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# The state as an agency in the assetisation of knowledge: the case of the Finnish education export

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## ABSTRACT

The assetisation of education explicates a major shift in how the state understands education. Education is not only an immaterial public good available to everybody but can be treated also as a promotable group of assets. This article discusses the case of a certain period in the Finnish education export. The analysis shows how the Finnish state with its governance tools is actively shaping and transforming education into asset, and through this process of assetisation becomes a certain kind of element in an education asset itself. In this process, the previous nature of education export 'goods' has been transformed to a modern rent-seeking 'knowledge asset', that can produce rent and excess value to both the state and businesses alike. When the state is involved in assetisation, the process is inherently politicised, and is exposed to potentially drastic polity changes.

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Assetisation; asset; state; governance; education export

## Introduction

During the 2010s and 2020s, the Ministry of Education and Culture of Finland planned and executed two influential roadmaps with detailed measures and tools to intensify the education export and widen the revenue base of the state and education businesses alike (Finnish National Agency for Education Decree 2016; Ministry of Education and Culture 2016; National Agency for Education 2020). The concrete measures taken included changes in legislation, among other things: *'The potential for selling our education is huge, but until now our laws have set up obstacles to promoting education exports. Now the barriers are opened'*. Minister of Education Grahn-Laasonen first introduced roadmap activities in 2015 (Ministry of Education and Culture 2010; 2015).

The two roadmaps for education export explicated the (major) shift in how the state treats education as an asset, and extended the concept of education from immaterial public goods available to everyone into a promotable group of assets, chosen through several criteria. The criteria, set by the Ministry of Education, helped shape and transform education into assets worthy of active sales promotion by the state. In this process, the nature of education export 'goods' has been transformed from a 'knowledge product' aligned with any export promotion activities the state may have had, into an actively rent-seeking asset that can produce rent and excess value to both the state and businesses. The evident difference between the two is the asset value of the latter; however, what brings about assets and their value is a question worth exploring.

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Admittedly, the education export and its specific programmes are not new features but have been part of state-led export activities in various forms and rationales for decades (Carnoy 1974; Green 1997; Schatz, Popovic, and Dervin 2015; Slaughter and Rhoades 2004). While such activities and showcasing the high quality of education have been and still are a 'standard' part of state-led export efforts, the questions of education as an asset, how the assets are formed, and how the process of education assetisation takes place are seldom studied, especially in the context of education export. This study addresses this gap in current research by analysing the assetisation of education in relation to the state export programme in Finland. In this analysis, we focus on assets and the active role of the state in asset formation.

In its different manifestations, education export demonstrates the processes of neoliberal governance and steering mechanisms. While education had previously either a minor or a rather passive role in state-driven export activities (Schatz, Popovic, and Dervin 2015), during the 2010s and 2020s, it was elevated to a nation-brand-building activity and an asset of its own right in export activities (Ministry of Education and Culture 2024). By using ministry-level roadmaps, the marked difference from previous export activities is the heightened active role of the state and its governance power in education export; the aim was income revenue through the assetisation of education products. In practice, this translated into a set of criteria for the design, content, and form of education as rentable assets. What has generally changed during these two decades is the intensification of governments' use of new economic engines for revenue streams. These are exemplified in the education sector by EdTech firms' investments in technological and algorithmic tools such as digital apps, platforms, and software.

Techno-scientific capitalism with algorithmic tools is present in all sectors of the economy and society, including education. These tools also changed the functions and modes of operations in the related sectors. In this respect, the tighter control of the Ministry of Education and Culture in Finland can be seen as an anticipatory governance of higher education (Kallo and Välimaa 2024; Lankinen 2007), can be considered an underlying manifestation of neoliberalism. However, at the core of contemporary techno-scientific capitalism are not mechanisms of control, but assets, which, according to Birch and Muniesa (2020), can be owned or controlled, traded, and capitalised as revenue streams, often involving the valuation of discounted future earnings in the present.

