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Abstract

Higher education policy in Finland has shifted toward academic capitalism as an extension to new demands for competitiveness placed on higher education institutions. The Finnish Ministry of Education has been involved for some time in reforming the Finnish higher education system with the aim of increasing outputs in research innovations and laying the groundwork for academic capitalism. In other words, political guidance has sought to reform research as a qualitative change, rather than commit to increasing investment. Looking at the statistical indicators of Finnish research and development, particularly in the context of Finnish universities, shows how in practice Finland has introduced ideas of academic capitalism locally by moving away from basic funding into a more competition-driven funding system. Competitive logics are filtered down from the level of national higher education policy to university level through policy tools, such as performance-based funding. Furthermore, the Finnish system shows a relatively high susceptibility to political control, which can be viewed as a challenge to substantive academic autonomy.

Introduction: New Paradigm for Higher Education

Nordic higher education systems have faced considerable reform as national higher education policies have embraced a new paradigm of knowledge(-based) economies to emphasise the importance of higher education as a competitive edge in global competition (Krejsler, 2006; Pinheiro et al., 2019) – and Finland has been no exception (Poutanen et al., 2022; Kuusela et al., 2021). Active innovation policies have sought to commodify and commercialise technological research for the benefit of the national economy (Lemola, 2020), which is also why higher education policy has been increasingly linked with economic priorities (Välilä 2011, 2019). This development fits within the analytical framework of academic capitalism, which describes a shift, though not a uniform one, toward market-oriented practices in science. Research into academic capitalism gained traction in analysing the shifts in higher education in the United States (Slaughter and Rhoades, 2004; Slaughter and Leslie, 1997), however, subsequent research has stressed the expansion of market-oriented practices in higher education to the EU (Slaughter and Cantwell, 2012) and to specific countries including Germany (Münch, 2020) and Finland (Kauppinen and Kaidesoja, 2014). This expansion is to be expected, given how often international comparative systems stack US universities as the most important points of comparison (Kivistö et al., 2019, p. 59).

Universities, particularly in terms of research and development of (technological) innovations, are expected to give more weight to economic value-creation, which is conducive to extending market logic and market-oriented behaviour to their operations. In common with most of the Nordic countries, the Finnish university system is still dependent on public funding to finance its activities. Higher education policy, which administers public resources to the universities – themselves often seen as public resources –

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becomes a crucial dimension in the responsible management of public resources (Aarvevaara et al., 2009). The state can enforce its strategic interests in higher education by wielding the power of the purse, deciding what higher education activities get funded based on a steering funding model.

The primary focus of this article is the role Finnish universities have come to play in what national economies see as their competitive edge – the knowledge economy. The purpose of this article is to analyse the developments in national higher education policy in Finland through specific indicators dealing with public funding mechanisms. Based on a seemingly broad political consensus to boost Finnish university output to improve Finnish national competitiveness, the assumption might be that the statistical data would show an increase in overall funding of research – and funding of universities – over time. However, if Finnish academic capitalism promotes competition and national competitiveness, it should be possible to find examples of an increase in specific research funding, which guides funding from research in general to what are identified as contingent (national) strategic research interests (i.e. funding instruments that are always applied for individually and in competition). Is there a quantitative change in resourcing in the Finnish case, or does academic capitalism rather entail a qualitative change in the logics of how public university resourcing is administered?

The article contributes to the existing research on Finnish academic capitalism (Kauppinen and Kaidesoja, 2014; Kaidesoja and Kauppinen, 2018) by analysing how the public innovation system in Finland has shifted its focus and moved from corporate innovation strategies to emphasising the role of public universities in producing innovations, which would benefit the competitiveness of the Finnish national economy in global markets. The analysis shows that in so doing, the universities have been subject to policy guidance, which promotes market-oriented behaviour, in the context of competing for scarce public resources, both internationally and nationally.

The article proceeds to outline the connection between the paradigm of knowledge(-based) economies in global competition and academic capitalism, and then discuss how this is particularly relevant in the Finnish case. We subsequently discuss the data and Finnish higher education reports and compare the data to the theoretical framework. We end with a discussion of the comparison and concluding remarks.

Innovation Framework in Knowledge(-Based) Economies

The transition of Finland into a knowledge economy, which reflects its innovation policy framework, is integrally linked to the Nokia Corporation. Although coordinated state-led research and development (R&D) and innovation policy can be traced back to the 1960s, the trend towards knowledge economies began in earnest in the 1980s (Lemola, 2020).¹ The economic recession of the 1990s might be regarded as a catalyst in developing the first stages of a Finnish brand of academic capitalism, as it simultaneously drove ideas pertaining to the need to compete in global markets and of endemic economic scarcity in Finnish society (Välilmaa 2011, pp. 105, 115). Education became crucial for Finnish success, and thus a critically important field for policy making too. Since the

economic recovery from the recession was driven, at least on a symbolic level, by Nokia (Lindén, 2021), issues of R&D investment and technological innovation became increasingly important.

The high-tech export industry and access to global markets was made manifest in Nokia's success in such a way that the Finnish imagination was completely entranced by the promise of national success inextricably intertwined with the success of its knowledge economy (Ahlqvist and Moisio, 2014: p. 23; Välimaa and Hoffman, 2008: p. 274). In 1999, some 60% of Nokia's corporate R&D took place in Finland, meaning that Nokia's contribution to national R&D investment was approximately 20% even without accounting for contributions from Nokia's subcontractors (Ali-Yrkkö et al., 2000: pp. 12-13). Nokia's share of the Finnish GDP was still 2.6% in 2008, accounting for roughly one third of total Finnish expenditure on research and development (Ali-Yrkkö, 2010: p. 4). Total Finnish R&D investment in terms of GDP was at its highest in 2009 at 3.75%, putting it in top position globally (Lemola, 2020, p. 40). Finland thus exemplified a successful transition from a welfare state regime of managed capitalism into a market capitalism-oriented knowledge-economy (Kauppinen and Kaidesoja, 2014; Antikainen, 2010). While a single company does not necessarily reshape the entire society, it was a powerful example of the material benefits of competing successfully – symbolically as a nation – in global markets.

