranking (MosIUR) does not use any survey data and focuses on the 'three key university missions': education (weight 45%), research (weight 25%), and interaction with society (weight 30%) as "uniquely in the history of rankings" (Moscow International University Ranking, 2018).

9.2 Market demands

To use rankings efficiently in different organizational contexts, it is important to understand how rankings participation can be optimized. In chapter seven came to the fore that prospective students and their parents like to see rankings to ensure a certain standard of quality without approaching the rankings as scientific tools. This audience is interested in a simple list of universities and is not attentive to calculations and methodological descriptions. Rankings thus answer a societal demand for lists, hierarchy, awards and competition and go beyond the academic realm (de Rijcke et al., 2016; Hazelkorn, 2017). Therefore, changes in the one-dimensional nature and dominant views that are generated in rankings would weaken their value (Frey & Osterloh, 2011). Attempts to shape rankings in a scientifically valuable way have therefore not succeeded. "Many attempts have been made to arrive at a different kind of ranking, for example U-Multirank. I think if you do that you don't understand the idea of a ranking, that someone is number 1," says a policy officer. Reinout van Brakel (VSNU) agrees:

"If you present a lot of variables it is very difficult to get an overview of the information. 'You are 50 in the ranking compared to others', there is also a need for simple numbers."

9.3   Accountability demands

Giving accountability for spending public money requires more than displaying simple numbers. The discrepancy between the governance of public universities and the focus of university rankings make commercial university rankings a problematic issue (Sirat et al., 2017). It is apparent that the Dutch universities have to give an overview of their performances as agreed on in performance agreements, but it is clear that international rankings can by no means fulfill a role in this accountability process. Additionally, the VSNU experiences difficulties to justify institutional data submission from public universities to commercial agencies. Due to these difficulties, policy officers and the VSNU deliberately gauge how two tasks can be fulfilled: answer to the accountability demand from the government and determine how to participate responsibly in international university rankings.

9.4   Benchmark demands

Because benchmarking on international scale is not possible due to differences of national administrative systems, Dutch universities should neglect any benchmark opportunities of international rankings. On a national scale, the VSNU attempts to answer the accountability demand with sector overviews that benchmark institutions on a set of indicators universities jointly agreed on. However, most universities are active in international networks and would like to compare themselves with other universities too without purchasing expensive data tools.

To facilitate benchmark practices without World University Rankings, universities could agree upon a fixed and acknowledged set of data definitions such as the definitions in the Frascati Manual (OECD, 2015). The Frascati Manual is a tool that is designed to unify different approaches to data and offers methodological and statistical conventions about R&D. The manual is developed by the OECD in 1963 and regularly updated. In these revisions OECD updated guidelines that reflect changes in R&D to adapt to current political and economic changes in international R&D policy. The manual is widely used and acknowledged by governments and global organisations and could be used to answer to benchmark demands (Godin, 2006; OECD, 2015; Vandevelde & van Brakel, 2015).

Being responsible as sector representative to give accountability for the spending of public money, the VSNU also shares responsibility for institutional data supply to commercial rankings agencies. To legitimize these practices, the VSNU emphasizes the value of World University Rankings for the position of Dutch academia on a competitive global market. Stating that World University Rankings don't have scientific or policy value for the VSNU, Dutch universities can approach rankings in the most profitable way. Reinout van Brakel suggests that universities could join forces and jointly submit their data to the rankings agencies to diminish institution's workload and puzzles with definitions. This approach emphasizes the marketing aspect of international rankings and underlines the rationale for rankings participation according to the VSNU. Conceding that policy officers cluster their expertise and experience with the international rankings, the Dutch universities might benefit from a shared approach in data submission and analysis practices. This idea resembles the idea as proposed by several policy officers and can best be described as 'The University of the Netherlands'.

