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## Institutional logics analysis in higher education research

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### ABSTRACT



While institutional logics theory has increasingly been applied in higher education research, especially in the past five years, agreement is lacking on how to approach institutional logics analysis. This results in proliferating institutional logics in higher education studies and often confuses newcomers to the field as to how to use institutional logics in their empirical research. As a response to this situation, our study outlines the state-of-the-art application of institutional logics in higher education studies through scrutinising 59 articles that apply institutional logics in organisation studies in the field of higher education. Specifically, we ask the following research questions: What approaches to institutional logics analysis are used in higher education studies? What institutional logics are identified/applied in higher education studies? What challenges are evident in applying institutional logics in higher education studies? How does the use of institutional logics in higher education research contribute to institutional logics theory? The most profound outcomes of our literature analysis are: First, we construct a novel typology of approaches to institutional logics analysis that is positioned on two-dimensions: the reasoning applied (deductive vs. inductive), and the level at which the logic is examined (societal vs. field/local); Second, we create an exhaustive list of institutional logics (over 50) applied and identified in these studies; Third, we discover major challenges in using institutional logics in higher education research. Finally, we clearly define societal-level and field-level logics and suggest a rationalisation of institutional logics approaches in order to fully utilise the explanatory power of institutional logics.

### KEYWORDS

Institutional logics; institutional theory; organisation studies; university; literature review

## Introduction

Institutional logics were introduced to organisation studies by Alford and Friedland (1985) who described how contradictory practices and beliefs inherent in modern Western societies shape individuals' actions in the political arena. The concept was popularised in their contribution, 'Bringing Society Back In: Symbols, Practices, and Institutional Contradictions' (Friedland and Alford 1991) where they further developed institutional logics in the context of exploring the interrelationships between individuals, organisations, and society. Meanwhile, they identified five key institutional logics - the bureaucratic state, the capitalist market, the nuclear family, democracy, and religion in

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the form of Christianity. Since then, there has been a significant increase in publications applying institutional logics (Reay and Jones 2016).

Thornton and colleagues went on to apply institutional logics to account for the complexity of institutional changes in an institutional system (Thornton and Ocasio 1999; Thornton, Ocasio, and Lounsbury 2012). Here, institutional logics are defined as ‘the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organise time and space, and provide meaning to their social reality’ (Thornton and Ocasio 1999, 804). Thornton (2004) initially extended Friedland and Alford’s (1991) five logics to six institutional logics – the state, the market, the family, religion, the profession, and the corporation, in which the democracy logic proposed by Friedland and Alford was dropped out. Later Thornton, Ocasio, and Lounsbury (2012) added one more logic – community – to form seven ideal types of institutional logics (Ocasio, Thornton, and Lounsbury 2017). These seven institutional logics embody the classic formulation of logics, each of which is tightly coupled to a small number of clearly identified societal institutions.

The use of institutional logics in higher education studies is a relatively new phenomenon. In a systematic literature review on the use of institutional theory in higher education, Cai and Mehari (2015) found that most higher education studies applying institutional theory refer to ‘new’ institutionalism with a focus on, for example, isomorphism and structuration processes, while more recently developed insights such as institutional entrepreneurship/work and institutional logics were rarely applied. Nevertheless, Cai and Mehari (2015) predicted a tendency towards the popularity of institutional logics in higher education research. In his review of selected higher education studies applying institutional logics, Lepori (2016) affirmed the potential of institutional logics theory for the study of higher education. He concluded that ‘logics theory could provide a more nuanced and flexible framework, which takes into account the role of (embedded) human agency and the multi-level nature of societal dynamics’ (245). The institutional logics perspective is particularly useful in higher education research because higher education is one of those ‘arenas long noted for the dominance of professionals’ (Dacin, Goodstein, and Scott 2002, 49) but increasingly represents a complex institutional system containing plural and even contesting institutional logics (Bastedo 2009; Shields and Watermeyer 2020). These changes and contestation mean that the higher education field offers a sufficient body of institutional logics research for analysis.

While the concept of institutional logics has grown in popularity (including in higher education studies) due to its usefulness in helping researchers navigate complexity in studies of stable, dynamic, or emerging fields, even the originators of institutional logics themselves have identified ‘sources of confusion’ within the concept (Thornton, Ocasio, and Lounsbury 2012, 4). Suddaby (2010, 15) expresses a concern that ‘any change, however slight, is now ‘institutional’, and we echo this concern in the area of institutional logics where any system of meaning is deemed an ‘institutional logic’, ignoring the need for ‘profound’, or field-level change (Dacin, Goodstein, and Scott 2002). Durand and Thornton (2018) point out that the ‘identification and operationalisation [of institutional logics] are not at the same level of refinement and systematic analysis as in the categories literature’ leading to delays in the development of ‘new generalisable concepts’. (650). Ocasio, Thornton, and Lounsbury (2017) express concern that the proliferation of institutional logics articles has occasioned confusion as to the conceptualisation and application of the institutional logics perspective. In doing so, they call for more research ‘on the degree of coherence of institutional logics [and how they are] differentiated from societal logics.’ (Ocasio, Thornton, and Lounsbury 2017, 511).

Such a problem is even more salient in higher education research. Lepori (2016) found that most higher education studies ‘have not fully mobilised the analytical potential of the approach and the methods developed by mainstream logics studies’ (246-247). This is compounded by divergences in how institutional logics are applied in empirical analyses (Reay and Jones 2016) ranging from those that follow the ideal types identified in the classic logics literature to those that define new logics idiosyncratic to their specific research settings. As noted by Reay and Jones (2016), ‘... different authors reveal and interpret institutional logics in diverse ways, and despite the large volume of

studies about logics, there is very limited discussion about how they can be identified, described, and measured' (442).

Reay and Jones (2016) identified three techniques, used by researchers in organisation studies to qualitatively capture institutional logics, namely (1) pattern deducing, (2) pattern matching, and (3) pattern inducing. These different approaches expose a tension in institutional logics studies. On the one hand, rigorous application of the seven classic institutional logics can more fully mobilise the analytical potential of institutional logics helping to 'discern a logic and distinguish among logics, demonstrating when multiple logics are at play in a field or organisation and revealing institutional complexity' (Reay and Jones 2016, 452). On the other hand, the theoretical development of institutional logics 'is continuing to grow through these multiple approaches' (Reay and Jones 2016, 452).

So far, little is known about the efforts of higher education researchers to trace the development of institutional logics theory and apply it in their research to better understand the nature of higher education institutions. To fill this gap, we analyse the use of institutional logics in higher education studies by asking the following research questions:

1. What approaches to institutional logics analysis are used in higher education studies?
2. What institutional logics are identified/applied in higher education studies?
3. What challenges are evident in applying institutional logics in higher education studies?
4. How does the use of institutional logics in higher education research contribute to institutional logics theory?

## Methodology

As our goal was to analyse literature where institutional logics are applied in higher education studies, we selected the systematic literature review as our methodology. This approach offers both transparency and rigour (Greenhalgh et al. 2004) in the attempt to answer a pre-defined research question. We followed the six steps of a systematic review process as suggested by Aguinis, Ramani, and Alabduljader (2017): 1. Determine the goal and scope of the review; 2. Determine the procedure to select journals for inclusion; 3. Calibrate source selection process through inter-coder agreement; 4. Select sources using process identified in step three; 5. Calibrate content extraction process through inter-coder agreement; and 6. Extract relevant content using multiple coders.

We selected a Web of Science search due to its coverage of key databases including citation indices, conference proceedings indices, and book citation indices from Science, Social Science, and Arts and Humanities; as well as the Emerging Sources Citation Index. We acknowledge that this may miss some niche higher education journals and may bias our results towards discipline-embedded research rather than pure higher education research. We believe, however, that this method preserves the systematic nature and replicability of our review. We used a combination of keywords of 'institutional logics' and 'higher education' (included in all fields) and applied inclusion/exclusion criteria as set out in Table 1 below:

The formal search, conducted on 17 September 2020, resulted in 87 publications. After a detailed review of these publications, we excluded 28 articles and selected 59 articles fitting our purpose (See PRISMA flowchart in Figure 1 and a full list of the articles in Appendix I).

