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The Developmental State in the 21st Century

Calling for a New Social Contract

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Georgeta Vidican Auktor

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Giulio Regeni: In memoriam

Almost a year ago, on 13 January 2016, I had my last Skype conversation with Giulio, when he called from Cairo where he was conducting his field research for his doctoral studies. We exchanged thoughts on finalising the draft of this paper, which was the result of our collaboration during his time as a visiting researcher at the German Development Institute in the summer of 2015. A few days later, on 25 January, alerts on his sudden disappearance reached us. He was found lifeless on 3 February on the outskirts of Cairo, with signs of extreme torture. Giulio's brutal passing, most probably at the hands of an increasingly repressive and paranoid Egyptian state, shocked not only those of us who knew him closely but also the larger development and regional studies community and social activist groups. This loss made it impossible for me to finish this draft for several months afterwards.

Giulio, with a brilliant mind, a passion for development, and great faith in humanity, was an inspiration for those he engaged with. His understanding of the development process was shaped by scholars such as Alice Amsden, Diane Davis, Ha-Joon Chang and Peter Evans, clearly evidenced in this Discussion Paper. His precise writing skills and commitment to understanding sources of development are reflected throughout this joint effort, especially in Sections 2 and 4.

Finalising this important paper without Giulio was hard as I was certain that these ideas would have benefited significantly from his insights. I do hope, however, that he would have enjoyed reading this final draft.

Giulio, you will never be forgotten!

Georgeta Vidican Auktor

Abstract

The ‘developmental state’ is a highly debated notion in development literature, having evolved from the extraordinary experience of late industrialising countries in East Asia. In this Discussion Paper we join a growing number of scholars to argue that changing global conditions call for a revitalisation of the debate on the role of the state in social and economic transformation in the 21st century. We focus on three main global challenges for economic development in the 21st century: climate change and environmental degradation; increased digitalisation (the increasingly ‘bit-driven’ economy); and changed policy space for individual states as a result of globalisation. These evolve simultaneously and reinforce each other. We argue that the global context calls for a change in the social contract that underpins structural economic transformation, by placing a stronger emphasis on cultivating inclusive state-society relations oriented towards promoting economic growth within planetary boundaries. Such emphasis is, in our view, currently under-represented in the emerging literature on a developmental state in the 21st century. For this reason, we consider it relevant not only to elaborate on the historical conditions that shaped the role of the state in industrial policy in late industrialising countries, but also on current challenges that call for a changing perspective on the role of the state in emerging and developing countries.

Acknowledgments

I am immensely grateful to my colleagues Tilman Altenburg and Elvis Melia who provided extensive reviews and insightful comments that greatly improved this manuscript. Their feedback enabled me to reflect on, sharpen, and further articulate ideas that originated from my work with Giulio. My gratitude extends also to Markus Loewe for helpful feedback on earlier drafts. The final outcome is thus, in my view, a collective effort. Any remaining errors are my own.

Bonn, January 2017 Georgeta Vidican Auktor

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Abbreviations

FDI	foreign direct investment
ITT	industrial, trade and technology
MITI	Ministry of International Trade and Industry (Japan)
MNC	multinational corporation
R&D	research & development
US	United States
WTO	World Trade Organization
WWII	World War II

1 Introduction

The 'developmental state'[1] is a highly debated notion in development literature, having evolved from the extraordinary experience of late industrialising countries in East Asia. Since then, the term developmental state has been used as a conceptual lens to analyse the economic transformation of countries with very diverse political and economic institutions from those that have succeeded in adopting successful industrial policy regimes in East Asia.

In this paper we join a growing number of scholars (such as WBGU [Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen], 2011; Fine, Saraswati, & Tavasci, 2013; Evans, 2014; Lütkenhorst, Altenburg, Pegels, & Vidican, 2014; Altenburg & Lütkenhorst, 2015; Evans & Heller, 2015; Friedman, 2016) to argue that changing global conditions call for a revitalisation of the debate on the role of the state in social and economic transformation[2] in the 21st century. We argue that this new perspective on the developmental state calls for a change in the social contract that underpins structural economic transformation, by placing a stronger emphasis on cultivating inclusive state-society relations oriented towards promoting economic growth within planetary boundaries. Such emphasis is, in our view, currently under-represented in the emerging literature on a developmental state for the 21st century. For this reason, we consider it relevant not only to elaborate on the historical conditions that shaped the role of the state in industrial policy in late industrialising countries, but also on current challenges that call for a changing perspective on the role of the state in emerging and developing countries.