> In that sense you could also say .... Perhaps you should observe Dutch universities as the 'University of the Netherlands'. ... We would never merge … but the VSNU could use that as a strategy to promote the University of the Netherlands with thirteen locations.[8]

However, not all Dutch universities are willing to share the data they submit to rankings agencies with other universities and the VSNU. For policy officers who fall back on the entrepreneurial repertoire, sharing rankings' data with national peers has no added value. They apply their own *degrees of freedom* that follow from the time and effort that they invested in the rankings. Data for the rankings, according to these respondents, are detached from practices of governing in the realm of Dutch higher education but belong to a global commercial rankings game that is individually played.

9.5   Recruitment demands

The level on which a shared approach would be highly desirable is student recruitment and nation branding. The idea of competition for bachelor students from the Netherlands is fairly relative since the influx of bachelor students is largely regionally determined, but the recruitment of foreign students could benefit from a shared approach, says a policy officer.

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[8] There are fourteen research universities in the Netherlands, but the Open University offers distance learning and is thus not taken into account as being a location for the 'University of the Netherlands'. For an overview of the Dutch research universities I refer to Appendix A.

> We are all interested in bringing talented foreign students to the Netherlands, ... so it is much smarter to do international marketing collectively, instead of competing against each other. … The Netherlands are so small, it makes no difference whether you go to Groningen, Maastricht or Amsterdam when you come from much larger countries with universities much farther apart.

From this point of view, Student Recruitment Advisor Zoé den Boer advocates a joint national approach to recruit foreign students abroad instead of a competition overseas.

> I went to Brazil a few years ago and it was really embarrassing, when a number of Dutch universities started to show obnoxious behaviour. I got up at one point and said: "Listen. I don't know what you are doing, but shouldn't we first put the Netherlands on the map here and then look further?"

The starting point for recruitment abroad are the NESOs; Netherlands Education Support Offices that are set up with funding of the Dutch Ministry of Education, Culture and Science and are located in ten countries that are strategically important for Dutch higher education: Brazil, China, India, Indonesia, Mexico, Russia, South Africa, South Korea, Turkey and Vietnam. The NESOs are representing the Dutch knowledge sector abroad and operate on behalf of EP-Nuffic, the Dutch organisation for internationalisation in education (EP-Nuffic, 2019). Building on the knowledge, experience and networks of those NESOs, universities can collectively brand the Netherlands as study destination. Yet, from the interviews appeared that student recruitment and rankings are not closely linked. Policy officers could consider creating links with the recruitment officers to on the one hand enhance nationwide student recruitment, and on the other hand extend their investments in reputation with the recruitment colleagues abroad.

Conclusion

World University Rankings are a recent phenomenon that has been embraced and criticized by higher education institutions and governments since their introduction in 2003. The emergence of funding-based research schemes, the urge for accountability and evaluation and the globalizing academic market created a world which rankings are an integral part of. With the development of strong inter-institutional and international ties higher education experienced a transformation not only in character but also in its relations with the state, economy and society. Increased collaboration with partner universities to recruit students and maximize competitive advantage turned universities into multinational corporations that align their strategies to a way of thinking that can be defined as transnational 'academic capitalism' (Hazelkorn, 2015, p. 10). Appearing at the intersection of these worlds, rankings involve paradoxical elements that are revealed in academic, economic, societal and governmental demands for rankings participation. Applying an STS approach and drawing on research from sociology, economics, organizational sciences and philosophy I identified how World University Rankings became such a powerful phenomenon and how tensions that come with rankings practices can be addressed.

From the 1970s onwards, market incentives from industry and government steered research objectives towards new findings; profitable patents and commodities. At this intersection of scientific research, innovation policies and economic profit-making a new way of governing higher education evolved: academic capitalism. This policy has its repercussions in all departments of academia that in turn try to bring their policies on research, teaching, management and administration to an agreement to adjust public academia to optimally answer market demands. To answer these demands according to measurable standards of output, new management models, that previously exclusively belonged to the private sector, were introduced in the academic realm. With the introduction of performance standards and output controls such as targets, audits, and benchmarks, academic practices were converted to quantifiable and competitive elements that could be used for policy making. Through the choice of quality indicators and data weightings, rankings agencies set the standard for a different notion of quality and excellence. In their attempt to mirror these standards, universities lose their unique profile and develop into a homogenized group that both reflects and promotes social stratification (Hazelkorn, 2015).

