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ORIGINAL ARTICLE

A Dialectical Perspective on an Institutional Change Process in Higher Education

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Abstract

The impact of stakeholders in the development of academic disciplines in higher education is a somewhat infrequently addressed topic in research. This article describes an institutional change and legitimacy formation process from a dialectical perspective by analysing organisational interpretations of and strategic responses to external pressures in higher education. When the interests of stakeholders differ, the pressure between actors creates tensions that are resolved by calculated actions. This article shows how strategic actions of an individual university act as drivers for institutional change in higher education. The results of this study show that changes in isomorphic structures arise through calculated micro-level actions that change the existing path dependency in decision-making and build political legitimacy. Tension-driven process leads to national-level, disciplinary-level and organisation-level changes as an outcome of dynamic interactions and contradictions between actors in a highly competitive and regulated field in higher education. The empirical focus of the study is in the engineering and technology field in Finland. A single case study design allows us to understand in-depth relations between actors to gain contextualised insight into a complex phenomenon. This study reveals dialectical dynamics between universities and between regional- and national-level actors in the development of an academic discipline.

Keywords Multi-level perspective · Stakeholder · Higher education · Institutional change · Legitimacy formation · Dialectical process

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Introduction

The challenges of understanding institutional change have attracted theoretical and empirical interest in higher education over the last few decades (Brankovic and Cantwell, 2022). Changing financial steering systems and competition over students, combined with growing demands for quality and efficiency, have become important concerns. To respond to growing demands, universities have adapted new strategic managerial models from the business world (Erkkilä, 2014; Dobbins, 2017; Tahar and Boutellier, 2013), which can be interpreted as a reaction to external political, economic and social pressures and strive towards the continuous improvement of processes, organisational structures and strategic collaboration with stakeholders (Pekkola et al., 2018; Rogers, 2019; Corazza and Saluto, 2021). In order to specialise and integrate with the highly standardised higher education industry (Stensaker and Norgård, 2001), aims at continuous improvement and effectiveness through strategic management and stakeholder engagement are necessities for universities (Pekkola et al., 2018); Rogers, 2019). Universities Act through research, education and societal engagement activities to respond to the needs of the society and stakeholders, while multiple stakeholders on the other hand influence university strategies, policies and structures (Vellamo et al., 2019).

Despite its importance, research on regional stakeholders' impact has gained only limited attention in higher education. Research on university stakeholder engagement tends to focus on technology and knowledge transfer and university–industry–government relations (Klofsten *et al*., 2010; Lappalainen and Markkula, 2013) fostered by an increased pressure from government on universities to take a more proactive role in enhancing regional and societal development (Miller et al., 2018). University and stakeholder involvement and engagement in academic change processes in a specific regional setting are not thoroughly studied. Research on the structural roles and impact of multiple stakeholders in triple and quadruple helix structures, especially in higher education, within regions is only emergent (Miller et al., 2018; Chapleo and Simms, 2010). In terms of stakeholder engagement in change, prior studies typically focus on one or a few stakeholders at a time without offering a systemic approach to stakeholder relationships, intersections, conflicts and salience of many stakeholder needs in to consideration (Myllykangas *et al*., 2010)

In this paper, the selected case study illuminates how multiple stakeholders engage in and affect higher education change in Finland. The study focuses on stakeholder impact in the highly competitive and regulated engineering and technology education over a period from 2016 to 2023, which was characterised by changes in the political steering in higher education and in the institutional organisation of the discipline. This paper offers a structured approach by applying institutional and stakeholder theories to analyse organisational interpretations of and strategic responses to external pressures in higher education. In other words, the paper shows how change in higher education is connected to responses to institutional pressures (e.g. pressures from regulatory agencies,

social expectations, the actions of leading organisations; Powell and DiMaggio, 1991; Greenwood and Hinings, 1996) and to strategic actions, which are aimed to affect the organisations and the wider institutional environment (Whatley and Castiello-Gutiérrez, 2022; Gornitzka and Maassen, 2000; Christensen and Gornitzka, 2017; Frølich et al., 2013). Due to national regulations in higher education, the reforms, whether general, discipline, or university specific, are always political. Any attempt to change higher education is an attempt to use power, and the use of power usually changes the higher education market (Välimaa, 2001). In a competitive environment, the optimisation of processes and structures legitimates both efficiency goals and benchmarking strategies (Peter and Bröckling, 2017).

This study provides new empirical knowledge on multiple stakeholder's impact, which is a simultaneous impact of many stakeholders, in higher education development by connecting these concepts with the notions of institutional change and legitimacy formation. Based on the empirical data, I demonstrate how strategic actions of an individual university can act as drivers for institutional change in higher education by altering the institutional isomorphic structures. Different interests at regional- and disciplinary-level create tensions that are actively resolved by calculated stakeholder actions.

Applying Stakeholder and Institutional Theories to Explain Change in Higher Education

The concepts of stakeholder power and interest (Freeman, 1984) and impact of different interest groups, who can affect or are affected by the actions, decisions, policies, practices, or goals of the organisation (Carroll et al., 2006), have started to attract more interest in higher education research. According to stakeholder management theory, a stakeholder for an organisation is any group or individual who affects or is affected by the achievements of the organisation's objectives. This theory considers all legitimate stakeholders but acknowledges that the urgency and importance of their interests differ. Interests define actors as stakeholders who use different means of influence (Freeman, 1984). Interests of stakeholders affect the processes of organisations through direct justifications and other means of legitimation to drive organisational interests (Deephouse and Suchman, 2008; Chapleo and Simms, 2010) and build or maintain power structures (Benson, 1977; Suchman, 1995).

Universities change by adapting to the institutional and stakeholder environment with calculated actions as a means of signalling their legitimacy (Meyer and Rowan, 1977; Powell and DiMaggio, 1991; Fumasoli and Huisman, 2013). Given the institutionalised nature of organisations, both the external and internal processes by which organisations adapt and change and the role of strategic intra-organisational actions in responding to the institutionalised pressures (Powell and DiMaggio, 1991) and field demands (Scott, 2008; Fumasoli and Huisman, 2013; Stensaker et al., 2014; Pinheiro et al., 2016; Mampaey, 2018; Hasanefendic and Donina, 2022), are critical. The key challenge in institutional change is to understand how and why institutional work occurs and how this affects institutional stability and change (Zietsma and Lawrence, 2010). Institutional emergence can be understood as an outcome of

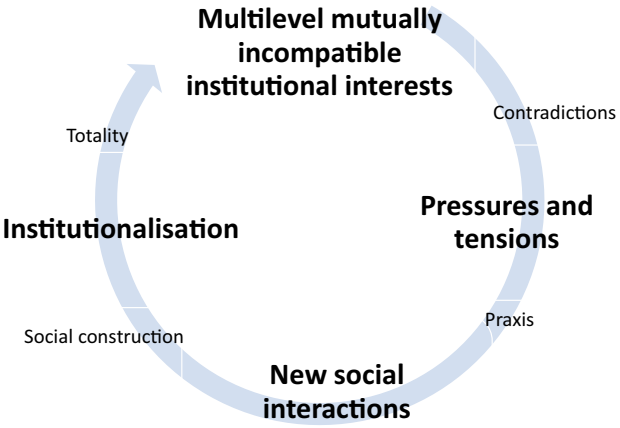


Fig. 1 Institutionalisation and institutional change: process from a dialectical perspective (adapted from Seo & Creed, 2002)

dynamic interactions between two institutional by-products: institutional contradictions and organisational actions (Fligstein, 1997; Pierson, 2000; Thelen, 2004). Misalignment in existing social arrangements or the differing interests of actors lead to institutional change, as organisations adapt to contextual expectations to gain legitimacy and increase their probability of survival (Powell and DiMaggio, 1991; Zimmerman and Zeitz, 2002). Legitimacy reflects social acceptance by other institutions and is maintained by conforming to the institutional environment, which leads to institutional isomorphism. (DiMaggio and Powell, 1983).

The dialectical perspective offers a good framework for combining the stakeholder and institutional theories to analyse institutional contradictions and change in higher education (Meyer and Rowan, 1977; Scott and Christensen, 1997) in a multilevel environment (DiMaggio and Powell, 1983; Scott and Biag, 2016). Dialectical processes happen at organisational (Benson, 1977), interorganisational (Das and Teng, 2000) and institutional levels (Seo and Creed, 2002). The dialectical perspective (Figure 1) explains institutional change as a process through which actors drive their interests. Contradictions in organisational interests create tensions that provoke actions. The accumulation of contradictions within and between institutions provides seeds for institutional change. Actions lead to new social interactions that, through institutionalisation and change, become legitimised and accepted (Seo and Creed, 2002).

Higher education change has been analysed as policy development and decision-making through action and political discourse whereby stakeholders express their interests (Ball, 2001; Whitty et al., 2004), which has either a controlling function (through stabilising) or a renewing function (through action) (Kauko, 2011). In higher education, relations between national and regional levels are dialectical (Antikainen, 2006), and development is a continuation of interconnected actions and decisions (Ball, 2001; Simola et al., 2017) to create alternative possibilities to resolve contradictions and direct change (Palonen, 2006)

During the last few decades, Finnish universities have faced major general reforms, changes in the funding system, requirements for research profiling guided by European higher education policy, and requirements for effectiveness, lean organisational structures, strong stakeholder partnerships, and regional impact (Kohtamäki and Balbachevsky, 2018; Lyytinen et al., 2017). Many reforms culminated in the New Universities Act in 2009, when universities were granted financial and administrative independence in relation to the state (Nokkala and Bladh, 2014; Tapanila et al., 2020). The most recent structural changes have been witnessed in the Aalto University and the Tampere University, where universities have been merged together (Roth et al., 2018). These mergers have been studied from a stakeholder perspective, demonstrating that external and internal stakeholders with different power and interests influence the development and management of university brand (Aula et al., 2015) and that perceptions of internal stakeholders on the change management have an integral impact on the success of the whole change process (Roth et al., 2018). Research on the Tampere merger has also shown that institutional change process affects the perceived individual, disciplinary and organisational views of internal stakeholders in technical fields (Vellamo, 2022). The extension of research and education in engineering and technology at the University of Turku has also been a strategic action to respond to societal demands and the need to improve the competitiveness of the multidisciplinary university.

Research Context and Methods

Case Description

Finnish higher education is based on a dual system comprising universities and universities of applied sciences. Universities focus on scientific research and education based on it. In contrast, universities of applied sciences offer pragmatic education that responds directly to regional needs. The higher education system consists of 13 universities and 22 universities of applied sciences. According to the Universities Act (Ministry of Education and Culture, 2009, Universities Act 558/ 2009, https://www.finlex.fi/fi/laki/kaannokset/2009/en20090558.pdf, n.d), degree education at universities is legislated and regulated by Decree to which amendments are prepared together by universities. Engineering and technology education is strongly regulated by the Decree. In particular, this regulation includes 13 separate fields, and universities can offer degree education only according to the responsibilities listed in the Decree (Opetus- ja kulttuuriministeriö, Asetus yliopistojen koulutusvastuun täsmentämisestä 30.12.2014/1451, https://www.edilex.fi/lainsaadanto/20141451).