We qualitatively reviewed the full text of the 59 articles. Our initial coding resulted in the categorisation of data mainly in the following aspects: 1) the number of, and names given to, the logics identified; 2) whether and how these logics had been defined by the authors; 3) the contributions claimed by the authors to institutional theory; 4) the type of paper in terms of research method; 5) the approaches to identifying/applying institutional logics; 6) the disciplinary field of the publishing journal. While our coding was primarily inductive, we did compare our analysis concerning the fifth category with Reay and Jones's (2016) three approaches of capturing institutional logics.

**Table 1.** Inclusion/exclusion criteria.

Criteria	Include	Exclude	Rationale
<i>Date</i>	<ul style="list-style-type: none"> <li>Published between 1985 and 2020</li> </ul>	<ul style="list-style-type: none"> <li>Articles published in 1984 or earlier</li> <li>Articles without a year of publication</li> </ul>	Introduction of institutional logics by Friedland and Alford in 1985
<i>Language</i>	<ul style="list-style-type: none"> <li>Articles in English</li> </ul>	<ul style="list-style-type: none"> <li>Article published in a language other than English</li> </ul>	Authors ability to understand and analyse the content
<i>Setting</i>	<ul style="list-style-type: none"> <li>Articles identifying institutional logics in the higher education setting</li> </ul>	<ul style="list-style-type: none"> <li>Articles that did not focus on a higher education setting.</li> </ul>	Study specific criteria: to investigate institutional logics analysis in the field of higher education
<i>Study design</i>	<ul style="list-style-type: none"> <li>Articles that utilise the explanatory power of institutional logics</li> </ul>	<ul style="list-style-type: none"> <li>Articles that did not employ institutional logics as a lens for analysis.</li> </ul>	Study specific criteria: to investigate institutional logics analysis in the field of higher education
<i>Database selection</i>	<ul style="list-style-type: none"> <li>Web of Science articles</li> </ul>	<ul style="list-style-type: none"> <li>Databases that are not included in Web of Science</li> </ul>	WoS provides wide coverage and replicability.

The number of articles that investigate institutional logics in the field of higher education has increased over time – in particular over the latter half of the last decade (see [Figure 2](#)). Most of the papers are qualitative studies (48), although there are 3 conceptual papers, 6 use the quantitative method and 2 apply mixed methods.

## Approaches to institutional logics analysis in higher education studies

### *Reflections on Reay and Jones's categorisation*

When categorising the approaches of institutional logics analysis used in higher education literature, we initially applied the framework of Reay and Jones (2016), who identify the following three techniques used to qualitatively capture institutional logics based on their discussions with many authors of institutional logics studies: 1) Pattern deducing: 'Gather large volume of data (primarily text), convert text to countable occurrences, and use analytic methods to reveal patterns' (Reay and Jones 2016, 443); 2) Pattern matching: 'Identify patterns (ideal type of logics) from extant literature and then compare data to ideal type' (ibid.); and 3) Pattern inducing: 'Focus on raw data using bottom-up process to identify patterns (logics) that can then be compared with extant literature' (ibid.).

Our findings indicate that although Reay and Jones's (2016) framework is useful in observing approaches to institutional logics analysis, the articles in our review do not cleanly match their three categories. Few of the studies that we reviewed were based on the big volume data that characterises 'pattern deducing'. The studies closest to pattern deducing were those that were based on the qualitative analysis of a reasonable number of interviews/documents. 'Pattern matching' is evident in organisational analysis in higher education but with two distinct application approaches. The first uses societal logics as described in classic institutional logics literature (Alford and Friedland 1985; Friedland and Alford 1991; Thornton 2004; Thornton and Ocasio 1999; Thornton, Ocasio, and Lounsbury 2012) as guiding frameworks. The second uses field-level logics identified by influential scholars in the field (e.g. Gumpert 2000; Berman 2011). Regarding 'pattern inducing', we did find many studies that used a bottom-up process to identify 'new' logics in

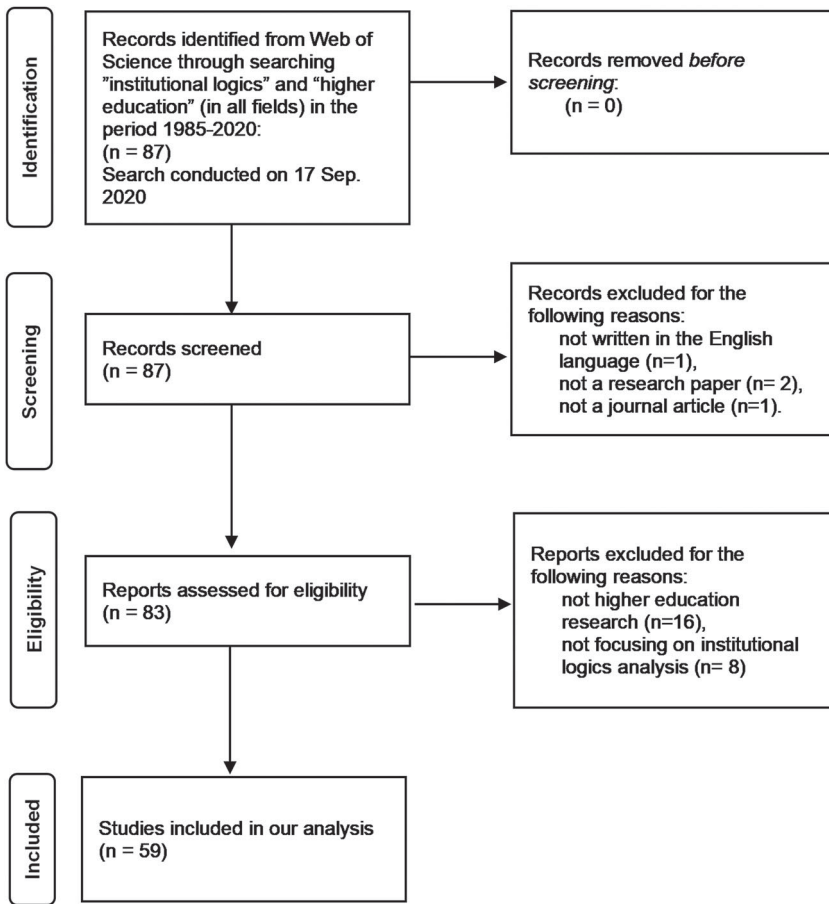


Figure 1. PRISMA flowchart.

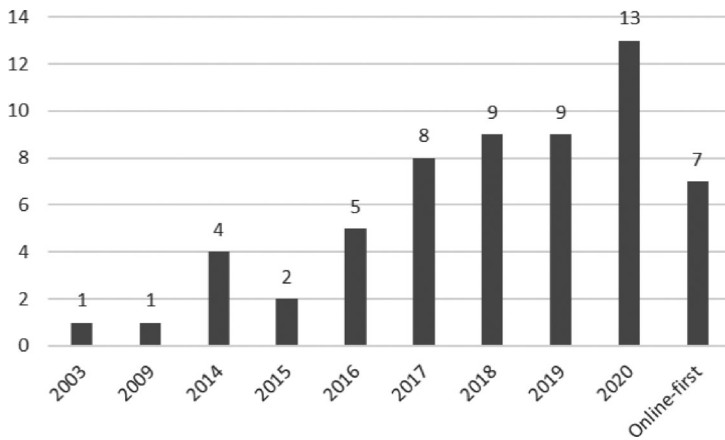


Figure 2. Numbers of articles applying institutional logics by year.

higher education studies. However, few of them went on to discuss how these identified new logics 'can then be compared with the extant literature' as a characteristic of 'pattern inducing' noted by Reay and Jones (2016).

Our categorisation highlights three areas in which Reay and Jones (2016) framework could be further elaborated. Firstly, there is a difference between capturing institutional logics as discussed by Reay and Jones (2016) and higher education research using institutional logics as focused on in our study. Capturing institutional logics is about how researchers identify, describe and measure the logics (Reay and Jones 2016), whereas applying institutional logics in higher education study entails both capturing institutional logics and applying the logics for organisational analysis in empirical investigations. Secondly, we struggled to find a clear boundary between the three techniques as described by Reay & Jones. Although Reay and Jones (2016) provide a detailed comparison between the three techniques, we find overlaps between them. For instance, when describing characteristics of 'pattern deducing', Reay and Jones (2016) emphasise the use of analytical techniques to reveal patterns out of a big amount of data (primarily text). However, this kind of analysis could be done either in an inductive manner, which shares the same methodological ground of 'pattern inducing', or being guided by ideal types, which is the main feature of 'pattern matching'. Third, while Reay and Jones (2016) see ideal-type institutional logics as societal-level logics, the ideal types of institutional logics considered by higher education researchers are at both societal-level and field-level.

