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Institutional diversity and state-led development: Singapore as a unique variety of capitalism

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ABSTRACT

This paper provides a critique of economic freedom indices through a case study of Singapore's unique political economy. We argue that these metrics reflect an ahistorical approach to development, obscuring real-world institutional diversity. By instantiating a single ideal of laissez-faire and proceeding to measure the magnitude of economic freedom in nations, these indices implicitly treat capitalist varieties as mere defects of laissez-faire rather than as distinct alternatives.

Consequently, owing to the discursive power neoliberal metrics enjoy in country-benchmarking, the varied roles that states play are overlooked in development discourse. Singapore's unique political economy and approach to development is one such institutional innovation being neglected. Through its strategic and calibrated control over factor markets, the Singapore state is ranked as a small government by economic freedom indices while simultaneously enjoying significant influence over economic activity. The wider implication is that nations' unique historical constraints push them onto diverse development trajectories.

1. Introduction

Singapore is one of the success stories of 20th-century development, having undergone industrialisation and rapid economic growth in a brief period. Notably, Singapore's development stands as a highly interesting case because it seems to challenge numerous theories, especially liberal expectations that capitalism and political freedom go hand in hand (Hayek, 1944; Friedman, 1962). Singapore has managed to maintain a relatively open economy but has sustained a closed political system, a rare combination in the world of nations.

While its status as an authoritarian country is clear, what has been subject to greater disagreement is the role of markets in its development. On one hand, market liberals believe that Singapore's development reflects the "power of economic freedom", which should be emulated more widely in world development (Tupy, 2015; Hanke, 2016). Pro-market scholars also advance this belief in academic works (Easterly, 2014; Lomasky and Teson, 2015; Panagariya, 2019). A key inspiration behind such arguments is the use of economic freedom indices (EFI), which rank Singapore and Hong Kong as the freest economies in the world (see Appendix 1). In contrast, scholars of East Asia have generally argued that Singapore is understood as a mixed economy that resembles the developmental state model, which combines industrial policy, high state capacity, and reliance on performance legitimacy (Low, 1998; Huff, 1995; Chu, 2016). For heterodox economist Ha-Joon Chang (2011a), Singapore's use of industrial policy is so extensive and successful that it constitutes an "effrontery to neoliberal economics".

The purpose of this paper is to explain the nature and implications of this disagreement, i.e., how Singapore can be simultaneously held as an exemplar by two very different schools of thought. What does this disagreement imply for the study of comparative economics? If the developmental state theorists are right, that Singapore's development is a result of the long arm of the state rather than the invisible hand, it would pose a grave challenge to market liberalism, since Singapore sits atop their rankings. However, if market liberals are right, then it might dismiss the wider developmental state tradition of which Singapore is part. This is a high-stakes issue that remains relevant. One simple answer to this disagreement may simply be that of ideology, where scholars see in Singapore what they wish to see and therefore frame it according to their preferred narrative. After all, what is considered a free market is often a political determination (Chang, 2011b, ch. 1). While we do not contend with this explanation, what must be acknowledged is that there is an established development literature employing EFI to establish the

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welfare-enhancing benefits of economic freedom (Stroup, 2007; Hall and Lawson, 2013; Gehring, 2013). Rather than portraying them as ideological, this paper examines their deeper assumptions.

1.1. Argument

This paper argues that Singapore's political economy constitutes a highly unique variety of capitalism which cannot be accounted for by market liberals' use of economic freedom indices due to their ahistorical and homogenous view of economic freedom. We show that the Singapore state has managed to construct a unique and hegemonic structure of state control arising from its control over the factor markets of land, labour, and capital, which has allowed it to maintain its great degree of control over both the economic and political realm. Its control over these *strategic nodes* allows it to have a "small government" while still being highly interventionist. We also present new evidence documenting the persistent dominance of government-linked entities in Singapore's political economy. These mechanisms have allowed Singapore's authoritarian capitalist institutions to persist even when other East Asian developmental states have democratised in recent decades.

Yet, Singapore has been treated as a bastion of economic freedom by many market liberals. This is exemplified by Economic Freedom Indices (EFI) which consistently rank Singapore very highly, despite its unique forms of intervention. We argue that such an evaluation is reflective of a reductive view of state-market relations where nations, regardless of their institutional context and unique circumstances, are benchmarked against a single ideal of laissez-faire. One may fairly expect those espousing the laissez-faire ideal to be sensitive to the different *forms* of state-market arrangements rather than simply the *magnitude* of measurable economic freedom. However, the case of Singapore demonstrates that they are not. As a result, the diverse ways in which states intervene and shape market outcomes are not considered, and the unique power relations within which markets are embedded are obscured.

Such a view is contradicted by the Varieties of Capitalism literature, which establishes that there are diverse forms of capitalism. The existence of such alternative models supports the argument that the reductive view of market liberals as expressed in EFI is not merely an issue of calculational matters or a lack of data. Rather, it is grounded in the deeper issue of whether such varieties are distinct variants in their own right or mere defects of the laissez-faire ideal. As such, we argue that these economic freedom indices perpetuate the misleading view that there is one form of capitalism and thus one track to development success that apply universally regardless of local contextual factors.

1.2. States and the political economy of numbers

Our argument has implications for two pressing issues: First, our appreciation of the role of states in economic development, and second, the discursive power of metrics and country-benchmarking that the "political economy of numbers" literature has stressed.

Historically, states have played an important role in development, whether through industrial policy, technological investment, or even the creation of the very institutions needed for development (Chang, 2002; Polanyi, 1957). This has been especially significant in the East Asian context, in which Singapore is an archetype (Huff, 1995; Wade, 2018; Haggard, 2018; Carney, 2018). Since the end of the Cold War, state capitalism is resurgent, and today constitutes a strong institutional contender (Schmidt, 2009; Kurlantzick, 2016). Moreover, states might play a positive "market-shaping" or "market-enhancing" role (Mazzucato, 2016). Yet, EFI perpetuate the neglect of such considerations by assuming away institutional diversity, impoverishing development discourse. Countries may need specific types of interventions or policies suited to their local contexts, but may instead miss out on them if alternative institutional arrangements are portrayed as dysfunctional defects of a single ideal.

We accept that EFI do account for institutions by measuring institutional quality: specifically, the rule of law and property rights protections. We also acknowledge the many improvements to EFI calculation over the years (see Heckelman, 2002; Ram, 2014; de Haan et al., 2006). The state is accounted for insofar as its interventions reduce a nation's ranking. Nonetheless, EFI remains a crudely reductionist portrayal of capitalism since it collapses state-market relations into a linear continuum of more or less state intervention. By placing the *magnitude* of economic freedom the centre stage of analysis, this approach obscures the real-world dimensions of capitalism, where institutions diverge and exhibit complex *forms.* While there is a fundamental essence that unites all capitalism, there are nonetheless "structurally dissimilar" properties that distinguish various forms from each other (Hodgson, 2015, 2016). This in turn means that capitalist systems may be fundamentally divergent, even if they have the same core properties of property rights and market resource allocation. For example, Singapore and Hong Kong, consistently ranked by EFI as the freest in the world, are nonetheless institutionally divergent. The former resorted to a state-led approach to development while the latter adopted an entrepreneurial path (Yu, 1998). Such institutional divergences cannot be accounted for by an approach insensitive to context.