Degree education and student volumes are estimated based on national demands steered at the Ministry and allocated between universities in negotiations of funding and education responsibilities. Currently, nine universities offer degree programmes in engineering and technology. Together these universities form the national FITech consortium.[1] In terms of student volume, the biggest universities are Aalto University (Aalto), Tampere University (TUNI), and Lappeenranta-Lahti University of Technology (LUT). Universities with a smaller volume of students include the Swedish-speaking university Åbo Akademi University (ÅA), the University of Turku (UTU), the University of Oulu (UO), and the University of Vaasa (UVA). The newest universities in the network are the University of Jyväskylä (UJY), which gained educational responsibility in engineering in 2020, and the University of Eastern Finland (UEF), which gained responsibility in 2021.

UTU was founded in 1920 and is one of the oldest universities in Finland. In terms of student enrolment, the university is the third-largest multidisciplinary university, but in terms of engineering and technology education, it is only middle-sized. In Southwest Finland, three other higher education institutions[2] offer education in engineering and technology. In 2019, UTU made a strategic decision to extend the engineering research and education. Other regional actors, higher education institutions, Turku Science Park and the City of Turku were strongly supporting this action. As a result, in 2023, the university had educational responsibilities in five engineering and technology fields.[3] In terms of student volume, UTU produces approximately ten per cent of all Masters of Science in Technology in Finland.

Methods

To answer the research question on how institutional change in higher education happens and how stakeholders engage in and affect the change, an event-based process approach was adopted to explain the temporal order of interconnected events and actions through a policy discussion where the interests, actions and means of influencing are addressed. A single case study design allows to explore and understand in-depth relations between actors to gain contextualised insight into a complex phenomenon (Welch et al., 2020). In this paper, a change process as a dialectical process between stakeholders is described by analysing the interests, contradictions and actions. A similar approach is commonly utilised, for example, in higher education policy studies (e.g. Isopahkala-Bouret et al., 2021).

The methodological approach is based on content analysis and the realisation of political interests as a dialectical process connected to stakeholder relations, actor

[1] The FITech was founded in 2017 by seven universities of technology, Technology Industries of Finland and the Academic Engineers and Architects in Finland, TEK. Universities of Jyväskylä and Eastern Finland joined the network later.

[2] Åbo Akademi, Turku University of Applied Sciences, and Novia University of Applied Sciences.

[3] UTU has (2023) educational responsibilities in Information and Communication Technology, Biotechnology, Electrical Engineering and Automation, Industrial engineering and management, Mechanical Engineering and Materials Engineering. ÅA has (2023) educational responsibilities in Information and Communication Technology and Chemical and Process Technology.

positions and actions (Haltia et al., 2019; Isopahkala-Bouret and Brunila, 2014). Analysis focuses on multiple stakeholders and their interests, where conflicting interests can be defined as political deadlocks (Häikiö, 2005). In this study, contradictory interests form deadlocks, which stakeholders resolve through actions that support their own agenda and actor positions (Mikola and Häikiö, 2014; Laclau and Mouffe, 2014). Process research approach aims to discover "how and why things emerge, develop or terminate over time" (Langley et al., 2013). Typically, process studies explain process outcomes by looking backwards or concentrating on the observed sequence of events and their underlying forces (Van de Ven and Engleman, 2004).

Research Data

The data consist of written documents outlining the institutional change from a policy perspective in a timeframe of 2016–2023. This time period was chosen for the case study to capture the intensive policy discussion and interconnected interests and actions at the national, disciplinary and regional levels. The written documents are "situated products" that were produced in a certain social setting for a certain purpose. When approaching documents from this perspective, the dynamics involved in the relationships between production, consumption and content need to be kept in mind (Prior, 2003). The empirical material consists of documents that together draw a picture of multiple stakeholders' interests and motivations, including memoranda, regional development plans, stakeholder statements, legal documents and decisions by the Ministry of Education and Culture, ministerial publications, and selected news articles. A couple of fact-checking interviews completed the data. All legal documents, including formal proposals to the Ministry of Education and Culture with annexes, political decisions and memoranda, and related stakeholder statements, are public. Part of the material is semi-public and accessible by request. All materials represent the formal opinions of stakeholders. The statements have been translated from Finnish to English, and the original meanings have been preserved as fully as possible. The full list of empirical materials is presented in Table 1 in Appendix 1.

Data Analysis

The data analysis was carried out in three phases following a process research approach. First, stakeholders and key events, watershed moments, from the higher education policy perspective were recognised from the data. Watershed moments are understood as critical points in the process of interconnected decisions that create discontinuity and hence change the institutional field, logic of operation, roles, or positions of actors. New institutions and structures typically emerge in these junctures (Hall, 2010; Ruonavaara, 2006). By recognising watershed moments, three separate episodes in the change process were identified.

After mapping the general process with main events and watershed moments, the documents were analysed to determine actions and patterns of meanings, and not so

much their frequency, arising from the data. Content analysis method was used to find patterns in the written documents to discover rationales in different documented "negotiations". To understand different stakeholder interests, theoretical perspectives from institutional and stakeholder theories were applied but instead of relying on a predefined coding scheme, a method of content analysis was used to produce a data-driven coding scheme.

The hermeneutical process of content analysis included several rounds to find all stakeholder actions and expressions of interests from the material. After all expressions of interest rising from the data were identified, they were interpreted by their meaning and categorised. Categories of interests were used to identify the contradictions in the data. Identifying stakeholder actions helped to reveal the action-reaction chains in the studied change process. To increase the validity of the analysis, researcher triangulation was used. Two researchers analysed the data separately and independent results were then compared. The analysis was an iterative process of shifting back and forth between data and results, until a plausible understanding of actions and interests conveyed by the material was reached. Finally, the data included 15 categories of interests. Inter-researcher results on stakeholder interests were aligned. Examples of stakeholder arguments from the data act as pieces of evidence to support the findings (Appendix 2). In the analysis, discrepancies in stakeholder actions were detected from the results. Researcher 1 found 157 separate stakeholder actions and researcher 2 found 165 actions. The inter-researcher reliability here was 95 per cent. Through elaboration, a resolution in the analysis was found and data scheme was finalised. The final combined data included altogether 163 stakeholder actions.

Finally, a visual mapping to illustrate the process and causal relationships between stakeholder actions was drawn by placing the main events and actions on a swimlane graph (Fig. 2). A similar approach has been used in other research to visualise the dialectical process between actors (Valta et al., 2022; Gehman et al., 2013).

Results

Stakeholders and Their Conflicting Interests

In 2015–2019, the Strategic Programme of Government in Finland stressed the importance of university–business collaboration, which entailed the specialisation of universities and interuniversity collaboration (Government Publications, 2015). The political climate thus facilitated the strengthening of universities according to their existing research and education portfolios. In this respect, Southwest Finland had been found to be lagging behind in technological development, with one reason being the insufficient number of Master of Science in Engineering and Technology graduates in the region. In 2016–2017, regional and national actions to resolve this shortage were initiated. While there was a shared objective, there were different perspectives on the best means by which to achieve it. The regional stakeholders, led by the city of Turku, drafted an extensive plan to resolve the chronic skills shortage, which included recommendations for action at both the regional and national

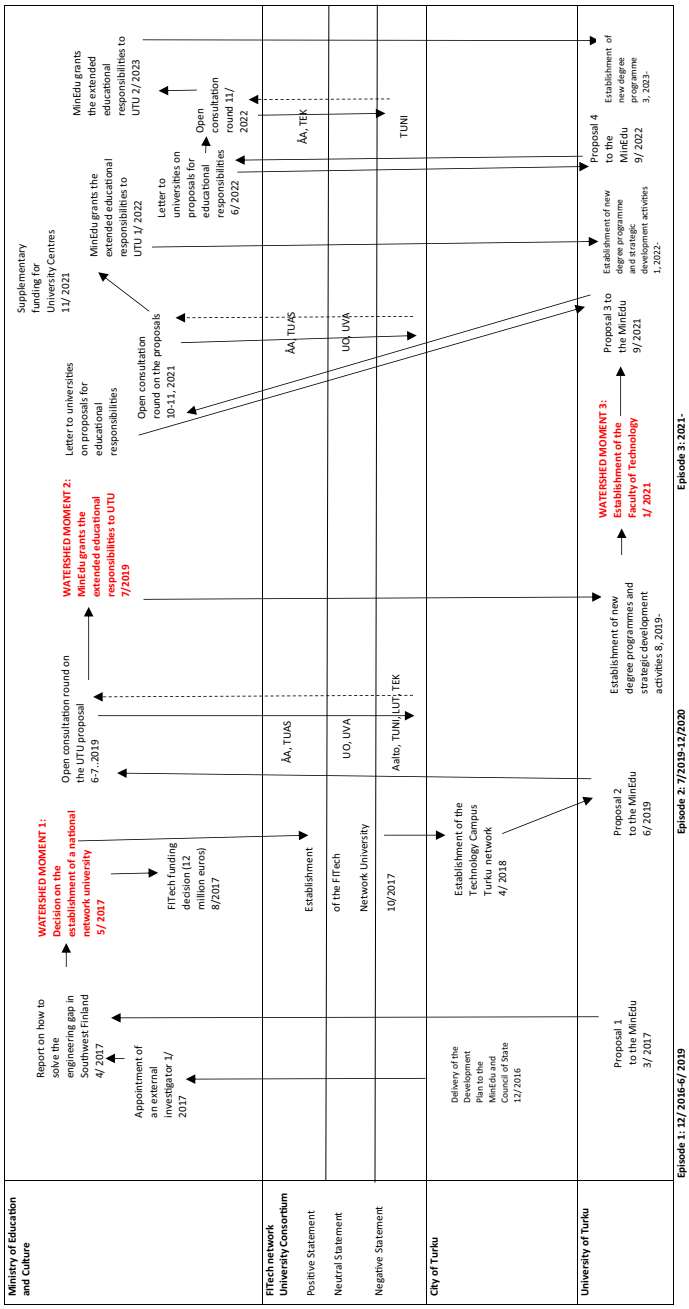


Fig. 2 Timeline of the main episodes, stakeholder actions and watershed moments

levels to secure adequate higher education in the long run. According to the plan, the competitiveness of the region could be ensured by rapidly initiating education activities in collaboration with other universities while simultaneously investing in strengthening the regional ecosystem. The solution was sought through interuniversity collaboration and by applying for extended educational responsibilities (I.1.1, Turun kaupunki, 2016. Positiivisen rakennemuutoksen arviointia — Vaikutukset ja toimenpiteet. Turun kaupunki, Kaupunkikehitysryhmä. https://docplayer.fi/26966838-Positiivisen-rakennemuutoksen-arviointia-vaikutukset-ja-toimenpiteet-turun-kaupunki-kaupunkikehitysryhma-esa-tuomisto.html). This plan was delivered to the Ministry of Education and Culture and the Council of State in December 2016.

