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Embedding offshore campuses in skill formation in Singapore: From ‘globalising’ domestic higher education to ‘localising’ foreign universities

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ABSTRACT

With operating offshore campuses, universities perform key education and training functions in regional economies worldwide. Few studies have acknowledged universities' expanded role in knowledge and skill formation as both local providers and transnational managers of education and training. Not enough is known about the embedding of transnational universities in local skill formation and varying levels of embeddedness, as well as about the role of hosting states therein and consequences for local economies. This paper addresses this gap in the context of the city-state of Singapore, exploring how skill development at foreign universities has been locally embedded, and why this embeddedness of offshore campuses in local skill formation has changed over time. Empirical evidence is drawn from semi-structured interviews with managers of foreign university subsidiaries. It is found that the Singapore state has changed its role in engaging with foreign universities, from a first phase of importing ‘global’ knowledge in teaching and training to a second phase of strengthening ‘local’ knowledge and skill formation. With being distinctively more embedded than older offshore campuses, recently established subsidiaries perform specifically ‘local’ functions in Singapore’s progressing knowledge-based transformation project. The paper provides better understanding of varying/changing levels of offshore campus embeddedness and the interconnections between changing roles of the state, integration of foreign universities and regional development. A further contribution lies in presenting a conceptualisation of offshore campuses with high levels of embeddedness, helping shed light on the dynamics in local skill formation and in foreign actors’ functions for the regional economy more generally.

1. Introduction

Literature on regional economic development traditionally draws a distinction between institutions that ‘supply’ skills, education and training for the local economy and economic entities that ‘demand’ these locally-available skills (cf. Fuchs et al., 2021). Universities, e.g., are often portrayed as place-based higher education institutions (HEIs), and contrasted from transnationally-operating multinational corporations (MNCs) that set up and exploit subsidiaries abroad. Since the 1990s, however, many governments worldwide have also targeted foreign HEIs to operate subsidiaries and offer transnational education (TNE) programmes on their territory (Kleibert et al., 2020). These offshore campuses strongly focus on providing education and training in various forms – rather than doing basic research or disseminating innovations (Kleibert et al., 2021) – and have academic and commercial partnerships with public and private actors on-site (Schulze, 2021). For

the local economy, foreign universities as transnationally-operating actors started to perform key education and training functions and have become important parts of local skill formation.

This expanded role of universities as both transnational managers and local providers of skill development has recently received some attention by geographic research. It is, e.g., studied how transnational universities are positioned in global networks of knowledge mobility (Gunter and Raghuram, 2018), understanding offshore campuses as infrastructures that broker the international mobilities and immobilities of students (Kleibert, 2022), or emphasising that universities’ TNE operations have generated new, distinctive forms of academic work and mobility (Leung and Waters, 2017; Liu and Lin, 2017: 290). Few studies particularly address questions about TNE programme and curricula localisation, i.e., providers adapting certain programme elements to specifics of local higher education (HE) systems (Shams and Huisman, 2014), about TNE domestication, i.e., international features becoming

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normalised parts of domestic HE systems (Waters and Leung, 2017a), or about the *embeddedness* of offshore campuses in the region, basically in financial terms and with respect to HEI's financial resilience (Kleibert et al., 2023). Not enough is known about the embedding of transnational universities in local skill formation and varying levels of embeddedness, as well as about the key role of hosting states in the integration process and about consequences of high levels of offshore campus embeddedness for local economies.

The city-state of Singapore is a viable example where such an integration of foreign HEIs in local skill formation has taken place since the late-1990s. Over the same period of time, Singapore has successfully upgraded its training and education system as well as its economic structure towards knowledge-based and higher value-added-capturing sectors. These transformations have been achieved via substantial efforts of the Singapore state and top-down national policies of attracting foreign direct investment (FDI). This paper takes Singapore's project of knowledge-based economic transformation including restructuring of education and skill formation as the regional context of research, in which the encounter of strong nation-state engagement and organisations' transnational activities can be well observed, particularly in the HE sector. With its 23 founded and 19 still operating foreign university subsidiaries, Singapore offers the second largest possible sample size for an offshore campus hosting city (behind Dubai) (Kleibert et al., 2020). Singapore's constitution as a city-state allows considering the local skill formation system and the state's territory as congruent and spanning the national and all sub-national scales. This helps bypass a common point of criticism of investigations into organisations' transnationalisation. Geographers Iammarino and McCann (2018: 367–368) criticise that many of these studies not only basically reduce geographical issues to the question of whether firms' subsidiaries are either located on the parent versus the overseas side of a country's border, but also that the definition of 'home' versus 'foreign' is largely ignorant of geographical scale and makes no difference of a country's size or distance. Scrutinising the development of foreign HEI subsidiaries in one common local hosting context enables moving beyond researching single offshore campuses or transnational universities as case studies, and backgrounding many – potentially impacting – variables such as variations in institutional specifics of differing skill formation systems between countries, regions or cities (cf. Busemeyer and Trampusch, 2011).

Two key research questions are addressed: how has skill development at foreign universities been locally embedded? And why has this embeddedness of offshore campuses in local skill formation changed over time? While the paper analyses the integration of skill development at offshore campuses in local education and training systems at the HEI and provider level, the bigger research objective is to look through discontinuities and shifts in the embedding processes at the connections with governmental instruments and state ambitions of advancing economic development. With empirically exploring the varying/changing levels of foreign universities' embeddedness in skill formation, the paper contributes to substantiating geographers' knowledge on the interconnections between the role of the state, the integration of foreign universities and regional development. With the help of a conceptualisation of offshore campuses with high levels of embeddedness, the paper provides further understanding of the dynamics in local skill formation and in foreign actors' functions for the regional economy more generally.