All this would not be a big deal if these indices were contained in academic silos. However, such indices enjoy a demonstrably privileged position in development discourse and practice. The "political economy of numbers" literature has shown that the widespread use of indices in country-benchmarking often privileges particular political discourses, especially those aligned with neoliberalism, because they present themselves as neutral evaluators and enjoy an appearance of authoritative expertise (Fougner, 2008; Broome and Quirk, 2015; Mügge, 2020; Broome, 2022). Not only do they misrepresent contentious ideals as natural solutions, the use of metrics in country-benchmarking also constitutes an exercise of indirect power in policy discourse by policing what constitutes best practices (Broome et al., 2018). Despite the extensive analysis of a range of metrics in country-benchmarking, EFI have yet to receive similar scrutiny. This paper seeks to address this alarming lacuna in the literature.

We highlight from the outset that this paper makes no claims about the calculations used to measure economic freedom. Rather, our argument is focused on a deeper issue of how the social embeddedness of institutions and market policies measured by EFI are abstracted away, which obscures the inescapable varieties of real-world capitalism and developmental trajectories. Our argument therefore draws from an established literature on the deficiencies of neoclassical principles in economics, which neglect the institutional intricacies of economic organisation (Hodgson, 1998). Accordingly, EFI maintain the problematic assumptions of "ontological" and "epistemological universalism" in neoclassical economics where all economic processes are seen as similar and comparable, rather than being structured by the particularities of time and place (Kenny and Williams, 2001; Kitson, 2005).

This paper is structured as follows. The first section will review the market liberal scholarship on economic freedom, particularly its overwhelming use of economic freedom indices (EFI) grounded on the ideal type of laissez-faire. Here, we show that the state is treated as a black box, which is ironic given its concern of state power. We demonstrate that in reality, a state's character of control is often rooted in unique circumstances. In this spirit, the second section shows that the Singapore state enjoys a unique character of control that is rooted in its strategic control of the factor markets of land, labour, and capital. Such control has allowed Singapore to be ranked as very free by EFI while being a uniquely interventionist developmental—or even entrepreneurial—state. We provide evidence of persistent economic intervention through data collected on government-linked entities in Singapore, based on more than 290 annual reports.

2. Institutional homogeneity in economic freedom indices (EFI)

Market liberals argue that greater economic freedom contributes to development and the achievement of a wide range of aspects of human well-being, such as gender equality, subjective happiness, environmental quality, and political liberty. A central feature of such arguments is the use of Economic Freedom Indices (EFI), which are metrics that measure the degree of economic freedom in nations and rank said nations. The leading variant, the Economic Freedom of the World Report (EFW), operationalises the concept of economic freedom through five indicators (Appendix 2). Nations are ranked according to the size of government, extent of regulation, degree of free trade, degree of sound money, and the protection of private property rights by law. There are other variants besides EFW: the Index of Economic Freedom (IEF) by Heritage Foundation is essentially similar and collapses these points into four areas, and the Property Rights Index by Property Rights Alliances focuses only on the institution of private property, both physical and intellectual.

Such metrics use a neoclassical ideal type of laissez-faire against which all nations are benchmarked. It is explicitly stated by the Fraser Institute (2022, p. 2) that the:

> The EFW measure might be thought of as a measure of the degree to which scarce resources are allocated by personal choices coordinated by markets rather than centralized planning directed by the political process. It might also be thought of as an effort to identify how closely the institutions and policies of a country correspond with the classical liberal ideal of a limited government, where the government protects property rights and arranges for the provision of a limited set of “public goods” such as national defence and access to money of sound value, but little beyond these core functions. T*o a large degree, a country’s EFW summary rating is a measure of how closely its institutions and policies compare with the idealized structure implied by standard textbook analysis of microeconomics.* (emphasis mine)

Market liberals do not necessarily believe that all nations are steadily marching towards this ideal. Many have distanced themselves from naive "end of history" arguments. In fact, the recent global average of economic freedom has declined. Nonetheless, EFI still rank nations against a limited government ideal. The less a state interferes in an economy (related to the first, third, fourth, and fifth components of EFW), and the more private property rights are protected by law (second component of EFW), the higher ranked and thus more "successful" the country is.

The serious problem with such metrics in country-benchmarking is that they are discursively presented as natural and rational despite their contested political origins (Broome et al., 2018; Mügge, 2020). Ranking nations based on their conformity to the ideal of laissez-faire implies that all countries can and should conform to that ideal. Granted, this implied imperative may not require countries to conform to the ideal entirely, but only in certain ways. Whatever the case, values which the laissez-faire ideal embody are championed by the ranking, chief amongst them being minimal government. More interventionistic systems are thus presented as *defects* of the laissez-faire ideal. Such discursive representations have been noted by scholars writing on the political economy of numbers. Broome and Quirk (2015) note that metrics and country-benchmarking have a “capacity to create the appearance of authoritative expertise on the basis of forms of quantification and numerical representation”. Similarly, Fougner (2008) writes that the competitiveness indexing by the World Economic Forum allow neoliberal reforms, through an exercise of Foucauldian governmentality, to be seen as natural policy responses states should adopt.

The perpetuation of such assumptions that are often unacknowledged is undesirable because they are at odds with the evidence. East Asian capitalism, despite sharing essential traits common to all capitalist economies, tends to be embedded within collectivist and Confucian norms (Hundt and Uttam, 2017). Southeast Asia exhibits even greater capitalist diversity, with institutional development shaped by varied colonial legacies, ethnic influences, indigenous cultures, and networks of clientelism and patronage (Carney and Andriesse, 2014; Moore, 2018).

These diverse capitalist varieties cannot be simply treated as mere defects of a limited government ideal, but are distinct variants in their own right. Politics is embedded in particular places and times, and such historical embeddedness leads to divergent state-market arrangements and development trajectories (Zysman, 1994; Hall, 2016). This is not to say that the limited government ideal of EFI is undesirable—more economic freedom may indeed contribute to welfare—but the possibility that nations may innovate their unique combination of state and market elements that *work best in their own contexts* is not considered. The narrative perpetuated by such influential statistics may discourage states from taking necessary actions for economic development in a pursuit of textbook ideal.