At the national level, interests differed. As a response to the regional initiative, the Ministry hired an external investigator to conduct another evaluation of how best to resolve the engineering skills shortage in Southwest Finland. In March 2017, the evaluation was still ongoing, and UTU proactively and formally applied for an extension of educational responsibilities to cover mechanical and materials engineering (I.1.2 Turun yliopisto, 20.3. 2017 Esitys, Koulutusvastuun muuttaminen, unpublished). The proposal was fully aligned with the regional development plan that had been delivered to the Ministry. Even after receiving the formal proposal, the Ministry did not initiate a political decision-making process, but instead relied on the results of the evaluation. These results were published in April 2017, roughly a month after UTU proposed new educational responsibilities. The evaluation report and the Minister of Education and Culture stated that the skills shortage could most effectively be addressed by utilising the already existing engineering and technology education at other universities and suggested the establishment of a national network university, the Finnish Institute of Technology (FITech) (I.2.1, Opetus- ja kulttuuriministeriö, 2017; Liiten, 2017).

The establishment of the FITech was aligned with the formal higher education policy and the interests of the Ministry, which stressed specialisation and collaboration between universities according to the current responsibilities. It was clear that new degree programmes needed to be established; still, the Ministry decided not to grant educational responsibilities to UTU and instead allocated new resources to other universities. The Ministry, for example, allowed the operations of LUT University to be extended by establishing a new unit in Lahti. In addition, the Ministry allocated a substantial EUR 12 million budget for the establishment of the FITech in August 2017. These proposed FITech operations were aligned with the Government Programme, which steered universities towards specialisation and collaboration (Publications of the Finnish Government 2019). Furthermore, supplementary funding was allocated to regions facing positive structural and industrial changes. In Turku, this meant EUR 2 million in funding for improvements to a regional platform called Turku Future Technologies (established in 2015), which was coordinated by the Turku Science Park and intended to serve as a regional hub for FITech. Another EUR 4 million was allocated to strengthening engineering education at the Turku University of Applied Sciences (Opetus- ja kulttuuriministeriön päätös ja perustelumuistio, Johtaja Birgitta Vuorinen, 10.7.2019 Opetus- ja kulttuuriministeriön asetus yliopistojen koulutusvastuun täsmentämisestä ja asetuksen liitteen muuttamisesta, unpublished).

National and disciplinary interests conflicted with regional ones, and the establishment of FITech remained controversial. While the Ministry made the decision to invest in the network university, the regional stakeholders stressed the temporary nature of the solution and the importance of regional ecosystem development. The forthcoming impact of the network university in the region was expected to remain insufficient. New measures were needed, and in April 2018, the city of Turku established the Technology Campus Turku network, with the aim of strengthening the regional technology ecosystem (I.1.4 Yhteistyösopimus koskien "Technology Campus Turku" -toiminnan perustamista, 27.4. 2018, unpublished). This network brought together all regional actors in a formal way and underlined the importance of regional objectives and strategies.

FITech was also challenged at the national level. The Ministry of Economic Affairs and Employment conducted another evaluation, which included recommendations for activities to support positive economic development in Southwest Finland. According to the report, FITech was important, but without regional capacity building, the network would never succeed (Työ- ja elinkeinoministeriö, 2017). Furthermore, the exportation of education from other universities could not fully address the existing gaps, because a competitive region needs research and a strong tech ecosystem to create a permanent impact. The results of this evaluation stressed that legitimate support for economic growth in Southwest Finland required long-term investments in research, education and infrastructure in the region, which would foster the accumulation of research and know-how to support economic growth and development. (Työ- ja elinkeinoministeriö, 2017). UTU renewed its proposal to the Ministry in June 2019 by criticising the effectiveness of FITech in resolving the skills shortage. UTU, with both regional and national support, pressured the Ministry of Education and Culture to evaluate the impact of their investment and to assess the need for amendments to their educational responsibilities to universities.

The main interest of the Ministry of Education and Culture is to ensure that qualitative and quantitative education needs are met at the national level by also considering regional needs, to secure high-quality research and education in universities, and to support specialisation in and collaboration between universities. The Universities Act Ministry of Education and Culture, 2009,Universities Act 558/ 2009, https://www.finlex.fi/fi/laki/kaannokset/2009/en20090558.pdf, n.d) and the Decree on Educational Responsibilities in Universities (Opetus- ja kulttuuriministeriö, Asetus yliopistojen koulutusvastuun täsmentämisestä 30.12.2014/1451, https://www.edilex.fi/lainsaadanto/20141451) legislate higher education in this context. Proposed changes to the educational responsibilities of universities are prepared in collaboration with universities. Normally, the Ministry requests that universities propose changes to the Decree through a formal letter. Before decisions are made, a formal consultation round is initiated. After UTU's second proposal, a formal consultation and policy process was initiated. The consultation round was affected by the regional interests supported by the Minister of Science and Culture, who at that time represented Southwest Finland in the government. Specifically, the regional interests were challenged by the disciplinary-level interests of other FITech actors. The consultation round resulted in eight statements. ÅA and TUAS, signing partners in

the regional Technology Campus Turku network, supported the proposal, stressing the importance of a long-term solution to effectively respond to the needs of the labour market (I.1.5, Åbo Akademins uttålande om Åbo Universitets framställing om precisering av utbildningsansvaret, 26.6. 2019; Turun ammattikorkeakoulun lausunto — Asia:181/400/2019, Turun yliopiston esitys yliopiston koulutusvastuun täsmentämisestä, 19.6. 2019, https://okm.fi/hanke?tunnus=OKM024:00/2019).

Some universities did not have a special interest in the extension plans of UTU. For instance, the University of Vaasa and the University of Oulu were quite neutral towards the proposal, as even if they were involved in FITech, they did not have any educational interests in Turku. According to their statements, regional innovation ecosystems in Finland should have been strengthened by research and education initiatives in all regions (I.3.2, Oulun yliopisto, Lausunto, Turun yliopiston esitys koulutusvastuun täsmentämisestä, 26.6. 2019, https://okm.fi/hanke?tunnus=OKM024:00/2019). Quite the opposite claims were made by other FITech universities, including Aalto, LUT and TUNI, all of which had educational interests in Turku through the FITech network. These institutions questioned both the capability of UTU to conduct new degree programmes and the process per se. Their main arguments concerned insufficient research, expertise and infrastructure. These universities "objected" to the proposal also because it was against the formal higher education policy and thus not formulated with the disciplinary interests in mind (I.3.3, Aalto-yliopisto, Lausunto, Turun yliopiston esitys yliopiston koulutusvastuun täsmentämisestä, 16.6. 2019); Lappeenranta-Lahti teknillinen yliopisto LUT, Lausunto, Turun yliopiston esitys yliopiston koulutusvastuun täsmentämisestä, 27.6. 2019); Tampereen yliopisto, Lausunto, Turun yliopiston esitys koulutusvastuun täsmentämisestä, 8.7. 2019, https://okm.fi/hanke?tunnus=OKM024:00/2019). Specifically, UTU was criticised for being proactive in initiating changes to existing educational responsibilities. Political decisions on amendments to the Decree had traditionally been connected to funding negotiations initiated by the Ministry. The fragmentation of research and education was identified as one of the key weaknesses of the Finnish higher education system, and this proposal was expected to worsen the situation (I.3.4 Aalto-yliopisto, Lausunto, Turun yliopiston esitys yliopiston koulutusvastuun täsmentämisestä, 16.6. 2019); Lappeenranta-Lahti teknillinen yliopisto LUT, Lausunto, Turun yliopiston esitys yliopiston koulutusvastuun täsmentämisestä, 27.6. 2019); Tampereen yliopisto, Lausunto, Turun yliopiston esitys koulutusvastuun täsmentämisestä, 8.7. 2019, https://okm.fi/hanke?tunnus=OKM024:00/2019). Another FITech actor, Academic Engineers and Architects in Finland, supported these universities. According to their statement, UTU's proposal was inadequate, as all changes to the existing responsibilities should have been made based on the best available resources and already planned investments (I.3.5, (Tekniikan Akateemiset TEK, Lausunto Turun yliopiston esityksestä koulutusvastuun täsmentämisestä, 6.7. 2019, https://okm.fi/hanke?tunnus=OKM024:00/2019)). This statement was prepared by an executive who conducted the evaluation that resulted in the establishment of FITech in 2017. Now, the existence of the network university was used as an argument against assigning new educational responsibilities to UTU.

Despite the criticisms advanced by the FITech actors, as well against the formal higher education policy, the Ministry made the decision to extend the existing

educational responsibilities in engineering and technology at UTU. The Ministry reasoned that the decision was based on the regional shortage of academic professionals, which threatened not only regional but also national economic competitiveness and growth (I.2.3, Opetus- ja kulttuuriministeriön päätös ja perustelumuistio, Opetus – ja kulttuuriministeriö, Johtaja Birgitta Vuorinen. Muistio 10.7.2019 Opetus- ja kulttuuriministeriön asetus yliopistojen koulutusvastuun täsmentämisestä ja asetuksen liitteen muuttamisesta, unpublished). The regional policy perspective on higher education development thus played an important role in the decision-making process. The stakeholder arguments above paint a clear picture of conflicting interests between regional- and disciplinary-level actors. The main stakeholders and their interests, with examples of arguments, are summarised in Appendix 2. Table also includes the means of influencing that are analysed in more detail in the following section.

Stakeholder Actions as Initiating Institutional Change

The stakeholders' conflicting interests in this case created tensions at the disciplinary level. Stakeholders' engagement and their respective actions in this process can be presented through a dialectical perspective. The accumulation of conflicts between stakeholders can be analysed by placing the actions in a swimlane graph. In Figure 2, the stakeholders and their actions are mapped to visualise the change process as a result of interconnected organisational actions, where the activity of one stakeholder leads to the reaction of others, hence forming a sequence of actions leading to changes in the broader institutional structure and actor positions.

The first watershed moment in the process was the establishment of a national network university. While the decision was political and designed to strengthen the existing power relations and institutional structure in the engineering and technology field, it simultaneously triggered regional activities in Southwest Finland. In 2019, the Ministry initiated a political decision process that led to a consultation round, which the universities and other FITech actors used as a medium for arguing against the proposal. Actors that had submitted a negative statement used their political power to appeal to the Ministry. Regional network actors used the consultation round to drive change by formally proposing new educational rights and by stressing the importance of the extension of academic engineering education in Southwest Finland. At this point, the direction of the triggering actions was from the regional level to the national level.