### ***A new typology***

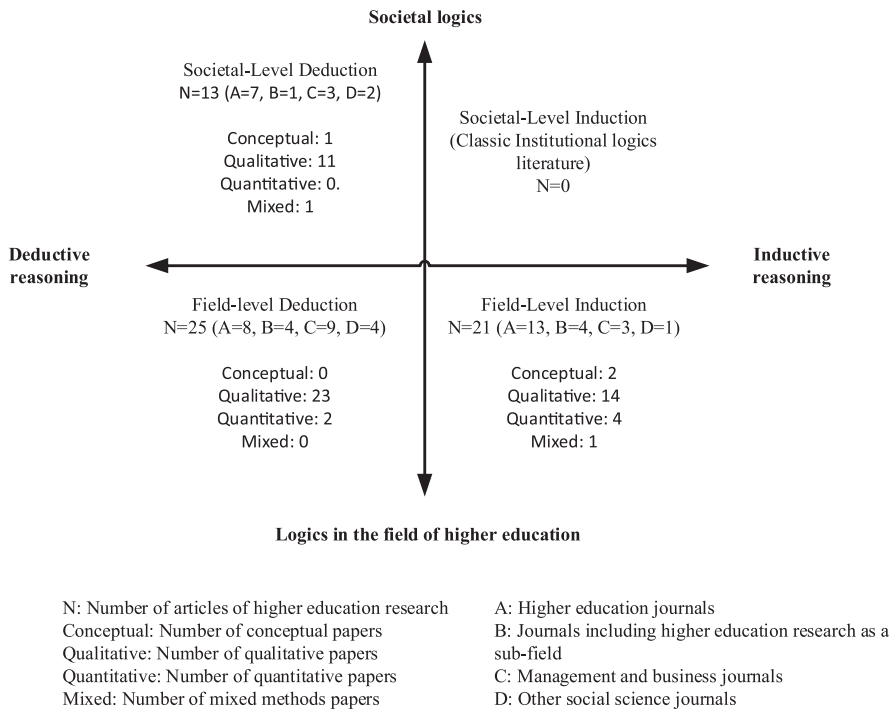
Our analysis reveals that the approaches to institutional logics analysis in higher education studies can be better positioned on a two-dimension typology (Figure 3). In the first dimension, we distinguish two ways of identifying institutional logics that are respectively associated with inductive and deductive reasoning. The former maps onto the 'bottom-up process' to identify institutional logics referred to by Reay and Jones (2016), while the latter is largely in line with 'pattern matching', where researchers 'identify patterns (ideal type of logics) from extant literature' (Reay and Jones 2016, 443).

In the second dimension, we contextualise the use of the institutional logics approach based on whether the logics are identified at the societal or field level. Thornton, Ocasio, and Lounsbury (2012) posit that institutional logics concern inter-institutional systems at macro, meso and micro levels (Thornton, Ocasio, and Lounsbury 2012). Therefore, organisational analysis requires both societal and field-level logics; 'Field-level logics are both embedded in societal-level logics and subject to field-level processes that generate distinct forms of instantiation, variation, and combination of societal logics' (Thornton, Ocasio, and Lounsbury 2012, 148).

The divisions between the approaches are not, however, always so clean cut. We did find some rare studies that use more integrated approaches. We have allocated the 59 articles to the quadrant associated with the primary approach employed. As shown in Figure 3, for each institutional logics approach, studies employ a range of research methods. While the approach of Societal-Level Induction is typically only seen in the classic institutional logics literature, the approaches discovered in our analysis of higher education studies include Societal-Level Deduction, Field-Level Deduction, and Field-Level Induction.

### **Institutional logics identified in the different approaches and related challenges**

We go on to analyse which institutional logics are identified/applied in each approach and discuss the associated challenges and problems. A full list of institutional logics applied/identified in different journals is provided in Appendix II.



**Figure 3.** Typology of institutional logics applications.

### **Societal-Level induction**

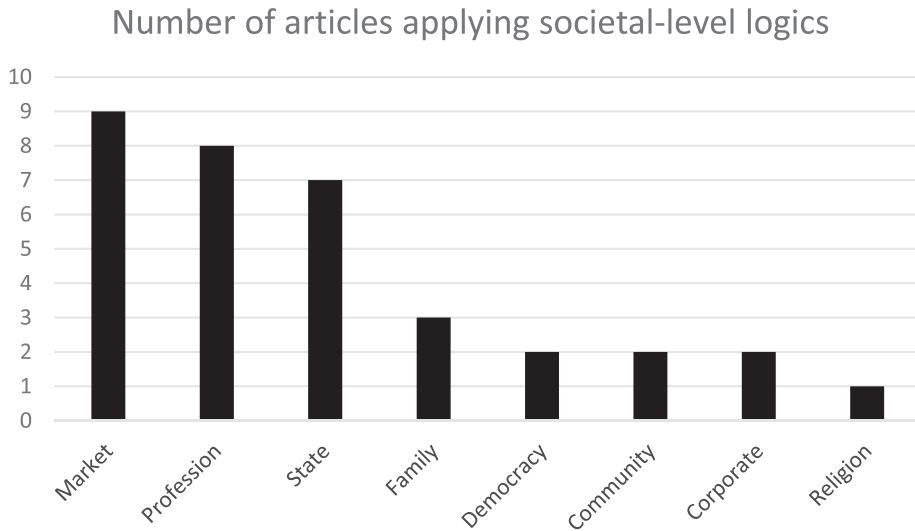
Typical examples in the quadrant of combining societal logics and inductive reasoning are the classic literature of institutional logics, which originally identified societal logics, such as the five logics by Friedland and Alford (1991), six logics by Thornton (2004), and seven logics by Thornton, Ocasio, and Lounsbury (2012). Because our selected higher education studies focus on field level analysis, none of our reviewed studies falls into this category but we include it as a quadrant on our matrix in order to contextualise the other quadrants and offer a more complete picture of the use of institutional logics as both analytical and theoretical tool.

### **Societal-Level deduction**

This quadrant includes those empirical studies that directly apply the societal institutional logics defined in classic institutional logics literature. All the eight societal logics, as ideal types of logics, proposed by the classic literature of institutional logics (i.e. the seven logics by Thornton, Ocasio, and Lounsbury 2012 combined with democracy as proposed by Friedland and Alford 1991) were mentioned in the articles in this quadrant (Figure 4). In each individual study, 2–5 logics were applied: 5 logics (2 articles), 4 logics (3 articles), 3 logics (5 articles), and 2 logics (3 articles). As shown in Figure 4, the most popular logics discussed in the literature are market, profession, and state logics.

