

**The London School of Economics and
Political Science**

***A SOCIOLOGY OF RANKINGS –
A longitudinal examination of the
Financial Times MBA rankings***

Author: Chris Moos

First supervisor: Professor Paul Willman

Second supervisor: Dr. Daniela Lup

A thesis submitted to the Department of Management of the London School of
Economics and Political Science for the degree of Doctor of Philosophy, London,
February 28th 2015

DECLARATION

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ABSTRACT

Although rankings have been in existence for almost a century, scholars have only developed a limited understanding of the role of such aggregations of performance measures in organisational fields. In particular, there is little understanding of how cognitive and strategic processes at the organisational level, which underlie the measurement and ranking process, impact on macro outcomes on the level of the organisational field. This is due to the persistence of two assumptions about the impact of rankings on organisations and fields. These are, firstly, that there is a cause-effect relationship between the emergence of rankings and change processes in organisational fields, and, secondly, that those processes lead to the emergence of a single model of organising around which organisational fields and actors homogenise. Refuting these assumptions, I develop the concepts of the ranking template and frame to explain the ways in which rankings can impact on organisations and fields, given the dynamics between organisations that produce and those who are subject to rankings. In particular, I show that through ranking frames, the latter develop notions of actual and aspired ranking performances and a strategy to align the two. An in-depth analysis of a novel longitudinal data set from the Financial Times Global MBA rankings as well as data from business schools provides evidence of the multitude of ways in which rankings can impact on organisations and fields. Specifically, I show how ranking fields are made up of field boundaries, vertical segments of competitors, horizontal segments of different performance measures, as well as clusters of peers. I conclude by discussing the contribution of these findings to the understanding of the dynamics between producers and subjects of performance measures in organisational fields.

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I INTRODUCTION

Rankings assess and compare the political, economic, social, environmental, moral and technological performance of organisations. This can be observed in fields as diverse as the audit industry, investment banking, sports, human rights, media, international business, social and environmental performance, technology, sustainability and ethics. In particular, there are several rankings of organisations that have generated a considerable amount of media attention, such as, the Times Higher Education World University Rankings, the different Financial Times (hereafter: FT) rankings, the Bloomberg Businessweek MBA rankings, the Interbrand Best Global Brands rankings, the Corporate Knights Global 100 Most Sustainable Companies rankings, the Vault rankings of Best Banking, Law and Consulting Firms and the Forbes World's Most Admired Companies rankings. Furthermore, rankings have been the subject of inquiry in academic disciplines as diverse as accounting (e.g. Free, Salterio & Shearer, 2009; Jeacle & Carter, 2011), information systems (e.g. Scott & Orlikowski, 2011), organisation theory (e.g. Mills, Weatherbee & Colwell, 2006; Power, Scheytt, Soin, & Sahlin, 2009), sociology (e.g. Burris, 2004; Sauder, 2006) and regulation (Hedmo, Sahlin-Andersson & Wedlin, 2009). They have also been the subject of studies to test new empirical methods (e.g. Graves, Marchand & Thompson, 1982; Köksalan, Büyükbasaran, Özpeynirci, & Wallenius, 2010). However, a consensus about how rankings change organisations and organisational fields has not emerged. In particular, there is little understanding of how cognitive and strategic processes at the organisational level, which underlie the measurement and ranking process, impact on macro outcomes on the level of the organisational field. This thesis will develop a

conceptual framework of this process, and present empirical evidence in support of the framework.

I will argue that rankings are particularly interesting subjects of enquiry for building an understanding of the dynamics between performance measures and organisations and organisational fields. Due to their prominence in some organisational fields they can become a focal point, a pathway into understanding dynamics between organisations on three levels of analysis. The first level is the dynamics between organisations subject to ranking processes and organisations that produce rankings; the second is the dynamics between organisations subject to ranking processes; the third one is the dynamics between individual actors, who may or may not be part of organisations, and individual actors and organisations that are part of the ranking process. For the purpose of this thesis, I will assume that organisations subject to rankings are unified actors, and thus focus primarily on the first two questions.

1 Definitions

As different authors have used different terms to describe the dynamics of rankings, the use of terminology in the current literature is both confused and confusing. Therefore, before I discuss the structure and key findings of this thesis in the next section, I will first introduce some key terms, as shown in table 1. I will elaborate the reasoning for using these definitions below.

Term	Definition
<i>Ranking</i>	An aggregation of metrics ordered transitively and relatively into a matrix by an algorithm
<i>Ranking actors</i>	Organisations that are being ranked
<i>Ranking agents</i>	Organisations that compile and publish rankings
<i>Ranking algorithm</i>	The ranking criteria and weightings that transform data inputs into ranks
<i>Ranking field</i>	Ranking fields are organisational fields that are constituted by ranking actors, ranking agents and ranking stakeholders who can represent a coercive, normative or mimetic influence on the ranking process [see DiMaggio and Powell's (1983) definition of organisational fields]
<i>Ranking frame</i>	The notion of ranking actors about their actual and aspired ranking performance and a strategy to align the two, given their past performance and aspirations, ranking and other templates, as well as the current and past performance and aspirations of their competitors
<i>Ranking matrix</i>	The graphical output of the ranking
<i>Ranking process</i>	The sets of interaction between ranking agents, actors and stakeholders that result into the creation of the ranking algorithm and matrix
<i>Ranking stakeholders</i>	Organisations other than ranking actors or agents that have a stake in the ranking process or provide resources or institutional demands for ranking actors, e.g. regulators, funding agencies, customers or other social evaluation agents
<i>Ranking template</i>	The models of organising that ranking agents create through rankings, thereby defining what is legitimate or of high reputation, status or performance in the ranking field
<i>Ranking zone</i>	The state of a ranking field in terms of informational complexity (Driver & Streufert, 1969) under which rankings can emerge, given the bounded rationality of ranking actors and agents

Table 1: Key definitions

Some of these definitions are labels, while others are concepts, which I will develop in detail in the thesis. Central to the understanding of the dynamics of rankings is the relationship between *ranking agents*, i.e. organisations that compile and publish rankings, and *ranking actors*, i.e. organisations that are ranked. The main place of negotiation and contestation between those two actors is the *ranking algorithm*. Through the *ranking process*, the ranking algorithm orders the aggregation of metrics that make up the ranking into the *ranking matrix*, which is the output that ranking actors and stakeholders 'see' and consequently base their actions on.

The variety of ranking agents, actors and stakeholders, as well as the ranking algorithm and matrix that are the result of the ranking process, make up the ranking field. The emergence of the ranking field is dependent on whether the ranking is within the *ranking zone*, i.e. in a state where the levels of informational complexity (Driver & Streufert, 1969) allow the emergence of a ranking as a reducer of information, given the bounded rationality (Simon, 1997 [1947]) of ranking actors and agents¹. If this is the case, ranking agents will create *ranking templates* as models of organising that define what is legitimate or of high reputation, status or performance in the field. Ranking templates set the boundaries within which ranking agents, actors and stakeholders negotiate the ranking process. The concept of the ranking template builds on previously developed concepts of templates of organising in the ranking field. Importantly, it gives a conceptual foundation to the role of the ranking agent within the ranking field, the competition of models of organising within the ranking field, as well as the construction of models of organising through the ranking agent. I will develop the concepts of the ranking zone and ranking template in detail in chapter II.

Within the boundaries set by ranking agents through ranking templates, ranking actors develop *ranking frames*, i.e. notions about their actual and aspired ranking performance and a strategy to align the two. Each ranking actor ‘sees’ the ranking field through their ranking frame. Therefore, the ranking frame is based on the notions of the past performance and aspirations of ranking actors, ranking and other templates, as well as the current and past performance and aspirations of their competitors. As such, the ranking frame is a novel concept, as it is explicitly based on the assumption that ranking actors are not perfectly, but boundedly rational. Ranking actors thus have cognitive limitations, requiring them to resort to reconciling conflicting notions of performance,

¹ The concept of bounded rationality used in this thesis will be defined in chapter II.

aspirations and organisational templates. I will develop the concept of the ranking frame in detail in chapter III.

A conceptual model of how ranking agents, actors and stakeholders work together to construct ‘the ranking’ through ranking frames, ranking templates and other templates can be seen in figure 1. Through ranking templates, frames and other organisational templates, ranking agents, actors and stakeholders construct together what comes to be perceived as ‘the ranking’. Since templates and frames differ between ranking agents, actors and stakeholders, there is no one single ranking that all participants in the ranking process perceive and act upon. This thesis will show that this has consequences for how rankings impact on organisational actors and fields.

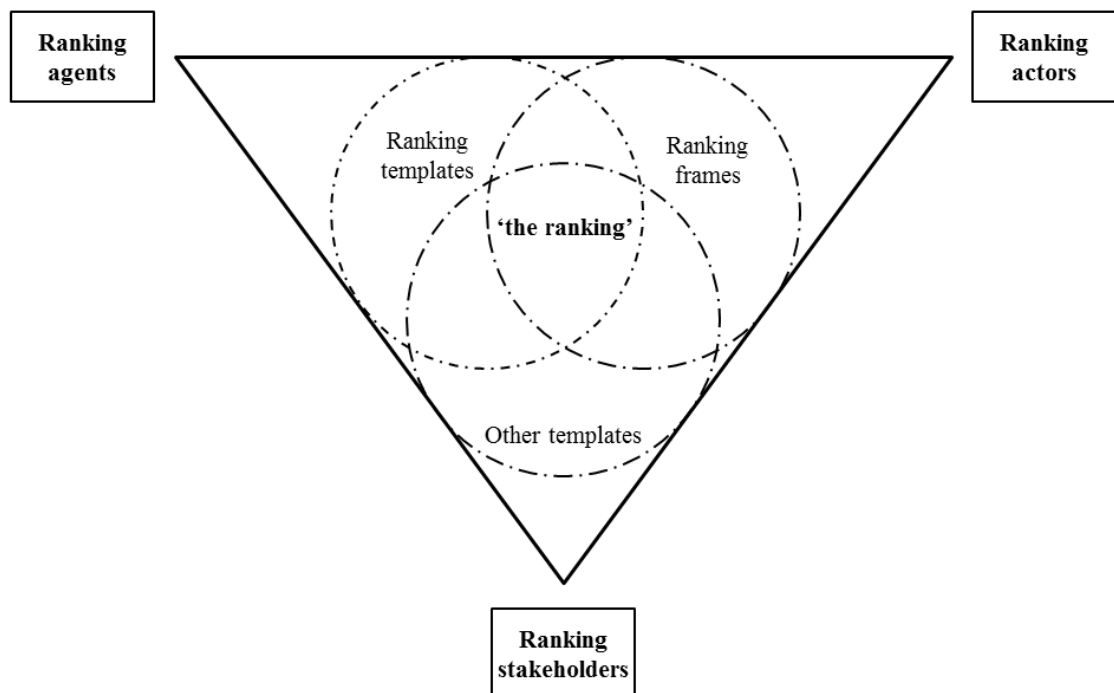


Figure 1: Model of the ranking field

Rankings can also be distinguished by scope (evaluating individuals; concepts; an organisation or parts of it), number and type of criteria (financial, technical or

institutional; input, process and output), data sources (scale; primary or secondary data; internal or external data sources), methodology (weighting; calculation; published or non-published), inclusiveness (criteria for inclusion of ranking actors), interactivity (publication of one ranking or of a tool through which users can generate individualised rankings) and graphical elements (extent to which the interpretation of the ranking matrix is based on colour, textual and structural features). However, this thesis will not attempt to construct a typology of rankings, but focus on developing an understanding of the role and impact of rankings on organisations and organisational fields. In this thesis, I will thus only discuss rankings that evaluate organisations, or parts thereof, and are published as one stable ranking. As different authors have used different terms, I will refer to ranking lists, indices or league tables as rankings only if they fulfil the following three conditions. First, rankings are aggregate metrics, meaning that they are the result of a process where several metrics are aggregated into a rank. Second, the ranks are ordered transitively, meaning that each organisation or dimension of an organisation is allocated a different rank². Third, they are relative, meaning that instead of being based on an absolute determination of what constitutes high or low performance, rankings set metrics, and consequently ranking actors, into a relationship with each other. Rankings are thus different from metrics like ratings, which classify organisations into defined, intransitive and absolute categories. As this distinction is consequential for the understanding of the sociology of rankings, I will discuss it in more detail in chapter III.

2 Structure of the thesis

² Not all rankings are forced, i.e. some rankings allocate ties to ranking actors.

This thesis is organised in ten chapters. In the introduction, I have offered a new set of definitions of rankings as well as of the actors that make up the ranking field.

In the second chapter, I will show how two assumptions that pervade the literature on rankings have led to a limited understanding of the construction of templates of organising in the ranking process. The first assumption is that there is a cause-effect relationship between the emergence of rankings and change processes in organisational fields. The second assumption is that those processes lead to the emergence of a single model of organising around which organisational fields and actors homogenise. I will show instead that rankings can trigger both processes of differentiation and homogenisation.

In particular, I will point out that the literature on rankings has thus far failed to specify what rationality limitations ranking actors and agents are subject to. I will argue that both ranking agents and actors are boundedly rational, and that they use rankings as a means of overcoming rationality limitations. Based on this, I will provide an alternative account of construction of ranking templates, showing the role that the agency of ranking actors, existing templates and competition from other devices of social evaluation, such as accreditations and ratings, play for the construction of templates. In particular, I will demonstrate that competing templates and commensuration ambiguities exist within a field that make the emergence of single templates, which all field actors use, unlikely. Based on this, I will propose the concept of ranking templates as the models of organising that ranking agents create through rankings, thereby defining what is legitimate or of high reputation, status or performance in the field.

Following this, I will discuss why rankings are more prevalent and impactful in some fields than others. My proposition is that the level of informational complexity (Driver & Streufert, 1969) is the main field condition that determines to what extent a

ranking will emerge and impact on organisational fields. I will also propose that the degree of informational complexity in a field is related to status orders and the degree of structuration and resource conflicts. I will introduce the concept of the ranking zone to show how informational complexity interacts with the probability of ranking emergence, and show how the degree of institutionalisation of the ranking limits the response discretion of ranking actors to ranking templates.

Based on this discussion, in chapter III, I will introduce the concept of ranking frames as cognitive and strategic models that explain how ranking actors see and strategise rankings, given their positions, aspirations, the templates of other actors and the performance of their competitors. I will also explain the mechanisms of production of ranking templates, preliminary and actual ranking frames, as well as the adjustment of the ranking frame. In addition, I will show how ranking frames are based on a segmentation of the ranking field into horizontal and vertical segments as well as clusters. I will base my empirical analysis on an investigation of these segments.

In chapter IV, I will lay out the structure of the empirical part of the thesis, discuss data issues of earlier studies, and explain the choice of a longitudinal and novel data set from the Financial Times Global MBA rankings as the main data set for the empirical analysis.

In chapter V and VI, I will discuss the vertical and horizontal segments of the ranking field, specifically participation of ranking actors in the ranking process, the role of non-published ranking field, entry and exit dynamics to the ranking field, and field performance on ranking criteria over time. In particular, I will discuss the development of ranking criteria in terms of their capability to serve as markers of distinction between low and high performers.

In further clarification of the mechanisms of adjustment of the ranking frame over time, I will present case studies of three business schools. These will show that

ranking actors, depending on their ranking performance, adjust their ranking frame by comparing their performance to competitors as well as through picking segmental, temporal, geographic or criteria-specific reference points. I will also introduce the Marginal Improvement Indicator and the Ranking Frame Indicator to show how ranking actors change their ranking frames over time.

Based on this, I will explain the mechanisms through which ranking actors can deal with discrepancies between actual and aspired performance. I will show that ranking actors employ mechanisms of reinterpretation, learning, lobbying, mergers and alliances, challenge, and exit for the adjustment of aspiration levels and mechanisms, leading to a variety of possible outcomes. I will conclude that, although the boundaries of possible action are set by the ranking templates proposed by ranking agents, ranking actors have considerable leeway in creating and adjusting ranking frames.

In chapter VIII and IX, I will do a cluster analysis of the data set, and present evidence for the existence of a decreasing number of clusters over time. I will show how core and peripheral clusters emerge from the data set, one European and one American. I will find that the criteria on which the clusters and the field distinguished themselves most clearly are diversity as well as faculty-related. In particular, I will show that cluster members actively engage with the rankings, discuss them in light of their strategy, and use reference points to contextualise and reinterpret them.

In chapter X, I will conclude the thesis by discussing key findings and contributions, as well as limitations of the thesis and avenues for future research, and end with some final observations. The principal contribution of this thesis is to present an integrated framework that explains how the cognitive and strategic components of measurement processes impact on macro outcomes on the organisational and field levels.

II THE CONSTRUCTION OF RANKING TEMPLATES

This chapter will focus on three questions. Firstly, do rankings impact on organisations and organisational fields? I conclude they do. Secondly, what is the mechanism through which rankings impact on ranking actors and fields? Thirdly, why do rankings impact more on some organisations and organisational fields than on others? To answer these questions, I will introduce the concept of the ranking template.

Although rankings have been in existence for many years, scholars have only started to explore these questions recently. However, it is not well understood how different actors construct different models of organising as a result of the ranking process, and what impact these models have on ranking fields. In particular, previous research has paid little attention to the differential impact that rankings have on different levels of organisational fields. The previous focus on the organisational field as the main unit of analysis of the impact of rankings (Sauder, 2008; Wedlin, 2006, 2007) has obscured the importance of the variety of organisations that exists within and outside of the ranking field. Furthermore, the high number of studies from the higher education field is not only the outcome of the personal experience of researchers, but suggests that the effect of rankings on organisational fields is more apparent in some fields than in others. Under what conditions rankings emerge and proliferate in some fields, but not others, is largely unclear. While “gaming” strategies (Espeland & Sauder, 2007) have been researched in detail, it is unclear how organisations can buffer themselves substantively from the influence of rankings. In addition, there is little clarity about what ranking criteria are more susceptible to triggering a reaction in ranking actors. Finally, it is important to distinguish between different field and organisational stages during which rankings can impact on organisations, as ranking actors follow different

paths of internalisation and institutionalisation of the ranking (Locke, 2011). In the following sections, I will argue that those questions have remained unaddressed because the ranking literature has been largely based on two assumptions. The first assumption is that there is a cause-effect relationship between the emergence of rankings and change processes in organisational fields. The second assumption is that the direction of change is the homogenisation of ranking actors and fields. I will discuss these assumptions in the light of the available literature, and introduce the concept of the ranking template to show that a great variety of models of organising exist within ranking fields. I will end this chapter by discussing the field conditions that make the impact of rankings more or less likely.

1 The cause-effect relationship between rankings and change

One important question that has virtually been omitted from the literature on rankings is whether rankings are the actual cause, rather than the symptom of wider changes in organisational fields. Yet, while there seems to be agreement between academics and practitioners that there is a cause-effect relationship between the emergence of rankings and change processes in organisational fields, there is little empirical evidence to support this. Scholars have taken the assertions of qualitative accounts of individual actors in ranking fields like higher education at face value, resulting in the conceptualisation of rankings as the cause of change. I will argue that this is also a result of a reductionist approach in the research on rankings, as researchers have tended to focus exclusively on rankings and ignored other factors in the formation of social evaluations.

Despite the wealth of empirical data made available through the proliferation of rankings, and a substantial literature critical of the methodological and conceptual

shortcomings of rankings (Adler & Harzing, 2009; Devinney, Dowling & Perm-Ajchariyawong, 2008; Dichev, 1999, 2008; Glick, 2008; Klein & Hamilton, 1998; Marginson & Van der Wende, 2007; Sauder & Espeland, 2006), there is little conceptual and empirical agreement on how rankings emerge in fields and what their relationship with change processes is, apart from the assertion that they are “dangerous” (Zemsky, 2008: 6). While some think of rankings as self-reproducing hegemonic structures (Ozbilgin, 2009) and a “fashion” that will eventually go away (Czarniawska, 2011), rankings can also be conceptualised as a social statistic (Espeland & Sauder, 2007), a sign of “audit society’s deep interest” in organisations (Power, 1997; Walsh, 2011:217). Even if the popularity of rankings is “silly” and “wrongheaded” (Zemsky, 2008: 6), they still cater to the deep desire of social actors to understand what organisations do, what they are “worth” in social terms, and how they relate to other organisations in a field. The question of whether organisational rankings are valid social measures is thus less important than the question of whether they matter, and if so, why (Martins, 2005; Gioia & Corley, 2002).

Recognising this, scholars have investigated how the addition of rankings to a field of organisations can be a “modest source of field change” (Sauder, 2008:209), how rankings can bring together formerly loosely connected actors around whom organisational fields crystallise (Wedlin, 2006), how rankings are places where organisational identities are renegotiated (Elsbach & Kramer, 1996), and how reputational resources are reallocated among actors (Corley & Gioia, 2000; Rindova, Williamson, Petkova & Sever, 2005). For example, ranking scholars have concluded that “rankings motivate organisational change” (Martins, 2005:701) as they “achieve pervasive influence over the fields they evaluate” (Sauder, 2008: 209). Griffith and Rask (2007) find that, depending on gender, minority status and ability, choice of students of universities is responsive to how institutions perform in rankings. Shin and

Toutkoushian (2011) argue that rankings have caused universities to internationalise, change in focus, mission and culture; for example, by giving more emphasis to student satisfaction and less to ‘soft’ social science research. A qualitative survey of 20 university leaders in four countries by the Institute for Higher Education Policy proposed that rankings changed the way universities made decisions concerning strategic positioning and planning, staffing and organisation, quality assurance, resource allocation and funding, as well as, admissions and financial aid (2009). This relates to the findings of Hazelkorn (2007), who asserts that many university leaders and staff perceive of rankings as having a direct impact on changes in academic partnerships, programme development, relationships with benefactors, industry partnerships, investments, marketing, faculty recruitment, research income and staff morale. She concludes that rankings provide “evidence for decision-making, introducing change, speeding up reform or pursuing a particular agenda” (2011: 97), as they have “ingratiated themselves into the planning and decision-making process of universities around the world” (2011:102).

Contrastingly, few authors have considered the possibility that rankings might be symptoms rather than the cause of profound changes in organisational fields. For instance, in the higher education field, which has been the place for most ranking studies (e.g. Sauder, 2008; Wedlin, 2006, 2007, 2011), there is a long-standing trend towards quality assurance, accountability, academic capitalism, performance measurement and evaluation (Frolich, Coate, Mignot-Gerard, Knill, 2010; Lawrence & Sharma, 2002; Shin, 2011), specifically in conjunction with increased competition and internationalisation (Teichler, 2011). Thus, rankings do not impact and change organisations in an isolated manner, but need to be investigated taking into account the context of a wider trend towards the “audit society” (Power, 1997), which has led to a general increase in social measures of public life, and especially of organisations.

An aspect that has rarely been considered so far is that rankings are focal points of attention around which already existing trends for change are justified, publicised, negotiated and implemented (for an exception see Locke, 2011). While it is clear that rankings can be a part of this trend, it is also possible that they are receiving a disproportionate share of attention in the mind of field actors due to their high visibility. Given that the vast majority of studies investigating the impact of rankings have used qualitative study designs that focus on perceptions of organisational actors, the question of what are the actual versus the perceived effects of rankings is virtually absent from the ranking literature. This is especially important, as rankings have been argued to have the ability to “recreate social worlds” (Espeland & Sauder, 2007:1). The social processes that ensue, as a result of a ranking, can thus create independent perceptions about the effect of the ranking. However, some studies indicate that rather than being the cause, rankings might be the symptom of change processes, a priori independent of rankings. From a survey of university administrators and faculty affected by rankings, Locke reports that most respondents agreed or agreed strongly that “changes implemented would have happened regardless of the league tables” (2011: 207-208). In another study, 63% of respondents disagreed or disagreed strongly with the statement that “rankings created pressures to take actions that the institution would rather not have taken” (Higher Education Funding Council for England, 2008: 59). Thus, on the balance of evidence, scholars should not assume that there is a simple causal link between rankings and mechanisms of organisational or field change.

In addition to arguing that rankings cause change, virtually all ranking scholars have argued that the direction of those changes has negative effects on organisations or fields. For example, Adler and Harzing argue that rankings put “the very health and vibrancy of the field [...] at stake” (2009: 72), while Walsh asserts that rankings destroy the “sacred in our secular scholarly world” (2011: 215). Osterloh and Frey warn of the

detrimental effects of rankings, claiming they lead to “a positional competition or a rent-seeking game [...] instead of an enhancement of research quality” (2009:17). Marginson and Van der Wende criticise that rankings lead to “greater system stratification and the concentration of elite researchers” (2007: 306). Van der Wende, and Westerheijden (2009) and Teichler (2008) also suggest that rankings have a problematic impact on mission diversity, the quality of managerial decision-making and the well-being of employees.

In most studies, however, what quality is or should be, is usually only loosely defined or not at all, except for generalised claims such as “ranking schemes diminish the professoriate and degrade knowledge work” (Hogler & Gross, 2009:1). Of course, what *is* quality in areas such as research or education is highly contested in itself (Denzin, 2009; Harvey & Green, 1993). Usually, the assertion that quality is lost when rankings become more prominent has not been tested empirically. An exception is a study by Vogel and Kieser on journal ratings (2014). They assert that

“As soon as rankings are introduced, university administrators hardly have any choice to refuse the participation in the imposed competition. [...] Rankings transpose differences in the kind of research into quantitative differences and thereby simplify in a brutal manner, while trying to impress by means of using a scientific method. Information that is transmitted besides the ranking position dramatically loses value. Rankings are popular because they simplify decisions. However, they simplify in a not acceptable way.” (2014:4)³

³ While the wording of this quote might seem strange, it is taken from the original paper.

Using bibliometric data from 300 randomly selected articles from a stratified sample of 31 journals that appeared in three different journal lists (Journal Citation Reports® by Thomson Reuters, VHB JOURQUAL, and ABS Academic Journal Quality Guide) they tested whether higher performing journals showed less quality in terms of theoretical diversity, interdisciplinarity, innovativeness, share of non-economic approaches, non-empirical articles and qualitative methods, as well as, methodological complexity and practical implications. They found that contrary to their predictions, high rating performers were actually more theoretically diverse and more interdisciplinary, while all other results were either not significant or contradictory between journal lists. In conclusion, the assumption that there is a simple cause-effect relationship between the emergence of rankings and change processes in organisational fields, and that the change is necessarily negative, is based on a loose and contested definition of quality, and has so far not found empirical support.

The focus on rankings and the dynamics of the wider ranking field has thus led to a situation where competing explanations for change are side-lined. Ranking actors and agents are contributing to the perceived overpowering effect of rankings by overemphasising the importance of ranking templates over other templates of organising that exist in organisational fields. Rather, I propose that rankings are the publicised outcome of a negotiation between field actors on what is considered legitimate and of high status in the field. Due to their ability to visibly and publicly codify complex relationships into a multitude of organisational templates, rankings serve as focal points of attention in organisational fields around which already existing trends for change become visible and institutionalised. This relates to the second assumption about the impact of rankings on organisations and fields.

2 Rankings as models for homogenisation

The second main assumption in the ranking literature is that rankings only promulgate one single model of what high performance is in a field. As organisations emulate this model of organising, ranking actors are becoming more similar to each other and the ranking field more homogeneous. Drawing on a review of the literature on rankings and new institutional theory, this chapter will argue that this assumption does not hold up to scrutiny and has led to a limited understanding of the impact of rankings. I will then specify what rationality limitations ranking agents and actors are subject to, and introduce the concept of the *ranking template* to show how rankings produce multiple models of organising, given the agency of ranking subjects as well as the competition of measurement devices like ratings, audits, and accreditations in the ranking field.

As rankings have become a focal point of attention in some organisational fields, practitioners as well as scholars have expressed the conviction that rankings are responsible for a trend towards managerial rationalism, commensurability, and conformism (Wedlin, 2006; Locke, 2011). Rankings are said to make organisations more uniform and stifle field development (Glick, 2008, Jablecka, 2012; Shin & Toutkoushian, 2011; Proulx 2009; Tight, 2000; Van Damme, 2009). For example, rankings are reported to cause convergence of educational standards within and between countries (Engwall, 2007a) as they “constitute sources of isomorphic pressure on organizations” (Martins, 2005: 701), which “can be assumed to be great” (Wedlin, 2007: 36), thereby resulting in a decrease in diversity in the field. Devinney, Dowling & Perm-Ajchariyawong contend that “rankings tend to foster imitation on the measured criteria, [thereby] reducing heterogeneity” (2008: 197). Hazelkorn proposes that

“rankings confer a single definition of excellence in [...] insidious ways” (2011:20), while Grey asserts that “ranking systems inevitably flatten out variety because they posit a unitary scale of goodness” (2009: 355). Consequently, as rankings proliferate, organisations “act rationally and strategically, effectively becoming what is being measured” (Van der Wende & Westerheijden, 2009: 77).

Despite their clarity about the outcome of ranking processes, most authors are nevertheless silent on the mechanism through which homogenisation is said to occur. One mechanism that is implicit in most of the previously mentioned studies is the process of attrition of performance measures proposed by Meyer and Gupta (1994) and Meyer (2002). They propose that over time, performance measures will ‘run down’, meaning that they will “lose variability and hence the capacity to discriminate good from bad performance” (Meyer & Gupta, 1994:330). This loss of variability is measured in both an increase in means as well as a loss of variance. Thus, most scholars have argued that there is a cause-effect relationship between the emergence of rankings and homogenisation processes in organisational fields. However, that is counterintuitive, as a ranking has by definition the goal of differentiating between ranking actors. Therefore, sufficient variance between ranking actors is a pre-condition for any ranking. Over time, if the ranking actors became more alike, a ranking would be able to show less of a meaningful difference between them. This means, at least in the long-term, the homogenisation assumption runs counter to the existence of rankings.

In addition, the homogenisation assumption hinges on the evidence for variance reduction. Empirically, if all actors in a field are trying to conform to one model of what constitutes high performance, organisations and thus the field should indeed become more homogeneous over time. However, there is no conclusive evidence that rankings make fields or particular organisations more homogenous. If anything, empirical research has been equivocal on the question of rankings and their impact on

organisations and fields. In her seminal study of the European business school field, Wedlin (2006: 98) concluded that “[...] the forming of prototypes and prototypical classifications can be assumed to foster mimetic isomorphism [...]”. However, she goes on to argue that “there is no consistent evidence that the field as a whole is becoming more homogenous because of the rankings (2006: 166)”. Wedlin’s explanation is that rankings are used “to create belonging to a group and to confirm conformity with the template. However, being driven by demands for distinctions, rankings are in essence classification systems that rely on measure that will show [...] differences between organizations in the rankings” (2006: 168). Hence, “rather than stressing conformity, [rankings] enhance differentiation between actors along a standardized axis” (Hedmo, Sahlin-Andersson & Wedlin, 2006: 322). The latter observation is particularly interesting, because ranking agents compile information that measures performance of organisations with the stated goal that field actors can make more informed decisions. Emphasising the differences between ranking actors by giving them a rank should thus lead to clearer distinctions between ranking actors, and have the effect of reducing informational asymmetries between field actors. This should lead to an increase in competition between ranking actors, with organisations emphasising their distinctive capabilities to gain competitive advantage. Indeed, many rankings have been created with the explicit purpose of providing for a basis of competition and differentiation, not homogenisation (Martins, 2005; for the BusinessWeek MBA rankings see Gioia & Corley, 2002; for the FT rankings see Wedlin, 2006). Hence, as rankings become “a substitute for more authentic market mechanisms” (Locke, 2011: 225) even under conditions of incomplete competition, it is possible that ranking fields become more diverse following the introduction of a ranking.

The literature has usually referred to this process of homogenisation as being one of mimetic isomorphic change (DiMaggio & Powell, 1983), meaning that

organisations are becoming more alike because competitors copy organisational processes, policies and structures of each other to enhance their legitimacy. One aspect that has been largely ignored is the one of coercive isomorphism. Some governments have started tying scholarships to admission in universities that are highly ranked in certain league tables. For example, the Ministry of Education of the Kingdom of Brunei requires scholarship holders to study in a top 50 university as defined by the Times Higher Education World University Rankings (British Universities Brunei Association, 2014). The Education Bureau of Hong Kong provides full tuition for students studying at any institution in the top 100 universities in the QS World University Rankings, the Times Higher Education World University Rankings, the Shanghai Jiao Tong University's Academic Ranking of World Universities or the US News and World Report's Best Global Universities (Hong Kong Education Bureau, 2014). Whether the processes are coercive or mimetic, isomorphic pressures will become apparent through an increase in the mean or a decrease in the variance of the criteria that make up the ranking. The implications of this assumption will be further elaborated in the following.

To summarise, there is wide agreement in the literature on the question that the ranking process creates mimetic isomorphic pressures (DiMaggio & Powell, 1983) which ranking actors can barely resist to, leading to a homogenisation of the ranking field. Often, these assertions make reference to the early strands of new organisational institutionalism, which proposes that one of the outcomes of isomorphism is homogenisation (DiMaggio & Powell, 1983). However, New Institutional Theory has been widely criticised for failing to explain nonconformity and divergent change in organisational fields (Dacin, Goodstein & Scott, 2002; Kraatz & Zajac, 1996; Oliver, 1991; Scott, 2008; Seo & Creed, 2002). Addressing this gap, research has investigated the cognitive and symbolic structures around which converging and diverging change takes place in organisational fields. These include archetypes (Greenwood & Hinings,

1988, 1993; Miller & Friesen, 1980; Short, Payne & Ketchen, 2008), logics (Dunn & Jones, 2010; Lounsbury, 2007; Marquis & Lounsbury, 2007; Seo & Creed, 2002; Thornton, 2002; Thornton & Ocasio, 1999, 2008) and frames (Benford & Snow, 2000; Kaplan, 2008, 2011; Kaplan & Orlikowski, 2013). However, there are important reasons to assume that far from convergence being a necessary outcome, organisations react to isomorphic pressures in different ways. Authors have shown how organisations deviate from isomorphic pressures and change in ways that diversity, not homogeneity, increases in organisational fields (D'Aunno, Succi & Alexander, 2000; Clemens & Cook, 1999, DiMaggio & Powell, 1991; Greenwood, Diaz, Li & Lorente, 2010; Oliver, 1991; Kondra & Hinings, 1998; Scheid-Cook, 1992; Scott, 2008; Tolbert & Zucker, 1996). More recently, this work has drawn on the literature that establishes the existence of multiple institutional arrangements that intertwine to create contradicting and diverging institutional pressures in organisational fields (D'Aunno, Sutton & Price, 1991; Friedland & Alford, 1991; Kraatz & Zajac, 1996; Lounsbury, 2007; Marquis & Lounsbury, 2007; Seo & Creed, 2002; Thornton & Ocasio, 2008). Thus, New Institutional Theory provides for a more complex view of the role of isomorphic pressures in organisational change, which has largely been ignored in the ranking literature.

In conclusion, conformity and differentiation are both possible outcomes of the emergence of rankings in a field. Nonetheless, the possibility that rankings increase diversity, making the ranking field more heterogeneous, or that the ranking field as a whole might become more homogeneous while some ranking actors become more diverse, has received little or no attention in the literature. In the following, I will develop the concept of the ranking template to explain how ranking agents create templates that ranking actors react to by both conforming and diverging.

3 The ranking template

In what is acknowledged as one of the first works of New Institutional Theory, DiMaggio and Powell conceptualise "templates for organizing" (1991: 27) as models from the institutional context of organisations that are used to gain legitimacy (see also Fligstein, 1996; Greenwood & Hinings, 1996; Heugens & Lander, 2009). Subsequently, D'Aunno, Succi & Alexander (2000:679) define templates as "patterns for arranging organizational behaviour that specify organizational structure and goals and reflect a distinct set of beliefs and values". Those templates have a taken-for-granted quality and cause actors to "unwittingly accept the prevailing template as appropriate, right, and the proper way of doing things" (Greenwood & Hinings, 1996: 1027).

In her study of the European business school field, Wedlin (2006, 2007) draws on the concept of the template to propose that rankings play a role in determining the specification of organisational structures and goals. She finds that the FT rankings promote the "template of the international business school" (2007:28). This templates advances "a generalized notion of an organizational group that serves as a comparison for assessing whether an organization belongs in a particular category or class, and is formed around perceptions of what is good, proper and 'true' for members of this group" (Wedlin, 2007:25). Thereby, rankings "provide a comparison group, specify measures of competition and comparison in this group, and promote role models for imitation and change" (Wedlin, 2007:25). Through mechanisms of information processing and redistribution of legitimacy and reputational resources (Sauder & Fine, 2008), actors converge to this template (see also Engwall, 2007b; Engwall & Danell, 2011) as it bridges "differences in contexts and values, or logics, underlying the field" (Wedlin, 2011: 211). Wedlin also points to the possibility that a "template holds multiple values and expectation" (2007:34), leading to a variation in codification as the

template is enacted by the ranking actor. She follows that “both similarity and difference follow from identification with a common template” are possible (2007:26). Given the emphasis of Wedlin’s study, this point has found little recognition in the literature (for an exception see Locke, 2011), and has been largely ignored in empirical studies (see Wedlin, 2011 for an exception). The prevailing assumption remains that rankings create a single, rather than a multitude of templates for a multitude of field actors, and that one template prevails over other templates of comparison and assessment in the field. In addition, other templates that ranking actors or stakeholders may be holding are ignored, or assumed to have less relevance than templates emanating from rankings. Given this, most studies have assumed, rather than demonstrated, that rankings create isomorphic pressures and thus cause organisations to become more homogenous.

In order to advance a more complete understanding of models of organising created by ranking agents, I propose the concept of the *ranking template*. Through the publication of rankings, rankings agents construct templates of organising of what they consider to be of high quality, performance, legitimacy or status in a field. Ranking templates are therefore defined as the *models of organising that ranking agents create through rankings, thereby defining what is legitimate or of high reputation, status or performance in the field*. Rankings are not templates, but serve as the basis of the construction of ranking templates. Consequently, a multitude of ranking templates can emanate from a single ranking. In the following section, I will show how rankings create complex, ambiguous and multi-faceted templates, depending on the prevalence of competing templates, the agency of ranking actors, and the competition of measurement devices for authority in the field.

Competing templates. There is no evidence to suggest that rankings transform field competition so profoundly that all other existing historical, technical, competitive and institutional pressures are simply overridden. For instance, institutional forces can vary as a function of ecological and competitive forces (Dacin, 1997). Furthermore, institutional rules stemming from legitimacy pressures and strategic agency stemming from technical pressures are antagonistic, but interdependent mechanisms (Beckert, 1999). Thus, rather than simply overriding existing patterns of legitimacy and competition, rankings work in conjunction with existing templates, legitimacy and technical pressures (Ruef & Scott, 1998; Suchman, 1995). In addition, the existence of multiple, contradicting pressures from different templates may lead to imperfect transmission (Zucker, 1988) or translation (Czarniawska-Joerges & Sevón, 1996), resulting in the adaptation, rather than the copying, of a template. Furthermore, even if templates are copied faithfully, different organisations might react differently to legitimation pressures and thus implement templates differently (Glynn, Barr & Dacin, 2000; Lawrence & Lorsch, 1967; Oliver, 1988, 1991), hence “opening the possibility for idiosyncratic interpretation and either deliberate or unwitting variation in practices” (Greenwood & Hinings, 1996: 1029).

To take a specific example, there is no evidence that because of the FT rankings, although assumed to be of strong rhetorical power (Devinney, Dowling & Perm-Ajchariyawong, 2008; Wedlin, 2006), Hong Kong UST Business School sees Harvard Business School as a direct competitor, despite them being separated by only two ranks in the 2011 ranking. Likewise, while their close rank in the Fortune World’s Most Admired Companies 2013 might suggest that PepsiCo (rank 37) is seeing Nestle (rank 32) and Unilever (rank 39) as its main rivals, historic patterns of competition suggest that Coca-Cola (rank 4) is still PepsiCo’s biggest competitor. Thus, the rivalry of both firms is imbued with historical legacy, competitive rivalry and status considerations

independent of the ranking of either actor. The competition of templates can also be explained by reference to the concept of prestige.

Veblen conceptualises historical legacy, wealth and power as features of prestige (1899). One of the features of prestige is that it allows for premium or prestige pricing, i.e. setting high prices to suggest quality (McCarthy & Perreault, 1990). However, as Weber points out “‘mere economic’ power, and above all ‘naked’ money power, is by no means a recognized basis of social honour [or prestige]” (1946: 180). Based on this, Zhou defines prestige as “social distinction based on persistent differences in social positions”, the “transcending of social boundaries” and the “acceptance by a broad audience” (2005:94). He however points out the dependence of prestige on concepts of legitimacy and appropriateness, on which social actors must base their claims to acquire prestige or status “in reference to the institutional realm of shared values and beliefs” (2005:95). Thus, while building on the notions of legitimacy, reputation and status, the evaluation of prestige is different from these concepts. As prestige takes a long time to build up and then depreciates slowly, historical legacy is one of the features that distinguish prestigious organisations, as well as their appeal to a broad audience and its transcendence of social boundaries. Therefore, prestigious organisations are typically those that a great variety of actors in a field can agree on to be of high standing. However, as we will see in the following sections, the distinction between reputation, status and prestige becomes especially consequential in the context of rankings, as highly prestigious organisations will occupy the top end of a status hierarchy. For instance, in a study of the US News & World Report rankings⁴, Grewal, Derden and Lilien (2008) show considerable stability for prestigious universities like Harvard, Princeton, Stanford, Yale, MIT, Pennsylvania, Cal Tech and Duke, with a probability

⁴ Hereafter: USNWR rankings

between 0.89 and 0.71 of being ranked in the top 5. Any American university ranking that contradicts or challenges this established prestige order would open itself up to scrutiny. Ranking agents thus need to take into account pre-existing templates when constructing a ranking. I propose that one of the reasons for the dominance of rankings over other measurement devices is that rather than challenging established templates, ranking templates allow for interpretations that are building upon and extending established templates of what is legitimate, prestigious or of low or high reputation and status. This construction of rankings alongside and based on existing templates of different actors implies that the construction of unitary ranking templates is unlikely.

Commensuration ambiguities. In virtually all of the literature on rankings, there is a strong assumption that ranking actors will model themselves after the best performers of the ranking, i.e. those that excel in most of the ranking criteria. This focus on a single template emanating from the ranking process is a consequence of one of the prominent features of the ranking process; the “transformation of qualities into quantities that share a metric”, thereby shaping “what we pay attention to, which things are connected to other things, and how we express sameness and difference” (Espeland & Sauder 2007: 16). The ensuing reductive nature of rankings can lead to the perception that there is only ‘one ranking’ that is perceived equally by all members of the ranking field. Nevertheless, and despite a burgeoning literature on rankings, there is little agreement on what rankings measure. In a quantitative study, where 1600 corporate recruiters were asked to rate 107 U.S. Business Schools, Rindova et al. (2005) measured how media rankings of business schools were affecting the prominence of business schools in the mind of their stakeholders. Remarkably, they found that media rankings had a strong direct and significant effect on the prominence dimension (-.51), more than faculty publications (.17) and faculty degree prestige (.18), and the largest indirect

effect on the price-premium dimension (-.30) of all variables. Compared to that, perceived quality only had an effect of .13 on the prominence dimension. Yet, when assessing the effects of rankings, other authors have been using arguably different concepts (Bitektine, 2011; Deephouse & Carter, 2005; Jensen & Roy, 2008; Shenkar & Yuchtman-Yaar, 1997) such as status, prestige, quality, performance and reputation, in most cases interchangeably. Hence rankings have been considered to be a noisy measure of performance (Dichev, 1999), reputation (Baden-Fuller, Ravazzolo & Schweizer, 2000; Corley & Gioia, 2000; Martins, 2005; Morgeson & Nahrgang, 2008; Sauder & Fine, 2008; Vidaver-Cohen, 2007), perceptions of quality (Sauder & Espeland, 2006), quality and positional status (Devinney, Dowling & Perm-Ajchariyawong, 2008), status (D'Aveni, 1996; Sauder, 2006), prestige (Zhou, 2005), prestige and status (Marginson & Van der Wende, 2007), positional status and reputation (Elsbach & Kramer, 1996) and, depending on the user, a measure of customer satisfaction, quality or market position (Zemsky, 2008). Thus, the balance of evidence suggests that there is little agreement on what rankings measure, making the emergence of a unitary ranking template unlikely.

In addition, the exact ranking algorithms or method of data collection and processing are often not made public. This leads to the creation of ambiguous templates. Furthermore, even if public, ranking algorithms are often ambiguous (Wedlin, 2007), and reengineering of rankings does not necessarily deliver actionable results (Devinney, Dowling & Perm-Ajchariyawong, 2008; Klein & Hamilton, 1998). Noticeably, while few ranking actors have been found to falsify ranking data, ranking actors often have the possibility “to exploit ambiguity in a number of the definitions without actually committing falsification” (Locke, 2011: 219). Meanwhile, ambiguity is not an unwanted side effect, but rather a central feature of rankings. Through the use of ambiguous signals, “[...] the template secures similarity and recognition of ‘belonging together’ in

the field while allowing for considerable variation in organizational practices and identities” (Wedlin, 2007: 24). With ambiguous templates, “organizations will likely have a greater range of available responses to institutional forces” (Glynn, Barr & Dacin, 2000: 730). Hence, rankings are fine-grained performance measurement systems that are so seemingly precise that they create more ambiguous than clear templates (see Bowker & Star, 2000; Fleischer, 2009). The more ambiguous these ranking templates are, the more discretion ranking actors will have in responding to them.