The Ministry's decision to extend the educational responsibilities at UTU was the second important watershed moment. This political decision changed the formal higher education policy and the acting positions of UTU and many other universities. After the new educational responsibilities in engineering were granted to UTU, the FITech network university started to retarget its operations towards teaching collaboration and continuous learning at the national level. After this move, the direction of the triggering actions in the process changed.

In autumn 2020, approximately one year after the Ministry's decision, both of the new engineering degree programmes were running at UTU, attracting students

mainly from Southwest Finland (60%) and the capital (25%). While UTU was building up the new degree programmes and recruiting new teaching resources, additional changes took place in the field. For instance, the Ministry granted the University of Jyväskylä new educational responsibility for ICT. Along with this decision, the field of engineering and technology gained a new university actor. To support the growth of engineering and technology education at the university, UTU established a Faculty of Technology in January 2021. Over the course of 2021, the Faculty, a new institutional actor in the field, built its legitimacy by strengthening engineering research, education and infrastructure. As such, the establishment of the new faculty was the third watershed moment in the process. In September 2021, when the Ministry approached all universities to propose changes in educational responsibilities, UTU proposed responsibility in electrical and automation engineering. The aim was to further strengthen their research and higher education activities to better meet the needs of the region (I.1.6, Turun yliopisto, Esitys uudeksi koulutusvastuuksi, 24.9. 2021, https://okm.fi/hanke?tunnus=OKM076:00/2021).

This time, UTU's proposal for new educational responsibilities was a response to the ministerial request, and the formal political decision process included an open consultation round to review all the proposals sent by the universities. As the evaluation process this time was extensive, many stakeholders wanted to share their opinions. Altogether, 35 stakeholder statements were submitted, out of which 10 included opinions directly related to UTU's proposal. These opinions, which were presented in formal statements, were generally as expected, but already more moderate than they had previously been. For instance, the universities of Oulu and Vaasa repeated their general statements, stressing the importance of higher education in fostering technology ecosystems as drivers for economic growth in all regions. Other university partners in the Technology Campus network supported the proposed extension of educational responsibilities initiated by UTU (I.1.7 Åbo Akademi, utlåtanden om ändringsförslagen till utbildningsansvar som de övriga universiteten framställt, 19.11. 2021; Turun ammattikorkeakoulun lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 10.11. 2021, https://okm.fi/hanke?tunnus=OKM076:00/2021).

In contrast, LUT University, who opposed the proposal in 2019, did not comment on UTU's proposal at all. However, Aalto and TUNI again strongly opposed the proposal. UTU's disciplinary competence was no longer questioned, but both universities categorically opposed this new opening with the same disciplinary- and national-level arguments that they presented in 2019. Both universities maintained that the new educational responsibilities at UTU would contradict Finland's long-term higher education policy and scatter the scarce resources, hence jeopardising both the efficiency of the organisation and the quality of the engineering education (I.3.6 Aalto-yliopiston lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 9.11. 2021); Tampereen yliopiston lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 12.11. 2021, https://okm.fi/hanke?tunnus=OKM076:00/2021).

Technology Industries of Finland, which did not comment on the proposal at all in 2019, stated that the development of engineering and technology education in a small country like Finland should be based on collaboration between universities.

According to their statement, all new proposals should have been evaluated based on their impact on the higher education system and on the effectiveness of resource allocation at the national level. To meet future needs, universities were thus expected to channel more resources towards continuous learning. It was predicted that Finnish technology industries would need 80,000 new professionals by 2030, and the majority of the needs in engineering and technology could not be fulfilled by a degree-level education alone. (Teknologiateollisuus ry, Lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 19.11. 2021, https://okm.fi/hanke?tunnus=OKM076:00/2021). In a similar vein, the Academic Engineers and Architects in Finland considered the new educational responsibilities in engineering to be inadequate. TEK emphasised the fact that during the ongoing government term, engineering education had already been remarkably extended. Therefore, it would now be best to concentrate on developing education according to the existing educational responsibilities and based on interuniversity collaboration (Tekniikan Akateemiset, Lausunto, 16.11. 2021, https://okm.fi/hanke?tunnus=OKM076:00/2021).

Following the new region-driven policy in higher education, and despite very strong opposing arguments, the Ministry granted the requested new responsibilities to UTU in January 2022. The main arguments for a positive decision concerned regional demands. At the same time, TUAS received a corresponding responsibility for automation and electrical engineering. Together, these universities were expected to foster regional tech ecosystem and meet the needs of industries. In addition, the Ministry stressed the importance of collaboration between universities at the national level (Opetus- ja kulttuuriministeriö, Muistio, Ylijohtaja Atte Jääskeläinen, 13.1. 2022, Opetus- ja kulttuuriministeriön asetus yliopistojen koulutusvastuun täsmentämisestä annetun opetus- ja kulttuuriministeriön asetuksen liitteen muuttamisesta, unpublished). In this round, the University of Eastern Finland gained its first educational responsibility in engineering and technology, hence extending the field again. Furthermore, already in November 2021, the government allocated supplementary funding to the development of regional university centres to strengthen higher education in regions outside the university cities. This decision allocated resources to smaller university units. After a long tradition of centralisation in higher education, especially in engineering and technology, the policy had changed. According to the Minister of Science and Culture, more importance was now placed on the development of smaller universities and university centres. The aim of this shift was to improve the accessibility of higher education in all regions (Liiten, 2021).

Social Construction of the New Disciplinary Environment

The change in higher education policy and strategic actions by UTU had already changed the disciplinary environment. Previous consultation processes had introduced strong contradictions between UTU and other institutions, which triggered universities to drive their organisational interests through the formal political process. Political decision-making played a key role in resolving these institutional contradictions. Compared to the way things were in 2017, the environment and positioning

of UTU were significantly different in 2022. In June 2022, the Ministry started a national Decree reform initiative. As a result, the Ministry again launched a formal process for universities to propose changes to the existing educational responsibilities. The aim was to offer all universities an equal possibility to propose changes to their educational responsibilities before the national Decree reform would take place.

During this round, only two universities suggested new responsibilities in engineering and technology. UTU made a proposal to extend its education to industrial engineering and management.[4] At that time, five universities[5] had educational responsibilities in the field. The formal consultation round to review the submitted proposals was organised in the autumn of 2022. Altogether, 37 statements were submitted, of which six concerned UTU's proposal. Most of the statements took a stand against the proposals at a general level without specifying individual universities. Stakeholders called for responsible decision-making in higher education to secure adequate resource allocations for all universities, a high quality of education and research, and the best possible economic impact on higher education. In their statements, several stakeholders suggested that the Ministry should not categorically grant any new educational responsibilities before the Decree reform would be finalised.

Concerning the statements regarding UTU's proposal, while the conflicts had subsided in the new disciplinary environment, they still persisted. Most of the FITech actors either supported the proposal or considered it to be minimally legitimate and did not comment at all. One university, TUNI, maintained reference to direct tensions in its policy agenda, suggesting that the educational responsibilities at UTU should not be extended at that time (I.3.7, Tampereen yliopiston lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 23.11. 2022, https://okm.fi/hanke?tunnus=OKM057:00/2022). Aalto opposed all extensions in the engineering field but did not directly comment on UTU's proposal. Both universities stressed the importance of collaboration between universities and emphasised the need for strategic long-term planning in the development of the engineering and technology discipline in Finland. They also appealed to the ongoing Decree reform, stating that no new responsibilities should be granted before the Decree would be ready to implement (I.3.8, Aalto-yliopiston lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 25.11. 2022, https://okm.fi/hanke?tunnus=OKM057:00/2022).

At the regional level, ÅA supported UTU's new proposal (I.1.8 Åbo Akademi, Uttålande gällande universitetens förslag till ändring av utbildningsansvar, 25.11. 2022, https://okm.fi/hanke?tunnus=OKM057:00/2022). This time, the proposal also gained support at the national level. Specifically, the Ministry of Economic Affairs and Employment of Finland and the Academic Engineers and Architects in Finland (TEK), the latter of which had opposed all earlier proposals, both supported UTU. According to TEK, this proposal to extend UTU's educational responsibilities to industrial engineering and management was well justified. In addition, the statement stressed that UTU had already proven its capabilities in successfully establishing new degree programmes

[4] In addition to UTU, the University of Oulu applied for new educational responsibilities in engineering and technology.

[5] Aalto University, Lappeenranta-Lahti University of Technology, Oulu University, Tampere University, and University of Vaasa

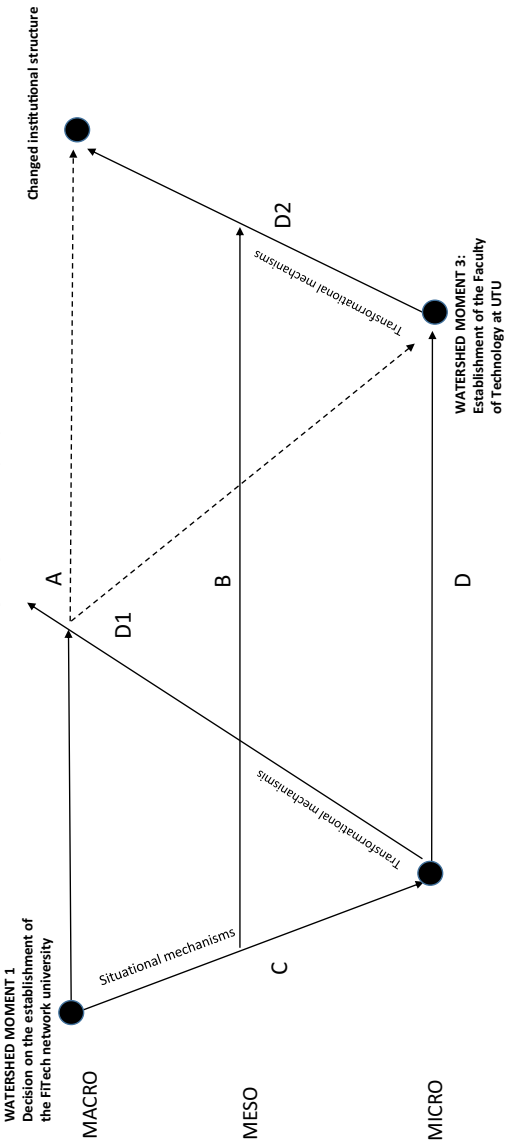
in engineering. However, TEK also pointed out that the new educational responsibilities that had been granted earlier had already irreversibly changed the engineering and technology field, and this would need to be taken into account in the future planning of engineering education (I.3.9, Työ- ja elinkeinoministeriö, Lausunto, yliopistojen ja ammattikorkeakoulujen koulutusvastuiden muutosesitykset, 23.11. 2022; Tekniikan Akateemiset, Lausunto yliopistojen koulutusvastuiden muuttamista koskevista esityksistä, 24.11. 2022, https://okm.fi/hanke?tunnus=OKM057:00/2022).