The Finnish state supported Nokia's growth when the big company in a small country² had created a chronic lack of skilled labour by tapping out the IT sector workforce (Ali-Yrkkö, 2000: p. 22), which increased pressure of Finnish universities to compensate.³ All in all, Finnish science policy in the 2000s had exceedingly been put into the service of technology and innovation policy initiatives (Pelkonen et al., 2010). In the 2000s the Finnish Ministry of Education (later: Education and Culture: henceforth MEC) expressed, through policy documents, that the Finnish university system didn't meet the new requirements posed by competing knowledge economies in the global markets (OPM, 2007). Indeed, Nokia spearheaded reforms into Finnish HE to suit the needs to "knowledge industries" (Lemola, 2020, pp. 192-193).

Finnish national innovation system and strategy was coordinated by the state, which highlights the pivotal role that a centrally administered science and innovation policy has had in Finland: the science and technology council became the main policy body coordinating the universities, the MEC, and trade and industry ministries, among others (Lemola, 2020). The need for a new national innovation system and strategy was expressed in the reports and statements of the council (VTTN 2000, 2003, 2006; see also Tomperi, 2009, pp. 172-179). These reports also found that profiling and streamlining the Finnish higher education system was necessary: securing Finnish competitiveness became a dominating discourse in governmental memos and reports (Tomperi, 2009, pp. 179-183; see also Kaidesoja and Kauppinen, 2018).

The discourse of competitiveness draws higher education in as a vital dimension of knowledge economies (Sum and Jessop 2013; Sum 2009), that reorients higher education policy in support of the beneficial "triple helix" of state, university, and society (Etzkowitz and Leydersdorff 2001). Washburn (2005, p. 196) summarizes, that "a nation's ability to sustain its competitive edge

in science and technology so that its industries will be well positioned to exploit the next big commercial breakthrough”. In terms of perception, the global knowledge economy represents “not only the highest form of social organization but also the most effective system of wealth accumulation” (Moisio and Kangas, 2016, p. 272). Market-oriented higher education reforms were typically promoted by discourse which described Finland as already having fallen dangerously behind from its competitors.⁴ This requires the state – interested in its own competitiveness – to push for reforms to “become competitive, entrepreneurial and work-market oriented” to enable catch-up competitiveness (Sum, 2009, p. 197). In the European context Finland is characterized as an “export-oriented small nation” (Nokkala, 2008), which is why competitiveness in the global market takes on special, if not nearly existential significance for them already in terms of national policy (Poutanen, 2022a).

The combined imaginaries of economic competition and Nokia's evident success made economic competition a natural frame of reference for reorganizing higher education, furthered also by recommendations to that effect from transnational policy advisory from the OECD (Hunter, 2013; Sellar and Lindgard, 2012) and the European Union (Wedlin, 2020, 2008; Fairclough and Wodak, 2008). These transnational actors framed (and continue to frame) national higher education policy through the competitiveness of knowledge-based economies: the OECD in particular has pushed for a closer alignment of Finnish innovation policy and HE policy (Alaja and Sorsa, 2020, pp. 835-837), and reforming industry policy (Ylä-Anttila and Palmberg, 2007) under the auspices of the knowledge economy paradigm.

Finnish Academic Capitalism?

Academic capitalism as a theoretical concept has evolved from a descriptor of business and industry embeddedness in universities in the United States to cover a more expansive conceptualization of the state and markets in higher education (Slaughter and Leslie, 1997; see also Washburn, 2005). Academic capitalism is typically defined as the application of knowledge primarily for commercial purposes, meaning that private claims of knowledge override public ones; there is very little left for the “public domain” of science (Slaughter & Rhoades, 2004, p. 132). The framework has been since broadened to more transnational, particularly European variants of academic capitalism to describe similar marketization developments through different national policy paths (Kauppinen, 2015; Slaughter and Cantwell, 2012). A combining element is that the economic impact of science is prioritized over its scientific impact (Münch, 2020, p. 101).

The transnational context is important, as Finnish higher education policy is informed by the EU's higher education policy, shaped by the Bologna process, the goal of which is to make Europe “the most competitive knowledge-based economy in the world” (Kauppinen and Kaidesoja, 2014, p. 32; Slaughter and Cantwell, 2012, p. 590; see also Välimaa and Hoffman, 2008), and OECD recommendations (Kallo, 2020). European variants of academic capitalism stress national and international competition, seen in promotion of research “excellence” and accumulation of competed public research funding. Münch (2020, pp. 89, 117-118, 158-159) explicates how, by emphasizing performance-based funding models, academic capitalism in Germany led a system of

relatively little institutional stratification into a system of consolidated status hierarchy.