In general, studies in this quadrant more strictly follow institutional logics theory and show methodological rigour. In three studies, the authors juxtaposed new logics (managerial logic in two articles and logic of organisation in the third) with more classic societal-level logics to develop their analytical frameworks. This avoids the danger that too strict an application of the classic ideal types may exclude new logics specific to higher education. However, the need to introduce so many new logics is arguable as the majority could be replaced with existing ideal-type logics. For instance, Pietilä and Pinheiro (2020) juxtapose managerial logic with the logics of state,



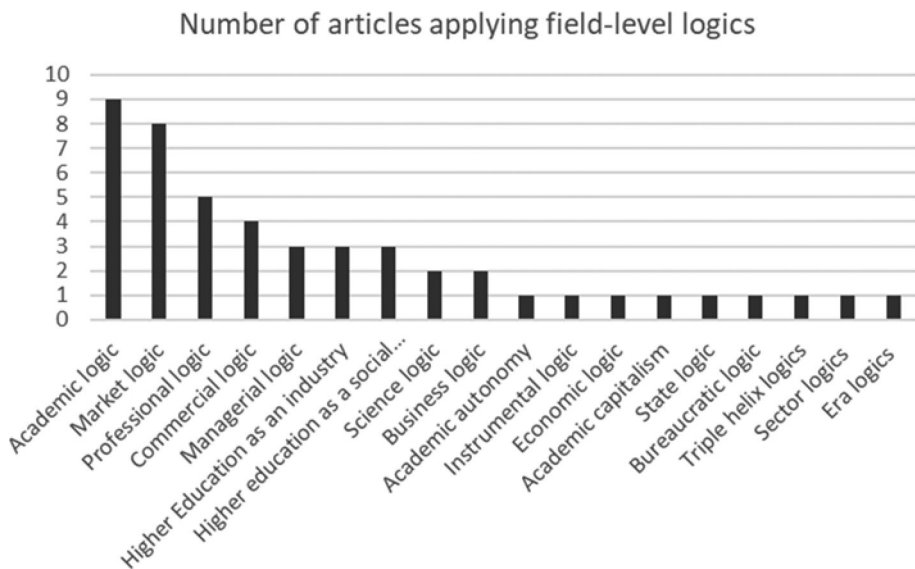


**Figure 4.** Logics applied in the approach of societal-level deduction.

profession and market in their study on university career systems. Although the authors initially raised the managerial logic by citing some higher education literature, when building their analytical framework of institutional logics they based it on Goodrick and Reay (2011) and Thornton, Ocasio, and Lounsbury (2012). Based on the cited sources, we understand that the managerial logic referred to by Pietilä and Pinheiro (2020) is largely about the logic of corporation.

### Field-Level deduction

This quadrant combines field level logics with deductive reasoning. It includes those studies that cite certain field-level institutional logics from other sources as ideal types to guide their empirical analysis. Altogether, we found 18 such logics applied in the literature in this camp (Figure 5). More detail



**Figure 5.** Logics applied in the approach of field-level deduction.

about these ideal-type institutional logics and the sources from which the logics are cited is provided in Appendix III. Although profession, market and state logics are among the seven societal logics (Thornton, Ocasio, and Lounsbury 2012), they are treated here as a field-level logic because the authors cite field-specific sources, rather than the classic logics literature. Also, these logics are used together with other field-level logics as analytical tools. Typically, individual studies discuss two of these logics as competing with each other (e.g. professional vs. commercial, academic vs. commercial, bureaucratic vs. managerial, academic vs. market). The exceptions being those studies applying economic logics, Triple Helix logics and Era logics, each of which includes more than two sub-categories as well as a couple of studies dealing with three logics, such as market, corporate and academic logics (Louw 2019).

We find three challenges arising in this quadrant. First, compared to more well-defined ideal-type logics at the societal level, agreement is lacking on ideal-type logics at the field-level. Although the institutional context of higher education is becoming increasingly complex, 18 logics in the field might be considered too many. Indeed, some logics, though with different names, share similar assumptions. For instance, Grossi, Dobija, and Strzelczyk (2020) equate managerial logic with business logic, whereas Pettersen (2015) describes a managerial logic as an instrumental logic. Excluding the Economic logics, Triple Helix logics, Sector logics and Era logics, the remaining logics can be roughly grouped according to the intrinsic similarities between them (see Table 2). This indicates that the most popular logics are academic logics (or the like), market logics (or the like) and managerial logics (or the like).

Second, there are different interpretations of logics. The authors of studies in this quadrant often cite logics with the same name from a variety of sources (See Appendix III). The most consistently cited field-level ideal-type logics are 'higher education as a social institution' and 'higher education as an industry' proposed by Gumpert (2000, 2003): 'An industry logic circumscribes purposes and practices within an economic rationality, while a social institution logic enables the legitimate pursuit of a broader range of activities under the rubric of educational and democratic interests' (Gumpert 2003, 41). When applying the two logics, the authors interpret them in different ways. For instance, Paisey and Paisey (2017) consider they are represented by a corporate logic and professional logic respectively. Juusola, Kettunen, and Alajoutsijarvi (2015) interpret them as market logic and academic logic. However, corporate logic and market logics are different (Thornton, Ocasio, and Lounsbury 2012), though academic logic and professional logic are sometimes treated as exchangeable (Pettersen 2015).

Finally, with only a few exceptions, such as the logics identified by Gumpert (2000), the formation of most ideal-type field-level logics in higher education research is difficult to trace. In other words, we are lacking detailed explanations of why certain chosen logics can be claimed as ideal types and how they were originally developed.

**Table 2.** Field-level logics in groups.

Groups	Logics	Number of articles applying the logics	
1	Academic logic	9	18
	Professional logic	5	
	Science logic	2	
	Academic autonomy	1	
	Higher education as a social institution	1	
2	Market logic	8	14
	Commercial logic	4	
	Academic capitalism	1	
	Higher education as an industry	1	
3	Managerial logic	3	7
	Business logic	2	
	Instrumental logic	2	
4	State logic	1	2
	Bureaucratic logic	1	

### **Field-Level induction**

The final quadrant, Field-Level Induction, houses those studies that inductively analyse their empirical data without initial reference to previously identified institutional logics at either societal or field level. The studies using this approach often, though not always, result in the modification and/or expansion of the range of logics at field or actor levels. Altogether, more than 30 new logics were created (See Appendix II). Many of these logics can hardly be applied to higher education at field level, but rather are idiosyncratic to the organisational settings of specific empirical studies.

This approach is the most promising but, at the same time, the most problematic. It is promising because it could provide a solid basis for identifying ideal type logics in the higher education field that can be applied as analytical frameworks in empirical investigations. In so doing, it helps strengthen the approach of Field-Level Deduction. One good example is that the logics of industry and social institution in higher education, identified and elucidated by Gumport (2003) through inductive reasoning, become commonly cited ideal-type field-level logics.

The approach is problematic because many of these new logics are rather freely defined and in some cases the logics identified do not strictly follow the definitions of institutional logics in the classic literature. Partially for this reason, some understandings of institutional logics focus too much on the aspect of institutional logics as tangible constructs. For instance, when institutional logics are understood as stakeholders' beliefs (Kezar and Maxey 2014), academic disciplines (Yonezawa et al. 2020) and research excellence (Cruz-Castro, Benitez-Amado, and Sanz-Menendez 2016), there is a risk of compromising the power of institutional logics as supra-organisational 'vocabularies of practice' (Thornton, Ocasio, and Lounsbury 2012, 96). These problems may limit the potential of the approach to supplement Field-Level Deduction.

### **Contribution to theoretical advancement of institutional logics by higher education studies**

Although our reviewed higher education studies primarily applied institutional logics as analytical tools in empirical studies, some of them also contributed to the theoretical development of institutional logics. They did so in three aspects: strengthening the core values of the theory; shedding light on blind spots within the theory; and suggesting directions for future research.

#### ***Strengthening the core values of institutional logics***

First, the institutional logic concretises the otherwise abstract concept of 'the institution' by identifying a set of supra-organisational patterns that provide meaning to actions and conflicts (Thornton and Ocasio 1999, 4). Many studies reviewed in this paper indicate, either explicitly or implicitly, that their motivation in applying an institutional logics perspective was to concretely define the content and meaning of institutions in their field. Whilst the phenomena in higher education organisations are often embedded in institutional contexts, an institutional logics perspective conceptualises the abstract term of 'context' in a more concrete way. As such, various sets of institutional logics in the fields of higher education are identified, though higher education studies discovering 'new' institutional logics are also flourishing as discussed earlier.

Second, the dynamic complexity of institutional logics is reflected in both horizontal and vertical dimensions in that institutional logics span horizontal and traverse vertical quadrants. On the horizontal dimension, an institutional logic perspective deals with multiple and contesting logics in institutional systems (Thornton, Ocasio, and Lounsbury 2012), rather than a more simplistic focus on dominating institutions in organisational fields (DiMaggio and Powell 1983). On the vertical dimension, an institutional logics perspective also calls for attention to analysing three levels of society, namely 'individuals competing and negotiating, organisations in conflict and coordination, and institutions in contradiction and interdependency' (Thornton and Ocasio 2008, 104). Such institutional

complexity enables change and innovation dynamics (Thornton, Ocasio, and Lounsbury 2012). The more than 50 institutional logics mentioned in our reviewed studies clearly demonstrate logic multiplicity on the horizontal dimension. Our analysis also highlights how logics are applied/identified at societal, field and organisational levels (See Appendix II). In addition, the higher education literature further develops the power of institutional logics to explain the dynamics of institutional complexity in the context of innovation. For instance, Dudau, Kominis, and Szocs (2018) elucidate duality in innovation outcomes in the context of higher education using the insights of institutional logics. They suggest that while mixing different institutional logics may enable innovations, conflicting institutional logics, e.g. between logics of professionalism and markets, may lead to the perceived failure of innovation.