The Ministry took a reasonably long amount of time to make decisions on the new educational responsibilities. Despite the ongoing Decree reform[6], in February 2023, the Ministry issued a positive decision on UTU's proposal to extend their educational responsibilities. According to the Ministry, educational needs in engineering and technology were to primarily be addressed by the already existing educational responsibilities in universities and be based on collaboration between them (i.e., the FITech network). However, UTU's proposal was considered adequate in its attempt to address the growing needs of professionals and the importance of securing positive industrial development and economic growth in Southwest Finland (Opetus- ja kulttuuriministeriö, Muistio, Ylijohtaja Atte Jääskeläinen, 2.3. 2023, Opetus- ja kulttuuriministeriön asetus yliopistojen koulutusvastuun täsmentämisestä annetun opetus- ja kulttuuriministeriön asetuksen liitteen muuttamisesta, unpublished) It is notable that this last proposal by UTU raised hardly any direct opposition, thus signalling the legitimation of the new actor in the disciplinary environment.

Totality: The New Institutional Structure

In the previous sections, institutional change at the disciplinary level was analysed through contradictions, actions and social construction (Seo & Creed, 2002). In some cases, regional- and disciplinary-level interests conflicted, and these contradictions created tensions that provoked actions at the national, disciplinary and regional levels. Organisational actions resulted in the accumulation of contradictions, which ultimately provided the seeds for institutional change. The dialectical nature of this institutional change process and the formation of new institutional structure can be effectively visualised with the Coleman bathtub figure (Figure 3), which is commonly used to describe multi-level relations in social science research. The figure illustrates the causal macro–meso–micro-relations, whereby macro-level actions cause micro-level actions, which in turn aggregate up to macro-level actions (Coleman, 1990). In this case study, a tension-driven higher education development process resulted both in national-level (macro) and disciplinary-level (meso) changes. The strategic actions of one university first changed the higher education policy by breaking the chain of political decision-making (D1). Through gained political legitimacy and further strategic actions, the university strengthened its disciplinary position (D2). In this process, a new disciplinary structure was formed, and a new university actor became legitimised and accepted.

[6] As of June 2023, the higher education Decree reform is still ongoing. The aim of the reform is to develop regulations to better support universities in responding to changing skills and labour needs (Valtioneuvosto, 2023).



(A) National policy and regulation in higher education in engineering and technology field (Macro)
(B) Disciplinary structure and interuniversity relationships in engineering and technology field (Meso) that are maintained by the situational stakeholder actions at the national and disciplinary levels (C)
(D) Resources and strategic institutional actions of UTU (D1-D2) (Micro) as transformational mechanisms that lead to change.

Fig. 3 The process of institutional change in higher education (adapted from Coleman, 1990)

The presented institutional change process can be understood through four types of contradictions (Seo and Creed, 2002). The first contradiction, *legitimation that undermines functional inefficiency*, in this case was connected to UTU's actions to seek legitimation and break the existing chain of decision-making in higher education policy. The second contradiction, *adaptation that undermines adaptability*, was exhibited in the adaptation of the universities to the existing institutional structure that undermined their adaptability to new social interactions at the disciplinary level, which, through the *intrainstitutional conformity* of the universities, *created interinstitutional incompatibilities*. As a fourth contradiction, the *isomorphic institutional structure conflicted* with the institutional interests of UTU, which challenged the existing interuniversity relationships and taken-for-granted assumptions at the disciplinary level. From a dialectical perspective, the accumulation of these contradictions both within and between universities provided the seeds for institutional change.

The analysis shows the dialectical nature of an institutional change process in the field of engineering and technology education in Finland. This case's strongest tensions are related to the relationship between universities with engineering and technology education. The special character of this case consists of the interplay between the national-level policy, the conservative orientation of established universities and the emerging university that challenged the isomorphic institutional structure. The disciplinary tensions were first resolved through national-level decision-making, but later, the strategic actions of one particular university became decisive.

Discussion

In higher education, discourse between actors is vital for the renewal of universities, their disciplines, and the university system as a whole. In this study, stakeholder interactions and interests were analysed from a dialectical perspective (Seo and Creed, 2002) through their categorisation into three levels — national, disciplinary and regional — which revealed the contradictions leading to change. More specifically, this study unveiled the dynamics of a political discourse that is laden with tensions. The results of this study show a tension-driven process leading to changes in the higher education policy and regulation, isomorphic disciplinary structure (Seo and Creed), interorganisational relationships at the disciplinary level (Das and Teng, 2000; Fumasoli and Huisman, 2013), and actor roles at the organisational level (Benson, 1977), a process which included the emergence of new collaborative structures (Hall, 2010; Ruonavaara, 2006).

Studies of university mergers have demonstrated that stakeholders with different interests influence both the development and management of universities (Roth et al., 2018; Aula et al., 2015). Universities have been shown to act through research, education and societal engagement activities to respond to the needs of a particular society and its stakeholders. At the same time, the existing literature also shows that multiple stakeholders influence university strategies, policies and structures (e.g. Vellamo et al., 2019). However, the role of regional stakeholders and individual universities in higher education change has been less studied in research. To address this issue, this study revealed that the interests and actions of an individual university can affect its positioning in the disciplinary field and the development of

a disciplinary structure. Specifically, the interests of established universities were found to be connected to the interest in maintaining their own positions and existing power structures (Benson, 1977; Suchman, 1995) at the disciplinary level, which one university challenged by contradicting the regional interests with disciplinary ones. In contrast, the Ministry used its regulative and legal power to resolve disciplinary contradictions first by strengthening the existing institutional structure and later by supporting institutional change.

In higher education, national-level policies and decisions have a strong effect on disciplines, individual universities' actions and interuniversity relationships. In this light, this case study has similarities with previous research on the impact of actions and contradictions between stakeholders in higher education, including the calculated adaptation of universities to external pressures (Meyer and Rowan, 1977; Powell and DiMaggio, 1991) and misaligned field demands (Scott, 2008; Fumasoli and Huisman, 2013; Stensaker et al., 2014; Pinheiro et al., 2016; Mampaey, 2018; Hasanefendic and Donina, 2022). Change in higher education is connected to both responses to institutional pressures (e.g. pressures from regulatory agencies, and the actions of leading organisations; Powell and DiMaggio, 1991; Greenwood and Hinings, 1996) and to strategic actions aimed at affecting both the individual organisations and the wider institutional environment (Whatley and Castiello-Gutiérrez, 2022; Christensen and Gornitzka, 2017; Frølich et al., 2013). To complement this knowledge, the results of this study show that an individual university (micro) can also, through strategic actions, drive change in the wider institutional environment at the national (macro) and accordingly at the disciplinary (meso) level in this context.

Institutional pressure is a key determinant of an organisation's actions (DiMaggio and Powell, 1983; Oliver, 1991). Organisations comply with regulative, normative and cognitive environmental pressures in their attempts to secure legitimacy and support (DiMaggio and Powell, 1983). Accordingly, the institutional positioning of universities reflects their strategic intentions and capabilities to accommodate other actors' strategic actions (Fumasoli and Huisman, 2013). The more organisations conform the more institutionalised they become, which subsequently produces and maintains institutional isomorphism. Isomorphic structures in higher education create and maintain conformity among leading universities (DiMaggio and Powell, 1983; Scott, 2001). However, the struggle for organisational legitimacy can also act as a driver of change. The empirical evidence provided in this study indicates that an individual university not only responds to external regulative pressures nor simply adapts to other universities at the disciplinary level, but also acts strategically to gain legitimacy and drive change. Ultimately, this study shows that change in higher education is possible by breaking institutional conformity at policy level and hence changing the forms of interaction between universities. In institutionalised structures, which in this case consisted of the political decision-making and regulation in higher education, decisions typically form a path dependency structure. Such a structure entails a chain of decision-making in which new decisions are based on previous decisions (Ruonavaara, 2006). The results of this study show that changes in isomorphic disciplinary structures arise through calculated micro-level actions that break the existing path dependency in political decision-making. Actions and decisions at these breaking points are critical watershed moments in the process of structural institutional change.

The dialectical perspective in this study illuminates how political decision-making was first used to resolve tensions raised by contradictory disciplinary interests and later to make institutional change possible. The role of an individual university in this change process was decisive. Institutional change in higher education happens through the formation of strategic political legitimation and calculated actions that break the existing isomorphic institutional structure and chain of decision-making. In exposing these mechanisms, this study provides new empirical knowledge on how the strategic actions of an individual university act as a driver for institutional change in higher education.

Conclusion

In higher education, political decision-making have strong effect on the development of disciplines and individual universities. Furthermore, universities affect each other. In this article, I demonstrate how strategic actions of one university act as drivers for institutional change in higher education by altering the institutional isomorphic structures. In this study, the change was driven by regional interests and happened through cross-level interactions, where the role of one university became decisive. The main contribution of this study is a better understanding of an individual university's power and role in institutional change at the disciplinary level and of the change mechanisms involved. The results show that changes in isomorphic disciplinary structures arise through calculated micro-level actions that build political legitimacy and break the existing path dependency in the political decision-making. Actions and decisions at these breaking points are critical in the process of structural institutional change in higher education.

One limitation of this study concerns the empirical data. To secure the replicability of the study, public and semi-public data were used to analyse the political discourse and decision-making by acknowledging that political discussion is not fully visible in formal documents. Retrospective interviews would have provided the analysis with additional information on different interests, but discovering tensions ex post would have also created possibilities for bias and hindsight. By utilising publicly available documents, the political discourse was analysed as it formally emerged at the time. Despite its limitations, this single case study reveals interesting interuniversity dynamics and disciplinary-level developments that have not been discussed in the prior higher education literature.

The theoretical concepts of stakeholder power and interest are commonly applied in higher education research. However, this study provides a novel empirical perspective on the multiple levels that stakeholders impact in higher education development by connecting institutional interests with institutional change and legitimacy formation. This knowledge can be used to advance stakeholder management through "smarter practices" in higher education in general and in strategic change processes in particular.

Appendix 1

See Table 1.