Competition of measurement devices. Rankings rarely are the only tools of social evaluation that contribute to the formation of templates in a field, but usually form part of an array of social measures. These are produced by ranking stakeholders and construct “legitimacy within the field, which actors use to attempt to shape and reform the field as it develops”, thereby “potentially altering the definition and distribution of symbolic capital in the field” (Wedlin, 2011:200). These measurement devices can be audits, accreditations, awards, certificates, rankings or ratings. While Wedlin acknowledges the existence of competing templates, stemming for example from accreditations, she simply states that “both systems compete with and support each other” (2007: 28). Nevertheless, she only mentions accreditations as one of the many competing producers of templates, but fails to explain the role of competing templates from other social evaluators, as well as the templates that exist independently of social evaluators in the field. In addition, the mechanism through which a template prevails over others, and what role ranking field actors play in this process remains unclear.

As a multitude of methodologically different rankings and other measurement devices like audits, certifications or awards impose their authority on a field simultaneously, conflicting demands on field actors are created (see also D'Aunno, Sutton, & Price, 1991; Meyer & Rowan, 1977). Haunschild and Miner (1997: 496) find

that “if populations enact multiple imitation processes at the same time [...] imitation may not produce simple homogeneity but may be a source of variation”. Thus, conflicting demands can result in a situation where not one, but several templates come into existence from a ranking. For instance, according to Sauder and Espeland (2006), the existence of multiple rankings, as opposed to a dominant one, can weaken the impact of rankings on a field by introducing complexity, thereby weakening the impact of small changes in rank and increasing reputational flexibility for the ranked. This can also undermine the idea of validity of rankings in general. Thus, the competition of other measurement devices for definitional authority in the field leads to a situation where competing, rather than converging templates, come into existence in the ranking field.

Wedlin (2006, 2007) shows the process through which ranking agents create templates that redefine what is legitimate in an organisational field. However, if rankings are the result of a collaborative process where different actors in the ranking field work together, it is essential to understand the differing models of legitimacy and status that ranking agents, actors and stakeholders who participate in the ranking process hold. This is because this process results in multiple templates that define what or what not is legitimate or status-enhancing in the field. Rankings are only one possible measurement device that creates templates on the base of which institutional pressures are negotiated. In particular, there are five measurement devices that can be used by field actors to build templates: accreditations, audits, awards, certificates and metrics. Building on Bitektine’s (2011) research on social judgement formation, I propose that the construction of templates emanating from rankings is contingent on the competition with other measurement devices that act as institutionalised suppliers of social judgement. Under conditions of bounded rationality and social influence, actors use templates to form a social judgement about desirable attributes of actors in the field.

This process includes the full or partial evaluation of any combination of the cognitive legitimacy, the socio-political legitimacy, the status and the reputation of the focal organisation. In the following, I will introduce the concept of legitimacy, reputation and status devices, and explain their role in the formation of templates of organising.

Legitimacy devices. Often, the first step of social judgement formation is the assessment of the cognitive legitimacy of an organisation, making the organisation understandable and taken for granted for its audiences, thus permitting its cognitive typification into an existing category (Berger & Luckmann, 1966; Meyer & Rowan, 1977; Suchman, 1995). This type of external legitimacy, i.e. the visible endorsement of an organisation by powerful external collective actors, represents a strong source of institutional support, above all for emerging organisations (Singh, Tucker & House, 1986: 176). This evaluation process is dichotomous in the sense that it will yield the confirmation of adherence or non-adherence to an existing category whose features are already known and whose legitimacy has already been evaluated. In the case of non-adherence, the search for other evaluation mechanisms will ensue (Bitektine, 2011: 159). For example, the first step in evaluating the cognitive legitimacy of an organisation can be whether it is for-profit or not-for-profit, public or private, independent or part of a larger entity. Furthermore, there are other dichotomous variables that are used to evaluate organisations. Accreditations and audits produce templates that indicate a certain minimum standard of adherence to a category in the field. For the audience, they create templates that actors can use to assess whether they can regard organisations as legitimate players or not. Thus, they are making organisations comparable to each other. Examples of issuers of accreditations that act as a source of strong institutional pressures on organisational actors are the Joint Commission of Accreditation, Health Care and Certification, which accredits hospitals

(Scott 1987: 502) or the Association to Advance Collegiate Schools of Business (hereafter: AACSB), which accredits business schools (Durand & McGuire, 2005; Trank & Washington, 2009).

In a socio-political legitimacy judgement, observed organisational features and performance are compared to the prevailing social norms. The evaluator judges whether the organisation, its form, its processes and its outcomes are socially acceptable, and hence should be dealt with, ignored or fought (Aldrich & Fiol, 1994; Meyer & Rowan, 1977; Scott & Meyer, 1991; Suchman, 1995). Templates that define the socio-political legitimacy of an organisation are constructed by making reference to societal purposes (creation of employment, creation of wealth and know-how), inclusion (equality and diversity), community and environmental engagement, organisational structure and governance. An example of a social-political legitimacy device is the consumer watchdog organisation (Rao, 1998). Often, socio-political legitimacy is conferred by the media, but also by reference to institutionalised and non-institutionalised rules, regulations, and laws (Aldrich & Fiol, 1994).

Reputation devices. Building on past experiences, stakeholders will use reputation judgements in order to identify unique organisational features that distinguish the focal organisation from its peers and to predict its future behaviour (Deepphouse & Carter, 2005; Weigelt & Camerer, 1988; Whetten & Mackey, 2002). Here, it is important to distinguish the concept of reputation from the concept of prestige. Brewer, Gates and Goldman conceptualise prestige as an “intangible, durable, and very valuable asset that, unlike reputation, does not go up or down rapidly” (2002: 30). They conclude that prestige is measured in absolute terms, defined by insiders like organisational members, depreciates slowly, and is a part of a zero-sum game for social standing, while reputation is measured in absolute terms, defined by outsiders like customers,

depreciates rapidly, and triggers positive-sum games (Brewer, Gates & Goldman, 2002: 36). Certificates, awards, references to organisational history, number and background of organisational members (internationality, diversity), partnerships or performance and resource metrics (e.g. cash, sales, profit, placement rates) produce templates that define reputation and that provide organisations with features that distinguish them from their peer group. An example of a reputation device that acts as a source of institutional pressures is the ISO 9000 quality certificate (Guler, Guillen & MacPherson, 2002).

Status devices. A status judgement evaluates the performance of an organisation compared to a peer group with similar features on a set of relevant dimensions, discriminating between higher and lower ranks that generate privilege or discrimination for actors (Podolny, 1993; Washington & Zajac, 2005; Wejnert, 2002). Rankings or ratings create templates that provide actors with a comparison in a discriminating, evaluative and hierarchical way. Examples of status devices are the previously mentioned rankings, as well as credit ratings, the Rabally city rating system, motion picture rating systems or the Research Excellence Framework in the UK. The role of equity ratings (Fleischer, 2009) and wine quality ratings (Benjamin & Podolny, 1999) have received particular attention in the organisational literature.

Interaction between measurement devices. The previously mentioned measurement devices do not exist independently, but build on each other in the creation of templates. The case of accreditations is especially interesting, as accreditations are often closely connected to rankings. Although accreditations have been in existence for many decades (see Stettler, 1965), the number of accreditation schemes is still expanding worldwide (Vroeijenstijn, 2003). Hence, scholars have identified the increasingly important role of accreditations as tools of social legitimation and status

evaluation. Research on accreditations has specifically investigated the process of legitimation of the accreditation agents like the AACSB in the face of increasing competition from other accreditation agents (Durand & McGuire, 2005) and the repercussions of the rise of an ‘accreditation market’ (Stensaker & Harvey, 2006). Rankings and accreditations also show overlaps in practice. For example, a condition for participation in the FT MBA rankings is to be accredited by either AACSB or EQUIS (European Quality Improvement System) (Financial Times, 2014a). Given this parallel, and sometimes conditional existence of accreditations and rankings, other studies have used the literature on reputation to shed light on the distinction between rankings and accreditations.

Building on Deephouse and Carter’s discussion of the differences between legitimacy and reputation (2005), Bartlett, Pallas and Frostenson define rankings as “mainly based on the ‘relative standing or desirability’ of an organization, whereas accreditation focuses on ‘meeting and adhering to the expectation of a social system’s norms, values, rules and meanings” (2013: 533). They thus propose that “rankings and accreditations work differently in their ability to discriminate between organizations sharing joint social contexts (ranking) and the extent to which organizations are perceived as following normative prescriptions and constraints (accreditations)” (Bartlett, Pallas & Frostenson, 2013: 537). However, they point out that the fact that several different reputation and status agents engage in competitive formation of reputation at the same time “creates effects in its own right” (Bartlett, Pallas & Frostenson, 2013: 539). Thus, accreditations and rankings do not simply co-exist, but compete for definitional authority (Espeland, 1997; Espeland & Stevens, 1998, 2008; Porter, 1995) in the field they are evaluating. As actors can strategically choose a ranking or other measurement device to advance their interpretation of a template (see previous section), this leads to a situation where competing rather than converging

templates come into existence through accreditations and rankings. Thus, the parallel competition of rankings and accreditations is likely to have a performance impact on ranking actors in its own right.

Given the potential impact of other measurement devices in the field, I thus propose that rankings cannot be perceived as measurement devices that deliver social judgments about field actors in an exclusive and isolated manner. Others have emphasised the role of the proliferation of accreditations in the emergence of rankings, conceptualising them as “interwoven templates” (Hedmo, Sahlin-Andersson & Wedlin, 2006) that “both compete with and support each other” (Wedlin, 2007: 28). However, to what extent templates emanating from both measurement devices are interwoven, and how, has not been empirically verified. Conceptually, studies have failed to construct a comprehensive theoretical framework that can explain the dynamic interaction between measurement devices in the creation of templates.

To summarise, given the existence of competing templates and the agency of ranking actors, rankings produce a multitude of often contradictory and ambiguous templates. In addition, the use of templates is contingent on specific empirical contexts, leaving it unclear under what conditions what kind of codification and enactment of the template is likely to occur. While Wedlin admits that pressures from different templates co-exist in the ranking field, and that this makes it possible that both similarities and differences between ranking actors persist or are widened (2007: 36), she does not explain how and under what circumstances this process occurs.

As using some measurement devices more than others may come at the cost of similarity and lack of differentiation from competitors, I propose that ranking actors will use templates selectively to find a balance between conformity and differentiation. In order to understand how ranking actors select templates or parts thereof, I will now define the rationality assumptions that underlie the concept of the ranking template and

frame. I will assume that using information from a ranking is a non-routine activity and that ranking actors are self-interested and subject to cognitive limitations during this process. Given the multitude and ambiguous nature of templates, ranking actors are subject to time, search and calculation limitations when using information from a ranking. Ranking actors respond to this problem by satisficing rather than optimising (Simon, 1997 [1947]), i.e. they will use the information from the ranking in way that is ‘good enough’ rather than optimal. In other words, ranking actors are “intendedly rational, but only boundedly so” (Simon, 1997 [1947]: 88). In addition, ranking actors work under the assumption that ranking agents are also self-interested and subject to cognitive limitations. However, ranking agents are also constructing the ranking under the assumption that ranking actors are boundedly rational, and use the ranking as a tool to reduce the informational complexity they are facing.

While the concept of bounded rationality has been applied differently in different disciplines, the previously mentioned operationalisation is close to the one adopted in much of the organisation theory literature, particularly the one on organisational institutionalism (Immergut, 1998) and learning (Simon, 1991). Thus, given that ranking actors are boundedly rational, and that there are is always a multitude of templates of organising in a field, it is unclear which ones ranking actors strategically choose to comply with, and under what conditions this choice has the potential to impact on the field. I will explore this theme in more detail in chapter III.

In conclusion, the existence of competing templates and the competition of measurement devices make the emergence of a unitary ranking template that all ranking actors can act upon unlikely, given that they are boundedly rational. Rather than producing one template that ranking field actors could use for reacting to rankings or positioning themselves in the organisational field, ranking agents are subject to bounded

rationality and produce a multitude of competing templates. This contrasts with the previous literature that is mainly based on the premise that the appearance of a ranking leads to the creation of a ‘one ranking’ template. Additionally, given that ranking actors are boundedly rational, ranking templates need to be understood in the environment of the ranking field in which they are produced. As section 4 will show, the extent to which particular ranking templates impact on ranking fields depends on the conditions prevalent within the field.

4 Conditions of ranking impact

Ranking studies have so far focused on the impact of rankings in specific organisational fields like American law schools (Sauder, 2008) or European business schools (Wedlin, 2006, 2007, 2011). While rankings do exist in other fields, for example in the field of multinational corporations (Ghoshal & Bartlett, 1990), where they rank corporations according to global brands (Interbrand, 2014), sustainability (Corporate Knights, 2014), or revenue (Fortune, 2014), many impactful rankings have emerged in the higher education field. In business education in particular, the influence of rankings on ranking actors and stakeholders has increased considerably in recent years (see Sauder & Fine, 2008). Therefore, on the one hand, I will propose that different fields provide different conditions for ranking impact. On the other hand, I will argue that the emergence of rankings also has an impact on field conditions. The most important of these conditions is the degree of informational complexity (Driver & Streufert, 1969) in the field.

As Simon points out, bounded rationality is based on “the two blades [of] the structure of task environments and the computational capabilities of the actor” (1990: 7). While the computational capabilities were discussed in section 3, and will be further

explored in chapter III, this section will focus on the structure of the task environment, and its qualities in terms of informational complexity. As environmental complexity evolves in terms of information, both ranking agents and ranking actors have to adapt their strategies vis-à-vis the ranking. For ranking actors and agents, rationality is set to be more bounded the more informational complexity there is. However, absence of informational complexity removes the conditions under which rankings can be meaningfully constructed. Rankings will be of little use in environments where informational complexity is too big to be meaningfully reduced. This discussion is thus relevant to both the concept of the ranking template and the ranking frame (to be discussed in chapter III), as the amount of informational complexity in a ranking field is set to change how both are constructed.

Field conditions and ranking impact. In order to reduce uncertainty from informational complexity, actors are likely to orient themselves towards models of organising of other actors (Haunschild & Miner, 1997). According to Blank (2007), informational complexity arises above all in markets for post-experience goods, for example in education, where quality “cannot be fully assessed by an individual consumer even after it is consumed” (Gormley & Weimer, 1999: 24). This leads to a situation where price information is not useful to determine value because important qualities of the good or service cannot be assessed monetarily, for example in the non-profit field (Steinberg, 2006: 128). This is exacerbated if a low frequency of purchase of the good or service leads to a lack of information about the product by the audience, or if erroneous purchases are difficult to correct, for example, because they are once-in-a-lifetime investments (Blank, 2007: 194). Rankings are thus likely to emerge in fields where informational complexity is high (Gormley & Weimer, 1999).

Informational complexity is related to the issue of status orders. Podolny (1994) argues that in conditions of informational complexity, status matters most if the quality of a product cannot be evaluated easily before the exchange. Building on Podolny's work, Stuart, Hoang and Hybels (1999) argue that whenever informational complexity is greater, depending on how resource consuming the evaluation of the ranking actor is, consumers are more likely to resort to status valuations. Therefore, if informational complexity is lower, status considerations should be less salient in the sense that the more precisely actors know where they are positioned in relation to their peers, the less they need to worry about being miscategorised by other actors. In other words, status anxiety, defined by Jensen (2006: 98) as the "concern about being devalued because other actors question the quality of one's partners", should be less prominent. In these situations, social measurement devices provide status judgement of field actor in a discriminating, evaluative and hierarchical way (Benjamin & Podolny, 1999; Bitektine, 2011; Podolny, 1993; 1994; Washington & Zajac, 2005; Wejnert, 2002). However, Sauder and Fine (2008) suggest that rather than stabilising status hierarchies, rankings also have the effect of providing new opportunities for change for low-status actors by increasing transparency and levelling status differences in the field:

"[The rankings have created] a certain degree of transparency. [...] And I think it actually has done a lot for the non-Ivy schools, the non-big schools. You always know the top ten schools—the ones with very big names and very big endowments; you don't need the rankings to know those. But I think it has really has opened the field for forty or fifty schools, and now as global markets are opening, it allows schools to receive attention." (Dean of a ranked school, cited in Sauder & Fine, 2008: 708).

This is consistent with the concept of middle-status conformity (Phillips & Zuckerman, 2001), which suggests that not all field actors will be affected equally by

considerations of status, but that pressures to conform to status expectations will be typically highest for middle-status actors. The main structural scope condition for middle-status conformity is a significant stability in the status order so that low-status actors are relatively permanent outsiders and high-status actors are secure enough to deviate from status conformity expectations (Phillips & Zuckerman, 2001). In institutional terms, features of a stable status hierarchy are a relatively high degree of structuration (Barley & Tolbert, 1997), an acknowledged centre and periphery, and a shared consciousness among field participants that they are part of the same wider endeavour (DiMaggio & Powell, 1983). Field-level intermediaries like rankings can play a role in the emergence of stable status orders or structured fields as they can “provide the ideation and structuration processes needed for organizational field evolution” (Washington; 2004: 396). Thus, on the one hand, rankings can be the “sharply defined interorganisational structures of domination and patterns of coalition” (DiMaggio & Powell 1983: 148) or “diffusion structure[s] for new models and norms” (DiMaggio & Powell, 1983: 156) whose construction helps actors to form a field if it has not yet reached a stable status order and structure. On the other hand, a highly structured field with a rigid status order is only going to benefit from the introduction of a ranking if it adds information to the field or changes the status order, for example by challenging it or making it more complex.

Furthermore, high demand for products can also create a demand for third party product information from social evaluators (Blank, 2007: 194). Hence, social judgement formation and the emergence of institutionalised suppliers of social judgement like rankings are also related to resource conflicts prevailing in the field. In particular, Bitektine emphasises that “[...] in the process of social judgment formation, the high economic and social stakes for the evaluator [...] [and] the availability of resources (such as time and money) would promote an extensive evaluation [...]” (2011: 170).

Thus, if resource conflicts are more intensive in a field, there will be a greater need to make accurate evaluations through the construction of social measurement devices like rankings.

In conclusion, rankings are constructed in fields to act as reducers of informational complexity, thereby reducing uncertainty for both producers and consumers and leading to a potential increase in consumption of the evaluated good. This will be more likely to occur in fields for post-experience goods with low to intermediate rigidity in terms of status order and field structuration, high levels of resource conflicts and adequate levels of informational complexity. In the following section, I will focus on the latter.

The ranking zone. In some fields, above all emerging ones, goods or services are too different to allow for a meaningful comparison. As a certain degree of similarity is necessary to establish comparisons under conditions of bounded rationality, too much informational complexity makes it impossible to compile a ranking that can authoritatively judge the field. Contrastingly, there are fields where few goods exist, or where search goods, which can be easily evaluated and compared before purchase, prevail (Nelson, 1970). These fields have little need for the reduction of information, given that boundedly rational actors are able to carry out evaluations without further assistance. Hence, too little informational complexity makes rankings as reducers of complexity less useful. For example, Kostova and Zaheer described how the legitimacy of organisations can be influenced by the complexity of the legitimating environment (1999). On an individual level, Driver and Streufert showed how information-processing systems respond to complexity of informational input in a curvilinear fashion (1969). On the one hand, the relationship between the bounded rationality of the ranking actor and the informational complexity of the ranking field in which they

operate is thus relevant for understanding how rankings impact on a ranking field. On the other hand, ranking agents are not only constrained by their own limitations in terms of bounded rationality, but they also have to take into account the limited ability of ranking actors to process information when constructing a ranking.

In the following, I will show how the probability of ranking impact interacts with the informational complexity of the field. As we can see in figure 2, I propose that there is a curvilinear relationship between informational complexity in the field and the probability of ranking impact. Ranking fields with low or high levels of informational complexity are less likely to provide favourable conditions for the impact of rankings.

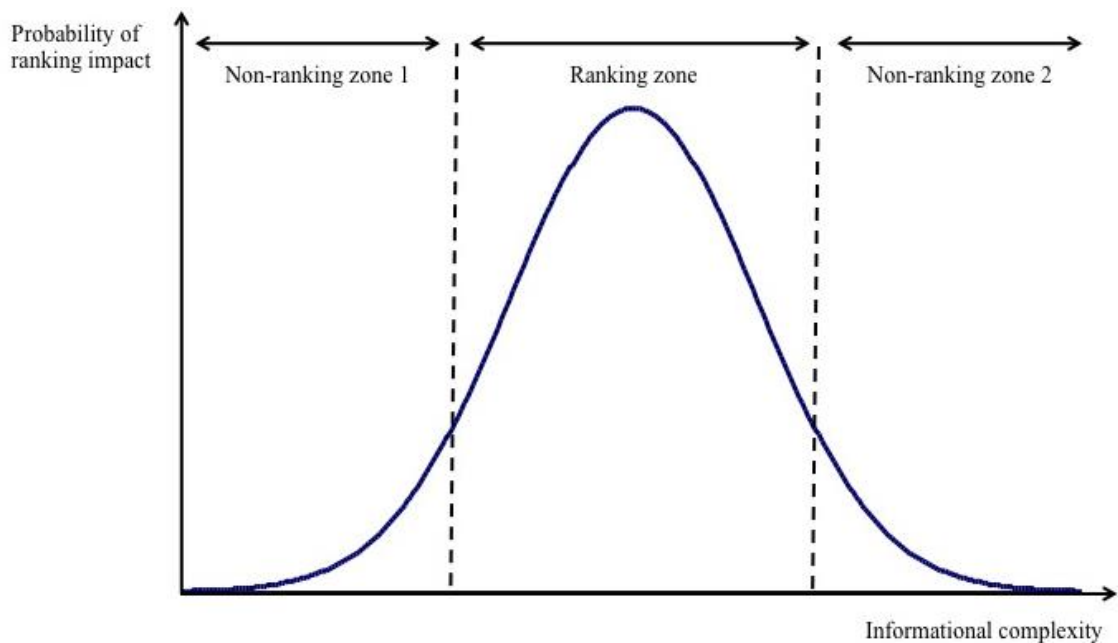


Figure 2: Model of the ranking zone

As shown in figure 2, the ranking field can be divided into one ranking zone and two non-ranking zones. In non-ranking zone 1, informational complexity is small. Here, ranking actors are too similar to be compared, which means that adding a ranking will not reduce informational complexity significantly because it will not add significantly new information. In that zone, the probability that a ranking will impact on ranking actors is small. An example would be discounters like Aldi and Lidl, whose business

model is to offer identical product ranges and store layouts in any particular country. While an internal ranking of attributes on which stores vary, e.g. revenue, number of customers, or loss would provide for new and useful information, a list that ranks features of each store would not, as differences between them are negligible.

As informational complexity increases, the ranking field enters the ranking zone. In that zone, there are a sufficient number of ranking actors, and these actors are sufficiently different to make a comparison meaningful. The probability of ranking impact thus increases with increasing informational complexity, until an apex of the probability of ranking impact is reached. This apex marks perfect conditions of informational complexity, i.e. an intermediate level of number and variance in terms of ranking actors. The higher education field, and specifically the business education field are close to that apex, as it offers both a strong normative drive towards a specific model of organising, i.e. the American research-focused international business school (Wedlin, 2006), while leaving considerable room for a variety of other local and differentiated models of organising. Rankings will be most useful at this apex, as they can meaningfully reduce information when informational complexity is neither too low nor too high. After this apex is surpassed, the probability of ranking impact declines with increasing levels of informational complexity. This means that ranking actors are becoming too numerous or too different to be meaningfully compared. Ranking impact thus decreases. As previously mentioned, higher education fields usually fall into the ranking zone. This intermediate level of informational complexity implies the existence of a priori isomorphic pressures (DiMaggio & Powell, 1983) in the organisational field that have reduced informational complexity and made goods similar enough to be compared. A relatively high level of isomorphic pressures may thus be a necessary condition for a ranking to operate in the ranking zone. The ranking zone is thus defined

as the state of a ranking field in terms of informational complexity under which rankings can emerge, given the bounded rationality of ranking actors and agents.

In non-ranking zone 2, informational complexity is so high that a meaningful reduction of information cannot be carried out. Hence, the probability of ranking impact declines and reaches a minimum as informational complexity is maximised. An example of a field in ranking zone 2 would be the field for newly founded start-ups. As business models, organisational structures, production processes and revenue streams are either vastly different or non-existent, informational complexity is high and ranking newly founded start-ups will likely not deliver meaningful and new information to field actors. In that zone, rankings have a low probability of impacting on the ranking field.

Impact of rankings on fields. The previously mentioned points imply that informational complexity affects how rankings impact on ranking fields. However, it is also possible that rankings affect informational complexity in the field. As we can see in figure 3, through the reduction of informational complexity, the ranking shifts the boundary of the ranking zone. Consequently, the ranking zone where the ranking has a high probability of impacting the ranking field becomes smaller.

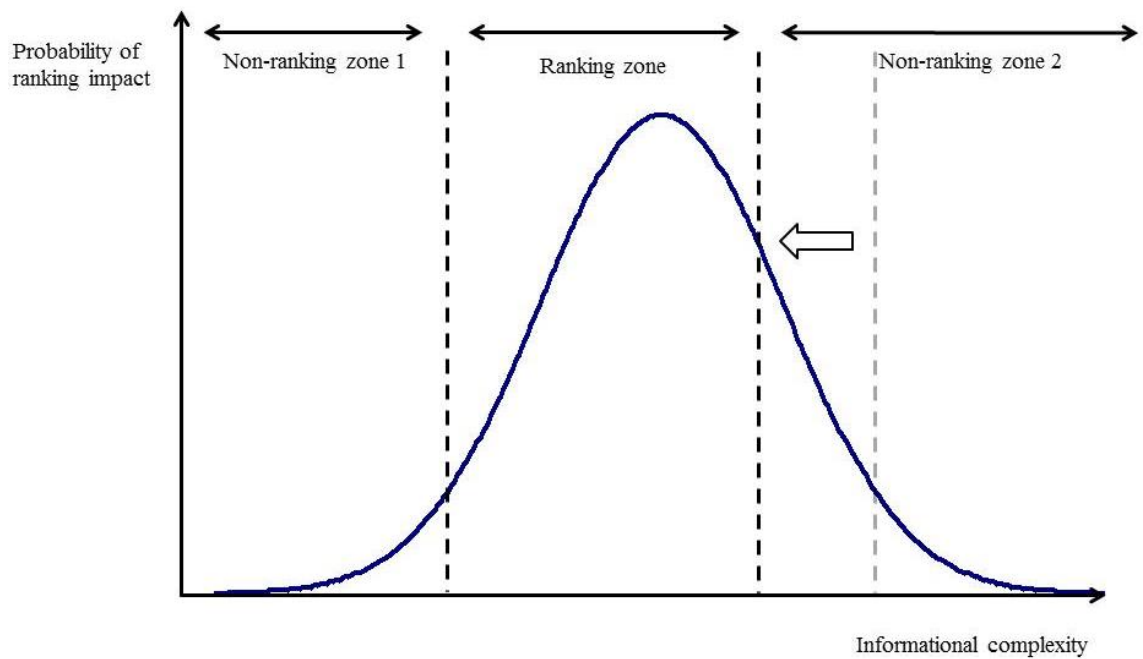


Figure 3: Model of change in the ranking zone

I will draw on the discussion in the previous sections of whether rankings cause ranking actors to become more similar or more different from each other to sketch out two possible effects of the narrowing of the ranking zone.

Firstly, as overall informational complexity in the ranking field is reduced through the ranking, a common standard of what is defined as legitimate or high in status, quality and performance emerges. Consequently, boundedly rational ranking actors will feel less of a need to distinguish themselves from each other. This causes ranking actors to converge with each other, thereby becoming more comparable, and hence more similar to each other. As similarity increases, there is less need for a reducer of informational complexity. This would mean that the more rankings impact on a ranking field, the less they will become useful to boundedly rational ranking actors over time. Therefore, as reducers of information, rankings may carry the seed of their own demise. If rankings homogenise fields, they should become redundant because they reduce variance. Hence, over time, the homogenisation assumption (see section 2 in this chapter) is set to become inconsistent with the impact of rankings, given that ranking actors are boundedly rational.

Secondly, it is also possible to imagine a different effect. Rankings only reduce informational complexity on some dimensions, above all the ones they are measuring. All field actors need to comply with pressures of conformity for legitimacy purposes (DiMaggio & Powell, 1983), but also distinguish themselves on others to maintain competitiveness. Specifically, Laurila and Lilja (2002) suggest that firms actually need to deviate from institutional legitimacy pressures in order to maintain competitiveness at the firm level. Being strategically different on some ranking criteria while complying with others is thus an option for ranking actors. For example, Grewal, Dearden and Lllien (2008) suggest that competition takes place primarily among similarly ranked ranking actors. In a study of the USNWR rankings, they show that competition in the ranking field takes place on different levels, in a way that how lower ranked universities compete is inherently different from the way higher ranked universities do. On the one hand, for better ranked universities with a lagged rank of 10, financial resources, graduation and retention sub-ranks are most important to keep their ranking. On the other hand, for lowly ranked universities with a lagged ranked of 40, academic reputation, graduation, and retention are most critical sub-ranks for overall ranking performance. They conclude that “a highly ranked university gets more leverage from growing financial resources, while lower ranked universities get more leverage from improvements in academic reputation” (Grewal, Dearden & Lllien, 2008: 237).

Therefore, satisficing rather than optimising ranking actors will converge with each other on some criteria, while diverging on others. Overall, this will result in ranking actors becoming more similar to each other on some dimensions, while becoming more different from each other on others as it becomes more beneficial to deviate from what is perceived as a common standard of performance. As ranking actors become both more similar to and more different from each other, overall informational complexity in the field increases. This results in more need for a reducer

of informational complexity for boundedly rational ranking actors. This would mean that the more rankings impact on a ranking field, the more they will become useful over time. Hence, as reducers of information, rankings can create the conditions under which they are more likely to impact on a field. Apart from that, the reduction of informational complexity has consequences for the competition of ranking agents. If a ranking agent manages to reduce informational complexity in the ranking field, the competitive space for other ranking agents is reduced. Thus, ranking agents do not only compete for legitimacy with ranking actors and stakeholders, but also for a part of the ranking field where they can reduce information. However, through the creation of ranking templates, the ranking agent limits the discretion with which ranking actors can respond to the ranking over time. The search and calculation limitations of ranking actors thus interact with the degree of informational complexity of the ranking field in determining ranking impact.

Ranking impact and ranking actor discretion. The development of the impact of a ranking over time plays a role in determining the discretion of ranking actors in responding to the ranking. Teichler (2011) contrasts the appearance of rankings in the higher education field in the 1920s with the fact that rankings only started achieving prominence in 1980s, with the more pronounced effects of rankings only becoming visible in the early 2000s. Yet, the literature on rankings has so far ignored the temporal dimension of the ranking process. This is surprising, given the historical and dynamic nature of institutional change (Seo & Creed, 2002). Ranking actors can however also learn over time about how to react to rankings (Locke, 2011). The stage of development of the ranking, the ranking agents, ranking actors, and the ranking field will play a role in how ranking actors respond to the ranking. For example, on the one hand, ranking actors that are newcomers to the ranking field lack legitimacy and status and could thus

become more susceptible to ranking pressures in comparison to older ranking actors with other established sources of legitimacy and status. On the other hand, established actors that are in the process of losing legitimacy or status will be prone to look to rankings as tools to hold on to, or improve, their standing. Like any entrepreneurial venture, ranking agents who try to establish a new ranking will need to pass a legitimacy threshold (Bitektine, 2008; Navis & Glynn, 2010; Zimmermann & Zeitz, 2002) before gaining acceptance from ranking actors and stakeholders. This building of legitimacy occurs over time, and can be easily disrupted. For example, volatile rankings that allow for sharp increases and decreases in rank over time face increased scrutiny from ranking stakeholders (for an example of a critique of the Economist MBA rankings see Byrne, 2013). Hence, the legitimisation of a ranking in the ranking field involves a dynamic interaction between ranking agent and actors. As we can see in figure 4, four ideal-typical phases can be distinguished in this process.

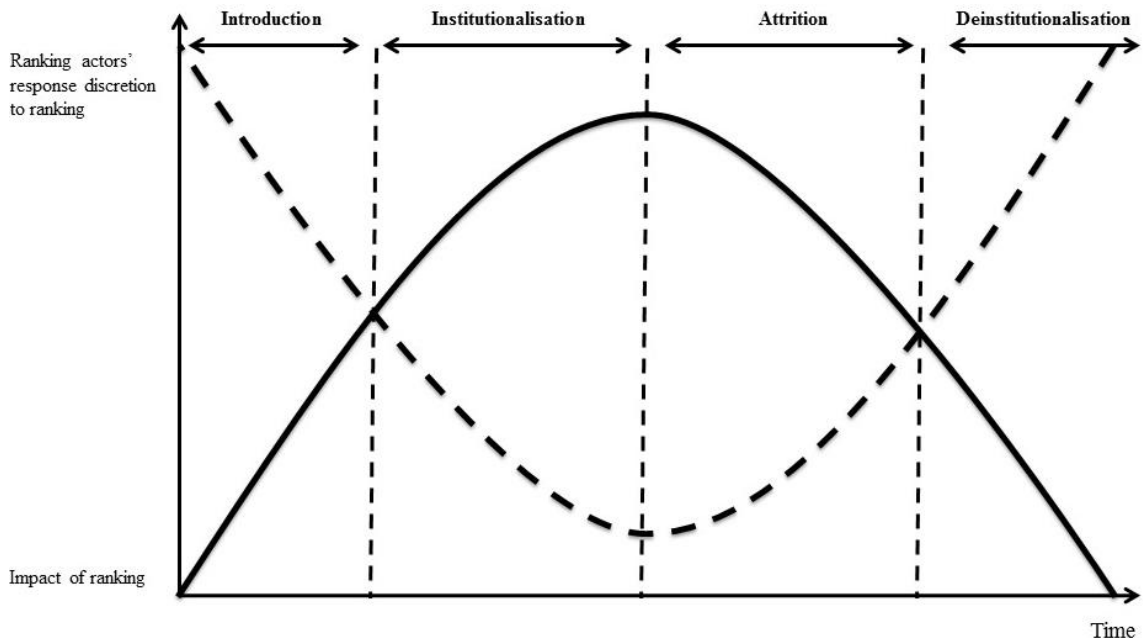


Figure 4: Model of ranking institutionalisation

Firstly, as a ranking is introduced, its authority to judge field actors is likely to be contested (Sauder, 2008). In this phase, rankings are not used or acknowledged by most field actors, and consequently yield little power to impact on ranking actors.

Secondly, as important field actors are co-opted into the ranking process, contestation of the ranking decreases, with the ranking being increasingly acknowledged and used by the different field actors. The ranking thus becomes institutionalised as part of the organisational field. As ranking actors are trying to maintain legitimacy and their position in the status order, they have less discretion in responding to the ranking.

Thirdly, as ranking actors become more similar to each other through a process of attrition, i.e. an increase in mean and decrease in variance of the performance measures that make up the ranking (Meyer & Gupta, 1994; Meyer, 2002), the ability of the ranking to differentiate among ranking actors diminishes. Nevertheless, ranking actors will continue to differentiate themselves both technically (White, 1986) and institutionally (Laurila & Lilja, 2002) from other actors, and ranking actor discretion increases.

Fourthly, this process is maintained until the ranking agent reacts to the decreasing ability of their ranking to discriminate among field actors by changing or adapting the performance measures of the ranking (Meyer & Gupta, 1994). If the ranking is successfully updated, the cycle starts again in the ranking institutionalisation phase. If the updated measures are not accepted by field actors, for example, because they result in a situation where the ranking results diverge from the established field order, the impact from the ranking will decline and eventually disappear. The ranking thus becomes deinstitutionalised and other performance measures or templates of organising emerge. To summarise, as ranking agents become increasingly institutionalised, ranking actors will first have more and then less discretion to deviate

from ranking templates, and gain response discretion again as the ranking becomes deinstitutionalised.

In conclusion, how ranking templates are created and compete with a multitude of templates for impact on the ranking field is moderated by the conditions in the ranking field and the degree of institutionalisation of the ranking. This process is based on a dynamic interaction between ranking templates and field conditions. As conditions of informational complexity change, the bounded rationality of ranking actors determines the way they use ranking templates. In Chapter III, I will show what role ranking actors and ranking frames play in that process.

III THE CONSTRUCTION OF RANKING FRAMES

The concept of the ranking template explains how ranking agents produce various templates of organising through the publication of a ranking. However, it cannot explain how boundedly rational ranking actors use these templates. I will thus introduce the concept of the ranking frame to explain how ranking actors produce ‘their ranking’ based on their own cognition and strategic preferences, ranking templates, and other templates that exist in the field. In the following, I will argue that in order to understand the impact of rankings, we have to understand how ranking actors ‘see’ and consequently use rankings. In this context, it is important to examine the differences between rankings and other measurement devices.

As mentioned in the introduction, rankings are *aggregate* measures. This means that they are not restricted to one particular metric, but combine various measures, often from different scales and data sources. This is important, as the combination of measures requires a dynamic process of negotiating, choosing and weighting variables between ranking actors and agents. In addition, rankings are transitive measures, meaning that they order ranking actors, assigning a *relative* position in a hierarchy to each ranking actor. Rankings thus make all ranking actors of a field directly comparable to each other. Hence, rankings are not based on a definition of an absolute standard (e.g. a scale of 1 to 10) of what is high or low performance. This implies that ranking actors and agents do not need to constantly renegotiate and redefine what exactly constitutes high or low performance, as a part of that process is inherent in the ranking process itself. Many studies (e.g. Geary, Marriott & Rowlinson, 2004; Özbilgin, 2009) have used the terms ‘ratings’, ‘rankings’, ‘performance measures’ and ‘metrics’ interchangeably. Ratings are however not relative, but *absolute* performance measures,

as they require the definition of absolute categories, and a subsequent ordering of ranking actors that is not necessarily hierarchical or continuous. As I will argue in this chapter, the aggregate, transitive and relative nature of rankings is consequential for understanding how ranking actors perceive and act upon rankings through the construction of frames.

As explained in chapter II, ranking actors are “intendedly rational, but only boundedly so” (Simon, 1997 [1947]: 88), meaning that they are subject to time, search and calculation limitations when using information from a ranking. I will argue in the following that given that ranking actors are boundedly rational, they will develop cognitive and strategic frames that help them process information from the ranking, and position themselves strategically in the ranking field. On the one hand, each ranking actor will thus use different ranking templates and consequently different information from a ranking. The more informational complexity increases beyond the apex of the probability of ranking impact, the more difficult, but also the more useful it will be for boundedly rational ranking actors to construct a ranking frame. On the other hand, the more informational complexity decreases below the apex of probability of ranking impact, the less difficult, but also the less useful it will be for boundedly rational ranking actors to construct a ranking frame. As each ranking actor is subject to different information, ranking actors are likely to develop different frames from a ranking. Therefore, the ranking is not the frame, but sets the boundaries for possible frames. Through their production of ranking templates, ranking agents set the boundaries for frame production. I will now outline the process of how ranking actors develop these frames.

1 The pre-ranking field

Before the arrival of a ranking, ranking actors to-be are likely to have a general cognitive notion of what is to become the ranking field. The pre-ranking field is subject to technical and legitimacy pressures (Beckert, 1999) that are a priori independent of the process of social evaluation. Given ecological and competitive dynamics (Dacin, 1997) that are permeating the pre-ranking field, templates other than ranking templates are likely to be dominant. These are pre-existing templates and the templates produced by other measurement devices and stakeholders. Given these templates, there is a generalised notion, albeit an imprecise and undefined one, on what the field is and where its boundaries are. Notions of the competitive positioning, i.e. what constitutes low or high legitimacy, status, quality or performance in the pre-ranking field are thus limited to broad categories that are not publicly codified or generally acknowledged by field actors. Therefore, what commands legitimacy and status in the field is mostly limited to the judgement of experts as well as field actors themselves. This provides them a leeway in laying claim to categories such as ‘elite’, ‘best’, ‘excellent’ and ‘leading’ (Sauder, 2006). Each ranking actor to-be will thus hold a coarse notion of their own position in the field, as well as a notion of the position of competitors or peers, given competitive positioning and organisational features like geography, products or organisational forms. However, as this advances an imprecise representation of the ad-hoc distribution of legitimacy, reputation, status and prestige within the field, there is little indication for actors of how they can change their position. The arrival of the ranking is bound to change this situation.

2 Preliminary ranking frames

As ranking actors to-be become aware of the possibility of the entry of a ranking into the field, they build a preliminary frame. This frame can be based on other rankings, but also other existing templates or templates from other measurement devices. However, frames based on other rankings are going to be most consequential, as they provide for a direct point of comparison. Bromiley (2005) notes that under conditions of bounded rationality, organisations set aspiration levels based on their past performance, as well as, the performance of peers. Since past performance or the performance of peers are difficult to assess in the pre-ranking field, the aspiration levels are imprecise. However, they are going to include a range of ranks, sub-ranks or criteria performances that ranking actors would see as either falling below aspirations, meeting aspirations, or exceeding aspirations. As we can see in figure 5, aspirations have content dimensions as well as levels (Bromiley, 2005: 26-31). Ranking actors thus construct the preliminary frames based on their own content and level of aspirations, as well as an assessment of the position of their peers. For example, an actor can outperform their peer in terms of overall performance, as defined by the templates prevalent before the arrival of the ranking. In the absence of other frames or templates, ranking actors are going to use the actual or presumed ranking position of their closest competitors as a point of comparison for themselves. In particular, the first preliminary ranking frame serves as anchor (Tversky & Kahneman, 1974) for the assessment of the first and subsequent rankings.

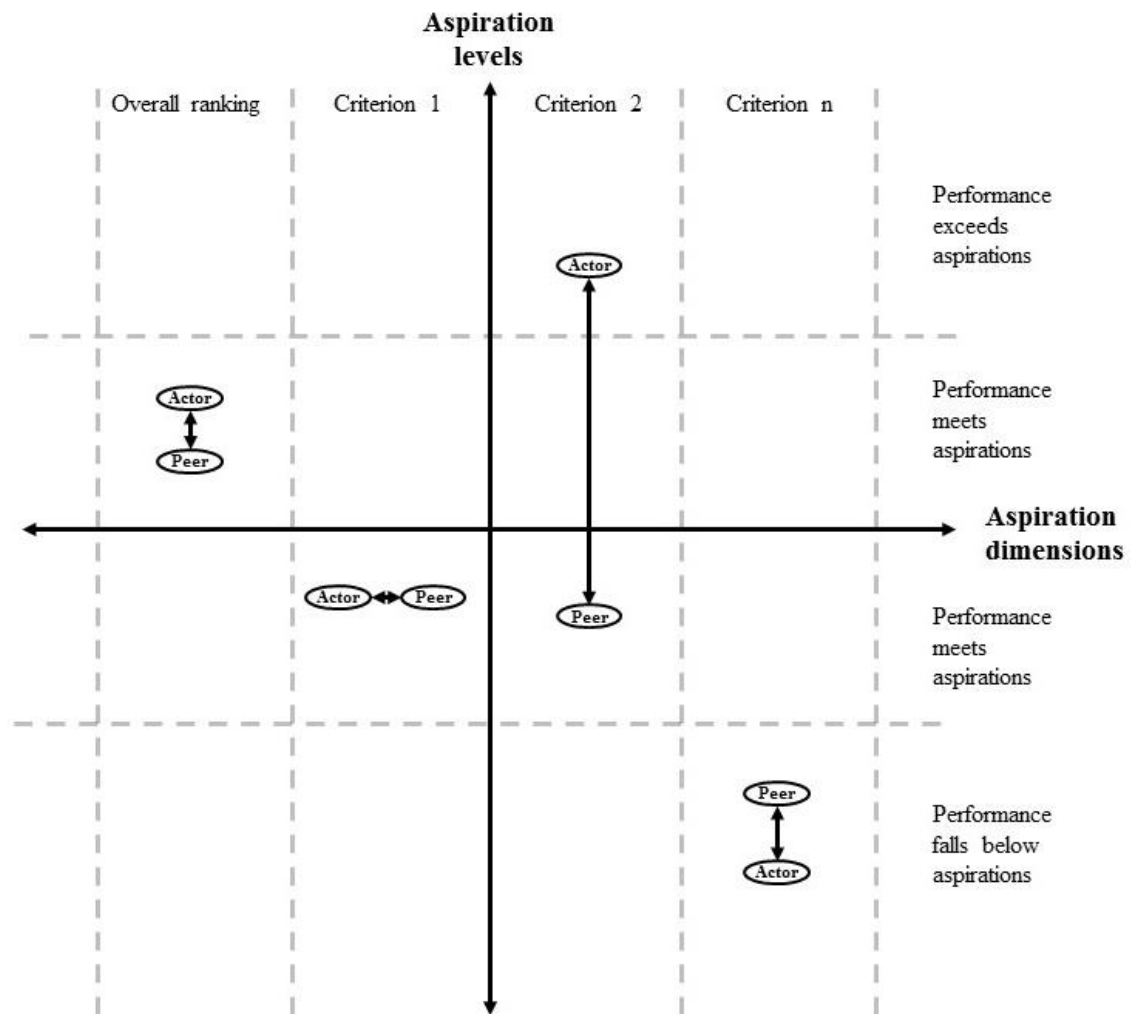


Figure 5: Model of the preliminary ranking frame

In the case of figure 5, while the actor has slightly higher aspirations than the peer, both the actor and the peer are on a performance level that meets their expectations. Since both perform within their aspirations, that situation will not trigger attempts to change performance or aspiration levels. However, discrepancies between actors and peers in terms of their performance and aspirations can become evident in the different aspiration dimensions. On criterion 1, actor and peer both perform on a par, while performing within their aspirations. However, on criterion 2, the actor outperforms the peer considerably, while at the same time exceeding its own expectations. On dimension 3, the peer outperforms the actor, but both perform below

their aspiration levels. In the following, I will explain how this kind of situation contributes to the building of ranking frames.