The rapid development of World University Rankings was coproduced with the transformation to an academic capitalist way of governing academia. To be competitive and maintain a high level of research, universities need a continuous supply of financial and human resources. As global academia is expanding and can rely less on public money, universities actively seek for resources to complement their financial deficits. Rankings, in this sense, disperse necessary market information and function as a legitimization for quality, reputation and international outlook to attract students and build international reputation. To facilitate these marketing demands, World University Rankings emphasize indicators on international outlook and reputation and strongly reflect the value of soft knowledge; knowledge of branding, the market, reputation, networks and relationships (Hutton, 2007). Although World University Rankings are criticized for their commercial nature and lack of academic validity, the same mechanisms that are condemned for dismantling good academic practices thus contribute to good scores and rising rankings' positions. Consequently, the contribution of soft policy tools to good rankings performances was met with a stronger role for Executive Boards and Marketing & Communication departments that are responsible for long term strategic guidance and universities' positions on the global academic market.

The pursuit for good rankings performances and striving for excellence are preconditions for competitiveness. Although rankings were initially met with a wait-and-see attitude from the universities, many rankings agencies rank universities without soliciting the universities' participation and subsequently started a global *rat race*. From a combination of fear for misrepresentation and an attempt to ameliorate score and rank, universities feel compelled to submit institutional data on students, staff, degrees, and finances. The collection, submission, analysis, and communication of institutional data and rankings results demand a considerable amount of time and effort from policy officers at the universities. These practices generate a certain tension; how can publicly funded universities invest in commercial university rankings businesses?

In this research I looked at rankings' practices in Dutch academia and analysed how we are to understand the impact of World University Rankings on higher education policy and practices in Dutch public research universities. Looking at these practices on an organizational level offers insights into power and identity to understand how different interests and incentives are negotiated within academia and ultimately gives rise to an answer to the research question: How do World University Rankings impact higher education policies and practices in Dutch public research universities?

The rationale for rankings participation in Dutch academia largely derives from the search for resources through building a strong international reputation and the recruitment of international students. As strategically outlined by Executive Boards, decisive factors are rankings' value for marketing purposes and highlighting the universities identity and outstanding performances or specializations. World University Rankings are not only used to disperse market incentives in the academic realm, participation in rankings is also demanded by the government who uses rankings performances in international context as indicator for the quality of research and teaching in the Netherlands.

Beyond the framework of strategic rankings policies, policy officers fall back on different repertoires in their approach to ranking related practices. These repertoires tell us something about the way in which policy officers negotiate institutional policies and personal motivations to come to a decision on rankings approaches. The policy officers in this research draw on two different interpretive repertoires when they describe rankings practices in their institution. The entrepreneurial repertoire is based on the rationale that rankings can be approached as a marketing game. This game is played by policy officers of the universities through optimizing institutional data as it fits best to rankings indicators. Drawing on this repertoire, rankings methodologies are thoroughly studied, and performances are analysed to verify if they match expectations. Because of their expertise, policy officers who fall back on this repertoire functioned as key figures in the national rankings working group under supervision of national association the VSNU. Besides the aim to optimize scores and ranks, one of the key objectives within this repertoire is the attraction of foreign students to complement the decrease in enrollment of domestic students and accordingly a declining income from the first flow of funds.