Table 1 The full list of empirical materials

Public materials

- Universities Act and Decree on educational responsibilities
- Ministry of Education and Culture, appointment of an external investigator, 17.1. 2017
- University of Turku, Proposal to extend the educational responsibilities to mechanical engineering and materials engineering, 3/ 2017
- Ministry of Education and Culture, Skill shortage in the positive structural industrial change, Evaluation report, Ministry of Education and Culture. Publications 2017: 54.
- Funding decision on the FITech network university 8/ 2017
- University of Turku, Proposal to extend the educational responsibilities to mechanical engineering and materials engineering 6/ 2019
- Ministry of Education and Culture, consultation round and stakeholder statements in 2019 (n= 8), https://okm.fi/hanke?tunnus=OKM024:00/2019
- Ministry of Education and Culture Amendment to the Decree 1451/2014, 10.7. 2019
- Ministry of Education and Culture, Letter for universities to propose amendments to educational responsibilities, 1.7. 2021
- University of Turku, Proposal to extend the educational responsibilities to electrical engineering and automation 9/ 2021
- Ministry of Education and Culture, consultation round and stakeholder statements in 2021 (n= 35), https://okm.fi/hanke?tunnus=OKM076:00/2021
- Ministry of Education and Culture, Amendment to the Decree 1451/2014, 13.1. 2022
- Ministry of Education and Culture, Letter for universities to renew the Decree regulation and to propose amendments to educational responsibilities, 23.6. 2022
- University of Turku, Proposal to extend the educational responsibilities to industrial engineering and management 8/ 2022
- Ministry of Education and Culture, consultation round and stakeholder statements (n= 35), https://okm.fi/hanke?tunnus=OKM057:00/2022
- Ministry of Education and Culture Amendment to the Decree 1451/2014, 2.3. 2023

Selected news articles concerning political decision-making in 2017-2022

Semi-public (unpublished) material

- City of Turku, City government meeting memorandum with annexes, including the Regional development plan, 14.12. 2016
- Consortium Agreement on the establishment of the FITech network university 27.10. 2017
- University of Turku, impact report to the Ministry of Education and Culture and to the Minister of Science and Culture (Annika Saarikko), 6/ 2020
- Agreement on the establishment of the Technological Campus Turku, 4/ 2018
- Ministry of Education and Culture, Decision on educational responsibilities for University of Turku and Memorandum, Director General Birgitta Vuorinen, 10.7.2019
- Ministry of Education and Culture, Decision on the extended educational responsibilities for University of Turku and Memorandum, Director General Atte Jääskeläinen, 13.1. 2022
- Ministry of Education and Culture, Decision on educational responsibilities for University of Turku and Memorandum, Director General Atte Jääskeläinen, 2.3.2023
- Fact-checking interviews (semi-structured) with stakeholder representatives in City of Turku, Ministry of Education and Culture and University of Turku.

Appendix 2

See Table 2.

Table 2 Main stakeholders and their interests and means of influencing, with examples

Main stakeholders	Interests	Means of influencing	Examples of stakeholder arguments
The Ministry of Education and Culture	To secure qualitative and quantitative education needs at national level by taking into consideration also the regional needs. To secure high quality of research and education in universities. To support specialisation in and collaboration between universities. To support economic growth and industrial development at national level by taking also regional needs into consideration. To make changes in educational responsibilities based on formal policy process, according to the Decree on higher education. To develop and utilise transparent and equal evaluation criteria and process for the new educational responsibilities. To increase resource efficiency in higher education in the field of engineering and technology.	University Act and Decree regulation (regulative power) Formal political decision-making (legal power) Agreement negotiations with universities (political power) Funding allocations (economic power)	I.2.1 This new collaboration model is the Finnish Institute of Technology. The core of the model is a national network university that jointly produces engineering and technology education, which combines the best resources from different universities. […] The network university is an effective way of producing degree education for the needs of the region. […] However, current degree programmes cannot meet all the needs – FITech universities need to design completely new programmes as well. (Opetus- ja kulttuuriministeriö (Ministry of Education and Culture), 2017) I.2.2 All Finnish technical universities are committed to providing Southwest Finland with expertise and degree education from over 300 professors and over 40 degree programmes. This is a fast and effective way to utilise research and teaching infrastructures. Opetus- ja kulttuuriministeri (Minister of Education and Culture), in Liiten 2017) I.2.3 University of Turku renewed its proposal to extend the education […] According to the proposal, the impact of the FITech project in the region has remained marginal. […] The growing gaps in graduates and research are forming a serious threat to both regional growth and national competitiveness. (Opetus- ja kulttuuriministeriö (Ministry of Education and Culture), 2019)

Table 2 (continued)

Main stakeholders	Interests	Means of influencing	Examples of stakeholder arguments
National FITech Network University University of Vaasa University of Jyväskylä University of Oulu Lappeenranta-Lahti University of Technology, LUT Aalto University Tampere University Academic Engineers and Architects in Finland, TEK Technology Industries of Finland (Other members of the FITech network: University of Turku Åbo Akademi)	To secure qualitative and quantitative education needs at national level by taking into consideration also the regional needs. To secure high quality of research and education in universities. To support specialisation in and collaboration between universities. To support economic growth and industrial development at national level. To make changes in educational responsibilities based on formal policy process, according to the Decree on higher education. To develop and utilise transparent and equal evaluation criteria and process for the new educational responsibilities. To increase resource efficiency in higher education in the field of engineering and technology To raise student intake in established universities in engineering and technology to serve both national and regional needs. To solve structural challenges and developing engineering and technology field based on the already existing educational responsibilities.	Appealing to the ministry by formal statements (political power) Strengthening the role of FITech university driven degree education and centralisation of resources Fostering teaching collaboration between universities	I.3.2 It is understandable that Turku wants to secure the continuation of degree education after the FITech project. […] OU considers it important that national competitiveness and regional ecosystems are supported by higher education and research. (Oulun yliopisto (Oulu University), 2019) I.3.3 LUT University objects to the proposal on extending the educational responsibilities at the UTU to include mechanical and materials engineering. […] The proposal includes arguments that are misleading because it is still too early to estimate the impacts of the FITech collaboration. (Lappeenrannan-Lahden teknillinen yliopisto LUT (LUT University), 2019) I.3.3 Competitive degree programmes are based on high-quality research, which requires massive investments and decades of development and hard work. Materials and mechanical engineering are especially expensive fields. Instead of fragmenting resources, we should utilise existing strengths to serve the whole country through a clear work division and collaboration between universities. (Aalto-yliopisto (Aalto University), 2019) I.3.3 Universities have in collaboration built university profiles to secure adequate resource allocations at national level and to support Finland's international competitiveness. Especially the FITech university has provided network and collaboration based higher education in the Turku region by utilising the already existing educational resources in other universities. […] The University of Tampere does not support UTU's proposal on extending the educational responsibilities in the field of engineering and technology. (Tampereen yliopisto (University of Tampere), 2019) I.3.4 In terms of the Finnish university sector, the proposal is not justifiable […] In recent decades, the universities have been systematically developed towards specialisation. Especially in engineering and technology, the collaboration between universities has been successful. The proposal from UTU would work against the achieved accomplishments and systematic collaboration […] This needs to be considered from a national perspective […] All universities and their strategic plans should be evaluated equally and at the same time. (Aalto yliopisto (Aalto University), 2019) I.3.4 Decisions on educational responsibilities should be assessed at national level in connection to the annual negotiations between the universities and the Ministry. […] Based on the issues presented in this statement, the University of Tampere does not support University of Turku's proposal on extending the educational responsibilities in the field of engineering and technology. (Tampereen yliopisto (University of Tampere), 2019) I.3.4 The University Act regulates that the changes in educational responsibilities are prepared in collaboration with all universities. According to our understanding, this principle is not applied in this process. The next negotiation round for universities starts only in the Autumn. Decisions on educational responsibilities should be addressed at national level, not university by university basis. (Lappeenranta-Lahti teknillinen yliopisto LUT, (LUT University) 2019) I.3.5 TEK does not support the proposed extensions in educational responsibilities. All changes should be made based on the best available resources and already planned investments.[…] TEK wants to remind all about the important role of the network university FITech [...].(Tekniikan Akateemiset TEK, (Academic Engineers and Architects in Finland), 2019) I.3.6 The proposals from the University of Eastern Finland and the University of Turku contradict the long-term strategic and systematic higher education development work in Finland. (Aalto-yliopisto (Aalto University), 2021) I.3.6 Extensions of education and the strategy of engineering education should be evaluated in a long-term perspective at national level by taking into consideration the existing research and education profiles at universities and their possibilities to organise research based higher education effectively. In a small country like Finland, it is not meaningful to buildcompeting research and education hubs. […] Tampere university considers proposals critically and counts rather on strategic collaboration between those universities that already have the educational responsibilities in these engineering fields. (Tampereen yliopisto (University of Tampere), 2021) I.3.7 Tampere university is concerned about the strong decentralisation of engineering education in Finland and about the possible deterioration in quality in higher education. Extensions challenge both the student recruitment base and resource allocation in universities. Tampere university suggests to postpone the decision on UTU's suggestion until both the needs for the extension and resources to the implementation of the new degree programme have undisputable been addressed. (Tampereen yliopisto, (University of Tampere), 2022) I.3.8 The collaboration between universities to reduce overlapping degree education has effectively fixed this structural competitive disadvantage in the engineering and technology field. An excellent example of this is the FITech-collaboration. […] Granting new educational responsibilities and fostering the negative development of education is not justified in the middle of this critical phase. (Aalto-yliopisto (Aalto University), 2022) I.3.9 The proposal of University of Turku to extend the educational responsibilities to industrial engineering and management is justified. (Tekniikan Akateemiset TEK (Academic Engineers and Architects in Finland), 2022)

Table 2 (continued)

