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Formulating strategies in a university setting: a response to institutional complexity and rising stakeholders' expectations

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Abstract

The university's missions and its role in society have been an important discussion as stakeholder expectations rise and budgetary constraints tighten. In order to respond to these macro conditions, strategic planning has become increasingly integral to university operations with research universities developing each their own university strategy addressing internal matters and external opportunities. This inductive case study explores the process of formulating a strategy at the largest science research and education institution in Denmark, The Faculty of Science at the University of Copenhagen. Results suggest that while having to respond to the overall university strategic goals and external pressures, each department of the Faculty attends to local context challenges by exploring the opportunities offered by the availability of multiple institutional logics. The strategic formulation process serves as the basis for addressing institutional contradictions related to maintaining research excellence and increasing collaboration with industry. Furthermore, the strategy formulation process of each department becomes a practice of combining top-down attentional perspectives and bottom-up environmental stimuli as a way to maintain openness and participation at the process itself.

Formulating strategies in a university setting: a response to institutional complexity and rising stakeholders' expectations

Introduction

The university's missions and its role in society have been an important discussion as stakeholder expectations rise and budgetary constraints tighten. In order to respond to these macro conditions, strategic planning has become increasingly integral to university operations with research universities developing each their own university strategy addressing internal matters and external opportunities. While the subject of the university has been of interest to scholars in disciplines such as entrepreneurship and innovation (D'este & Perkmann, 2011), research policy (Bercovitz & Feldman, 2007) and regional economic development (Breznitz, 2014), strategic management issues confronting the universities have not been fully addressed.

The following inductive case study explores the process of formulating a strategy at the largest science research and education institution in Denmark – the Faculty of Science at the University of Copenhagen. At the outset the study focuses on the process of developing a university strategy which aims to fulfil the general university missions of research and education, but also the strategic decisions with focus on increased collaborations with public and private partners. As these decisions vary based on the local contexts and are guided by different organizational identities and local level strategies, the study focuses on how a new practice for formulating a strategy shaped by multiple institutional logics spreads in the focal organization. Concretely, this study adopts the institutional logics perspective (Thornton, Ocasio, & Lounsbury, 2012) in order to explore how actors, actions and context come together in pluralistic institutional environment and how institutional complexity affects the development of an “open” strategy in a university setting.

The study approach is explorative and the prime data source is based on 34 in-depth interviews with department leaders and university management during a period of strategy formulation, which took place between May and September 2018. The chosen approach to conduct the research is a case study, suitable when conducting exploratory research. This particular approach is chosen also in order to address the research question of how multiple institutional logics affect the formulation of an open strategy in a university setting. Due to the exploratory nature of the study, it is considered suitable to let the data guide the research to a certain extent. Initial emerging concepts have served as a starting point and been revised after data was collected and coded, leading towards emerging theoretical concepts that further framed the discussion.

Background literature

Conflicting institutional logics at the university

A large body of research have been dedicated on the strategic change processes at the universities in relation to commercialization of research results through spin-outs (Leitch & Harrison, 2005; Lockett & Wright, 2005) and the efficiency of the technology transfer offices (Macho-Stadler, Pérez-Castrillo, & Veugelers, 2007; Siegel, Waldman, & Link, 2003). Tensions between such commercially-oriented activities and the academic activities related to research and education are often viewed as creating conflicts and as limiting factor to the strategic change process (Barnett, 2010). Creating and managing these dual structures however also suggests organizational ambidexterity in the research organization where tensions are managed effectively through the dual purpose of the institutions (Ambos, Mäkelä, Birkinshaw, & d'Este, 2008).

In order to allow for nuanced approach to understanding the role of strategy at the university, this study draws on the institutional logics perspective (Thornton & Ocasio, 2008) to frame discussions about the how the university reflects on these tensions in the light of formulating strategies. The institutional logics perspective has its origins in institutional theory, linking macro intuitional structures with individual micro-level actions. Building on the work of Friedland and Alford (1991), Thornton and Ocasio (2008: 101) describe institutional logics as “the socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules by which individuals produce and reproduce their material subsistence”. Perceived as governing interactions which affect both the organizations and the individual, institutional logics could have both facilitating and constraining characters (Thornton et al., 2012), transmitted through incentives and sanctions.