Drawing on the utilitarian repertoire, policy officers focus on a strict application of rankings' methodologies. This utilitarian repertoire is employed by policy officers who attempt to accurately match their institutional data to the data definitions defined by the rankings agencies. In this way they aim at a genuine representation of the university towards industrial research partners and focus less on commercial branding for student recruitment purposes. Therefore, rankings that highlight the universities' identity and engagement such as sustainability rankings possess more symbolic power and are preferred over World University Rankings.

The different approaches to data submission are shared and discussed in the national working group of the VSNU. In this sense, policy officers of the Dutch research universities

form a tight-knit 'community of practice' in which they share practices rather than goals (Lave & Wenger, 1991; Lesser & Storck, 2001). As a result, their relations as peers in the national context can best be described as *personal relations* instead of *team relations*. In addition to sharing approaches to data submission, policy officers exchange detailed reports on their rankings performances that are supplied by the rankings agencies. Although they articulated an open and supportive attitude towards their peers and claimed not to experience any competitive tensions, policy officers drawing on the entrepreneurial repertoire seemed to be alert to unexpected shift in the performances of their peers. Small inquiries into performances of peers demonstrate underlying strategic plans and give an indication of the position on which universities perceive themselves (Elken, Stensaker, & Hovdhaugen, 2017). Sharing practices rather than goals, those intentions and actions turned out to be sensitive topics and are kept aside from national discussions on rankings approaches in the working group.

To define to what extent World University Rankings impact higher education policies and practices in Dutch public research universities, rankings need to be evaluated in the context of global academia. Being part of this realm, Dutch universities align their rankings practices to meet institutional strategies such as recruiting foreign students and strengthen collaborations with the industry. Policy officers negotiated tensions that come with rankings practices through the development of repertoires that give legitimization and meaning to their actions. In this process, the Dutch policy officers benefit from expertise and support from peers of the VSNU working group. However, universities in the Netherlands are confronted with far-reaching policy reforms that will have their repercussions on the distribution of financial assets and power balance between the universities (Rijksoverheid, 2019; van Heest, 2019b). These reforms, in their turn, mediate the interests and strategies for rankings participation.

Yet, rankings practices and policies are constantly shaped by the rapidly changing world economy and require continual investigation. With this research I have provided a starting point to further investigate administrative and organizational practices of university rankings in public academia. Building on this research, it is necessary to further examine these practices to come to understand how commercial university rankings now and in the future can be addressed.

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Appendices

A: Overview Dutch public research universities

B: List of interviewees

C: Topic guide Policy Officers

D: Topic guide: Rathenau Instituut VSNU

D: Coding scheme

Appendix A: Overview Dutch public research universities		
Name	**Location**	**Established**
Delft University of Technology	Delft	1842
Eindhoven University of Technology	Eindhoven	1956
Erasmus University Rotterdam	Rotterdam	1913
Leiden University	Leiden	1575
Maastricht University	Maastricht	1976
Open University	*Nationwide*	1984
Radboud University Nijmegen	Nijmegen	1923
Tilburg University	Tilburg	1927
University of Amsterdam	Amsterdam	1632
University of Groningen	Groningen	1614
University of Twente	Enschede	1961
Utrecht University	Utrecht	1636
Vrije Universiteit Amsterdam	Amsterdam	1880
Wageningen University and Research Centre	Wageningen	1867

Appendix B: Overview interviewees

Name	Function	Expertise	Institutional context
Zoé den Boer	Communications Advisor Marketing and Communication	The interviewee works at the Marketing and Communications department of Maastricht University and coordinates the country teams for student recruitment purposes.	Maastricht University
Reinout van Brakel	Director Accountability	The interviewee works with universities, ministries and other suppliers and users of data on suitable indicators that provide information about the state of affairs in universities The Netherlands. He is responsible for facts, figures and infographics to ensure that opinions on academic education and research are substantiated by facts. To this end, his team maintains and develops various datasets relating to education, research, staff and finances.	VSNU (The Association of Universities in the Netherlands)
Wouter ter Haar	Executive Staff Strategy & Information	The interviewee is responsible for numerical information on the functioning and positioning of his institution in global academia in the Business Intelligence department of the UvA . His work is situated in quality assurances of the university and in this area, he works with national and international rankings.	University of Amsterdam