In our analysis, we focus on three main global challenges for economic development in the 21st century: climate change and environmental degradation; increased digitalisation (the increasingly 'bit-driven' economy); and changed policy space for individual states as a result of globalisation. These evolve simultaneously and reinforce each other. We argue that these global trends call for an increased role of the state in policymaking (to develop long-term strategies, engage societal actors, enforce socially contested decisions), thus opening up the debate about the need to balance the creative potential of markets with state directionality. Importantly, the political economy context of such interventions shaped by the reality of "failing markets and weak states" (Altenburg & Lütkenhorst, 2015) raises questions about how states can achieve developmental outcomes in less than 'optimal' environments. Empirical evidence shows that a closer understanding of the relationship between the state and other societal actors can elucidate the conditions under which such outcomes are possible.

The 20th century growth-centred models placed an emphasis on structural transformation through state-led, carbon-based industrial development, assuming more or less limitless resources (Satgar, 2014). However, it is now widely acknowledged that climate change and environmental degradation raise new challenges to the growth trajectories of both

1 The developmental state, one of the most charismatic concepts as per Evans and Heller (2015), has been defined by Chang (1994, p. 183) as: "a state which can create and regulate the economic and political relationships that can support sustained industrialization". According to Chang, a developmental state must necessarily fulfil the following political duties: coordination for change; provision of vision; institution building; and conflict management.

2 Chang (1997, p. 294) defines structural transformation as: "large-scale economic change which involves substantial changes in technology and institutions".

developed and developing countries. The sense of urgency of action – while at the same time planning with a long-term horizon and in conditions of high levels of uncertainty – is a reality of this new global environment (IPCC [Intergovernmental Panel on Climate Change], 2013). Increasingly, scholarly work aims to reconcile growth and development models along various ideological spectrums with environmental imperatives generating new concepts that highlight this intersection.[3] At the core, these concepts stress that 'old' ways of economic growth are no longer viable; 'new' approaches are needed to internalise environmental costs, phase-out unsustainable modes of production and consumption, and phase-in environmentally friendly technologies. In this process, the state plays a focal point in correcting market failures, managing conflicts and trade-offs, creating niche markets for clean energy technologies, and supporting their integration in new sustainable 'socio-technical regimes' (Geels, 2002; Lütkenhorst et al., 2014; Rodrik, 2014). Inevitably, such a process is highly political as it calls for a reconfiguration of stakeholder dynamics, challenging interests vested in the status quo, engaging other actors such as local communities and consumers, and thus entailing profound changes in political power (Scoones, Leach, & Newell, 2015). This added complexity (reinforced by urgency and the long-term planning horizon) points to a much stronger need for agile and visionary states with significant capacity to drive this transformation process, by managing conflicts, redistributing rents, and reconfiguring the social contract such that transformation towards sustainability is enabled.

Industrial policy in the 21st century is also challenged by the fast pace of technology development that results in high levels of digitalisation in the manufacturing and service sectors. As a result, at the present time value added comes less from the physical manipulation of materials (that is, tangible goods) but rather from advances in information and digital technology (that is, intangible services – ideas, skills and networks) (Evans, 2014). While the long-term effects remain unclear, there is increasing evidence showing that employment in manufacturing (as well as in some parts of the service sector) is expected to continue its decline and that demand for low- and middle-skilled jobs is likely to sink significantly (Frey & Osborne, 2013). This process will probably be associated with rising inequality and the concentration of profits on a small number of technology lead-firms. In response, institutions need to be adapted to not only mitigate the negative effects (on workers and market structure), but to also take advantage of the opportunities created by such technological advancements. Thus, we argue that the state needs a stronger focus on social and competition policy; education system reform to better align to the new labour market demands; and investment in research and development (R&D).