The analysis builds on a qualitative methodology and focuses on foreign universities' offshore campuses in Singapore as one specific provider form of TNE programmes. As a start, offshore campuses that were in operation in 2019/2020 were identified via an extensive online desktop research, browsing search engines, leaflets and university websites. All subsidiaries have been included in the sample that are organised as corporate entities, linked to one single clearly identifiable foreign HEI and require some form of investment in physical presence – such as running at least an office and having permanent staff on-site. Then detailed semi-structured face-to-face interviews of approximately

one hour each were conducted with the senior executives of 15 out of these 19 identified subsidiaries in 2019, covering around 80 percent of the target population. The subsidiary managers' views and reflections on current and past institutional strategies as well as their encounters with Singapore state authorities provide the main empirical evidence for the analysis. The interviews were treated with personal anonymity, audio-recorded¹, transcribed verbatim, translated to English when necessary, and coded. This main data was supplemented with observations made during visiting 14 of the campuses in person, as well as with background knowledge from interviews conducted at subsidiaries' parent HEIs, parent HEIs' subsidiaries in other locations and local institutions that provide foreign HEIs' degree programmes in Singapore. The insights from the interviews, observations and online sources were triangulated, which helped fill missing information or numbers on programmes and campuses as well as sketch the backgrounds of the transnationally operating parent HEIs and of the local HE and training system in Singapore.

The remainder of the article is structured as follows. Developing the conceptual framing of the article, the following section reviews literature on regional economic development, local skill formation as well as the role of the state and transnational universities therein. The third section sketches the progression of Singapore's knowledge-based transformation project and the (developmental) state's shifting engagement with FDI and transnational providers therein. The fourth section then analyses the nexus to the transformed embeddedness of offshore campuses in local skill formation and varying functions of foreign HEIs for the regional economy. The paper closes with discussing the key findings and contributions, before suggesting some management and policy implications.

2. Conceptualising the state and foreign universities in local skill formation and regional development

2.1. States' engagement with transnational economic activities and universities

Geographic research on regional development and economies' transformation under the conditions of global interdependencies has laid emphasis on the relations between regional economies and global production processes. Here, the ongoing importance of the state and its institutions is underlined, e.g., for creating processes of *strategic coupling* (cf. Dawley et al., 2019). Strategic coupling refers to the capturing of greater economic value in territories while domestic industries upgrade their position within a global production network (cf. Coe et al., 2004; MacKinnon, 2011). Yet, states' considerations for attracting MNCs and FDI often go beyond capital accumulation and upgrading. States mostly adopt various – interrelated and multiply combined – roles for impacting or exercising control in global production networks (Horner, 2017). They often take the roles of buyers and facilitators. Through public procurement, e.g., states purchase from private corporations on the large scale because public or state-linked organisations require certain input products for their own operation or for basic social service provision. States' facilitating activities are yet not necessarily restricted to implementing an attractive business environment for FDI (cf. Dicken, 1994). 'Depending on whether they support home or foreign firms and global lead or smaller-scale firms, the precise facilitative policies may take on varying forms' (Horner, 2017: 7), such as negotiating favourable trade policies and promoting multilateral global or bilateral regional agreements on the liberalisation of trade. However, for protecting critical infrastructure or strategic enterprises, states often also take the roles of regulators and producers. Many states heavily regulate foreign producers' access to specific sectors such as those with relevant sensitivity

¹ One interviewee did not agree to the recording. In this case a memory protocol was created and included in the analysis.

in political or economic terms and in need of particular treatment. Also, states are strongly involved in (co-)production and (co-)provision via state-owned or government-linked companies, in particular in sectors in which command and advancement of capacities is planned or where private firms' investment is rather unlikely.

Studies focusing on concrete economic activities introduced the concept of embeddedness to analyse the relationship of economic actors to their space-time context (Hess, 2004). One specific form is territorial embeddedness, referring to economic actors' integration in their spatial environment on the site of their location. When, e.g., investing and setting up subsidiaries abroad, economic actors are – with varying levels of embeddedness and 'strategic localization' (Coe and Lee, 2013) – being anchored in places and territories on-site, which has also been coined the firm-territory nexus (cf. Dicken and Malmberg, 2001). Another form, network embeddedness, describes economic actors' relationships with other individual and collective actors and organisations (Hess, 2004). The metaphor of the network is taken as an analytical compromise to acknowledge that transnational economic actors draw from both bounded capacities of regions and fluid flows of capital, people, commodities and knowledge. The economy can hence be seen 'as a set of interlocking and overlapping networks; economic objects are the result of the interaction between these networks' (Thrift and Olds, 1996: 321). This network embeddedness can refer to local and *trans*-local as well as to intra- and inter-firm relationships, and is cognate with understandings of MNCs as networks within networks (Dicken and Malmberg, 2001).

Literature taking a view into the regional economies widely agrees that on-site available human capital and skilled labour contribute positively to economic development (cf. Asheim et al., 2017). So, in addition to engaging with FDI and (transnational) firms for supporting regional economic development, a key task of the state is to ensure education provision locally and/or coordinate several public/private actors' education and training 'activities for the purpose of improving the local skill base' (Fuchs et al., 2021: 296). Such *skill formation systems* largely differ between countries, often because of varying institutional contexts and diverging, historically-developed constellations of funding actors (Busemeyer and Trampusch, 2011). In terms of local skill and labour pool formation, governments have traditionally considered education institutions as location-based providers of academic education and/or practical training (cf. Fromhold-Eisebith and Werker, 2013). Since the 1990s, however, policy-makers in some selected economies have increasingly incentivised foreign universities to invest and set up subsidiaries in their territories, so-called offshore campuses. They have also formulated ambitions of forming so-called international education hubs by integrating foreign actors in the field of education and research (Knight, 2011). Depending on context, governments' goals behind attracting foreign providers may be satisfying demand for HE of (parts of) the local population, extending the capacities of domestic HE systems as well as developing HE as an economic sector that draws in – export – revenues via attracting fee-paying international students.

Recently, these restructurings in education and training systems have been explored in relation to states' quest of developing into *knowledge-based economies*, in particular in Southeast Asia and the Arab Gulf (Olds, 2007; Ewers, 2016). In terms of knowledge-based economic transformation, varying expectations to foreign universities may exist. Whereas hosting governments may hope for direct innovation impulses to local industries and economic effects, most offshore campuses actually conduct only little research or third mission activities that could drive these processes (Kleibert et al., 2021). Offshore campuses can, thus, rather be seen as importing platforms of skills and knowledge in TNE, upgrading local HE and training systems and upskilling the local workforce. For this, governments apply existing state-specific industrial and FDI policies in the HE sector, which strategically couple local with global development for 'globalising' domestic HE and regional economies (Schulze and Kleibert, 2021). Government-provided infrastructures and designated territories that support foreign campus

establishment, such as education cities or zones, are state tools to import and retain knowledge in the form of skilled labour (Rottlieb and Kleibert, 2022). Yet, many aspects of these offshore campus-attracting and -integrating state strategies and of these embedding processes need to be understood in more detail. It is largely underexplored in what offshore campuses are actually being embedded, how exactly governments utilise offshore campuses' – varying – embeddedness, and to what extent states further develop their embedding strategies over time.