Conflicting institutional logics are often conceptualized as “ideal types”, emphasizing specific, comparative, features of management practices and individual actions. Adopting this approach, scholars have increasingly classified and distinguished between academic and commercial logics (Bjerregaard, 2010; Murray, 2010; Perkmann, McKelvey, & Phillips, 2018). Academic logics normally relate to issues of upholding freedom of academic research and independence, disclosure of research results and quest for pure knowledge. Commercial logics, on the other hand, entail conflicting practices focused on applied research and the financial appropriation from this research, often marked by tighter bureaucratic control and restrictive disclosure.

Distinguishing between the “traditional” university – providing education and focused on fundamental knowledge, and the “enterprise” university – geared towards serving a new knowledge economy, Barnett (2010) describes different logics, each of these underscored by idealized features. While these ideal types are conceptualized as a common base for conflict, other studies have suggested that such conflicting logics view tends to overemphasize the differences between “academic logic” and “commercial logic” (Sauermann & Stephan, 2013), and that competing strategic narratives could provide resonance and co-exist (Holstein, Starkey, & Wright, 2016). Sauermann & Stephan advance the understanding of institutional logics by examining differences in how scientific results are disclosed and how scientific work is organized. Illuminating the relationships among interdependent dimensions of academic and industrial science, the authors imply that despite sectoral heterogeneity, there are vast similarities among some of the dimensions which could actually facilitate collaboration between academia and industry.

Focused on the considerable sector-level heterogeneity within academia, Holstein et al. (2016) analysis on the tensions created by meeting financial expectations while upholding academic values, employs a narrative approach to strategy implementation at the university, and shows how competing narratives co-exist, in what the authors refer to as “multi-voiced or polyphonic organization”. This also suggests that the universities are organizations with transcendent values and able to unify multiple conflicting logics in the light of these tensions.

Strategic management of the universities

With raising stakeholder expectations, increased competition and tight budgetary constraints, the research university of today is becoming arguably more complex to manage than a corporate organization. Ever since Clark Kerr coined the term “multiversity” in 1963 during the Godkin Lectures at Harvard University (Kerr, 1963), it has become a commonplace to talk about the modern research universities as being composed of multiple communities and serving great variety of social actors such as governments, service industries, faculty, alumni and local communities. While scholars have studied the university as complex organization in the context of industrial innovation (Mansfield & Lee, 1996), regional development (Breznitz & Feldman, 2012), decision making of scholars (Cohen, March, & Olsen, 1972), change in higher education (Clark, 1998), strategic management of the universities have received limited attention.

Creating strategies at the university may seem like a new activity, especially for public research organizations. However, with increasing societal demands for accountability and transparency, the

universities are forced to explicate their contribution to society and with that, their organizational effectiveness. In most countries the universities rely heavily on public funding and therefore pressured to “pay back the community” (Russell, 2002).

Another aspect for developing strategies in academia has also been the recent political and economic changes creating a very competitive environment for the universities (Cohen & March, 1974; Keller, 1983). Universities adapt more business-like orientation, not only recognizing these macro changes, but also so that they can accomplish their intended results quickly in an environment with market character (Milliken, 1990).

Earlier studies have explored how top management teams in universities respond to “strategic change” in academia (Gioia & Thomas, 1996) and puts strategy into practice (Jarzabkowski & Wilson, 2002). In the study of sensemaking during strategic change, to Gioia & Thomas find that parallels with business approaches to strategic changes are not exact, suggesting that universities are not accustomed to think strategically. This is however an example of a case where the changing organization is “just becoming familiar with the elements of strategic change”, as noted by the authors. The research universities have certainly been in a turbulent environment since the 90’s, experiencing dynamics which affect the way they are managed and how societal expectations are addressed.

In their in-depth study of how strategy is formulated and implemented in Warwick University, Jarzabkowski & Wilson found that the organizational structures have a key influence on the strategic actions and processes organized by the university top management team(2002). The centralized management practices are being counter-balanced by the operational control of the individual subunits of the university, suggesting that further analysis should be focused on how actions are related to both the team and the wider organization’s characteristics.