Third, the institutional logics perspective explains how institutions both enable and constrain action by incorporating macro structure, local culture and human agency (Thornton, Ocasio, and Lounsbury 2012). This helps to provide a better understanding of the 'paradox of embedded agency' (Seo and Creed 2002): if the actions of organisational actors are constrained by taken-for-granted institutions, how and why can the actors induce institutional changes (Horton and de Araujo Wanderley 2018)? Nevertheless, its theoretical account on how mingling logics are managed via human agency remains relatively abstract. Besides demonstrating the important agency role in that actors can strategically choose institutional logics for their own benefit (Nations 2018), some higher education studies reveal micro-level mechanisms concerning strategies for balancing between competing logics or reducing tensions. For example, Narayan, Northcott, and Parker (2017) suggest the use of 'bridging strategies' and 'buffering strategies' to compromise or balance between competing logics. Mampaey and Huisman (2016) propose a typology of conflict-reducing and conflict-inducing strategies for understanding universities' responses to tensions among different institutional logics in their operating environment. Gebreiter and Nunung (2019) provide a map of different strategies for individuals to respond to conflicting institutional logics in the context of a business school.

### ***Shedding light on blind spots in institutional logics theory***

Cloutier and Langley (2013) pointed out four less developed areas or blind spots within current conceptualizations of institutional logics: 1) few explanations on how institutional processes play out at a micro-level, 2) little attention on struggles over conflicting logics from a legitimacy perspective, 3) a lack of consideration as to the moral aspect of institutional logics, and 4) a failure to recognise the manifestation of institutional logics in material objectives. Although the observation was made eight years ago, the higher education studies under our review largely affirmed these gaps. The contribution of higher education research primarily sheds light on the first point (as mentioned above). Relative to this, the other three areas remain less developed blind spots in organisation studies of higher education.

To fill these gaps, Cloutier and Langley (2013) propose combining institutional logics with insights from other theories. Similar efforts are seen in some of our reviewed studies, such as the integration of institutional logics and imprinting theory in higher education literature (Oertel and Soll 2017; Oertel 2018). Building synergies between institutional logics and other theories would help to gain a comprehensive understanding of various organisational phenomena in the complex professional organisations that characterise the higher education field. It has already become popular to combine institutional theory (often new institutionalism) and other theories in higher education studies (Cai and Mehari 2015), though this is not a trend with respect to institutional logics analysis yet.

### ***Implications for future research***

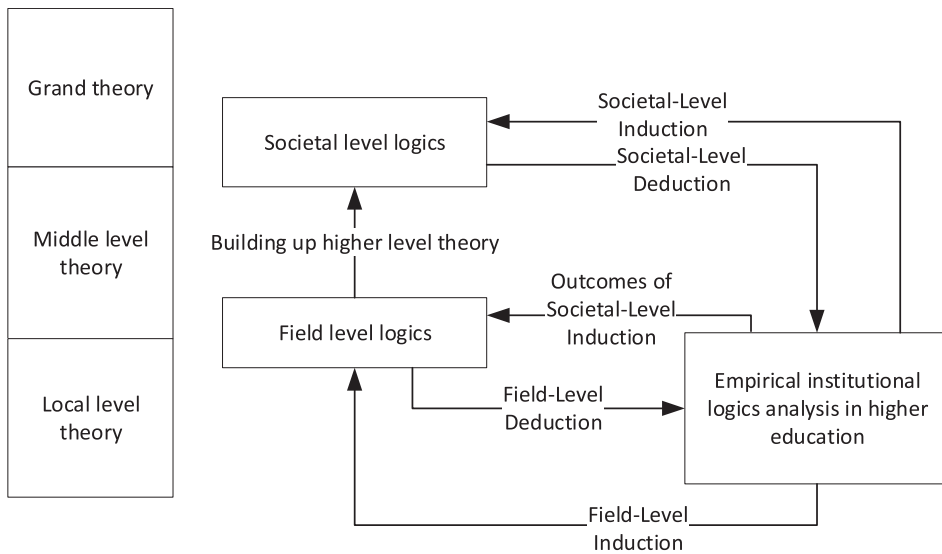
Our analysis also suggests two directions for advancing the development of institutional logics theory. First, as studies applying societal-level logics and field-level logics tend to take different

analysis approaches and understand institutional logics differently, there is a need to differentiate the definitions of societal-level logics and field-level logics. While the definition of institutional logics by Friedland and Alford (1991) can be understood to specifically refer to societal-level logics, the definition by Thornton and Ocasio (1999) or Thornton, Ocasio, and Lounsbury (2012) can be more flexibly applied to logics at both levels. It seems, however, that authors of our reviewed studies are not always sensitive to such distinctions. For instance, Oertel (2018, 105) applies the field-level induction approach, defining institutional logics as 'central [that] logics define means and ends and are constitutive for individuals, organisations, and society' while citing both Friedland and Alford (1991) and Thornton, Ocasio, and Lounsbury (2012). We suggest that societal-level logics draw on institutional orders at the societal level (Friedland and Alford 1991) and have a stronger cultural component (Ocasio, Thornton, and Lounsbury 2017). Field-level logics, on the other hand, are more connected to practices, and specifically those that occur at the organisational level (Thornton, Ocasio, and Lounsbury 2012). The key differentiator for field logics is that collective identity, power and status, social classification, and attention (Thornton and Ocasio 2008) are all determined at the field level based on how things are organised or practiced, rather than the societal level based on cultural norms. This focus on practice can, however, mean that practices are sometimes labelled as logics. Both field and societal logics must, of course, maintain cultural *and* practice-based foundations. Thornton and Ocasio's four criteria could, therefore, act as a checklist in order to distinguish a pure practice from a logic - identity, power, classification and attention must stem from, and underpin, the practice-based *and* cultural constraining/enabling of a logic. Building on this, further definition and drawing of the boundaries between field and societal logic is required in order to manage the increasing proliferation of logics at the field level.

Second, the challenges regarding conceptual rigour in institutional logics analysis in higher education call for optimal methodological approaches that help realise a 'theory-method fit' (Gehman et al. 2017). Theory is a complex and multi-layered concept and this is exemplified in the case of institutional logics theory. Kezar (2006) distinguishes between four vertical levels of theory, namely meta-theory, grand theory, middle-level theory, and low-level theory. Kezar's key message is that there is a recursive relationship between higher and lower-level theories: higher-level theories guide and influence the theoretical development at the lower level, while lower-level theories build up to higher-level theories. Such an understanding of theory is very much in line with institutional logics, which deals with logics in societies, organisational fields and organisations (Thornton, Ocasio, and Lounsbury 2012): Logics at the field level are subject to societal-level logics, while logics at higher levels of the social structure are in turn based on the meanings produced by actors at lower levels. Thus, we propose that the four approaches to institutional logics analysis that we have outlined earlier could contribute to the building of institutional logics theory at the three theory levels (grand, middle and local) as illustrated in Figure 6.

Institutional logics at the societal level can be positioned between grand level theory and middle-level theory, whilst the field level logics sit in between middle and local levels of theory. The Societal-Level Induction approach, typically seen in the classic institutional logics literature, is the major method used to identify societal logics. Institutional logics at the organisational field level are developed by both approaches of Societal-Level Deduction and Field-Level Induction. The former examines how the societal logics are manifested at the field level; the latter discovers 'new' institutional logics at the field level. Once the 'new' field-level logics have gained legitimacy in respective research communities, they could serve as analytical tools for empirical institutional analysis in corresponding fields.