2.2. Universities' transnational activities

Beyond investigating the state perspective, geographers increasingly study the perspective of universities as key players in global HE and TNE. Here, a central focus is put on exploring universities' function in configuring international academic and knowledge mobilities (cf. Gunter and Raghuram, 2018). Universities do not only attract foreign – fee-paying – students to the parent campus, but with offering TNE programmes abroad also aim at recruiting those students that would not move internationally yet want to study for foreign degrees. Offshore campuses are, thus, infrastructures that broker international student mobilities and immobilities (Kleibert, 2022). With regards to the international mobilities of academics, universities constitute central nodes in global networks of knowledge production (Jöns and Hoyler, 2013). With starting to operate subsidiaries, universities also generated a new distinctive form of academic mobility: so-called flying faculty are staff from other locations of the parent university that temporarily visit the offshore campus, e.g., for intensive block teaching in TNE programmes (Leung and Waters, 2017).

Some literature investigates universities' operation of offshore campuses through a management lens, often reflecting organisational models against those known from MNCs. Using flying faculty, e.g., very much resembles the international, intra-institutional, often temporary transfer of employees utilised by MNCs 'to succeed in economic processes of internationalization and market penetration set in a metropolitan context' (Beaverstock, 2011: 241). Via expatriation or secondments, MNCs stretch knowledge embodied in highly-skilled employees across time and space, serving for the acquisition and dissemination of expertise as well as the transfer of the cultural ethos from the headquarter to the subsidiary (cf. Iredale and Appleyard, 2001). Conceptualisations of the 'truly international company' (Fuchs, 2022: 109, referring to term by Perlmutter, 1969: 12), in which headquarter and subsidiary strongly synchronise their activities, also informed the promotion of what is dubbed the global (business) school model. Some HEIs claim to operate a network of campuses at the same hierarchical level with 'rotation' of students and faculty between the centres of the global economy (Meyer et al., 2004: 112). These HEIs try to position themselves as (born-)global institutions that provide supposedly universally-applicable degrees to a (future) global business elite.

Views following this specific notion of TNE and transnational universities derive that the success of offshore campuses 'depends on a smooth transplantation of their educational product in their host societies' (Liu and Lin, 2017: 290), and local adaptations should thus be avoided as far as possible. Contrastingly, some aspects of universities adapting TNE programmes at offshore campuses is comparable with firms' 'strategic localisation' of products and services (cf. Coe and Lee, 2013). As a 'local response' to regional market specifics within a 'globally integrated' product management practice (Shams and Huisman, 2014), some universities, e.g., strategically 'localise' parts of programme curricula or employ 'local' teaching staff. While this process of embedding locally may cause extra efforts and costs for offshore campuses, it may sometimes be necessary for complying with local regulations, for more context-sensitive student experiences, or for making the product more relevant to local consumers (cf. Salt and Wood, 2014; Healey, 2018).

Little literature exists that explores the integration and embedding processes of foreign universities in regional contexts beyond these

management points of view on programme localisation. With a focus on British TNE programmes in Hong Kong, which are franchised and/or (collaboratively) delivered by local community colleges, [Waters and Leung \(2017a: 240\)](#) observe that ‘international education is being domesticated’ via students internalising their TNE student identities as failures to secure places in local universities. [Miller-Idriss and Hanauer \(2011: 192\)](#) point out that the combination of ‘regional trends’ with universities’ drive for operating TNE programmes constitutes a necessary condition for the emergence of offshore campuses in the Middle East. According to the authors, these specifics of the Middle East are its regional identity, economic and demographic transformations, HE systems’ inadequacies, as well as political and cultural issues. Yet, these ‘regionally-sensitive’ approaches for explaining TNE development at specific locations, such as in the Middle East or in Hong Kong, hardly helps understand why offshore campuses have flourished in other regional contexts as well. Nor does it shed light on why offshore campuses with varying levels of embeddedness exist in the same context, such as ‘replica campuses’ and ‘branch campuses’ ([Miller-Idriss and Hanauer, 2011: 185](#)). Though also predominantly focusing on financial aspects, [Kleibert, Schulze, Rottleb and Bobée \(2023\)](#) provide a more open exploration of offshore campus’ embeddedness with a global scope. Comparing TNE providers worldwide that tap local funding sources and those that build more strongly on their connections to outside of the region suggests that regional embeddedness can contribute to greater financial resilience of offshore campuses. During the Covid-19 pandemic, e.g., HEIs’ transregional embeddedness in international student mobilities was suddenly disrupted, which drastically cut offshore campuses’ revenues from foreign tuition fees.

For this paper’s exploration of offshore campuses’ embedding in local skill formation, [Kleibert, Schulze, Rottleb and Bobée’s \(2023\)](#) conceptualisation of providers’ regional versus transregional embeddedness is taken as the base. It lists partnerships, governmental funding, faculty and students as four dimensions of embeddedness. Yet some adaptation and extension are required for shedding more light on the role of the hosting state within embedding processes and on potentially varying levels of embeddedness. [Fig. 1](#) presents an analytical framework based on the pre-considerations from the literature, outlining the relatedness of the role of the state, offshore campus embedding and regional economic development. Shifts in states’ instruments of incentivising subsidiary development is placed upstream in the analysis, and includes all financial aspects such as cost and risk reduction through subsidies or public–private partnerships. Unpacking the changing embeddedness of offshore campuses in local skill formation is placed in the middle of the analysis, and explored along three dimensions: (1) who is skilled and trained, (2) what are students trained in and skilled for, and (3) how are students skilled and trained? Understanding the differing functions offshore campuses perform in the regional economy is placed downstream and derived from the analysis of state engagements and offshore campus embedding.