More recently, studies conjecture that strategic management theories could provide an opportunity to examine the challenges which the university faces (Hayter & Cahoy, 2016; Siegel & Leih, 2018). These studies suggest that the responses of higher education institutions to recent changes are seemingly inadequate not because of resistance to change but rather as not recognizing the need for strategic management frameworks geared towards the specific social responsibilities and expected impact of higher education.

Fundamental organizational attributes of the universities have continued to rapidly change in the last decades. Universities have experienced further growth and the governments have become even

more concerned with the returns on investments in research. In the case of Denmark, the private research foundations have grown significantly in the last decade, exceeding the basic research foundations budgets, and the state have become more central in evaluating the performance of the universities – two historical developments which make it important to re-examine the roles of the universities and how universities reflect on these changes when formulating specific strategies.

Research design and method

Research setting: The case of the Faculty of Science

The Faculty of Science is the largest university faculty at the University of Copenhagen and the empirical setting for this study. As such, it provides an appealing arena to explore how the university strategy is re-formulated as it transfers through the multiple organizational levels – from the top-university level and boards of directors, through the level of the faculties and to the level of the individual departments which the faculty consist of.

Brief history

The Faculty of Science is the largest science research and education institution in Denmark, employing 4,500 scientific and technical staff, 9,500 BSc and MSc students across 12 departments. (University of Copenhagen, 2018). The Faculty has experienced multiple organizational changes in the last couple of decades. In January 2007, The Royal Veterinary and Agricultural University was renamed to the Faculty of Life Sciences and merged into the university. Five years later, in 2012 it was split between the Faculty of Health and the Faculty of Science, reducing the number of the four “wet” faculties (Faculties of Pharmaceutical Sciences, Health Sciences, Life Sciences and Science) to two – The Faculty of Health Sciences and Faculty of Science. By reducing the number of faculties, from four to two, the Board of the University aimed to improve the academic coherence by optimizing the collaboration across faculties and create synergies among researchers in order to better connect basic and applied research. According to the Board and the deans of the Faculties in an article published on the university’s internal news site in September 2011, a main reason for the restructuring was to increase the social commitment and create a sustainable organization. This has led to the dynamic interplay between macro-reforms and the local level changes at the departments. Whether the goals and expectations from the organizational restructuring have been achieved remains an open question and certainly a topic to which the interviewees of this study referred to often. Table. 1 presents the current structure of the faculty of Science consisting of 12 departments.