3 Ranking frames

The aspiration levels are put to the test once the ranking enters the field and ranking actors can see the results of the processing of the ranking algorithm, i.e. the ranking criteria and weightings that transform data inputs into the ranking matrix. Assuming that all ranking actors have a discrepancy between actual and aspired performance on at least one criterion, they will use the information from the ranking to contrast that discrepancy, compare their performance with the presumed aspired and actual performance of competitors or peers, and strategise ways of closing those gaps. All ranking actors thus have their own set of gaps. As ranking actors cannot know the precise aspirations of their peers, they have to use other existing templates, and what they presume to be the ranking template that the peer is using, to create an understanding of the ranking frames of the competitor. Given the vague nature of performances and aspirations, ranking actors thus have considerable leeway in producing their ranking frames. However, in order to maintain legitimacy, ranking actors take into account existing templates as well as ranking templates for the construction of their frames. Therefore, through the production of ranking templates, the ranking agent sets the boundaries inside which ranking actors can construct their ranking frames.

Ranking frames are based on “mental templates that individuals impose on an information environment to give it form and meaning” (Walsh, 1995: 281), i.e. the cognitive models that ranking actors are using to assess the ranking field. Through ranking frames, organisations ‘see’ their past and current performance. That assessment is inextricably linked to the building of a strategy, a plan or a set of goals with respect to the aspired performance. Ranking frames are used for “developing subjective

representations of the environment that, in turn, drive strategic decisions and subsequent firm action” (Nadkarni & Barr, 2008: 1395). They are thus tools for strategising, defined by Jarzabkowski, Balogun and Seidl as the “doing of strategy” (2007:8), i.e. the processes through which praxis, practices and practitioners jointly form the strategy of an organisation. Therefore, I propose that the ranking field is the place where ranking actors use ranking frames to strategise what they see and aspire to see as “the ranking” based on the templates from ranking agents and other templates from ranking stakeholders (see figure 1 in chapter I). This assumes that ranking actors are boundedly rational, i.e. they do not know what competitors are doing exactly, but have an idea of the actions of other actors. It also assumes that all ranking actors are trying to improve their rank. Accordingly, the ranking frame is defined as *the notion of ranking actors about their actual and aspired ranking performance and a strategy to align the two, given their past performances and aspirations, ranking and other templates, as well as the current and past performances and aspirations of their competitors.*

The concept of the ranking frame builds on the ideas of Goffman (1974) and Daft and Weick (1984) who defined frames as guides to interpretation that shape how actors understand their environment. In particular, they underlined the importance of cognitive and symbolic structures in the assessment of organisational realities. Emphasising the role of organisational actors in the use and construction of frames, Benford and Snow define framing as “an active processual phenomenon that implies agency and contention at the level of reality construction” (2000: 613). Kaplan shows how individual actors try to impose their cognitive frames onto their organisation’s predominant collective frames through framing contests (2008). She proposes that “frames shape how actors recognize what is going on” [and] “engage in framing activities in an attempt to mobilize others around a particular point of view” (2008:

730). Kaplan's concept of the frame and framing contests are useful for emphasising the microfoundations of the competitive creation of frames between individual organisational actors. For the purpose of this thesis, I will not investigate the contestation of frames between individual actors in an organisation, but how ranking actors as organisations form ranking frames using ranking templates, other templates, their own set of performances and aspirations, and the ones of their competitors.

For conceptual clarity, I will now contrast the concept of the ranking frame with the notions of the archetype, template and institutional logics. Ranking frames are similar to archetypes because they are sets of structures and systems that reflect an interpretive scheme that is composed of ideas, beliefs and values (Greenwood & Hinings, 1993). Given that different archetypes co-exist within a field, change is not holistic, but differs on the basis of the impacted levels, i.e. systems, structures or interpretive schemes (Liguori, 2012). Incremental change takes place along the lines of an existing archetype, whereas radical change occurs when a shift in both structures, systems and interpretive schemes from an existing archetype to a new one takes place (Greenwood & Hinings, 1996). Hence, ranking frames are different from the concept of the archetype as well as the one of templates of organising (DiMaggio & Powell, 1991; Greenwood & Hinings, 1996; Wedlin, 2006, 2007), because they account for an interaction of actor and field-level dynamics. They are thus not a single interpretative scheme that is prevalent in the organisational environment (usually two in the literature on archetypes), but a set of notions that ranking actors hold and act upon, given the field conditions they are facing. Therefore, this concept bridges meso and macro-level explanations between actors and fields, and differs from the macro-level concept of institutional logics that represent "symbolic systems, ways of ordering reality, and thereby rendering experience of time and space meaningful" that actors draw from their social environment to trigger change (Friedland & Alford, 1991: 243).

I will now explain how ranking frames both represent and shape the cognitive and strategic view that ranking actors hold of the ranking field. Ranking actors segment ranking fields in four ways. Horizontal segmentation is the segmentation of the ranking field into the overall ranking outcome as well as the ranking criteria. Vertical segmentation takes place between ranking actors, who are segmented according to their ranking performance. This includes segmentation into published and non-published parts of the ranking, as well as segmentation between ranking actors that are part of the ranking field, and those that are not. In addition, peer clusters emerge around the interaction of ranking pressures with the historical, geographical or sector-specific relationships of the ranking actors. As explained beforehand, the cognitive and strategic notions that ranking actors hold about the ranking field build on the existence of other templates.

Horizontal segments. As rankings are the result of an aggregation of multiple performance measures, a horizontal segmentation of the ranking field takes place on the criteria that make up the ranking. If these criteria are published, sub-rankings that rank ranking actors on the criteria emerge besides the overall ranking. This is consequential for the ranking actors, as most will perform highly on some criteria, while underperforming on others, as chapter VII will show. Therefore, depending on ranking performance and the technical and legitimacy pressures on the ranking actors a priori independent of the ranking, each ranking actor accords different importance to different criteria. Taking the example of the FT rankings, knowing that they cannot perform well in the overall ranking due to their lack of resources, some schools will place more importance on their value for money rank. I thus propose that, depending on their

ranking frame, ranking actors will focus on changing their performance on specific ranking criteria.

Vertical segments. Vertical segmentation takes place between ranking actors, who are segmented according to their ranking performance. This distinction between different vertical ranking segments has important implications for the construction of ranking frames, as well as the behaviour of ranking actors. For example, as those “who best conform and perform to the ranking criteria achieve high rankings and reap tremendous rewards” (Gioia & Corley, 2002: 110), the first-ranked is its own category, and the performance of all other ranking actors is compared to them. Although the difference between number one and number two might be minuscule in statistical or substantive terms, the status and legitimacy benefits are considerably higher for the ranking actor leading the ranking. In this context, prestige dynamics will play an important role, as ranking agents need to make sure ranking results do not conflict with existing, universally accepted and persistent notions of social standing (see chapter II). For example, any business school ranking that would *not* give prestigious schools like Harvard, Wharton, Stanford or Chicago a high ranking would immediately be subject to criticism and scrutiny. Due to the quantitative nature of a process that ranks all organisations forcibly, various segments pervade the ranking field, conferring reputational and status advantages to ranking actors who are in the ‘top 10’, ‘top 25’ or ‘top 50’ (Sauder, 2006; Sauder & Espeland, 2009). The difference between being ranked 9th and 10th might be as small as the difference between 10th and 11th; however, this difference can have a consequence for the ranking actor (Locke, 2011). It is therefore likely that ranking actors that are changing ranking segments are going to change their ranking frame, depending on their levels and content of aspirations. I thus

propose that ranking actors change their ranking frame when changing ranking segments.

Field boundary work. Vertical segmentation implies a differentiation between the ranking and non-ranking field. For the creation of a ranking, the first decision ranking agents have to take is on the kind of organisations to assess. This implies a decision on what kind of organisations are similar and dissimilar, and thus what kind of organisations should be included in or excluded from the ranking. For example, the FT rankings were created with the explicit goal of providing for a comparison of ‘global’ MBA programmes across North American and European business schools (Bradshaw, 2007), whereas the BusinessWeek MBA rankings assess American and non-American schools separately. The FT’s decision implies that North American and European are similar enough for comparison, whereas the BusinessWeek’s decision implies that they are not. Thus, the ranking process is inherently linked to the process of the definition of the boundaries of fields, with rankings being an arena where organisations “participate in debates and struggles about what constitutes the field” (Wedlin, 2006:5). In a similar vein, she proposes that rankings are arenas for boundary work and field structuration (Wedlin, 2011). Hence, through the ranking process, rankings do give a seemingly clear answer to the question of which organisations form a part of the field, what confers legitimacy and status in the field, how field actors perform in relation to each other and where clusters of similarity and dissimilarity lie. Yet, Wedlin (2007) proposes that “isomorphic pressures are limited to those organizations that identify with the business school template and participate in rankings” (2007: 36). This ignores the wider impact that rankings have on organisations within and without the ranking field. In particular, segmentation extends beyond the published ranking field. Typically, to compensate for

unresponsive ranking actors, ranking agents include more organisations in the ranking process than required to publish the ranking. Yet, usually, arbitrary cut-off points are chosen for the published rankings, for example, ranking “the best 100” or “500” organisations. These cut-off points gain particular significance for ranking actors, as inclusion or exclusion can decide whether others will perceive them to be part of the ranking field, or not, with consequences for their legitimacy and status. This distinction is particularly important, as previous studies have assumed stable field boundaries (e.g. Sauder, 2008), and thus not investigated the impact of the construction and enforcement of field boundaries on ranking actors. I thus propose that ranking actors change their ranking frame when they become part of the published ranking field, or leave it.

As can be seen in figure 6, this leaves the ranking field with four additional segments of ranking actors. The first one is the third quartile, which is composed of ranking actors who are part of the published ranking, and who are not at immediate risk of falling below the threshold for inclusion in the future rankings. The second is the fourth quartile, which is composed of ranking actors who are part of the published ranking and who are at risk of falling below the threshold for publication. The third is the first non-published quartile, which is composed of ranking actors who are not part of the published ranking, but who are at risk of inclusion in future published ranking outcomes. The last segment is the second non-published quartile, which is composed of ranking actors who are not part of the published ranking, and who are not at immediate risk of inclusion in future published ranking outcomes. The further away ranking actors are from the field boundaries, the less the ranking frame will feature an exclusion from the ranking. This effect can be compounded the longer ranking actors are part of the ranking (Bowman & Bastedo 2010; Sauder & Lancaster 2006). However, the closer ranking actors are getting to field boundaries, the more this signals to them that their

previous ranking frame needs adjustment. I thus propose that ranking actors change ranking frames when they approach segment or field boundaries.

Peer clusters. Adding to the horizontal and vertical segmentation dimension of the ranking frame, the fourth way of segmenting the ranking field is into peer clusters. These are composed of ranking actors who are exposed to similar historical, geographical, sector-specific technical or legitimacy pressures. For instance, Engwall and Danell show how UK business schools have followed historically and geographically contingent paths of development (2011). A ranking will thus not immediately change a competitive relationship that is imbued with historical legacy. For example, the fact that University of Oxford and Cambridge perform 2nd and 7th in the Times Higher Education World University Rankings 2013-2014 might be less important to them than the fact that Oxford performs better than Cambridge, and that both outperform all other universities in the United Kingdom. In this case, Oxford and Cambridge build a ranking cluster, while being part of a bigger cluster of UK universities. I thus propose that clusters of ranking actors will emerge in the ranking field over time.

Ranking actors assess and strategise their position based on ranking and other templates. However, the main reference point of the strategising activity is the position of peers that arises from historical, geographical or sector-specific technical or legitimacy pressures. For example, as can be seen in figure 6, a ranking actor is ranked in the top 25, just below its main peer 1 but ahead of its peer 2, who is ranked in the top 50. Given the horizontal segmentation, the ranking frame of the actor thus suggests an increase in the distance to its peer 2, while surpassing peer 1 by entering the top 10. Strategic goals that are part of the ranking frame are represented as arrows. In terms of

vertical segmentation, the picture is different. On criterion 1, the ranking frame suggests to increase the distance to peer 1 to remain in the top 50 segment. As the ranking actor does not directly compete with peer 2 on criterion 1, its ranking frame does not require action vis-à-vis peer 2. On criterion two, the ranking frame is to maintain parity in the position with peer 2, while no action is suggested vis-à-vis peer 1. On criterion three, the strategic goal is to surpass both peer 1 and peer 2 to improve the actor's position from the fourth quartile to the top 50. Ranking actors might also solely target the overall ranking or specific criteria. However, as the criteria and overall ranking are not independent of each other, this is unlikely. Here, it is important to bear in mind that a ranking is a relative performance measure, i.e. even when the absolute performance of a ranking actor increases, its ranking position might decrease. The focus on ranking positions is therefore relevant to the strategising exercise.

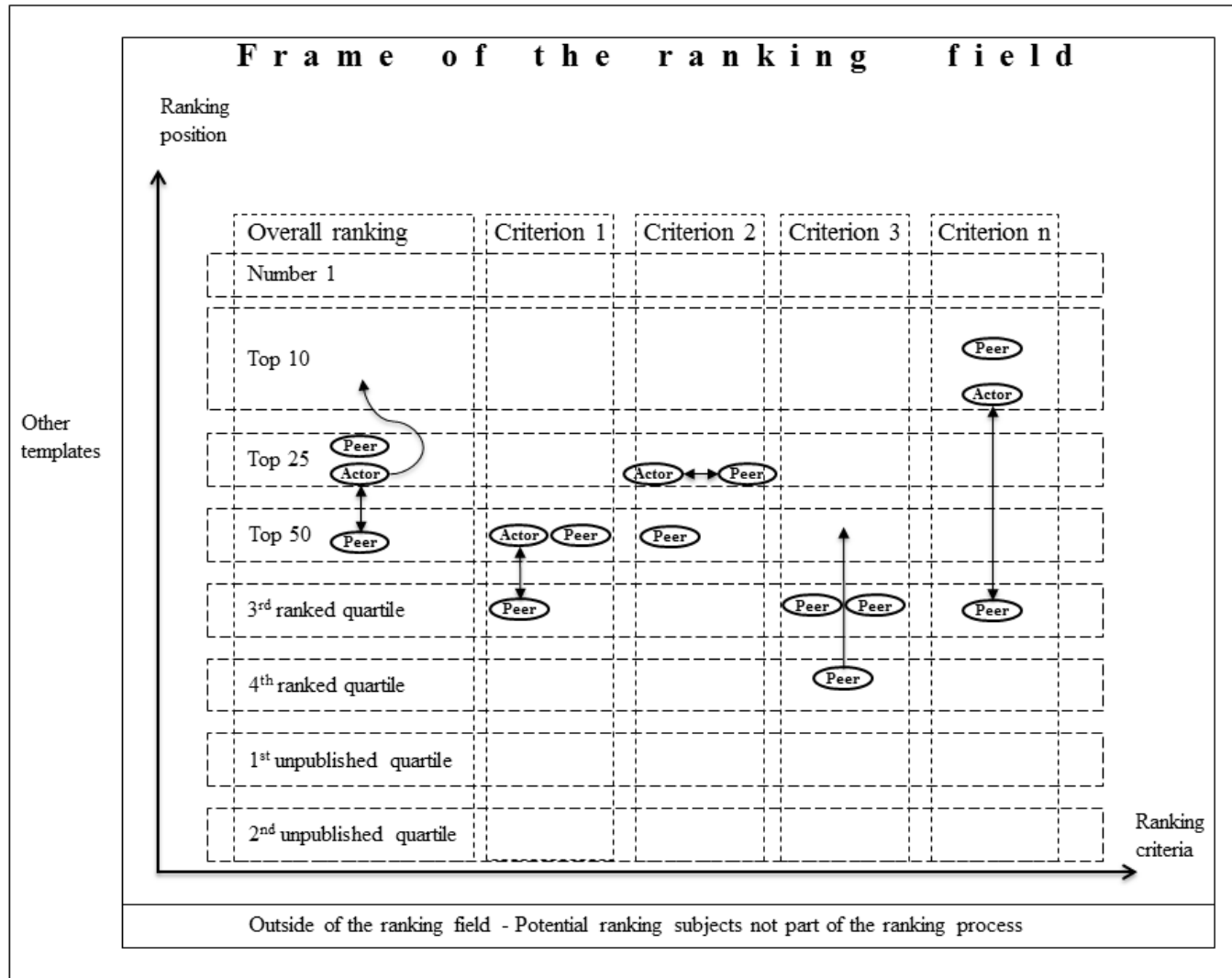


Figure 6: Model of the frame of a ranking field with 100 published ranking actors

Therefore, ranking clusters can be more meaningful to ranking actors in terms of their legitimacy, status and competitive position than their criteria-specific or overall ranking positions. Above all, regional logics of competition can affect responses of actors to institutional pressures (Greenwood, Diaz, Li & Lorente, 2010), and impact on how ranking actors respond to the pressures of a ranking. This is supported by McNamara, Deephouse and Luce (2003), who found that firms use groups of competitors as reference points and that performance differences within strategic groups are significantly greater than across groups. Given the nature of the competition of higher education institutions, cluster-specific performance differences should be, at least partially, explained by school-level characteristics such as geographic location, institutional control, operating budget, faculty or student demographics. I therefore propose that while overall ranking performance is becoming more homogeneous, differentiation is taking place on the cluster-level, resulting in increased cluster-specific variance.

However, as discussed earlier, Meyer (2002) proposes that over time, performance measures will ‘run down’, meaning that they will “lose variability and hence the capacity to discriminate good from bad performance” (Meyer & Gupta, 1994: 330). I thus propose that while this process takes place, decreasing variance will result in a merging of some of the clusters, leading to a decrease in the number of clusters.

Nevertheless, Meyer and Gupta (1994) also observed that some performance measures ‘run down’ more quickly than others do. Specifically, Meyer (2002) discussed the external environment, changes in measures and consensus about performance as possible moderators of the degrading process. However, he did not explore the discretion that performance measurement actors have when responding to being measured, as another mechanism that can explain differential degrading. In the context of rankings, it is likely that ranking actors will have more discretion over some

performance criteria than others. I thus propose that criteria over which ranking actors have more discretion will wear down quicker than others do, thereby affecting the emergence of clusters in the ranking field. Response discretion to criteria implies that ranking actors have the possibility to adjust their ranking frame over time. This will be the focus of the following section.

4 Ranking frame adjustment

There are two mechanisms that play a role in how ranking actors can adjust ranking frames over time.

Anchoring. Firstly, due to anchoring effects (Tversky & Kahnemann, 1974), i.e. the use of initial values as a reference point for future values, the initial ranking will be most consequential for ranking actors, as performance results will be assessed in reference to the earliest point. For example, a school that ranks very highly in the beginning of the ranking, yet deteriorates to a low rank over time, will be perceived very differently than a school that consistently ranks lowly. I thus propose that the initial rank of a ranking actor will have a lasting effect on its ranking frame. This is in line with Bastedo and Bowman (2010), who showed that first, but not second-year rankings had lasting effects on reputational peer assessments. However, given the short time frame of their study of three years, I propose that the anchoring point of ranking actors changes over longer periods. For example, a ranking actor that has a constantly high or low performance over an extended period is likely to adjust its ranking frame to that performance, even if it contradicts its initial anchoring point. I thus propose that anchoring points change over time when ranking actors show constant performance on a different level over an extended period.

Loss aversion. Secondly, prospect theory (Kahnemann & Tversky, 1979) suggests that deteriorations in rank or criteria performance will be more consequential than gains. For example, a ranking actor that falls by five ranks will be proportionally more scrutinised than a ranking actor that gains five ranks. This effect can be made more severe if the deterioration in rank removes the ranking actor from its anchoring point, and when the change in rank implies a change in segment. I thus propose that ranking actors are more likely to change their ranking frame following a fall in rank than a rise in rank.

The effect of the anchoring and loss aversion mechanisms are moderated by the performance of competing peers, and play a role in how ranking actors deal with discrepancies between actual and aspired ranking performance.

Adjustment of aspiration levels. Even though notions of the aspiration levels may be vague, a great discrepancy between the ranking and aspiration levels will trigger attempts by ranking actors to cognitively, and strategically, reconcile their actual and aspired position. Bromiley proposes that ranking actors can engage in a search that ends with either the achievement of the aspired performance or a change in the aspiration level (2005: 26-31). In the following, I will argue that ranking actors have six other ways of dealing with discrepancies in aspired and actual ranking performance. These are reinterpretation, learning, lobbying, mergers and alliances, challenge, and exit.

Reinterpretation. Scheid-Cook (1992) shows how actors define and create institutional demands, and enact environmental pressures with a certain amount of discretion. She proposes that actors will comply with pressures only to the degree necessary to maintain organisational legitimacy. This leaves the possibility that actors exercise discretion in responding to ranking templates. This is also confirmed by

Morphew and Swanson, who note that “from a macro point of view, [ranking actors] have relatively little control over their rankings, whereas, from a micro perspective, smaller, yet important changes may be possible as a function of concentrated changed behaviour” (2011: 189). Given that not a single, but multiple templates of organising exist in a field, Brunsson (1982, 1986) proposes that actors react to inconsistent, contradicting and conflicting demands by saying one thing, deciding on something else and acting altogether differently. “Active organizational resistance”, “passive conformity” or “proactive manipulation” (Oliver, 1991: 145) are thus options for ranking actors in dealing with rankings, apart from the strategies of ceremonial performance and gaming that have been already been explored in detail in the literature (see Espeland & Sauder, 2007).

For example, apart from the main ranking outcome, most rankings feature several sub-rankings. The FT ranking has one main ranking outcome, which is the overall placement of the MBA programme of the business school. Additionally, among the 22 criteria that are used to construct the ranking, there are ten that are published to create more specific sub-rankings: the “3 year average rank”, the “value for money rank”, the “career progress rank”, the “aims achieved rank”, the “placement success rank”, the “alumni recommend rank”, the “international mobility rank”, the “international experience rank”, the “FT doctoral rank” and the “FT research rank” (Financial Times, 2014a). An investigation of the websites of the business schools ranked by the FT (see chapter VI) reveals that ranking actors are using sub-rankings selectively, emphasising performance in some sub-rankings, and sometimes even omitting the overall ranking result. Even if sub-rankings are not published, ranking actors can create their own sub-rankings based on self-chosen categories, e.g. “best public school in the Northwest”. The exploitation of commensuration ambiguities discussed in chapter II also facilitates that process of reinterpretation. This suggests that

in order to deal with discrepancies in aspired and actual performance, ranking actors actively reinterpret the ranking and change their ranking frame, i.e. how they ‘see’ the ranking.

Learning. The performance measurement literature has discussed performance measures like ratings (Bowker & Star, 2000; Gormley & Weimer, 1999); financial and efficiency measures (Meyer & Gupta, 1994; Meyer, 2002), organisational performance measures (Neely, 1998, 2005), accounting and cost measures (Christensen & Demski, 2003) with a specific focus on the Balanced Scorecard (Kaplan & Atkinson, 1998; Kaplan & Norton, 2001) and audit technologies (Power, 1997). Although rankings have been an emerging topic of study in various literatures of organisation theory in recent years (e.g. Espeland & Sauder, 2007; Martins, 2005; Rindova, Williamson, Petkova & Sever, 2005; Sauder, 2008; Sauder & Espeland, 2009), they are a case of a compilation of performance measures that so far have been largely ignored by the performance measurement literature. This is surprising, as rankings stem from a rich and emerging empirical context in a variety of social fields (Sauder, 2008; Wedlin, 2006). The performance literature proposes learning as the main mechanism through which organisations can respond to performance measures (Meyer & Gupta, 1994; Meyer, 2002). In the following, I will give examples of how ranking actors change their ranking frame through learning mechanisms.

Ranking actors can respond to ranking results with “positive learning” (Meyer, 2002). For example, as rankings gain prominence, business schools are becoming more aware of the importance of quality education and research. As rankings are assumed to reflect actual quality, business schools try to improve the quality of their teaching and research to achieve a better overall performance, which has a positive impact on ranking performance. This can entail a process of copying from competitors, doing

organisational experiments, grafting, i.e. acquisition of other organisational members, or searching for and noticing cues in the environment (Huber, 1991). For instance, business schools could copy fundraising practices from competitors, acquire star faculty or opportunistically learn from the failures of others.

However, the process of learning need not necessarily be positive, but can also result in “perverse learning” (Meyer, 2002). For example, some business schools accept that ranking criteria like “Employment of graduates after three months”, “Percentage of faculty with Doctorate” or “International Students” are not truthful indicators of the quality of MBA programmes. However, as they are rewarded for performance on indicators rather than the underlying concept of quality, business schools will try to improve their performance on these measures. Business schools might thus dismiss experienced teaching staff without a PhD and replace them with inexperienced teaching staff with more research credentials; hire graduates who did not find a job within three months of graduating into temporary research assistance positions to increase their performance on the employment criterion; or admit less qualified international students over more qualified national students (see also Sauder & Espeland, 2009).

Learning outcomes, whether positive or perverse, depend on the amount of influence that ranking actors have on outcome measures. Ranking actors thus need to make a strategic choice on which criteria to improve performance. In the case of higher education institutions, “university administrators and faculty favour performance measures that reflect the quality of the educational experience in a manner that elucidates their own specific institutional mission(s)” (Alexander, 2000:426). Therefore, whether and to what extent performance measures or criteria can be changed depends on the internal structure of the institution, as well as conditions like the existence of resource conflicts or status hierarchies prevalent in the ranking field (see chapter II). For example, while teaching more female students should not require

changes in the structure of a school, recruiting female students might be more difficult, as most applicants to MBA programmes are still male (Graduate Management Admission Council, 2013). Ranking actors are thus likely to work on changing the parts of the ranking frame over which they have more control; meaning that a change in the criterion is more likely to deliver an increase in rank with a relatively low associated cost and risk.

Lobbying. Another way of changing the ranking frame indirectly is by changing the basis on which it is constructed. Ranking actors can lobby the ranking agent to have the criteria or calculation methods that favour certain ranking actors included or changed. This is an important issue for the ranking agent, as especially prestigious or high-status ranking actors have the possibility to end the collaboration with the ranking agent. As non-participation or withdrawal of prestigious actors signals lack of credibility of the ranking and the ranking agent, more prestigious ranking actors will be better positioned to exert pressure in that way. For example, Harvard Business School (HBS) refused to participate in a first version of the FT rankings in 1998. A business school ranking that does not place Harvard Business School close to the top of the ranking will likely lack credibility and open itself to scrutiny. The reaction of the FT was to redesign the ranking in consultation with HBS, resulting in the first ranking in 1999 (Wedlin, 2006). HBS gained the first position in both the 1999 and 2000 editions of the FT ranking.

Importantly, after an initial period of change and adjustment between 1999 and 2001, the ranking criteria of the FT ranking have barely changed, with the only exception of the language criterion decreasing from a 2% to a 1% weighting and the international experience criterion increasing from a 2% to a 3% weighting in 2012. This indicates that after the negotiation with important ranking actors like HBS was

successfully concluded, the ranking agent refrained from changing the methodology substantively, presumably to avoid raising questions of the legitimacy of the ranking process. Nevertheless, there have been numerous changes in the methodology to calculate the criteria. For example, the most recent change was in the calculation of the 'Employed After Three Months' criterion. It changed to the percentage of the most recent MBA class that had found a job within three months of completing their studies, rather than graduation (Financial Times, 2014a). Lobbying is thus an important mechanism to adjust ranking frames, especially for powerful ranking actors.

Mergers and alliances. A more radical way of changing the ranking frame is by changing the performance, aspirations and templates it is based on. Following the emergence of rankings comparing universities across the world, countries like Finland and Portugal, which have been faring below their own aspirations, have been launching programmes to reorganise and merge institutes of higher education (Staley, 2014). A particular poignant example is France. In 2011, following the country's low performance in the Shanghai Jiao Tong Academic Ranking of World Universities, the French government started a funding programme of 7.7 billion Euros to incentivise universities, 'Grandes Ecoles' business and engineering schools, as well as research institutes, to merge into a 'Sorbonne league' to rival the American 'Ivy league' (Grove, 2011).

In addition, alliances are also a way of changing the performances, aspirations and frames of a ranked organisation. For instance, many Executive MBA programmes are the product of alliances between several business schools. For example, the five most highly ranked programmes in the Financial Times Executive MBA ranking 2014 are the result of an alliance of two or more business schools, all of them across continents. As compared to mergers, alliances are more flexible, and can be started and

dissolved with comparative ease once performance ceases to match aspirations for one of the partners.

Challenge. To change their ranking frame, rather than changing their performance or aspirations, ranking actors can challenge the ranking that exposes the discrepancy. These often take the form of publicised letters of high-level academics to ranking agencies and stakeholders, including calls to boycott rankings (Sauder, 2008). This strategy has the advantage of not requiring ranking actors to change aspiration levels or performance. However, the evidence indicates that boycotts, for example of the American USNWR law school rankings (Sauder, 2008), the Canadian MacLean university rankings (see Samarasekera, 2007) or the German Handelsblatt business research rankings (Storbeck, 2012), have largely been unsuccessful.

Another way of challenging a ranking is by organising the publication of a competing ranking. For example, the French Ecoles de Mines Paris Tech ranking, as well as the Russian ReitOR rankings, have been created with the support of national universities and governments with a view to challenging existing American and British-based rankings (Rauhvargers, 2011). Unsurprisingly, French and Russian institutions rank usually considerably higher in those respective rankings.

Exit. Finally, if aspiration levels do not match performance over an extended period, ranking actors can change their ranking frame by exiting the ranking process. Ranking actors can then choose to build a ranking frame based on templates from other rankings, or other measurement devices. For example, as business schools are ranked, but perform poorly, they are becoming increasingly scrutinised for their poor performance, and eventually drop out of the first 100 ranked schools. As participation in

the FT rankings is voluntary, poor performers can opt out of the ranking process, citing methodological or ethical issues as cause of their decision. However, not all rankings require data from the ranking actors. An example for this are the Shanghai Jiao Tong Academic Ranking of World Universities, which only relies on publicly available - mainly bibliometric - data.

In conclusion, as I have illustrated in this chapter, there is a need for a more fine-grained approach to the question of ranking impact on ranking actors. Assumptions about the 'one' ranking frame with a simple cause-effect relationship between the emergence of rankings and change, and homogenisation processes in organisational fields, have led to a one-dimensional conceptualisation of the impact of rankings on organisations. In particular, this chapter has sought to build the understanding of the collaborative nature of the construction of ranking frames between ranking actors, agents and stakeholders. I have introduced the concept of the ranking frame that explains the cognitive bases on which ranking actors strategically respond to ranking templates produced by ranking agents. This concept contrasts the previous literature that has conceptualised ranking actors as those whose agency is either limited to gaming or conforming to ranking templates produced by ranking actors. Rather, the concept of the ranking frame sheds light on the differential impact of rankings on ranking field actors through horizontal and vertical segments, as well as clusters, in the ranking field. In addition, I have introduced reinterpretation, learning, lobbying, mergers and alliances, challenge, and exit as the mechanisms through which ranking actors can deal with discrepancies between actual and aspired performance.

As I will show in chapters VII through IX, the concept of the ranking frame is particularly useful to assess the effects of rankings on ranking actors, and the dynamics between ranking actors and agents. In particular, I will give a detailed description of the

vertical and horizontal segments, as well as the clusters of the FT Global MBA ranking field. In order to elucidate the dynamics in the ranking field, I will analyse the development of the ranking using the example of three different ranking actors with different ranking trajectories. Based on this analysis, I will conduct a cluster analysis and give a detailed explanation of the compilation, structure and development of the resulting clusters. The definitions of the ranking, ranking actors, agents, stakeholders and the ranking field proposed in table 1 (see Chapter I) will be particularly relevant to these chapters, as will be the definition of ranking frames, as the notions of ranking actors about their actual and aspired ranking performance and a strategy to align the two.

IV DATA SETS

In this chapter, I will introduce the empirical context of the study. In particular, I will discuss the data issues of earlier studies, and the consequent choice of the data set for this study. I will then give a detailed description of the Financial Times Global MBA rankings.

1 Data issues of earlier studies

As mentioned in chapter II, most of the ranking literature has almost entirely relied on qualitative methods to investigate the impact of rankings on organisational fields and actors. Notably, virtually all empirical studies of ranking impact on organisations and organisational fields have heavily relied on the use of small-N interview data, in particular of organisational actors affected by rankings, as well as records like organisational press releases, communication with former and future organisational members, newspaper articles and internal documents and memos (e.g. Elsbach & Kramer, 1996; Espeland & Sauder, 2007; Sauder, 2006; 2008; Sauder & Espeland, 2006; Sauder & Espeland, 2009; Sauder & Fine, 2008; Wedlin, 2006, 2007, 2011). Most of the interviews have been with academics, administrators, career services staff, deans, prospective students and employers, in particular of European business or American law schools. Few studies, like Higher Education Funding Council for England (2008), Martins (2005) and Sauder and Lancaster (2006) have used large-N quantitative surveys of the perceptions of organisational members impacted by rankings.

Relying on the perceptions of organisational members or field members impacted by rankings is helpful for understanding how rankings have shaped the discursive space and consequently perceptions and identities of field members. This approach however ignores the possibility that rather than having a causal effect on ranking field actors, rankings serve as focal points of attention in organisational fields around which ranking frames are constructed (see chapter III). Yet, if ranking actors react to ranking pressures, they should do so first and foremost on the criteria published by the ranking agents. Ranking agents such as Bloomberg Businessweek or the FT publish rich data sets that include the published data on the performance criteria of ranking actors on dimensions such as percentage of faculty with doctorates or salary. Yet, few studies have used these data (for exceptions see Grewal, Dearden & Lillian, 2008; Rindova, Williamson, Petkova & Sever, 2005) to explain the dynamics of the ranking process. One important limitation of these studies is however that they do not take into account the importance of horizontal and vertical field segments, clusters and boundaries. In addition, these studies only used the data published by ranking agents, which ignores the impact of the rankings on the entire ranking field, including non-published ranking actors. Studies on the impact of rankings on organisations should thus take into account both published and non-published data on ranking actors. I will thus explain the choice of the data set for this study.

2 Choice of the data set

There were several reasons for using the FT Global MBA ranking data set. As explained beforehand, rankings have not equally impacted all organisational fields in which they emerged, and fields for post-experience goods with intermediate levels of informational complexity and isomorphic pressures, low to intermediate rigidity in

terms of status order and field structuration, and high levels of resource conflicts provide good conditions for the impact of rankings. Education and research are post-experience goods. I thus chose higher education as field of investigation. Within the higher education field, the business school field shows an intermediate level of informational complexity, a relatively high rigidity in terms of status order and field structuration, as well as high levels of resource conflicts, thus fulfilling most of the conditions that favour the impact of rankings.

The business school field has been a rich field for the investigation of rankings for previous studies (Devinney, Dowling & Perm-Ajchariyawong, 2008; Elsbach & Kramer, 1996; Gioia & Corley, 2002; Martins, 2005; Rindova, Williamson, Petkova & Sever, 2005; Sauder & Fine, 2008; Wedlin, 2006, 2007, 2011). I thus examined the available data published by ranking agents that rank business schools or business and management departments of universities. These included the Academic Ranking of World Universities, America Economia, Bloomberg Businessweek, Business Insider, Centrum Fur Hochschulforschung, CNN Expansion, Complete University Guide, Economist, EdUniversal, Financial Times, Forbes, Guardian, Handelsblatt, L'Etudiant, Le Figaro, Le Point, US News & World Report, Poets & Quants, Quacquarelli Symonds, Sunday Times and Wall Street Journal.

I selected the ranking according to the following six criteria.

First, an investigation of business school rankings requires taking into account the methodology of the ranking, making a published and transparent ranking methodology necessary.

Second, an investigation of the performance of schools on ranking criteria requires access to data on the actual, not aggregate performance on ranking criteria.

Third, given the previously mentioned temporal quality of the construction of ranking frames, an investigation requires longitudinal data.

Fourth, in order to explain differences in responses to rankings across national subfields, the ranking needs to be cross-national or cross-disciplinary in scope.

Fifth, in order to have an impact on ranking actors, ranking actors need to be aware of the ranking.

Sixth, the ranking needs to include published and non-published data to provide for an investigation of the whole ranking field (see chapter III), requiring access to non-published data of the ranking agent.

The various Financial Times business education rankings (Masters in Management, Masters in Finance, Executive MBA, Global MBA) were the only data sets that satisfied all criteria. The London School of Economics and Political Science features various business related programmes, but not a full-time MBA programme. In order to avoid concerns about conflicts of interest, the Financial Times was thus approached for access to the Financial Times Global MBA ranking data. Before I describe the data set to which the Financial Times granted access, I will give some background to the Financial Times Global MBA rankings.

3 The Financial Times Global MBA rankings

The FT introduced the FT Global MBA rankings as part of the introduction of a dedicated section on business education in 1999. Ever since then, the FT rankings have appeared annually. Since 2001, the FT ranks about 150 business schools from around the world (see chapter V), publishing a list of the 100 “best management programmes” (Financial Times, 2014b). After an initial phase of experimentation in 1999 and 2000, where the ranking methodology including criteria weighting was not published fully,

the ranking criteria (although not their composition and calculation, see chapter III) have barely changed.

I gained access to the data of published ranking actors between 2001 and 2014, and the non-published ranking actors that participated in the FT MBA rankings between 2006 and 2014. Table 2 gives an overview of the available data on each criterion.

Criterion	Code	Data available	Unit	Definition in 2014
Employed at Three Months	Emp3M	Published and non-published	Percentage	"Percentage of the most recent graduating class who had found employment or accepted a job offer within three months of completing their studies."
Employment Data	EmpDat	Published and non-published	Percentage	"Percentage of the class for which the school was able to provide employment data, and is used to calculate the school's final score in this category."
Faculty with Doctorates	FacDoc	Published and non-published	Percentage	"Percentage of full-time faculty with a doctoral degree."
International Board	IntBoa	Published and non-published	Percentage	"Percentage of the board whose citizenship differs from the country in which the school is based."
International Faculty	IntFac	Published and non-published	Percentage	"Calculated according to the diversity of faculty by citizenship and the percentage whose citizenship differs from their country of employment."
International Students	IntStu	Published and non-published	Percentage	"Calculated according to the diversity of current MBA students by citizenship and the percentage whose citizenship differs from the country in which they study."
Women Board	WomBoa	Published and non-published	Percentage	"Percentage of female members on the school advisory board. Schools with a 50:50 (male: female) composition receive the highest possible score."
Women Faculty	WomFac	Published and non-published	Percentage	"Percentage of female faculty. Schools with a 50:50 (male: female) composition receive the highest possible score."
Women Students	WomStu	Published and non-published	Percentage	"Percentage of female students on the full-time MBA. Schools with a 50:50 (male: female) composition receive the highest possible score."
Languages	Lang	Published and non-published	Languages	"Number of extra languages required on completion of the MBA."
Salary Increase	SlyInc	Published only	Percentage	"Average difference in alumnus salary before the MBA to now. Half of this figure is calculated according to the absolute salary increase, and half according to the percentage increase relative to pre-MBA salary – the "salary percentage increase" figure published in the table."

Table 2: FT Global MBA ranking criteria definitions between 2006 and 2014 (Source: FT website, accessed 30-01-2014)

Criterion	Code	Data available	Unit	Definition in 2014
Weighted Salary	SlyWgt	Published only	US\$ PPP equivalent	"Average alumnus salary three years after graduation, US\$ PPP equivalent, with adjustment for variations between sectors. Includes data for the current year and the one or two preceding years where available."
Aims Achieved	AimAch	Published only	Ranks	"The extent to which alumni fulfilled their stated goals or reasons for doing an MBA. Includes data for the current year and the one or two preceding years where available."
Alumni Recommend	AluRec	Published only	Ranks	"Calculated according to selection by alumni of three schools from which they would recruit MBA graduates. Includes data for the current year and the one or two preceding years where available."
Career Progress	CarPro	Published only	Ranks	"Calculated according to changes in the level of seniority and the size of company alumni are working in now, compared with before their MBA. Includes data for the current year and the one or two preceding years where available."
FT Doctoral Rank	DocRank	Published only	Ranks	"Calculated according to the number of doctoral graduates from each business school during the past three years. Extra points are awarded if these graduates took up faculty positions at one of the top 50 full-time MBA schools of 2013."
FT Research Rank	ResRank	Published only	Ranks	"Calculated according to the number of articles published by each school's current full-time faculty members in 45 selected academic and practitioner journals between January 2011 and October 2013. The rank combines the absolute number of publications with the number weighted relative to the faculty's size."
International Experience	IntExp	Published only	Ranks	"Calculated according to whether the most recent graduating MBA class completed exchanges, research projects, study tours and company internships in countries other than where the school is based."
International Mobility	IntMob	Published only	Ranks	"Calculated according to whether alumni worked in different countries pre-MBA, on graduation and three years after graduation."
Placement Success	PlaSuc	Published only	Ranks	"Effectiveness of the school careers service in supporting student recruitment, as rated by their alumni. Includes data for the current year and the one or two preceding years where available."
Value for Money	ValMon	Published only	Ranks	"Calculated using salary today, course length, fees and other costs, including lost income during the MBA."

Table 2: FT Global MBA ranking criteria definitions between 2006 and 2014 (Source: FT website, accessed 30-01-2014) (continued)

Those data have several advantages as compared to data sets used in previous studies. First, it includes novel data of both published ranking actors (the first 100 ranked) and non-published ones. Second, it is longitudinal, as it features data over fourteen years between 2001 and 2014. Third, it is complete, as it includes published and non-published data on ten out of 21 criteria, for most of the years. Aggregate data,

which is only published in rank form, like Aims Achieved, Alumni Recommend, Career Progress, FT Doctoral Rank, FT Research Rank, International Experience, International Mobility, Placement Success and Value for Money was not requested, as ranks are not calculated for non-ranked ranking actors. Due to confidentiality issues, the FT did not share the non-published Salary Increase and Weighted Salary Data. Fourth, it includes real and not aggregate data. Fifth, the methodology is transparent and can be accessed for all years. Finally, the FT rankings have gained considerable attention in the business as well as academic communities as the only truly global ranking of MBA programmes (Dichev, 2008; Devinney, Dowling & Perm-Ajchariyawong, 2010; Free, Saltiero & Shearer, 2009; Wedlin, 2006, 2007, 2011), suggesting that ranking actors are aware of the FT ranking.

Given that not all data were available for all years, criteria (specifically salary data) and type of ranking actors (published or non-published), I thus split the data into five different data sets. In table 3, the data sets are presented according to the number of ranking actors, whether they include constant ranking actors in every year in order to control for entering and exiting actors, whether they include ranked and non-ranked actors, whether they include salary data, and according to how many years of observations it includes.

Data set	DS1	DS2	DS3	DS4	DS5
Number of actors	114	200	131	62	52
Constant actors	yes	no	no	yes	yes
Includes non-ranked	yes	yes	no	no	no
Includes salary data	no	no	yes	yes	yes
Years	2006-2014	2006-2014	2001-2014	2006-2014	2001-2014

Table 3: Comparison of data sets

As can be seen in table 3, none of the data sets is complete in the sense of the previously mentioned criteria. As they included a substantial number of ranking actors,

I retained data sets DS1, DS2 and DS3 for further analysis. While the DS2 and DS3 data sets contain more variables and ranking actors, a comparison revealed that they are not fundamentally different from DS1 in terms of their probability distributions and measures of central tendency. Due to its relatively high number of ranked and non-ranked actors and high number of repeat observations ($t=9$), I thus chose DS1 as the reference data set for further analysis. I will use the DS2 and DS3 data sets in order to triangulate results from the analysis of DS1 (Denzin & Lincoln, 1994). I am including some summary statistics for the 114 participating ranking actors in table 4 and 5. These will be analysed in detail in chapters V and VI. For an overview of the 114 schools see table 6. The DS2 data set consists of exactly 200 ranking actors that have participated in the FT MBA ranking process at least once between 2006 and 2014. For an overview of the 200 schools see table 7. I am including some summary statistics for the 200 participating ranking actors of DS2 in table 8 and 9.