Joseph Martin	Teaching Associate	The interviewee is trained as a Historian of modern Science and Technology and focuses on the physical sciences in Cold War America. In the context of this thesis we talked about the interviewee's role as assessor for Times Higher Education in the period 2015-2018.	University of Cambridge
Barend van der Meulen	Head of Research	The interviewee specializes in the dynamics of science and policy and the instruments used for science policy. In several publications he has examined evaluation, foresight and funding of science, the 'Europeanization' of science, and the impact of science. He also researched the history and development of the Dutch research system.	Rathenau Instituut
Eric de Munck	Policy officer Education & Student Affairs - Quality & Strategic Information	The interviewee's work is situated in quantitative data analyses related to educational policy of Wageningen University and Research; rankings are part of this domain.	Wageningen University and Research
Merle Rodenburg	Head Business Intelligence and Policy Officer Research	As Policy Officer Research at the staff office at the General Affairs department, the interviewee is responsible for the data submission and analysis of all the rankings the TU/e participates in.	Eindhoven University of Technology

Jules van Rooij	Senior Advisor Research Policy and Institutional Research, Coordinator Research Assessment	The interviewee's work is situated in the assessment of quality, research strategy, and key figures on research and education. He is responsible for the data submission and analysis of the rankings his institution participates in. In addition, his expertise includes citation impact analysis, Web of Science and Scopus.	University of Groningen
Cathelijn Waaijer	Policy Officer	The interviewee works as a policy officer at the Administration and Central Services of Leiden University. Among her tasks are the coordination and analysis of data submission and rankings results of the institution. Previously, she has been a doctoral researcher at the Centre for Science and Technology Studies, where her research focused on academic career systems and science policy.	Leiden University
Richard de Waard	Policy Advisor Academic Affairs	The interviewee is responsible for the data submission and analyses of Utrecht University's participation in World University Rankings and is responsible for the coordination and quality assurance in Utrecht University's research domain.	Utrecht University

Appendix C: Topic guide Policy Officers

(EN/*NL*)

Framing

RQ: How do audits as international university reputation rankings impact higher education policies and practices in Dutch public research universities?/ *Hoe beïnvloeden internationale universiteitsrankings het beleid van Nederlandse universiteiten?*

SQ: How did international university rankings emerge and gain importance?/ *Hoe zijn internationale rankings ontstaan en hoe hebben ze een belangrijke positie kunnen verwerven?*
        Why do universities participate in rankings?/ *Waarom doen universiteiten mee aan rankings?*
        What is the impact of World University Rankings?/ *Wat zijn de effecten van universiteitsrankings* ?
        How can universities deal with rankings in an effective way?/ *Hoe kunnen universiteiten op een effectieve manier met rankings omgaan?*

Rankings industry

Can you introduce yourself and tell me something about your job? / *Kunt u uzelf kort voorstellen en iets vertellen over uw werkzaamheden/functie?*
→ Follow up: Do you work on/with international rankings of your institution?/ *Werkt u met/aan rankings van deze universiteit?*

Can you describe the role and position of the rankings department in your institution? / *Kunt u de rol van de rankingsafdeling van deze universiteit beschrijven?*

In which rankings does your university participate? / *Aan welke rankings doet uw universiteit mee?*
→ Follow up: By who and why was that decided?/ *Door wie is dat besloten? Op basis waarvan?*

Does your institution actively submit data for these rankings?/ *Voor de rankings waarin deze instelling meedoet; wordt daar actief data voor aangeleverd?*
→ Follow up: Why or why not? / *Waarom wel of niet?*

Does your institution have a strict ranking policy? (participate in x ranking but not in y ranking)/ *Heeft deze universiteit een strikt rankingsbeleid?*
→ Follow up: Is it regularly updated or critically reviewed? / *Wordt dit vaak besproken en/of veranderd?*

What is the target population of the rankings of your institution? / *Wat is de doelgroep van de rankings van deze instelling?*
→ Follow up: Are rankings strategically communicated to this group? (e.g. website, open days, etc.) / Worden de rankings (strategisch) aan deze groep aangeboden? (bijv. door middel van de website, op open dagen, etc.)