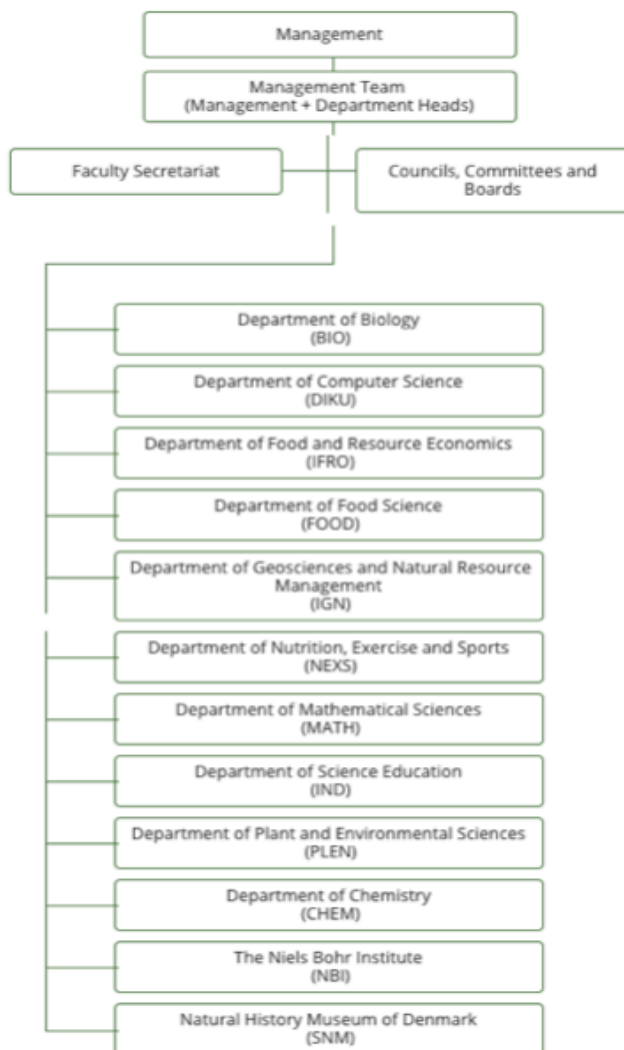


Table 1. Organizational Structure - Faculty of Science

Strategy at the university of Copenhagen

In the beginning of 2018 the University of Copenhagen introduced its third strategy with the title “Talent and collaboration – Strategy 2023”. The strategy has focus on four strategic areas – 1. Attracting, developing and retaining academic talent, 2. Education with closer ties to practice, 3. Collaboration and societal commitment – nationally and globally, 4. One unified and focus university (UCPH Strategy 2023). As informed by the interview participants and the university’s media outlet, this strategic term, and the launch of the new strategy, differed from the two previous ones in multiple ways. First, there are particular expectations by the central management and the board about how the 6 university faculties, and the departments they consist of, would “contribute” to the overarching university strategy. With that, a number of template documents were developed

to serve as a framework for developing and formulating the “goals and actions” plans of the individual departments and faculties. Specific process with deadlines for hearings and deliverables was developed from the central management which the sub-units, faculties and departments, had to follow. Lastly, a website was developed with the purpose to dedicate a space for the materials related to the strategy which included the description of the process, minutes from meetings, and documents templates. The website also served as a platform to facilitate the hearing process where staff and students could voice their opinions and suggested corrections. This type of archival data complemented the data collected through interviews which is described next.

Data collection

In order to understand the role of the strategy when addressing the university’s missions, constraints and opportunities, and how the university strategy transfers to the levels of the faculty and the individual departments faculty, it was important to study this phenomenon in its context. As the general approach of the study is qualitative and fundamentally interpretive, particular attention was paid to the ways that the interview participants understood their context and their experience with formulating strategic plans. Our research method draws on principles of constructivist grounded theory which entails closely connecting the data collection process, analysis and prior theory in a iterative fashion (Charmaz, 2014). Furthermore, following this grounded theory method entails strategically selecting interview participants to confirm or disconfirm emergent themes until reaching theoretical saturation (Glaser & Strauss, 1967).

For the sample and data collection was used purposeful sampling (Pratt, 2009), however as the research progressed we utilized snowball sampling (Martin & Eisenhardt, 2010). Initially, interviews were scheduled with all department heads and members of the dean’s office, but as the department heads informed that they work on formulating their strategic plans together with their colleagues, the refereed faculty members were included in the sample. In most cases the department heads suggested to contact their deputy heads of departments responsible for either research, education or administration and in couple of occasions, they suggested talking to their entire management team.

In total 34 interviews were conducted with the extended management team of the faculty. This included the dean and the members of the dean’s office, department heads and colleagues from their management teams, directly involved in the process of formulating strategic plans for the levels of

the organization they represented. All interviewees were able and willing to reflect on the university's missions, constraints and opportunities and formulating the strategy.

The interviews were semi-structured and open-ended. They involved participants' own views and reflections (Spradley, 2016) and although an interview guide was developed and followed through the interview process, the participants had the opportunity to elaborate on aspects they found important. The interviewees were allowed to steer the interview, using their own terminology and pointing towards issues and concepts which they deemed important, and in this way providing "thick", descriptive data.

Each interview was audiotaped and transcribed verbatim by the author. Notes were taken during the interviews and after the transcription summaries of the interviews were created and compared with the notes taken through the interviews. Ultimately the notes and the transcribed interviews comprise the primary data for this qualitative study. Table 2 summarizes the set of 34 interviews and references the codes used to refer to the individual respondents in this study.