This variant is more relatable to the Finnish perspective, where the commodification of proprietary innovations (as opposed to common knowledge – a public good) is seen as serving both private business and industry and the national economy. Finnish public universities are not market actors per se but engage in market-like behaviour under academic capitalism. The shift toward academic capitalism departs from a mode of research based on public good (Kaidesoja and Kauppinen, 2018, pp. 100-101). Market-oriented approaches to higher education emphasize competition over scarce (public) resources. Although pressures to reform Finnish HE gained strength already in the late 1990s, academic capitalism gathered momentum through crisis discourse of the 2000s, which stated as a fact that Finnish universities were lagging behind in international competition (Tjeldvoll, 2008). This has been challenged, to little avail, by Finnish academics (Kivinen and Hedman, 2016; Raatikainen, 2016). Finnish universities were expected to operate as “market-driven economic actors”, which corresponds with increases in performance-based funding but also a change in legal status that gives external stakeholders more power in the governing boards of universities (Kohtamäki, 2019, p. 73; see also Kuusela, 2021). Indeed, the discourse of crisis was used to reframe *university autonomy* as something that advanced managerial reforms (Piironen, 2013, p. 138).⁵

Discursive support to this effect could also be found in reports by the science and technology council, which suggested “profiling” Finnish universities by reducing their number and pooling resources to larger units as a policy goal (VTTN, 2006; see also Alaja and Sorsa, 2020, p. 838). The MEC had determined that by reducing the number of individual institutions, larger HEIs would gain resources to profile themselves effectively for competitive advantage both nationally and internationally (Välimala et al., 2014; Nokkala and Välimala, 2017). This has also been supported by government or ministry reports, which had concluded that globalization, internationalization and competitiveness should guide the “restructuring” of Finnish universities (VNK, 2004, 2005; OPM, 2008). In the centre-right Vanhanen II cabinet (see Appendix I) took this up explicitly as a policy priority (VNK, 2007). The reform culminated in the Universities Act of 2009, passed under the Vanhanen II cabinet, which is identified by many Finnish researchers as a watershed moment, which changed the structure of Finnish higher education, (Poutanen et al., 2022; Kaidesoja and Kauppinen, 2018; Kauppinen and Kaidesoja, 2014; Välimala, 2011, 2019; see also OKM, 2011) and separated Finnish universities from the state. This separation, which also meant making the universities fiscally responsible for their own finances, made Finnish universities acutely aware of competitive pressures in HE, but also of their continued dependency on Finnish public finances through the MEC. Later policy evaluations have concluded that the political guidance of the Universities Act was exceptionally strong (Rantala, 2011). Finnish academic capitalism, then, is guided by organizational autonomy under strict top-down responsabilization.

The Act realized stated-facilitated Finnish academic capitalism in conjunction with growing pressure to compete under performance-based funding indicators, making Finland one of the most competed higher education systems

in the world (Hansen et al., 2019; Kivistö et al., 2019). While the Act de jure separated Finnish universities administratively from the public sector, but as publicly funded institutions they are still de facto and de jure beholden to state interests through performance contracts (Kallio et al., 2021b). Universities and academics were expected to offer more return on public investment (Aarrevaara, 2009: 12). In effect, despite increasing quasi-market (Wedlin, 2008, 2020) logics, the MEC retained a strong steering hand in Finnish universities.

As another example of policy guidance conducive to academic capitalism, Kaidesoja and Kauppinen (2018, p. 106) point to the research and innovation council report of the Stubb cabinet (see Appendix I), which emphasized the need to reorient funding flows to profile Finnish universities, foster competition, and promote strategic research more effectively. The report practically conceptualized all scientific research through the lens of commodifying research outputs as (technology) innovations (ibid., p. 108). In the 2010s, the MEC particularly emphasized international competitiveness through higher education, which is expected to create innovations that can be readily and quickly commercialized (OKM, 2012). At the same time, by 2014, 66% of university financing came from the state, leaving 34% to supplementary funding (Kohtamäki, 2014, p. 328). Kallio et al. (2021b, p. 51) confirm that basic funding, covered by the MEC, is approximately two thirds of the total funding of Finnish universities.

Indeed, the MEC places performance-based funding (PBF) at the core of its funding model: up to 75% of Finnish universities' public funding is performance-based, which makes it "one of the most performance-driven systems in the world" (Hansen et al., 2019, p. 563; Rinne et al., 2014, p. 219; see also de Boer, 2015). Even the OECD, which originally recommended performance-based funding, has expressed some concern in 2017 over overt emphasis on PBF in Finland (OECD, 2017). The PBF system underscores how much the Finnish university funding operates as a zero-sum game (Mathies et al., 2020, p. 26), as is fitting for academic capitalism.⁶ PBF seeks to drive efficiency and quality in HE through competition, even though extant Finnish research suggest that market-based guidance doesn't improve performance (Kivistö and Kohtamäki, 2016). If anything, Finnish researchers have become concerned over signs of stacking resources – the so-called Matthew Effect, in Finnish academia (Rinne et al., 2014, p.23; Seuri and Vartiainen, 2018, p. 219) – as described by Münch (2020).

Data and Method

The data is based on open statistical data available from mostly public sources. In some cases, the data was not fully compatible year-on-year, in which case experts at the Finnish MEC were consulted to fill in gaps as much as possible on the timeline. In the Finnish system the problem with fully compatible year-on-year data over an extended period of time relates to the rapid changes in both accounting and administrative models in and regarding public universities. When Finnish universities were separated from the state, the MEC had to change accounting logics and accounting systems, meaning all the data is not even currently available in a single repository. Relying only on data available at the time of writing, the Finnish MEC Vipunen database would've provided only less