This article analyses the contemporary role of the state in activities that shape and transform knowledge into educational assets. The focus is on Finland's national education export programme activities – a 'governmental education export programme, offering Finnish educational know-how and learning solutions globally' (Education Finland 2024). The analysed activities were mainly run by the Ministry of Education and Culture and, more recently, by the Ministry of Employment and Economic Affairs.

The remainder of this paper is organised as follows. The following section presents the key questions addressed, followed by a presentation and theoretical discussion of the core concepts of assets, the assetisation of education, and the role of the state in asset shaping and assetisation. Next, we introduce our data and analyse the assetisation of education exports. We consider the assetisation taking place both in EdTech companies and on the state-owned export platform as the main forum of the asset-shaping activities of the state. In the last section, we summarise the key results and highlight their broad relevance to the production and valuation of knowledge.

## Theoretical and conceptual approach

The major transformations that have taken place in the education sector are best described as attempts to financialise (Klinge et al. 2023; Williamson 2022; Williamson and Komljenovic 2023) and assetise (Birch 2024; Komljenovic 2021) key parts of education as institutional systems, as well as intangible aspects of cultural and intellectual capital. At the general level, an asset can be defined as a tradable resource that an actor owns or controls, with the expectation that it will provide future benefits (Birch 2020; Birch and Muniesa 2020; Golka 2021). Assets are mobilised to

produce value through value creation and extraction processes. In our analysis, these appear as co-creation processes, as we will show later in this article.

The conceptualisation of an asset relates to different research traditions and understandings of assets as a concrete, measurable, and reportable entity that can be monetised; as a more abstract element that may deliver a return to an investor through the assetisation process; or as a metaphorical reference to a useful or generally valuable resource, without specific assetised or monetised value (Célérier, Chiapello, and Jeny 2022; Chiapello 2024). Assetisation is used variably in these conceptualisations, addressing temporal or socio-technical process transformations (Birch and Muniesa 2020; Birch and Ward 2024; Golka 2021; Golka, van der Zwan, and van der Heide 2024), for example, where the future value of assets includes both material and immaterial entities and investments and materialises in rentiership (Birch 2020).

Assetisation presumes a quantifiable character, even from immaterial entities, as well as a relatively homogeneous quality for the entity in question. Birch (2024) notes that assetisation takes place via a dual transformation process: when something becomes an asset – through becoming part of, and in relation to, a broader economic system – it also changes the ways we understand, relate to, and manage that transformed value. This transformation is layered, processual, and social. However, it bears some relation to the objective valuations of the potential projected income from the asset. Therefore, in the transformation, the asset no longer exists in its earlier socio-material form (alone) but simultaneously becomes a ‘value-added’ entity, transformed value, and ‘an asset’ with a socially co-defined valuation. How this ‘something’ becomes assessed and treated after the transformation is an important question.

According to our theoretical understanding of the dual transformation process outlined above, the state is not seen only as an enabler of the assetisation but rather as a shaper and co-creator of assets. In our case, co-creation means that the qualities and assurances brought by the state become immersed in the process of assetisation, and thus become an integral part of the asset itself. An important dimension of this process is the asymmetrical governance power of the state over other participants. Our study participants include universities and EdTech companies.

In the aforementioned process, educational institutions and businesses are transforming the infrastructure of knowledge production and institutional structures to better fit into the platformised model of knowledge production. Therefore, its scalability and potential value in the form of rent or interest also become important sellable intangible items. Not only ‘outside’ organisations such as tech companies that enter the education sector or EdTech start-ups but an increasing number of education institutions are also transforming their core activities into marketable and rentable units and are thus actualising education markets (see also Williamson and Komljenovic 2023).

The growth of higher education markets is closely connected to digitalisation trends (Komljenovic 2021, 2022; Komljenovic and Robertson 2016). The digitalisation and related platformisation of education – an example of several digitalisation projects in the public sector – is often fuelled by rather straightforward assumptions of the public services provided by the state becoming more effective based on algorithmic functions (Poutanen and Kovalainen 2023; Veale and Brass 2019; Williamson, Potter, and Eynon 2019).