Since the rise of the East Asian Tigers, the policy landscape of the global economy has also changed significantly, as exemplified by increasing flows of foreign direct investment (FDI); the rising dominance of multinational corporations (MNCs); and reduced space for protectionist measures, all leading to much stronger economic interdependencies. While some argue that the policy space for national states has been reduced in comparison to two decades ago, opportunities *do* exist for states seeking to promote development through targeted interventions aimed at improving market conditions, infrastructure and human capital. Even so, this requires proactive states that engage in constant experimentation and learning processes, seeking to identify new comparative advantages in an increasingly

3 New concepts such as 'green growth', 'green economy', 'green transformation', 'green industrial policy', or 'low-carbon development' are examples of this new thinking to reflect this intersection.

globally interconnected world. In spite of the increasing prominence and sophistication of bi- and multi-lateral trade and investment treaties in defining national-level policies, recent tensions arising from (and ultimately the failure of) such regional agreements call for a more participatory democracy, inclusive institutions, and thus more embedded national states.

These global challenges of the 21st century are a reflection of a progressive and cumulative change on all three of these fronts (environment, technology, and market integration), which calls for an adaptation in regulations and institutions and in the mode of governance. To meet these challenges successfully, today's developmental states need to be grounded in more inclusive and decentralised institutions that call for constant experimentation, feedback and monitoring. The urgency of responding to climate change and to environmental degradation cries out for new visions for energy systems and policy, and for the more effective governance of natural resources. Changes in the structure of employment due to digitalisation have implications on the distribution of gains and losses, necessitating innovative social policies. Digitalisation also leads to highly connected flows of knowledge that enable collective action and facilitate citizen feedback mechanisms, thus weakening top-down governance structures. The tighter interdependence of markets – and subsequent changed policy space for national governments – stresses the need for openness, experimentation, and deliberation, to maximise on the opportunities offered by global competition. This suggests that the 21st century is becoming characterised by increasingly complex challenges that exceed the capabilities of any single actor. Strong alliances between the state and the business elites are, thus, at present unsatisfactory. Instead, the 'embedded autonomy' concept (Evans, 1995) needs to be augmented to emphasise the need for deeper alliances between the state and more diverse societal actors, grounded in participatory political institutions.

To build the argument that leads us to these conclusions, we take a step back from these global shifts to focus, in Section 2, on the concept of the developmental state *per se* as a driver of the process of structural transformation. We provide a brief genealogy of the concept, highlighting the framework conditions that led to the impressive development performance of East Asian countries, followed by a short critique in light of later reflections. In Section 3, we then delve deeper into the changing global framework conditions that reinforce the need for a strong but deliberative and inclusive state. We infer that, while the developmental state concept remains important, national policies have to be based on even deeper state-society alliances than in the past. In Section 4 we argue that these changing global conditions call for a new social contract that goes beyond the alliance between the state and industrial elites to include wider societal groups in order to achieve a more inclusive structural transformation. Section 5 concludes with the main messages of this paper.

2 The developmental state – past and present

2.1 The genealogy of a concept

As a "charismatic concept" (Evans & Heller, 2015) in development theory, the 'developmental state' has evolved in line with the contours of the global economy. When Chalmers Johnson (1982) first coined the term of the 'capitalist developmental state' in his history of modern Japanese industrial policy, *MITI and the Japanese Miracle*, he intended to move beyond the opposition between the American and Soviet economic models that he saw as prevailing in development theory during the Cold War. In contrast, Johnson sought "to call attention to the differences, not the similarities, between the capitalist economies of the United States and Britain, on the one hand, and Japan and its emulators elsewhere in East Asia, on the other" (Johnson, 1999, p. 32).

Through his analysis of the Japanese economic planning bureaucracy, the Ministry of International Trade and Industry (MITI), Johnson formulated a Weberian model of the interventionist state. This was neither a socialist, 'plan-irrational'[4] state, which saw both ownership and management in the hands of the state (as in the Soviet Union), nor a free-market, 'no plan' state in which private ownership and private control overlapped. Instead, the Japanese model was a 'plan-rational' capitalist developmental state, comprising of both private ownership and state guidance. Given the rapid and sustained industrial growth attained by the Japanese plan-rational state, Johnson's theory about the developmental state came to be intriguingly perceived by some as a way to combine interventionism and accelerated economic growth, potentially in any country of the world (Woo-Cumings, 1999).