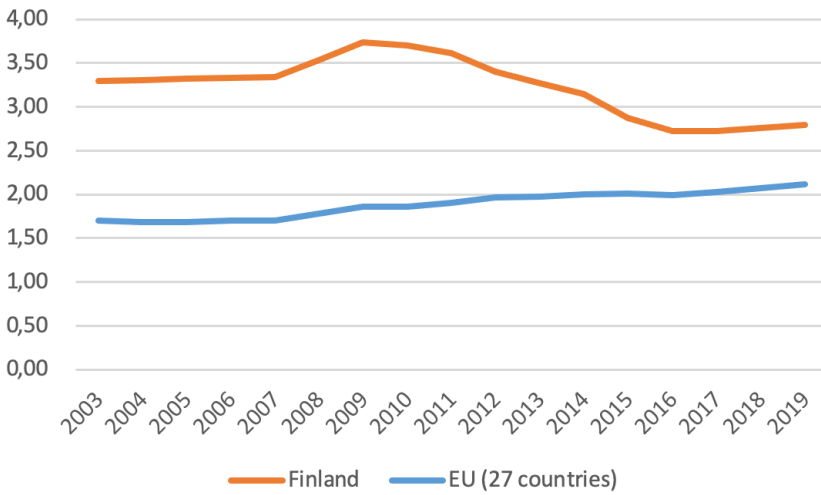
than 5 years of compatible data year-on-year. Similarly, OECD data on Finland, in turn, was at the time of writing only available back to 2009. As consequence, the data has been collected from disparate sources, but cross-referenced, when possible, in the OECD database on education, Statistics Finland, Vipunen database and Academy of Finland statistics. The dataset ends in 2019 to exclude data from the exceptional circumstances of the coronavirus pandemic, that begun in 2020. The data is also supplemented by relevant policy documents and reports.

The data shows the investment into Finnish university funding and research funding overall, which are judged to be extremely relevant metrics for the paradigm of knowledge(-based) economies and academic capitalism. The emphasis on the necessity to increase academic outputs of knowledge work in official discourse was contrasted with the statistical data to arrive at an understanding of the dialectic meeting of stated purposes discussed in the extant research literature and material investment represented by the indicators. The goal was not, as such, to compare discourse and statistics, but rather form a baseline understanding of Finnish investment into research, how that can be viewed based on the assumptions of academic capitalism, and what peculiarities of Finnish academic capitalism can be located in the data.

Finnish Research by the Numbers

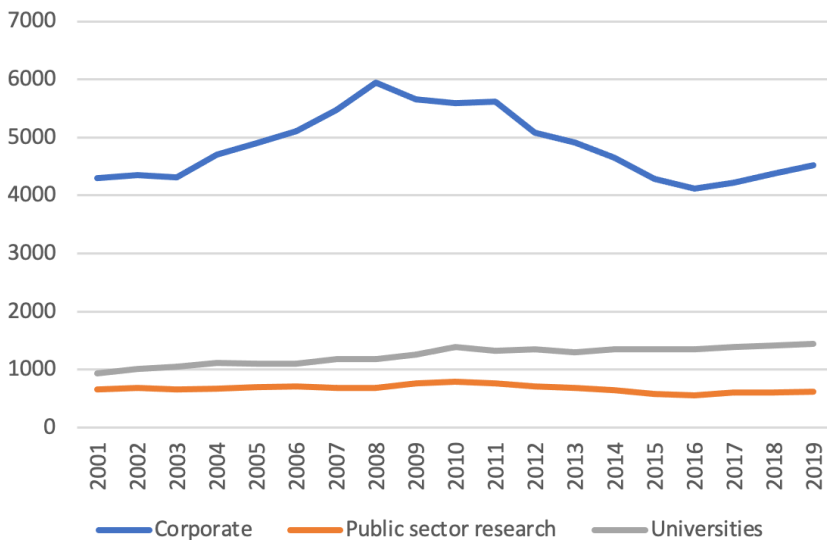
In this section we explore and discuss relevant statistical indicators. First and foremost, and as important background to our discussion. First, according to OECD data, Finnish public budget appropriations into research and development (R&D), often perceived as the originator of technological innovation, have shown a downward trend. According to Alaja and Sorsa (2020, p. 838), between 1996 and 1999 Finnish state expenditure on R&D rose from 3,3% to 4,6%. This coincided with a need to increase university-level education to the service of the knowledge industry in the early 2000s. Finnish investment in R&D at this time surpassed the OECD average, which is consistent with assumptions of competition being driven by the knowledge-economies paradigm. However, based on data from the mid-2000s to late-2010s, the investment share has considerably decreased, closing the gap between the OECD average within the EU and Finland (see Figure 1). In effect, Finland is losing out in R&D investment expenditures.

Figure 1. Gross domestic R&D expenditure as a percentage of GDP (OECD, 2022a)



Diving more deeply into the R&D sector we can determine the division of R&D expenses per sector – corporate, public sector research institutions and higher education institutions (Figure 2: adjusted by the author for inflation, comparable to 2021, based on the Finnish Consumer Price Index).

Figure 2. R&D expenses per sector, in million euros (Statistics Finland, 2022a)