Main stakeholders	Interests	Means of influencing	Examples of stakeholder arguments
Regional Technology Campus Turku Network The City of Turku Turku Science Park Ltd University of Turku Åbo Akademi Turku University of Applied Sciences Yrkeshögskolan Novia	To secure qualitative and quantitative education needs at national level by taking into consideration especially the regional needs To secure high quality of research and education in universities. To support specialisation in and collaboration between universities. To support the positive structural industrial change and to strengthen economic growth and innovation development at national and especially at regional level. To make changes in educational responsibilities based on formal policy process, according to the Decree on higher education. To develop and utilise transparent and equal evaluation criteria and process for the new educational responsibilities. To fulfil the gap in Masters of Science in Technology graduates in the Southwest Finland. To invest in shared investments on research infrastructures and equipment at regional level. To build a long-term educational solution by extending the educational responsibilities at University of Turku and hence creating a strong technical and engineering ecosystem in the region. To develop and renew engineering and technology education field by extending the educational responsibilities and increasing the accessibility of higher education.	Proactively making development suggestions to other universities and to the Ministry (political power) Strong regional strategic triple helix collaboration (political power)	I.1.1 The City of Turku is investing in a full professorship at Lappeenranta Technical University in the field of mechanical engineering. […] It is important that the Ministry makes the needed changes in the steering and financing of universities, so that incentives for teaching collaboration are found, and universities are motivated to produce higher education in Turku, too. (Turun kaupunki (The City of Turku), 2016) I.1.1 A permanent solution to the problem [regional skill shortage in engineering and technology], could be reached by establishing a Faculty of Technology at the University of Turku and by granting feasible educational responsibilities to the university. (Turun kaupunki (The City of Turku), 2016) I.1.2 The cities of Turku, Uusikaupunki, Rauma and Pori together with 29 important businesses in the South-West Finland have expressed their concern about the lack of academic engineers in the region causing a severe bottleneck for the development of regional development and growth. This skills shortage can't be handled with temporary educational arrangements in higher education – we need a sustainable and permanent solution which is based on academic degree education in South-West Finland. (Turun yliopisto (University of Turku), 2017) I.1.3 The Chamber of Turku has conducted a survey, which confirms that the shortage of academic engineers is still remarkable. Impact of the FITech-project on the availability of engineers in South-West Finland has remained marginal. The shortage of engineering research and skilled academic professionals together form a severe threat for the economic growth in Turku region and nationally. (Turun yliopisto (University of Turku), 2019) I.1.4 The aim of the Technology Campus network is to secure adequate volume and content of engineering and academic engineering education in the region. Recognised shortage of academic engineers requires commitment of all parties who participate in the national FITech collaboration. Along with long-term development activities, we create a strong engineering ecosystem that support the development of future technologies in the region. (Technology Campus Turku Agreement, 2018) I.1.5 Åbo Akademi supports the proposal. The need for a Master of Science in Technology in the region is huge, and the positive structural change has even increased the demand. Measures in FITech have been important, but not enough […]. (Åbo Akademi, 2019) I.1.5 The Turku University of Applied Sciences strongly supports the proposal to extend the educational responsibilities at the University of Turku. […] There is a growing gap in the Masters of Science in Technology in Southwest Finland. (Turun ammattikorkeakoulu (Turku University of Applied Sciences), 2019) I.1.6 University of Turku considers the extension of educational responsibilities to electrical and automation technology as a strategic measure to strengthen the research and higher education in the region. The companies in South-West Finland have for a long time raised their concern about the shortage of skilled engineering professionals, which already forms a bottleneck for the positive development of the region, industrial growth and export. Industrial development and growth in South-West has a remarkable national impact and importance. (Turun yliopisto (University of Turku), 2021) I.1.7 University of Turku's proposal on extending the educational responsibilities to electronic and automation engineering supports both the operational guidelines and strategies to fulfil the regional and national needs for skilled professionals in the field. The proposal follows the strategical plans at the University of Turku and in the engineering education specifically. Åbo Akademi fully supports this proposal as it is in accordance with the regional long-term strategic plans on securing the adequate amount of engineering professionals in the region and also at national level. (Åbo Akademi, 2021) I.1.7 The proposal by the University of Turku to extend the engineering education to electronic and automation engineering answers to the regional need for skilled academic professional. The proposal also supports the strengthening of the strategic collaboration between the higher education institutions in the region according to the Technology Campus Turku aims. (Turun ammattikorkeakoulu (Turku University of Applied Sciences), 2021) I.1.8 Åbo Akademi är mycket positiv till Åbo universitets ansökan om att bredda sin utbildningsrätt inom teknik att inkludera även produktionsekonomi (tuotantotalous). Den utvidgande utbildningrätten innebär fortsatt uppbyggande av ett närä samarbete inom utbilding och forskning med bl.a. industriell ekonomi vid Åbo Akademi. (Åbo Akademi, 2022).

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Declarations

Conflict of interest The author declares that she has no known competing financial interests or personal relationship that could have appeared to influence the work reported in this paper.

References

Antikainen, A. (2006) Koulutuksen globaali ja paikallinen merkitys. *Aikuiskasvatus 26*(2): 148

Aula, H.-M., Tienari, J. and Wæraas, A. (2015) The University branding game: players, interests, politics. *International Studies of Management & Organization 45*(2): 164–179. https://doi.org/10.1080/00208825.2015.1006015

Ball, S.J. (2001) Globaalit toimintaperiaatteet ja kansalliset politiikat eurooppalaisessa koulutuksessa. Teoksessa Jauhiainen, A.; Rinne, R. & Tähtinen, J. (toim.) Koulutuspolitiikka Suomessa ja ylikansalliset mallit pp 21–43

Benson, J.K. (1977) Organizations: A dialectical view. *Administrative Science Quarterly 22*(1): 1–21. https://doi.org/10.2307/2391741

Brankovic, J. and Cantwell, B. (2022) Making sense of change in higher education research: Exploring the intersection of science and policy. *Higher Education 84*(6): 1207–1226. https://doi.org/10.1007/s10734-022-00928-3

Carroll, A. B., Buchholtz, A. K., Calhoun, J. W., Shaut, D., Acuña, M. S., Szilagyi, J., O'Neill, J., Smart, S. C., Churchman, H., & Carrillo, J. (2006) *Business and society: Ethics and stakeholder management*. 20.

Chapleo, C. and Simms, C. (2010) Stakeholder analysis in higher education: A case study of the University of Portsmouth. *Perspectives (association of University Administrators (u.k.)) 14*(1): 12–20

Christensen, T. and Gornitzka, Å. (2017) Reputation management in complex environments—A comparative study of university organizations. *Higher Education Policy 30*(1): 123–140

Coleman, James S. (1990) *Foundations of social theory*, Cambridge, Mass.: Harvard University Press.

Corazza, L. and Saluto, P. (2021) Universities and multistakeholder engagement for sustainable development: A research and technology perspective. *IEEE Transactions on Engineering Management 68*(4): 1173–1178. https://doi.org/10.1109/TEM.2020.3020736

Das, T.K. and Teng, B.-S. (2000) Instabilities of strategic alliances: An internal tensions perspective. *Organization Science 11*(1): 77–101. https://doi.org/10.1287/orsc.11.1.77.12570

Deephouse, D.L. and Suchman, M. (2008) 'Legitimacy in organizational institutionalism', *In The SAGE Handbook of Organizational Institutionalism*SAGE Publications Ltd, pp. 49–77.

DiMaggio, P.J. and Powell, W.W. (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review 48*(2): 147–160. https://doi.org/10.2307/2095101

Dobbins, M. (2017) Convergent or divergent Europeanization? An analysis of higher education governance reforms in France and Italy. *International Review of Administrative Sciences 83*(1): 177–199. https://doi.org/10.1177/0020852315580498

Erkkilä, T. (2014) Global university rankings, transnational policy discourse and higher education in Europe. *European Journal of Education 49*(1): 91–101

Fligstein, N. (1997) Social skill and institutional theory. *American Behavioral Scientist 40*(4): 397–405. https://doi.org/10.1177/0002764297040004003

Freeman, R. Edward. (1984). *Strategic management: A stakeholder approach. Boston, Mass.* : Pitman

Frølich, N., Huisman, J., Slipersæter, S., Stensaker, B. and Bótas, P.C.P. (2013) A reinterpretation of institutional transformations in European higher education: Strategising pluralistic organisations in multiplex environments. *Higher Education 65*(1): 79–93. https://doi.org/10.1007/s10734-012-9582-8

Fumasoli, T. and Huisman, J. (2013) Strategic agency and system diversity: Conceptualizing institutional positioning in higher education. *Minerva 51*(2): 155–169. https://doi.org/10.1007/s11024-013-9225-y

Gehman, J., Treviño, L.K. and Garud, R. (2013) Values work: A process study of the emergence and performance of organizational values practices. *Academy of Management Journal 56*(1): 84–112. https://doi.org/10.5465/amj.2010.0628

Gornitzka, Å. and Maassen, P. (2000) Hybrid steering approaches with respect to European higher education. *Higher Education Policy 13*(3): 267–285. https://doi.org/10.1016/S0952-8733(00)00012-X

Government Publications. 2015:12. Finland, a land of solutions: Strategic Programme of Prime Minister Juha Sipilä's Government, 29 May 2015. http://urn.fi/URN:ISBN:978-952-287-185-5, Accessed 15 November 2022.

Greenwood, R. and Hinings, C.R. (1996) Understanding radical organizational change: Bringing together the old and the new institutionalism. *The Academy of Management Review 21*(4): 1022–1054. https://doi.org/10.2307/259163

Häikiö, L. (2005) *Osallistumisen rajat. Valta-analyysi kestävän kehityksen suunnittelusta Tampereella*. Tampere University Press. https://trepo.tuni.fi/handle/10024/67464.

Hall, Peter A. (2010) 'Historical Institutionalism in Rationalist and Sociological Perspective', in Mahoney James and Thelen Kathleen (eds.) *Expalining Institutional Change. Ambiguity, Agency and Power*- New York: Cambridge University Press.

Haltia, N., Isopahkala-Bouret, U. and Jauhiainen, A. (2019) Korkeakoulujen opiskelijavalintauudistus ja aikuisopiskelijan opiskelumahdollisuudet. *Aikuiskasvatus 39*(4): 276–289. https://doi.org/10.33336/aik.88081

Hasanefendic, S. and Donina, D. (2022) Endurance in the face of environmental transformations: A practice-oriented perspective on organizational identity. *Studies in Higher Education*. https://doi.org/10.1080/03075079.2022.2061448

Isopahkala-Bouret, U. & Brunila, K. (2014). On aika puhua marginaalista. Teoksessa Brunila, K. & Isopahkala-Bouret, U. (toim.) Marginaalin voima! Aikuiskasvatuksen 51. Vuosikirja. Kansanvalitusseura; Aikuiskasvatuksen Tutkimusseura.,pp. 11–19.

Isopahkala-Bouret, U.; Haltia, N.; Peura, M. (2021). Valintamekanismit, oikeudenmukaisuus ja korkeakoulujen autonomia: Analyysi toimijoiden välisistä merkityskamppailuista opiskelijavalintauudistuksessa. Teoksessa Varjo, J.; Kauko, J.; Silvennoinen, H. (toim.) Koulutuksen politiikat. Suomen kasvatustieteellinen seura.

Kauko, J. (2011). Korkeakoulupolitiikan dynamiikat Suomessa. https://helda.helsinki.fi/handle/10138/26522.

Klofsten. (2010) Transferring good practice beyond organizational borders: Lessons from transferring an entrepreneurship programme. *Regional Studies 44*(6): 791. https://doi.org/10.1080/00343400903095238

Kohtamäki, V., & Balbachevsky, E. (2018). University autonomy: From past to present. Theoretical and Methodological Perspectives on Higher Education Management and Transformation : An Advanced Reader for PhD Students, 179–194. https://researchportal.tuni.fi/en/publications/university-autonomy-from-past-to-present.

Laclau, E. and Mouffe, C. (2014) *Hegemony and socialist strategy: Towards a radical democratic politics (Vol 8)*, Verso Books.

Langley, A., Smallman, C., Tsoukas, H. and Van de Ven, A.H. (2013) Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal 56*(1): 1–13. https://doi.org/10.5465/amj.2013.4001

Lappalainen and Markkula, (ed.) (2013) *The knowledge triangle: Re-inventing the future*, European Society for Engineering Education SEFI.