Table 2. Interview participants		
Organization - management level	Number of interviews	Ref. Codes
Deans office (dean, deputy deans for research, education, public & private sector services and faculty director (adm.),	5	Member of Dean's Office (MoDO 1-5)
Heads of Departments	12	Head of Department (HoD 1-12)
Deputy heads of department responsible for administration, research, education		
Deputy heads of department (administration)	3	Deputy Head for Administration (DHfA 1-3)
Deputy heads of department (research)	10	Deputy Head for Research (DHfR 1-10)
Deputy heads of department (education)	4	Deputy Head for Education (DHfE 1-4)
	Total: 34	

The interview data collection started in May 2018 and ended in September 2018. Questions to the interviewees were related to the traditions and aspirations of the departments they represented, the perceived role and purpose of the university strategy, the interviewees' experience working in the management team and their work on the strategy. Furthermore, the participants were asked to describe the process of introducing the university strategy, the formulation of the strategic plans on the level of the departments (or at the faculty if the interview represented the dean's office) and how this process differed from the process of the previous strategy formulation and implementation at the university. In addition to the interviews, archival data was collected which included current and previous strategic plans, mission statements, implementation guides, and also comments collected through the hearing process of the new strategy which took place in 2017.

Analysis

Figure 1 represents the development of the analysis and the following section provides details to its progression¹. During the first read of the notes and interview transcriptions, first-order codes and concepts were identified as informed by the interview participants (Van Maanen, 1979). An example is the bottom-up and top-level strategies, expressions which the interviewees used in order to describe the process of formulating the strategy and the importance of the strategic fit.

Subsequent reading was devoted to collecting these concepts together in order to develop categories which define overlapping and similar ideas and issues which the informants deemed important.

These are found in the first column of the Figure 1.

The data was then explored further via theoretical sampling (Strauss, 1987) focused on convergent concepts and the way they relate to the evolving categories and themes which emerged from the initial first stage of the analysis. Overlapping categories were merged and second-order theoretical labels were assigned to the emerging themes in the second column of Figure 1. These second-order themes capture the participants' categories at a higher level of abstraction (Van Maanen, 1979). These, more general labels were derived by combining overlapping first-order categories and by referencing the existing literature describing the emerging themes.

A constant comparative iteration was used to take decisions about whether enough evidence was available and identify themes and categories as reportable finding. Final aggregation of the second-

¹ This is however, based on preliminary analysis of the existing data. A further, more in-depth analysis is expected for this study.

order themes presents the analytical dimensions of the overarching concepts and serves as a general umbrella framework, organizing the emerging findings.