I will now compare the DS1 and DS2 data sets in terms of their inclusion of ranking actors. The difference in representation of countries between the DS1 and DS2 is marginal, i.e. 1% or less for most countries. Countries that are slightly underrepresented in DS1 are France (-2.2%), China (-2.2%), South Korea (-1.1%), Germany (-1.5%), India (-1.5%), and Portugal (-1.5%). For China, South Korea and India, this can be explained by the recent entry of Asian schools into the ranking process. France's underrepresentation can be explained by its relatively high number of unsuccessful submissions. Germany and Portugal on the other hand have both entered the business school market as latecomers, and have a historically low number of internationally successful business schools, thus being underrepresented as well. Countries that are slightly overrepresented are the UK (2.2%) and Canada (2.3%), which corresponds with the preponderance of business schools from English-speaking

countries, and their long tradition of MBA programmes. The only country with a moderate overrepresentation in the DS1 data set is the US (13.5%), which can be explained by the overall dominance of US business schools in terms of ranking success. Despite being challenged in recent years in particular by European and Asian business schools (Collet & Vives, 2013), American schools still dominate the ranking: In 2014, 50 US schools were ranked among the best 100. This is only a small decrease from 2006, when 58 US schools made the FT MBA ranking, and an even smaller decrease from 2001, where 51 US schools achieved the same. Thus, overall, the DS1 data set overweighs high performing schools from English-speaking countries, and underweights continental European and Asian business schools. In the following chapter, I will use all three data sets to describe the vertical segments, horizontal segments and clusters of the ranking field.

VII RANKING FRAME ADJUSTMENT

In this chapter, I will use three case studies of ranking actors with different ranking trajectories to analyse how ranking frames are adjusted over time. For this purpose, I will develop several indicators that will help to understand how ranking actors adjust ranking frames. I will triangulate the results from these analyses with evidence from public communication materials of ranking actors. For that purpose, I will also present evidence of the use of other templates and reference points that play a role in the adjustment of ranking frames, specifically history, geography and measurement devices like accreditations.

Before presenting the empirical evidence, I will explain the theoretical underpinning of the case studies, provide reasons for the selection of cases, and lay out a structure for the analysis of each case. This includes the construction of two measures; the Marginal Improvement Indicator and the Ranking Frame Indicator.

I am choosing the approach of an instrumental case study (Stake, 1978), using three business schools as well as two clusters of schools that participated in the FT MBA ranking between 2001 and 2014. These cases will serve to shed light on the impact of rankings on organisations. The use of case studies has a long-standing tradition in the organisational literature (Eisenhardt, 1989, 1991; Gibbert, Ruigrok, & Wicki, 2008). Case study research involves both the in-depth investigation of single cases on several levels of analysis, as well as the exploration and comparison of several cases (Yin, 1981, 1984). Case studies usually use multiple sources of evidence and data triangulation (Denzin & Lincoln, 1994), as well as both qualitative and quantitative data (Yin, 1994). Here, Stake (1995) points out that focusing on the comparison of cases can lead to a loss of complexity. Thus, I aim to provide a rich set of descriptions (Kidder,

1982) to construct individual meaning and generalise beyond the selected cases by comparing the outcomes of the single case studies (Firestone, 1993).

1 Selection of cases

The single cases were chosen according to three criteria. First, as the aim of the case study is the longitudinal exploration of a particular case, the data set was examined for cases in the DS2 data set in the period from 2001 to 2014. Second, the data set was examined for clear patterns of rises and falls in ranks, with an emphasis on identifying cases that show a fairly linear ranking trend, as well as cases that show changes in trends. Third, given that there is a preponderance of ranking actors from North American, Europe and Asia, one ranking actor from each continent was chosen. These cases are also complementary, as the decline in rank of American and European and in particular UK schools is mirrored by a rise in rank of Asian schools. The shortlisted cases were CEIBS, Chinese University of Hong Kong Business School, Indian Institute of Management Ahmedabad, University of Edinburgh Business School, Manchester Business School, Warwick Business School, Judge Business School, Said Business School, Tuck School of Business at Dartmouth College, Western University Ivey Business School and Cox School of Business. Based on availability of relevant data on rankings from the school websites, I further narrowed the cases down to three ranking actors. Thus, CEIBS, University of Edinburgh Business School (hereafter: UEBS) and Western University Ivey Business School (hereafter: WUIBS) were retained for the case studies.

3 Case study I – CEIBS

Background. Founded in 1994 in Shanghai, China, under an agreement between the Ministry of Commerce of the People's Republic of China and the European Commission as the China Europe International Business School, CEIBS's mission is to "educate responsible leaders versed in 'China Depth, Global Breadth' (CEIBS, 2014a). In 2014, CEIBS had 62 full-time faculty and claimed to be "the first business school in mainland China that offers a full-time MBA, an Executive MBA and a wide array of executive education programmes" (CEIBS, 2014a). CEIBS's 18-months full-time MBA programme had a class intake of 192 students from 21 countries in 2013, of which 35% were overseas students (CEIBS, 2014a). This international dimension is emphasised by the school, which claims that this makes CEIBS "the most diverse group of any business school in Mainland China" (CEIBS, 2014a). This is also reflected in the choice of international partners. CEIBS offers an exchange programme with partners such as Schulich School of Business (Canada), HK-UST and CUHK (both Hong Kong), HEC and INSEAD (both France), Indian School of Business (India), SDA Bocconi (Italy), ESADE and IESE (both Spain), Rotterdam School of Management (Netherlands), LBS and MBS (both UK), as well as Haas, Anderson, Darden, Cox, Fuqua, Johnson, Kellogg, Stern, McCombs, Ross, Tuck and Wharton (all USA) (CEIBS, 2014b). All of these partners also participate in the FT rankings, usually exhibiting mid to high-level ranking performance.

Ranking communication. CEIBS has a dedicated ‘Rankings and accreditations’ page, which it introduces by taking China, Asia and the world as reference points, pointing out that it is “the first Asia-based business school that has achieved top-tier global rankings” and “the leading international business school in Asia” (CEIBS, 2014c). Furthermore, the school claims that it is “the first Asia-based business school that has achieved top-tier global rankings for its MBA, EMBA and Executive Education programmes, and is the first business school in mainland China that has earned an internationally recognized EQUIS accreditation” (CEIBS, 2014c).

In the section “Top-tier global rankings” the school changes its emphasis to a temporal focus, pointing to the recent establishment of the school. It then claims that it is “the only Asian business school to have achieved global ranking”, whereas it had only claimed to be “the first” to achieve that in the previous paragraph (CEIBS, 2014c). It then takes the FT MBA top 25 schools as a reference point, suggesting that it sees itself as competing in the top segment of the ranking, and points to the stability in its ranking “for 10 consecutive years”:

*“CEIBS is the **only Asian business school to have achieved global (sic!) ranking for its MBA, EMBA and Executive Education programmes. Despite its young age of just 20 years, the CEIBS MBA Programme has ranked within the Top 25 by the Financial Times’ annual global business school survey for 10 consecutive years (2005-2014). The EMBA Programme is ranked #7 (2012).**” (CEIBS, 2014c; emphasis added)*

CEIBS then goes on to display its performance on the Bloomberg Businessweek China, Forbes China, Forbes Magazine, Ed Universal, Quacquarelli Symmonds, and Poets & Quants rankings, but mainly the various rankings of the FT, and specifically the

MBA ranking. In terms of accreditations, CEIBS specifically mentions its AACSB and EQUIS (see chapter II) accreditations (CEIBS, 2014c).

Ranking performance. As we can see in figure 43, CEIBS’s ranking performance is marked by a strong upwards tendency. Between 2002 and 2014, CEIBS gains 75 ranks. This tendency is however not linear. Most of the increase is achieved from 2002 to 2005, where the ranking increases from 92nd to 22nd place. While the highest ever ranking is reached in 2009 (8th), a sharp fall to 22nd place follows after that. This is followed by another fall to 24th in 2012. Only in 2013, this tendency is partially reversed, with another increase in rank by nine positions to 15th.

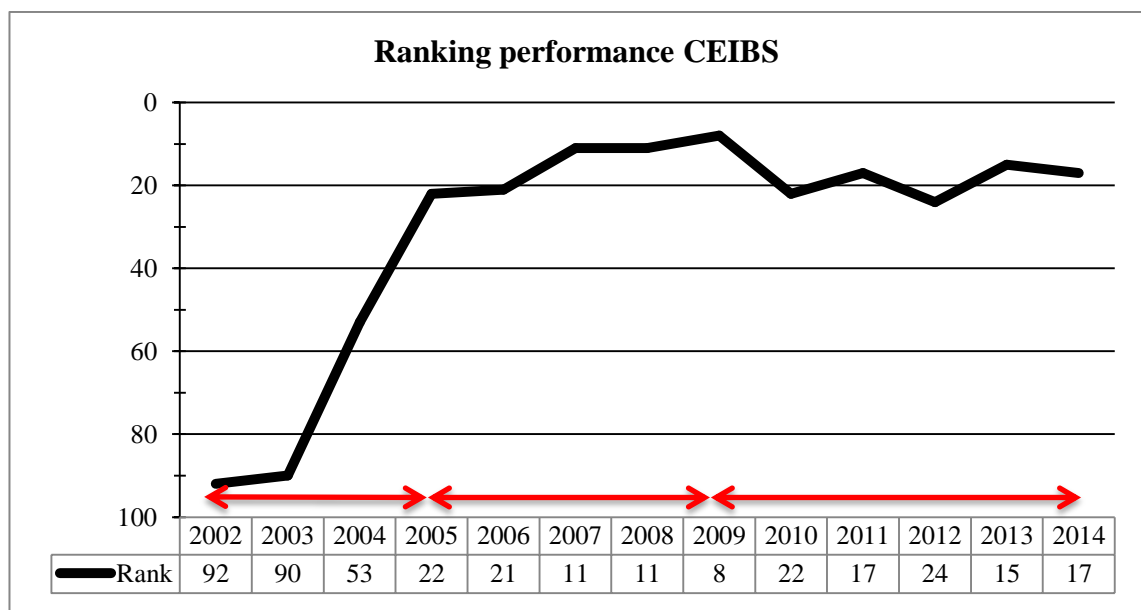


Figure 43: CEIBS – Ranking performance 2002-2014

Marginal Improvement Indicators. As we can see in table 14, CEIBS shows a comparatively low marginal performance improvement (red cells) in many indicators in most of the years, with a considerable amount of strong marginal performance deteriorations, for example in the 2004-05 period (IntFac=-16; WomFac=-7), 2002-03 (FacDoc=-17), 2008-09 (Emp3M=-8; IntFac=-7). Many of these deteriorations are made up for in the year following the fall, suggesting that a fall in criterion performance

triggers strategic activity to make up for previous shortcomings. Notable exceptions are the 2005-06 and 2010-11 period, where seven indicators show a marginal performance improvement. Overall, CEIBS has more positive than negative MMIs on only three criteria: FacDoc, IntStu and SlyInc, suggesting that a school can increase its rank considerably by focusing on only a small range of criteria. Most of the quick increase in the ranking position is however explained through the high marginal performance improvement on SlyWgt of more than 30,000\$ for three periods in a row between 2003 and 2005. Some of this improvement is however again lost in 2005 in terms of SlyInc, as well as during the years 2009 until 2012 in terms of SlyWgt, in particular in 2010. As these two criteria count for 40% of all performance criteria in the ranking, this drop largely explains the sudden fall from 8th to 22nd in ranking position between 2009 and 2010. Only when the marginal performance improvement is reversed in 2013, mainly in terms of IntFac, SlyWgt and SlyInc, the fall in rank is partially reversed, with CEIBS rising again to 15th. The high coefficients of variation (hereafter: CV) for IntStu (0.48 as compared to field CV of 0.07) and SlyWgt (0.38 as compared to 0.08) suggest that international and salary criteria have seen most of the strategic changes in the period in question in comparison to the field. However, despite the steep increase in rank, it is interesting to note that CEIBS actually has a preponderance of negative MIIs on most criteria over all periods. Only IntStu, FacDoc and SlyInc show more positive than negative MIIs. This indicates that, despite falling behind on most indicators in most periods, ranking actors can still increase their rank through a ranking frame that focuses on strong improvements on specific criteria and periods.

MII CEIBS	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
Empl3M	8	-2	-2	4	-10	-9	2	-8	14	-2	2	-1
IntFac	-4	1	-16	8	4	-4	2	-7	1	-4	6	-2
IntBoa	-11	-2	1	-1	2	-4	0	-1	-4	2	-2	0
IntStu	13	-5	7	-2	10	3	3	2	4	0	-3	-7
WomBoa	-1	-1	-1	-2	0	0	-1	1	6	0	0	0
WomFac	1	5	-7	-3	-2	1	2	2	-2	0	-2	-2
WomStu	-4	1	-3	4	-7	5	-5	3	4	-7	0	11
FacDoc	-17	13	1	2	0	1	1	0	2	0	-2	0
SlyWgt	-4580	31409	36673	34797	5652	4166	-5475	-23829	-3476	-2735	3744	-473
SlyInc	17	29	10	-23	10	-1	26	-43	22	-14	13	5

Table 14: CEIBS – Change of criterion performance year-to-year, controlling for field changes (negative values in red, positive values in green)

The performance of CEIBS and the field on each ranking criterion can be found in tables 15 and 16.

CEIBS	2002	2003	2004	2005	2006	2007	2008
Emp3M	100	96	96	99	97	99	92
EmpDat	n/a	n/a	n/a	n/a	88	92	87
IntFac	71	69	71	54	64	68	65
IntBoa	60	50	50	50	50	50	50
IntStu	2	14	11	19	19	29	32
WomBoa	0	10	10	10	10	10	10
WomFac	12	13	18	12	9	8	9
WomStu	39	33	33	30	36	30	35
FacDoc	94	76	88	92	94	95	95
Lang	0	0	0	0	1	1	1
SlyWgt	35,048	31,184	61,556	98,912	135,562	146,410	154,144
SlyInc	160	177	194	191	154	159	157

Year	2009	2010	2011	2012	2013	2014	Mean	CV
Emp3M	92	75	92	94	95	93	94	0.07
EmpDat	94	84	95	99	100	99	93	0.06
IntFac	69	63	65	63	70	68	66	0.07
IntBoa	50	50	50	50	50	50	51	0.05
IntStu	37	37	42	43	42	34	28	0.48
WomBoa	10	10	17	17	17	17	12	0.28
WomFac	12	15	13	13	12	11	12	0.22
WomStu	31	33	37	30	33	43	34	0.11
FacDoc	96	96	96	98	98	98	94	0.06
Lang	1	1	1	1	1	1	1	0.69
SlyWgt	151,641	127,688	126,315	123,058	131,362	127,117	111,538	0.38
SlyInc	179	133	155	150	157	156	163	0.10

Table 15: CEIBS – Performance on all criteria

Ranking Frame Indicator. As we can see in table 17, between 2003 and 2014, the RFI is positive and particularly high for IntStu (from 2% to 34% between 2002 and 2014; see table 15), SlyWgt (from 35,048\$ to 127,117\$) and SlyInc (from 160% to 156%). As the RFI takes into account the relative performance of the field, the RFI for SlyInc is positive and high despite a decrease in performance. As the ranking field average decreases from 144 to 98 for SlyInc (see table 16), a decline of only 4 points over 13 years shows the strategic emphasis that CEIBS has put on maintaining performance on this criterion relative to the ranking field. Contrastingly, WomFac (0 to 17 between 2002 and 2014, IntBoa (60 to 50) and IntFac (71 to 68) have a negative RFI, falling behind as compared to the rising averages of the ranking field. This suggests that CEIBS's ranking frame puts little strategic emphasis on changing the gender and international composition of its faculty or board.

RFI CEIBS	03-05	05-09	09-14	03-14
IntStu	757	66	-12	1157
SlyWgt	181	40	-18	216
SlyInc	35	7	-9	32
WomBoa	-29	-29	69	11
WomStu	-17	-9	36	5
FacDoc	-4	4	0	1
Empl3M	5	-14	5	-4
IntFac	-27	19	-8	-21
IntBoa	-20	-7	-9	-34
WomFac	-9	-19	-23	-52

Table 17: CEIBS – Ranking Frame Indicator over different periods

As we have seen in figure 43 above, however, the development of the ranking performance of CEIBS is not linear. I thus calculated different RFIs for the three periods of increase in rank (2002-2005), slight increase (2005-2009), and slight decrease (2009-2014). As we can see in table 17, the ranking frame has changed between periods following a change in ranking performance. While IntStu and SlyWgt show the highest score between 2003 and 2005 (757 and 181), these scores are considerably reduced in the period from 2005 to 2009, and turn negative in 2009

between 2014 (-12 and -18). In the latter period, criteria like WomBoa and WomStu that had been negative previously (-29 and -17; -29 and -9) turn positive in the two following periods (69 and 36). This suggests that a strong change in rank can serve as input for a decision to change focus on specific criteria in specific periods.

Conclusion. The criteria investigated in this study measure performance on mainly five dimensions: Employment (Emp3M), salary (SlyWgt, SlyInc), internationality (IntFac, IntBoa, IntStu, Lang), gender (WomBoa, WomFac, WomStu), and research (FacDoc). CEIBS has gone through a period of strategic change, with a ranking frame that suggests strong strategic emphasis on increasing salary-related performance in the first period, as well as on number of international students. As the ranking frame changes, a somewhat weaker emphasis on these criteria in the second period correlates with a slowing rise in ranking performance, while the decline on the same criteria in the last period coincides with a decline in ranking performance. Given this decline, an apparent shift in the ranking frame from salary-related criteria and international students to gender-related criteria (WomBoa and WomStu) ensues.

This could be the outcome of a strategic decision to focus on diversity criteria, or a reflection of the fact that improvement on salary criteria will be increasingly difficult to achieve for the school, given internal and external constraints. At the same time, the international faculty and board membership criteria remain negative throughout most periods. This suggests that CEIBS is relying on changing its input and output of students, rather than its internal structures in terms faculty and board membership, despite its stated mission of “becoming the most respected international business school by linking East and West in teaching, research, and business practice” (CEIBS, 2014a). The same counts for the percentage of female faculty, which remains negative in RFI throughout all periods.

To summarise, CEIBS has shown a clear emphasis on the FT MBA rankings in its communication, which is supported by its change of ranking frames and its use of several temporal, segmental and geographical reference points, as well as the fact that most of its international partners are high performers in the same ranking. It is thus reasonable to conclude that CEIBS has not only reacted to the rankings by changing its ranking frames in dealing with FT MBA rankings, but that these ranking frames have played a central role in the strategic decision making of the school.

4 Case study II – University of Edinburgh Business School

Background. Founded in 1918 as part of the University of Edinburgh, Scotland, the University of Edinburgh Business School (hereafter: UEBS) has “an international student body typically representing more than 88 countries” (UEBS, 2014a). In 2014, UEBS had 99 full-time faculty, representing 26 different nationalities, of which 50% were from outside the UK (UEBS, 2014a). UEBS’s full-time MBA takes 12 months, and had a cohort of 39 students, representing 21 countries in 2014 (UEBS, 2014a). It also offers a 16-months option including an exchange with partners like Aalto (Finland), EADA (Spain), ESSEC (France), Fuqua (USA), IPADE (México), Kellogg (USA), Macquarie (Australia) and Schulich (Canada) (UEBS, 2014b), all of which have participated in the FT rankings as well, most of them displaying relatively low ranking performance.

Ranking communication. UEBS has a dedicated ‘Accreditations and rankings’ page (UEBS, 2014c), which it introduces however solely by a reference to its reputation and achieved accreditations, stating that (emphasis in bold added by the author):

*“The University of Edinburgh Business School is **one of the most respected in the world**. Our programmes are among the most highly sought after. Our reputation is given further substance by our accreditation from a wide range of leading business education organisations and professional bodies.”* (UEBS, 2014c; emphasis added)

The school then mentions its various accreditations like AACSB, EQUIS and AMBA. The ranking subsection of the page is introduced by stating that “The Business School and its programmes feature highly in the leading rankings and league tables” (UEBS, 2014c). It specifically mentions UEBS’s 100th spot in the Economist full-time MBA ranking 2013 and its performance in the FT MSc in Management and MSc in Finance rankings, but not the FT MBA or EMBA rankings (UEBS, 2014c).

Ranking performance. As we can see in figure 44, UEBS starts being ranked in the 50th position in 2001. However, the school quickly drops in ranking to 93rd place in 2004. In 2005, the position is maintained, followed by an increase in position that even surpasses the initial position by six places, resulting in a rank of 44 in 2008. This is followed by another sharp fall in rank to 92 in 2009, after which the school still manages to improve by nine ranks in 2012 (83rd). After that, the school drops off the ranking in 2013 and 2014 (indicated as rank 120).

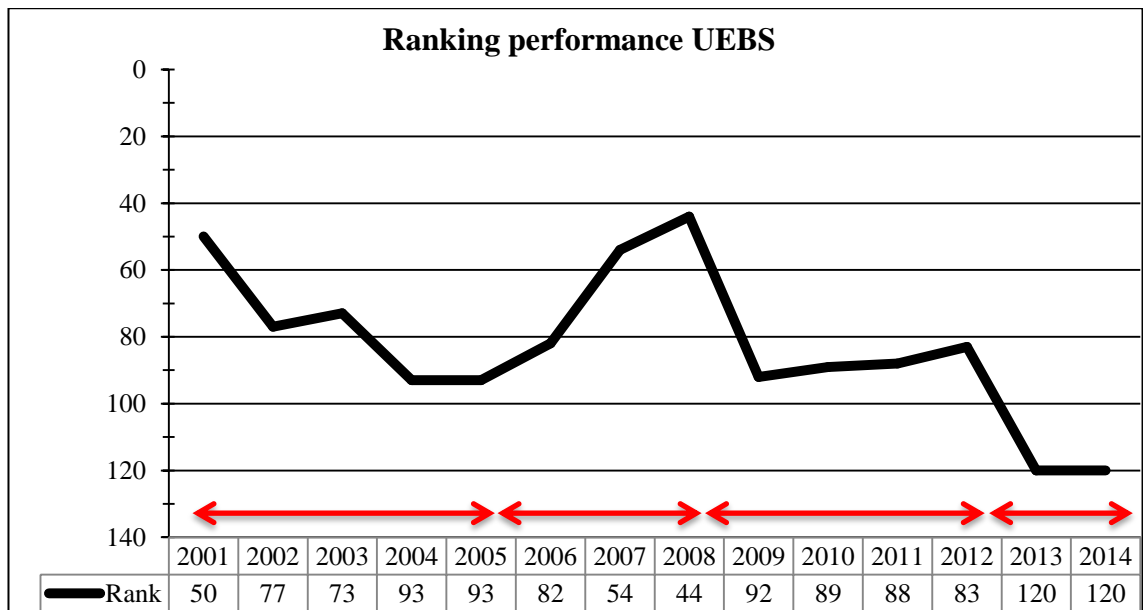


Figure 44: UEBS – Ranking performance 2001-2014 (non-ranked coded as 120)

Marginal Improvement Indicator. As we can see in table 18, there are more negative than positive MIIs in most periods. Only in the periods of 2006-2008, 2009-2011 and 2013-2014 more criteria show improvement than those that do not. These periods of improvement only translate into higher rankings between 2006 and 2008, while the other years show a fall in ranking despite the rising MII.

MII UEBS	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
Empl3M	0	14	-13	-6	10	-24	16	3	4	-6	-6	8	1
IntFac	n/a	-1	5	7	1	-1	1	-8	-1	3	1	7	3
IntBoa	n/a	-1	-2	-22	5	2	3	0	1	-21	8	-2	13
IntStu	n/a	5	-4	-3	1	12	-8	1	4	10	-1	-13	-2
WomBoa	n/a	-1	-1	-8	5	0	5	9	-6	8	-11	0	0
WomFac	n/a	1	-1	0	4	-2	5	-2	4	1	0	-1	-1
WomStu	n/a	1	4	-3	-14	20	-3	-9	1	7	12	-21	12
FacDoc	n/a	18	-13	-3	3	-2	7	0	-6	7	-4	-7	5
Lang	n/a	1	0	0	0	0	-1	0	0	0	0	0	0
SlyWgt	-2885	-7510	-6828	1959	6885	9335	2082	-9044	-3504	1709	-3813	n/a	n/a
SlyInc	0	-18	-6	-1	29	8	1	-18	1	-9	-10	n/a	n/a

Table 18: UEBS – Change of criterion performance year-to-year, controlling for field changes (negative values in red, positive values in green)

In a characteristic pattern, several MIIs show high values for particular periods, followed by a deterioration in MII the next year, for example 2002-2004 (Empl3M: 14 and -13; FacDoc: 18 and -13), 2006-2008 (IntStu: 12 and -8), 2011-2013 (WomStu: 12

and -21). This suggests that UEBS has made an effort in improving on certain criteria, but the resulting marginal improvements are not sustainable. Contrastingly, periods of large negative marginal performance improvements are not usually met with corresponding improvements in the following periods, even when changes are positive, for example in 2002-2004 (SlyWgt: -7,510 and -6,828), 2004-2007 (IntBoa: -22 and 5 and 2), 2008-2010 (SlyWgt: -9,044 and -3,504 and 1,709) and 2013-2014 (IntStu: -13 and -2; WomStu: -21 and 12). However, overall, more criteria show marginal performance improvements than those that do not. Only FacDoc, Lang, SlyWgt and SlyInc have more negative than positive periods. This is an interesting observation, because it indicates that despite improving on each criterion as compared to the field in most periods, a ranking actor can still heavily decline in rank over time. Table 19 shows the performance of UEBS on all criteria.

Ranking Frame Indicator. As we can see in table 20, the RFI reveals an emphasis on improving the IntFac (69), WomFac (44) and WomStu (25) criteria between 2002 and 2014, while it is negative for the SlyWgt, SlyInc and IntBoa criteria.

RFI	2002-2005	2005-2008	2008-2012	2012-2014	2002-2014*
IntFac	43	3	-10	23	69
WomFac	0	34	13	-5	44
WomStu	5	11	37	-22	25
FacDoc	2	10	-4	-2	5
Empl3M	-4	2	-6	11	1
WomBoa	-40	57	-1	0	1
IntStu	-2	5	16	-15	0
SlyWgt	-15	23	-14	n/a	-10
SlyInc	-23	49	-37	n/a	-21
IntBoa	-50	36	-31	36	-33

Table 20: UEBS – Ranking Frame Indicator over different periods

*2002-2012 for salary criteria

This reflects the lack of emphasis on salary criteria in the ranking frame. The picture is however different for different periods. Between 2002 and 2005, mainly board indicators (WomBoa: -40; IntBoa: -50) as well as salary indicators (SlyWgt: -15; SlyInc: -23) are negative, while the ranking frame has an emphasis on international faculty (IntFac: 43). This leads to a fall in ranking position. In the 2005 to 2008 period, all criteria are positive, with WomBoa (57), SlyInc (49), IntBoa (36), WomFac (34) and SlyWgt (23) showing the highest increases, suggesting that the low performance on these criteria was strategically addressed by changing the ranking frame, resulting in a rise in ranking position. These gains are however lost in the following period, with all criteria except for WomStu (37), IntStu (16), and WomFac (13) showing negative RFIs, suggesting that the school attempted to address some of its gender related performance issues, as well as the number of international students between 2008 and 2012. The latter efforts are also carried into the next period between 2012 and 2014 (IntBoa: 36 and IntFac: 23). However, UEBS deemphasised gender related indicators between 2012 and 2014 (WomFac: -5; WomStu: -22 and WomBoa: 0), while it incorporated the expansion of international faculty (IntFac: 23) and board (IntBoa: 36), as well as employment (Emp3M: 11) into its ranking frame.

Conclusion. UEBS has gone from being ranked in the top 50 of the FT MBA rankings to dropping off the rankings in 2013 and 2014. This development is largely due to a deterioration in salary related criteria and international board membership, despite a strong expansion of international faculty. It is apparent from the data that UEBS has changed its ranking frame to counter this fall, which led to a considerable improvement in ranking position between 2005 and 2008. The fact that most of the marginal improvements in terms of criteria were mirrored by a deterioration in the following periods indicates that changes were not sustainable. The frequent adjustments

in ranking frame, emphasising IntFac between 2002 and 2005, salary and gender-related indicators between 2005 and 2008 as well as international indicators between 2012 and 2014 suggest that UEBS's strategy vis-à-vis the ranking is fluctuating. Despite a marginal improvement on many criteria in most periods, the lack of focus on the most relevant ranking criteria contributes to the fall in rank. Overall, UEBS's ranking frame is consistent with the public emphasis on international indicators of UEBS, but reveals an inconsistency of approach regarding the FT ranking, resulting ultimately in the school dropping off the rankings. This pattern, together with a lack of emphasis of the FT ranking in the school communication, suggests that the school is increasingly moving away from using the FT MBA rankings for the production of its ranking frame.

5 Case study III – Western University – Richard Ivey Business School

Background. Founded in 1922 as the Department of Commercial Economics of the University of Western Ontario, the Ivey Business School (WUIBS) claims it “has earned an international reputation for its teaching and research excellence and the high calibre of its students and faculty” (WUIBS, 2014a). WUIBS has a faculty of 108 professors and lecturers whose mission is to “develop business leaders who think globally, act strategically and contribute to the societies in which they operate” (WUIBS, 2014a). The school offers a 12-months full-time MBA programme with a cohort of 104 students, of which 32% were from 13 countries in 2014 (WUIBS, 2014b). The school is part of the CEMS Global Alliance in Management Education and has established campuses in Toronto, Hong Kong and Mumbai (WUIBS, 2014a).

Ranking communication. WUIBS has a dedicated ‘Ranking Ivey’ page (WUIBS, 2014c). The school mentions its performance in several rankings, among them BusinessWeek, Canadian Business, as well as the FT EMBA and Executive Education rankings. Here, it claims that “there are some rankings dimensions that align with Ivey’s program strategies, which centre on student and recruiter satisfaction, and others that do not” (WUIBS, 2014c). WUIBS then relates the ranking performance to the strategy of the school: “On the measures that align with our strategy, we perform well and where we do not, we pay close attention and review the data to determine if there is opportunity to improve”, nevertheless concluding that “we do not formulate strategy based on their results” (WUIBS, 2014c).

WUIBS dedicates a whole section to the analysis of its FT MBA ranking performance. The school still uses its performance in the FT rankings as “one of the top twenty MBA programs in the world” in the year 2000 in its history section (WUIBS, 2014a). It also delivers a detailed analysis of its fall in ranking performance in the ranking section.

First, the school explains its overall ranking and drop in ranking performance, saying that “this year Ivey was ranked 89th internationally (of the top 100 global business schools) by the FT. This represents a drop in our position, despite improving our results in a number of areas this year” (WUIBS, 2014c). The school then goes on to discuss this development, pointing towards the complexity of the ranking system and its number of dimensions, and emphasising the criteria on which it performed well: “The FT Ranking is a complex ranking system that ultimately measures schools on 16 (sic!) different dimensions. Ivey performs well on several key criteria” (WUIBS, 2014c). The school uses the Weighted Salary figure and Placement Success sub-ranking to take a specifically Canadian and temporal reference point, emphasising the gap to its (unnamed) Canadian competitors:

“SALARY TODAY: Ivey retained its leadership position for top salary in Canada for 15 consecutive years at \$99,072 with a significant \$8,768 gap between us and next (sic!) closest Canadian school.

PLACEMENT SUCCESS: Ivey scored 38th in the world with our nearest Canadian competitor at 81 and all other Canadian schools sitting in the bottom quartile. We are ahead of 9 schools that made the top 25 overall. This score measures satisfaction with Career Management Services.”

(WUIBS, 2014c; emphasis added)

On the Career Progress criterion, WUIBS takes a temporal reference point, emphasising its improvement over the last years, but without mentioning its 75th position on the career progress sub-ranking:

“CAREER PROGRESS: Ivey improved 7 positions this year. This score measures improved level in seniority after an MBA.” (WUIBS, 2014c; emphasis added)

In terms of the Value for Money and Alumni Recommendation sub-rankings, the school underlines its global position in the top 50 of all participating schools:

“VALUE FOR MONEY: Ivey is in the top 50 schools and scored 43rd globally.

ALUMNI RECOMMENDATION: Ivey ranked 35th globally on this score that asks alumni from all schools in the ranking to name three schools from which they would recruit MBA graduates.” (WUIBS, 2014c; emphasis added)

Finally, WUIBS uses a detailed explanation of the measurement of the Employed at 3 Months metric, using an alleged difference in the reporting period. It then claims that this metric understates its job placement rate without providing evidence for this assertion. Subsequently, the school compares the performance to other Canadian business schools, and concludes that it *would* outperform most schools in the ranking:

“EMPLOYED AT 3 MONTHS: Ivey is second in Canada at 83%. This metric measures our employment rate 3 months post-graduation. With April convocation instead of June, our reporting period is nearly two months shorter than most schools. This understates our placement rate by about 9%. For our Employment Report we report on the same time frame as other Canadian schools - as of September 1. Based on our September 1 employment rate, Ivey would rank 1st in Canada and 24th globally (higher than 8 schools in the top 10 overall).” (WUIBS, 2014c; emphasis added)

Ranking performance. As we can see in figure 45, WUIBS shows a fairly stable pattern of decline from a top 20 position in 2001, reaching 53rd place in 2008. Between 2008 and 2011, the school rank increases by a total of seven ranks, before it drops to 68th place in 2012, followed by a further decline to 89th in 2014.

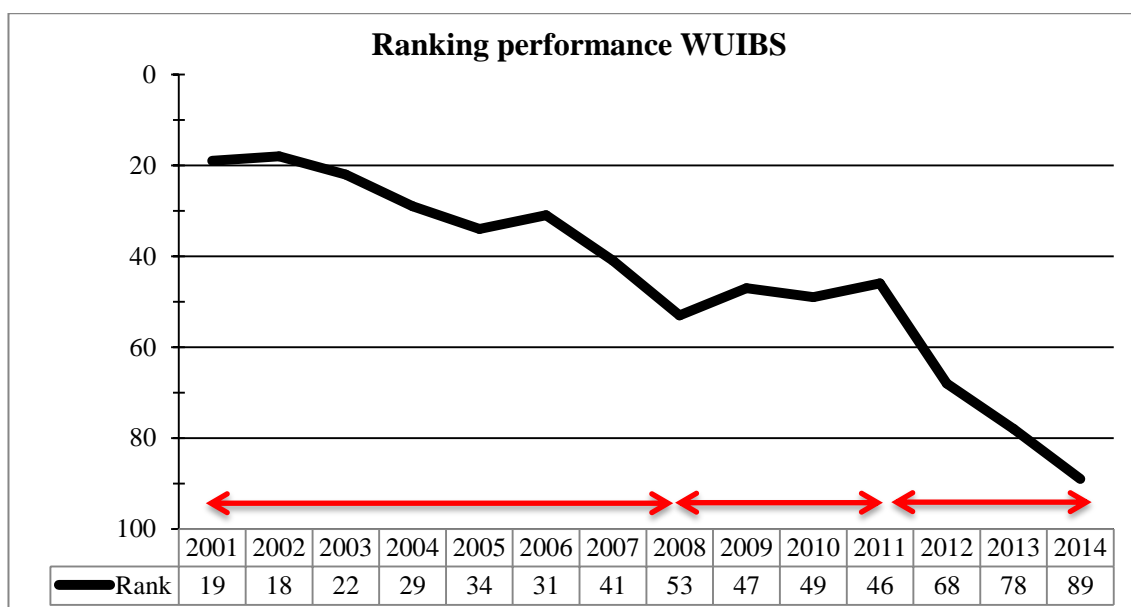


Figure 45: WUIBS – Ranking performance 2001-2014

Marginal Improvement Indicator. As we can see in table 21, WUIBS has more criteria with a negative than a positive MII in most of the periods. In particular the IntBoa, IntStu, WomBoa and FacDoc indicators are negative in most periods, with SlyWgt and SlyInc only being positive in three and four of 13 periods. Positive indicators outweigh the negative ones only in the 2001-2002, 2004-2006, 2010-2012 and 2013-2014 periods, which are nevertheless only translated to a simultaneous increase in rank in the 2010-2011 period. Strong decreases in MII (Empl3M: -11 in 2001-02 and -15 in 2002-03; IntFac: -15 in 2006-07; IntBoa: -9 in 2006-07 and 2007-08; IntStu: -42 in 2006-07) are often followed by positive marginal improvements in subsequent periods (Empl3M: 14 in 2003-04 and 23 in 2005-06; IntFac: 13 in 2008-09; IntBoa: 10 in 2008-09; IntStu: 8 in 2013-14).

MII WUIBS	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
Empl3M	-11	-15	14	1	23	-13	-2	1	5	2	-6	1	-4
IntFac	-3	-4	2	2	9	-15	0	13	-2	9	1	1	3
IntBoa	18	6	-4	2	0	-9	-9	10	-13	-4	3	-2	1
IntStu	-1	0	-1	16	6	-42	-3	0	0	2	3	0	8
WomBoa	-1	0	2	-1	-2	2	-2	0	0	0	2	-2	1
WomFac	5	2	-1	-4	1	-3	0	-1	2	5	-2	-3	3
WomStu	0	3	-5	4	-1	8	-9	-2	6	2	0	-6	-2
FacDoc	-3	-2	0	1	1	-1	0	4	-2	-5	5	-2	1
Lang	0	0	0	0	0	0	0	0	0	0	0	0	0

SlyWgt	930	5472	-5475	-4719	-6409	-3846	2940	-3792	-1493	-615	-3067	-2186	-268
SlyInc	7	-12	-4	-19	6	-12	-3	-2	-3	5	-18	1	-6

Table 21: WUIBS – Change of criterion performance year-to-year, controlling for field changes (negative values in red, positive values in green)

The 2006-07 period marks a turning point, with a strong decline in employment, international and salary MIIs. This deterioration in performance measures is however stopped in the subsequent years, in particular in the 2010-12 periods. The school however never manages to make up for this fall in rank. The constant drop in rank between 2001 and 2008 coincides with a preponderance of negative MIIs throughout this period. The change in tendency in 2008 can be partially explained by an increase in the SlyWgt criterion by \$2,940 in 2007-08. Despite this improvement being lost again in the subsequent period, the improvement on other criteria (IntFac and IntBoa) translates into a higher rank. As these increases are modest, this is however not a sustainable development, resulting in a loss of the previously gained ranking positions after 2011. The high coefficient of variation of the IntStu (0.40), IntFac (0.28) as well as IntBoa (0.26) indicate that the school was making frequent and significant strategic changes on international criteria, indicating a lack of strategic focus. Table 22 shows the performance of WUIBS on each criterion.

Ranking Frame Indicator. As we can see in table 23, most of the RFIs of WUIBS are consistently negative over the 2001-2014 period, with SlyWgt (-23), SlyInc (-34), and IntStu (-34) being the criteria that exhibit least strategic emphasis. Only the IntFac (46) and WomFac (29) criteria are positive, suggesting that the expansion of an international and gender-balanced faculty was a part of the ranking frame in that period. The picture is somewhat different for the first period of decline from a top 20 to a top 50 position from 2001 to 2008, where the expansion of international faculty received less attention (-28), whereas the expansion of the international board did (25). The only period of rise in ranks from 2008 to 2011 features an adjusted ranking frame with

positive RFIs for the expansion of international (64) and female (38) faculty, and to a lesser extent international (6) and female students (27). However, the salary-related criteria that make up a large part of the weighting of the ranking receive only low SlyInc (0) or negative (-6) RFIs, indicating that the ranking frame does not emphasise these criteria. In the subsequent period of decline in ranking (2011-2014), the ranking frame adjusts to include the expansion of the international criteria, specifically IntFac (9), IntBoa (7) and IntStu (48).

RFI	2001-2008	2008-2011	2011-2014	2001-2014
IntFac	-28	64	9	46
WomFac	-3	38	-6	29
FacDoc	-4	-4	5	-3
Empl3M	-2	8	-10	-4
WomStu	2	27	-27	-4
IntBoa	25	-24	7	-6
WomBoa	-19	1	5	-10
SlyWgt	-11	-6	-5	-23
SlyInc	-21	0	-23	-34
IntStu	-63	6	48	-34

Table 23: WUIBS – Ranking Frame Indicator over different periods

Conclusion. WUIBS’s assertion that “we do not formulate strategy based on [ranking] results” contradicts some of the patterns of strategic shifts observed in the previous sections, specifically in relation to faculty-related criteria, while it is more consistent with salary-related and international student criteria. Given the professed international outlook of the school, including its expansion with campuses in Asia, the lack of emphasis on these criteria in most periods, specifically on international students, is particularly inconsistent with the communication efforts of the school. In addition, the employment-related criteria do not receive a great deal of emphasis in the ranking frame, despite the lengthy explanation of the school on the website, which justifies its low performance on that criterion.

In conclusion, while some of the reference points the school is taking in its communication are still global, most comparisons now include a reference to Canadian schools. The lengthy explanations of ranking performance, and even specific criteria of the FT ranking, suggest that despite the fall in position, the ranking frame is still an important input into overall strategic decision making of the school. Hence, the school seems to deal with its low global ranking performance by increasingly adjusting its ranking frame to reflect a national, rather than a global identity, as evidenced by its frequent reference to national competitors. It appears that the FT MBA ranking is accelerating this process by making the impossibility of competing globally evident for the school.

6 Conclusions from the case studies

As these three case studies have shown, schools adopt different strategies in dealing with the ranking, in both their changes in ranking frame as well as the way changes or conflicts in actual and aspired performance are communicated. The choice of segmental, temporal, geographic or criteria-specific reference points in the FT ranking speaks to the active engagement of the schools with the ranking. However, this appears to be partially conditional on ranking success – while CEIBS openly uses its good placement in the ranking as a sign of quality and reputation, UEBS is less open about its ranking success, or lack thereof. The school rather puts the emphasis on accreditations, and some other rankings in which it performs comparably well. However, WUIBS has a much more active approach, openly discussing its ranking success, taking various reference points, and even reinterpreting some of the results.

On the one hand, a high number of positive relative performance improvements on criteria do not guarantee increases in rank, as evidenced by the case of UEBS. On the other hand, a high number of negative relative performance deteriorations do not necessarily result in a fall in rank, as evidenced by the case of CEIBS. Performance gains can easily be lost subsequently, indicating that some ranking frame adjustments like positive learning are more sustainable than gaming strategies that lead to short-term wins. In addition, rather than overall improvements on all criteria, ranking frames that emphasise focused performance improvements on some criteria in specific periods can result in a strong increase in rank. Ranking actors pick an anchoring point, for example their initial ranking position, or their main competitor, and compare their performance to this rank over time, producing either active and open celebration of the rankings, as is the case with CEIBS, defensive reinterpretation, as is the case of WUIBS, or an active emphasis on other measures of social evaluation, as is the case with UEBS. This confirms the proposals on ranking frame adjustment made in chapter III.

In conclusion, ranking actors are not passive recipients of the ranking process, but play an active role in the way ranking frames are being used and adjusted. This results in a variety of ranking frames that change over time, and are used for strategising and communication purposes by the ranking actor. However, as we have seen in chapter III, other templates as well as competitive and institutional pressures from peers also influence ranking frame formation. Hence, I will now turn to the question to what extent ranking frames are influenced by competitive clusters. In chapter VIII, I will thus do a cluster analysis of the FT rankings.

VIII CLUSTERS IN THE RANKING FIELD

The existence of clusters in the ranking field that shape how ranking actors set aspiration levels and evaluate actual performance is integral to the concept of the ranking frame. I thus did a cluster analysis of the FT ranking data in order to clarify some of the issues raised in the preceding chapters, specifically to what extent clusters exist within the ranking fields, what their nature and composition is, and how they develop over time.

There is a long-standing tradition in the organisational literature of using organisational metrics to determine clusters of organisations or individuals, in particular in the strategy, marketing, organisational behaviour and organisation theory fields. Gupta & Huefner (1972) were the first to cluster firms on financial ratios like cash velocity, inventory and asset turnover. They found that financial indicators could be used to determine characteristics of industries in which the clustered organisations were active. They concluded that “cluster analysis groupings of the ratio data correspond highly with both the judgmental classifications of economists and with numerous qualitatively expressed economic characteristics of the industries involved” (1972:90). Subsequently, there has been a number of organisational studies using cluster analysis to determine the dynamics of strategic groups of firms (Canina, Enz, & Harrison, 2005; Fiegenbaum & Thomas, 1995; Porac, Thomas, Wilson, Paton & Kanfer, 1995; Reger & Huff, 1993), the structural asymmetries of competitors within industries of known rivalry characteristics (Harrigan, 1985), contingent employees (Marler, Woodard, Barringer & Milkovich, 2002), technology ventures (Grueber, Heinemann, Brettel & Hugeling, 2010), listed companies (Leask & Parker, 2007), public banks (DeSarbo &

Grewal, 2008), service professionals (Bensaou, Galunic & Jonczyk-Sédès, 2014), and work teams (Gilson & Shalley, 2004).

Although widely used for creating groups of research subjects based on their performance on variables, cluster analysis remains a “complex challenge” and “has been often less than ideal”, as Ketchen and Shook (1996: 441) state in their review of the application of cluster analysis in the strategy field. A particular issue is that cluster analysis requires the “extensive reliance on researcher judgment” (Ketchen & Shook, 1996: 442) as it cannot be reduced to a single test statistic. As Schneiderman, Willis & Kowalski (1993: 399) point out, this leads to situation where “a given clustering method can be characterized in terms of whether it does or does not possess some 45 properties [...] [thus,] the total number of possible methods is of the order of 2^{45} .” Therefore, great care and rigour is required when using cluster analysis.