Discussions as to the relationship between theory building and institutional analysis approaches imply that synergy building between inductive and deductive approaches to institutional logics analysis could better contribute to institutional research. Qualitative methods have long been used within management studies both to build theory inductively and to test theory following a deductive logic (Bansal and Corley 2012; Eisenhardt 1989). This reflects a general suggestion by the methodology literature that a research cycle that integrates deductive



**Figure 6.** Approaches of institutional logics analysis in the framework of theory levels.

and inductive reasoning tends to deliver more comprehensive understandings of unknown phenomena (Newman and Benz 1998; Creswell 2003; Reay and Jones 2016). In the context of qualitative research, Langley calls this process abduction; ‘theoretical ideas, which are also out there and can be further developed’ (Gehman et al. 2017, 297). This is in line with the Gioia methodology, which recommends combining a “1st-order” analysis (i.e. an analysis using informant-centric terms and codes) and a “2nd-order” analysis (i.e. one using researcher-centric concepts, themes, and dimensions) in pursuit of qualitative rigour (Gioia, Corley, and Hamilton 2013). The inductive/deductive combination facilitates ‘cycling between emergent data, themes, concepts, and dimensions and the relevant literature, not only to see whether what we are finding has precedents, but also whether we have discovered new concepts’ (Gioia, Corley, and Hamilton 2013, 20). Reay and Jones’ (2016) Patten Deducing (which ‘privileges analytical technics’ and is based on a large volume of data) can therefore be regarded as the first-order analysis, while Patten Inducing (which ‘privileges researcher’ and compares identified patterns with extant literature) is close to the second-order analysis. We suggest that such combined inductive/deductive approaches offer an optimum ‘theory-method fit’ in institutional logics. It offers flexibility (to reflect and respond to local logics) alongside the consistency of terminology necessary to facilitate meta-analyses and potential cross-field conversations.

## Concluding discussions

Our analysis of the state-of-the-art application of institutional logics in higher education studies shows that the concept of institutional logics has become increasingly popular in higher education studies, especially over the past five years. Our literature analysis has revealed the usefulness of institutional logics theory in understanding universities and colleges in complex institutional environments. The higher education studies analysed in our review include research in two groups of journals: 1) those serving as primary publication outlets for higher education scholars (i.e. higher education journals and journals including higher education research as a sub-field) and 2) those including marginal research publications on higher education issues by authors from the fields of management & business as well as other areas of the social sciences (i.e. management and business journals and other social science journals).

We find distinctions between institutional logics analysis in these two types of journals. Studies applying field-level ideal type logics are evenly distributed between the two kinds of journals, often focusing on tensions between two logics. Studies applying societal-level ideal type logics are more prevalent in higher education journals and tend to investigate more than two logics (up to five). This may imply that higher education researchers have heightened perceptions of the complexity of the institutional environment of higher education in which they work. Perhaps for the same reason, where 'new' logics are suggested in the field of higher education, this is mainly evident within the core higher education journal publications.

Here, we highlight several areas that require scholarly attention to more fully exploit the power of institutional logics theory in higher education research. The first concerns conceptualising institutional logics in the context of higher education. While our reviewed articles combine to mention dozens of institutional logics, the number of logics applied/identified in each individual study does vary. So too does the rigour with which each logic is defined. This may signal a problem of 'concept misformation', including 'conceptual straining' and 'conceptual stretching' (Sartori 1970). These two kinds of concept misformation are associated with two potential threats to the institutional logic as a concept. One is the problem of too few logics. If eight institutional logics, as societal-level ideal types, have been identified, then there is no room for further discovery of how particular logics of specific institutions are at work. In short, there are no new questions for research. The second threat is an excessive proliferation of logics. If logics become simply a particular organisation's engrained practices, sense of identity or sense of purpose, detached from a tight coupling with societal institutions, then an institutional logic becomes an empty concept. This divergence in the life-path of the institutional logic construct threatens its integrity and its power to increase our understanding of organisations (and the people within them) in dynamic interaction with fields.

Second, the explanatory power of institutional logics has not been fully utilised in higher education studies. Between conceptual straining and conceptual stretching, is the best use of the concept: institutional logics as the tangible influence of macrological structure observed in meso- and micro-logical behaviour, routines, and artefacts (Thornton and Ocasio 2008). While our reviewed higher education studies, as a whole, do deal with institutional logics at the societal, field and organisational levels, we lack individual studies that properly elaborate how institutional logics at different levels are related and embedded. For an excellent exception see Blaschke, Frost, and Hattke (2014) which integrates macro and micro levels of analysis.

Third, it is possible that some of the problems we identify may reflect the fact that some authors lean on the theoretical insights of institutional logics without a comprehensive understanding of institutional theory. Institutional logics is only one of several interrelated strands of institutional theory (Cai and Mehari 2015). For instance, to understand how various forms of institutional logics emerge, evolve, and become displaced in competing, hybrid or blended logics, other strands of institutional theory such as institutional work (e.g. Lawrence and Suddaby 2006) or institutional entrepreneurship (e.g. Battilana, Leca, and Boxenbaum 2009) can be useful. Louw (2019) offers a good example of this integration of institutional approaches.

In an effort to enhance institutional analysis in higher education research, we offer our typology of approaches to institutional logics analysis as a tool for researchers that may assist in surfacing and questioning the assumptions that underpin their methodological approach. We also hope that researchers might consult our exhaustive list of institutional logics applied in higher education studies and consider the challenges we raise in the use of institutional logics in higher education research before adding new logics or loosely applying existing terminology. Our ultimate goal is that we, as a community of higher education scholars, collaboratively capture, reflect and theorise the complex institutional context in which we work and study.

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## Appendices

### Appendix I: List of reviewed articles (Total 59)

Authors	Article Title	Source Title	Publication Year
Conrath-Hargreaves, A; Wustemann, S	Managing Multiple Institutional Logics and the Use of Accounting: Insights from a German Higher Education Institution	ABACUS-A JOURNAL OF ACCOUNTING FINANCE AND BUSINESS STUDIES	2019
Conrath-Hargreaves, A; Wustemann, S	Multiple institutional logics and their impact on accounting in higher education The case of a German foundation university	ACCOUNTING AUDITING & ACCOUNTABILITY JOURNAL	2019
Gebreiter, F; Hidayah, NN	Individual responses to competing accountability pressures in hybrid organisations The case of an English business school	ACCOUNTING AUDITING & ACCOUNTABILITY JOURNAL	2019
Paisey, C; Paisey, NJ	The decline of the professionally-qualified accounting academic: Recruitment into the accounting academic community	ACCOUNTING FORUM	2017
Gumport, PJ	The demand-response scenario: Perspectives of community college presidents	ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE	2003
Garza, AN; Van Delinder, J	Scripted schooling: determining when cultural retooling is worth the academic payoff	BRITISH JOURNAL OF SOCIOLOGY OF EDUCATION	2020
Howells, JRL; Karatas-Ozkan, M; Yavuz, C; Atiq, M	University management and organisational change: a dynamic institutional perspective	CAMBRIDGE JOURNAL OF REGIONS ECONOMY AND SOCIETY	2014
Taylor, A; Kahlke, R	Institutional Logics and Community Service-Learning in Higher Education	CANADIAN JOURNAL OF HIGHER EDUCATION	2017
Golyagina, A	Competing logics in university accounting education in post-revolutionary Russia	CRITICAL PERSPECTIVES ON ACCOUNTING	2020
van Schalkwyk, F; de Lange, G	The engaged university and the specificity of place: The case of Nelson Mandela Metropolitan University	DEVELOPMENT SOUTHERN AFRICA	2018
Pettersen, IJ	From Metrics to Knowledge? Quality Assessment in Higher Education	FINANCIAL ACCOUNTABILITY & MANAGEMENT	2015
Narayan, AK; Northcott, D; Parker, LD	Managing the accountability-autonomy tensions in university research commercialisation	FINANCIAL ACCOUNTABILITY & MANAGEMENT	2017
Zheng, GM; Shen, WQ; Cai, YZ	Institutional logics of Chinese doctoral education system	HIGHER EDUCATION	2018
Pietila, M; Pinheiro, R	Reaching for different ends through tenure track-institutional logics in university career systems	HIGHER EDUCATION	Online-first
Gu, JX; Levin, JS	Tournament in academia: a comparative analysis of faculty evaluation systems in research universities in China and the USA	HIGHER EDUCATION	Online-first
Cho, AR; Taylor, B	Alignment between universities and their affiliated professional schools: organisational segmentation and institutional logics in the USA	HIGHER EDUCATION	2019
Blaschke, S; Frost, J; Hattke, F	Towards a micro foundation of leadership, governance, and management in universities	HIGHER EDUCATION	2014
Bruckmann, S; Carvalho, T	Understanding change in higher education: an archetypal approach	HIGHER EDUCATION	2018
Nokkala, T; Diogo, S	Institutional perspectives in transition: research groups' profiles and embeddedness in organisational and national context	HIGHER EDUCATION	2020
Oertel, S; Soll, M	Universities between traditional forces and modern demands: the role of imprinting on the missions of German universities	HIGHER EDUCATION	2017