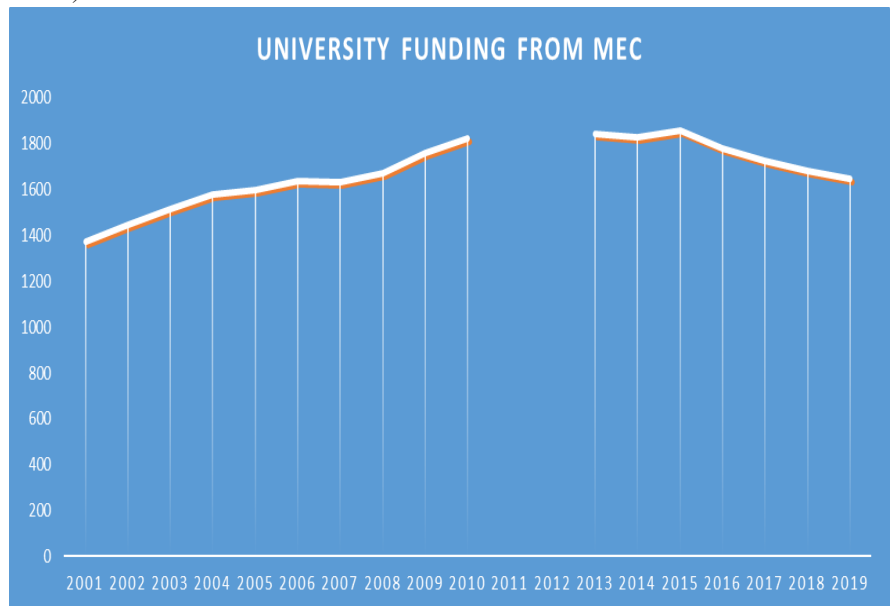


The dip in R&D expenditure, is visible in both figures after 2008 and becomes clearer after 2011. Figure 2 shows that the drop in Figure 1 is mostly due to a reduction of corporate R&D funding and shows an increasing role for universities in R&D expenditures. A structural reduction in the number of public

research centres in Finland has resulted in their low contribution to R&D. The size of these centres has been steadily reduced since the early 2000s (Lemola, 2020, pp. 130-131), likely due to public sector efficiency programs (Herranen, 2015). The Finnish higher education sector is the second largest sector that produces R&D outputs altogether, and the largest in terms of public sector R&D spending (Niemi, 2022).

While the corporate sector is expected carry most of the burden, and indeed has shown an increase after 2016, the universities seem to be growing their share steadily as a matter of public administration and state policy. To look closer, we need to zoom in on how public funding – through the MEC – and external funding for the universities has been trending. First, data from the Finnish MEC statistics service Vipunen shows a perhaps surprising downward turn in steadily growing budget funding from the MEC since 2015 (Figure 3: adjusted by the author for inflation based on the Finnish Consumer Price Index). According to a 2018 MEC report, the share of basic funding from the Ministry to universities has dropped from 62% in 2010 to 58% in 2017 (OKM, 2018a: p. 4).

Figure 3. University funding from MEC 2001-2019⁷, in million euros (OKM, 2022a)



In figure 3 we can see a drop in funding levels, but this takes place only after 2015, and not 2010 as in the corporate sector. This suggests these two events are decoupled, which makes sense, given the different degrees of political control toward R&D between the private and the public sector. The cuts in the MEC's budget funding have meant a relative flat trend in the university R&D personnel person-years (Figure 4) and a mildly downward trend in the number of university staff overall since 2010, which is since rising again (Figure 5).

Figure 4. University R&D person-years (Statistics Finland, 2022b)

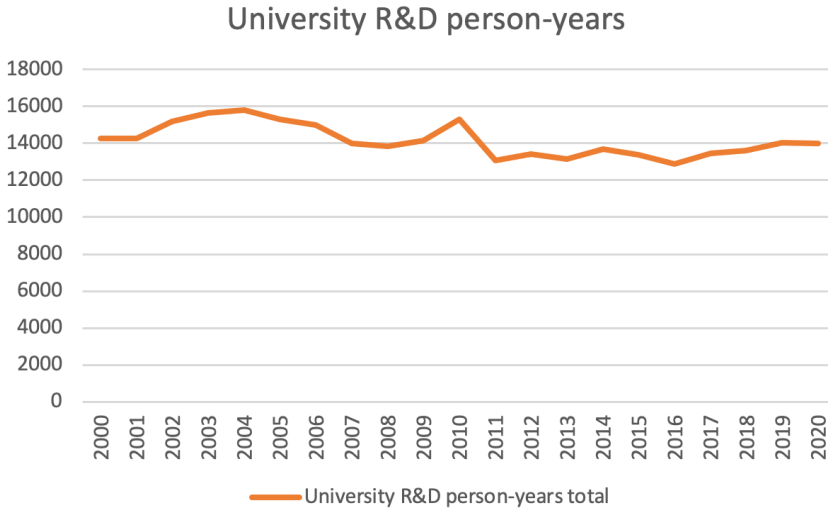
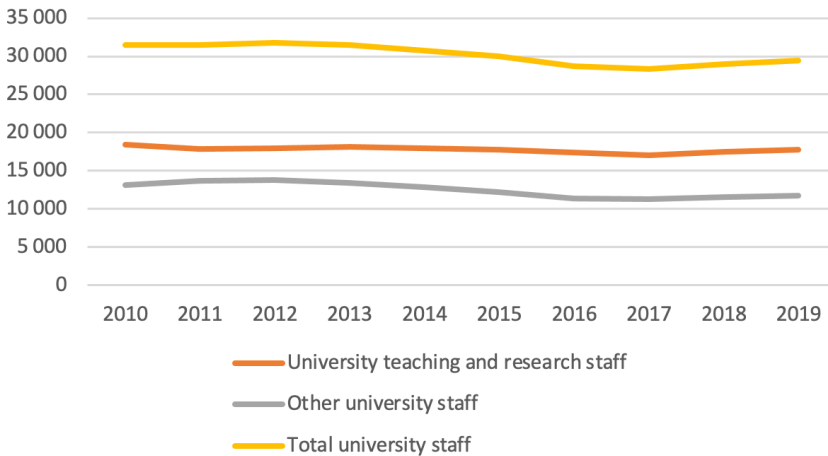