Opinion

How do you perceive rankings in your daily work at this institution? / *Hoe gaat u om met rankings in uw dagelijkse werkzaamheden?*

How do you perceive rankings in your institution? / *Wat is uw mening over de rankings en het rankingsbeleid van uw instelling?*

What should be the goal of rankings? *Wat zou het eigenlijke doel van een ranking moeten zijn?*

Do the rankings results correspond with your institution in your opinion? / *Vindt u dat de rankingsresultaten (positie) overeen komen met deze instelling?*
→ Follow up: Why or why not? / *Waarom wel of niet?*

Coercive/Seductive power of rankings
Can you describe the routine when rankings results are released? *Kunt u beschrijven hoe het er aan toe gaat wanneer de rankingsresultaten uitkomen?*
→ Follow up: What do those days look like? / *Hoe zien deze dagen er uit?*

How are results communicated to M&O, Executive Board, faculties? *Hoe worden de resultaten gecommuniceerd aan M&O, het CvB en de faculteiten?*
→ Follow up: Do you consider different strategies to communicate results? *Overweegt u om dit [communicatiebeleid] te veranderen?*

If you imagine that you're working at a top-10 university, in what extent would your function be different? *Als u zich voorstelt dat u in een universiteit van de THE WUR top-10 werkt, in hoeverre zouden uw werkzaamheden dan anders zijn?*

Gaming
Does your institution use additional internal or external ranking tools; Faculty surveys, THE DataPoints, QS Analytics, etc? *Heeft en gebruikt uw instelling ook andere rankingstools? Bijvoorbeeld faculteitssurveys, DataPoints, QS Analytics, etc.*
→ Follow up: Why (not)? What are the perceived effects of this/ can be the perceived effects? *Waarom wel/niet? Wat zijn de verwachtingen van het gebruik?*

Do you make predictions; how do you inform stakeholders prior to the release? *Maakt u voorspellingen en informeert u de belanghebbenden voorafgaand aan de officiële aankondiging van de ranking?*

Innovation in rankings/ Future of rankings
Do you know innovative rankings? / *Bent u bekend met nieuwe rankingsiniatieven? (die claimen innovatief en duurzaam te zijn)*

Does your institution participate in innovative rankings (QS Strength ranking, Universitas 21 ranking)? *Doet uw instelling mee aan een dergelijke ranking?*
→ Follow up: Why or why not? *Waarom wel/niet?*

If it was up to you, how would you design the rankings of the future? *Als het aan u lag, hoe zou u de rankings van de toekomst vormgeven ?*
→ Follow up: To what extent would they differ?/ *Waarin zou deze ranking verschillen van huidige rankings?*

Is there something that you missed/want to share/have to add? *Is er nog iets dat ik niet genoemd heb of iets dat u toe wilt voegen?*

Appendix D: Topic guide Rathenau Instituut/VSNU

(EN/*NL*)

Framing

RQ: How do audits as international university reputation rankings impact higher education policies and practices in Dutch public research universities?/ *Hoe beïnvloeden internationale universiteitsrankings het beleid van Nederlandse universiteiten?*

SQ: How did international university rankings emerge and gain importance?/ *Hoe zijn internationale rankings ontstaan en hoe hebben ze een belangrijke positie kunnen verwerven?*
        Why do universities participate in rankings?/ *Waarom doen universiteiten mee aan rankings?*
        What is the impact of World University Rankings?/ *Wat zijn de effecten van universiteitsrankings ?*
        How can universities deal with rankings in an effective way?/ *Hoe kunnen universiteiten op een effectieve manier met rankings omgaan?*