3. Singapore’s state project of knowledge-based economic transformation

This section pinpoints the broader regional context of this research, i. e., the knowledge-based economic transformation project of the city-state of Singapore. First, an overview of the development of Singapore’s economy and training and education system is given. By unpacking the changing engagement of the Singapore state with foreign HE providers and with FDI more generally, the section then maps out two distinct phases of knowledge-based economic transformation and incentivising of foreign universities’ subsidiary establishment.

In contrast to its natural resources-rich and domestic market-equipped neighbours, which for great parts long relied on import-substitution industrialisation, Singapore encouraged FDI-driven development of export industries relatively early after independence from the United Kingdom in 1963 and from Malaysia in 1965 ([Al-Fadhat, 2020](#)).

From the late 1970s to the early 1990s, as other Southeast Asian economies, Singapore’s manufacturing benefited particularly from Western – and Japanese – economies’ restructuring in terms of the globalisation of capital. Western states’ reconfiguring was meant to favour global competitiveness instead of national development and entailed considerable relocation of manufacturing functions to lower-wage economies ([Carroll, 2020](#)). However, strong reliance on FDI backfired for Singapore during the Asian financial crisis from 1997/1998, when capital was quickly withdrawn from Southeast Asia and, e.g., causing all-time high unemployment rates in Singapore. As a reaction, the city-state government set the target to even more strongly gear the economy with the knowledge-intensive sectors ([Olds, 2007](#)) and embraced the knowledge-based economy as the central theme for reforming several fields of public policy ([Sidhu, 2005](#)).

This state project of knowledge-based economic transformation included substantial restructuring of Singapore’s training and education system, which has early been identified as a key strategic sector with great potential to support economic development and industrial diversification ([Olds, 2007](#)). Historically, foreign education providers have long played a role in education and skill formation in Singapore. Supplementing domestic institutions, the on-site provision of foreign HE and training programmes in Singapore emerged in the 1980s, when local institutions started to offer so-called external programmes in collaboration with foreign awarding universities ([Ziguras, 2003](#)). While this franchise form of TNE had been growing constantly, the Singapore government started to encourage foreign HEIs establishing physical presences in the mid-1990s. Consequently, 19 foreign HEIs have set up offshore campuses in Singapore since 1999.

[Fig. 2](#) maps these offshore campus foundations in Singapore over time, giving the numbers of newly set up subsidiaries per year (see number of square elements). The figure further distinguishes the offshore campus foundations based on how the Singapore state has incentivised foreign universities to set up these subsidiaries (see colour of square elements). The timeline indicates that the Singapore government changed its stimulus tools in the mid-/late-2000s, from creating incentives via direct subsidising or free trade agreements to forging private–public partnerships between domestic and foreign universities (see shift from grey-hatched to grey-coloured elements). This shift becomes even more visible when scrutinising the two ‘phases’ of Singapore’s knowledge-based economic transformation project, during which the state characteristically engaged with transnational actors in education and training and with FDI more generally.

A first phase started in the late 1990s when selected foreign universities received considerable financial support by the Singapore government for setting up offshore campuses in the city-state. This funding has ranged from direct subsidies to favourable land or rent deals, and has been channelled through strategic policy-reforming programmes such as the World Class University programme from 1998 or the succeeding Global Schoolhouse programme rolled out by the Singapore Economic Development Board in 2002 ([Olds, 2007](#)). Foreign campus foundations were moderated by bilateral free trade agreements. The Singapore–Australia Free Trade Agreement from 2003, e.g., explicitly includes the aim of facilitating cross-border mobilities in education services for enhancing bilateral trade and investment relationships more generally, and indirectly grants special regulatory status² to some Australian universities in Singapore ([Australian Government, 2003](#)). It is important to

² The case of an Australian university in Singapore can be seen as exemplary for special concessions granted through the free trade agreement. Its offshore campus is the only foreign provider in Singapore that is allowed to carry the term university in its name. As foreign providers are said to create reputational advantages through clearly visible symbolic links to their parent institution’s brand (cf. [Shams and Huisman, 2012](#)), it is not unlikely that the foreign branch’s special status translates into competitive advantages on the Singapore market.

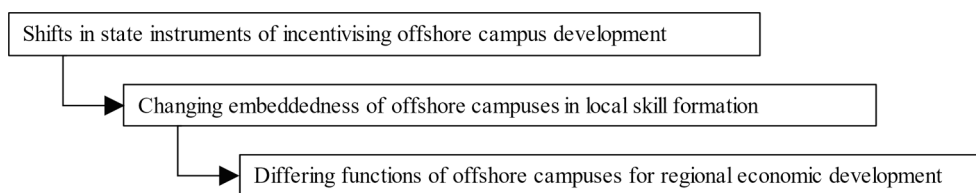


Fig. 1. Concept map for analysing dynamics in the role of the state, offshore campus embedding and regional economic development. Own compilation.

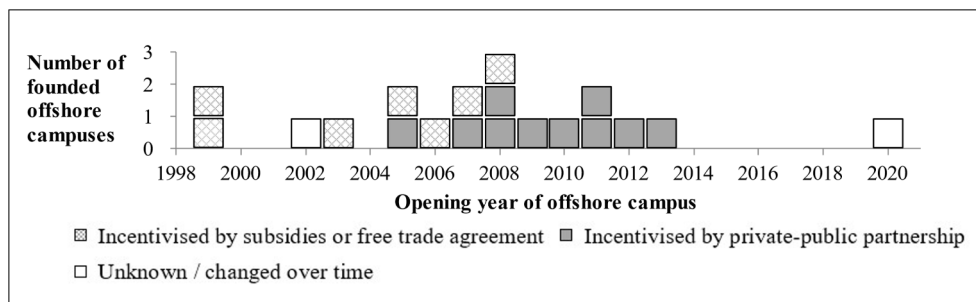


Fig. 2. Number of offshore campus foundations in Singapore by form of state incentivisation (as retrospectively researched in 2019/2020) and year. Campuses closed down or out of operation in 2019/2020 are not included. Own compilation.

note that offering TNE programmes in Singapore has been regulated by the state in a market-accelerationist manner (Mok, 2011). On the one hand, the Singapore state has taken a strategic direction to systematically develop HE as a market and industry, and provided the central policy instruments to drive forward TNE provision in the city-state (Mok, 2008). It introduced a relatively liberal regulatory framework at the macro-scale, which, e.g., does not require accreditation of foreign degrees by central local authorities. Foreign providers, which are locally constituted as corporate entities, are potentially able to transfer HE service products across borders without formal necessities to costly localisation (cf. Shams and Huisman, 2014). But on the other hand, Singapore's Ministry of Education micro-assesses each foreign programme on a case-by-case basis for approval or denial (Mok, 2008). This form of market liberalisation and deregulation of private HE may arguably appear selective, in particular in the light of that Singapore has not made education commitment under the multilateral General Agreement on Trade in Services to reduce restrictions on market entry for foreign providers (Ziguras, 2003).