After all, innovations in governance are common throughout history. Nations have always configured their governance in diverse ways to meet local challenges and have conceptualised these arrangements by their own standards rather than the binary of big vs small government (Polanyi, 1957; Blyth, 2004; Stahl, 2019). Additionally, despite the rise of neoliberalism, states have not always embraced *laissez-faire*, but have innovated a range of alternatives such as *faire faire* (have market actors do) or *faire avec* (do with market actors) (Schmidt, 2009). Accordingly, a model that is grounded on a single limited government ideal and which then proceeds to measure how countries conform to it, is unable to accommodate the reality that there may not be a settled equilibrium in governance. Therefore, EFI ends up perpetuating an outdated view of state-market relations reminiscent of a Cold War mentality which bred “the implicit assumption underlying the idea of a homogenous capitalism, the notion that all capitalist economies are fundamentally the same” (Baumol et al., 2007, p. vii).

Deviations from laissez-faire capitalism are lumped together as inferior anti-capitalist or socialist defects. In fact, when confronted with state capitalism, the market liberal response is that it is "yet another form of rent-seeking", where such exogenous interventions deviate the system from the naturally ideal laissez-faire (Aligica and Tarko, 2012). Yet, ever since the end of the Cold War, the debate is no longer about capitalism vs socialism, but between varieties of capitalism. The debate today operates under the shadow of the challenge posed by political meritocracy and state capitalism, most prominently represented by China (Bell, 2016; Kurlantzick, 2016). This raises further questions on just how helpful EFI are. Capitalism is already treated as the norm in most countries; there is no need to tell them that they need to be capitalist. The real question for many developing countries is what combinations of capitalist institutions they see across the world that apply to their own circumstances.

We now provide caveats. It would be unfair to characterise market liberalism as wholly insensitive to institutions. Notably, some market liberal scholars adopt an interpretive outlook, emphasising not only the institutional environments that influence human action, but that of culture and ideas (Lavoie, 2005; Boettke et al., 2008; Storr, 2013; McCloskey, 2022). Some market liberals also situate state development in a historical context (Johnson and Koyama, 2017). However, it should be stressed that the economics profession remains wedded to a neoclassical paradigm insensitive to the institutional context of human action (Kitson, 2005; Hodgson, 2015). The argument of this paper is directed against *market liberalism as expressed through EFI,* which is reflective of precisely this neoclassical paradigm.

Also, it must be granted that EFI does in some ways incorporate institutions. The first is that institutional quality, i.e., that of the rule of law and property rights, are being measured in their methodology (see Appendix 2). The second is that there are also recent variants of such metrics that go beyond economic liberties but include also political liberties and culture. For example, the Cato Institute has released the Human Freedom Index (HFI), which attempts to integrate political freedom into the measurement by employing 82 indicators of freedom. It has also released the Global Index of Economic Mentality which measures whether people have an "interventionist mentality" and expect government to "do more".[1] By incorporating aspects like politics and culture, the wider environment that influences individual decision-making is being considered.

However, the problem remains that these market institutions are being measured along a more-or-less-free unidimensional scale. For example, quantitative scores, based on expert opinion, are given to measure how strongly property rights are protected in each country. While this is praiseworthy, the deeper reality being obscured is the fact that these institutions are embedded in specific social-cultural-historical contexts, which introduces some element of incommensurability. By abstracting away such embeddedness, EFI inadvertently treats nations as if they could converge onto a single natural state of laissez-faire by moving up the rankings (see Hodgson, 2016 for an understanding of natural state assumptions in economics). The possibility that there are multiple, divergent, and distinct forms of capitalism *existing in their own right* is not considered.

Varieties of Capitalism (VoC) scholars have shown that not only is capitalism manifested through divergent and distinct forms, the divergent clusters that arise exhibit their own sources of comparative advantage which *cannot be aggregated along a linear scale* (Hall and Soskice, 2001; Crouch and Streeck, 1997; Aoki et al., 1997). Liberal market economies have their own comparative advantages, but so do coordinated market economies, etc. (Hall and Soskice, 2001; Amable, 2003; Feldmann, 2018). East Asian capitalism, by virtue of its strong state-society linkages, might enjoy higher state capacity, even if it may lag in innovation outcomes (De Meyer, 2014; Hundt and Uttam, 2017). In other words, there are unique implications and trade-offs flowing from respective varieties, results which cannot be reduced to a unidimensional analysis of more or less intervention. Applied to development, it means that nations often forge their own unique development trajectory rooted in local historical constraints.

Thus, the problem here is not a matter of improving EFI's calculational methods. In fact, we can accept them for what they are, with their goal of measuring conformity to the laissez-faire ideal. The crux of the matter is that EFI are rooted in a single ideal of laissez-faire which then proceeds to rank nations according to the *magnitude* of how closely they fulfil it. The varied institutional *forms* in capitalism are ignored and thus treated as mere defects of laissez-faire. Understandably, all metrics require some abstraction. Yet, to abstract away a crucial characteristic of the subject of study—in this case, the diversity of institutions—is to do the very subject a grave injustice.

By abstracting away contextual factors, EFI research achieves usefulness as an aggregate metric to discover large-N relationships between measured economic freedom and a range of welfare indicators. The trade-off is that it cannot illuminate how market institutions are configured in diverse ways. While we may measure the magnitude of economic freedom across nations, their unique social contexts (within which economic freedom is embedded) cannot be placed on a single scale. Two countries with the same EFI scores may nonetheless be of vastly different types. Even if the United States and Japan were to have the same EFI scores, we would expect Japan to have more hierarchical firms and stronger protections for workers due to its adherence to a more collectivist form of capitalism (Witt, 2014). This trade-off is a serious one, as it can lead to certain capitalist forms—like that of Singapore's state capitalism—to be misclassified and to be discursively presented as inferior to the universal ideal of laissez-faire.

Once cultural differences are considered, the institutional distinctions between capitalist varieties are greater. Since there is no common yardstick to judge all cultures, cultural differences introduce analytical incommensurability. Take the institution of property, which although universal to most human societies, is nonetheless a custom rooted in local meanings and social constructions (Wilson, 2020). So even if private property is common to all capitalism, how this institution is interpreted and structured is incommensurable across cultural contexts. Consequently, the irreducibly manifold and sometimes incommensurable dimensions of capitalist varieties recommend a thick description approach to uncover institutional details (see Chamlee-Wright, 2011; Skarbek, 2020 for such an approach).

2.1. Varieties of capitalism and character of state control

Both institutional economics and Varieties of Capitalism imply that state power has unique peculiarities that require comparative institutional analysis. A basic premise of VoC is that state-market relations, and thus state power, differ from context to context. A liberal market economy model may envision a more circumscribed role for the state, while others place the state as a central economic actor, etc. Accordingly, the institutional arrangements of a nation's political economy affect the place and power of the state, and hence its character of control over society. Most ironically, it was the development economist Peter Bauer (1969, p 84) himself who expressed the inadequacy of statistics in capturing this character of control:

> These political results or corollaries of state control of economic life depend largely on the closeness and the types of state control of economic life, matters which cannot be inferred simply from conventional statistics of the size of the public sector. For instance, government expenditure may be comparatively small, and yet government control over the economy close if there are many state trading monopolies, or if there is extensive licensing of economic activity. (Conversely, even if government expenditure, as a proportion of the national income, is substantial, this need not imply close control over the economy, if the expenditure is on the performance of the familiar traditional functions of government.) Thus, in assessing the political implications of state control of economic life, the *character of the control* is of major relevance, and this character often cannot be inferred from readily accessible statistics. (emphasis mine)

According to Peter Bauer (1969, p. 84) this character of control "depend[s] largely on the closeness and the types of state control of economic life". This warrants an investigation into the institutional configuration of the state, i.e., how it is structured and how its constituent parts interact. Such configurations in turn require an approach sensitive to contextual details, rather than an aggregative snapshot of institutions. Doing so helps illuminate the diverse configurations of actual state-market arrangements, shedding light on what Peter Bauer called the state's character of control.