Knoll and Fraser (2024) and Williams (2020) also noted that assetisation is not only a story of privatisation but has increasingly become a public sector and public asset story (Williams 2020, 289). In our research context, the complex dependency structure between the state as the co-creator and enabler of various export efforts and agencies (e.g., higher education institutions and businesses) aiming for global education markets with the help of the state, is part of assetisation. For example, as Birch (2019) argues, technoscientific rentier organisations are involved in assessing the actual and potential value of assets, such as intellectual property, and capturing the streams of revenue they are expected to harvest (Sayer 2023). It is thus important to discuss whether the state is, in fact, a rentier organisation based on its education export activities, as discussed by several theorists in relation to neoliberalism and the state (Birch 2018; Sayer 2023).

## Data and methods

By analysing the Finnish education export programme, we show how parts of education are shaped and transformed into assets through active co-creation by the state. The Finnish education export consists of two entities: the education export programme, and, within it, the capital loan company, which is an experiment targeting only the education export. These two entities have been developed in alignment and concert with each other; however, they are separate, but have the same aim of making education a valuable export product. The data consist of education-export-related public documents from 2010 to 2023, such as website materials, public documents, and preparatory materials from the Ministry of Education and Ministry of Economic Affairs; reports published by ministries and by the Prime Minister's Office; public documentation of state brand work and the role of education; and Ministry of Education roadmap reports, news, and media outlets from the Prime Minister's Office, Ministry of Education, Ministry of Employment and Economic Affairs, and National Agency for Education.

A close and critical reading was used in the classification and analysis of the materials to identify how the formation of education into assets takes place, as well as the role of the state in this change. The analysis illustrates how the state, on the one hand, selects and steers the participants of the education export programme, and, on the other hand, participates along with the selected participants in the co-creation of education assets. More broadly, an analysis of empirical materials reveals the active role of the state in the formation of general assets.

Using a detailed collection of reports and policy documents on education export programme activities and export policies from two ministries, the Ministry of Education and Culture and the Ministry of Employment and Economic Affairs, our analysis details how the state, as a powerful hegemonic actor, operates the asset formation in education by participating and co-creating assets for export using its platform for education export.

## The transformation of Finnish education into assetised export goods

For a long time, the export of both educational content and institutions has been promoted under the overarching umbrellas of internationalisation as a common good and a cultural goal, as well as that of education as a business and as a specific nation-state-related economic good and goal (e.g., Ollsen and Peters 2005). The simplistic definition of education export as a means of transferring national intellectual capital has been challenged in several ways over time (Brewis 2023; Kirp 2003; Marginson 2024). This criticism does not dispute the fact that education is, in many ways, nested in and central to sociocultural and political cultures.

### *How education became exportable?*

The global solid and good reputation of Finnish educational achievements, recognised by international measurements such as student assessment (Programme for International Student Assessment, PISA) achievements, has boosted the country's education export efforts since the early 2000s and has also developed into an important theme of its development policy (Juusola and Nokkala 2021; Schatz, Popovic, and Dervin 2015). Certain parts of the education system have been directly coupled to the state's image building through the 'brandification' of education, but both the contents and connections to the state are currently mediated in many ways. In addition to championing PISA, the Programme for International Assessment of Adult Competencies (PIAAC) and Organisation for Economic Co-operation and Development (OECD)-level education comparisons of nation-states have also served this purpose well (National Agency for Education 2020).