Liiten, M. (2017) "Hallitukselta 20 miljoonaa insinöörikoulutukseen Lounais-Suomessa – taustalla kasvanut työvoiman tarve. Turkuun perustetaan tekniikan alan yhteistyöyliopisto. Myös ammattikorkeakoulu- ja ammattikouluopetusta lisätään", *Helsingin Sanomat*. 9 May. https://www.hs.fi/politiikka/art-2000005217471.html. Accessed 15 November 2022.

Liiten, M. (2021) "Tiedeministeri Antti Kurvinen: Linja korkeakoulupolitiikassa on muuttunut – "Minä en keskitä", *Helsingin Sanomat*. 8 November. https://www.hs.fi/politiikka/art-2000008357011.html. Accessed 15 November 2022.

Lyytinen, A., Kohtamäki, V., Kivistö, J., Pekkola, E. and Hölttä, S. (2017) Scenarios of quality assurance of stakeholder relationships in Finnish higher education institutions. *Quality in Higher Education 23*(1): 35–49. https://doi.org/10.1080/13538322.2017.1294410

Mampaey, J. (2018) Are higher education institutions trapped in conformity? A translation perspective. *Studies in Higher Education 43*(7): 1241–1253. https://doi.org/10.1080/03075079.2016.1242566

Meyer, J.W. and Rowan, B. (1977) Institutionalized organizations: Formal structure as myth and ceremony. *The American Journal of Sociology 83*(2): 340–363. https://doi.org/10.1086/226550

Mikola, E. & Häikiö L. (2014). Merkitysten muodostuminen politikkaprosesseissa: Päästökaupan kansalliset kamppailut ja tarinalinjat. Teoksessa L. Häikiö & H. Leino (toim.) Tulkinnan mahti: Johdatus tulkitsevaan politiikka-analyysiin.pp. 56–83.

Miller, K., McAdam, R. and McAdam, M. (2018) A systematic literature review of university technology transfer from a quadruple helix perspective: Toward a research agenda. *R & D Management 48*(1): 7–24. https://doi.org/10.1111/radm.12228

Myllykangas, P. (et. al). (2010) Analyzing the essence of stakeholder relationships: What do we need in addition to power, legitimacy, and urgency? *Journal of Business Ethics 96*(Supplement 1): 65–72. https://doi.org/10.1007/s10551-011-0945-3

Nokkala, T. and Bladh, A. (2014) Institutional autonomy and academic freedom in the nordic context—Similarities and differences. *Higher Education Policy 27*(1): 1–21. https://doi.org/10.1057/hep.2013.8

Oliver, C. (1991) Strategic Responses to Institutional Processes. *The Academy of Management Review 16*(1): 145–179. https://doi.org/10.2307/258610

Opetus- ja kulttuuriministeriö. (2017). Positiivisen rakennemuutoksen osaajatarpeet. Selvitysmiehen raportti—Jari Jokinen [Sarjajulkaisu]. Opetus- ja kulttuuriministeriö. http://urn.fi/URN:ISBN:978-952-263-551-8. Accessed 15 November 2022.

Palonen, K. (2006) *A Struggle with time: The struggle with time: A conceptual history of "Politics" as an activity*, LIT Verlag.

Pekkola, E. et al. (eds.) (2018) *Theoretical and methodological perspectives on higher education management and transformation: An advanced reader for PhD students*, Tampere: Tampere University Press.

Peter, T. and Bröckling, U. (2017) Equality and excellence. Hegemonic discourses of economisation within the German education system. *International Studies in Sociology of Education 26*(3): 231–247. https://doi.org/10.1080/09620214.2016.1187575

Pierson, P. (2000) The limits of design: Explaining institutional origins and change. *Governance 13*(4): 475–499. https://doi.org/10.1111/0952-1895.00142

Pinheiro, R., Charles, D. and Jones, G. (2016) Translating strategy, values and identities in higher education: The case of multi-campus systems. *Tertiary Education and Management 23*(1): 1. https://doi.org/10.1080/13583883.2016.1248858

Powell, W.W. and DiMaggio, P.J. (eds.) (1991) *The New Institutionalism in Organizational Analysis*, University of Chicago Press.

Prior, L. (2003) Using documents in social research. *SAGE Publications*. https://doi.org/10.4135/9780857020222

Publications of the Finnish Government 2019:33. Programme of Prime Minister Sanna Marin's Government, 10 December 2019 Inclusive and Competent Finland - a socially, economically and ecologically sustainable society, http://urn.fi/URN:ISBN:978-952-287-811-3, Accessed 15 November 2022.

Rogers, N. (2019) Why change? A practitioner's perspective on why and how universities tackle organisational change or don't. *Perspectives Policy and Practice in Higher Education*. https://doi.org/10.1080/13603108.2019.1581850

Roth, P.-C., Teräsahde, S., Mäkinen, M., & Eskola, J. (2018). Muutoksen johtaminen korkeakoulujen yhdistyessä: Viestintä, osallistaminen ja luottamus tutkimus- ja opetushenkilökunnan kertomuksissa. https://trepo.tuni.fi/handle/10024/105010.

Ruonavaara, H. (2006) 'Historian polut ja teorian kartta – eli miten tutkia tapahtumaketjuja sosiologisesti?', in J. Saari (ed.) *Historiallinen käänne. Johdatus pitkän aikavälin historian tutkimukseen*Helsinki: Gaudeamus.

Scott, W.R. (2001) *Institutions and Organizations*. 2nd ed. Thousand Oaks (Calif.): Sage.

Scott, W.R. (2008) Approaching adulthood: The maturing of institutional theory. *Theory and Society 37*(5): 427–442. https://doi.org/10.1007/s11186-008-9067-z

Scott, W.R. and Biag, M. (2016) 'The changing ecology of U.S. higher education: An organization field perspective', *Research in the Sociology of Organizations*, vol. 46, Emerald Group Publishing Limited, pp. 25–35.

Scott, W.R. and Christensen, S. (eds) (1997) The Institutional Construction of Organizations. International and Longitudinal Studies 1995, Thousand Oaks and London: Sage. 356 pages. Organization Studies, 18(5), 887–888. https://doi.org/10.1177/017084069701800517.

Seo, M.-G. and Creed, W.E.D. (2002) Institutional contradictions, praxis, and institutional change: A dialectical perspective. *The Academy of Management Review 27*(2): 222–247. https://doi.org/10.2307/4134353

Simola, H., Kalalahti, M., Kauko, J., Sahlström, F., & Varjo, J. (2017). Dynamics in education politics: Understanding and explaining the Finnish case. Routledge. https://helda.helsinki.fi/handle/10138/311240.

Stensaker, B. and Norgård, J.D. (2001) Innovation and isomorphism: A case-study of university identity struggle 1969–1999. *Higher Education 42*(4): 473–492. https://doi.org/10.1023/A:1012212026597

Stensaker, B., Frølich, N., Huisman, J., Waagene, E., Scordato, L. and Pimentel Bótas, P. (2014) Factors affecting strategic change in higher education. *Journal of Strategy and Management 7*(2): 193–207. https://doi.org/10.1108/JSMA-12-2012-0066

Suchman, M.C. (1995) Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review 20*(3): 571–610

Tahar, S. and Boutellier, R. (2013) Resource allocation in higher education in the context of new public management. *Public Management Review 15*(5): 687–711. https://doi.org/10.1080/14719037.2012.707680

Tapanila, K., Siivonen, P. and Filander, K. (2020) Academics' social positioning towards the restructured management system in Finnish Universities. *Studies in Higher Education 45*(1): 117–128. https://doi.org/10.1080/03075079.2018.1539957

Thelen, K. (2004) *How institutions evolve: The political economy of skills in Germany Britain the United States and Japan*, Cambridge Core: Cambridge University Press.

Työ- ja elinkeinoministeriö (2017). Kasvun mahdollisuus – positiivisen rakennemuutoksen hyödyntäminen Lounais-Suomessa. http://urn.fi/URN:ISBN:978-952-327-241-5. Accessed 15 November 2022.

Välimaa, J. (2001). Finnish Higher Education in Transition: Perspectives on Massification and Globalisation. Institute for Educational Research, Customer Services, University of Jyvaskyla, P. https://eric.ed.gov/?id=ED461347.

Valta, J., Mäkinen, S.J. and Kirjavainen, J. (2022) Dialectic tensions driving niche creation–A case study of a local energy system. *Environmental Innovation and Societal Transitions 42*: 99–111

Valtioneuvosto. (2023). Korkeakoulujen koulutusvastuujärjestelmän uudistaminen—Korkeakoulujen koulutuksesstaavien vararehtorien ja johtajien tapaaminen, Maarit Palonen.

Van de Ven, A.H. and Engleman, R.M. (2004) Event- and outcome-driven explanations of entrepreneurship. *Journal of Business Venturing 19*(3): 343–358. https://doi.org/10.1016/S0883-9026(03)00035-1

Vellamo, T., Pekkola, E., & Siekkinen, T. (2019). Technical Education in Jeopardy? Assessing the Interdisciplinary Faculty Structure in a University Merger. 203–232. https://doi.org/10.1007/978-3-030-25646-3_8.

Vellamo, T. (2022). Technical Identities in a University Merger: Organisational, Disciplinary and Individual Perspectives. PhD Dissertation, Faculty of Management and Business, Tampere University. https://trepo.tuni.fi/handle/10024/141400.

Welch, C., Piekkari, R., Plakoyiannaki, E. and Paavilainen-Mäntymäki, E. (2020) 'Theorising from case studies: Towards a pluralist Future for international business research', in L. Eden, B.B. Nielsen and A. Verbeke (eds.) *Research Methods in International Business*Springer International Publishing, pp. 171–220.

Whatley, M. and Castiello-Gutiérrez, S. (2022) Balancing finances, politics, and public health: International student enrollment and reopening plans at US higher education institutions amid the COVID-19 pandemic. *Higher Education 84*(2): 299–320. https://doi.org/10.1007/s10734-021-00768-7

Whitty, G,, Power, S., Halpin, D., Dickinson, M. and Gewirtz, S. (2004) Englannin koulutuksen erityistoimintavyöhykkeet: Toimintapolitiikan kehityspolkututkimus New Labour'in kokeiluhankkeessa. Suom. H. Hiillos. 251–271.

Zietsma, C. and Lawrence, T.B. (2010) Institutional work in the transformation of an organizational field: The interplay of boundary work and practice work. *Administrative Science Quarterly 55*(2): 189–221. https://doi.org/10.2189/asqu.2010.55.2.189

Zimmerman, M.A. and Zeitz, G. (2002) Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review 27*(3). https://doi.org/10.5465/amr.2002.7389921