In this paper, we suggest that this character of control, the uniqueness of which is a by-product of varieties of capitalism, may stem from a state's internal orientation and its ability to control strategic nodes in the economy. Rather than treating the state as a black box, one may disaggregate it to reveal its internal nature, which can affect its ability to externally enforce its will on society. A state may be small and limited as measured on EFI but nonetheless wield enormous control should such strategic nodes be controlled.

A thought experiment is instructive. Imagine a hypothetical country Libertopia, which has only 50 civil servants governing a huge population with a government expenditure per capita of $500. Possessing an efficient organisational structure, they control a strategic resource within the economy: the harbour through which all foreign goods must enter. The control over this singular strategic node is sufficient for the state of Libertopia to wield enormous influence over economic activity, especially with the dependence of firms on foreign raw materials. Due to the leanness and efficiency of the civil service, these 50 civil servants do not expend much taxpayer resources in their operations. Contrast this to Hobbesia, which has government expenditure per capita of $5000 and supervises 1000 civil servants over a smaller population. Here, the state

[1] Singapore is, interestingly, not ranked on this indicator.

owns many more assets, but none as strategic as the harbour. There are many points of entry for foreign goods to enter and multiple nodes of interaction between foreign and local entities. The intuition is clear: Libertopia's government ironically wields more extensive political economic control than Hobbesia.

This thought experiment is analogous to Singapore's state capitalism. We argue that the Singapore case exemplifies a highly efficient technocratic model of governance that allows it to maintain significant influence over economic processes without needing large bureaucracies. Through the use of big data, algorithms, and the meritocratic recruitment of civil servants, the Singapore state is able to remain "small" while enjoying outsized influence over the market. This internal configuration in turn should be analysed with reference to its external linkages to other social institutions. In Singaporean society, the state, despite its relatively small size, has penetrated various aspects of the market and society. This has been extensively documented and does not need to be rehashed here, but the state-society and state-market entanglements are evident by the prevalence of para-political organisations, government-sponsored civil society, and the numerous hybrid public-private bodies like business councils, committees, and party-state associations (Singh, 2017). In this paper we extend the analysis by showing how the efficient technocratic state of Singapore has managed to exert significant though carefully calibrated control over the economy through its dominance over factor markets, which are strategic nodes in any economy.

3. Singapore model as a unique variety of state capitalism

The purpose of this section is to explain Singapore's political economy as a unique variety of state capitalism. We show that in the last few decades, the extent of state influence in Singapore's economy has not waned but has persisted. It is important to stress that the significance of this control has thus far yet to be successfully reduced to its quantitative degree but is instead an *institutional* one arising from the state's control over strategic nodes. This section analyses state influence in the economy by focusing on the three strategic nodes of factor markets: land, capital, and labour. Each factor is explored in a sub-section. Government-linked corporations (GLCs) and government-linked real estate investment trusts (GLREITs), and their strategic presence in the economy, are analysed in the sub-section for capital. We highlight that the analysis on GLCs and GLREITs are based on an original compilation of financial statements of these entities.

3.1. Factor markets as strategic nodes of control

The nature of Singapore's state capitalism stems from its carefully-calibrated state control over strategic nodes in the economy. In the language of network theory, strategic nodes are those that occupy a qualitatively significant importance within an entire system by virtue of their strategic position, whose disruption can severely impact the system's functionality (Lalou et al., 2018). For example, in a transportation network, airports or major intersections might be considered strategic nodes due to their role in connecting different parts of the network. With this analogy, we argue that factor markets are similarly strategic nodes in a nation's political economy and that state control over these nodes allows a state significant influence over market processes despite it remaining "small".

Notably, factor markets are crucially one-half of the economy, with product markets the remainder. State control over half of the economy affords it significant control of firms and households in the wider economy. In the Singapore context, land as a factor of production is monopolised. Labour and capital markets are also heavily engineered in Singapore by the developmental state.

The separation of factor and product markets allows us to understand the limited liberalisation of Asian political economies since the late 20th century. Even though product markets have been largely liberalised, factor markets have remained unfree due to the ongoing persistence of state capitalism, where state actors ground their hegemony on the control of these strategic nodes (Huang and Tao, 2010; Sally, 2015). What is unique in Singapore beyond these Asian counterparts is the great extent to which the state has managed to exert control over all three factor markets, as this section demonstrates.

State capacity is also an important determinant. Hong Kong, widely considered Singapore's economic twin, has had poor state capacity, and has thus been unable to shape the direction of the economy as much as Singapore. In the case of the Singapore state, this capacity stems from its unique internal characteristics. First, perhaps more than any other nation in the world, it has sought to ground public administration on principles of meritocracy and efficiency (Haque, 2004; Quah, 2010). This allows the state to "do more with less", allowing it to maintain extensive control while remaining lean in size. Second, Singapore's authoritarianism achieves a rare degree of performance legitimacy, with the public accepting exercises of state power on the basis that material wellbeing is provided for. This means that the state, with a "light touch" approach, achieves outsized influence over economic processes without resorting to heavy-handed tactics. On this note, it is important to remember that state power is based not merely on physical coercion, but the ability to exercise ideological hegemony in the cultural realm. That the Singapore state has achieved such hegemony is widely accepted (Chua, 1995; Barr, 2014; Abdullah, 2017). This in turn means that a "small" state, through carefully calibrated controls over strategic nodes, can sustain central economic planning without a large bureaucratic apparatus.