The Finnish government took advantage of the excellent national PISA results in the early 2000s, presenting them in the context of the newly established country brand as 'Finland's success story' (Nokkala 2007; Schatz, Popovic, and Dervin 2015, 6). The aim was to build national branding

through high-quality education and promote education as a Finnish export product; (OKM 2016, 2022; Opetushallitus 2020). This export ranged from early childhood education to higher education, as education was considered by the state to be key to economic development, together with nation-state image building (Rautalin 2018; Schatz, Popovic, and Dervin 2015). Therefore, the government linking Finnish public education and education with the export industry is not new nationally or unique compared with other countries. Historically, higher education has been considered an important building block and part of the national identities of Nordic countries (Kuortti 2024), especially Sweden and Norway (Sataøen 2015). The relationship between education and the economy (i.e., education as an enabler of innovation in global competition) has long been embedded in Finland's higher education policy (Kauko, Rinne, and Takala 2018; Schatz, Popovic, and Dervin 2015; Seppänen et al. 2023). In our understanding, the attachment of education to nation-building and nationally constructed international classifications preceded its assetisation.

Finnish Government's Education Export (FGEE) programme was officially launched in 2010. Various ministries made joint efforts and implemented activities to boost the export industry. The main change was a more focused effort toward income-generating activities. The FGEE programme was renewed and revised in 2016 to include a roadmap for 2016–2019. The policy roadmap gathered information on export activities, legislative actions, and ministries responsible for the execution and follow-up of export activities, with measures ranging from foreign student fees to education production in exportable packages. The discourses on nation-state brand building with the help of high-quality education exports were also included (Finnish National Agency for Education 2020; Suhonen et al. 2022).

Following the first roadmap, the Ministry of Education created the second roadmap document, specifically addressing education export. The renewed roadmap (2020–2023) is more systematic than its predecessor. The 2017 closure of the growth programme for education export by Finpro (Business Finland) and the Prime Minister's Office shifted the responsibility for the education export and the export programme to the Ministry of Education and Culture (Oph.fi 2017). The measures outlined in the second roadmap range from the expansion of tuition fees and legislative execution to plans for new state-owned funding instruments for education export companies. In this process, the name of the Finnish National Board of Education was changed to the Finnish National Agency of Education (FNAE) to highlight its agile executive role and accountability directly to the Ministry of Education and Culture. The FNAE coordinated the renewed roadmap programme – the 'Education Finland' export programme – and collaborated with the Ministry of Foreign Affairs, the Ministry of Trade and Employment, and the Prime Minister's Office (Education Finland 2024; Finnish National Agency for Education 2020). At this stage, the tools for the assetisation of education for export were strategically governed by the state.

### ***Transformations of the education export programme***

During its short history, the 'Education Finland' programme was recalibrated twice using roadmaps (2016–2019; 2019–2023) by the Ministry of Education and Culture. In the process, the strategy of the programme was tightened, with a more explicit focus on education export activities, funding possibilities, and criteria for funding. Aligned with the growing emphasis on education export, practical tools aiding export efforts were also added, including loan capital by a state-owned investment company, Oppiva Invest Ltd., established in March 2019 (Oph.fi 2020). Oppiva Invest Ltd. was established as the sole requirement for the assetised education aimed at export markets.

As previously mentioned, education export programmes have also been part of the Ministry of Education's aim to raise the role of quality education and increase its economic value. Indeed, EdTech companies' rapid growth has been visible among Education Finland programme member institutions and businesses (Table 1). Currently, all members of the programme are presented on a webpage governed by the Ministry of Education and Culture.

**Table 1.** Education Export Programme members in Finland, by turnover size and business field, 2023.

Size (turnover)	Education businesses (training, degrees, courses)	EdTech businesses (IT, AI, gaming & programming)	Education institutions (HEIs, vocational inst., & their businesses)	Total
> 500.000€	11	15	40	66
50.000–499.000€	23	7		30
< 50.000€	17	3	2	22
<b>Total</b>	<b>51</b>	<b>25</b>	<b>42</b>	<b>118</b>

The missing economic data from 5 companies relates to change in financial reporting period (3), business closure (1) and HQ outside of Finland (1). Sources: Education Finland member list; individual EF-members' financial information from companies' financial reports, cross-checked with economic data service at <https://www.vainu.io/>.