Despite calls to use longitudinal data for cluster analysis to overcome some of the previously mentioned statistical issues and to uncover performance differences within and across years (Ketchen & Shook, 1996: 455), one of the main weaknesses of the literature using cluster analysis has been the lack of longitudinal studies. To be specific, Ketchen and Shook (1996: 455) propose that longitudinal studies can help understand the cumulative and the lagged effect of cluster membership on performance over time, as well as how time impacts on the cluster-performance relationship. Yet, the studies that have addressed this issue remain the exception (see De la Cruz Mesía, Quintana & Marshall, 2008; Ketchen, Thomas & Snow, 1993; Osborne, Stubbart & Ramaprasad, 2001). Others have not used the full potential of longitudinal data sets. For example, Bierly & Chakrabarti (1996) split a 15-year sample into three 5-year periods to compare the development of cluster means. A reason for this is that little progress has been made to advance capabilities for analysing longitudinal cluster data, despite calls to develop methods and software (Schneiderman, Willis & Kowalski, 1993). In

addition, few studies have focused on developing new methods for longitudinal cluster analysis. However, the advances that have been made (see for example Heggeseth, 2013) have not yet been put into practice in the field of organisational studies, possibly because the development of corresponding software has been lagging behind.

Given that cluster analysis, and specifically longitudinal cluster analysis, still has no generally accepted single approach, I will thus base my analysis on the process proposed by Milligan (1996) and Everitt, Landau, Leese and Stahl (2011:261-262). The cluster analysis options of STATA 13 was used for all analyses. In the following, I will describe the process of the analysis in eight steps, addressing issues of the selection of clustering objects, dealing with missing and erroneous values and variable standardisation, choice of proximity measures, variable weighting and selection, as well as choice of clustering methods, determination of the number of clusters, and testing for reliability and validity of cluster solutions. In chapter IX, I will then interpret the resulting clusters and complement my analysis with qualitative data from business schools.

1 Selection of clustering objects

In order to provide for a triangulation (Denzin & Lincoln, 1994) of the results of the cluster analysis, I did the analysis with each of the three data sets DS1, DS2 and DS3 described in the previous chapters. As can be seen in table 24, these data sets all contain measures from the FT rankings, but are different in terms of type and number of ranking actors (non-ranked and ranked), inclusion of salary data and time frames.

Data set	DS1	DS2	DS3
Number of actors	114	200	131
Constant actors	yes	no	no

Includes non-ranked	yes	yes	no
Includes salary data	no	no	yes
Years	2006-2014	2006-2014	2001-2014

Table 24: Comparison of data sets used in the cluster analysis

2 Dealing with missing and erroneous values and variable standardisation

All three data sets included a small number of missing values. Nine of the Emp3M criteria were over 100%, indicating erroneous values. These values were replaced with the average of the values of all ranking actors in the particular year. Other missing values for the WomBoa and WomFac criteria were dealt with in the same manner.

Ketchen and Shook (1996) define the process of standardisation as one of the most important steps in cluster analysis, as variables with large ranges can dominate cluster solutions. Many cluster analysis studies transform variables into z-scores with means of zero and equal variances. However, assuming that all variables have an equal contribution to the final cluster solution by discarding meaningful differences in variance can lead to a high loss of information (Edelbrock, 1979). Thus, Aldenderfer and Blashfield (1984) recommend the use of standardisation on a case-by-case basis, depending on the data structure. As can be seen in table 25, most variables were on a continuous scale, taking values between 0 and 100. Standardisation was thus not necessary for these variables.

Criterion	Weighting 2014 in %	Data available	Unit	Minimum value	Maximum value
Emp3M	2	All data sets	Percentage	0	100
EmpDat	0	All data sets	Percentage	0	100
FacDoc	5	All data sets	Percentage	0	100
IntBoa	2	All data sets	Percentage	0	100
IntFac	4	All data sets	Percentage	0	100
IntStu	4	All data sets	Percentage	0	100
WomBoa	1	All data sets	Percentage	0	100
WomFac	2	All data sets	Percentage	0	100
WomStu	2	All data sets	Percentage	0	100

Lang	1*	All data sets	Languages	0	2
SlyInc	20	DS3 only	Percentage	42	252
SlyWgt	20	DS3 only	US\$ PPP equivalent	31,184	194,645

Table 25: Comparison of variables used in the cluster analysis

* changed from 2 to 1% in 2013

Milligan and Cooper (1988) recommended standardisation using range rather than standard deviations to improve cluster recovery. The remaining Language, Salary Increase and Weighted Salary criteria were thus standardised according to the following formula:

$$\text{Standardised score} = \left(\frac{x_{vt} - \min_v}{\max_v - \min_v} \right) * 100 ,$$

where $v = \text{variable}$ and $t = \text{year}$. Since the absolute maxima and minima remain constant for all criteria measured in percentages, I used the maximum and minimum over all years for the standardisation of the other variables.

3 Choice of proximity measures

While Sneath and Sokal (1973) suggest the use of the simplest possible measure to ease interpretability of results, the nature and scale of the data as well as the clustering method should inform the choice of the proximity measure (Everitt, Landau, Leese & Stahl, 2011: 68-69). Gower and Legendre (1986) discuss several similarity and dissimilarity measures and give a decision making table. According to that classification, the data are continuous, have only positive values, double zeroes are excluded, and there are few extreme values. Thus, simple Euclidean distances were used as proximity measures.

4 Variable weighting

Cluster analysis treats all variables as equally important inputs. This can lead to misspecifications (Ketchen & Shook, 1996). Given that not all criteria do have an equal weighting in the ranking process, I considered a method for weighting the criteria. Milligan and Cooper (1988) propose eight different techniques for weighting continuous variables in cluster analyses, all based on variability. As Everitt et al. (2011: 64) point out, this approach has been adopted for most studies involving the clustering of continuous variables, parting from the assumption that the importance of a variable is inversely proportional to its variability. This can be problematic, as variables that are high in variability have been shown to assist the emergence of clear cluster solutions (Fleiss and Zubin, 1969). Given that the criteria in this study differ considerably in terms of variability, and that there is no apparent correlation between variability and weighting, this is not a reasonable assumption to make for this data set. Weighting by the inverse of the standard error is also a possibility, but only when the aim is the acknowledgement of measurement error (Everitt, Landau, Leese and Stahl, 2011:66). Another option is the omission of variables, or giving them a weighting of zero. Gnanadesikan, Kettenring and Tsao (1995) tested several approaches to variable selection. They found that equal weighting, and weights based on standard deviation or range variability were “generally ineffective” (1995:134), and that “weighting that is intertwined with k-means cluster optimization is more effective overall” (1995:134).

However, these studies do not discuss cases where there is a theoretical way of determining variable weighting, as is the case with the variables in the data sets in this study. As Morrison (1967) proposes, if there is a good rationale for assigning weightings, the researcher can weigh variables differently. I thus used the weights that the FT are employing for their MBA ranking as specified in table 25 above, multiplying

the values with the weighting divided by 100, as suggested by Bartholomew, Steele, Moustaki and Galbraith (2002:28).

5 Variable selection

The variable weighting process is inherently linked to the variable selection process, as omitting a variable from the analysis amounts to giving it a weighting of zero. Only criteria that are likely to define clusters should be included in the analysis (Everitt, Landau, Leese and Stahl, 2011:261). As the selection of variables that are “essentially 'white noise'” can be of great “discriminant importance” (Harrigan, 1985: 70), this step is “perhaps the most important [one]” (Ketchen & Shook, 1996: 443). Punj and Stewart (1983) also caution against the inclusion of spurious variables, as they may distort cluster solutions, while Reger and Huff (1993:103) warn that the “haphazard” selection of strategic dimensions can affect cluster analysis results.

The issue of multicollinearity is related to the question of variable selection. Ketchen and Shook (1996: 452) suggest that correlations of higher of 0.5 can serve as threshold for the exclusion of variables. As can be seen in table 26, the variables in the DS1 data set are not strongly correlated, with most below the 0.3 threshold. Few correlations are above the 0.5 threshold, and only those that are conceptually related, e.g. international indicators. Correlations for the DS2 and DS3 data sets showed similar results. However, citing Milligan (1996), Homburg, Jensen & Krohmer (2008: 137) point out that “unlike other multivariate methods, most cluster methods do not rely on the assumption that the input variables are uncorrelated”. Thus, variables were not excluded based on their correlation.

Year	Variable	Emp3M	EmpDat	WomFac	WomStu	WomBoa	IntFac	IntStu	IntBoa	FacDoc	Lang
2006	Emp3M	1									
2006	EmpDat	0.6	1								
2006	WomFac	-0.1	-0.1	1							
2006	WomStu	0	0	0.1	1						
2006	WomBoa	0	0	0.3	0	1					
2006	IntFac	0.1	-0.1	-0.2	0	0.2	1				
2006	IntStu	0.1	-0.1	0.1	-0.1	0.3	0.6	1			
2006	IntBoa	0	-0.1	-0.1	-0.1	0.2	0.6	0.6	1		
2006	FacDoc	0.2	0.2	-0.1	0.1	-0.1	0.2	0	0	1	
2006	Lang	-0.1	0	-0.1	-0.3	0.1	0.3	0.4	0.5	-0.3	1
2007	Emp3M	1									
2007	EmpDat	0.5	1								
2007	WomFac	-0.2	-0.1	1							
2007	WomStu	-0.3	-0.2	0.3	1						
2007	WomBoa	0	0	0.3	0	1					
2007	IntFac	0	-0.3	-0.2	0	0.1	1				
2007	IntStu	0	-0.4	0	-0.1	0.2	0.6	1			
2007	IntBoa	0	-0.3	-0.2	-0.1	0.2	0.6	0.6	1		
2007	FacDoc	0.2	0.1	-0.1	-0.1	-0.1	0.2	0	0	1	
2007	Lang	0	0	-0.2	-0.1	0	0.3	0.4	0.5	-0.2	1
2008	Emp3M	1									
2008	EmpDat	0.2	1								
2008	WomFac	0	-0.2	1							
2008	WomStu	-0.1	0	0.3	1						
2008	WomBoa	0.2	-0.2	0.1	0	1					
2008	IntFac	0.1	-0.2	-0.2	0	0.2	1				
2008	IntStu	0.1	-0.2	0	-0.2	0.3	0.6	1			
2008	IntBoa	0.1	-0.2	-0.1	-0.1	0.3	0.5	0.7	1		
2008	FacDoc	0.3	0.1	0	-0.1	0	0.2	0	0	1	
2008	Lang	-0.3	0	-0.1	-0.1	0	0.2	0.3	0.5	-0.2	1

Table 26: Correlations between criteria for all years, DS1

Year	Variable	Emp3M	EmpDat	WomFac	WomStu	WomBoa	IntFac	IntStu	IntBoa	FacDoc	Lang
2009	Emp3M	1									
2009	EmpDat	0.3	1								
2009	WomFac	-0.2	-0.1	1							
2009	WomStu	0	0	0	1						
2009	WomBoa	0.1	-0.2	0.2	-0.1	1					
2009	IntFac	0.1	-0.1	-0.1	0	0.2	1				
2009	IntStu	0.1	-0.3	0	-0.1	0.4	0.6	1			
2009	IntBoa	0	-0.2	-0.1	-0.1	0.3	0.6	0.7	1		
2009	FacDoc	0.2	0.3	0	-0.1	0	0.3	0	0	1	
2009	Lang	-0.2	0	0	0	0	0.2	0.3	0.5	-0.3	1
2010	Emp3M	1									
2010	EmpDat	0	1								
2010	WomFac	0.1	-0.1	1							
2010	WomStu	-0.2	-0.1	0.2	1						
2010	WomBoa	0.1	-0.1	0.2	-0.1	1					
2010	IntFac	0.2	-0.1	-0.1	0	0.3	1				
2010	IntStu	0.2	-0.2	0	-0.1	0.5	0.6	1			
2010	IntBoa	0.1	-0.1	-0.1	-0.1	0.3	0.6	0.6	1		
2010	FacDoc	0.2	0.2	-0.1	-0.1	-0.1	0.2	0	0.1	1	
2010	Lang	-0.2	0	-0.1	0	0	0.3	0.4	0.5	-0.2	1
2011	Emp3M	1									
2011	EmpDat	0.2	1								
2011	WomFac	0	-0.1	1							
2011	WomStu	-0.2	0	0.1	1						
2011	WomBoa	0.1	-0.1	0.2	0	1					
2011	IntFac	0.1	-0.1	0	0	0.4	1				
2011	IntStu	0.1	-0.4	0.1	-0.1	0.5	0.6	1			
2011	IntBoa	0.1	-0.2	-0.1	0	0.3	0.5	0.6	1		
2011	FacDoc	0.1	0.2	0	-0.2	0.1	0.2	0.1	0.1	1	
2011	Lang	-0.2	-0.2	-0.1	0.1	0	0.3	0.4	0.5	-0.2	1

Table 26: Correlations between criteria for all years, DS1 (continued)

Year	Variable	Emp3M	EmpDat	WomFac	WomStu	WomBoa	IntFac	IntStu	IntBoa	FacDoc	Lang
2012	Emp3M	1									
2012	EmpDat	0.2	1								
2012	WomFac	-0.1	-0.1	1							
2012	WomStu	-0.2	0	-0.1	1						
2012	WomBoa	0	-0.2	0.3	0.2	1					
2012	IntFac	0.1	-0.1	0	0	0.2	1				
2012	IntStu	0.1	-0.4	0.1	0.1	0.4	0.6	1			
2012	IntBoa	0.1	0	-0.1	0.3	0.2	0.5	0.6	1		
2012	FacDoc	0.1	0.1	0	-0.2	0	0.3	0.2	0.1	1	
2012	Lang	-0.2	-0.1	-0.1	0.1	0	0.3	0.3	0.5	-0.1	1
2013	Emp3M	1									
2013	EmpDat	0.3	1								
2013	WomFac	-0.1	0	1							
2013	WomStu	-0.3	-0.2	0.1	1						
2013	WomBoa	-0.1	-0.2	0.3	0.1	1					
2013	IntFac	0.1	-0.2	-0.1	0.2	0.2	1				
2013	IntStu	0.1	-0.4	0.1	0.1	0.4	0.6	1			
2013	IntBoa	0	-0.2	-0.1	0.1	0.2	0.5	0.6	1		
2013	FacDoc	0.2	0.1	0	-0.1	0	0.3	0.2	0.2	1	
2013	Lang	-0.2	-0.1	-0.1	0.1	0	0.3	0.3	0.6	0	1
2014	Emp3M	1									
2014	EmpDat	0.3	1								
2014	WomFac	0	-0.1	1							
2014	WomStu	-0.2	-0.1	0.2	1						
2014	WomBoa	-0.1	-0.2	0.3	0.2	1					
2014	IntFac	-0.1	-0.2	-0.1	0.1	0.2	1				
2014	IntStu	-0.1	-0.3	0.1	0.2	0.4	0.6	1			
2014	IntBoa	-0.2	-0.2	-0.1	0.1	0.3	0.6	0.6	1		
2014	FacDoc	0.1	0.1	0	0.1	0	0.3	0.2	0.2	1	
2014	Lang	-0.2	-0.1	-0.2	-0.1	0	0.3	0.3	0.5	0	1

Table 26: Correlations between criteria for all years, DS1 (continued)

As Harrigan (1985) suggests, adding additional variables often leads to only marginal improvements in cluster solutions, in particular if the variables are

standardised. She thus recommends that the researcher use judgement in selecting the number of variables. Noting that the chosen selection method should match the aim of the study, Ketchen and Shook (1996) propose three different approaches to variable selection. Inductive selection refers to the selection of variables without prior relationship to theory, often involving the maximisation of the number of variables. Deductive selection involves taking into account the expected cluster number and structure for selection. The cognitive approach uses the opinion of expert informants to inform variable selection. Ng, Westgren and Sonka (2008) suggest a fourth approach. They propose that high F-statistics indicate a great contribution to the separation of cluster solutions. They thus use the F-statistics of the ANOVA to determine key variables to include in the K-means analysis.

While Ng, Westgren and Sonka's (2008) method is rigorous in statistical terms, it can only be employed after an initial exploratory cluster analysis, and it does not take into account the expected cluster number and structure, as proposed by Ketchen and Shook's deductive approach (1996). I thus ran the analysis with different variables with the aim of being as parsimonious as possible and producing meaningful and interpretable solutions. The Employment Data criterion contributes to the calculation of the Emp3M criterion, but carries no weighting in the ranking. I thus excluded the Employment Data criterion from the further analyses. As discussed in chapter VI, an examination of the measures of central tendency of the data sets revealed that some criteria were heavily skewed and lost variance over time. This increases the risk of creating unstable cluster solutions.

As discussed in chapter VI, across all three data sets, the criteria with the lowest overall variance and the most highly skewed distributions were Lang, FacDoc, Emp3M, WomBoa as well as SlyInc. The language criterion was not excluded, as it was the only criterion with changing ranking weighting, as well as a significant decline in mean.

Based on this, different combinations of each data set, including all criteria or excluding FacDoc, Emp3M, WomBoa as well as SlyInc were used for determining the most meaningful and interpretable cluster solution. Including and excluding different variables, I thus compared the cluster solutions from the hierarchical cluster analysis, i.e. the cluster solutions as determined by interpreting the dendrogram, the Duda-Hart criterion, and the Calinski-Harabasz criterion (see section “Choice of clustering methods” for a detailed explanation of the hierarchical cluster analysis and stopping rules employed) for each analysis. As can be seen in tables 27, 28 and 29, the solutions including all variables, but excluding the FacDoc criterion as highly weighted (5%) and heavily skewed criterion, produced the most stable and meaningful results for each of the three data sets. The FacDoc criterion was thus excluded from further analysis, and the outcome of the hierarchical cluster analysis was used as a starting point for the non-hierarchical analysis. I will discuss this process now.

6 Choice of clustering methods

I considered both agglomerative hierarchical and polythetic non-hierarchical divisive clustering methods for the analysis. The unweighted pair-group method using arithmetic averages (hereafter: UPGMA) (Sokal & Sneath, 1963) and single linkage are most commonly used in hierarchical cluster analysis (Aldenderfer & Blashfield, 1984; Ng, Westgren, & Sonka, 2008).

The unweighted average linkage clustering method was chosen as it “tends to join clusters with small variances”, offers an “intermediate [solution] between single and complete linkage” and “takes account of cluster structure” (Everitt, Landau, Leese & Stahl, 2011:79). A combination of the Euclidian distance measure with the unweighted average linkage clustering method is particularly appropriate, as UPGMA takes into account (dis)similarity between pairs of cases in different clusters, thereby leading to comparatively little information loss (Romesburg, 1990). UPGMA is thus “relatively robust” (Everitt, Landau, Leese & Stahl, 2011:79) as compared to methods that tend to produce ‘chained’ clusters like single linkage (Sneath, 1957), do not take into account cluster structure like complete linkage (Sorensen, 1948), lead to solutions where clusters are dominated by certain groups like centroid linkage (Sokal & Michener, 1958), weigh points in small clusters more highly than in large clusters like weighted average linkage (McQuitty, 1966), or are subject to reversals like median linkage (Gower, 1967). Ward’s method (Ward, 1963) was also considered, but not chosen as it tends to find same size clusters and is sensitive to outliers (Ketchen & Shook, 1996; Everitt, Landau, Leese & Stahl, 2011:79).

However, there is a longstanding agreement in the literature that hierarchical agglomerative methods are, albeit popular, fraught with problems (Hawkins et al., 1982; Kaufman & Rousseeuw, 1990). In particular, hierarchical methods should not be applied where the data structure is itself not hierarchical (Everitt et al., 2011). As

Ketchen and Shook (1996) point out, all hierarchical algorithms suffer from instability of solutions, specifically for small sample sizes, as researchers do not know the cluster structure in advance.

Non-hierarchical methods have the advantage of being less prone to distortion by outliers (Aldenderfer & Blashfield, 1984). In addition, through passing through cluster solutions not once, but several times, they simultaneously maximise within-cluster homogeneity and between-cluster variance. Milligan and Cooper (1985: 351) deem the use of the results of hierarchical clustering as a starting point for non-hierarchical methods like k-means to be “an excellent strategy for establishing the generalizability of a cluster analysis”. The consensus among cluster researchers has thus been to use hierarchical algorithms to cross-validate results from non-hierarchical analysis and use results from hierarchical analysis as a starting points for non-hierarchical methods to determine the appropriate cluster structure (Aldenderfer & Blashfield, 1984; Hair et al., 1992; Hartigan, 1975; Ketchen & Shook, 1996; Milligan, 1980; Punj & Stewart, 1983). In consequence, the replication and testing of the results of hierarchical cluster analyses with non-hierarchical k-means analysis has become a common feature of cluster analysis studies in the strategy, marketing and organisational literatures (see for example Bensaou, Galunic & Jonczyk-Sédès, 2014; Gilson & Shalley, 2003; Grueber, Heinemann, Brettel & Hungeling, 2010; Homburg, Jensen & Krohmer, 2008; Short, Ketchen & Palmer, 2007). I am thus employing a combination of hierarchical unweighted average linkage clustering and non-hierarchical k-means clustering.

7 Determination of the number of clusters

Harrigan suggests that “the appropriate number of clusters will be a trade-off between parsimony and one's need for detail” (1985: 61). She thus encourages the researcher to decide what number of clusters provide for a meaningful portrayal of the data. Ketchen and Shook (1996: 446) suggest using the dendogram to look for natural clusters, as evidenced by dense branches. As this requires considerable interpretation of the researcher, Aldenderfer and Blashfield (1984) caution against the exclusive use of this method. Ketchen and Shook (1996) point out that attempts to formalise the interpretation of the dendogram like the use of the absolute or incremental value of the agglomeration coefficient, as well as the cubic clustering criterion (Milligan & Cooper, 1985) are also fraught with problems. A priori-theory about the number of clusters can also serve to inform the number of clusters (Hair et al., 1992). Ketchen and Shook thus conclude that “confidence in the number of clusters identified may be greater when determined through the convergence of multiple methods” (1996: 447).

Reger and Huff (1993) used three decision rules to ascertain the number of clusters from various hierarchical clustering techniques. The first rule is to select clusters that become evident through large distances in the dendogram; the second rule is to avoid one-actor cluster solutions and the third rule is to choose solutions with high interpretability based on qualitative data (Everitt, 1980; Hartigan, 1975). Ketchen and Shook (1996:442) also caution that cluster analysis “will provide clusters even if no meaningful groups are embedded in a sample”. It is thus necessary to test for the existence of a cluster structure.

Stopping rules, which determine after which point increasing the number of clusters leads to a loss of within cluster homogeneity and between cluster variance are appropriate for testing for cluster structures. In a test and review of 30 different stopping

rules, Milligan and Cooper's (1985) find that the Calinski–Harabasz pseudo-F index (Calinski & Harabasz, 1974) and the Duda–Hart $Je(2)/Je(1)$ index (Duda & Hart 1973) are most successful in recovering cluster structures. Large values of the Calinski–Harabasz pseudo-F point to the existence of distinct clusters, as well as large values of the $Je(2)/Je(1)$ index, coupled with a simultaneous small pseudo-T-squared value and a steep change in the pseudo-T-squared between cluster solutions. The Duda–Hart index can only be used for hierarchical cluster methods, while the Calinski–Harabasz index can be used for both non-hierarchical and hierarchical cluster analyses (Everitt et al., 2011). The Duda-Hart index has the additional advantage of testing for a one-cluster solution, i.e. the absence of cluster structure.

Following Homburg, Jensen & Krohmer (2008), who use the pseudo- t^2 index in combination with hierarchical clustering and Fukuoka, Lindgren, Rankin, Cooper & Carroll (2007), I used a combination of the dendograms, as well as the Duda-Hart and Calinski-Harabasz stopping rules to assess the cluster structure and minimise subjectivity in determination of cluster solutions. In particular, I looked for changes in solutions that are substantively not meaningful, e.g. a change from nine to two clusters for the Calinski-Harabasz criterion between 2006 and 2007, with a corresponding solution of four for the dendogram, and two for the Duda-Hart criterion (DS3). As can be seen in table 30, the DS1 data set delivers the most stable solution, both within and between stopping rules. In the following, I will thus limit my analysis to the DS1 data set.

Taking the average between the two stopping rules and the dendrogram analysis, the number of clusters decreases in all solutions over time. This is from approximately four to two clusters in DS1 between 2006 and 2014, from three to two clusters in DS2 from 2006 to 2014, and approximately seven to three clusters in DS3 from 2001 to 2014 (five to three clusters between 2006 and 2014). This indicates that overall, there is a clear decrease in the number of clusters in all data sets, with two out of three data sets showing a decrease to two clusters. In addition, none of the cluster solutions consisted in only one cluster, leaving the conclusion that while clusters do persist in the FT ranking, their number decreases considerably over time, leaving two main clusters. The cluster composition and structure will be further analysed in chapter IX.

8 Testing for reliability and validity of cluster solutions

Grueber, Heinemann, Brettel and Hungeling (2010) and Homburg, Jensen & Krohmer (2008) use the cross-validation procedure proposed by McIntyre and Blashfield (1980) and Hambrick (1983). This procedure randomly splits the sample into equal halves and runs the k-means algorithm for each half, assigning each actor in the second half to a cluster based on the cluster mean of the first half, and comparing the agreement between the two solutions. Homburg, Jensen & Krohmer (2008) then used the Rand (1971) index to cross-validate the results. I did not use that method as it is not appropriate for small sample sizes (Ketchen & Shook, 1996).

Ketchen and Shook (1996) suggest that cluster reliability has to be established as a condition for cluster validity. Reliability can be ascertained through multiple repetitions of the analysis with different algorithms, as described in section 7. External validity needs to be established for generalising about a population of interest (Cook & Campbell, 1979). Criterion-related validity needs to be established for the prediction of

outcomes (Kerlinger, 1986). Ketchen and Shook (1996: 447) suggest that “extreme care in validation is warranted, because without validation one is not assured of having arrived at a meaningful and useful set of clusters”. External validity can be established by analysing both the focal sample, as well as another similar sample (Hair et al., 1992; Hambrick, 1983). This should only be done when both samples are industry specific (Thomas & Venkatraman, 1988), as is the case of the DS1, DS2 and DS3 data sets used for this analysis.

Many studies have used t-tests of homogeneity to compare group means of clustering variables (Bierly & Chakrabarti, 1996; Harrigan, 1985; Ng, Westgren, & Sonka, 2008; Reger & Huff, 1993). As can be seen in table 31, a t-test of homogeneity of means assuming equal variances yielded significant results for virtually all variables and years, except for the Emp3M, WomFac, WomStu and FacDoc variables.

T-test of homogeneity									
Criterion	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	0.310	0.820	0.450	0.510	0.047	0.290	0.560	0.590	0.017
EmpDat	0.061	0.000	0.001	0.012	0.011	0.000	0.002	0.002	0.001
WomFac	0.991	0.977	0.195	0.959	0.106	0.423	0.363	0.500	0.158
WomStu	0.137	0.389	0.124	0.338	0.090	0.182	0.880	0.435	0.760
WomBoa	0.001	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntFac	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntStu	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntBoa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacDoc	0.481	0.558	0.471	0.675	0.152	0.245	0.395	0.267	0.178
Lang	0.000	0.000	0.182	0.000	0.000	0.000	0.000	0.000	0.001

Table 31: T-test of homogeneity of criteria, per cluster (DS1)

The basic version of the t-test makes the assumption of normal distribution. Not all variables are distributed normally (see chapter IV). To ensure the accuracy of the results, I thus conducted the Wilcoxon-Mann-Whitney rank sum test. This is a non-parametric t-test that does not operate under the assumption of normality. The results are virtually identical to the previous analysis, as can be seen in table 32.

Wilcoxon-Mann-Whitney rank sum test									
Criterion	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	0.288	0.782	0.836	0.528	0.003	0.300	0.270	0.309	0.007
EmpDat	0.019	0.001	0.019	0.023	0.006	0.000	0.000	0.000	0.000
WomFac	0.940	0.911	0.134	0.725	0.088	0.198	0.184	0.235	0.048
WomStu	0.122	0.426	0.233	0.240	0.049	0.129	0.950	0.485	0.580
WomBoa	0.004	0.033	0.001	0.000	0.000	0.000	0.000	0.000	0.000
IntFac	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntStu	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntBoa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacDoc	0.651	0.819	0.854	0.957	0.145	0.045	0.260	0.087	0.078
Lang	0.001	0.000	0.180	0.000	0.000	0.000	0.000	0.000	0.001

Table 32: Wilcoxon-Mann-Whitney of criteria, per cluster (DS1)

MANOVA procedures can be used for testing the equality of means for more than two groups to account for several dependent variables, even if they are correlated (Aldenderfer & Blashfield, 1984; Ketchen and Shook, 1996; Ng, Westgren, and Sonka 2008). Others have used Tukey's studentized range t-tests and chi-square statistics to ascertain to what extent variables had significantly different values between clusters (Marler, Woodard Barringer & Milkovich, 2002; Gilson & Shalley, 2004; Grueber, Heinemann, Brettel & Hungeling, 2010; Shore & Barksdale, 1998). All of these techniques assume the existence of more than two cluster solutions. As there were only two stable core clusters in the DS1 data set, I did a one-way ANOVA to confirm the results from the t-tests. As can be seen in table 33, the results of the t-tests are confirmed.

ANOVA (p-values)									
Criterion	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	0.310	0.819	0.457	0.508	0.048	0.294	0.561	0.585	0.018
EmpDat	0.061	0.000	0.001	0.012	0.011	0.000	0.002	0.000	0.000
WomFac	0.991	0.977	0.195	0.959	0.106	0.423	0.363	0.500	0.158
WomStu	0.137	0.389	0.124	0.338	0.090	0.182	0.880	0.435	0.760
WomBoa	0.001	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntFac	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntStu	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IntBoa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FacDoc	0.481	0.558	0.471	0.675	0.152	0.245	0.395	0.267	0.178
Lang	0.000	0.000	0.182	0.000	0.000	0.000	0.000	0.000	0.001

Table 33: ANOVA of criteria per cluster, p-values (DS1)

The F-test statistic of the ANOVA indicates the ratio between explained and unexplained variance and can thus serve not only as an indicator of criterion-related validity, but also as an indication of which variables contribute most to the emergence of the clusters (Aldenderfer & Blashfield, 1984; Harrigan, 1985; Ketchen & Shook, 1996; Ng, Westgren, & Sonka, 2008). As can be seen in table 34, WomFac, FacDoc, WomStu and Emp3M show consistently low values in the F-test statistics. This provides further support to the decision to exclude the heavily weighted FacDoc criterion. At the same time, it indicates that criteria like WomFac, WomStu and Emp3M were not as relevant as other criteria for the emergence of a clear cluster solution.

ANOVA (F-test statistics)										
Criterion	2006	2007	2008	2009	2010	2011	2012	2013	2014	SUM
WomFac	0.0	0.0	1.7	0.0	2.7	0.7	0.8	0.5	2.0	8.3
FacDoc	0.5	0.4	0.5	0.2	2.1	1.4	0.7	1.2	1.8	8.8
WomStu	2.3	0.8	2.4	0.9	2.9	1.8	0.0	0.6	0.1	11.8
Emp3M	1.1	0.1	0.6	0.4	4.0	1.1	0.3	0.3	5.8	13.7
EmpDat	3.7	16.8	11.4	6.6	6.7	21.7	9.7	14.5	15.6	106.8
Lang	14.4	24.1	1.8	17.8	18.6	23.0	29.0	18.6	12.1	159.4
WomBoa	13.0	6.8	15.2	17.9	33.3	43.4	26.3	25.3	28.5	209.5
IntFac	75.4	80.2	33.5	94.2	41.4	93.5	74.4	91.6	85.5	669.6
IntBoa	90.0	129.6	41.2	181.1	54.3	104.1	76.3	77.2	66.5	820.0
IntStu	371.0	645.1	313.2	483.6	520.6	673.6	366.8	329.0	367.5	4070.3
SUM	571.1	903.6	421.4	802.8	686.5	964.2	584.5	558.7	585.4	

Table 34: ANOVA of criteria per cluster, ordered by F-test statistics (DS1)

In conclusion, the cluster analysis revealed a relatively stable, but decreasing number of clusters across all data sets. In chapter IX, I will use the results from this section as well as qualitative data to analyse and interpret the cluster solutions, and demonstrate the relevance that clusters are playing for the construction of ranking frames.

IX CLUSTER CASE STUDIES

In this chapter, I will use both the quantitative data from the cluster analysis of chapter VIII, as well as qualitative data collected from school websites in order to analyse and interpret the clusters. I will thus use multiple sources of evidence in order to provide for data triangulation (Denzin & Lincoln, 1994), including both qualitative and quantitative data (Yin, 1994), aiming to provide a rich set of descriptions (Kidder, 1982) that can be used to understand the composition and development of the clusters. I will follow a similar structure of analysis to the case studies in chapter VII. Specifically, I will use the Marginal Improvement and Ranking Frame Indicators introduced earlier to analyse the quantitative data from the cluster analysis, and as well as qualitative data from the public communication of ranking actors.

As Harrigan (1985: 70) points out, “a very heavy element of managerial judgement is needed in developing the cluster dimensions and interpreting the results.” To establish the clusters, I thus compared the cluster results according to country and average rank of the ranking actors. As can be seen in table 35, four clusters with similar geographic and rank profile emerged.

Cluster	2006	2007	2008	2009	2010	2011	2012	2013	2014	Mean	Min	Max
EU	60	53	58	45	50	42	55	57	61	53	42	61
EU2			40		59					50	40	59
US	70	69	68	79	68	78	71	74	71	72	68	79
US2	54	57		55		58				56	54	58

Table 35: Average ranks of clusters (non-ranked schools are counted as rank 120)

European (EU) clusters consisted mostly of European and some Asian actors, whereas the American (US) clusters consisted of mostly US, Canadian as well as some Latin American and Asian schools. In order to provide for a longitudinal analysis of the

data, I thus joined the clusters with the most similar profiles in terms of geographical provenance and average overall ranking to form a longitudinal data set. In order to facilitate interpretability, I took care to include as many ranking actors as possible. For example, in 2008, the smaller EU2 cluster showed an unusually low average ranking of 40 as compared to the clusters in the other years. I thus decided to include the other cluster in to the European longitudinal set of cluster, obtaining two stable sets of clusters, with the European cluster set having an average rank of 53 and the American cluster set of 72.

In the following, the sets of clusters will be either presented as *peripheral clusters*, which includes all ranking actors in all years, even if they are not part of the cluster in every year; or as *core clusters*, which only includes the actors that are part of the set of clusters in each year of the ranking. This is consistent with the approach of Porac et al. (1995) and Reger and Huff (1993), who propose that competitive groupings can contain a core and peripheral structure, as well as DeSarbo and Grewal (2008), who propose that there are hybrid strategic groups, consisting of core firms and secondary firms that are loosely related to the first group.

1 The European cluster

Core cluster. As can be seen in table 36, the European core cluster includes four British schools, one Spanish school, and one school from Singapore. These are University of Birmingham Business School (hereafter: UBBS), Eada, NUS Business School (hereafter: NUSBS), University of Cambridge Judge Business School (hereafter: CJBS), University of Oxford Said Business School (hereafter: OSBS) and Strathclyde Business School (hereafter: USBS).

EU core cluster	Country
Birmingham Business School	U.K.
Eada	Spain
National University of Singapore Business School	Singapore
University of Cambridge: Judge	U.K.
University of Oxford: Saïd	U.K.
University of Strathclyde Business School	U.K.

Table 36: EU core cluster members

All schools in the core cluster, except for CJBS and OSBS, have dedicated ‘rankings’ websites, meaning that they have a separate site on their main website focusing specifically on their ranking performance. In the following, I will describe how the schools in the EU core cluster present rankings in their communication. I will specifically focus on the presentation of the FT MBA ranking.

EADA presents results from the various FT and Economist rankings, and includes a specific reference to the FT MBA ranking 2011, the last time the school was ranked, without further comment (EADA, 2014).

University of Birmingham Business School introduces its rankings website by stating that “the Birmingham MBA is highly ranked in the Global Top 100s. In fact, it has attracted excellent ratings from some of the leading business education rankings year after year” (UBBS, 2014). The school then showcases its performance in the Economist and Expansion MBA rankings, and falsely claims that “Birmingham Business School’s MBA was positioned at 86th in the world, 20th in Europe and 11th in the UK which included being ranked 35th for Career progression and ranked 6th for Value for Money” in the 2012 FT MBA ranking. In fact, UBBS had not been ranked at all in 2012, and achieved 87th and 73rd position worldwide in 2013 and 2014. The school then emphasises the importance of rankings with a section on “Why do rankings matter?”, making specific reference to quality, brand, value and marketability of the degree:

*“Rankings are important because they are a **measure of the quality** of the MBA degree programme and student experience at specific universities and schools. Rankings are a **quality mark** for your MBA and **add value** to the **brand** of your business school. Success within the rankings guarantees that your degree remains **highly regarded** within the global **employment** market and enhances your portfolio, allowing you to boost your **career**, and command a higher **salary**.”* (UBBS, 2014; emphasis added)

The school nevertheless follows this up by including a subsection on “More than just rankings”:

*“Whilst **rankings are very important**, an MBA at Birmingham Business School offers much more. We offer a range of MBA **student experiences** to accompany our global top 100 rankings, including: Distinguished Leader Series Guest Lectures [...], Networking and Employer Engagement [...], [and] MBA Career Support [...].”* (UBBS, 2014; emphasis added).

UBBS then concludes the page with a note to its alumni about the importance of rankings, pointing out how ranking participation “*guarantees the **value of your qualification** within the employment market as well as assisting Birmingham Business School*” (UBBS, 2014; emphasis added).

NUS Business School has a dedicated ‘Rankings & Accreditation’ page, where it references the ranking performance of the university (QS World Rankings: “24th globally”; Times Higher Education World University Rankings: “26th globally”, Times Higher Education World Reputation Rankings: “22nd globally”), and the Business School (QS Global 200 Top Business Schools Report, University of Texas, Top 100

Business School Research Rankings, Forbes), including references to “#1”, “#2”, and “#3” placements in Asia. Despite its relatively high ranking (2011: 23rd, 2012: 23rd, 2013: 36th, 2014:32nd), it only references its performance in the FT MBA rankings as “#10 for International Mobility”. The school concludes the section with a reference to its AACSB and EQUIS accreditations (NUSBS, 2014).

Strathclyde Business School has an ‘International Accreditations’ website, which it divides into three sections. In the “Rankings – undergraduate” section, the school references its ranking in disciplinary sub-rankings of the Times and Sunday Times Good University rankings, Guardian University rankings and Complete University guide. In the “Rankings – postgraduate” section, the school mentions that it is “1st in Scotland, top 10 in UK, top 20 in Europe and 73rd in the world (FT MBA, January 2014)”, and makes further reference to its performance in various other FT and Economist rankings. In the “External Recognition” section, the school states that it is “1 of only 59 business schools in the world (out of 5000 +), and only Scottish business school with full international accreditation (AMBA, AACSB and EQUIS)” (USBS, 2014). This is false, as the University of Edinburgh Business School has been featuring these three accreditations for years (UEBS, 2014c).

University of Oxford Said Business School does not have a dedicated rankings website, but features a ‘Facts and figures’ section on its MBA programme page with a subsection called “Oxford MBA in the rankings”, where it makes reference to the data sources and the school’s ranking performance in the BusinessWeek, FT and Forbes MBA rankings. It thereby takes a geographic reference point that is specifically not American: “*Our one-year MBA is ranked 5th in Business Week’s full time MBA ranking outside the USA. [...]Forbes magazine has ranked the Oxford MBA fifth among the top*

non-US Business Schools.” (OSBS, 2014a; emphasis added). For the FT MBA ranking it adds criteria-specific performance to the geographic reference points:

*“Saïd Business School's MBA programme is ranked 23rd in the **world** and third in the UK. Our programme is in the **top ten globally for student diversity** and in the top twenty for **value for money**.* (OSBS, 2014a; emphasis added)

This information is also emphasised in a press release regarding the rankings (OSBS, 2014b). Both pages conclude by a reference to OSBS’s AMBA and EQUIS accreditations.

University of Cambridge Judge Business School does not have a dedicated ‘rankings’ or ‘accreditations’ website. However, in a statement with regards to the FT MBA rankings, the school presents itself as the “top ranked one-year programme in the **UK** for the second year running” (CJBS, 2014; emphasis added). It then picks three criteria as reference points, saying that the school “featured in the top ten business schools in the world in three **key areas** of the FT survey: it was ranked 10th for career progression, 8th for value for money and 7th for aims achieved” (CJBS, 2014; emphasis added).

To emphasise the importance of the outcome, a note by the dean of the school to the alumni is included: “I want to sincerely thank the alumni who took the time to give their feedback in response to the survey [...]” (CJBS, 2014). This is followed by an appreciation of rankings in general:

*“This solid positioning in the global top 20 reflects the **world-class** programme we deliver at Cambridge Judge Business School. Rankings can be useful in giving us a chance to reflect on individual elements of our*

students' experience and of the School more broadly in relation to our peers.” (CJBS, 2014; emphasis added)

The school then nevertheless adds that

*“However, [rankings] **do not and should not drive our strategy**, which is to offer our students a transformative educational experience and the tools to pursue their dreams. Along with providing **elements that can be ranked – and ranked highly** – our main goal is to offer a business education that equips people to understand the role of managerial actions in society and helps them shape their careers in the wider context of offering value to society.”* (CJBS, 2014; emphasis added)

In conclusion, not only do all schools of the core cluster actively engage with rankings in general and the FT MBA rankings specifically, but they do so by following some of the mechanisms laid out in chapter III. Cluster members actively reinterpret ranking results, for example by choosing national or regional reference points, including the construction of sub-rankings on specific criteria. There is a discrepancy between some schools pointing out that rankings “do not drive strategy” and that “student experience” is more important than ranking performance. Contrastingly, others emphasise how rankings are “very important” as they measure “quality”. This includes claims of a positive effect of rankings on value, brand and general “regard”, including a positive outcome in terms of salary and employment prospects. These claims are not substantiated subsequently. Others specifically thank their alumni for participating, indicating that rankings are important tools for engaging with alumni. Virtually all actors mention other measurement devices, specifically other rankings and accreditations as a way of comparing, contrasting and relativising ranking results, above

all for low-performing cluster members. Remarkably, some schools make false claims about their ranking performance. Overall, this suggests that members of the EU cluster actively communicate their performance in the FT rankings specifically and rankings in general, indicating that there is an active engagement of the cluster members with their respective ranking frame. However, these observations are limited to the core cluster members. I will now discuss the composition of the peripheral cluster.

Peripheral cluster. As can be seen in table 37, the composition of the EU peripheral cluster distinguishes itself from the core cluster on several dimensions, with the number of ranking actors in the peripheral cluster more than doubling in size from 14 schools in 2006 to 33 in 2014.

While the core cluster is mostly composed of mid to lowly or non-ranked schools, the peripheral cluster includes the full range of mainly European ranking actors in terms of ranking performance. However, many of the prestigious ranking actors like London Business School (appearing seven out of nine years between 2006 and 2014), IE Business School (eight years), IMD (seven years), HEC Paris (eight years), ESADE (eight years), IESE (seven years), INSEAD (six years) and Hong Kong UST (six years) gain high positions in the ranking in many years.

This suggests that some European and Asian high-ranking schools, while not part of the core cluster, still are closely aligned with each other in most of the years. From 2011 on, all of the previously mentioned schools cluster with each other, as well as the lower ranked Bocconi, Manchester, Cass, Nanyang, Cranfield, AGSM, Rotterdam, Imperial, Lancaster, Schulich, Melbourne, Durham, Warwick, INCAE, Edinburgh, Bradford, Leeds, and EMLyon. This indicates that, while high-ranking actors are relatively dissimilar in the period between 2006 and 2010, over time they

become more similar to both each other and the combined EU core and peripheral cluster. This suggests that the core cluster expands over time, leading to an extended core of ranking actors that show similar characteristics.

Tables 38 and 39 show a comparison of the means and standard deviations for all criteria and ranks of the European core and peripheral cluster.