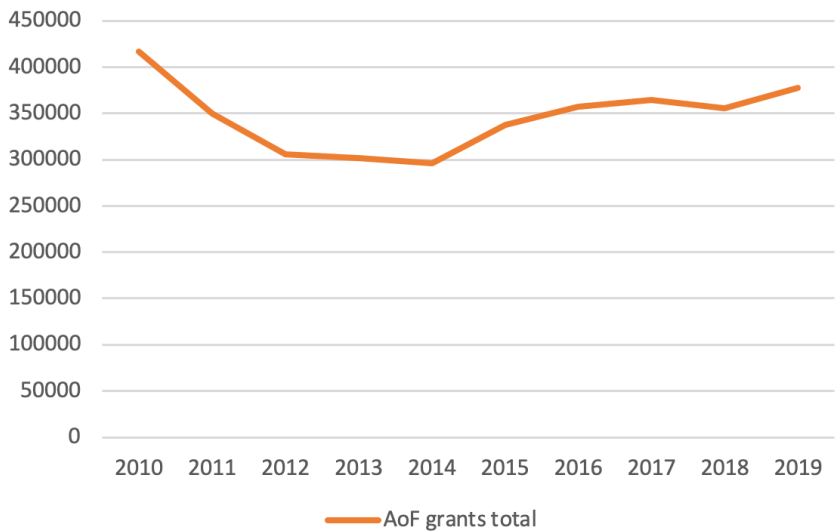
Figure 5. Finnish university staff number in person years 2010-2019 (OKM, 2022b)



The statistical data do not really support any idea of heavy investment into Finnish public R&D by proxy of universities. Considering the drop in MEC funding in Figure 3, it is more likely that academic positions have become increasingly short-term and competed. If anything, the data shows only recently recovering investment in R&D but a continued negative trend between 2015 and 2019 to the MEC’s budget funding. Positive public funding trends prior to the 2010s do not reliably correlate with university R&D investment, but rather show a moderate downward trend in terms of the number of person-years worked in university-level R&D or in the number of university staff in the 2010s, with some increase visible at the end of the decade.

It also bears noting that research funding has diminished based on moving some of the MECs budget into external, but still wholly or mostly publicly funded sources (Academy of Finland, Business Finland, etc.). This funding must be specifically applied for by academics for their own university. For example, the Academy of Finland began attributing research funds based on a political allocation from 2010 onward. While that funding dropped with the basic funding in 2015, it has since rallied and is on the rise (Figure 6: also adjusted for inflation). Combined with the funding set aside for competition under the Academy of Finland, a new funding mechanism for strategic research – also governed by the Academy of Finland, amounts to 55,6 million euros annually since 2015 (OKM, 2022c: not included in Figure 6). Furthermore, the annual government allotment for strategic research funding is another similar tool, which has grown from 4,65 million annually from its inauguration in 2014 to 11,5 million euros in 2020 (VNK, 2022a).

Figure 6. Academy of Finland funding grants (OKM, 2022c)



The role of discretionary, strategic research funding allocated through funding instruments relying on competed calls is increasing in the funding system, while MEC basic funding to universities seems to be declining. Let us not forget that basic funding is also subjected to the competitive pressures of the PBF. This also results in an increasingly fragmented field of funding, which increases uncertainty to secure income – for both academics and their universities.

As another expression of the emphasis for competed funding, Finnish universities have been incentivized to actively fundraise on their own, with the state matching particularly private sector investments. According to the Finnish MEC, the fundraising of Finnish universities gained nearly 130 million euros between 2014-2017, which the state then supplemented by 150 million (OKM, 2017).⁸ Such competition activities could be expected to increase the need for

more administrative staff in Finnish universities, but that has not been the case; statistics show only modest growth after 2017 after five years of reductions, and other staff numbers have yet to return to pre-2010 levels (Figure 5).

A final funding stream to consider is the process of capitalizing as a funding mechanism means that instead of basic funding is to be used into growing the universities' investment portfolio, allowing them to become more self-sufficient and capable of using their individual investment – as forces in the investment market dictates – to their own benefit. The MEC, in effect, is increasing market logic by allocating money specifically to be invested under markets, rather than maintaining a more predictable strain of basic funding. These investments between 2008 and 2019, according to the MEC's own report, added up to 831,3 million euros, and is slated to continue to up to 1,027 billion altogether by the end of 2019 (OKM 2018a, p. 9). It should be noted, however, that this funding has not yet risen to the level of even coming close to supplanting basic funding, which can rise to over 1,7 billion euros annually.

Discussion

The Finnish turn to academic capitalism can be directly linked to a transition toward emphasis of knowledge-based economies in global competition (Kauppinen and Kaidesoja, 2014, pp. 23, 29-30). Targeted funding in Finland has a much higher percentage than in many other countries, as opposed to basic funding (Raatikainen, 2016, p. 44). This means more project-based research. Rather than allowing universities to recruit and invest in research activities based on a growing element of basic funding, the MEC seems to have not only increasing contractual oversight to promote “strategic goals” within the university field⁹, but also increasing the share of funding available to competed funding instruments. This can be seen to reaffirm a tenet of academic capitalism: no radical change has occurred in funding quantity, though some change can be seen in funding quality: “state support remains central for academic science, though state funding patterns have shifted” (Slaughter and Cantwell, 2012, p. 597).

The Finnish state retains considerable control over the fundings instruments, be they university capitalization, competed project funding, or basic funding subjected to the PBF. This means comparably less autonomous allocation of resources from the perspective of the universities. Furthermore, one might argue that the capitalization of universities in particular, instead of maintaining public funding, moves more of the universities' funding directly into the realm of the financial markets. This exposes universities to market failures (Slaughter and Cantwell, 2012: 602). In this sense, the findings of this article seem to be in line with the findings by Kaidesoja and Kauppinen (2018: 115-116) on Finnish academic capitalism.