The majority of the approximately 125 members (in 2023) accepted to the programme consists of universities, applied science universities, and EdTech businesses, ranging from very small start-ups in EdTech to Europe's second-largest multinational media company focusing on digital learning and teaching activities on platforms. Almost all institutions and businesses participating in the state-led export programme are active in the field of educational technology, including teaching and learning materials, apps, games, and a variety of digital solutions. As measured by sales and turnover, the most common technologies are related to teaching and learning materials, university degree education packages, and consulting related to education. All Finnish universities and most applied science universities (40 in total) are members of this programme, some of them directly or through the companies or institutes they own. Very large companies, such as media companies, are still rare among those that export EdTech from Finland, as only 15 member companies had turnovers surpassing EUR 500,000 in 2022.

The education export programme is coordinated and supervised by the Ministry of Education and Culture and the units participating in the programme are selected based on a twice-annual application period. For the nominal membership fee and depending on the company's turnover, the programme offers membership benefits such as advancing virtual and physical visibility in the targeted export markets of Southeast Asia, China, Latin America, the Gulf region, and Central Asia. Additionally, the programme offers meetings with local and national investors, buyers, and partners, as well as marketing support and national and international networking. The support of local embassy services is a type of concierge, 'door opening' service, which is also part of the membership benefits. The multiple state-supported mechanisms reflect the global market for EdTech business, valued at billions of dollars (Ministry of Education 2022).

An asymmetric power relationship is evident in the governance criteria set by the state. Membership in the programme is accepted when institutions and companies fulfil the mandatory requirements of business registers, which follow, amongst others, the code of conduct, have proven track records when it comes to their activities, and can provide at least two international references of their activities. The criteria for membership are first and foremost economic, not content-related. The selected units for the programme are mentioned as 'first-class private companies, vocational institutions and higher education establishments' (Education Finland 2024), while the programme supports 'the best education providers in their growth on the international market' (Education Finland 2024). The Ministry of Education and Culture does not provide public records of the funding targeted and used by those participating in the programme.

The education export case of Finland shows the assetisation of education is processual, consisting of membership acceptance procedures set by the state and culminating in state loan offerings for those accepted into the programme. The state provides trustworthiness, credentials, and validity to educational products and companies. Through co-creation, these features increasingly become part of companies' asset formation and intangible value creation in relation to educational assets. The assets range from digital apps to teaching and learning modules. The education export programme, operating on behalf of the Finnish state, has the power to accept participants, shape their products, and govern their conduct. Therefore, the education export programme shapes the creation of assets,

which takes place under monopolistic rather than market conditions. ‘Education Finland’ is an example of a state-initiated activity where institutions capable of packaging education into serviceable units are invited to market and rent their services globally under the patronage of the state. The state promotes education export as state-guaranteed assetisation and simultaneously speeds up and intensifies asset formation within the educational sector, emphasising the earnings logic of education instead of its other values. The new governance logic also intensifies the state’s active presence in the private sector.

### ***Loan capital company for education export – a brief history***

State-owned and mandated funding company Oppiva Invest Ltd. was established ahead of the policy roadmap for 2020–2023 to boost education exports. In 2019, the ministry, together with the Prime Minister’s Office, nominated the CEO and board for this state-governed ‘special assignment company’, with the main purpose of providing loan capital to companies whose solutions were found, based on evaluation, to be impactful in education and export (Oph.fi 2019). Finland endowed the company with EUR 80 million as equity capital, and the annual revenue of this equity capital created a pool for market-based loans to education export firms (Oph.fi 2019). By the end of 2022, the equity capital of Oppiva Invest Ltd. had risen to close to EUR 90 million according to its balance sheet, but its annual revenue and profit were on a downfall in 2022, after only three years in operation (Vainu 2023).

Oppiva Invest offers equity loans to eligible EdTech companies. The criteria for funding are the ability to ‘produce added value and benefit to teaching and learning environments with special emphasis on professional competence and learning environments’. In addition, economic value and sound cash flow were listed as ‘must have assessable added value and effectiveness; must function at markets and generate sales revenue; the solution must be scalable, duplicable and widely usable in teaching and learning environments’ (Oppiva Invest Funding Criteria 2019; Oppiva Invest 2022).