Mean of criteria EU cluster	Core (C) or peripheral (P)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	C	84	86	93	92	79	85	89	93	85
Emp3M	P	79	89	90	88	87	84	86	86	80
EmpDat	C	87	80	81	79	75	80	83	83	87
EmpDat	P	80	88	84	88	89	88	92	91	89
FacDoc	C	79	77	79	78	77	81	86	85	83
FacDoc	P	89	91	93	90	89	93	93	93	94
IntBoa	C	41	42	40	43	39	39	42	43	44
IntBoa	P	43	48	35	52	44	52	46	46	48
IntFac	C	40	40	42	43	45	48	48	53	51
IntFac	P	53	51	54	53	43	54	56	58	58
IntStu	C	92	88	93	93	93	93	91	91	94
IntStu	P	78	83	77	81	87	84	80	80	81
Lang	C	8	0	0	8	8	8	8	0	0
Lang	P	39	39	0	28	31	27	26	24	23
Rank	C	79	69	66	48	67	50	66	67	64
Rank	P	52	49	54	45	44	40	53	55	61
WomBoa	C	29	30	31	28	27	31	32	32	34
WomBoa	P	18	18	21	23	25	25	24	24	25
WomFac	C	25	26	27	24	25	26	22	25	27
WomFac	P	21	22	24	24	27	26	26	26	27
WomStu	C	27	29	33	32	33	31	32	31	32
WomStu	P	27	31	28	29	27	29	30	34	32

Table 38: Criteria means of core and peripheral EU clusters, per year

Standard deviation of criteria EU cluster	Core (C) or peripheral (P)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	C	14	13	4	5	25	11	7	4	8
Emp3M	P	17	9	6	13	5	10	11	12	14
EmpDat	C	17	20	25	13	23	11	7	14	14
EmpDat	P	20	10	13	12	8	13	6	11	11
FacDoc	C	25	30	25	26	25	24	15	17	15
FacDoc	P	10	8	5	10	8	6	9	9	7
IntBoa	C	23	21	23	18	15	16	12	10	12
IntBoa	P	28	27	20	24	24	27	24	25	25
IntFac	C	15	12	15	16	12	11	10	13	12
IntFac	P	25	22	15	22	14	22	19	18	18
IntStu	C	3	10	3	2	2	3	3	4	4
IntStu	P	11	8	12	12	9	10	16	15	13
Lang	C	20	0	0	20	20	20	20	0	0
Lang	P	40	37	0	32	31	29	28	28	28
Rank	C	42	43	52	32	46	28	49	48	48
Rank	P	39	35	26	36	32	29	37	39	41
WomBoa	C	14	11	15	16	13	13	14	14	15
WomBoa	P	10	12	12	11	11	10	10	9	9
WomFac	C	6	5	5	7	10	11	9	10	10
WomFac	P	8	8	4	8	7	7	7	7	7
WomStu	C	8	6	7	9	5	8	7	4	7
WomStu	P	6	7	7	9	5	5	6	7	9

Table 39: Standard deviations of EU core and peripheral clusters, per year

Interpretation. As we can see in tables 40 and 41, the EU core cluster ranks on average 26 places higher than the field average with an overall average rank of 38, and 10 percentage points lower in terms of Faculty with Doctorate. However, the cluster distinguishes itself most clearly from the field in terms of international diversity criteria (Averages across years: IntFac: +9%; IntStu: +43% and IntBoa: +18%), as well as the female representation on the academic board (WomBoa: +12%).

EU Core Cluster	2006	2007	2008	2009	2010	2011	2012	2013	2014	Mean	CV
Rank	40	39	39	39	38	40	37	34	33	38	0.07
Empl3M	84	86	93	92	79	85	89	93	85	87	0.06
EmpDat	87	80	81	79	75	80	83	83	87	81	0.04
WomFac	25	26	27	24	25	26	22	25	27	25	0.05
WomStu	27	29	33	32	33	31	32	31	32	31	0.06
WomBoa	29	30	31	28	27	31	32	32	34	30	0.07
IntFac	40	40	42	43	45	48	48	53	51	46	0.10
IntStu	92	88	93	93	93	93	91	91	94	92	0.02
IntBoa	41	42	40	43	39	39	42	43	44	41	0.04
FacDoc	79	77	79	78	77	81	86	85	83	80	0.04
Lang	0.17	0.00	0.00	0.17	0.17	0.17	0.17	0.00	0.00	0.09	0.95

Table 40: EU core cluster average performance, per year

As we can see in tables 42 and 43, the picture is slightly different for the peripheral cluster. The average ranking of the peripheral cluster is 50, which is 12 ranks lower than the core cluster. As compared to the core cluster, the peripheral cluster also shows a less pronounced difference to the field (average across years: WomBoa: +3, IntStu: +26 and FacDoc: +1). Contrastingly, the average difference for IntFac (+13) is more pronounced, and equally as pronounced for IntBoa (+18). Thus, the peripheral cluster consists of ranking actors ranked lower than the average field and the EU core cluster, but outperform both in terms of international faculty, while scoring similarly on international board membership. Moreover, the EU peripheral cluster only distinguishes itself significantly from the field in terms of international diversity criteria, while the EU core cluster does so on female board membership and faculty with doctorates as well.

Cluster EU P	2006	2007	2008	2009	2010	2011	2012	2013	2014	Mean	CV
Rank	52	49	54	45	44	40	53	55	61	50	0.13
Empl3M	79	89	90	88	87	84	86	86	80	86	0.05
EmpDat	80	88	84	88	89	88	92	91	89	88	0.04
WomFac	21	22	24	24	27	26	26	26	27	25	0.10
WomStu	27	31	28	29	27	29	30	34	32	30	0.08

WomBoa	18	18	21	23	25	25	24	24	25	23	0.12
IntFac	53	51	54	53	43	54	56	58	58	53	0.08
IntStu	78	83	77	81	87	84	80	80	81	81	0.04
IntBoa	43	48	35	52	44	52	46	46	48	46	0.11
FacDoc	89	91	93	90	89	93	93	93	94	92	0.02
Lang	0.79	0.78	0.00	0.56	0.63	0.54	0.53	0.49	0.45	0.53	0.44

Table 42: EU peripheral cluster average performance, per year

The strength on the international criteria of the cluster is partly a reflection of the fact that European schools are based in relatively small countries with a low geographic distance to other countries. European schools thus have a tradition of recruiting students, faculty and board members from beyond their home market. They also face fewer barriers in doing so, as other markets are geographically close. The same applies to Singapore, which is an international trade hub. The differences in ranking position, faculty with doctorate and female board membership require a more detailed explanation. I will thus examine the Marginal Improvement Indicator as well as the Ranking Frame Indicator (see chapter VII) for both clusters.

As we can see in tables 44 and 45, the marginal performance improvement or deterioration of both the core and peripheral cluster as compared to the field are relatively low. Only three periods (EU core, EmpDat, 2006-07: -10; EU peripheral, IntBoa, 2007-09: -14 and +15; EU peripheral, IntFac, 2009-11: -10 and +10) show changes above 10 points, with an approximately equal number of negative and positive MMIs. On average, year-to-year improvements are between -1 and +1 over all periods. This suggests that the clusters are not improving or deteriorating significantly in performance as compared to the field, meaning that not only the number of clusters is stable, but also their position in the field.

As shown in table 46, this is confirmed when looking at the Ranking Frame Indicators for both the EU core and peripheral clusters. Strategic emphasis on improvement as compared to the field is low on all criteria, and only appears to be

higher for the language criterion, which can however be explained for the most part through a triple change of the indicator for a single school (EADA).

RFI for EU C and P	RFI EU C	RFI EU P
WomStu	11	12
IntFac	11	-2
WomBoa	8	18
FacDoc	4	5
Empl3M	2	2
IntStu	-3	-2
IntBoa	-3	-1
EmpDat	-5	6
WomFac	-10	13
Lang	-68	-35

Table 46: Ranking Frame Indicator of EU core and peripheral clusters

Conclusion. A stable core cluster of predominantly European ranking actors has emerged from the data. These actors actively communicate their performance in the FT rankings in specific and rankings in general, indicating that there is an engagement of the cluster members with their respective ranking frame. EU cluster members distinguish themselves from the field by their high performance on international diversity criteria, their relatively high overall ranking performance, their low performance on the faculty with doctorate criterion and their relatively high participation of female board members. In addition, the peripheral cluster shows a less pronounced difference in performance to the field average, but includes many high-ranking actors that perform very highly on most criteria, above all on international diversity criteria. The strength of the EU clusters in terms of international criteria is consistent with the overall strength of European and some Asian ranking actors in terms of attracting international students and faculty, and the emphasis on international and diversity dimensions in communication of schools. Importantly, the marginal performance improvements of EU core and peripheral ranking actors do not indicate an increase in difference between the EU clusters and the ranking field. This suggests that

the position of the clusters within the field is stable over time. This lends further evidence to the proposition that the clusters are indeed stable and not ephemeral within the ranking field. In addition, the evidence points to an expansion of the core cluster over time, suggesting that European ranking actors show an increasingly similar performance over time.

2 The American cluster

Core cluster. As can be seen in table 47, the US core cluster consists of 35 ranking actors, most of them being situated in the southern and mid-western parts of the US. One cluster member is from Brazil (Coppead), one from Mexico (IPADE), one from Colombia (Facultad de Administracion Universidad de los Andes) and one from South Korea (Kaist College of Business). The overall rank average of the cluster is 72.

In the following, I will describe how the schools in the US core cluster present rankings in general, and specifically the FT MBA ranking in their public communication. As can be seen in table 48, 30 out of 35 schools have dedicated ranking websites.

Out of the five schools that do not, four however mention or discuss ranking results in other sections, for example ‘Fast facts’. Only Carroll School of Management does not mention rankings in their publication communication at all. Out of the 34 schools that use rankings, most use the U.S. News & World Report MBA or Business School rankings (26). About an equal number of schools makes reference to the BusinessWeek MBA ranking (19), Forbes MBA or Business School ranking (21), and

FT MBA rankings (20). For the FT ranking, not all schools use the most recent results, but rather communicate their ranking position using data reaching back up to 2011. This is usually the case when schools have suffered a decrease in performance, or dropped off the rankings. Only four schools use the Wall Street Journal MBA ranking, whilst 13 schools are using other MBA rankings like Expansion, or Poets & Quants.

Thus, despite the FT not having an equally prominent position in the US as on the European continent, most schools still use the FT MBA rankings as a marker of quality, reputation or status. The considerable number of 15 schools that do not use the FT rankings, despite participating in the ranking process, suggest however that US schools in particular are in a position to strategically choose what ranking to use in their communication. Unsurprisingly, the schools usually pick the rankings in which they show high performance. As most of the schools in the US core cluster perform on a rather low level, many choose not to communicate their low performance in the FT ranking. This suggests that in the American business school field, the FT rankings are not currently seen as an essential part of the social standing of schools.

As we can see in table 49, out of the 20 schools that use the FT ranking, most use specific reference points to reinterpret the ranking result.

Five schools use their performance on specific criteria to build sub-rankings, above all using the career, salary and 'aims achieved' related indicators. Three schools build sub-rankings in terms of institutional control (public/ private). While ten schools take their national performance as reference points, all except for one also disclose their performance in terms of the worldwide ranking position. While 13 schools use their AACSB accreditation, only three use the European EQUIS accreditation, and only one the British AMBA accreditation. Overall, while most of the schools use their FT

ranking results, most do so in an eclectic manner, choosing specific reference points to present their ranking performance.

Notably, and as compared to the European schools in the EU core cluster, none of the schools offers a critique or appreciation of rankings. Neither does any school mention specific competitors, reference regional competitors, or use North America or the American continent as geographic reference points. This contrasts with the European and Asian ranking actors, which make frequent reference to their position within Europe or Asia, and offer at times detailed critiques of ranking methodology or practice.

Peripheral cluster. Similarly to the EU cluster, the composition of the US peripheral cluster distinguishes itself from the US core cluster on several accounts. As we can see in table 50, the number of ranking actors in the peripheral cluster multiplies in size from seven schools in 2006 to 40 schools in 2014.

While the core cluster is mostly composed of mid to lowly or non-ranked schools, the peripheral cluster includes the full range of ranking actors in terms of ranking performance. However, many prestigious ranking actors like Yale School of Management (part of the peripheral cluster eight out of nine times between 2006 and 2014), Tuck School of Business (eight years), Kellogg School of Management (seven years), Wharton School (five years), Stanford Graduate School of Business (five years), Harvard Business School (five years), Sloan School of Management (six years), Booth School of Business (five years), Stern School of Business (five years), Fuqua School of Business (five years), Johnson Graduate School of Management (six years) gain high positions in the ranking in many years. This suggests that some of the high-performing American schools, while not part of the core cluster, are still closely aligned with the core cluster in most of the years. From 2010 on, Sloan, Yale, Tuck and Johnson cluster

with each other, as do the lower performing Connecticut, D'Amore-McKim, Katz, Washington University Olin, Fox, Haskayne, Ross, Smith, Urbana-Champaign, Merage, Cape Town, Kenan-Flagler, Tippie, Davis, and Babson College Olin. This indicates that, while high-ranking actors are relatively dissimilar in the period between 2006 and 2009 in terms of ranking performance, over time they become more similar to both each other and the combined US core and peripheral cluster. Overall, similarly to the EU cluster, this suggests that the core cluster expands over time, leading to an extended core of ranking actors that show similar characteristics.

A comparison of the performance of the core and peripheral US cluster can be found in tables 51 and 52.

Mean of criteria (US cluster)	Core (C) or peripheral (P)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	C	83	88	87	86	75	79	83	84	84
Emp3M	P	90	91	90	89	81	86	88	87	88
EmpDat	C	89	96	93	93	93	95	95	97	96
EmpDat	P	96	94	93	93	91	96	95	95	95
FacDoc	C	88	89	88	88	88	87	87	86	87
FacDoc	P	91	93	93	92	92	90	92	92	91
IntBoa	C	3	3	3	4	3	5	7	7	8
IntBoa	P	6	7	17	5	19	15	18	20	23
IntFac	C	14	16	17	17	17	18	20	22	21
IntFac	P	18	26	36	22	32	28	36	36	37
IntStu	C	27	27	27	25	23	25	25	30	29
IntStu	P	33	35	38	39	36	34	39	41	41
Lang	C	6	6	6	4	4	4	6	6	7
Lang	P	0	0	3	0	5	0	1	3	4
Rank	C	76	75	82	81	80	82	84	89	86
Rank	P	42	56	58	75	58	71	60	60	58
WomBoa	C	13	14	12	15	14	14	15	16	16
WomBoa	P	15	17	17	17	16	16	17	18	17
WomFac	C	22	23	23	24	24	24	24	25	26
WomFac	P	20	23	22	24	24	26	24	25	25
WomStu	C	31	31	31	31	30	31	29	32	30
WomStu	P	28	33	34	33	32	31	32	33	33

Table 51: Criteria means of core and peripheral US clusters, per year

Standard deviation of criteria (US cluster)	Core (C) or peripheral (P)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Emp3M	C	15	11	17	15	17	18	14	15	13
Emp3M	P	7	7	9	6	10	8	8	9	6
EmpDat	C	16	5	10	9	9	5	8	5	6
EmpDat	P	3	7	9	7	12	3	7	6	7
FacDoc	C	15	15	13	13	13	12	13	13	12
FacDoc	P	12	6	7	6	9	10	9	8	9
IntBoa	C	4	6	4	5	4	7	14	10	11
IntBoa	P	7	8	17	4	18	15	17	16	18
IntFac	C	8	7	7	8	7	8	9	12	10
IntFac	P	8	9	14	7	10	8	12	12	13
IntStu	C	10	9	9	9	10	9	10	12	11
IntStu	P	6	8	9	8	9	9	10	9	10
Lang	C	16	16	16	14	14	14	16	16	18
Lang	P	0	0	13	0	16	0	8	11	13
Rank	C	29	32	31	31	30	29	31	31	33
Rank	P	27	37	39	35	40	42	43	44	44
WomBoa	C	5	6	6	6	5	6	7	6	8
WomBoa	P	12	8	9	7	8	4	9	9	8
WomFac	C	7	7	7	7	7	7	7	7	7
WomFac	P	4	6	6	4	6	6	6	7	7
WomStu	C	9	6	6	6	7	7	7	7	6
WomStu	P	4	7	9	6	6	7	5	6	6

Table 52: Standard deviations of US core and peripheral cluster, per year

Interpretation. As we can see in tables 53 and 54, with an overall average ranking of 82, the US core cluster ranks on average 18 ranks lower than the field average. The US core cluster exhibits an average of female board members that is slightly lower (-4%) than the field average over the years. However, the cluster distinguishes itself most clearly from the field in terms of the international diversity criteria (IntFac: -18%; IntStu: -22% and IntBoa: -19%). The criteria that change most over time are IntBoa (CV=0.40), IntFac (CV=0.13), and Lang (CV=0.18), suggesting that international criteria are more frequently the target of strategic changes than other the criteria, which remain relatively stable.

Cluster US C	2006	2007	2008	2009	2010	2011	2012	2013	2014	Mean	CV
Rank	76	75	82	81	80	82	84	89	86	82	0.05
Emp3M	83	88	87	86	75	79	83	84	84	83	0.05
EmpDat	89	96	93	93	93	95	95	97	96	94	0.03
WomFac	22	23	23	24	24	24	24	25	26	24	0.05
WomStu	31	31	31	31	30	31	29	32	30	31	0.03
WomBoa	13	14	12	15	14	14	15	16	16	14	0.09
IntFac	14	16	17	17	17	18	20	22	21	18	0.13
IntStu	27	27	27	25	23	25	25	30	29	26	0.08
IntBoa	3	3	3	4	3	5	7	7	8	5	0.40
FacDoc	88	89	88	88	88	87	87	86	87	88	0.01
Lang	0	0	0	0	0	0	0	0	0	0	0.18

Table 53: US core cluster average performance

The picture is only slightly different for the peripheral US cluster, as an examination of tables 55 and 56 reveals. While the average rank is higher (60), and thus only six places below the average field ranking, the difference of the international diversity criteria is not as strong as for the core cluster, with IntFac scoring 6% and IntStu 12% and IntBoa 9% below field average, while WomBoa performs only 2% below field average. This suggests that US cluster members distinguish themselves mainly along the lines of international student, faculty and board membership. This is explained mainly through the large home market of the US business school field, and

the relative distance to other geographic markets, which makes the recruitment of foreign nationals more difficult. Another explanation might be the citizenship laws of the US. As foreign passport holders usually have the possibility of acquiring US citizenship after few years, whereas other countries have higher barriers and longer procedures the naturalisation of immigrants, this might lead to a relatively lower number of foreign passport holders in US schools. Notably, the FT uses the numbers of foreign passport holders as measure of internationality, not origin or migration status.

Cluster US P	2006	2007	2008	2009	2010	2011	2012	2013	2014	Mean	CV
Rank	42	56	58	75	58	71	60	60	58	60	0.16
Emp3M	90	91	90	89	81	86	88	87	88	88	0.04
EmpDat	96	94	93	93	91	96	95	95	95	94	0.02
WomFac	20	23	22	24	24	26	24	25	25	24	0.07
WomStu	28	33	34	33	32	31	32	33	33	32	0.06
WomBoa	15	17	17	17	16	16	17	18	17	16	0.06
IntFac	18	26	36	22	32	28	36	36	37	30	0.24
IntStu	33	35	38	39	36	34	39	41	41	37	0.08
IntBoa	6	7	17	5	19	15	18	20	23	14	0.46
FacDoc	91	93	93	92	92	90	92	92	91	92	0.01
Lang	0	0	0	0	0	0	0	0	0	0	1.11

Table 55: US peripheral cluster average performance

As we can see in tables 57 and 58, the marginal performance improvement or deterioration of both clusters as compared to the field is relatively low. For the EU core cluster, the highest MMIs are +4 and -2 (EmpDat: 2006 to 2008). Most other criteria are between -2 and +2.

The picture for the peripheral cluster is only slightly different. Only four periods (IntFac, 2008-10: -15 and +10; IntBoa, 2008-10: -13 and +14) show changes above 10 points, with an approximately equal number of negative and positive MMIs. However, these changes are usually equalised in the following periods. Thus, on average over all years, year-to-year improvements are between -1 and +2. This suggests that the cluster

is not improving or deteriorating significantly in performance as compared to the field, meaning that the US cluster is stable in terms of its position in the field.

MII US C - DS1	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	Mean
Rank	10	10	17	-20	18	-13	4	0	3
Emp3M	2	-2	0	-2	0	1	1	2	0
EmpDat	4	-2	0	2	-1	-1	1	0	0
WomFac	0	0	0	0	-1	0	0	0	0
WomStu	-1	0	0	0	1	-2	1	-1	0
WomBoa	1	-2	1	-1	0	0	0	0	0
IntFac	1	-1	0	-1	0	1	0	0	0
IntStu	0	-1	-2	0	0	-1	2	-1	0
IntBoa	1	-1	0	-1	1	2	-1	-1	0
FacDoc	0	-1	0	0	-1	0	-1	1	0
Lang	0	0	0	0	0	0	0	0	0

Table 57: Marginal Improvement Indicator of US core cluster

MII US P - DS1	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	Mean
Rank	25	5	35	-37	31	-27	-2	1	4
Emp3M	-3	-1	-1	1	2	-2	0	3	0
EmpDat	-5	-1	0	-1	3	-3	0	1	-1
WomFac	2	-1	2	-1	2	-2	0	-1	0
WomStu	3	1	-1	1	-2	1	-1	1	0
WomBoa	2	1	-1	-1	0	0	0	0	0
IntFac	7	9	-15	10	-5	7	-2	1	2
IntStu	2	3	1	-3	-3	3	0	1	1
IntBoa	1	9	-13	14	-5	3	1	2	1
FacDoc	2	-1	0	0	-2	1	0	-1	0
Lang	0	0	0	0	0	0	0	0	0

Table 58: Marginal Improvement Indicator of US peripheral cluster

This is confirmed when looking at the Ranking Frame Indicators for both the US core and peripheral clusters, as shown in table 59. Strategic emphasis on improvement as compared to the field is low on all criteria, and only appears to be higher for the language criterion of the core cluster. For the peripheral cluster, the RFI is low for most criteria, while being moderately high for IntFac (73) and high for IntBoa (185). This suggests that, for the period between 2006 and 2014, the strategic emphasis on the international diversity criteria was limited to the peripheral cluster. As compared to the

field average, the core cluster remains remarkably stable on all criteria throughout all periods. This again suggests that the cluster, as well as its position in the field, is relatively stable.

RFI 2006-2014	US C	US P
Lang	71	-
EmpDat	3	-5
Emp3M	1	-2
WomBoa	1	0
WomFac	-2	1
IntFac	-2	73
FacDoc	-2	-1
WomStu	-7	11
IntStu	-8	13
IntBoa	-12	185

Table 59: Ranking Frame Indicator of US core and peripheral clusters

Conclusion. As we can see from the preceding sections, a stable core cluster of predominantly US schools has emerged from the data. These actors distinguish themselves from the field by their low performance on international diversity criteria and their relatively low overall ranking performance. In addition, the peripheral cluster of ranking actors has a less pronounced difference in performance to the field average, but includes many high-ranking actors that perform very strongly on most criteria. Importantly, the marginal performance improvements of US core and peripheral ranking actors do not indicate an increasing difference between the US clusters and the ranking field. Similarly to the EU cluster, this suggests that the position of the cluster is stable, lending further evidence to the proposition that the clusters are indeed stable within the ranking field. In addition, the evidence points to an expansion of the core cluster from 2010 on, indicating that an increasing number of American ranking actors show a similar performance in terms of ranking criteria, in particular high-ranking ones like

Sloan and Yale School of Management. Having examined each set of clusters in detail, I will now compare the EU and US clusters.

3 Comparison of the European and American clusters

In the following, I will compare the development of the EU and US clusters in terms of measures of central tendency. Firstly, I will however examine the ranking actors that are non-affiliated, meaning that they are neither part of the EU or US clusters. I will conclude with a discussion of the differences between the ranking field and both clusters.

Non-aligned ranking actors. As we can see in table 60, while there are 37 ranking actors that cluster neither with the US or EU clusters in 2006, this number declines to reach 27 ranking actors in 2011. In 2012, 2013, and 2014, all ranking actors cluster with either the EU or US clusters. This suggests that over time, there is an increasing split in the ranking field, as schools align with either cluster. The non-affiliated ranking actors are mainly from three groups. The smallest group is composed of low-ranking US actors, for example Jindal (ranked five out of nine years), Simon (four years) and Thunderbird (four years). The second group are Canadian business schools, composed of Desautels (five years), Alberta (four years), Sauder (four years), Rotman (five years), HEC Montreal (four years) and Telfer (five years). The biggest group consists in a set of high-ranking and high status business schools from the US, including one from France (HEC, five years) and one Chinese school (CEIBS, five years). The American schools are Harvard (four years), Stanford (four years), Columbia

(five years), Booth (four years), Stern (four years), Haas (four years), Fuqua (four years) and Wharton (four years).

Thus, in particular prestigious American schools and mid to low ranking Canadian schools are forming a distinct group in many years, only joining the clusters in the later periods. This suggests that these schools, albeit not being part of a stable third cluster, are distinct from the other American and European schools in their strategic profiles for most of the year.

Figures 47 to 64 show a comparison of the trends in terms of means and standard deviations of all ranking actors as well as the two clusters, for each criterion. As can be seen in the figures, while some of the trends converge over time, several variables show a pattern of increasingly different means and variances, or stable difference. In the following, I will analyse the development of the criteria on which ranking actors do not cluster, followed by a description of the criteria on which they do.

Criteria on which ranking actors do not cluster. As we can see in figures 46, 47 and 48, the means of the clusters as well as the field are virtually indistinguishable in terms of the Emp3M, WomFac and WomStu criteria over most years. Confirming the findings from chapter VIII, this suggests that clusters do not distinguish themselves on these criteria.

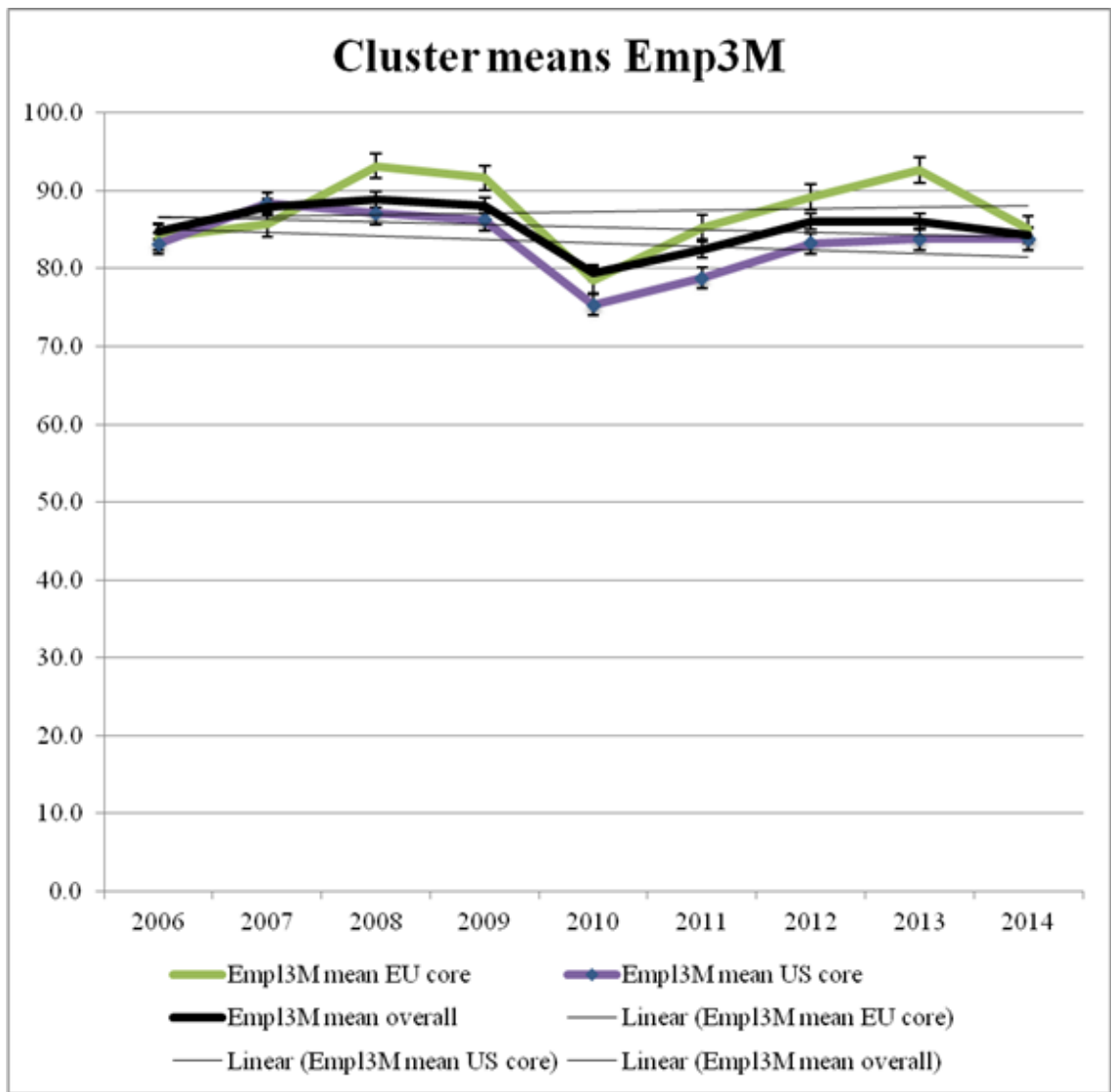


Figure 46: Comparison of cluster means, Emp3M

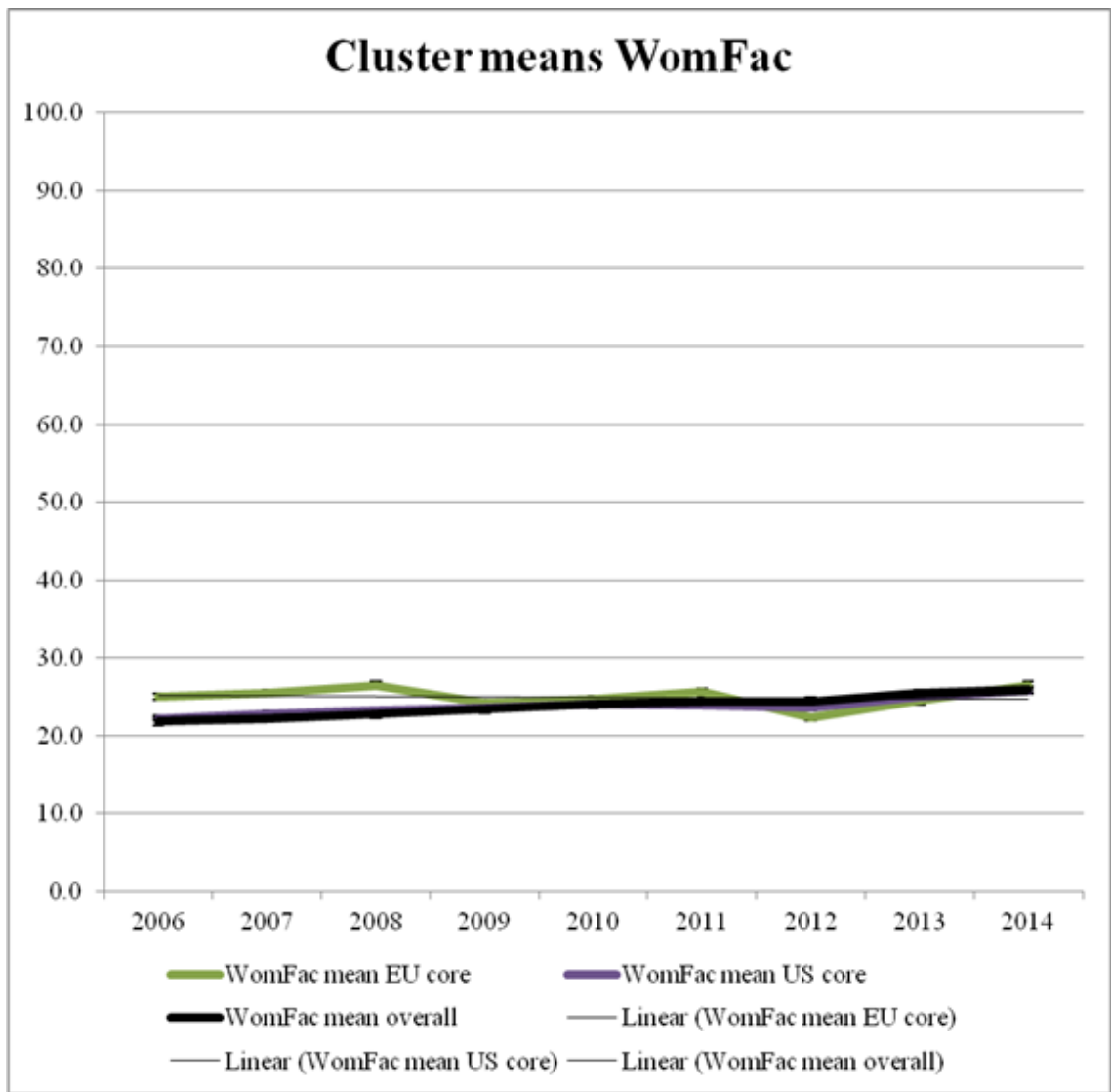


Figure 47: Comparison of cluster means, WomFac

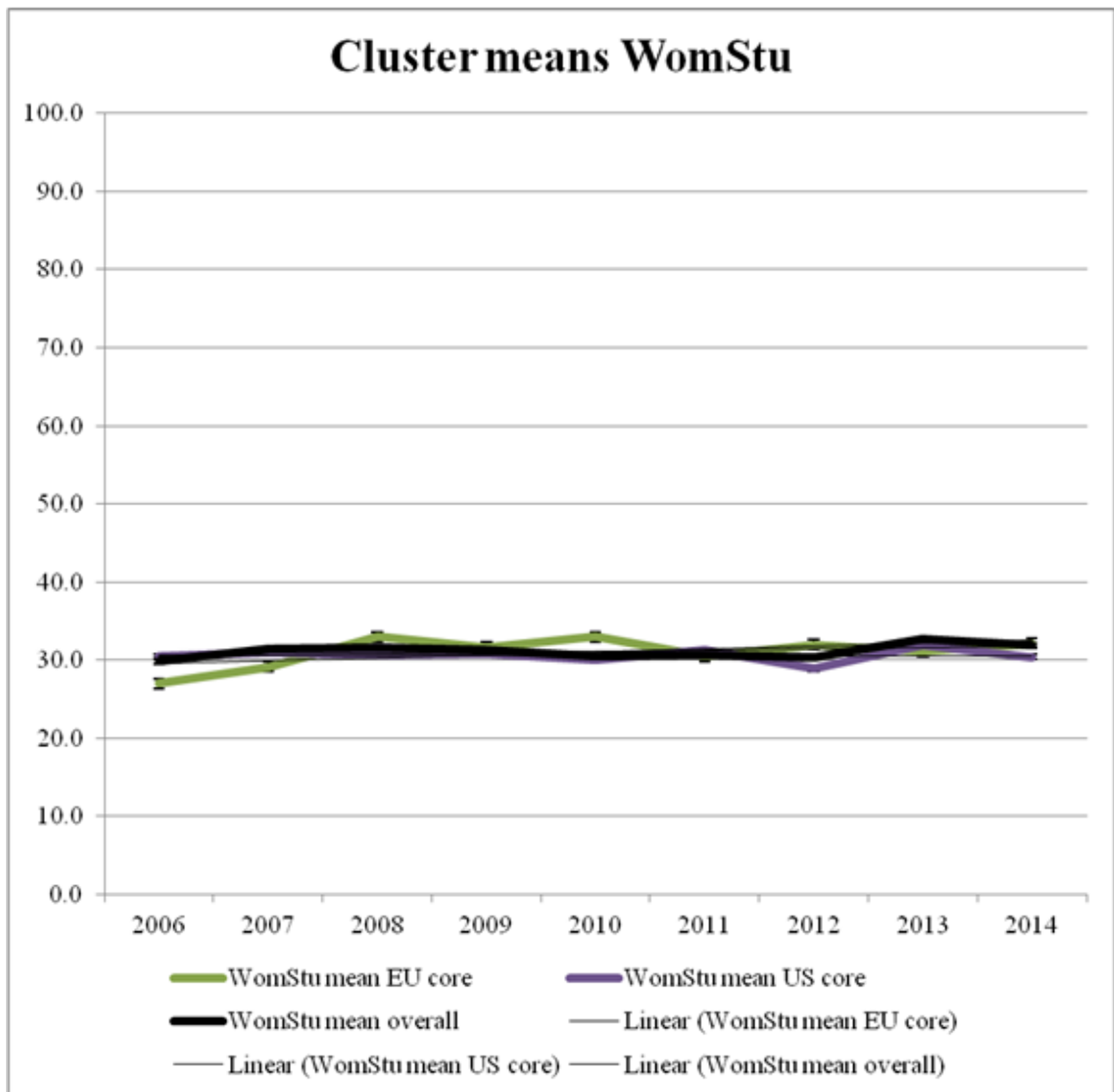


Figure 48: Comparison of cluster means, WomStu

As can be seen in figure 49, from the 2008 on, both clusters and the field diverge in variance on the Emp3M criterion, with the EU core cluster showing lower variance throughout all years except for 2010. This suggests that for the European cluster schools, employment prospects are a mark of distinction, but less so than both the average ranking field and the US core cluster. The exceptionally high variance in the year 2010 can be explained by the effects of the financial crisis, which affected European schools to a greater extent than American ones in terms of employment. While the field trend and US cluster show a slight decline in terms of variance, the European cluster shows the heaviest decline. This suggests that in the European

business school field, placing graduates quickly into jobs is becoming less of a means of distinction, while it remains one in the US field.

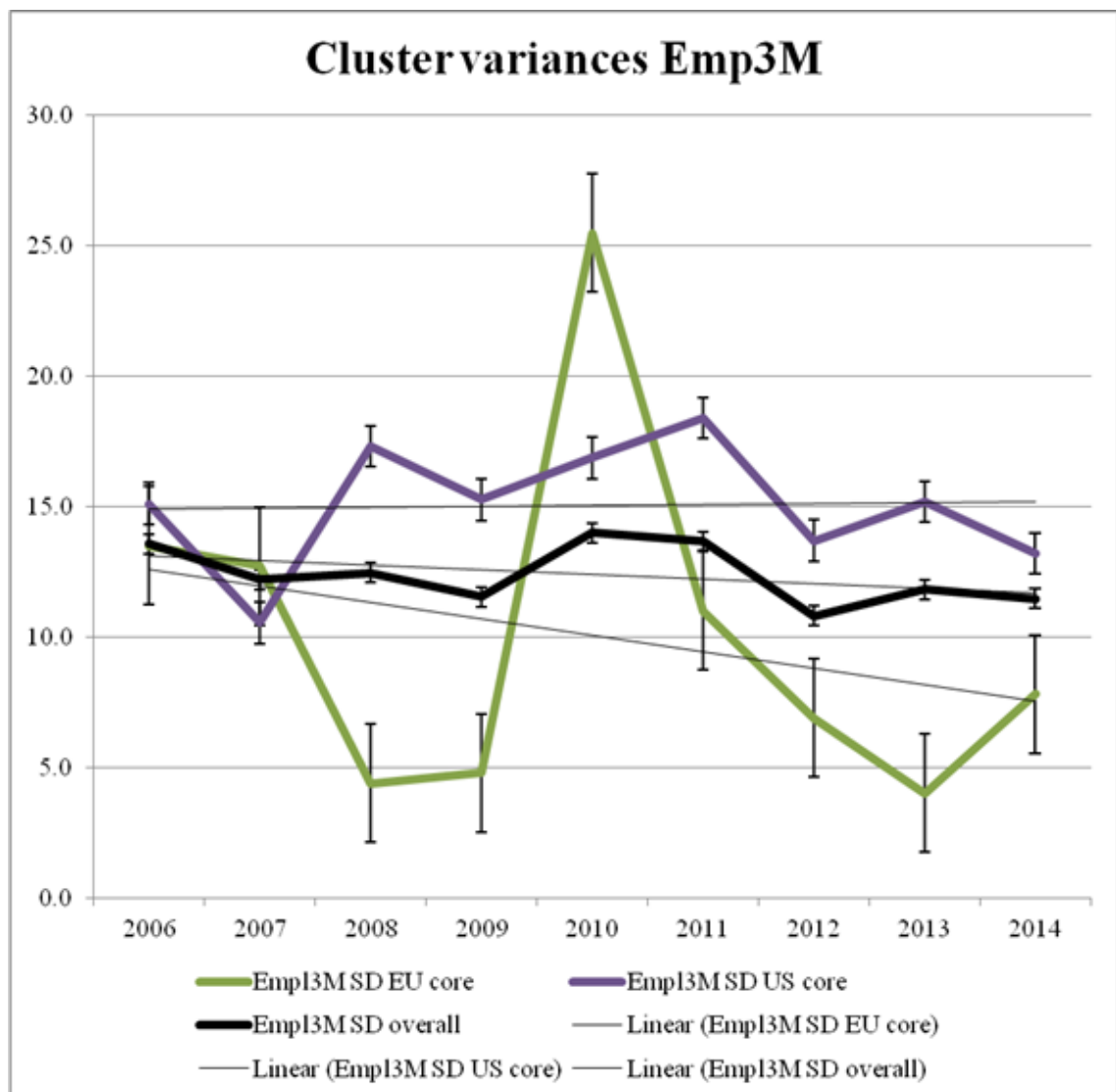


Figure 49: Comparison of cluster standard deviations, Emp3M

As we can see in figure 50, in terms of female faculty, the field and the US core cluster show a very similar variance in all periods, with barely any change in tendency over the years. However, the EU core cluster shows a relatively strong and almost continuous increase in variance over time. This suggests that for European business schools, female participation in the faculty becomes increasingly a means of distinction,

and that the European business school field becomes increasingly different in terms of the variance of female faculty participation from both the US and the overall business school fields.

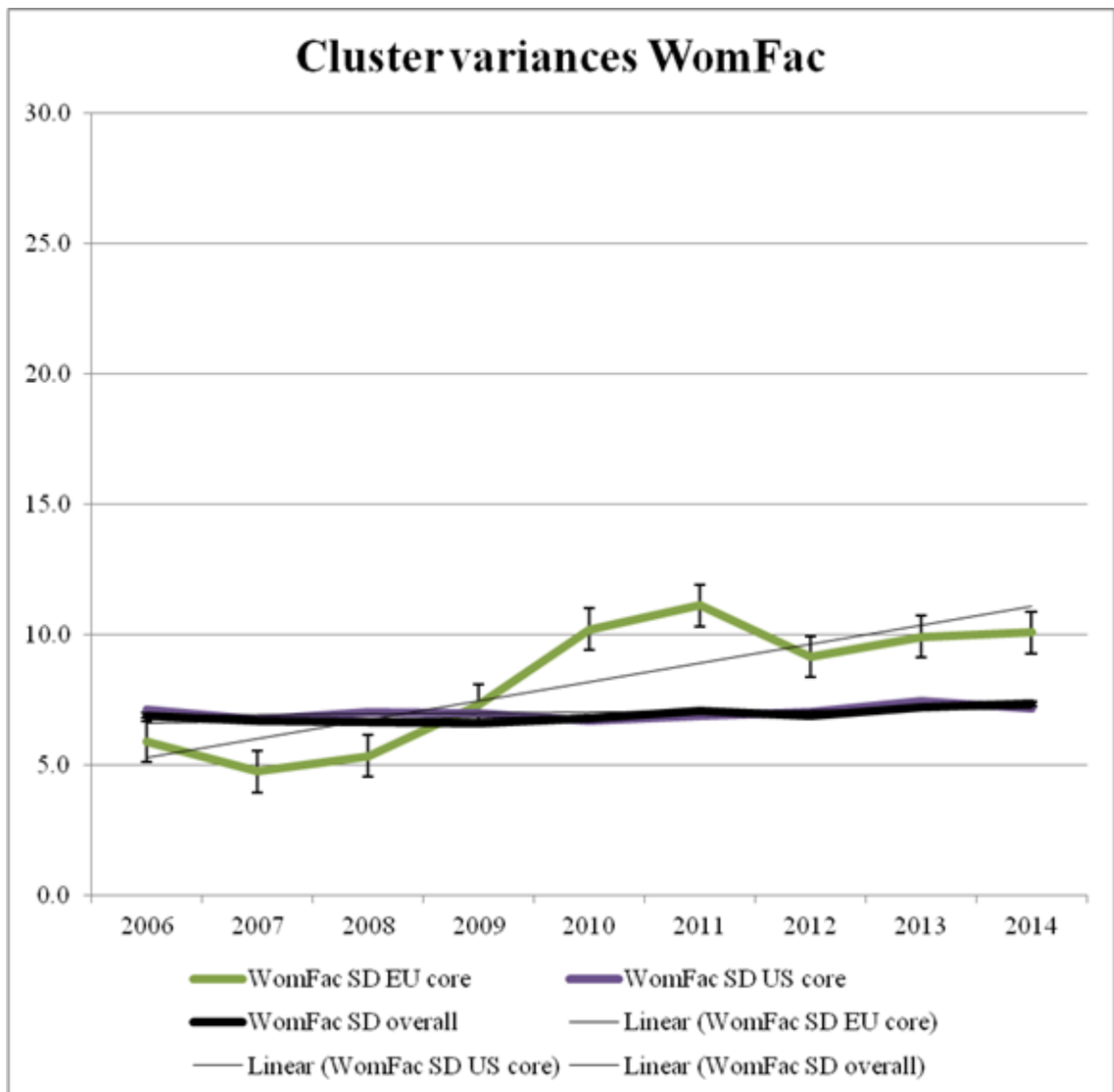


Figure 50: Comparison of cluster standard deviations, WomFac

As we can see in figure 51, while the variance of all both clusters and the field appears to be slightly decreasing over the years, no clear pattern emerges in terms of the distinctiveness of the clusters and the field in terms of female participation in the student body.