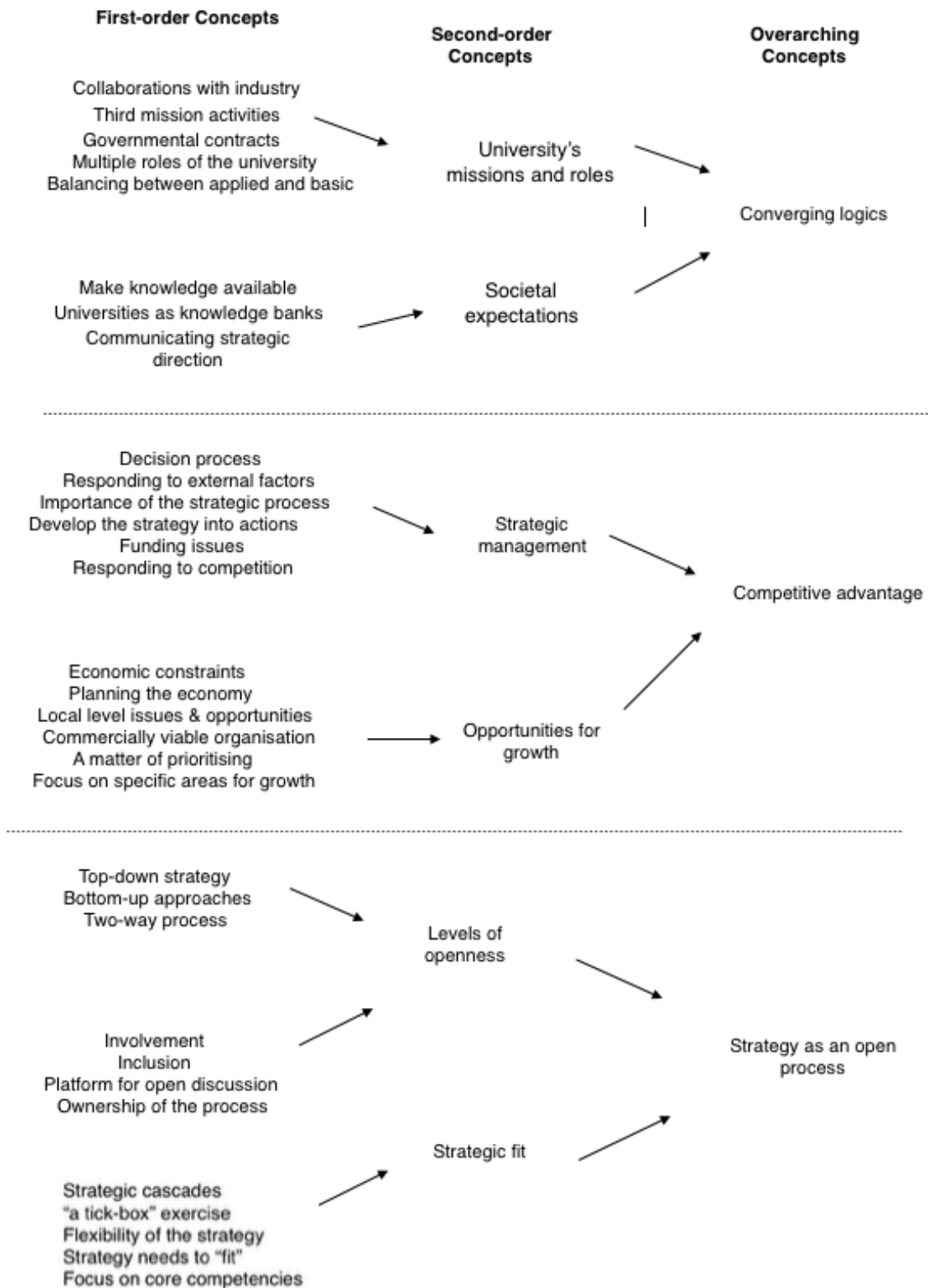


Figure 1. Emerging concepts

Figure 1 presents overall findings in relations to the emergent dominant themes. The following sections, however, includes quotes from the interview participants in order to demonstrate the character of these themes and in this way keep the theoretical perspective grounded in the data.

Discussion

Converging institutional logics

Sociologists and historians of science have increasingly adopted the institutional logics perspectives to discuss the changing nature of academia. These discussions have often conceptualized academic and commercial logics as conflicting (Barnett, 2010; Murray, 2010). Empirical studies however have elicited that these logics are often intertwined in the scientific practices of both academic and industrial scientists (Sauermann & Stephan, 2013).

Moving beyond the notion of ideal types of commercial and academic logics, and realizing the opportunities from collaboration with public and private partners, the interviewed department leaders often referred to external collaboration as means to address the multiple missions of the modern research university. A department head emphasized on the importance of developing strategic goals especially targeting collaborations as follows:

"I think that as a university you have an obligation to educate people that can contribute to society. You have to do research, and of course teaching, has to be research-based but actually in the university act it also says that you have to make your expertise available to the Danish Society so that was one reason for doing this and the second was I wanted to have more funding opportunities to sort of widen the places that we can apply for money, to sort of counteract the increased competition" (HoD3)

As the university basic funding is decreasing, the management of the university seeks means to widen the opportunities while at the same time contribute to its third mission and meet societal expectations. Essentially, the risen expectations for doing more collaborative research are viewed also as something which the governments have focused more than before. A deputy head of department responsible for research, representing one of the more basic science fields in the Faculty, implied that while academics are expected to deliver more on the third mission, focus should also be kept on the basic academic missions:

"We should keep on focusing on our core competencies... there is focus on increased connections and collaborations with the private sector and it is something that politicians want us to do. And this digressing from our most important task here...". (DhfR7)

The core competences and expectations were often discussed in the light of strategic directions for protecting academic values while at the same time engaging with the society and keeping multiple promises for education and the future of graduates. A department head expresses this by pointing out that staying closer to the industry could secure better career opportunities for students rather than being a mere expectation from the top-management or the government which needs to be fulfilled:

"This is not just because the government says we should, or it is not just because the Faculty says we should. It is also because I think that it is a matter of survival, because if we don't do it, I think that the students in the future would go to other universities, and won't come to my department. If we are not better at demonstrating to them how the education they get here can be useful in the context of the private companies and we can also by statistics show that these collaborations with industry increases their chances of getting a job when they are finished. So, for me it also becomes an investment in the future"(HoD11)

As the stakeholder expectations change, the university managers realize that objectives must be set in order to achieve expected outcomes within the university's missions. Guided by both academic values and objectives for developing closer ties with industries and governments, academic and commercial logics intertwine according to the management. In our study we find support for the affordances created by the institutional complexity which the university finds itself in. Having, potentially, a facilitating character (Thornton et al., 2012), the multiple logics followed by the faculty and department management provide the platform not only for reflection but also as the base for creating concrete strategic plans.

Competitive advantage

The "investments in the future", as suggested by the head of department above reflect both the constraints which the individual departments experience and the risen expectations of the society. The formulation of the strategic plans develops a platform for discussing these objectives and looking harder at how the roles of the universities are changing:

"The university is part of society and the society moves all the time, and when society changes and develops and becomes different in many ways compares to say, just 5 or 10 years back. It is

mandatory for the University to seek out a strategy and the renewal of itself. So how does it see itself as a context, in a context of society, and how does it see itself in a context of a more modern world.”(HoD5)

The department leaders describe the strategic process previously as being a rather top-down approach while now it is becoming an important set of events to discuss the obligations to the society, to the students and alumni, to the public and the private sector. Strategic management notions like organizational capabilities, competitive advantage and sustainable performance dominate these discussions in the management setting of the university’s faculty and its departments. According to recent studies (Hayter & Cahoy, 2016; Siegel & Leih, 2018), these concepts have become central due to the uncertain future and having to deal with a new array of factors affecting the university.

Growth opportunities and competitive conditions are main topics in the discussion of the new strategy of the departments. From the representative quote from HoD3 in the previous section, we gather that management considers making available the university-based research knowledge as strategic advantage – not only as this one of the missions of the university, but also as this might widen the funding opportunities for the department.

Selecting relevant opportunities and prioritizing research projects in a way to reflect the departments’ economy is considered as a new way to organize the decision process:

“So that has to do with which kind of money and projects we attract and to make some strategic decisions on which research Fields are we going to expand in, and maybe others that we don't want to because we don't find them that promising. And that is new for us to take decisions like that. Up to now, you could say, it has been more up to what people want to do...” (DHoR9)

Organizing a commercially viable organization has become central and analysing the research funding landscape is something that is becoming a common practice for the departments’ management. Research freedom and “what people want to do” are important aspects to be considered in this new way of managing. In most of the interviews, research freedom, and the prioritization process related to strategically selecting research areas, were discussed not as opposing features but rather as co-existing important aspects of the way decisions are taken in order to focus on the core competences of the department and its researchers:

"...it is also important because there might be some fields that you don't want to cover and the strategy would keep you on track and in a way, it could be a very liberating process to put stuff aside. So, in a way it is important for taking decisions, it makes people and management take decisions." (HoD9)

The importance of the strategy formulation process was often related to discussions of learning what the core capabilities of the individual department are and what does it take to respond to the different external factors, affecting the departments directly or indirectly. The general university strategy may not relate explicitly to the local level issues that the departments deal with and have only symbolic meaning. The interviewed faculty and department leaders of this study however, inform that in order to respond to competition and sustain economically, the strategy should be developed into specific actions and following a specific process for monitoring and evaluation.