The typical payback time for Oppiva Invest Ltd. loans was planned to be five to six years. The financial evaluation of companies prior to loan acceptance included assessments of their earnings logic, a detailed repayment plan, and an overall estimate of the future cash flow. Oppiva Invest Ltd. operated under the Ministry of Education and Culture, but the company board made loan decisions independently. In three years, through Oppiva Invest Ltd., the state made 33 financing decisions (totalling EUR 16.9 million) for 19 companies in the education technology sector (Oppiva Invest 2019, 2022). Of these 19 companies, five companies were also members of the Education Finland programme at the time of closure. The export efforts and activities of the financed companies are not publicly disclosed.

In April 2024, Oppiva Invest Ltd. faced new information on decisions made by the new Government of Finland and the Government’s Ministerial Committee on Economic Policy; the investment activities and operations of Oppiva Invest Ltd. were to be discontinued immediately, and no new investments were to be made after May 2024. As we are writing this article, at the end of 2024, the Oppiva Invest Ltd. will shut down, and its capital and ongoing investment portfolio, existing obligations, and assets will be transferred by January 2025 to the Industry Investment Group, which deals with all Finnish industrial investments, ranging from metals and chemicals to high technology. The board of Oppiva Invest Ltd. was changed in the process, and the steering of the public company was transferred from the Finnish National Agency for Education to the Ministry of Economic Affairs and Employment, which now handles the loan portfolio and governs the equity capital of the former Oppiva Invest Ltd.

One of the reasons for the government’s drastic closure decision of Oppiva Invest Ltd. was the aim to effectivise the various types of national capital investments, such as equity of EUR 80 million at Oppiva Invest Ltd. and certain others, by centralising the capital and venture loans to the Finnish Industry Investment Group (Oppiva Invest 2023, 2024). Economic arguments trumped the

educational arguments that highlighted education as a strong and independent brand-building asset for the state. Instead, the government stated that national funds allocated to venture capital investment activities were to become more strongly targeted at return-oriented investment activities and market-based companies (Ministry of Employment and Economic Affairs 2024).

With the government's cooperation, the possibility of investing in the export of educational assets by the Ministry of Education and Culture ceased. Accordingly, the government's decision meant that the Ministry of Education and Culture and the National Agency for Education lost their ability to operate in education export markets on behalf of the state as key equity investors and funders. This decision also changed the financing of education export vis a vis the export of other goods and assets in Finland.

This transfer of financial power from the Ministry of Education and Culture to the Ministry of Economic Affairs and its Industry Investment Group, appointed in June 2023, was a political consequence of the current government's economic policy. The streamlining of the state-governed loan instruments and venture capital was not based on any evaluation of existing instruments, such as Oppiva Invest Ltd., but was focusing on return on any state investment by centralising them under the Ministry of Economic Affairs. Following the government's new efficiency policy, all education export assets competed with all other industries' assets to receive support and loans from state-governed loan instruments and state venture capital.

Relating the Oppiva Invest Ltd. case to our theoretical interpretation of the dual transformation process detailed by Birch (2024) and outlined in our case description above, the qualities and assurances provided by the state become an integral part of the asset itself in the transformation process. Does the shift in political power and its direct consequences, such as the one described above, erase this assetisation transformation? Our interpretation is that a change in the political power balance may drastically change external conditions. Politics was an unknown state during this transformation. It is crucial, however, that in this case, the change in the new government's policy and tools did not extend to eradicating the state's interest in participating in the actual dual transformation process or to the assetisation of education export.

## Discussion and conclusions

The Finnish education export case adds a perspective to assetisation and its nature not as a market-driven or private activity, but as a public sector, or more specifically, a state-initiated, established, governed, and promoted activity. As our empirical case shows, the state, through its agencies, has become a powerful and active agent in shaping and governing the assetisation of education. Furthermore, the state claimed ownership of these processes by financing actors who aimed to export education. Through active ownership and asset funding initiatives, the state also shaped knowledge production during the assetisation process.