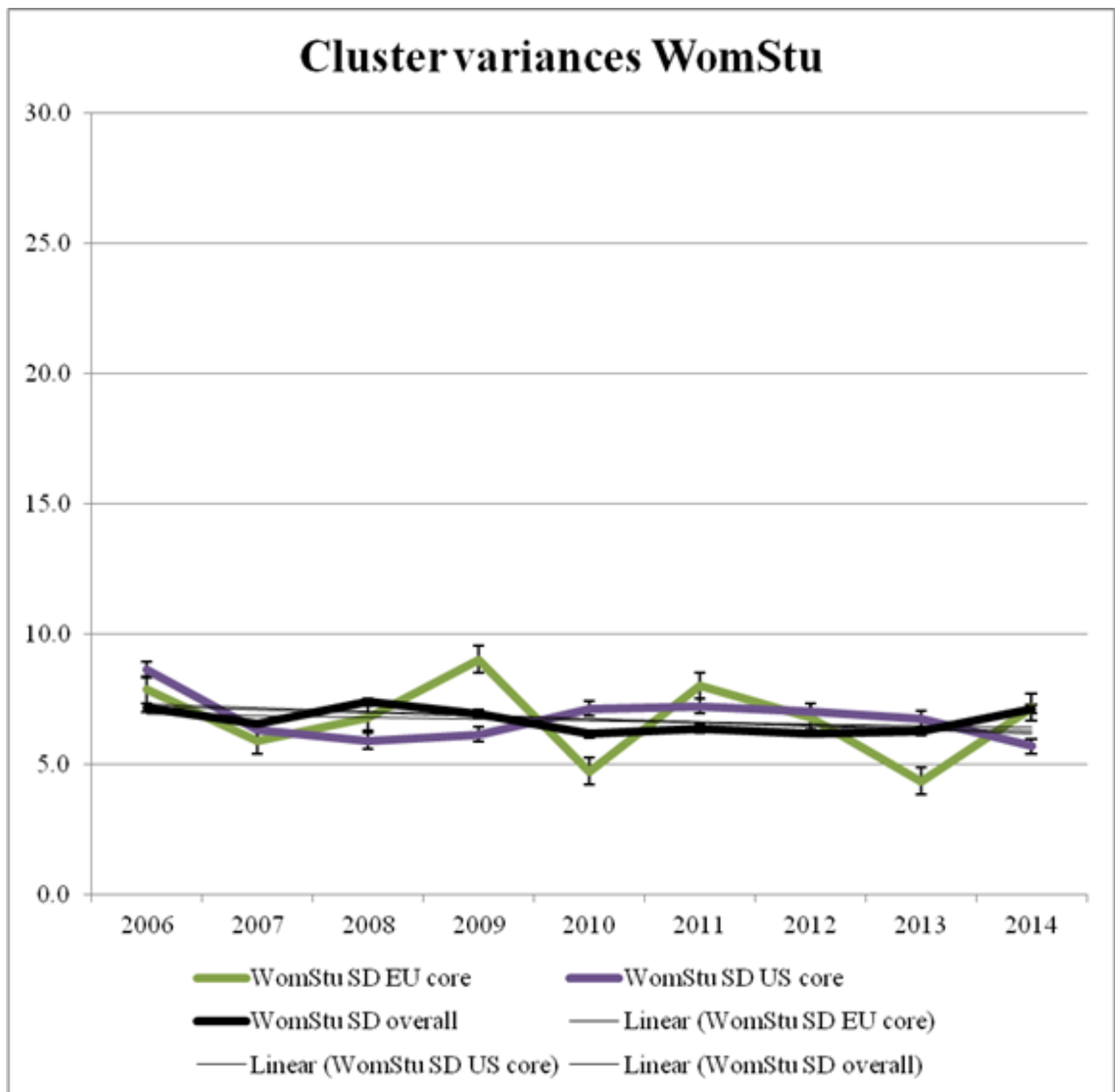


Figure 51: Comparison of cluster standard deviations, WomStu

Criteria on which ranking actors cluster. As we can see in figure 52, while both clusters and the field show a slight increase in compliance with employment data, the US cluster and the overall ranking field have virtually indistinguishable rates of compliance. This suggests that the US cluster is closer to the field than the European cluster on that criterion. While the difference between the average field compliance and the EU cluster compliance shrinks in 2014, the distinction between the cluster and the European schools is nevertheless maintained. This suggests that the EU cluster schools are different in terms of compliance with employment data submission from both the field and the US cluster. This effect may be due to the overall weaker relation with alumni that European schools have as compared to their American counterparts, resulting in lower compliance rates with ranking data submission.

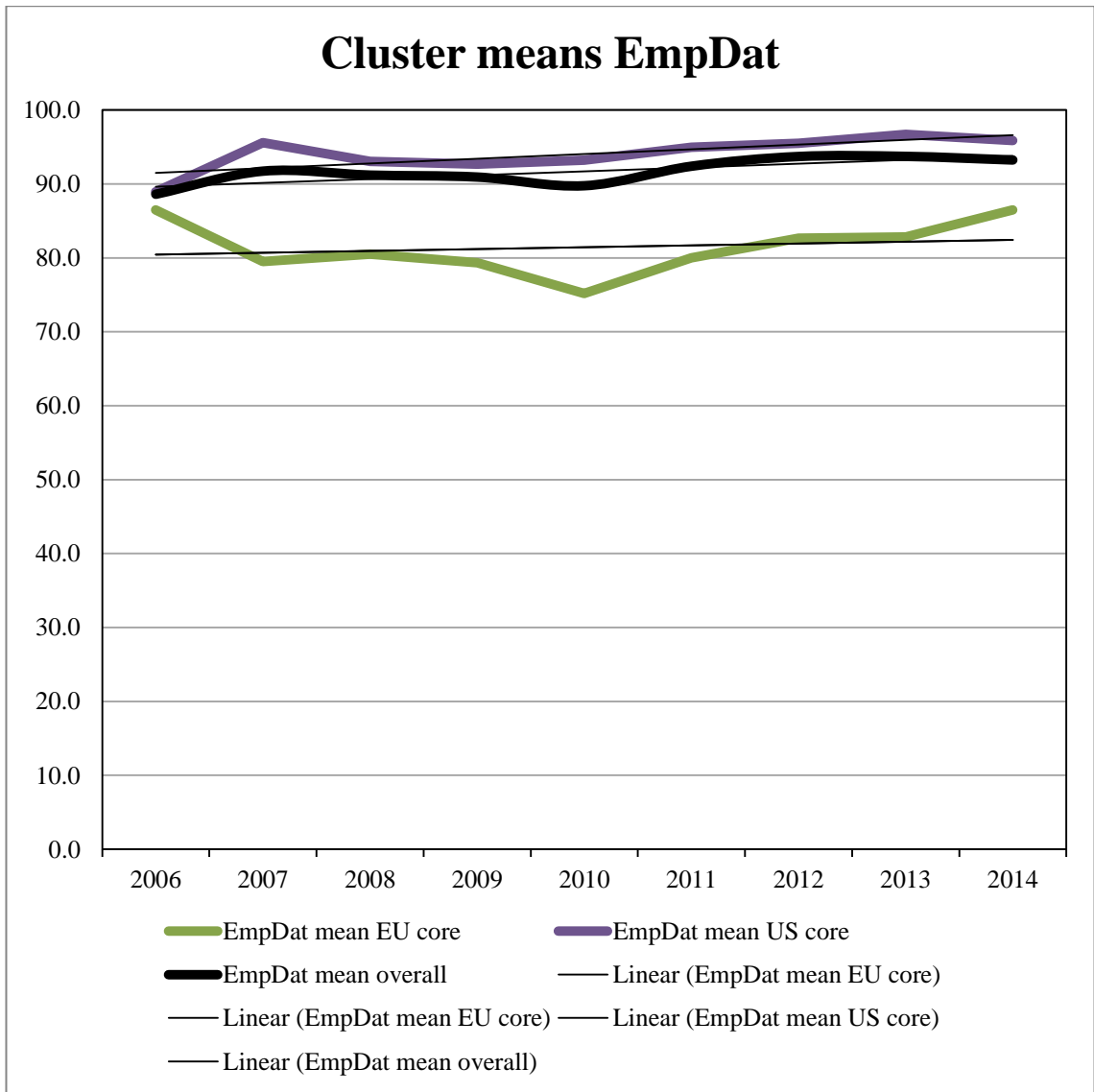


Figure 52: Comparison of cluster means, EmpDat

As we can see in figure 53, on the EmpDat criterion, the clusters and the field distinguish themselves in terms of variance from 2007 on. The only exception is the year 2012, where both clusters and the field have similar variances. While the EU cluster shows a constantly high variance as compared to the field and the US cluster with the exception of 2012, the variance of the field declines strongly at the same time. The decline in variance of the EU cluster is less pronounced. The decline of the variance of the US cluster is thus stronger than the decline of both the EU cluster and the field, with the variance staying well below the field average in all years except 2012. Overall, this suggests that the EmpDat criterion is becoming less of a means of

distinction for the field and both clusters. However, while compliance with the submission of employment data was a distinguishing factor for both American and European schools in 2006, by 2014 this was much less the case for American schools than it was for European ones.

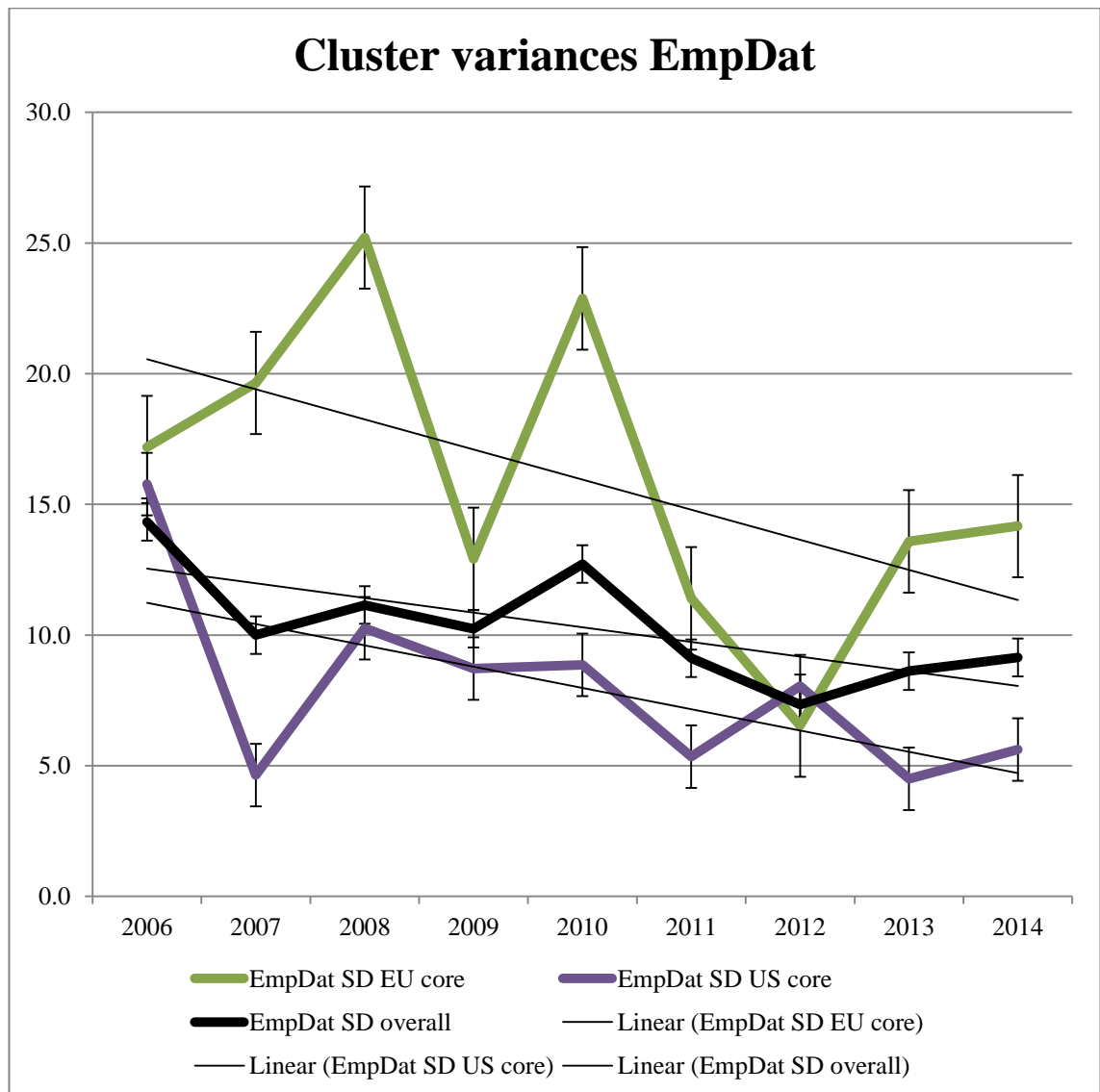


Figure 53: Comparison of cluster standard deviations, EmpDat

As figure 54 shows, the US cluster barely distinguishes itself from the overall field in terms of the percentage of faculty with a doctorate. However, the difference is becoming more pronounced over the years, with US schools showing lower scores on this criterion as compared to the field. This might be partially due to a trend of making

business education more practitioner-oriented in the US. At the same time, the EU cluster shows a relatively clear increase in terms of faculty with doctorates, approaching the average of the US cluster in 2012 and 2013.

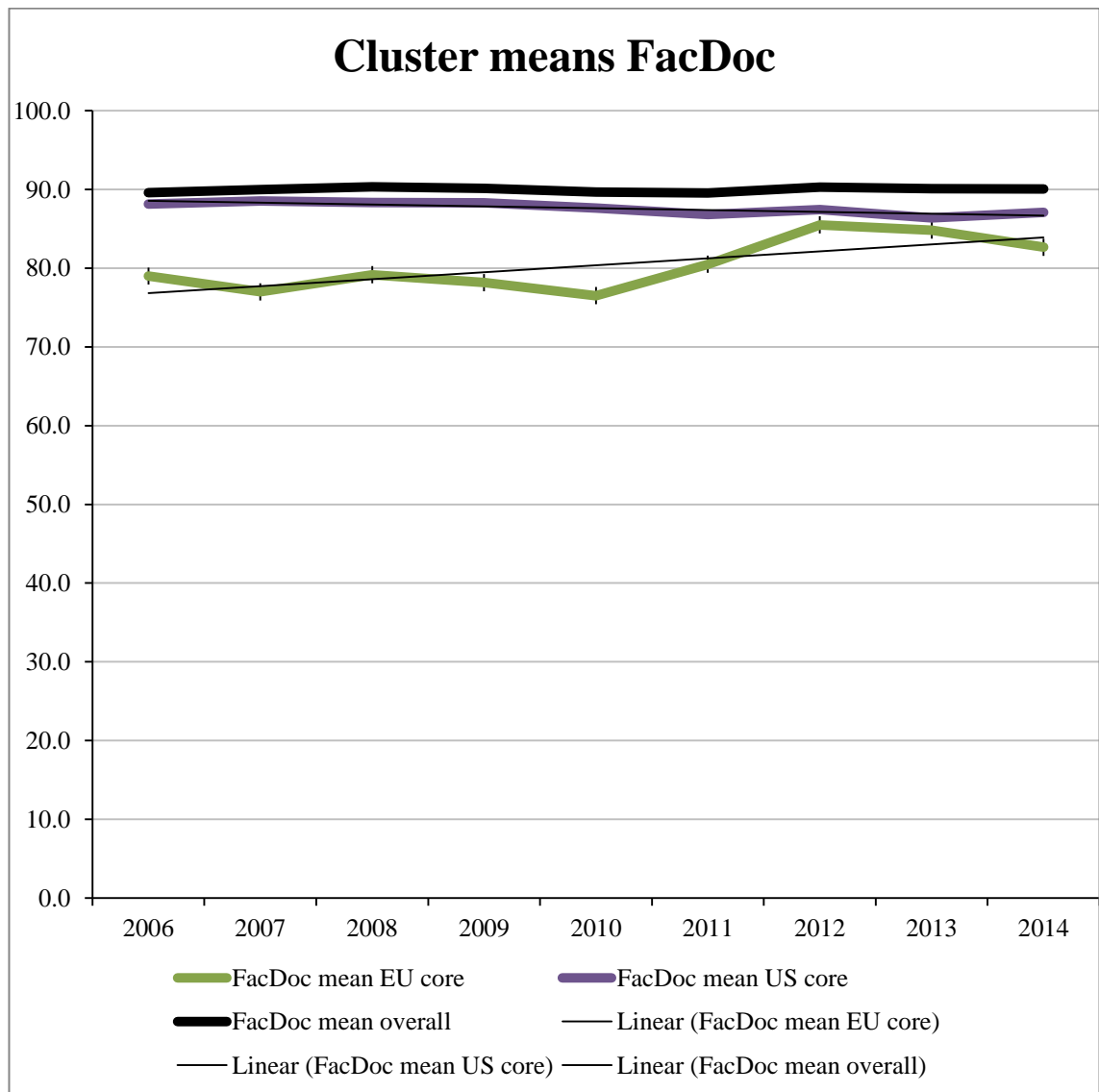


Figure 54: Comparison of cluster means, FacDoc

As we can see in figure 55, the variance of the US cluster and the field is virtually indistinguishable for most years, suggesting that the faculty with doctorates is losing in significance as distinguishing factor to a similar extent in both the US cluster and the field. The EU cluster appears to converge to that trend, with the initially high values in terms of variance almost constantly declining to similar levels until 2014.

Overall, this suggests that faculty with a doctorate is becoming less of a distinguishing factor in both clusters as well as the overall ranking field.

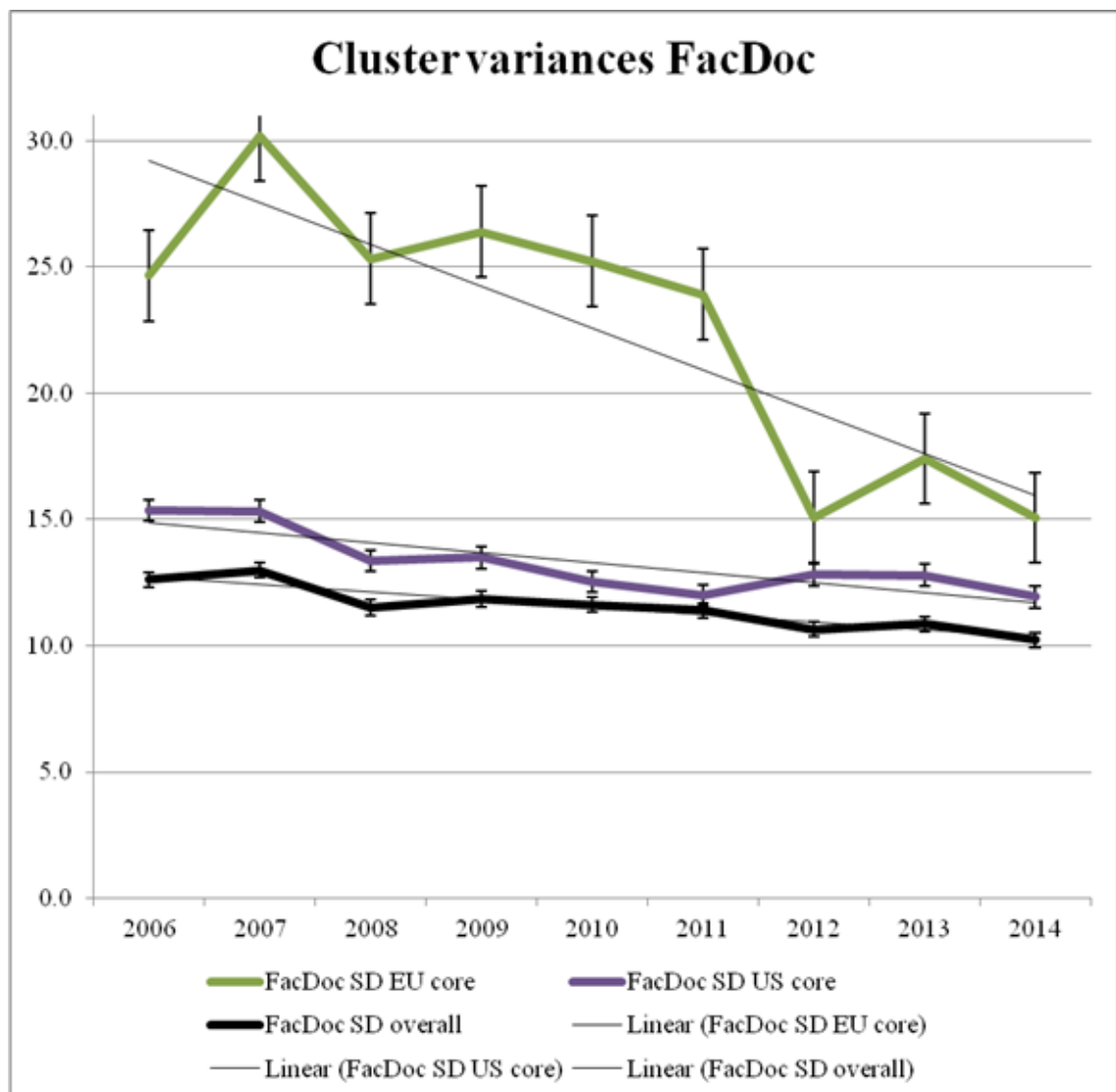


Figure 55: Comparison of cluster standard deviations, FacDoc

As we can see in figure 56, the clusters and the field clearly distinguish themselves from each other in terms of female board participation. While both the US core cluster and the field show a slight rise in terms of the WomBoa criterion, female board participation in US schools in the cluster remains distinctively low. Contrastingly, the EU core cluster shows a much stronger increase in female board participation than the US cluster, despite its high starting value in 2006, which is more than double (29%)

as high as the score of the US core cluster (13%). This suggests that not only does the EU cluster distinguish itself from both the US cluster and the field in terms of female board participation, but also that that distinction is growing.

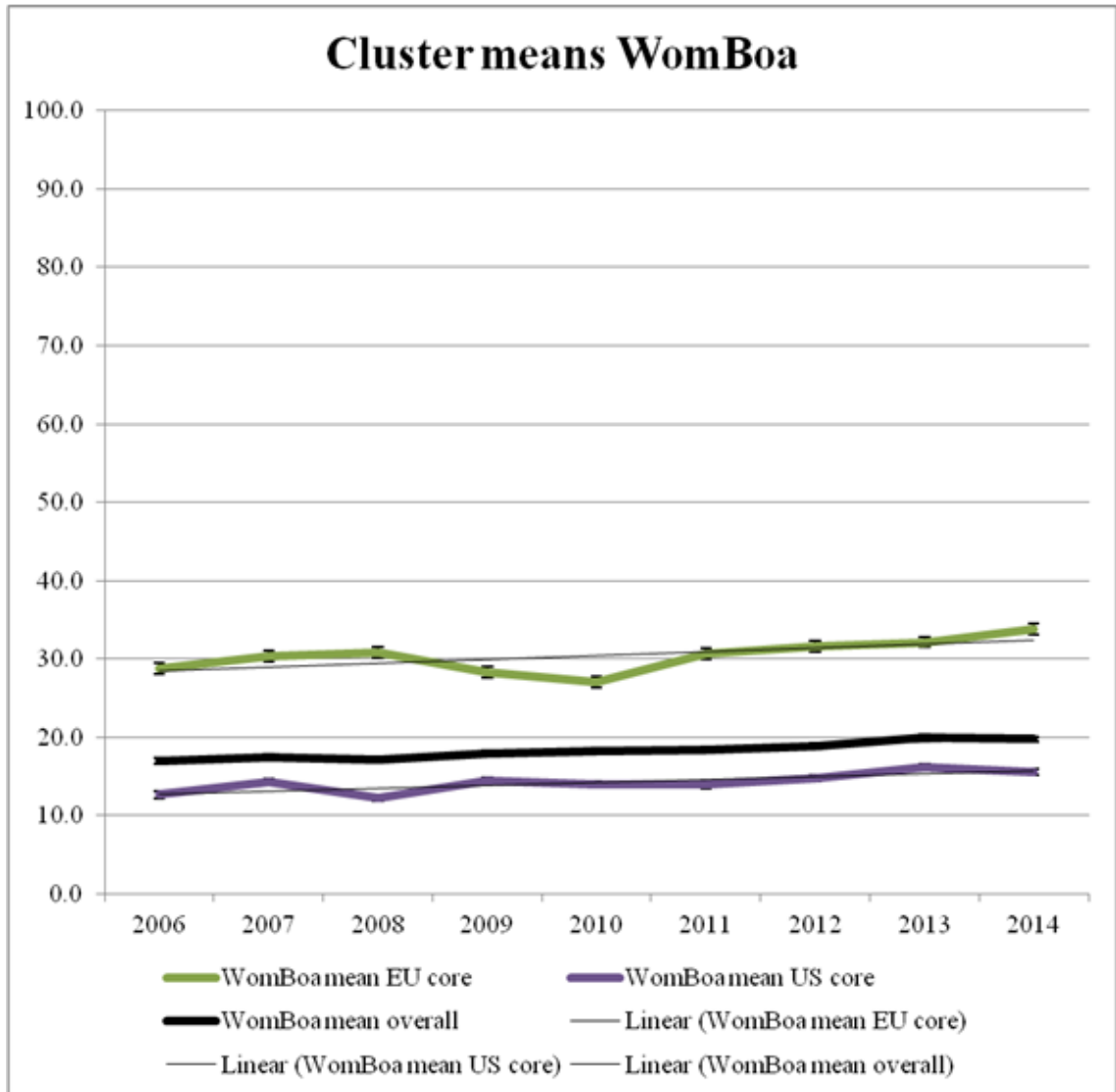


Figure 56: Comparison of cluster means, WomBoa

As we can see in figure 57, both the EU cluster shows a high, and increasing, distinctiveness from the field in terms of female board membership. The US cluster variance is increasing at a similar rate, but from an average below the ranking field. This suggests that female board membership remains a constant distinguishing feature

of the field, with both clusters increasing in distinctiveness, while at the same time maintaining a different degree of variance from both each other and the field over time.

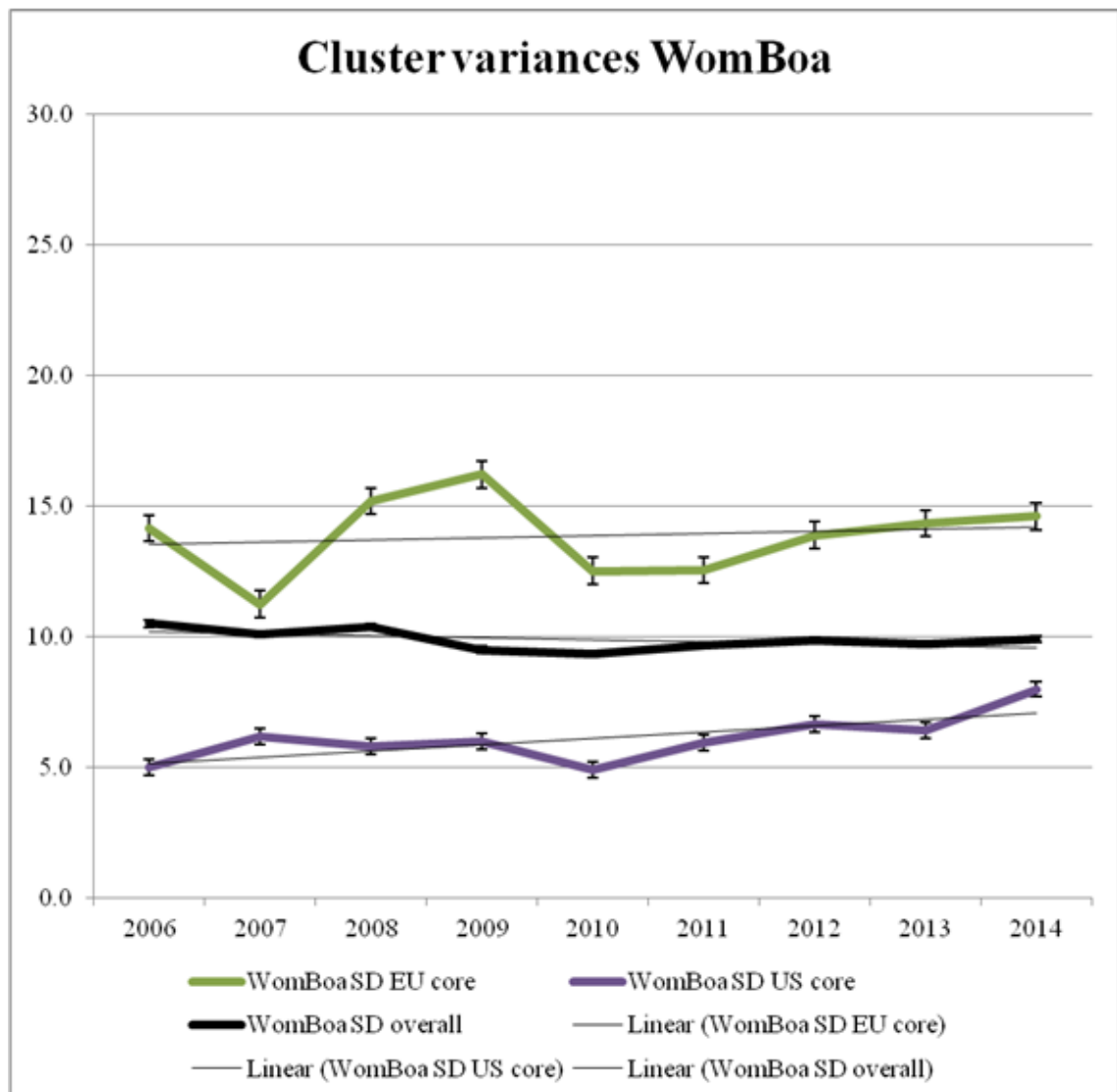


Figure 57: Comparison of cluster standard deviations, WomBoa

As we can see in figures 58, 59 and 60, the clusters and the ranking field most clearly distinguish themselves on all three international diversity criteria, i.e. international board, student and faculty participation. For all three criteria, the distinctive profile is maintained for the field and both clusters between 2006 and 2009, despite both the clusters and the field slightly growing over time. The only exception is the EU cluster, where the percentage of international faculty is increasing at a slightly

faster rate than the US cluster and the field average. Overall, this suggests that international diversity in terms of faculty, student and board participation is a lasting point of distinction for both clusters from the field, with the EU cluster performing markedly higher on international criteria than the US cluster and the field.

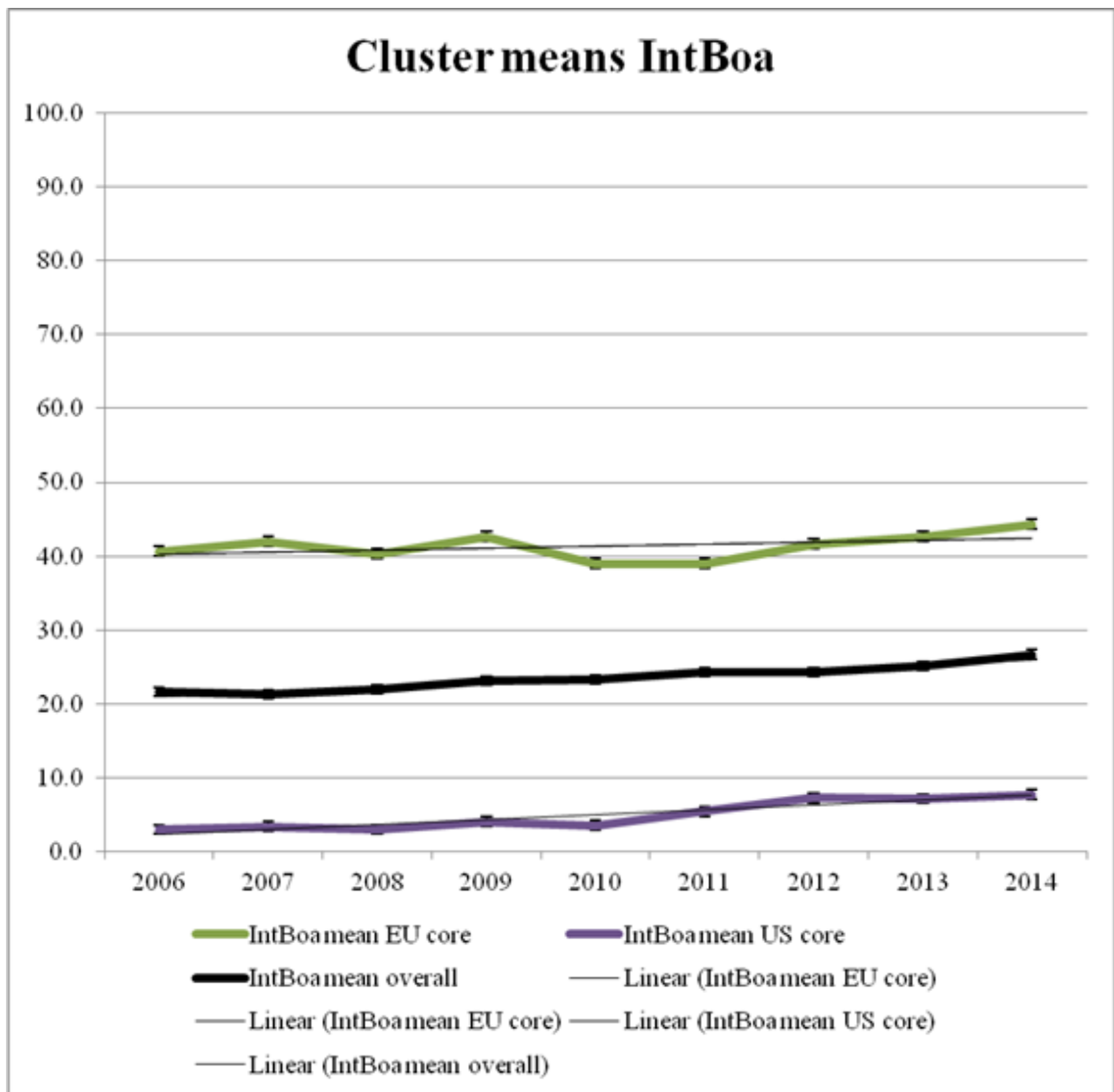


Figure 58: Comparison of cluster means, IntBoa

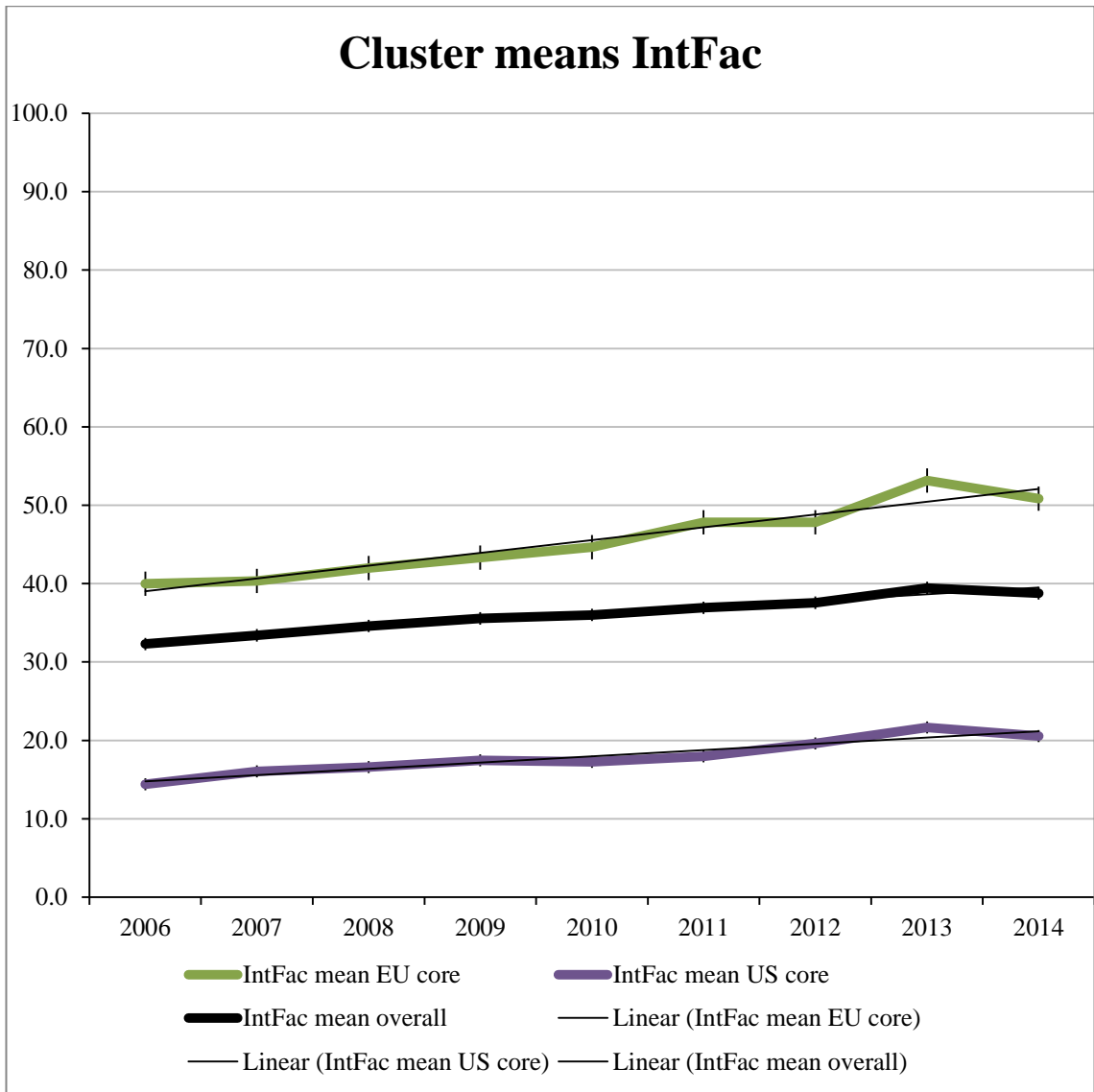


Figure 59: Comparison of cluster means, IntFac

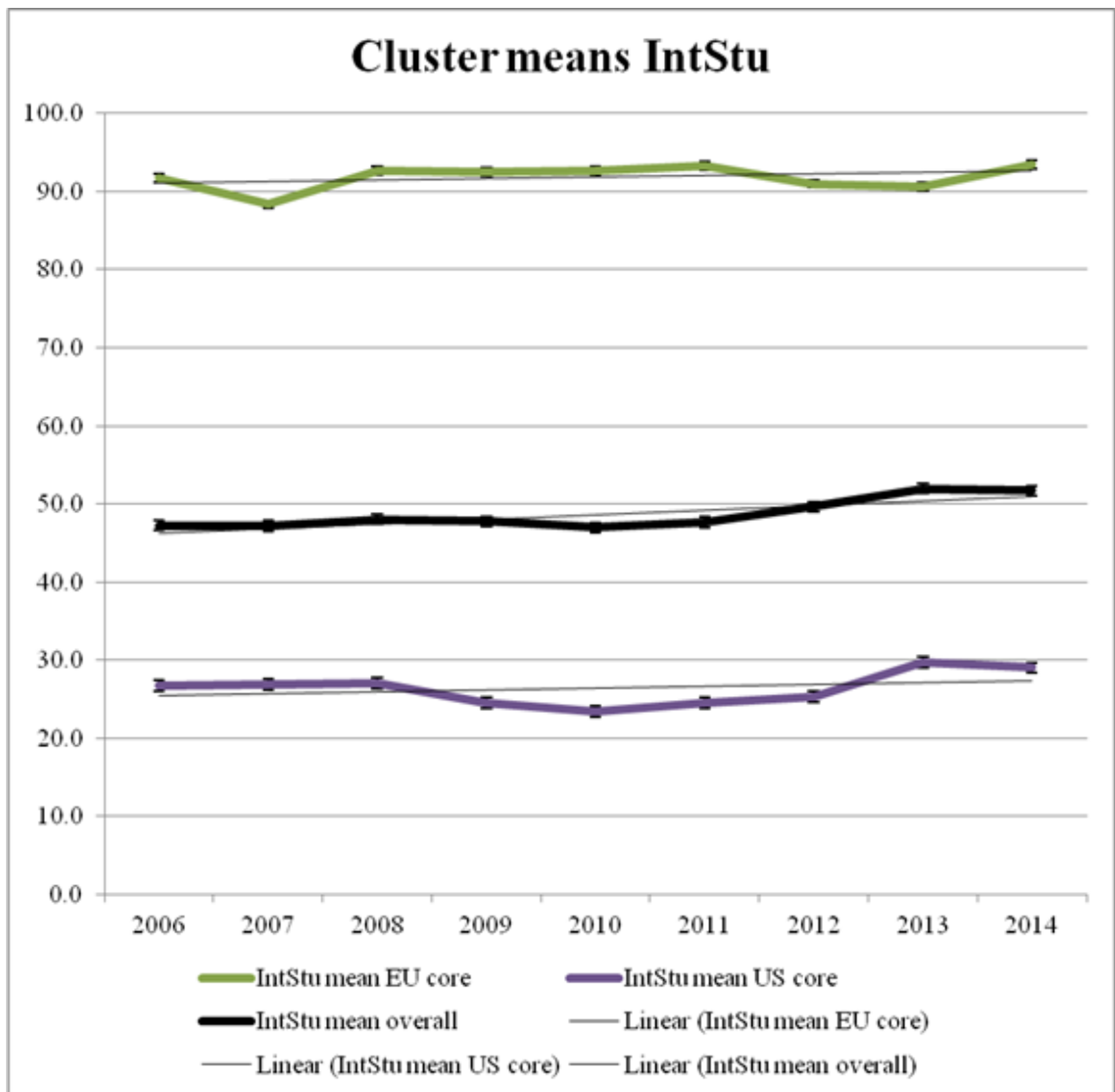


Figure 60: Comparison of cluster means, IntStu

As we can see in figure 61 and 62, international board and faculty membership remain fairly constant factors of distinction in the field between 2006 and 2014. However, the EU cluster shows a declining trend in terms of variance on both criteria, while the US cluster starts from relatively low levels in 2006 and converges with the EU cluster variance trend from 2012 on. This suggests that international board and faculty membership are becoming less of a distinguishing feature of the EU cluster ranking actors, while the opposite is the case for the US cluster. However, both clusters converge to equal levels of variance from 2012 on. This is in contrast to the high field average, which suggests that distinction through the international board and faculty

membership is more of a factor in the field than it is within the clusters. This indicates that the ranking actors outside the EU and US clusters continue to distinguish themselves through their percentage of international board and faculty members.