3.1.1. Land

The first factor to analyse is that of land, a very important factor of production within the economy. Until entrepreneurs can innovate solutions to fully escape the physical limits of land, it remains a constraint on market exchange. Considering that all buildings must be built on some parcel of land and that firms must either own land or rent it for their enterprises, any control over this resource by the state provides it tremendous influence over the economy. Accordingly, land control in Singapore is extensive. The Singaporean developmental state, since its birth in the 1960s, has increased its ownership of land, from about one-quarter of Singapore's land area in 1968 to more than 90% today (Kim and Phang, 2013). The state has achieved this through a variety of legal approaches. Chief amongst these is the legal power the state has reserved for itself to seize private land through the Land Acquisition Act of 1966, which allows the state to acquire land not just for public use, but "for any residential, commercial or industrial purposes" (Yeung, 1973, p. 38). Between 1959 and 1984, the state acquired a total of about 44,000 acres of land which was about one-third of the total land area of Singapore then, the bulk of which was acquired through the Act. By 1985, the government became the biggest landowner (Aleshire, 1986; Wong and Yeh, 1985, pp. 44–45). It should be noted that these acquisitions involved forced relocations and displacement of families. Up to over 1,200 sites were expropriated and nearly 270,000 families were displaced (Koninck, 1992). Another legal instrument was the Foreshores (Amendment) Ordinance in 1964 that prevents private landowners affected by foreshore reclamation to seek compensation for the loss of sea frontage. Thus, an irony emerges: Singapore's highly ranked property rights protections on EFI was historically enabled by violations of private property rights.

State control over land in Singapore is part of a larger framework of social engineering. Other countries, such as Hong Kong, also witness state monopoly over land (Haila, 2000). But what is unique in Singapore is that land policy is carefully coordinated with a range of central economic and social policies. This is reflected in the government's Concept Plan, implemented in 1971, which strictly determines how land is distributed across different uses. Testament to the effort to coordinate policy areas, the developmental state in Singapore involves organising various officials into committees to systematically plan land allocation needs. This was confirmed in an interview with a former government official, who has also called the approach "integrated and long term in perspective", with a "whole of government approach" that helps "facilitate the realization of Singapore's plans".[2] In other words, the technocratic state engages in the *engineering of physical space* in Singapore through systematic planning through which economic and social objectives are met.

3.1.2. Capital

The second crucial factor market is capital, which in Singapore is subject to significant state direction. Since its independence, Singapore's government, in pursuit of its developmental state objectives, has intervened in the capital market to direct capital investment into industries and areas it deems important. This has been done in many ways, by acquiring significant stakes in the major local banks, banking regulation, and the direct provision of credit to influence entrepreneurs to invest in specific sectors.

The form that this control takes is important, because it has political ramifications. In Singapore, the technocratic state's influence of capital markets allows it to not only shape the industrial structure, but also maintain its political dominance. This is due to its reliance on three instruments: the provision of industrial grants, a forced savings scheme, and the maintenance of indirect control through government-linked entities.

First, the provision of these grants forges a relationship of dependence, where local firms are dependant on such flow of funds for their business ventures. The Singapore state provides not only favourable loans to spur business growth (usually with 50% of risks covered by the state), but direct cash grants to firms for capability development. The most significant is the Enterprise Development grant, where up to 80% of a project's fee (which can include projects to upgrade internal processes and install new systems) can be subsidised. The fact that all local small-medium enterprises are eligible for such schemes on very generous terms forges a close political dependence on the state.

The second instrument of the state's influence over capital allocation is its renowned forced savings scheme called the Central Provident Fund (CPF), which funds massive budget surpluses and foreign reserves (Lim, 2018, pp. 101–102; Lim and Pang, 2016, p. 137; Asher et al., 2016). This is highly significant, because the Singapore state is able to fund large capital expenditures through *extra-budgetary means, arising from CPF revenues*, without having to maintain high income taxes. In other words, Singapore's seemingly low tax and low spending reputation belies its centralised direction of capital flows, a cornerstone of its political economy. Additionally, citizens' education, housing, and healthcare decisions are all tied to CPF savings, making it a significant enabler of the state's character of control.

3.1.2.1. Government-Linked entities. The third and highly significant feature of the Singapore's state's direction of capital flows is its maintenance of government-linked entities (GLEs), which comprise government-linked corporations (GLCs) and government-linked real-estate investment trusts (GLREITs). This is a unique trait of Singapore's state capitalism because it constitutes an indirect form of control that allows the state to officially record minimal state ownership of assets, thus the paradox of its high ranks on EFI despite its state-centric nature. Additionally, the political significance of these entities stems not just from them being numerous, but from their concentration in strategic sectors.

Importantly, they are not state-owned enterprises in the typical sense, because they are not directly owned by the state. On a *de jure* basis, these are private entities. But on a *de facto* level, they nonetheless reflect state control because they are held by a holding company called Temasek Holdings. Temasek is not just a sovereign wealth fund, meaning its activities go beyond mere investments. It is also an owner—whether full or partial—of numerous domestic companies. This means that Temasek Holdings is a holding company through which many Singaporean firms are *indirectly owned* by the state.

It is important to stress the uniquely indirect nature of this ownership. This indirectness means that in official budget documents, measures of fiscal size do not account for these entities, which are officially classified as private. Importantly, EFI also do not adequately account for these entities because it relies on V-Dem's (2021) dataset, specifically, the sub-indicator "state ownership of the economy", which is essentially a survey question posed to country experts: "does the state own or directly control important sectors of the economy?". The extensive presence of these entities in Singapore is entirely consistent with a negative answer to this question.

Much has been written about these entities in Singapore (Low, 1991, 2002; Paiva-Silva, 2022). The contribution of this paper is to establish the continued prevalence of these entities in the domestic economy *despite* a privatisation exercise of the government in 1985, and their continued persistence in strategic sectors of the economy. A past privatisation exercise from 1985 to 1990 led to the divestment of 36 GLCs. In the only comprehensive review of this exercise thus far, the economist Linda Low (1991, p. 190) concluded that "what has been achieved so far with privatisation appears rather superficial and cosmetic. The government's coffers have been topped up, enabling it to re-arrange its portfolio of companies somewhat at least to meet up with one of its aims of pulling out of industries which the private sector can handle and re-investing in new ones". This insight is significant because it suggests that even though privatisation was executed by the Singaporean developmental state, it did not genuinely reduce the size of the state sector and may have in fact allowed it to further consolidate its presence in the domestic political economy.

We extend Linda Low's analysis by showing that since 1990, there remains a significant presence of GLEs within the Singapore economy, with the role of Temasek Holdings largely unchanged. GLREITs are an especially significant entity, because these are entities that dominate the land sector in Singapore, another strategic node. It is through GLREITs that the state indirectly channels the flow of capital into its real estate assets like shopping malls, industrial facilities, and offices.

Based on this author's own investigations, the total number of GLCs and GLREITs has remained constant since the early 2000s, with no significant decreases. These numbers, shown in Table 1, are derived by individually analysing the annual reports and available public statements of 290 Tier 1 and 2 GLCs and dozens of GLREITs over the period 2006 to 2019, with the full list and notes in Appendix 3.

A further complication is that the ownership of firms by Temasek, and indirectly the government, operates on multiple levels. A Tier 1 GLC is a local company with at least 15% of its shares owned by Temasek Holdings, as stated in the various editions of the Temasek Review. The issue is that these Tier 1 firms may themselves own, whether fully or partially, other firms which are considered Tier 2, 3, 4, etc., depending on the degree of separation from the parent company. For example, DBS

Table 1
Number of Tier 1 and 2 GLCs and GLREITs over time since 2006.