During this first phase of Singapore's transformation project, the government operated as a buyer of foreign teaching and training services, and as a facilitator of cross-border trade in knowledge-based education services in the region. One key goal of incentivising offshore campus development and TNE provision in this way can be found in the import of explicitly 'global' knowledge, e.g., on business-making or financial services (cf. Beaverstock, 2002). This ties in quite well with Singapore's aim of repositioning as a global city and centre for knowledge-oriented service sectors, for which it increased its efforts in the late-1990s. Singapore's project of global city formation was not only fostered by its advanced development trajectory as a regional centre for trading, the service sectors and MNCs, but also by superior resource endowment that has been mobilised through the political capacities and legitimacy of the developmental (city-)state (Olds and Yeung, 2004). This is further linked to Singapore's repositioning within the labour structures in the greater supra-national region. Since the 1970s, the division of labour in Asia Pacific had become more differentiated and Singapore's labour-intensive industries increasingly came under pressure by neighbouring economies with considerably lower costs for land and labour. So, for retaining global competitiveness, the Singapore government initiated the Sijori Triangle project, which was officially launched in 1990 (Al-Fadhat, 2020). Sijori was intended to combine the

transborder region of Singapore, Johor (Malaysia) and Riau Islands (Indonesia) as one coherent economic zone, which creates complementary specialisations in production with beneficial outcomes for all of its parts. For Singapore, this territorial complementarity allowed sustaining its management and service function via offshoring land- and labour-intensive economic activities to the adjacent regions (Revilla Diez et al., 2019). Thus, 'the Triangle is a clever remedy for a city-state that grew from export-processing but now aims at occupying higher rungs of the international division of labour without losing its regional competitive advantage. And reterritorializations – of capital, of land and, above all, of workers' bodies – remains the key' (Sparke et al., 2004: 495).

A second, partly overlapping phase of knowledge-based transformation started in the late-2000s, entailing that foreign education and training providers were strongly incentivised to set up offshore campuses in close partnership with local public HEIs. It is central here that even though the national universities have been formally privatised and governed as corporate entities, marketisation and incorporation of public HE in Singapore are rather management-driven than financially and include ongoing strong state funding for the national universities (Mok, 2011). Reforms of HE, which envision education as services, can be understood as following Singapore's 'model of state capitalism and a broader rationality where government behaves as if it is a private corporation engaged in a quest for efficiency and productivity' (Sidhu et al., 2014: 122). Recently, the Singapore national universities have not only become dominant players in providing advanced knowledge and skills in the city-state but also in the education market, which has been expanding far beyond Singapore's territorial borders and serves students from the greater supra-national region. This upgrading of domestic universities can be seen as a counterpart to a phasing out of foreign campus promotion in Singapore. Many of the offshore campuses from the second phase have been set-up for limited timeframes, having recently been announced to be terminated or to be taken over by their Singapore public partner over the next years.

For this second phase, the Singapore state has changed its engagement with FDI, more strongly regulating foreign providers' access to HE as a critical sector in knowledge and skill formation, as well as steering domestic HEIs as (co-) producer of skills and TNE services in the greater region. This ties in quite well with a strategic shift in Singapore's economic policies that has been taken in the 2000s as a response to an

identified lack of formulas for sustainable and innovation-driven growth (Chong, 2007). For the long run, the city-state aimed at moving beyond predominantly importing talents and knowledge via MNCs and efficiently adding intermediate processes in global value chains. Via fostering independent, local creation and utilisation of new knowledge as well as upgrading domestic skill formation capacities, the city-state aimed at sustaining its position at the upper part of labour division (Kiese, 2006). The government considerably increased spending for education as specified in the New Economic Strategy from 2001 as well as expenditures for research and development and funds to promote technology-oriented start-ups with the Science and Technology Plan in 2005 (Kiese, 2006). The upgrading of government-linked HEIs is very much in line with government's promotion of Singaporean capital and trade venturing across a greater regional market. In the early 2000s, e.g., Singapore proposed the ASEAN Economic Community as a regional governance regime, which should enable the creation of an integrated regional market 'as an important new scale of accumulation for Singaporean capital' (Al-Fadhat, 2020: 187) and Singapore's (government-linked) companies to grow into mayor regional and global players.

4. Embedded offshore campuses serving new regional needs in Singapore

This section takes the two phases of knowledge-based economic transformation and incentivising of foreign universities' subsidiaries as the vantage point, and scrutinises the changing integration of offshore campuses into education provision and skill formation in Singapore in more detail. For this, the section foregrounds examples of skill development at offshore campuses in Singapore that illustrate that more recently established subsidiaries are distinct from those from the first phase. The two campus generations differ along three dimensions: (1) who is skilled and trained, (2) what are students trained in and skilled for, and (3) how are students skilled and trained? The more recently established campuses have a high level of embeddedness in local skill formation and perform new, rather locally-specific functions in Singapore's advanced project of knowledge-based economic development.

Table 1 outlines all foreign HEIs that operated offshore campuses in Singapore in 2020. The left column provides details on the parent institutions concerning legal status, disciplinary focus and other campus locations worldwide. All possible backgrounds of HEIs can be found here, including public/private, fully-fledged/specialised institutions with university/college/school status and single/various offshore campuses worldwide. The right column adds information on the Singapore subsidiaries, giving the official names under which they are listed and the focus of the degree programmes offered in Singapore. The profiles of some subsidiaries in the right column differ considerably from their parent institution in the left column, indicating that offshore campuses often specialise in specific disciplines and programmes for setting up in a new regional context and integrating in the local education and training system. It is worth exploring these instances and varying levels of 'localisation' in more detail, especially via scrutinising the differences between the two campus generations that were set up during the two identified phases of Singapore's transformation project.