The strongly developmental inclination of the Japanese state, based on the close cooperative relationship between public bureaucracy and privately owned business, was not the result of luck or coincidence. Rather, it was the product of conscious and consistent governmental efforts going back to at least the 1920s. Over the course of the subsequent 50 years, Japan experimented with three different public-private frameworks: the first was based on self-control by private business, the second was centred around state control, and only subsequently came the cooperative model (Johnson, 1999). Hence, the specific developmental model which characterised post-World War II (WWII) Japan was the outcome of active institutional experimentation by the government, embedded in the particular historical and political circumstances facing Japan during the Cold War.

Central to the success of the Japanese model was "the existence of a small, inexpensive, but elite state bureaucracy staffed by the best managerial talent available in the system" (Woo-Cumings 1999, p. 314): the MITI pilot agency. This bureaucracy's role in the post-war period involved coordinating Japan's industrial, trade and technology (ITT) policies, with the aim of catching up with leader countries in selected technological sectors. This implied identifying the industries to be developed, selecting the best means of developing such industries, and supervising competition in the chosen strategic sectors by adopting market-conforming means of state intervention. Competition policy was in fact at the heart

4 As our colleague, Elvis Melia, pointed out, our use of the term 'irrational' is not normative or judgemental. Rather, we base it on Upham's (2007, p. 60) understanding of rationality "in the Weberian sense of legal rationality arrived at through formal processes rather than irrational law arrived at through magic, morality, or common sense."

of MITI's creation of comparative advantage among Japanese firms internationally. Instead of allowing free competition among firms, the Japanese government managed and directed domestic competition in order to advance investment and technical change (Rasiah, Singh, & Ernst, 2015). Amsden and Singh (1993) provide an account of the interventionist role that MITI played in promoting the rise of Japanese industries, which went contrary to the neoclassical notion of allowing maximum competition. During the period 1950-1973 and under the guidance of MITI:

> Protection, together with restrictions on domestic competition, provided the Japanese companies with a captive home market leading to high profits which enabled them to undertake high rates of investment, to improve the quality of their products, and also to capture markets abroad…[I]n return for protection, MITI often imposed on them export and world market share performance targets. (Amsden and Singh 1993, p. 8)

These policies accounted for Japan's rapid ascent as an industrial power. The success of Japan's steel and car industries should serve as a demonstration. In the early 1950s, Japan produced around 5 million tons of steel and 50,000 passenger cars annually.[5] At the time, the United States produced roughly 100 million tons of steel and nearly 6 million cars annually. Although the Japanese costs of producing steel in the mid-1950s were almost twice the world price of steel, within 20 years Japan became the lowest-cost steel producer in the world and was producing as much steel as the United States. By the late 1970s, Japan was manufacturing more cars than the United States and, in the process, seizing an important share of the US market (Singh, 1989). This achievement became possible thanks to Japan's gradual transition from being an exporter of primary products to one of high-value added manufactured goods, which contributed to a sharp increase in national living standards.

Academic interest for the East Asian development model came to include the case of successive star performers, such as South Korea and Taiwan (see Amsden, 1989; Wade 1990). Indeed, these East Asian Tigers (along with the city states of Hong Kong and Singapore) successfully managed to upgrade their economies from 'underdeveloped' to 'developed' within just two generations after WWII. As Evans reminds us: "This kind of shift is not only unprecedented among 20th century developing countries, but exceptional even in a broader context that includes the historical experience of Europe and the Americas" (Evans, 2008, p. 6).

As in the case of Japan, the impressive growth of these countries (with the potential exception of Hong Kong) is essentially due to activist international technology transfer policies by the state and good export performance (Chang, 2002).[6] Given their technological backwardness vis-à-vis early industrialisers, these 'late developers' were initially forced to compete in international markets on the joint basis of low wages, state subsidies, incremental productivity, and quality improvements related to existing products

5 Silk and silk-related raw materials were Japan's biggest export products until the 1950s (Chang & Evans, 2005, p. 10).

6 To be sure, Amsden (1989, p. 62-63) makes it clear that Japan represented a privileged case of '20th century late developer', due to its history as an imperial power and the fact that it started its catching up period earlier than other East Asian countries.