	Mean	Minimum	Maximum
Tier 1 GLCs	19.5	18 (2016–2019)	23 (2007)
Tier 2 GLCs*	155.4	140 (2019)	172 (2015)
Tier 1 & 2 GLCs	174.9	158 (2019)	192 (2015)
GLREITs	9.9	7 (2006)	14 (2017–2019)

Source: Temasek Holdings (2006-2019) and annual reports of Tier 1 GLCs.
* Tier 2 GLCs include Ascendas-Singbridge Pte Ltd. It is a GLC that is higher-tiered than a Tier 2 GLC. However, it has been treated as a Tier 2 GLC here as the annual reports of Temasek Holdings highlight it as a major investment owned through a wholly owned subsidiary.

[2] Interview with Professor Heng Chye Kiang from National University of Singapore, who has served on boards of urban planning agencies in Singapore including URA, HDB, JTC, CLC, and BCA.

Group Holdings Ltd is a Tier 1 GLC, as 29% of its shares are owned by Temasek Holdings. DBS Bank Ltd is a Tier 2 GLC as it is a subsidiary wholly owned by DBS Group Holdings Ltd which is a Tier 1 company. Another example is Singapore Telecommunications Limited, a Tier 1 GLC owned by Temasek. This one entity has 62 Tier 2 subsidiaries under it, which may themselves have more subsidiaries, etc. In 2019 specifically, the 18 Tier 1 GLCs had at least 140 Tier 2 subsidiaries under them. Thus, not only does Temasek Holdings control the major firms shown in Figs. 1 and 2, it also indirectly does so for many other subsidiary firms through further layers of ownership.

Given the time constraints involved with this research, only Tier 1 and 2 GLCs have been tracked, which suggests that the true extent of government ownership in Singapore's economy remains understated.

Another way to measure the dominance of the state sector in

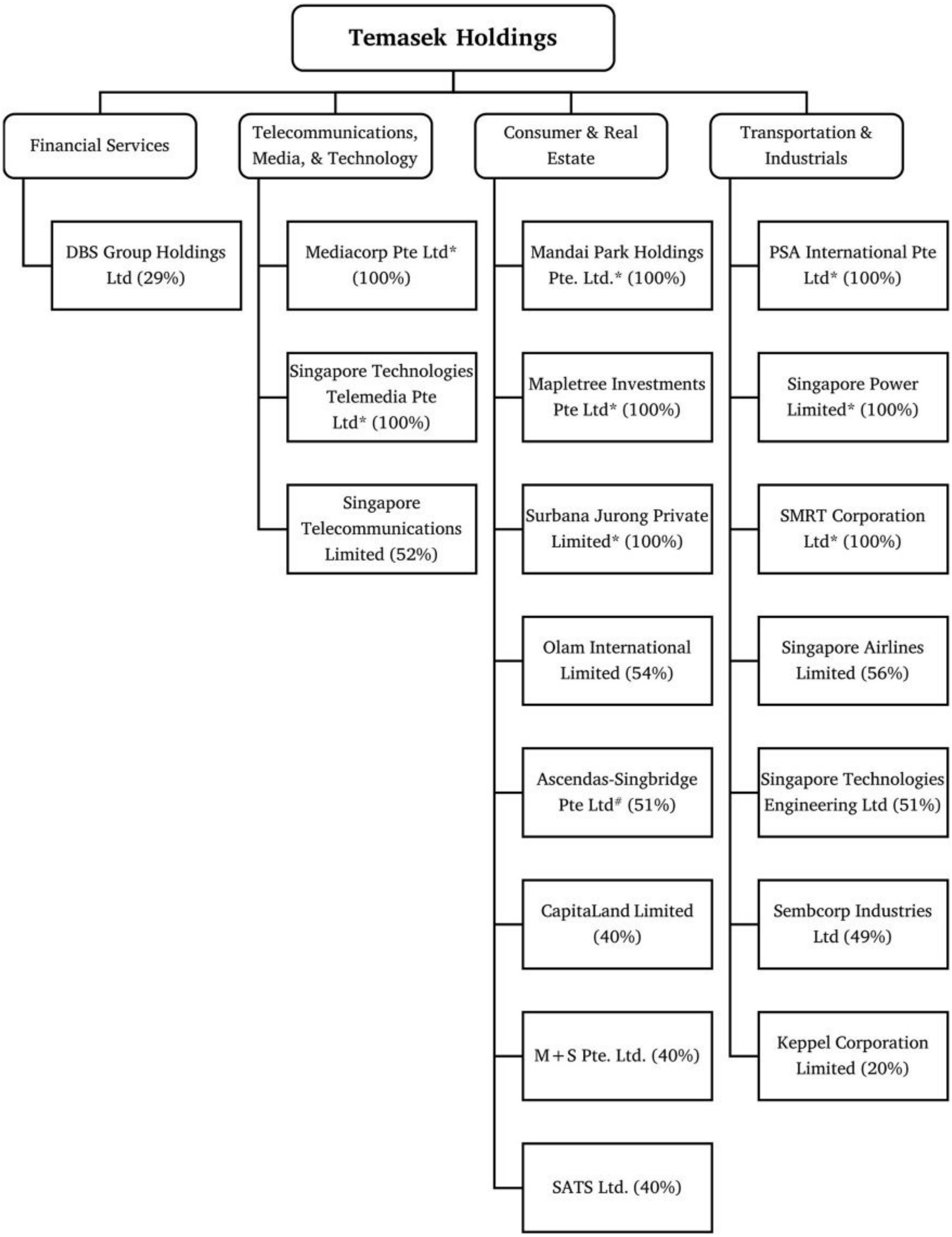

Fig. 1. Temasek's Singapore-based GLCs and GLREITs with Ownership Share (FY2018)—Tier 1 Only.
[3] This only features Singapore-based firms that Temasek has investments in and excludes its overseas holdings.
* Firms which are not publicly listed.
# Although Ascendas-Singbridge is directly listed in Temasek Holdings' annual reports, it is not a Tier 1 GLC. As noted in the footnote to Table 1, it is a GLC higher-tiered than a Tier 2 GLC.