Knowledge and knowledge production are shaped by promoting business forms and creating conditions for funding export activities. As also noted by Falkenberg and Fochler (2024), Kampmann (2024) and Tellman, Braun, and Brandl (2024), assetisation is not merely about flows but also about large pools of capital that can be mobilised to promote and support the desired output – in this case, education exports. By setting a strict formula for intangible education as a product, the state warrants that the 'pre-packaging of education' for export is feasible, fulfils the standards of marketable and desirable products abroad, and fits the portfolio of the Ministry of Education and Culture. The standardisation of education enables the scaling effects of export efforts by the state: the asset is sold and simultaneously kept for scaling to new markets, contracts, and deals.

This study argues that the notion of assetisation is crucial for understanding how states may function in shaping the epistemic foundation of education when transformed into sellable and rentable assets. Drawing from the education export case, we show how the state uses its intangible capital-shaping vehicle to mould the assetisation of knowledge. In doing so, the state may also speed up the assetisation process.

Therefore, the state can play a decisive role in assetisation. Specifically, in this process, the state shapes how knowledge and its socio-material existence and varieties are understood in education and society. Ownership power is central in this process. In our example, the state has created and owns an education export platform and governs the companies and institutions it invites to export. The state offers support not available to export companies functioning outside the state-run platform. Activities such as invitation-only meetings, visits and seminars abroad, conventions, and networking get-togethers in embassies and other institutions' locations are part of shaping the assets by the state. The seminars and networking events organised by the embassies show the power of the state as a practical enabler and liaison in export activities. The education export certificate for the members of the platform guaranteed by the state is mentioned in the education export roadmap as one way to 'secure the quality of exporters' activities' and offer them support in their 'market credibility'. By granting the certificate, the state governs both the quality of education exports, and shapes and co-creates its formation into further refined assets.

From the control viewpoint, membership in the education export programme enables the state 'invasion' of market activities of the companies and institutions that receive the export certificate. This strengthens the processes of knowledge assetisation.

In the education export programme, the state strives to create credible capital for firms accepted on its education export platform. In this value creation process, the key assets consist of the 'right' types of education products, which can be imported, scaled up, and presented on the state-owned platform. In the value-extraction process, the asset amalgamates the active state support and educational value of the asset itself. Value extraction is achieved when an asset is rented abroad.

The analysis of the 'rise and fall' of Oppiva Invest Ltd, the specific funding instrument that the Ministry of Education and Culture created for education export, shows how the assetisation of education and its standardised loan procedures and criteria (A+ rating, own capital ratio, etc.) made it easier for the state to categorise education as any export asset. Accordingly, after the specific education-targeted loan system of Oppiva Invest Ltd. was closed, the education export goods would compete with all other industries' goods for the possibility of obtaining capital loans from state-loan instruments and state venture capital. In our interpretation, the shifts and changes in politics, or in this case, the new government and its economic policy, change the processes of dual transformation, but may not be sufficient to erase the entire assetisation process.

The above analysis describes how the assetisation and shaping of knowledge into assets take place when the state interrogates assetisation to boost export income. Knowledge is understood here not as an end but rather as a means for assetisation, shaped by state activities and supported by state-owned platforms. The platform owner's power is actualised during the process of transforming intangible human capital into potential and realised assets. Education export thus exemplifies a more general issue related to the value and variety of the knowledge produced in education. When knowledge is shaped into assets at educational institutions, it becomes primarily understood as a means of assetisation. This transformation necessitates and strengthens the exclusionary processes in knowledge production that shape the understanding of knowledge and its value in education towards one-dimensionality. Therefore, it is highly important to analyse which types of valuable knowledge in education may become disregarded or diminished because of a poor fit with the permeating logic of assetisation. These types may be related to the intrinsic values of truth, ethics, and emancipatory knowledge.

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## Data availability statement

There is no dataset associated with the paper.

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