Key performance indicators are being developed both as an internal evaluative measure and also to respond to governmental expectations: Adopting an enterprise-like strategic narrative (Holstein et al., 2016), a member of the dean's office describes the strategic objectives of the faculty as linking to the decisions taken at the state level:

"...Our government has decided about new "målsætninger" (objectives), and this is a decision that it has been made. And we have developed 9 performance indicators so we will be measured on how we perform in relation to this one, so there is also very much, what do you call it, "styring" (literally: steering, also means management) ..." (MoDO3)

The multiple levels in which the strategic plans cascade through are important to consider when developing the specific actions. The interviewees often described this process as a way to "contribute" to the general university strategy, to address the expectations of the stakeholders and move beyond the process of ticking boxes when KPIs have been met.

Strategy as an open process

The focus on core competences and capabilities of the individual departments are central for the discussion of the strategic fit to the broader university management strategic objectives. An important and very central discussion in which the department leaders engaged in was the combination of the top-down and bottom-up approaches for formulating the strategy and cascading it through the different university levels. Although many of the interviewed heads of departments described the process which the university created as very top-down approach, they also confirmed

that the individual departments were able to incorporate their own sectoral issues, opportunities for growth in the specific research areas, and how they perceive collaboration with external stakeholders. A deputy head of department responsible for research described the process as follows:

"...so, the strategy process was very much a top down process from the University, and a bottom up process from our department, trying to meet each other half way, and trying to sort of fit together, so... I think it was actually useful for us to have two-way process rather than just responding to the university strategy setting the scene for everything...." (DHfR1)

Being able to "set the scene" referred to the ways to respond to specific challenges and opportunities of the individual department. The university as an organization increasingly adopts more open practices through introducing greater transparency, creating a process which is supposed to accommodate the dynamics and local level issues of the sub-units and in this way enhancing the upwards and downwards accountability. A head of administration at one of the largest departments describes the process of the strategy as "extremely open":

"I mean, the way it was open it was for everybody to write on the web page in the initial process, it was extremely open." (DHfA2)

The call for more openness has essentially multiple implications for the organizational design and the logics at the university. A strategic process at the university should supposedly not only allow the individual researchers to voice their opinions but also include a number of non-faculty stakeholders in the process. Openness has been a central organizing principle at the university when it comes to the academic logics of research disclosure and developing knowledge for the benefit of the society. Openness related to the strategic management of the universities however, adds a new level of complexity to how logics converge.

In terms of classical notions of authority versus openness and inclusiveness, a head of department shared:

"We had strategies. But this time they (the central university management) has said very explicitly that we only have one strategy and we will develop action plans to support the strategy. We interpret the overall strategy and develop it into actions. But it must not contradict the overall strategy." (HoD3)

The cascading process from the university to the departments has relations to the process of interpreting the broad strategic objectives into workable actions and although this process is inherently open and transparent, the authority of the higher levels of management may stand in contrast to this openness. Recent studies on open strategy suggest that although transparency supposes more accountability and promotes participation, authority remains one of the main dimensions of the conflicting opacity and openness notions within organizational practices (Birchall, 2011; Christensen & Cheney, 2014; Dobusch, Dobusch, & Müller-Seitz, 2017).

The implications for organizing for openness, in the case of developing strategic plans in public research universities should be explored further in order to theorize the specific functions, outcomes and paradoxes of the organizational openness.

Concluding remarks

This study offers empirical insight into the process of formulation university strategies and how these are transmitted to the different levels of the research institution in light of pluralistic logics. Results suggest that while having to respond to the overall university strategic goals and external pressures, each department attends to local context challenges by exploring the opportunities offered by the availability of multiple institutional logics. The strategic formulation process serves as the basis for addressing institutional contradictions related to maintaining research excellence and increasing collaboration with industry. Furthermore, the strategy formulation process of each department becomes a practice of combining top-down attentional perspectives and bottom-up environmental stimuli as a way to maintain openness and participation at the process itself. Implications for related to aspects of increased open organizing in the light of changes in the society at large should be addressed further by exploring the conditions and consequences of these organizational practices.

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