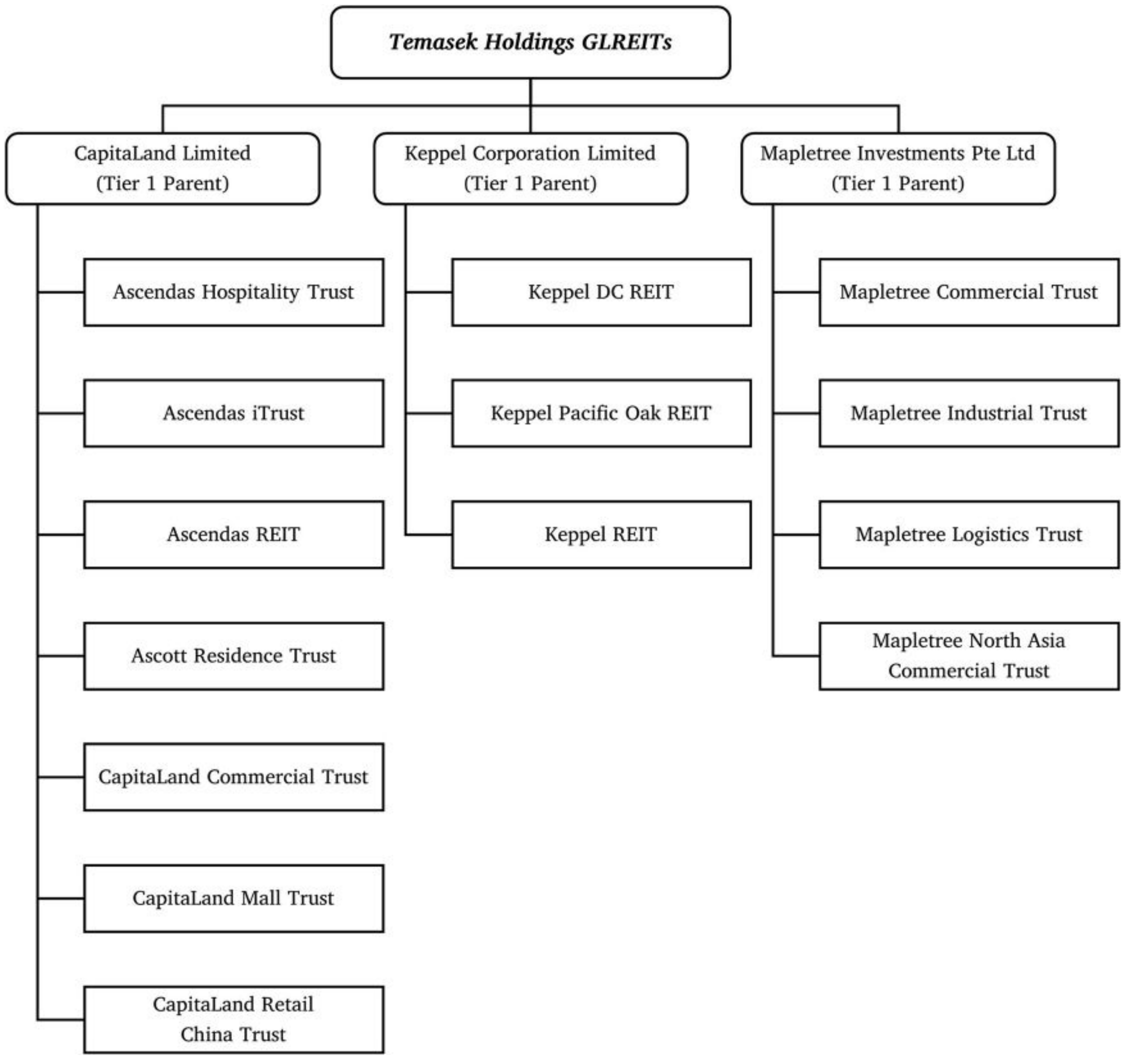

Fig. 2. Temasek-Linked Real Estate Investment Trusts (GLREITs) (FY2018).

[4] Some of these entities have since been reconfigured. For example, Ascott Residence Trust and Ascendas Hospitality Trust have merged.

Singapore is to look at the percentage share of GLCs and GLREITs as part of the overall stock market capitalisation. Table 2 summarises the results. Over the entire period of calculation (2006 to 2019), GLCs took up an average of 38.06% of the stock market capitalisation, with little variation throughout the period. State ownership is much greater when one considers the real-estate investment trusts (REITs) market only. Over this period, GLREITs occupied an average of 64.04%, a significant quantity considering that REITs are responsible for owning major shopping malls, offices, hotels, warehouses, data centres, healthcare facilities, and industrial properties. For most years, more than 60% of the REITs market was state-linked.

Table 2
Percentage of Stock Market Value (Stock Market Capitalisation) of SGX-Listed Government Linked Entities (2006 to 2019).

	Mean	Minimum	Maximum
GLCs only (as% of actual stock market value, excl. REITs)	38.06%	35.44% (2018)	42.73% (2008)
GLREITs only (as% of REIT sub-sector only)	64.04%	56.03% (2016)	69.81% (2009)
GLEs (GLCs + GLREITs) (as% of both non-REIT & REIT sub-sector)	40.30%	37.39% (2010)	43.73% (2008)

Source: Authors' Calculations from Bloomberg Stock Market Capitalisation Data.

For further perspective, an earlier study by Isabel Sim et al. (2014), covering a shorter period of only 2008 to 2013, showed GLCs and GLREITs at 37% and 54% stock market capitalisation respectively. Our study, with a longer timeframe, confirms a similar stock market capitalisation of GLCs, but with a marked increase for that of GLREITs. A more holistic picture may also be gleaned by adding up the state's share of both the non-REITs and REITs sub-sectors. Seen this way, government-linked entities (GLEs) on average made up 40.3% of the entire stock market.

3.1.2.2. Strategic position of GLCs and GLREITs in Singapore. A key thesis of this paper is that typical aggregate statistics cannot account for the uniqueness of specific institutional arrangements, in this case, Singapore's unique state capitalism. Thus, the significance of these GLEs is not so much a matter of quantitative degree because they have qualities that make them difficult to measure. This is a product of the unique indirect nature of state ownership abovementioned, but also of the concentration of these entities in strategic sectors.

One piece of evidence of GLEs' strategic position is an analysis of the list of the top 30 public companies on the Straits Times Index (STI), shown in Appendix 4. This list demonstrates that most of these publicly listed companies, further broken down by their belonging to key industries, are in fact government-linked.

As argued earlier, it is not only the size of the state that matters, but also the character of control that it wields. Ownership of the ten largest arts companies in a country is qualitatively different from that of the ten largest media companies in the same country, with the latter being a more strategic resource in the economy since the media has great influence in determining the winners in the arts. Further analysis (see Appendix 5, for an analysis of three years of annual reports) shows that Temasek Holdings continues to be involved in a wide spread of industries and has retained control over strategic sectors, such as infrastructure, real estate and property development, telecommunications, and transportation. The most significant sector is that of telecommunications and the media: it is the state's (indirect) control over this sector that enables its suppression of civil liberties in Singapore. Any analysis of Singapore's censorship of the media, which is aplenty (see George, 2012), needs to be considered in tandem with the nature of Temasek's indirect but significant control over economic assets.

3.1.3. Labour

The third factor input that affords a state strategic control is that of labour. While most economies have some form of regulation over labour, what is unique about Singapore is its consistent exercise of social control over the labour class and its concerted attempts to direct the flow of labour through industrial policy. The character of control of the Singapore state over labour lies not just in formal legislation, but through a *deeper exercise of discipline* over citizens.