Given the context of competing knowledge-based economies, but a lack of new revenue streams, Finnish HEIs are asked to do more with less. Indeed, Raatikainen (2016, pp. 46-48) argues, that the Finnish higher education system is chronically under-resourced. The decrease in resources has negatively impacted staff numbers, which Seuri and Vartiainen (2018, p. 8) note has been comparatively rare in international comparison. Furthermore, according to

Valkeasuo and Holopainen (2019, p. 17), reduction in basic funding has also led to an increase of fixed term contracts; between 2010–2014, 70% of all recruitments have been fixed term contracts (see also Puhakka & Rautopuro, 2016; Puhakka, 2019). More recent data, however, suggests this trend could be turning (OKM, 2022b).

The Universities Act creates its own timeframe after 2010, that rather increases state power in the universities, despite the Act purposefully increasing university autonomy: the MEC has, through its funding model, securely held the reins of the Finnish universities. And the MEC, in turn, is subjected to political changes, which further runs the danger of making the overall status of research funding unpredictable. As seen in the data, Finnish higher education funding grew steadily between 2001 and 2011, but then plateaued, and even dropped between 2015 and 2019, during the centre-right Sipilä cabinet (Figure 3). The figures suggest that for the Sipilä cabinet, the issue of cutting government expenditure in itself was more relevant for improving Finnish competitiveness than innovation policy driven through the universities (Kaitila, 2019). Halting cost-index increases to university funding, which was done specifically in order to cut public sector spending, was however initiated already during the preceding Katainen cabinet (OKM 2018b, p. 5: see Appendix I).

More research into Finnish academic capitalism is still needed. We will outline here three considerations for future research. Firstly, and as noted previously, new funding streams have become available to Finnish universities and academics, but it is not clear from the data to which extent these new funding streams require (commercially viable) collaboration between universities and businesses. If this were the case, it would suggest reductions in public funding could serve academic capitalism by pushing universities to engage in more direct market actions. Further research would be needed to shed light on this possible connection.

Secondly, what is also left missing from this equation is the experience of Finnish academics subjected to the market logic of academic capitalism, under which academics are encouraged to view academic work through a competitive lens, either through a more abstract change in operational culture (Rinne et al., 2014) or through more direct policy guidance and steering (Kallio et al., 2021a, 2021b; Poutanen, 2022a). This suggests that under Finnish academic capitalism it is in the interests of both higher education policy and universities to encourage academics to invest more of their time in competitive funding applications. Arguably, this is problematic in terms of professional autonomy, as applications mean uncertain and competed funding instruments to secure career progression. Additionally, pushing academics to constantly apply for external funding often cuts into academic labour performance indicators (Kallio et al., 2017; Seuri and Vartiainen, 2018). Many academics have found this shift into a culture of permanent applications and project-work draining (Brunila and Hannukainen, 2017), and conducive to conflicting organizational logics and identities (Kallio et al., 2020, 2021a, 2021b; Poutanen, 2022b). The next question regarding Finnish academic capitalism rather relates to how deeply it is impacting the individual logics of academics and professional autonomy.

Thirdly, the development of academic capitalism in Finland has not been noticeably impacted by party-political changes in government – they do not

seem to fall under partisan policy guidance tools. The dimension that seemingly can change based on political parties, is the scale of public funding. Contingent funding has forced many HEIs – but also academics – to be responsive to often politically shifting state interests, expressed through changing emphasis in the funding model. If the overall funding is not increased, performance-based funding becomes merely a mechanism for dividing up scarcity. What's more, future funding models by the Finnish MEC look to further increase the emphasis on performance-based funding (OKM, 2019), which already is at a comparatively high level in Finland (Kivistö et al., 2019). The role of the MEC is instituting an unofficial policy of academic capitalism in Finland thus becomes of central importance in future research.

Conclusion

Academic capitalism refers to market logic permeating universities in various ways. A competitive framework for public funding is to deliver more commodifiable innovations on one hand, but also cost efficiency in the public sector, on the other. The original argument posited by Slaughter and Leslie (1997) that universities have to prioritize their resources – funding – over other concerns also applies in the Finnish context. Arguably the high state involvement in Finnish higher education can be explained by the historical context of the welfare state and the newer, more managerial struggles over university autonomy (Poutanen et al., 2022; Kallio et al., 2021a, p. 51; Jalava, 2012). Finland has had a long tradition of state involvement in science and innovation policy, centrally administrated from the days of the national science and technology council. It makes sense that this centralized authority has been, in a fashion, reorganized at the MEC to guide the universities. This has meant drawing the universities closer to the operational logic of science and technology production, in other words the more market-oriented logic of academic capitalism. HE policy to this effect has been legitimized by the need for constant adaptation to the demands of international competitiveness to avoid placing the future of the Finnish state at risk (Ahlqvist and Moisio, 2014, p. 29).

Given the uncertainty and volatility of global markets, small and export-oriented nations would have to prioritize strategies for economic survival (Nokkala, 2008). This common sense is exemplified by the major political parties in Finland agreeing on the need to reform higher education (Björn et al., 2017; Tirronen and Nokkala, 2009), even if there always is disagreement regarding how to best achieve this. Especially as funding for universities was cut, economies of scale became standard logic of financial survival (Raatikainen, 2020; Seuri and Vartiainen, 2018).

While we agree with Kaidesoja and Kauppinen (2018, pp. 104, 118), who argue that Finnish academic capitalism shouldn't be understood as a deterministic change between absolute states but more as a process of shifting, it also seems that the shift has gathered momentum, at least in terms of policy. Finnish universities are still in the process of transitioning from a system emphasizing the public good of knowledge into one ordered around the market-orientation of academic capitalism. State action and political guidance, despite stated political consensus to resource Finnish universities sufficiently, seems to

emphasize a publicly managed strain of academic capitalism, which embeds competition into the Finnish higher education system on multiple levels.