4.1. Upskilling medium-qualified segments of the local labour force

The two campus generations differ in terms of whom is skilled and trained at these institutions. Most of the younger-generation offshore campuses in Singapore recruit and train groups of students that are distinct from those at other (foreign) HEIs. Here, a move towards increasingly attracting 'local' students can be observed, understood as students who were already residing in Singapore before starting the study programme and who were already within the Singapore education system. At bachelor level, many younger offshore campuses strongly build on directly recruiting from local institutions, e.g., by offering options to seamlessly top-up Singapore polytechnic diplomas to university

Table 1

Foreign higher education institutions (left column) with offshore campuses in Singapore in operation in 2019/2020 (right column), institutions and campus locations alphabetically ordered. Own compilation.

Foreign higher education institution	Offshore campus in Singapore
01 Curtin University • Public university with technology focus • Campuses in Australia, Dubai, Malaysia, Mauritius, Singapore	Curtin Singapore • Degrees in business or health sciences
02 DigiPen Institute of Technology • Private college with game design focus • Campuses in Singapore, Spain, USA	DigiPen Instit. of Techn. Singapore • Degrees in computer science, game design or system eng.
03 Duke University • Private university, fully-fledged • Campuses in Singapore, USA	Duke-NUS Medical School • Degrees in medicine or biosciences
04 École hôtelière de Lausanne • Private college with hotel management focus • Campuses in Singapore, Switzerland	EHL Campus Singapore • Degree in intern. hospitality management
05 ESSEC Business School • Private business school • Campuses in France, Mauritius, Morocco, Singapore	ESSEC Asia-Pacific • Degrees in global business or executive educ.
06 INSEAD • Private business school • Campuses in Abu Dhabi, France, Singapore	INSEAD Asia Campus • Degrees in global business or executive educ.
07 James Cook University • Public university, fully-fledged • Campuses in Australia, Singapore	James Cook University Singapore • Degrees in business, tourism, IT, educ. or psychology
08 Murdoch University • Public university, fully-fledged • Campuses in Australia, Dubai, Singapore	Murdoch Singapore • Degrees in business or psychology
09 Newcastle University • Public university, fully-fledged • Campuses in Malaysia, Singapore, United Kingdom	NUI • Degrees in engineering
10 Massey University • Public university, fully-fledged • Campuses in New Zealand, Singapore	SIT-Massey Programme • Degree in food technology
11 SP Jain School of Global Management • Private business school • Campuses in Australia, Dubai, India, Singapore	SP Jain Center of Managem. Singapore • Degrees in global business or executive educ.
12 Technical University of Munich • Public university with technology focus • Campuses in Germany, Singapore	TUM Asia • Degrees in engineering or logistics
13 The Culinary Institute of America • Private college with culinary arts focus • Campuses in Singapore, USA	The Culin. Instit. of Am., Singapore • Degree in food business management
14 The Glasgow School of Art • Public art school • Campuses in Singapore, United Kingdom	The Glasgow School of Art Singapore • Degrees in communication or interior design
15 Trinity College Dublin, University of Dublin • Public university, fully-fledged • Campuses in Ireland, Singapore	SIT-Trinity College Dublin Programme • Degrees in radiation, occupational or physio therapy
16 University of Glasgow • Public university, fully-fledged • Campuses in China, Singapore, United Kingdom	Uglasgow • Degrees in engineering or computer science
17 University of Liverpool • Public university, fully-fledged • Campuses in Singapore, United Kingdom	UoL • Degrees in criminology and security
18 University of Manchester • Public university, fully-fledged • Campuses in Brazil, China, Dubai, Singapore, United Kingdom	Manchester Business School Singapore • Degrees in global business or executive educ.
19 Yale University • Private university, fully-fledged • Campuses in Singapore, USA	Yale-NUS College • Degrees in liberal arts

degrees, sometimes via shortened study duration of only two years. An offshore campus executive annotates that their students often have less-privileged social backgrounds and work towards the foreign degree as an alternative education route to the high-charging private schools and selective national universities. As many students come with some vocational training or practical work experience, the international programmes also help them catch up on the basics of academic knowledge and education, which they did not get access to before.

While relying on these standardised student recruitment procedures is relatively convenient for many of the younger offshore campuses to fill courses at undergraduate level, it entails challenges for introducing postgraduate programmes. One subsidiary manager talks about difficulties to stream their bachelor students into consecutive master programmes or doctorates, which could in principle be offered at the offshore campus yet require new – mostly international – student recruitment. The executive claims that Singaporeans' strong orientation towards employability on the local labour market would account for low demand for postgraduate education among local students. The manager annotates:

'Local students often do engineering and quit after the bachelor. In the worst case they then go into banking and finance. Or they after all go into some engineering but don't do the master, because it costs them two years of time, they need to pay money, and the delta they get in their later salary is not worth the extra effort at the end of the day.'

Many of the bachelor students at later-established offshore campuses obtain double degrees with the Singapore Institute of Technology (SIT), a national, strongly government-linked HEI that only recently gained university status. With precisely streaming a selected group of students into these undergraduate programmes, the Singapore state has taken control over whom should be equipped with doses of foreign HE and training: it is the medium-level-educated and -trained segment of the local labour force that is targeted for upskilling. Targeting local, medium-qualified students is a turn away from older-generation offshore campuses' self-formulated ambition of generating a global business elite, e.g., by equipping them with the necessary cultural and social capital in the Bourdieusian sense. This, to some extent, reminds of what [Waters and Leung \(2013\)](#) noted for the Hong Kong context, where TNE programmes are often catered for students that did not manage to directly enter the public universities and for whom foreign providers present the only chance to get an HE degree. However, TNE in Hong Kong is rather detached from local universities, serving for increasing 'the number of young people participating in higher education *without* – crucially – expanding the number of places available at local universities' ([Waters and Leung, 2017a](#), 237; emphasis by authors). Contrastingly to the Hong Kong context where foreign providers 'seem to have entered the [...] education system almost by stealth' (p.238), the Singapore state explicitly places the skill development at the younger-generation offshore campuses inside domestic public universities for strategic reasons.