Rankings industry

Can you introduce yourself and tell me something about your job? / *Kunt u uzelf kort voorstellen en iets vertellen over uw werkzaamheden/functie?*

How do you perceive rankings in your daily work at this institution? / *Hoe gaat u om met rankings in uw dagelijkse werkzaamheden?*

What is the target population of rankings in the Netherlands? / *Wat is de doelgroep van de rankings waaraan Nederlandse universiteiten deelnemen?*
→ Follow up: Are rankings strategically communicated to this group? (e.g. jointly via the VSNU, politically, etc.) / Worden de rankings (strategisch) aan deze groep aangeboden? (bijv. gezamenlijk via de VSNU, politiek uitgedragen, etc.)

Opinion

What should be the goal of rankings? *Wat zou het eigenlijke doel van een ranking moeten zijn?*

Do rankings performances in the Netherlands correspond with the quality of research and teaching in your opinion? / *Vindt u dat rankingsresultaten (positie) overeenkomen met de onderzoeks- en onderwijskwaliteit van de Nederlandse universiteiten?*
→ Follow up: Why or why not? / *Waarom wel of niet?*

Stakeholders of rankings

Who do you perceive as stakeholders concerning rankings in Dutch academia? *Wie zijn de belanghebbenden wanneer het om rankingsresultaten van de Nederlandse universiteiten gaat?*

How do you inform stakeholders on rankings publications? *Hoe informeert u de belanghebbenden over publicaties van rankings?*

Innovation in rankings/ Future of rankings

Do you know innovative rankings? / *Bent u bekend met nieuwe rankingsiniatieven? (die claimen innovatief en duurzaam te zijn)*

If it was up to you, how would you design the rankings of the future? *Als het aan u lag, hoe zou u de rankings van de toekomst vormgeven?*
→ Follow up: To what extent would they differ?/ *Waarin zou deze ranking verschillen van huidige rankings?*

Is there something that you missed/want to share/have to add? *Is er nog iets dat ik niet genoemd heb of iets dat u toe wilt voegen?*

Appendix E: Coding scheme

x. Main codes
- Subcodes

English

1. **Higher Education realm**
   a. **International**
   - Finances
   - Competition
   - Collaboration

   b. **National**
   - Funding policy
   - Competition
   - Collaboration

2. **Institutional policy**
   a. **Processes**
   - Data submission
   - Gaming
   - Data analysis
   - Communication of results
   - Workload

   b. **Actors**
   - Policy network
   - Data submission
   - Data analysis
   - Communication of results

3. **Institutional data**
   - Benchmarking
   - Accountability
   - Quality assurance
   - National data

4. **Rankings**
   - THE
   - QS
   - ARWU
   - Leiden Ranking
   - National rankings

Nederlands

Hoger Onderwijs landschap
a. **Internationaal**
- Financiën
- Concurrentie
- Samenwerking

b. **Nationaal**
- Financieringsbeleid
- Concurrentie
- Samenwerking

Instellingsbeleid
a. **Processen**
- Data-aanlevering
- Gaming
- Data-analyse
- Communicatie resultaten
- Werklast

b. **Actoren**
- Beleidsmakers
- Data-aanlevering
- Data-analyse
- Communicatie resultaten

Instellingsdata
- Benchmarking
- Verantwoording
- Kwaliteitszorg
- Nationale databestanden

Rankings
- THE
- QS
- ARWU
- Leiden Ranking
- Nationale rankings

- Other rankings
- Top 100
- Relativity
- Scientific component

5. Reputation
- Attraction of researchers
- Attraction of students
- Marketing tool

• Overige rankings
• Top 100
• Betrekkelijkheid
• Wetenschappelijke component

Reputatie
• Werving van onderzoekers
• Werving van studenten
• Marketinginstrument