Owing to its nature as a developmental state, Singapore has exercised extensive control over the allocation of labour. Primarily, it has sought to direct the flow of labour into sectors it deems necessary for industrial and economic growth. This is achieved through various instruments and across different levels of society. Through the use of incentives and manpower targets, students are steered into specific sectors, usually those related to STEM. State allocation of labour resources is conducted based on national-level sectoral manpower plans, which identify the future manpower needs of the economy, chart out ideal progression pathways for workers, and derive specific targets on the allocation of places in tertiary institutions and the distribution of disciplines available to students. The private sector is also involved in this planning of the labour market, as firms in selected industries are given incentives to train workers on specific skillsets pre-identified by manpower plans, the most famous example being the National SkillsFuture program. The large-scale nature of this exercise means that private firms are influenced by the provision of these incentives to act in ways they otherwise would not. This in turn directs labour resources into areas that are pre-identified by the government.

A key instrument the state uses to influence the flow of talent into these areas identified by manpower plans is the use of government scholarships. Far more than any other country, Singapore's government provides generous scholarships to university students annually whose tertiary education is sponsored in return for employment in government agencies and GLEs. In fact, most scholarships that students pursue in Singapore are state-provided (Appendix 6). Analysts have acknowledged the downsides of this practice, particularly the crowding out effect where local firms are overshadowed by foreign entities (Rikap and Flacher, 2020; Audretsch and Fiedler, 2022; Cheang, 2022). What is notable is that this instrument affords the state an influential tool in shaping the social preferences of young talents, influencing them to enjoy government-centric careers over alternative ones. In this way, the Singapore state resembles the political meritocracy model that Confucian scholars have upheld, where the state sustains its dominance by attracting the "best" talents (Bell, 2016). The Singapore state's ability to exert control in this manner means that it simultaneously sustains its *economic and political* control.

Labour regulation is commonplace, but what is especially unique in Singapore's political economy is the state's *extensive exercise of discipline over workers.* The underlying principle is that the Singapore developmental state sees labour as an important resource that needs to be disciplined to achieve its economic objectives (Tremewan, 1996; Rodan, 2016). It had to strip away the rights of trade unions, workers' bargaining powers, and block political activism more generally to direct citizens' energies towards economic production. Just as the "road to the free market (in the UK) was opened and kept open by an enormous increase" in "interventionism" (Polanyi, 1957, p. 140), Singapore's post-war capitalism was established through these authoritarian means.

The exercise of social control over labour was achieved institutionally and ideologically. On an institutional level, the state subjugated the labour class within the ambit of the state. The prime example is the establishment of the National Wages Council which has historically set wages in accordance with the needs of economic competitiveness. This organisation is in turn part of a "tripartite" approach to labour governance, where employer-employee relationships are negotiated within the ambit of the state (Leggett, 1992). Accordingly, a range of legislation was implemented in the decades following independence, prohibiting conventional industrial actions that are typically allowed elsewhere. These mechanisms aimed to ensure a ready supply of low-cost, disciplined labour that would be attractive to global capital, hence securing Singapore's export-orientated industrialisation.

The state's exercise of discipline over labour extends to physical bodies themselves. The legal scholar Jothie Rajah (2012) showed that in Singapore, the "rule of law" has been discursively transformed into rule by law, whereby legal mechanisms are used to discipline media, society, religion, and even human bodies, all for the sake of state-led development. An illustrative example was the state's framing of the infamous 1994 incident involving American teenager Michael Fay, who was charged with vandalism. State officials insisted on judicial corporal punishment on the basis that Singapore was a Confucian society that prizes social discipline and collective interests, and that this would avoid the social decay of the West, and hence ensure continued development (Yao, 2007). The most powerful social control mechanism over the physical body is arguably conscription, which in peacetime Singapore is far longer in duration than countries actively at war. Conscription in Singapore is not merely a military strategy, but serves the social function of nation-building and the economic function of shaping a resilient workforce (Nair, 1995). Overall, the body is seen as "instrumental in the nation building process (of Singapore) and a key site of discipline" (Hudson, 2009).

At the heart of these exercises of social discipline is a state-constructed ideology of survival, one that warrants technocratic governance to reshape social relations. In the post-war years, tumultuous social circumstances created the backdrop for such a discourse. The purported need for survival has exercised a disciplinary function, since the people must "be transformed into a tightly organized and highly disciplined citizenry all pulling in the same direction with a sense of public spiritedness and self-sacrifice in the national interest" (Chua 1995, p. 18). Accordingly, it is a "key civic responsibility of political elites, the intelligentsia…to facilitate the transformation of the traditional segment of the population into a modern (i.e., rational, hard-working, sober, disciplined, accumulating and achievement-orientated) body of people" (see Doshi and Coclanis, 1999, p. 36). Such an ideology has in turn been reinforced through the education system, where citizens are socialised into these public values and geared for the workforce. In other words, the developmental state has required the creation of "developmental workers": disciplined, hard-working, and modern assets for developmental success (Sung, 2006).

4. Conclusion

In conclusion, this paper underscores the significance of historical contingency and the role of the state in development. This issue arises naturally out of the larger reality that innovations occur not only in markets but also in governance. The liberal state itself is but one innovation in the history of governance. EFI which do not track such innovations are understandably confounded by the emergence of novel institutional forms. Historically, nations have always innovated their own combinations of states and markets consonant with their local constraints. Today, varieties of capitalism, which are distinct categories of their own, vie for geopolitical pre-eminence. This warrants critical reflection on market liberals' use of neoclassical design principles to measure and rank economic freedom on a linear "more or less" scale, which precludes a nuanced understanding of such institutional diversity.

Such a reflection is urgently needed considering that metrics and country-benchmarking are commonplace in policy discourse. Indeed, EFI are central discursive devices of influential networks of market liberal organisations today (Mirowski and Plehwe, 2015). These organisations typically hold up Singapore—currently ranked as the "freest" by Heritage Foundation—as a paragon of economic freedom that others should emulate (Tupy, 2015; Kim, 2020). Such a portrayal is highly ironic, considering that its unique hybrid model is precisely a political innovation that sought to deliberately distinguish itself from Western liberal capitalism and which is held up by developmental statists as their preferred archetype.

We have thus fittingly used Singapore as a case study. We do not argue that economic freedom indices may be improved by changing their methods of calculation or that Singapore should be ranked lower. The significance of Singapore's state capitalism is not a matter of quantitative degrees measured along a linear scale but has an institutional significance that such scales have failed to capture. The Singapore state is able to enjoy high rankings on EFI while enjoying outsized influence over economic processes due to its unique mechanisms of control, arising from its technocratic internal orientation and efficient ability to control all three factor markets, which are strategic nodes.

How can Singapore, which employs such a novel interventionist model be ranked as economically freest? This stunning gap suggests that state capitalism is not an aberration benchmarked against laissez-faire, but an independent category in its own right. That Singapore achieved great success with this model suggests that there may be many developmental tracks, each with their own internal logic and unique comparative advantages.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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Supplementary materials

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