4.2. Providing specialists in (regionally-specific) critical economic sectors

The two generations of offshore campuses in Singapore further differ in what their students are trained in and skilled for. This can particularly be read from the actual programme contents at the HEIs. Younger offshore campuses tend to focus on teaching subjects, disciplines and skills that are only marginally covered by other education and training providers in the city-state. The University of Liverpool's subsidiary, e.g., teaches a programme in Criminology and Security, which does not exist in similar form at other HEIs in Singapore and worldwide. While the programme is principally based on more general sociology modules that similarly exist at the parent campus, its security part is newly drafted in Singapore and is tailored to address context-specific challenges: such as piracy in the South China Sea, which has only become pertinent with

Singapore's economic integration in the greater region. This specialisation of taught curriculum and skills at younger offshore campuses is often flanked by the selection of programmes that fit to specific sectors of the city-states' economy. The Glasgow School of Art, e.g., globally renowned for its critical fine arts education, teaches rigidly-structured programmes at its Singapore presence, which are very much oriented towards the local design industry, and places great importance on their graduates' future employability in Singapore's economy.

This adaptation of curricula and skill development at younger offshore campuses to the socio-political challenges and economic needs of the city-state, is strongly advocated by the Singapore government and enforced by rather strict state regulation of (foreign) HE providers. An executive manager, whose parent institution is rather oriented towards the technical disciplines, mentions that at some instance regulatory authorities required the offshore campus to draft and offer nursing courses at very short notice. Complying to these changing regulations poses substantial challenges to both the offshore campuses and their parent universities, as on-site developed curricula and programmes may not be congruent and fitting with other campus locations. As an offshore campus manager puts it:

'[Here in] Singapore, it's not difficult to talk to the people [of the government authorities], it's [rather] whether are we able to customise it to meet their convenience and their corporate needs. That is always the challenge, because they will be developing a course at our university, and they would have to think at whether is it worth it to just develop it for Singapore, which may not be transferrable to other centres.'

Pushing forward providers' localisation of programme and skill development is very much in line with Singapore's political-economic model of the developmentalist city-state, as a central focus lies in supplying suitably-equipped and trained professionals to those economic sectors that are short of skilled labour and prospectively create growth and innovation. It also partly presents a turn away from the global school model, as which some of the older-generation offshore campuses in Singapore try to position themselves and which strongly promote the supposedly universally-applicable knowledge, e.g. on global business-making, transferred by their programmes. This idea that academic knowledge can lossless be captured, stored and conveyed in TNE and transferred from one campus location to another is highly disputable ([Waters and Leung, 2017b](#)).

4.3. Strengthening training expertise in local institutions and of local teaching faculty

An observable trend with regard to how students are trained and equipped with skills at offshore campuses in Singapore is that younger subsidiaries tend to have comprehensive learning and training infrastructures in-house and on-campus, such as specialist libraries, training labs or practice workstations. Mostly funded and provided by the foreign universities' public partners, these facilities are often nested within the domestic partner institutions' campuses. The Singapore subsidiary of The Culinary Institute of America is an example for this. Located on the campus and inside a building complex of local Temasek Polytechnic, the foreign institute operates a fully-equipped pastry and restaurant, which are completely catered by students of food business and catering management, and used for practical on-job training. Foreign subsidiaries' move towards conducting training modules in-house is often accompanied by increasingly hiring employees for the actual teaching and training tasks on local contracts and terms. Offshore campus managers in Singapore indicate that this staff 'localisation' may not necessarily be solely based on financial considerations, even though travel expenses can be saved by not flying in staff from the parent campus. Singapore's job market is characterised by high labour costs, so recruiting from the local labour market may also be spurred on by administrative-managerial reasons. Employing Singaporean residents

can, e.g., save foreign subsidiaries inconveniences with getting working visa or with incompatibilities in social security systems. It can help operate more self-sufficiently and autonomously from the parent institution on the ground, and allows more flexible adaptation to changing local circumstances.

Via the close entanglements of local publicly-funded HEIs with the younger offshore campuses, the Singapore state has become a supporter and driver of subsidiaries' turn towards in-house training and local staffing practices. This integration of work and training expertise in local institutions is strongly connected with Singapore's recent ambition of strengthening domestic skill and knowledge formation capacities and favouring the upgrading of its local HEIs over importing expertise from foreign providers. A manager of a foreign university subsidiary in Singapore reflects on his ambivalent situation:

'Because we started [this undergraduate programme partnership with a national university a few years ago], we've been ramping up the numbers, so in 2021 we'll be at sort of steady state with just over 1,000 students across our six programmes. [...] That's good and that's our bread and butter, if you like, that's where we get most of our income to deliver, to support our operation. A downside to that you could say would be you're working with a partner institution which is a young and growing institution in Singapore. It wouldn't be unreasonable to think at some point in the future that they might say, "Well, actually we've grown up now, we can do this ourselves, thank you very much, it's been nice knowing you, you can go home." That is possible.'

Relying on hands-on skill development in-house rather than on internships in MNCs for equipping students with practical experience, as well as having teaching and training conducted by locally residing staff rather than by short-term fly-in faculty can be interpreted as an abandonment of the typical distinguishing features of international university campuses from other HEIs. Some managers of older offshore campuses, e.g., not only emphasise their proximity, close relationships and social networks with MNCs in Singapore, but also praise their flying faculty model for underlining the 'international' character of their university. Students would associate faculty from the parent university with the reputation of the foreign brand, supposedly preferring being taught by the same professors as at the parent campus. This corresponds with common views that in the flying faculty model embodied knowledge is 'far more prevalent' [...] than when a franchise model is used' (Waters and Leung, 2017b: 273). However, it seems that new-generation offshore campuses with high levels of local embeddedness rather prioritise exposing their students to context-specific knowledge, which is embodied by local training and teaching staff.