This has made Finnish universities averse to risk (Koivukangas et al., 2020, p. 30), as the heavy public steering model employed by the MEC leaves little strategic leeway. The market logics for applying for external funding are, as Kallio et al. (2021a) suggested, filtered down to academics through competed, project-based funding mechanisms. The high degree of public steering has led some Finnish academics to determine that their professional autonomy is in jeopardy (Poutanen, 2022a, 2022b; Kallio et al., 2020; Siekkinen et al., 2020). Extant research (e.g. Kallio et al., 2021b; Rinne et al., 2014) has also shown dissatisfaction of Finnish academics with the current direction of HE policy (see also: Kuusela, 2020).

While public funding flows are susceptible to changes in political constellations the higher education sector has become increasingly crucial for the positive development of Finnish R&D investment, linked to enhancing national competitiveness. In a recent government proposal aiming for cross-party support, Finland would seek to increase its R&D investment to 4% of GDP from 2,9% by 2030 as a legislative commitment (HE211/2022 vp; OKM, 2021). Based on the proposal, it is uncertain what share of this R&D investment would go to the universities – and indeed how much into non-competed basic funding. The Finnish strain of academic capitalism has not previously resulted in consistent increases to the funding of public universities, but an increase of competition over scarce funding sources, causing considerable uncertainty in the stability of (long-term) strategy of Finnish HEIs (Koivukangas et al., 2020, p. 32).

The MEC is likely to pull HEIs ever closer with active policy guidance because it can guide the R&D flows of publicly funded HEIs more than it can influence the private sector. As it stands, academic capitalism in Finland does not actively engage with the private sector as much as remain embedded in national competitiveness through state oversight. Through funding instruments the state retains control over national competitiveness, not risking ceding control fully to the markets, but no longer leaving it in the hands of the universities or academics either.

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Appendix

Table 1: Political constitution of Finnish cabinets 2001-2020 (VNK 2022b¹⁰)

In office	Government coalition	Cabinet
15.4.1999 - 17.4.2003	Left-right coalition (SDP; National Coalition; Left Alliance; Greens; Swedish People's Party)	Lipponen II
24.6.2003 - 19.4.2007	Centre-left coalition (Centre; SDP; Swedish People's Party)	Vanhanen I
19.4.2007 - 22.6.2010	Centre-right coalition (Centre, National Coalition, Greens, Swedish People's Party)	Vanhanen II
22.6.2010 - 22.6.2011	Centre-right coalition (Centre, National Coalition, Greens, Swedish People's Party)	Kiviniemi
22.6.2011 - 24.6.2014	Rainbow coalition (National coalition, SDP, Swedish People's Party, Left Alliance, Greens, Christian Democrats)	Katainen
24.6.2014 - 29.5.2015	Rainbow coalition (National coalition, SDP, Swedish People's Party, Christian Democrats)	Stubb
29.5.2015 - 6.6.2019	Centre-right coalition (Centre, National coalition, Finns party)	Sipilä
6.6.2019 - 10.12.2019	Left-centre coalition (SDP, Centre, Greens, Swedish People's Party, Left Alliance)	Rinne
10.12.2019 -	Left-centre coalition (SDP, Centre, Greens, Swedish People's Party, Left Alliance)	Marin

Notes

1. For a historical overview of the developments of Finnish higher education developing towards New Public Management and the neoliberal turn of academic capitalism, see Rinne et al. (2014, p. 217).
2. See e.g. Kaidesoja and Kauppinen (2018, p. 108) and Nokkala (2008) on the predominance of this particular brand of discourse in policy documents.
3. Some have criticized the narrative of Nokia's corporate success being due to the markets alone, given how extensively the Finnish state and society invested in the company's success (Ali-Yrkkö et al., 2000, p. 51; see also Lemola, 2018, pp. 170-171).
4. Trifuljesko (2019) notes that this is in particular a problem for countries placed at the periphery of global markets – like Finland.
5. The tendency of academic capitalism to externalize executive management of universities is noted by Slaughter and Cantwell (2012, p. 594) and Münch (2020, p. 123), and it is noted in the Finnish context also by

Kauppinen and Kaidesoja (2014, p. 30). See Poutanen et al. (2022) and Kuusela (2021) for evidence of increasing centralization and externalization of Finnish university management.

6. It should be noted that although Münch (2020, p. 176) notes making knowledge exclusive through patents and commercial commodification is an important dimension of academic capitalism, the PBF model of the MEC doesn't emphasize patents as outputs (Seuri and Vartiainen, 2018). What is emphasized, however, are *strategic policy goals*: in the MEC's public funding model for 2021-2014 24% of all funding is determined based on policy goals (OKM, 2019).
7. Data from 2011 and 2012 could not be confirmed year-on-year compatible, and thus are omitted from Figure 3. The difference between 2010 and 2013 suggests a low probability of radical change during the “missing” years.
8. It should be noted that calculating exact funding flows can be challenging. Researchers have noted that due to the various public actors in the Finnish system providing particular parts of funding it is difficult to parse together to overall level of funding (Seuri and Vartiainen, 2018, p. 6).
9. The universities are contractually obligated by the MEC – currently for 4 years at a time – to specific performance goals and strategic development of research and teaching profiles, which then serve as basis for distributing funds.
10. The Jäätteenmäki government excluded given its tenure of only 70 days in office before Vanhanen I.