– rather than on the competitive advantage of new, innovative products and processes.[7] Only through gradual improvements in productivity and product specification could late developers move forward in price and quality competitiveness (Amsden, 1989). Their ITT policies were channelled through deliberate organisational choices and innovations, including pilot agencies, financial control, and state-owned enterprises (SOEs) (Chang, 2010). State support, however, was dependent on apposite policy incentives and compulsions. In South Korea, much as in the case of Japan or Taiwan, "the state intervene[d] with subsidies deliberately to distort relative prices in order to stimulate economic activities […] In exchange for subsidies, the state has imposed performance standards on private firms" (Amsden, 1989, p. 8).

In South Korea, the targets of these forms of financial assistance were the *chaebols* (large holding companies), which could use state-created rents to engage in learning how to adapt foreign technology. State discipline vis-à-vis industrial capital – a key concept in Amsden's understanding of South Korea's catch-up strategy – had to be so effective as to prevent "inefficient firms from protecting their subsidies if the state decided to withdraw them" (Khan & Blankenburg, 2009, p. 13).[8] In the case of Taiwan, technological upgrading and the rapid acquisition of technologies took place instead, at the level of small private-sector firms. The specific 'rent-management' system enabled "the state to acquire high-productivity technologies through state-led technology licensing and subsidising the provision of this technology to the private sector" (Khan & Blankenburg, 2009, p. 15). As these technologies were made available by the state to various firms in the private sector, competition would benefit those firms which could raise productivity most rapidly through learning (see Wade, 1990). As a result, by following their respective catch-up strategies, Japan, South Korea and Taiwan graduated from income levels in the 1950s equivalent to those of some African countries to European income levels in the mid-1990s (Chang & Evans, 2005, p. 23).

The ability of state institutions to provide appropriate guidance and compulsion to the private sector, while preventing private sector interests from influencing the long-term ITT strategy of the state has been termed 'embedded autonomy' (Evans, 1995). According to Evans, an important criteria, based on which a bureaucracy can be considered developmental, is its embeddedness in society through "a concrete set of connections that link the state intimately and aggressively to particular social groups with whom the state shares a joint project of transformation" (Evans, 1995, p. 59). At the same time, a developmental bureaucracy needs to enjoy sufficient autonomy, involving "the ability to formulate collective goals instead of allowing officeholders to pursue their individual interests" (Evans, 1995, p. 45). For Evans, the specific state-society relations that allowed states and their developmental elites in Japan, South Korea and Taiwan to successfully nurture an embedded autonomy were fundamentally based on the alliance with industrial

7 Amsden (1989) expanded on the concept of 'late development' as first articulated by Gerschenkron (1962). In her usage, the term refers to a particular stage of economic development, in which catching up occurs by way of 'learning' how to compete by adopting new technologies. Late development is presented as a new mode of industrialisation, one which follows from industrialisation as it occurred in Britain in the 18th century on the basis of 'invention' of technological processes and as it subsequently occurred in Germany and the United States in the 19th century on the basis of technological 'innovation'.

8 The concept of 'discipline' will be dealt with in greater detail in Section 4.

capital.[9] In contrast, intermediate states such as Brazil or India and predatory states such as Zaire represented the midway and opposite levels of bureaucratic achievement, respectively.[10]

The 'developmental state' paradigm – which according to the literature was based on the excellent bureaucratic structures found in East Asia – contributed to a critical understanding of the role that political institutions play in the process of economic transformation and in addressing market failure in particular. This alternative narrative increasingly flew in the face of the neoliberal Washington Consensus and its policies of privatisation, deregulation and trade liberalisation, which in the 1990s were being advocated by the World Bank and the International Monetary Fund (IMF).[11] While the international financial institutions (IFIs) were demanding the abandonment of inward-oriented industrial policies and price distortions, Amsden (1989, p. 18), amongst other critics, was arguing for "getting relative prices wrong" in the catch-up stage of industrialisation, claiming that exporting by itself was not a formula for sustainable economic growth. Amsden's posture was backed by the unquestionable evidence of extensive state intervention in the East Asian newly industrialised countries (NICs) and their success. At the same time, the Washington Consensus was suffering from a crisis of legitimacy resulting from the disappointing results of market-oriented reforms in much of the developing world since the 1980s (Katz, 2002; Rodrik, 2006; Fine et al., 2013). The World Bank's stance was famously exemplified by *The East Asian Miracle Report* (World Bank, 1993), a study commissioned by the Japanese to reconsider the role of the state in the East Asian NICs. Not surprisingly, the report downplayed the role that ITT policies played in the high growth rates of East Asian countries in their catch-up phase and, significantly, advised against attempting to replicate the East Asian development model in other developing countries (Woo-Cumings, 1999; Fine et al., 2013).[12]