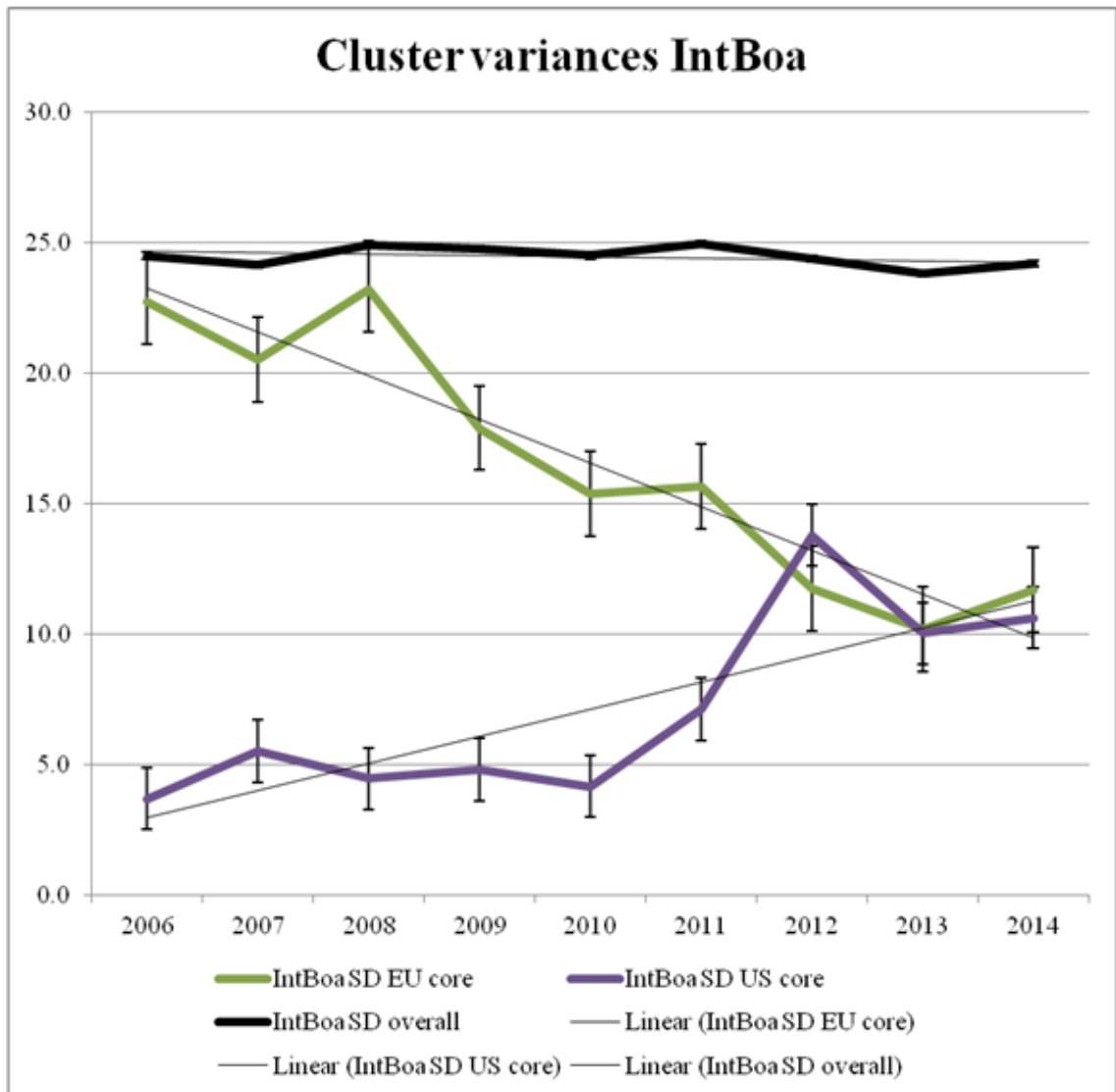


Figure 61: Comparison of cluster standard deviations, IntBoa

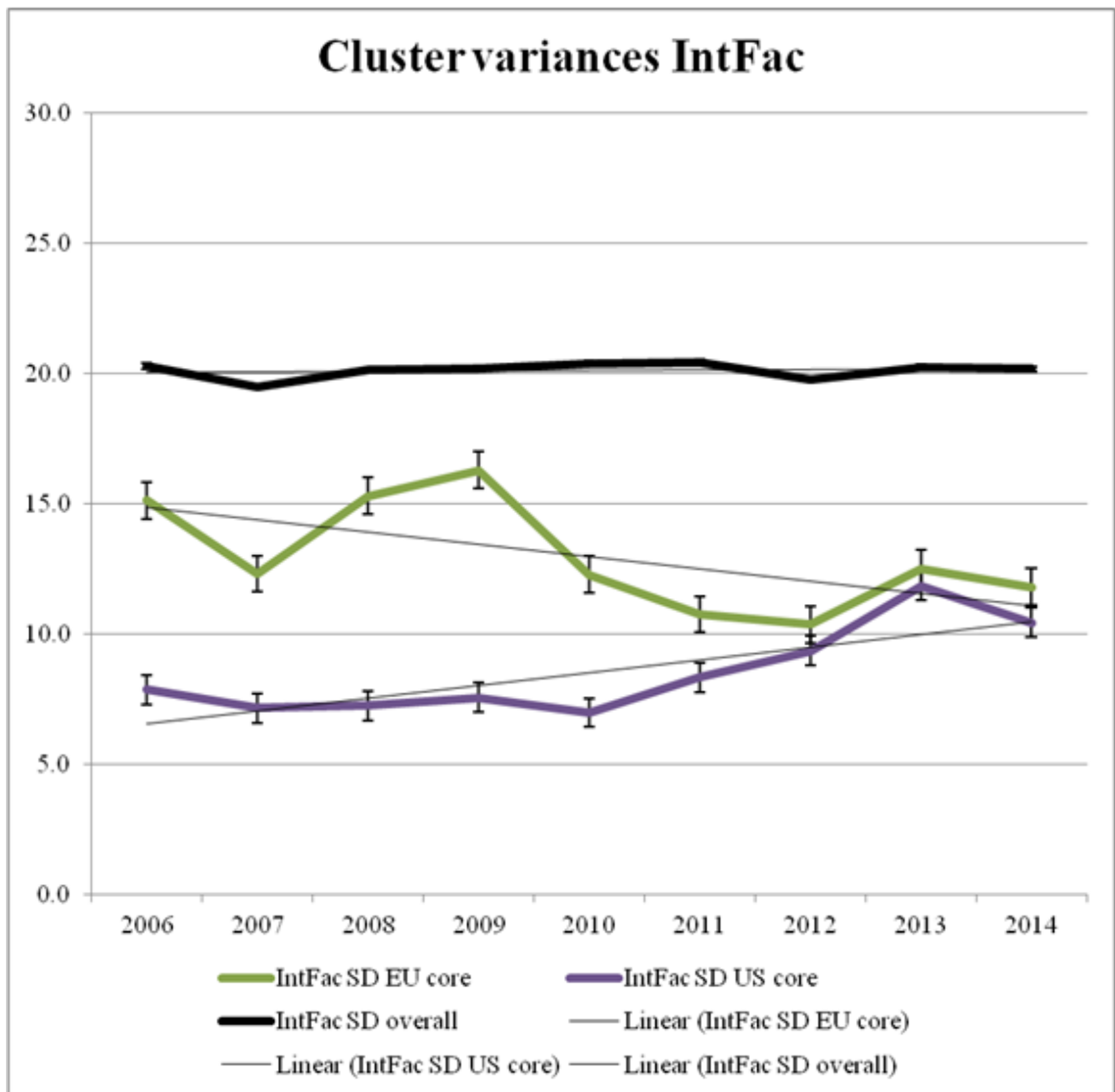


Figure 62: Comparison of cluster standard deviations, IntFac

As we can see in figure 63, the pattern is different for international student participation. While the variance of the field increases slowly but clearly between 2006 and 2014, it increases at a similar rate for the US cluster, but decreases for the EU cluster. This suggests that international students are becoming more of a distinguishing feature for the field and the US cluster, while becoming less so for the EU cluster. This can be partially explained through the high average percentage of international students in the EU cluster, which may make it more difficult for ranking actors to achieve performance improvements or show varying performance.

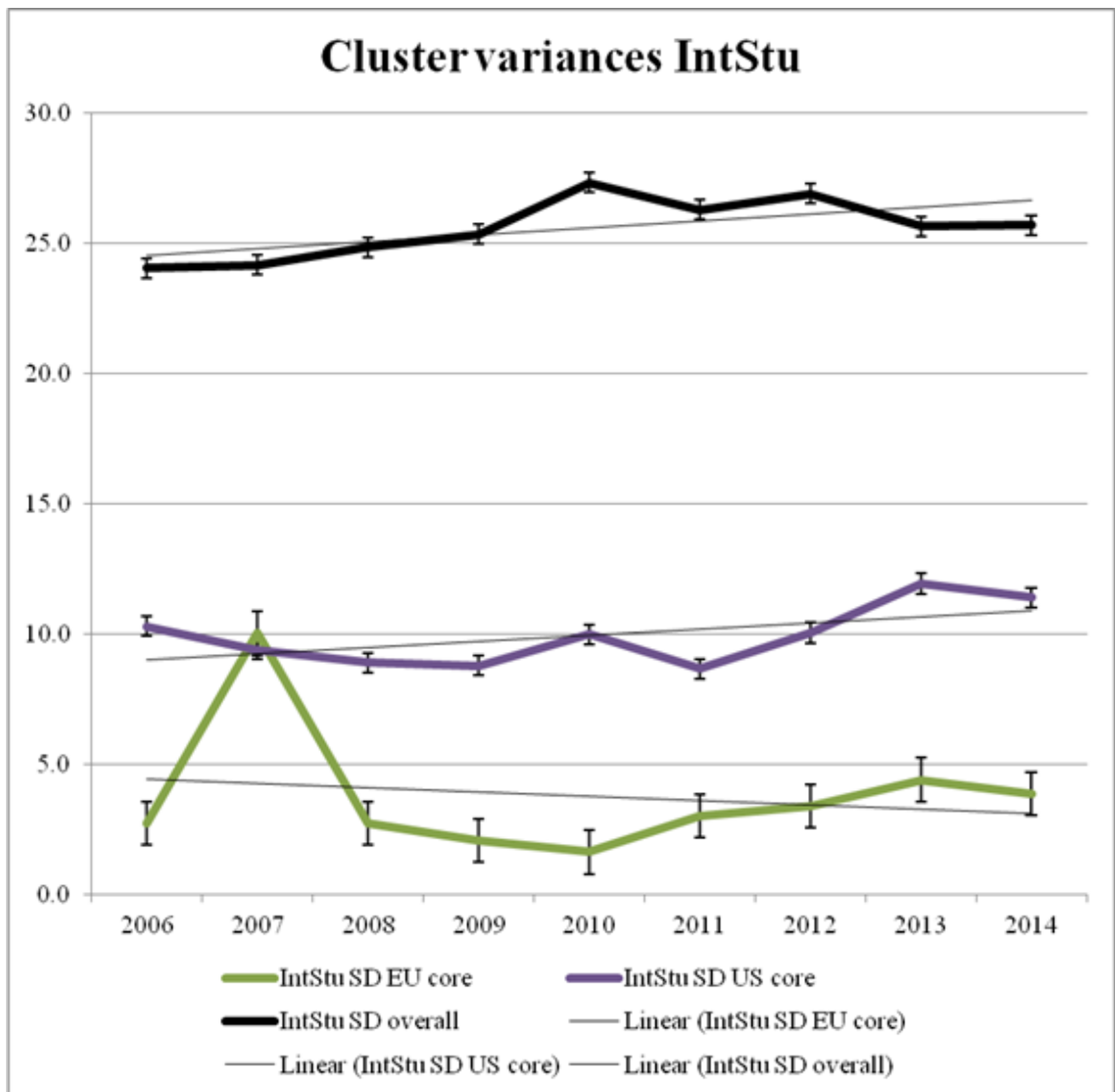


Figure 63: Comparison of cluster standard deviations, IntStu

Conclusion. In the preceding sections, I have described the EU and US core and peripheral clusters, as well as non-affiliated ranking actors, both in terms of composition, structure, and development of measures of central tendency. While the core clusters are naturally homogeneous in their composition, both the peripheral EU and US clusters contain many business schools that are performing highly in the ranking, suggesting that high status schools are only loosely related to the core clusters. This however changes over time, as an increasing number of high status ranking actors are clustering with the core cluster members. This indicates that the field of business schools is increasingly splitting into one EU cluster, mainly containing European ranking actors, and a US cluster, mainly containing American ranking actors of both high and low ranks. In the long term, this raises questions about the approach of the FT to combine American, European and Asian schools in a single ranking, as discussed in chapter II. The evidence presented in this chapter shows that despite the strong influence of the FT ranking, the attainment of this objective is becoming less feasible.

In addition, a strong number of Canadian and low and high status American business schools remains independent of the clustering process for most of the time, only joining either cluster after 2011. This suggests that some schools, above all high status American schools, were able to maintain their distinctive profile, only becoming more similar to either cluster towards the end of the observation period. This provides confirmation of the proposition of the emergence of two distinctive fields with a core of American and European business schools as well as a periphery of schools that align with the core.

On the one hand, EU ranking actors deal with their performance in the FT MBA rankings in more detail in their communication, including critique and appreciation of the ranking and its methodology on dedicated ‘rankings’ websites. On the other hand, schools in the US cluster only use the FT rankings as one of several measurement

devices, specifically other rankings and accreditations. However, actors from both clusters display an active engagement with the rankings, discussing them in light of their strategy, and using reference points, specifically geographic and criterion-related ones, to contextualise and reinterpret the FT rankings.

The criteria on which the clusters and the field distinguish themselves most clearly are the diversity criteria International Faculty, International Board and International Student, as well as female board membership. The Faculty with Doctorate criterion serves to a lesser extent as a mark of distinction. This suggests that diversity as well as faculty-related criteria serve most clearly to distinguish schools in the ranking field. This can be explained through the availability of candidates in the European and American Business School fields, as well as the ensuing different strategic outlook of the schools in each field. Confirming the findings from chapter VIII, I showed that the two clusters distinguish themselves barely on the Emp3M, WomFac and WomStu criteria over most years. This suggests that schools in both clusters are subject to similar environmental conditions in terms of employment conditions, given that there is an international labour market for MBA graduates. This also indicates that schools in both clusters face similar difficulty in recruiting female faculty and students, indicating that the issue of gender imbalance in business education transcends national boundaries.

While the clusters change over time, both barely change as compared to the field, suggesting that not only the number, but also the relative position of the clusters remains stable over time. The development of schools in terms of performance and similarity is criterion specific. With the exception of the heavily left-skewed criteria Emp3M and FacDoc, all criteria show slow, but clear upwards trends in terms of their performance. This counts for the field as well as both clusters. The fact that these criteria are heavily left-skewed suggests also that high employment prospects and high

percentage of faculty with a doctorate have become a de facto standard in the FT ranking field.

The development of the criteria in terms of their capability to serve as markers of distinctiveness between low and high performers is however more nuanced. While some criteria decrease in variance (Emp3M, EmpDat, FacDoc, IntStu, WomStu), others increase in variance (WomFac, WomBoa) while others do not show a clear development (IntBoa, IntFac, Lang) in terms of their different field and respective cluster variances, suggesting that the FT ranking does not have a consistent homogenising effect on ranking actors. At the same time, international diversity criteria maintain, but do not expand their status as indicators of distinction. Overall, this indicates that individual and clusters of ranking actors respond to the pressures emanating from the ranking with a range of different adaptive strategies, based on the range of strategic responses discussed in chapter III. However, it also shows that how ranking actors choose to engage with their ranking frame is at least partially contingent on their environmental context, and particularly geographic location. I will summarise my key findings from the thesis and discuss their significance in more detail in chapter X.

X DISCUSSION AND CONCLUSION

This thesis has significantly advanced the literature on rankings through elucidating the relationship between concepts that help to understand rankings and their impact on organisations and fields. In particular, it has clarified how cognitive and strategic processes at the organisational level, which underlie the measurement and ranking process, impact on macro outcomes on the level of the organisational field. In doing so, it has introduced the concepts of the ranking template and frame, and offered an explanation of the conditions and mechanisms of the ranking process. As a result, it has shown that the outcome of the ranking process can both be differentiation and homogenisation of ranking actors and fields. This thesis thus makes several contributions to the literatures on rankings and performance measurement.

In this chapter, I first will explain the key findings of the thesis. These include the clarification of the rationality assumptions in the literature on rankings, as well as the introduction of the concept of the ranking template, the explanation of the conditions of ranking impact, ranking frames, ranking field segments, boundaries and clusters, ranking frame adjustments and finally ranking outcomes. I will show how each of these findings contributes to the literature on rankings, and discuss how this thesis has also advanced the literature on rankings in terms of methodological approach. I will follow up that section by explaining the limitations of this thesis. These include limitations on the vertical elements of ranking frames, the development of clusters, actor response discretion, the competition of measurement devices, rankings in different fields and ranking field construction. I will show how each of these limitations can be constructively addressed in future research. Finally, I will conclude the thesis with some

observations about the future of the FT ranking, and business school rankings in general.

1 Key findings and contributions

The fact that the previous literature has not yet developed a common language on rankings has led to a limited understanding in terms of roles of actors, conditions and mechanisms of the ranking process. I thus introduced clear definitions of what rankings and ranking fields are, as well as of the actors that make up the ranking field. These are organisations that publish rankings, organisations that are ranked, and stakeholders in the ranking process. The definition of rankings as an aggregation of metrics ordered transitively and relatively into a matrix by an algorithm is particularly helpful because it provides a clear definition of the cognitive and strategic bases that underlie the construction of frames for different performance measures. Thereby, the thesis adds to the literature on organisational performance measures (Meyer, 2002; Meyer & Gupta, 1994). This new terminology is particularly useful when explained in the context of the other concepts that the thesis has introduced. I will first start with the rationality assumptions.

Rationality assumptions. I have argued that understanding the impact of rankings on organisations and organisational fields requires an understanding of the rationality assumptions that underlie the ranking process. This thesis has thus clarified the previously unspecified rationality assumptions that pervade the literature on rankings. Drawing on the concept of bounded rationality of Simon (1997 [1947]), I proposed that ranking agents are subject to cognitive limitations when constructing rankings, and are also taking into account the cognitive limitations of ranking actors when constructing rankings. I have also argued that ranking actors are boundedly

rational actors that use rankings as devices to overcome their cognitive limitations, thereby developing a variety of cognitive and strategic frames that help them to position themselves strategically in the ranking field. In addition, I have clarified the role the conditions of informational complexity of the ranking zone are playing in the ranking process. I explained how the relationship between the bounded rationality of ranking actors and field conditions determines ranking impact over time as informational complexity changes and the ranking zone moves. I have thus shown how the bounded rationality of both ranking actors and agents interacts with conditions of informational complexity in the construction of both ranking frames and templates. These concepts are novel and useful for future studies of rankings and other performance measures, as they provide a clear basis for understanding how cognition, informational complexity and strategising of actors work together in determining the impact of performance measures.

Ranking templates. Contrasting the concept of templates of organising proposed by the New Institutional literature (DiMaggio & Powel, 1991; Fligstein, 1996; Greenwood & Hinings, 1996; Heugens & Lander, 2009; D'Aunno, Succi & Alexander, 2000), and based on Wedlin's (2006, 2007) concept of the template, I have shown how a variety of competing templates coexist within a field. I have also demonstrated how this makes the emergence of a single template that all field actors use in the same way unlikely. Building on this, I proposed the concept of the ranking template as the models of organising that ranking agents create through rankings, thereby defining what is legitimate or of high reputation, status or performance in the field. Adding to that, my use of concept of prestige and the introduction of a distinction between legitimacy, reputation and status devices provides an explanation of the dynamics that ranking actors are subject to independently of the ranking process. It shows that rankings draw

on several types of social judgement formation. In particular, this extends Wedlin's concept of measurement devices (2011).

The concept of the ranking template thus significantly adds to the previous literature on rankings (Sauder, 2008; Wedlin, 2006; 2007), as it explicitly allows for the creation of multiple templates of organising through ranking and other agents. In particular, this adds to Wedlin, who has shown that pressures from different templates co-exist in the ranking field, but has not explained how and under what circumstances certain templates prevail over others (Wedlin, 2007: 36). While this thesis does not offer a full explanation of the mechanisms of how ranking templates prevail over others, it clarifies that any such process will be based on the perpetual competition of templates, rather than the emergence of a single one.

Conditions of ranking impact. The previous literature on rankings has not addressed the question of the conditions under which rankings impact on organisations and fields. I proposed that informational complexity is the main field condition for the impact of performance measures like rankings, above all with post-experience goods like education or research. I also outlined how the degree of informational complexity in a field is related to status orders and the degree of structuration and resource conflicts. Based on this, and a discussion of the role of the environment for boundedly rational actors, I proposed the concept of the ranking zone to show how informational complexity interacts with the probability of ranking impact to create ranking and non-ranking zones. In particular, I showed how the degree of institutionalisation of the ranking limits the response discretion of ranking actors to ranking templates. I have thus demonstrated under what conditions rankings are more or less likely to impact on organisational fields, and have given an explanation of why in particular in business

education, the influence of rankings on ranking actors has increased considerably in recent years (see Sauder & Fine, 2008). This presents a significant addition to the ranking literature, as previous studies have not investigated the relationship between field conditions and ranking impact, thereby assuming that rankings emerge independently of field conditions.

Ranking frames. The previous literature has failed to explain the dynamic process of interaction between ranking agents and actors in the use of templates of organising, in particular ranking templates. I proposed that in order to understand how rankings impact on organisations, one has to understand how ranking actors ‘see’ and consequently use templates emanating from rankings, and to what extent their cognitive limitations impact that process. This provides an important counterpoint to the previous literature, which has assumed that rankings are “seen” and used similarly by ranking actors. In particular, how actors use their cognition and strategise in response to measurement devices has remained unclear. This thesis has addressed this by outlining the collaborative nature of the construction of ranking frames between ranking actors, stakeholders and agents.

Building on the literature on frames (Goffman, 1974, Daft & Weick, 1984; Kaplan, 2008; Nadkarni & Barr, 2008; Walsh, 1995), I thus introduced the ranking frame as a concept that bridges meso and macro-level explanations between actors and fields. This adds significantly to the literature, as it takes into account the cognitive and strategic bases of the ranking process. Specifically, it clarifies the cognitive and strategic bases on which ranking actors respond to ranking templates produced by ranking agents. This also contrasts the previous literature, which conceptualised the agency of ranking actors as either limited to gaming (see Espeland & Sauder, 2007) or

conforming to one ranking template (Glick, 2008, Jablecka, 2012; Shin & Toutkoushian, 2011; Proulx 2009; Tight, 2000; Van Damme, 2009).

In addition, the concept of the ranking frame extends the work of Kaplan on frames and framing contests, who has investigated the microfoundations of the competitive creation of frames between individual organisational actors (2008). The concept of the ranking frame extends this work to the organisational level, showing how ranked organisations form ranking frames by using ranking templates, other templates, their own set of performances and aspirations as well as the ones of their competitors. Through the introduction of the concepts of aspiration levels, preliminary ranking frames, the segmentation of the ranking field, and ranking frame adjustment, I have also mapped the process of the construction of ranking frames. I will discuss these concepts in more detail in the following sections.

Ranking field segments, boundaries and clusters. I have shown how the concept of the ranking frame is useful to sketch out the boundaries of a ranking field, as well as its clusters and horizontal and vertical segments. The analysis of the development of the ranking criteria in terms of variance revealed that more criteria in terms of weighting remained constant or increased in variance than those that decreased in variance over the same time. The empirical results confirmed that the ranking frame thus cannot be reduced to a single overall ranking metric that is used by all ranking actors indiscriminately, but rather has to be analysed for each criterion and its impact on the ranking actor.

As part of the analysis of ranking criteria, I showed that the process of wearing down of performance measures is more complex than described by Meyer and Gupta (1994) and Meyer (2002). Specifically, I demonstrated how correlated measures can ‘run down’ in very different ways, including the simultaneous increase of means with

decrease in variance, and vice versa. I extended their work by proposing two other types of attrition. Type 2 attrition features a decrease or stability in the mean and the variance of a performance measure. Type 3 attrition occurs when both the mean and the variance of the performance measure increase or remain stable. Importantly, I also showed that exogenous shocks, such as the crisis of 2008 and its effects on the ranking year 2010, can have a lasting effect on the way criteria decay over time. This provides evidence for the proposal that rankings have to be conceptualised as part of a ranking field that is subject to not only institutional, but also competitive pressures.

An analysis of the development of ranking field boundaries confirmed that there is a dynamic process of engagement between ranking actors and the ranking agent, in which ranking actors build their ranking frame through entering and exiting the ranking field. This suggests that schools are not the passive recipients of ranking templates from the ranking agent, but choose to use the ranking strategically and opportunistically. Nevertheless, most ranking actors show relatively consistent patterns of participation, indicating that they have a fairly stable ranking frame. This in turn affects how ranking actors continue with their participation, even when they are non-ranked. Importantly, a substantive minority of schools show more unstable patterns of participation, suggesting an alternative process of building, testing and adjusting of ranking frames. This also adds to the literature in that it is the first empirical investigation of Wedlin's ideas about the establishment and negotiation of the boundaries of the ranking field (2006, 2007, 2011).

The concept of the existence of clusters in the ranking field that are a priori independent of the ranking adds significantly to the understanding of the role of cognitive and strategic processes of ranking actors that other authors (Locke, 2011; Sauder, 2006; Sauder & Espeland, 2009; Sauder, 2008) have only marginally outlined. In addition, the existence of core and peripheral clusters confirms the findings of work

on strategic groups and competitive clusters (McNamara, Deephouse & Luce; 2003). The results of the cluster analysis as well as a longitudinal analysis of the development of the criteria also confirmed the proposition that ranking actors respond to rankings with a range of different strategies. I will discuss this in more detail in the following section.

Change and homogenisation. As chapter II has shown, the main assumptions of the current literature on rankings have been that there is a simple cause-effect relationship between the emergence of rankings and change and homogenisation processes in organisational fields. Through my analysis of the ranking field, I have shown that these two assumptions have led to a limited understanding of the variety of outcomes of the ranking process and the models of organising that exist within ranking fields.

Building on the ideas of Locke (2011), who theorised that rankings are focal points of attention around which already existing trends for change are being justified, publicised, negotiated and implemented, I proposed that the highly publicised nature of the ranking process impacts perceptions about rankings that are a priori independent of them. I thus demonstrated how claims that rankings have negative effects on organisations and fields (Adler & Harzing, 2009; Walsh, 2011; Osterloh & Frey, 2009, Marginson & Van der Wende, 2007; Van der Wende & Westerheijden, 2009; Vogel & Kieser, 2014) are based on a loose and contested definition of what quality or ‘good’ education and research are. I also proposed that the focus on rankings, specifically the attribution of negative developments in organisations and fields to the emergence of rankings, can partially be explained by a wider trend towards quality assurance, accountability, performance measurement and evaluation (Frolich, Coate, Mignot-Gerard, Knill, 2010; Lawrence & Sharma, 2002; Shin, 2011; see also Power, 1997).

This provides a counterpoint to scholars who have assumed that rankings necessarily impact on organisations and fields (Czarniawska, 2011; Hazelkorn, 2007, 2011; Ozbilgin, 2009; Zemsky, 2008; Shin and Toutkoushian, 2011), as well as research, that has shown how rankings change fields (Corley & Gioia, 2000; Elsbach & Kramer, 1996; Martins, 2005; Sauder, 2008; Wedlin, 2006).

I also argued that the assumption of isomorphic change or homogenisation is counterintuitive, as a ranking has, by definition, the goal of differentiating between ranking actors, and sufficient variance between ranking actors is thus a pre-condition for measurement. The results of the cluster analysis confirmed that there are no consistent homogenising effects of rankings, but that as cluster members, ranking actors respond to the ranking with a range of different strategies. I found that there were a relatively stable, but decreasing number of clusters across all data sets. The field exhibited a split into two longitudinal sets of core and peripheral clusters, one European and one American. While core clusters were naturally homogeneous in their composition, over time, more high-ranking and highly prestigious schools joined the EU and US clusters, leading to two integrated American and European/Asian clusters of high and low performing actors over time. A high number of Canadian and low and high status American business schools remained independent of the clustering process for most of the time, only joining either cluster after 2011. This suggests that some ranking actors, above all high status American schools, were able to maintain their distinctive profile, only becoming more similar to the American cluster towards the end of the observation period. This confirms the emergence of two distinctive ranking subfields with a core of American and European business schools. This is especially relevant for the Financial Times, as the FT Global MBA rankings were explicitly created with the aim of closing the transatlantic divide in the MBA market (Wedlin, 2006). The criteria on which the clusters and the field distinguished themselves most clearly were international diversity

related. The EU and US clusters distinguished themselves barely on the employment and female faculty and students criteria. Importantly, the data revealed that although clusters changed over time, both barely change as compared to the field, suggesting that the relative position of the core clusters in the field remained stable over time.

The development of the criteria in terms of their capability to serve as markers of distinction between low and high performers was however more nuanced. Only 28% of criteria in terms of weighting decreased in variance over time. Criteria counting for 35% of the weighting either remained constant, or increased, in variance. Notably, international diversity criteria remained relatively constant in terms of field variance, while the female faculty criterion increased. This suggests that on the ranking field level, international diversity remains a constant factor of distinction, while gender diversity on the faculty increases in importance. While this holds true on the field level, it does not necessarily do so on the cluster level. The results suggested that clusters of ranking actors respond to the pressures emanating from the ranking with a range of different strategies for all criteria except for the Employed After Three Months and the Women Faculty and Students. I thus demonstrated how cluster membership and geographic location play a role in how ranking actors respond to rankings.

This confirmed the proposition that there are no one-dimensional homogenising effects of rankings, but that ranking actors and clusters respond to the ranking with a range of different strategies. In particular, the analysis of the public communication of cluster members revealed that they actively engage with the rankings, discussing them in light of their strategy, and using reference points to contextualise and reinterpret specifically the FT rankings. This also revealed that while almost all ranking actors in the study strategically and publicly engaged with the rankings, a number of them explicitly denied doing so.

Therefore, both conceptually and empirically, I have shown that the claim that rankings generally homogenise organisations and fields (Glick, 2008, Grey, 2009; Hazelkorn, 2011; Jablecka, 2012; Shin & Toutkoushian, 2011; Proulx 2009; Tight, 2000; Van Damme, 2009) does not hold up to scrutiny. In particular, I have shown how rankings can trigger both processes of differentiation and homogenisation, thereby providing evidence that organisations can still “act rationally and strategically”, but without “effectively becoming what is being measured” (Van der Wende & Westerheijden, 2009: 77). This adds in particular to Martins, 2005; Wedlin (2006, 2007), Hedmo, Sahlin-Andersson and Wedlin (2006) and Locke (2011), who have thus far not provided a mechanism for how organisational fields can become more diverse following the emergence of a ranking.

Ranking frame adjustment. Building on Bromiley’s concept of aspiration levels (2005), anchoring (Tversky & Kahnemann, 1974) and prospect theory (Kahnemann & Tversky, 1979), I showed that through the preliminary ranking frame, rankings can influence the process of the setting of aspiration levels in the pre-ranking field even before they enter a field. Based on this, I explained the mechanisms through which ranking actors can deal with discrepancies between actual and aspired performance. The current literature has focused on the reactivity to rankings and gaming strategies that ranking actors can employ to deal with rankings (see Espeland & Sauder, 2007). In contrast, I have shown that the adjustment of aspiration levels and mechanisms of reinterpretation, learning, lobbying, mergers and alliances, challenge and exit are also employed by ranking actors, leading to a variety of possible outcomes of the ranking process. This provides a richer conceptualisation of the array of strategic options of ranking actors, as well as a basis for practitioners and scholars, to understand the mechanisms of how measured organisations react to measurement in more detail.

In addition, I developed the Marginal Improvement Indicator in order to assess the impact of a ranking on ranking actors. I also introduced the Ranking Frame Indicator, which serves as proxy for the strategic emphasis that ranking actors put on changing their performance on a criterion, thereby reflecting its ranking frame. Applying these indicators to three case studies, I showed how ranking actors go through periods of strategic change, giving more or less emphasis to certain criteria over time. I specifically pointed to the limitations in terms of strategic decision making that ranking actors are facing vis-à-vis the ranking, in particular resource and organisational constraints, for example, in terms of faculty and board membership. However, while some of the data indicated that ranking actors are more prone to adjusting their performance on criteria such as the composition of their students, the available data did not allow for a definitive conclusion about the reasons for which ranking actors change on certain criteria, or not.

I also used the case studies to show how schools adopt different strategies in dealing with the ranking, in both their changes in ranking frame, as well as the way changes or conflicts in actual and aspired performance are communicated. The choice of segmental, temporal, geographic or criteria-specific reference points speaks to the active engagement of ranking actors with the ranking. Some ranking actors were shown to put more emphasis on accreditations, and some on other rankings in which they performed comparatively well. Other schools have a much more pro-active approach, openly discussing their ranking success, falsifying results, taking various reference points, and reinterpreting some of the results. I suggested that this is partially conditional on ranking success.

Performance gains and losses indicated that some ranking frame adjustments like positive learning are more sustainable than gaming strategies that lead to short-term wins. In addition, the data showed that rather than overall improvements on all criteria,

ranking frames that emphasised focused performance improvements on some criteria in specific periods resulted in particularly strong increases in rank. As part of this process, I demonstrated how ranking actors pick an anchoring point, for example their initial ranking position, or their main competitor, and compare their performance to this rank over time, producing either active and open celebration of the rankings, defensive reinterpretation or an emphasis on other measurement devices like accreditations. I also proposed that the stage of development of the ranking, ranking agents, actors and fields play a role in how ranking actors respond to rankings. This provides a conceptual framework for the empirical findings of Bowman and Bastedo (2010), who had first demonstrated the existence of anchoring effects in reputational judgements emanating from university rankings. However, it also extends their work, as it allows for flexibility and change of the anchoring point over time. Adding to that, I then proposed a model of how ranking impact and the discretion of ranking actors interact over time, leading to different paths of internalisation and institutionalisation of the ranking. I concluded that, although the boundaries of possible action are set by the ranking and field conditions, ranking actors have considerable leeway in creating and adjusting ranking frames.

Methodology. This thesis distinguishes itself from other studies on rankings in its empirical approach. Previous studies had mainly used interviews and archival data, most of them with academics, administrators, career services staff, deans, prospective students and employers of European business or American law schools (e.g. Elsbach & Kramer, 1996; Espeland & Sauder, 2007; Sauder, 2006; 2008; Sauder & Espeland, 2006; Sauder & Espeland, 2009; Sauder & Fine, 2008; Wedlin, 2006, 2007, 2011). Few other studies have used quantitative surveys of organisational members of ranking actors (Higher Education Funding Council for England, 2008; Martins, 2005; Sauder &

Lancaster, 2006). Starting from the assumption that cognitive and strategic responses cannot be understood by solely relying on qualitative or quantitative data from organisational members, I have instead analysed the data from the ranking.

Given the facility of rankings to dominate discourses and become focal points of attention (see Locke, 2011), in particular in the higher education field, this has the advantage of separating perceptions of the impact of rankings from the patterns that can be observed from the development of the ranking. Triangulated with data published by ranking actors, this analysis gives an insight into the difference between actual and aspired strategies of ranking actors vis-à-vis the ranking. This thesis thus adds to the limited number of studies that have used ranking data to investigate patterns of ranking development (Grewal, Dearden & Lilien, 2008; Rindova, Williamson, Petkova & Sever, 2005). In addition, a parallel analysis of different data sets allowed for a triangulation of the data (Denzin & Lincoln, 1994), and a rare application of longitudinal cluster analysis in the organisation theory field.

2 Limitations and avenues for future research

This thesis has several limitations, in particular concerning the empirical analysis on vertical frames, the development of clusters, actor response discretion, the competition of measurement devices, rankings in different fields and ranking field construction. In the following, I will discuss those limitations, and indicate avenues for future research to overcome them.

Data set. The data set I used has the limitation that it does not incorporate the full data of all criteria, specifically the highly weighted salary-related criteria. This

shortcoming should be addressed in future studies. However, the present data set is also interesting for future studies for the following reasons. As it includes both published and non-published ranking actors, the thesis is based on a novel data set, which is the result of the merging of nine different data sets (one for each year between 2006 and 2014). The data has been cleaned and prepared for further analysis. Given the limitations of the data, I split it into three self-contained data sets, with either constant or changing ranking actors over the years, and including or excluding salary data. Each of these data sets is novel and includes thousands of data points. Either of them can thus provide a basis for future research in the following aspects. Firstly, gender-related research can use the data to show patterns of increase of female participation over time. Interdependencies and dynamics between the development of female students, faculty and board members over time can be constructively explored. In particular, the fact that to date no business school has exceeded 50% of female participation on either of these criteria without heavily reducing that participation in the subsequent year can be a point of departure for further investigations. Secondly, data from international diversity criteria like international students, faculty and board members can be used to evaluate the effects of internationalisation strategies of business schools. Similar to the gender-related criteria, differences and interdependencies of how the three criteria develop over time might be a point of departure for further analyses, specifically for international business research. In addition, the data can be used to determine geographic patterns of changes over time, specifically when the coding is extended to include subnational geographic data. Thirdly, given the longitudinal nature of the data, the data can be used to build models that can be used to predict approximate ranks of non-ranked ranking actors and ranked ranking actors.

Vertical frames. This thesis has provided empirical evidence of how the ranking field is made up of horizontal segments, boundaries, and clusters. The issue of the existence of vertical segments has however remained largely unaddressed. This is due to methodological limitations, as ascertaining to what extent changes of ranking actors in terms of vertical segments impact on their future behaviour requires the extensive use of inferential longitudinal statistical techniques.

A future study should address this gap, using for example, multilevel mixed-effect models to analyse to what extent belonging of ranking actors to a certain ranking segment and cluster impacts on the overall and criteria-specific performance of ranking actors over time. Such a study would benefit in particular from the inclusion of salary data of non-ranked ranking actors, which were not available for this study.

Development of clusters. This thesis has shown that the development of clusters changes over time, as an increasing number of high status ranking actors are clustering with the core cluster members. This indicates that the field of business schools is increasingly splitting into one EU cluster, mainly containing European ranking actors, and a US cluster, mainly containing American ranking actors of both high and low ranks. In the long term, this raises questions about the approach of ranking agents to combine American, European and Asian schools in a single ranking to reduce the intercontinental divide in business school education. The evidence presented in this chapter shows that despite the strong influence of the FT ranking, the attainment of this objective is becoming less likely.

In terms of avenues for future research, a future study should thus investigate the further development of the clusters in the FT Global MBA ranking, above all taking

into account the development of the criteria on which the rankings cluster, and observe the changes or adjustments to the criteria where they do not.

Actor response discretion. This thesis has given some indication of which criteria are more susceptible to triggering a reaction in ranking actors than others. However, it has not found a conclusive answer to the question of which criteria ranking actors are more likely to change their performance on, and why.

Future research could use a survey design to ask decision makers of ranking actors to rank and weigh different criteria in terms of their and the school's response discretion. This would also provide further evidence for the mechanism through which ranking actors decide which criteria to respond to, thereby indicating how ranking actors find a balance between conformity and differentiation in terms of aggregate performance measures. This survey should also probe for performance measures that are not captured by the ranking, but might be affected by it.

Intraorganisational competition and individual ranking actors. This thesis has assumed that organisations involved in rankings are unified actors. While studies have investigated the perceptions of different actors within organisations vis-à-vis rankings (Elsbach & Kramer, 1996; Espeland & Sauder, 2007; Sauder, 2006; 2008; Sauder & Espeland, 2006; Sauder & Espeland, 2009; Sauder & Fine, 2008; Wedlin, 2006, 2007, 2011), these authors have mainly focused on the consensus of the perceptions between organisational members. However, as rankings have become highly contested in organisational fields, it is likely that strategic responses to rankings are going to be contested within organisations.

In future research, an investigation of how different levels of organisational members and groups collaboratively create a ranking frame could reveal important

mechanisms about the politics of rankings. Kaplan's concept of the frame and framing contests (2008) would be particularly useful for investigating the microfoundations of the competitive creation of frames between individual organisational members.

The competition of measurement devices. By highlighting the role of prestige, and providing a typology of measurement devices, this thesis has outlined the basis for an investigation of how measurement devices work together in the formation of templates. In particular, I proposed that rankings cannot be viewed as measurement devices that deliver social judgments about field actors in an exclusive and isolated manner, because they will compete with other measurement devices for definitional authority in the field (Espeland, 1997; Espeland & Stevens, 1998, 2008; Porter, 1995; Sauder & Espeland, 2006). However, I have not significantly added to the work of Bartlett, Pallas & Frostenson's (2013) on the interaction of measurement devices such as rankings and accreditations.

Further work should close that gap and provide an empirical analysis of the relationship between rankings and other measurement devices in the social judgement formation in organisational fields. This should take into account ratings (e.g. Fleischer, 2009), accreditations (e.g. Durand & McGuire, 2005; Trank & Washington, 2009), certificates (e.g. Guler, Guillen & MacPherson, 2002) and also other measurement devices like audits. Studies that investigate more than one measurement device are of special value to learn about the interaction of measurement devices in a field. For example, Mills, Weatherbee & Colwell (2006) show how a combination of ethnostatistics from accreditations and rankings are tied to the sensemaking of important stakeholders in a field. However, they only show the parallel use of the two measurement devices, but not their interdependence and competition with each other. A future study could close that gap and investigate how the competition of measurement

devices for similar reputational and status resources in a field impacts on the reputation and status of field actors. For example, in the field of business schools, accreditation status could serve as a buffer against low ranking performance in terms of reputational outcomes, or rankings could serve as a reputational complement to the legitimacy derived from an accreditation.

Rankings in different fields. Based on the question why rankings appear to impact more on some organisational fields than on others, this thesis has proposed informational complexity as the central condition for the emergence of rankings. In particular, I proposed that when informational complexity changes, the conditions for ranking impact do so as well. One of the limitations of this thesis is it has not presented empirical evidence for these proposals.

In future research, this should thus be explored empirically through a comparative and longitudinal study of the emergence of rankings in different fields, such as the rankings of corporations according to global brands (Interbrand, 2014), sustainability (Corporate Knights, 2014), or revenue (Fortune, 2014). This research could specifically investigate field conditions in terms of informational complexity, status order, structuration and resource conflicts, and show how these conditions impact on the construction of ranking templates and frames in each ranking field.

For example, in situations of informational complexity, rankings provide field actors with a comparison of organisations in a discriminating, evaluative and hierarchical way (Benjamin & Podolny, 1999; Podolny, 1993; Washington & Zajac, 2005; Wejnert, 2002). Thus, rankings should lead to a clearer positioning of ranking actors in the status hierarchy, leading to less miscategorisations. Status anxiety (Jensen, 2006) should thus be less prominent in fields with established rankings. However, qualitative evidence suggests that status anxiety increases considerably through

rankings (Locke, 2011). An avenue for future research would be investigating to what extent and in what stages of the ranking process and development status anxiety is increased or decreased, and for what actors. Here, a comparative longitudinal study design that takes into account both the development of rankings and status positions that exist independently of rankings would be fruitful to explore.

Ranking field construction. While this thesis has outlined a model of the mechanism of ranking field construction, these proposals need to be substantiated both conceptually and empirically.

Wedlin (2006) has studied how rankings can shape and transform an already existing field. However, there are no empirical studies on the mechanisms through which rankings can bring a whole field into existence. Rankings of emerging organisations or actors, for example start-ups (e.g. www.startupranking.com), or the Times Higher Education 100 under 50 years universities can provide a rich empirical context for this kind of studies. In particular, static rankings, of which only one version is disseminated, differ in construction from interactive rankings, where the user can create their own ranking on the website. Given the extensive need for collaboration between ranking actors and agents for the latter type of ranking, this could be an especially interesting case of the construction of a ranking field. A research design that combines participant observation and in-depth interviews of a ranking agent, ideally one that is in the process of launching a first ranking, would be a good way of gathering a rich data set on the process of field construction. Obtaining access to a ranking agent that also constructs other measurement devices like ratings or awards would provide for a rich comparison of the construction of measurement devices.

3 Conclusion

In conclusion of the thesis, I will now offer some observations about the future of FT Global MBA rankings as well as business school rankings in general.

As we have seen, a European and an American cluster have emerged in the FT rankings over time. As mentioned in chapter III, the FT rankings were created with the explicit goal of providing for a comparison of “global” MBA programmes across North American and European business schools. It appears that the provision of a unified transatlantic ranking is becoming less, not more feasible. Instead of decreasing them, the ranking appears to have exposed some of the differences between the continents in terms of MBA education, and reinforced the field boundaries between the European and American markets. In the future, this development might make it harder for the FT to provide a truly global ranking.

Another interesting observation is that Asian schools are generally more aligned with European schools than with their American counterparts, thereby confirming the special status of the American market. In this sense, publications like BusinessWeek, who rank American and non-American schools separately, have a methodological advantage over the FT. This raises the question of whether a global ranking like the FT Global MBA ranking, even of a relatively homogenous degree like the MBA, will be able to cope with the diversity of the ranking field in the long-term, given the homogenisation processes along cluster lines as described in this thesis.

One way the FT could respond to that development is by adjusting the criteria and their weightings. More business schools from lowly developed but rapidly growing countries like India and China are joining the ranking. On the one hand, this introduces welcome variance into the ranking. On the other hand, this creates an increasing problem of commensurability, especially when business schools based in countries with low weighted salaries, yet high potential for salary increase, are measured against high

income and low growth countries. As a result, the pressure on the FT to make the commensuration process more transparent will probably increase in the future. This problem will also become more apparent when an increasing number of ranking actors try to respond to ranking results through gaming. The FT's response to gaming attempts has until now been to maintain comparability and stability across years, only making small adjustments in the calculation of criteria, but not in the criteria themselves, and barely the weightings. The more these differences become apparent, the more the FT will need to think about finding a balance between newcomers that introduce variance but may push actors to game the system, and incumbents who have most to lose from an adjustment of criteria and weightings. The more the traditional MBA market becomes shaken up by newcomers, the more and the quicker ranking frames of ranking actors are also set to change. Hence, the FT will need to develop a strategy to deal with the emergence of different and new ranking frames.

Another issue is the increasing number of business school rankings. The FT is now publishing a total of nine business school rankings and lists. At the same time, more competitors are entering the business school rankings market, the most recent one being Quacquarelli Symonds with its Global 200 Business Schools Report. On the one hand, for ranking agents, more rankings can pose a potential threat, and not only through the competition for media attention. The more different and competing ranking templates are produced, the more specific ranking templates may lose legitimacy as compared to other templates of organising. On the other hand, as the number of rankings expands, ranking actors have more leeway in withstanding pressures from any particular ranking by using rankings electively. Templates created by traditional competitors such as accreditations, awards, certificates and ratings will also play a role in this process, as well as templates from more innovative devices like interactive rankings, maps, or evaluation tools. The future of MBA rankings will thus be largely

determined by how ranking agents and actors can address the previously mentioned issues collaboratively, especially the emergence of new templates and frames from within and without the ranking field.

In conclusion, this thesis has shown that the investigation of ranking fields, agents and actors can be a pathway into understanding the dynamics of cognition, strategising and institutionalisation between organisations that carry out performance measurement, and those who are subject to it. As organisations and organisational fields are becoming more complex through the expansion of information technologies and processes of globalisation, more rankings and other performance measures are likely to emerge; both as reducers of information and focal points of attention around which organisational fields crystallise. The emergence of rankings is thus a sign that the audit society (Power, 1997) is not only a project of intellectual elites that can process complex econometric models. Rather, the audit society is becoming closer to reality through the mediatised popularisation of basic, yet complex statistical measures like rankings. For scholars and practitioners alike, understanding what the audit society is and what the effects of its proliferation are will thus increasingly require an in-depth understanding of the dynamics of methodologically simple, yet socially powerful, performance measures like rankings.

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