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Authors	Article Title	Source Title	Publication Year
Hladchenko, M; Westerheijden, DF	The self-concept of Ukrainian doctoral students: Means-ends decoupling at the state level	HIGHER EDUCATION QUARTERLY	2019
Sewerin, T; Holmberg, R	Contextualizing distributed leadership in higher education	HIGHER EDUCATION RESEARCH & DEVELOPMENT	2017
Pruisken, I	Institutional Logics and Critique in German Academic Science Studying the Merger of the Karlsruhe Institute of Technology	HISTORICAL SOCIAL RESEARCH-HISTORISCHE SOZIALFORSCHUNG	2017
Hladchenko, M; Benninghoff, M	Implementing the global model of the research university in a national context: perspectives of deans and departments heads	INTERNATIONAL JOURNAL OF EDUCATIONAL MANAGEMENT	Online-first
Aksom, H	Academics' experience of contradicting institutional logics of publishing	INTERNATIONAL JOURNAL OF EDUCATIONAL MANAGEMENT	2018
Beer, CT	Rationale of early adopters of fossil fuel divestment	INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION	2016
Peksatici,O; Ergun, HS	The gap between academy and industry - A qualitative study in Turkish aviation context	JOURNAL OF AIR TRANSPORT MANAGEMENT	2019
Mir, FA; Rezanian, D; Baker, R	Managing Change in Pluralistic Organisations: The Role of Normative Accountability Assumptions	JOURNAL OF CHANGE MANAGEMENT	2020
Nordberg, TH; Andreassen, TA	Challenging professional control? Reforming higher education through stakeholder involvement	JOURNAL OF EDUCATION AND WORK	2020
Warshaw, JB; Upton, S	Hybrid logics in the resource strategies of US public research universities	JOURNAL OF FURTHER AND HIGHER EDUCATION	Online-first
Hladchenko, M	Academic identities in Ukrainian research universities under conditions of means-ends decoupling at the state level	JOURNAL OF FURTHER AND HIGHER EDUCATION	2020
Brint, S; Yoshikawa, SRK; Rotondi, MB; Viggiano, T; Maldonado, J	Surviving and Thriving: The Adaptive Responses of US Four-Year Colleges and Universities during the Great Recession	JOURNAL OF HIGHER EDUCATION	2016
Wang, SY; Jones, GA	Competing institutional logics of academic personnel system reforms in leading Chinese Universities	JOURNAL OF HIGHER EDUCATION POLICY AND MANAGEMENT	Online-first
Upton, S; Warshaw, JB	Evidence of hybrid institutional logics in the US public research university	JOURNAL OF HIGHER EDUCATION POLICY AND MANAGEMENT	2017
Yonezawa, A; Hammond, CD; Brotherhood, T; Kitamura, M; Kitagawa, F	Evolutions in knowledge production policy and practice in Japan: a case study of an interdisciplinary research institute for disaster science	JOURNAL OF HIGHER EDUCATION POLICY AND MANAGEMENT	2020
Juusola, K; Kettunen, K; Alajoutsijarvi, K	Accelerating the Americanization of Management Education: Five Responses From Business Schools	JOURNAL OF MANAGEMENT INQUIRY	2015
Buckner, E; Zapp, M	Institutional Logics in the Global Higher Education Landscape: Differences in Organisational Characteristics by Sector and Founding Era	MINERVA	Online-first
Mars, MM; Bresonis, K; Szelenyi, K	Science and Engineering Doctoral Student Socialisation, Logics, and the National Economic Agenda: Alignment or Disconnect?	MINERVA	2014
Alexander, EA; Phillips, W; Kapletia, D	Shifting logics: limitations on the journey from 'state' to 'market' logic in UK higher education	POLICY AND POLITICS	2018
Oertel, S	The role of imprinting on the adoption of diversity management in German universities	PUBLIC ADMINISTRATION	2018
Anderson, DM; Taggart, G	Organisations, Policies, and the Roots of Public Value Failure: The Case of For-Profit Higher Education	PUBLIC ADMINISTRATION REVIEW	2016

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Authors	Article Title	Source Title	Publication Year
Dudau, A; Kominis, G; Szocs, M	Innovation failure in the eye of the beholder: towards a theory of innovation shaped by competing agendas within higher education	PUBLIC MANAGEMENT REVIEW	2018
Grossi, G; Dobija, D; Strzelczyk, W	The Impact of Competing Institutional Pressures and Logics on the Use of Performance Measurement in Hybrid Universities	PUBLIC PERFORMANCE & MANAGEMENT REVIEW	2020
Guarini, E; Magli, F; Francesconi, A	Academic logics in changing performance measurement systems An exploration in a university setting	QUALITATIVE RESEARCH IN ACCOUNTING AND MANAGEMENT	2020
Cruz-Castro, L; Benitez-Amado, A; Sanz-Menendez, L	The proof of the pudding: University responses to the European Research Council	RESEARCH EVALUATION	2016
Bruno, K; Larsen, K; van Leeuwen, TN	Knowledge production at industrial research institutes: Institutional logics and struggles for relevance in the Swedish Institute for Surface Chemistry, 1980–2005	RESEARCH EVALUATION	2017
Hewitt-Dundas, N; Gkypali, A; Roper, S	Does learning from prior collaboration help firms to overcome the ‘two worlds’ paradox in university-business collaboration?	RESEARCH POLICY	2019
Gonzales, LD; Ayers, DF	The Convergence of Institutional Logics on the Community College Sector and the Normalisation of Emotional Labour: A New Theoretical Approach for Considering the Community College Faculty Labour Expectations	REVIEW OF HIGHER EDUCATION	2018
Taylor, LD	Neoliberal Consequence: Data-driven decision making and the subversion of student success efforts	REVIEW OF HIGHER EDUCATION	2020
Bastedo, MN	Convergent Institutional Logics in Public Higher Education: State Policymaking and Governing Board Activism	REVIEW OF HIGHER EDUCATION	2009
Nations, JM	Resisting the Market University: Political Challenges to the Locus of Authority in Public University Tuition Policy	SOCIAL SCIENCE HISTORY	2018
Louw, J	Going against the grain: emotional labour in the face of established business school institutional logics	STUDIES IN HIGHER EDUCATION	2019
Mampaey, J; Huisman, J	Defensive stakeholder management in European universities: an institutional logics perspective	STUDIES IN HIGHER EDUCATION	2016
Kuznetsova, O; Kuznetsov, A	And then there were none: what a UCU archive tells us about employee relations in marketising universities	STUDIES IN HIGHER EDUCATION	Online-first
Rios, CD; Dion, ML; Leonard, K	Institutional logics and indigenous research sovereignty in Canada, the United States, Australia, and New Zealand	STUDIES IN HIGHER EDUCATION	2020
Shields, R; Watermeyer, R	Competing institutional logics in universities in the United Kingdom: schism in the church of reason	STUDIES IN HIGHER EDUCATION	2020
Ma, JY	Developing Joint R&D Institutes between Chinese Universities and International Enterprises in China’s Innovation System: A Case at Tsinghua University	SUSTAINABILITY	2019
Kezar, A; Maxey, D	Understanding Key Stakeholder Belief Systems or Institutional Logics Related to Non-Tenure-Track Faculty and the Changing Professoriate	TEACHERS COLLEGE RECORD	2014
Larsen, K	Managing the complexity of centres of excellence: accommodating diversity in institutional logics	TERTIARY EDUCATION AND MANAGEMENT	2020