5. Conclusions

Since the late-1990s, various foreign universities were integrated in the local skill formation system of the Singapore city-state. This paper has found that in these embedding processes the Singapore state strategically changed its role and instruments over time. In a first phase, the import of 'global' knowledge in teaching and training was in the foreground, being directly state incentivised by buying teaching and training activities from foreign universities' subsidiaries via subsidisation or by facilitating cross-border exchange of education services via free trade agreements. A second phase rather reflects a turn towards strengthening 'local' capacities of knowledge and skill formation, for which foreign universities were incentivised to forge partnerships with domestic public HEIs. Here, the state has strongly regulated HE as a critical sector for skill development, as well as started to (co-)produce teaching and training services in TNE for upgrading local knowledge production and for exporting HE to a greater-regional and global market. Another finding is that with this strategic shift, new 'localised' foreign university campuses were established, which have a distinctively higher level of embeddedness in skill formation in the city-state than

older offshore campuses, and perform new functions in Singapore's progressing knowledge-based economic project. By educating and training 'local' students, they upskill medium-qualified segments of the labour force. By providing locality-specific skills and programme contents, they train specialists for critical sectors of the local economy. And by running training and teaching activities at shared in-house facilities and with 'local' teaching faculty, they help upgrade the skill development expertise in local education institutions.

By helping better understand how dynamics in the role of the state, offshore campus embedding and regional economic development are interrelated, this paper makes two contributions to debates on (foreign) universities in regional transformation. Firstly, the paper explains how and why states' interactions with FDI and foreign providers in the HE sector change with progressing regional economic development, allowing making statements on offshore campuses' differing/shifting functions in local skill formation and, with it, in the regional economy. As observable in many countries with education hub ambitions (cf. Schulze and Kleibert, 2021; Rottlieb and Kleibert, 2022), foreign universities are often ascribed the function of 'globalising' regional development, economic actors and parts of the labour force. Yet, with states' efforts to transition to new phases in knowledge-based development projects, new functions are given to later-established offshore campuses in local skill formation. These new functions are strongly connected to addressing regional challenges and the adapted needs of the local economy, hence 'localising' foreign universities and allowing a conceptualisation of offshore campuses with high levels of local embeddedness. While the concrete form and conditions of this later-phase localisation are necessarily Singapore-specific, the role of the state and its utilised instruments are not (cf. Horner, 2017). For embedded offshore campuses, the (city-)state acts as a strict regulator that sets specifications in terms of programme design and staff employment. The state is further a co-producer of TNE via enticing foreign universities into partnerships with government-linked domestic HEIs, which relieve student recruitment and co-fund teaching and training infrastructures. This shift in instruments for localising foreign universities in the Singapore context can serve as a role model for other economies that have attracted foreign university subsidiaries yet struggle to adapt offshore campus integration to needs and challenges that emerge with progressing economic pathways.

As a second contribution, the paper provides empirical evidence for the dynamics and varying levels of foreign universities' embeddedness within one regional context. With the focus on offshore campuses' integration in local skill formation, the empirical analysis has combined and concretised considerations on TNE programme localisation, which are less empirically substantiated (cf. Shams and Huisman, 2014), and on providers' regional embeddedness, which are rather static as well as situated at a more general and less context-sensitive level (cf. Kleibert et al., 2023). Empirically exploring offshore campuses with varying levels of embeddedness opens up an alternative perspective to common notions of TNE as international programmes that are – only in few aspects and if necessary – adapted to local circumstances, and of global universities as supposedly 'truly international' actors (cf. Meyer et al., 2004). Offshore campuses can be set up as embedded institutions from the beginning on, which provide both locally-constituted skill development and the reputation and 'qualities' of the foreign programmes that supposedly 'include "world-class education", studying in English, gaining international exposure and skills in critical thinking and innovation' (Leung and Waters, 2017: 1282). There is indication that running offshore campuses with high levels of embeddedness requires smaller business acumen and financial risk-taking from the foreign university, e.g., because the greater fit with the needs of the local economy likely entails easier student recruitment or lower facility costs. However, it may come with new challenges that are rather unknown to foreign universities, such as little freedom in developing autonomous institutional strategies and fewer options in programme design as well as strong dependence on local partner institutions and governmental

actors.

With a history of entangling FDI and MNCs as well as foreign labour and knowledge in its economic development project (Beaverstock, 2002), the Singapore context has served well for shedding more light on regional embedding processes of foreign HEIs as both transnational managers of knowledge and skill production and local providers of education, training and skills. Because of the Singapore city-state's specifics, the design of this research can of course only be limitedly applied to studies in other dissimilar contexts, such as in broad territorial states with federal structures in Southeast Asia (e.g. Malaysia) or in less advanced economies of the Global South. The observed dynamics in offshore campus embedding, however, allow some extent of generalisation and find validity beyond the Southeast Asian city-state. There is indication that what this paper has conceptualised as the offshore campus with a high level of embeddedness may be an empirical phenomenon with a limited lifespan. While some of the foreign-domestic partnership campuses in Singapore were set up for a limited period of time from the beginning on and planned to be taught out after some years – e.g., the University of Liverpool's joint programme with the SIT – other offshore campus terminations were rather unexpectedly announced to the general public – e.g., as of Yale-NUS College, a liberal arts school jointly run by Yale University and the National University of Singapore (Redden, 2021). Such as embedded offshore campuses have emerged with the progression of states' knowledge-based development projects, they may also become obsolete and disappear with further advancement. While this research has unpacked offshore campus embedding processes in Singapore, similar transitions from clearly-identifiable foreign to fully-'domesticated' institutions (cf. Koch, 2014) will likely be observable in other subsidiaries-attracting countries as well. It will probably also occur in Qatar or China, yet in context-specific manifestations and for differing economic, political and social reasons.

These insights from the Singapore context help formulate some advice for management and policy-making more generally. For strategists in university management, on the one hand, developing offshore campuses with high levels of local embeddedness holds a mixture of sticks and carrots offered by the hosting state. In offshore subsidiary development in the HE sector, power asymmetries may be in the process of shifting from the parent organisation to the investment-recipient region. This more strongly exposes transnationally-operating universities to changes and re-assessments in states' strategies, requiring more carefully weighing the greater objectives of HEIs' internationalisation and offshore campus development. For governments, on the other hand, this research suggests that the embedding of offshore campuses can effectively be used as a policy tool for addressing economic and socio-political challenges. One of the most relevant adjusting screws can be found in how the state incentivises the establishment and operations of offshore campuses, and hence supports and regulates their funding: particularly public-private joint-ventures have proven to be effective for steering the embeddedness of foreign providers and localisation of programmes. It is further recommendable to re-evaluate these partnerships' contributions to local skill formation, and adapt their modification to new economic developments over time.

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Data availability

The data that has been used is confidential.

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