**Appendix II: Institutional logics applied/identified in source journals**

Journal category	Source Title	Number of articles in the source	Societal logics applied (Societal-Level Deduction)	Field logics applied (Field-Level Deduction)	Self-identified field or organisational level logics (Field-Level Induction)
Higher Education Journals	CANADIAN JOURNAL OF HIGHER EDUCATION	1	Market, Profession, Community		Managerialism vs traditional colloquialism; Collegial, efficient-collegial, managerial archetypes; Profiles of research groups in the lens of institutional logics; Service-oriented logic vs. German specific classical logic
	HIGHER EDUCATION	8	State (2), Profession (2), Market (2), Corporation, Family, Managerial (Close to the logic of corporation)	Academic, Professional, Market (2), State	
	HIGHER EDUCATION QUARTERLY	1	State, Market		
	HIGHER EDUCATION RESEARCH & DEVELOPMENT	1	Corporation, Profession, Market		
	INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION	1			Logics economic sustainability vs. market endowment vs. education
	JOURNAL OF FURTHER AND HIGHER EDUCATION	2		Higher education as a social institution, Higher education as an industry	Academic identities in the lens of institutional logics
	JOURNAL OF HIGHER EDUCATION	1			Logics of universities' adaptation to economic recessions: Consumer service, market search, growing and greening, the complete arsenal
	JOURNAL OF HIGHER EDUCATION POLICY AND MANAGEMENT	3	State, Profession, Market, Managerial (Close to corporation)	Higher education as a social institution, Higher education as an industry	Logics of academic disciplines
	REVIEW OF HIGHER EDUCATION	3	Family, Democracy, Religion	Economic logics	Logics in higher education policymaking: Mission differentiation, student opportunity, system development and managerialism
	STUDIES IN HIGHER EDUCATION	5		Market (2), Corporate, Academic, Professional, Academic autonomy, Academic capitalism	Indigenous vs. western social scientific logics; Autonomy, utilitarianism, managerialism
	TEACHERS COLLEGE RECORD	1			Logics as four distinctive stakeholder beliefs
	TERTIARY EDUCATION AND MANAGEMENT	1			Five logics of research excellence (Research centres)

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Journal category	Source Title	Number of articles in the source	Societal logics applied (Societal-Level Deduction)	Field logics applied (Field-Level Deduction)	Self-identified field or organisational level logics (Field-Level Induction)
Journals in which higher education research is a sub-field	BRITISH JOURNAL OF SOCIOLOGY OF EDUCATION	1			Academic logic of high school vs. academic of higher education
	INTERNATIONAL JOURNAL OF EDUCATIONAL MANAGEMENT	2		Academic, commercial	Logic of science advancement vs. logic of coercive pressures to publish
	JOURNAL OF EDUCATION AND WORK	1	Profession, Democracy, Family/ community, State, Logic of organisation (Close to the logic of corporation)		
	MINERVA	2		Sector logics vs era logics, scientific, market	
	RESEARCH EVALUATION	2			Research excellence logics (among ERC recipients) Scientific autonomous vs market logics
Management and business journals	RESEARCH POLICY	1		Market logic, Science logic	
	ABACUS-A JOURNAL OF ACCOUNTING FINANCE AND BUSINESS STUDIES	1			State logic, Business Logic
	ACCOUNTING AUDITING & ACCOUNTABILITY JOURNAL	2	State, Profession, Corporation, Market	Professional, Commercial	
	ACCOUNTING FORUM	1		Higher education as a social institution, Higher Education as an industry	
	CRITICAL PERSPECTIVES ON ACCOUNTING	1	State, Profession, Market		
	FINANCIAL ACCOUNTABILITY & MANAGEMENT	2		Instrumental logic, Professional logic, Academic logic, Commercial logic	
	JOURNAL OF AIR TRANSPORT MANAGEMENT	1		Academic, Commercial	
	JOURNAL OF CHANGE MANAGEMENT	1		Democratic and professional logic, Managerialist logic	
	JOURNAL OF MANAGEMENT INQUIRY	1		Academic logic, Market logic	
	PUBLIC ADMINISTRATION	1			Logic of inclusion vs. logic of equality
PUBLIC ADMINISTRATION REVIEW	1			Guild logic vs. corporate logic	

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Journal category	Source Title	Number of articles in the source	Societal logics applied (Societal-Level Deduction)	Field logics applied (Field-Level Deduction)	Self-identified field or organisational level logics (Field-Level Induction)
Other social science journals	PUBLIC MANAGEMENT REVIEW	1	Profession, Market		
	PUBLIC PERFORMANCE & MANAGEMENT REVIEW	1		Academic, Business/managerial logic	
	QUALITATIVE RESEARCH IN ACCOUNTING AND MANAGEMENT	1		Academic logic, Business logic	
	ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE	1		Higher education as a social institution, Higher education as an industry	
	CAMBRIDGE JOURNAL OF REGIONS ECONOMY AND SOCIETY	1		Bureaucratic logic, Managerial logic	
	DEVELOPMENT SOUTHERN AFRICA	1	Market, Profession, Community		
	HISTORICAL SOCIAL RESEARCH-HISTORISCHE SOZIALFORSCHUNG	1			Corporatist planning, Organisational competition
	POLICY AND POLITICS	1	State, Market		
	SOCIAL SCIENCE HISTORY	1		Academic, Market	
SUSTAINABILITY	1		Triple Helix logics		

### Appendix III: Ideal type field-level institutional logics applied in higher education studies and the sources where the logics are cited

Logics	Cited sources	Number of articles identified the logics
Academic logic	(Levin 2017), (OECD 2009), (D'Este and Patel 2007), (Gulbrandsen and Smeby 2005), (Pettersen and Solstad 2007), (Fini and Lacetera 2010), (Perkmann, Neely, and Walsh 2011), (Gumport 2000), (Thornton and Ocasio 2008), (Kallio, Kallio, and Grossi 2017), (Kubra Canhilal, Lepori, and Seeber 2016), (Grossi, Dobija, and Strzelczyk 2020)	9
Professional logic	(Deem, Hillyard, and Reed 2007), (Deem 2004), (Brint 1994), (Biesta 2004), (Giroux, Karmis, and Rouillard 2015), (Peters, Liu, and Ondercin 2012), (Townley 1997)	4
Science logic	(Merton 1957), (Mitroff 1974),	2
Academic autonomy	(ESRC No date)	1
Market logic	(Ball 2012), (Timmermans and Oh 2010), (Gumport 2000), (Berman 2011), (Slaughter and Rhoades 2004), (Geiger 2004), (Mars, Slaughter, and Rhoades 2008), (Deem 2001), (Trowler 2010)	8
Commercial logic	(Bovens 2005), (D'Este and Patel 2007), (Gulbrandsen and Smeby 2005), (Pettersen and Solstad 2007), (Fini and Lacetera 2010), (Perkmann, Neely, and Walsh 2011)	4
Managerial logic	(Deem, Hillyard, and Reed 2007), (Biesta 2004), (Giroux, Karmis, and Rouillard 2015), (Deem and Brehony 2005)	2
Instrumental logic	(OECD 2009)	1
Business logic	(Kallio, Kallio, and Grossi 2017), (Kubra Canhilal, Lepori, and Seeber 2016), (Grossi, Dobija, and Strzelczyk 2020)	2
Economic logic	(Giroux 2002)	1
Academic capitalism	(Moore et al. 2017)	1
Higher Education as an industry	(Gumport 2000)	4
Higher education as a social institution	(Gumport 2000)	4
State logic	(Timmermans and Oh 2010),	1
Bureaucratic logic	(Deem, Hillyard, and Reed 2007)	1
Triple helix logics	(Cai 2015, 2014)	1
Sector logics	(Geiger 1988), (Bernasconi 2011)	1
<ul style="list-style-type: none"> <li>• Logics in the private sector</li> <li>• Logics in the public sector</li> </ul>		
Era logics	<ul style="list-style-type: none"> <li>• (Ben-David 1972)</li> <li>• (Clark 1983), (Trow 2000)</li> <li>• (Deem 2001), (Enders and Jongbloed 2007), (Neave and van Vught 1991), (Neave and Van Vught 1994)</li> </ul>	1
<ul style="list-style-type: none"> <li>• Logic of elite education</li> <li>• Logic of massification</li> <li>• Logic of neoliberalism and knowledge economy</li> </ul>		

\*Cited sources refer to those publications that the authors of our reviewed articles cited when they applied corresponding field-level institutional logics.