Eventually, the pendulum swung back towards the 'getting the prices right' approach, increasing the significance of the institutional structure that underlines the price system. This has led to the emergence of the 'good governance' agenda in place of the old Washington Consensus, with the aim of ensuring that developing countries comply with a number of governance-related conditionalities. While the 'good governance' package has varied in content from one recommendation to another – notably because we are still

9 Evans does not, however, exclude the possibility that alternative state-society arrangements may be found, as in the case of agrarian communism in Kerala (India), or European social democracy in Austria.

10 Evans (1989) defines the 'predatory state' as one preoccupied with rent-seeking (corruption), where the control of the state apparatus is held by a small group of personally connected individuals. As such, "personalism and plundering at the top destroys any possibility of rule-governed behaviour in the lower levels of bureaucracy, giving individual maximization free-rein" (p. 564). By 'intermediate state', Evans refers to the unusually extensive powers of political appointment necessary to complement a lack of generalised meritocratic requirement. Specific characteristics refer to the lack of incentives for long-term commitments by members of the bureaucracy, lack of a stable bureaucratic structure, and poor linkages with society.

11 The articulation of these policies had been backed by a transition in development economics since the late 1970s. Whereas, in the early literature, the idea that the state should play a central role in economic development was central – such as in the 'Big Push' theory of industrialisation by Rosenstein-Rodan and Scitovsky – this would change dramatically between the late 1970s and the early 1990s. During this period, ideas of market liberalisation and contraction of the state became dominant (see Chang, 1997).

12 For a vigorous rebuttal to the World Bank report, see Amsden (1994).

trying to understand the exact connection between specific institutions and economic development – it has generally included the following items: democracy; a clean and efficient bureaucracy; strong protection of private property rights (including intellectual property rights); high-quality corporate governance; and, well-developed financial institutions (Chang, 2002, p. 69-70).

However, despite the shift from prices to institutions, the 'good governance' agenda and its institutional requirements have failed to take into account many of the lessons from developmental state literature. While strong governance capabilities are fundamental in managing the process of industrial catch-up, the late developers who have successfully undertaken such developmental transitions over the last fifty years, especially in East Asia, would not have scored high in the 'good governance' rankings – both at the time when their take-offs began and for a long period after that. Instead, their governance capabilities were oriented towards solving definite problems, such as "overcoming constraints limiting technology acquisition, solving problems in allocating valuable resources such as land and maintaining political stability within tolerable limits" (Khan, 2012, p. 1).

What is more, as Chang (2002) demonstrates, the policies and institutions currently recommended to developing countries, as part of the 'good governance' agenda, are not those that were adopted by advanced countries when they themselves were developing. Instead, most of today's advanced countries, including the United Kingdom and the United States, adopted 'bad' trade and industrial policies and infant industry protection and export subsidies, even though such practices are today highly discouraged or outright banned by institutions such as the World Trade Organization (WTO).

Hence, the study of the 20th-century developmental state based on empirical observations has contributed significantly to throwing light on the developmental strategies pursued after WWII by the East Asian Tigers in the process of technological catch-up. This has provided awareness of the importance that ITT policies have played to their attainment of prosperity. Furthermore, this body of literature has served to critically appraise the market-oriented policies that international organisations have recommended to developing countries.

One of the main 'take-away' messages from the 20th-century developmental state paradigm is that each country should be able to pursue developmental success through a selective process of experimentation, outside of any ideological straightjacket. These lessons, however, have not yet been fully institutionalised at the core of international financial institutions, and the enduring theoretical disputes over the role of the state in promoting economic development demonstrate the contentiousness of this debate. The next section will look at how discussions regarding the developmental state have evolved, before evaluating the significance of this concept for the 21st century.

2.1 Critical perspectives on the developmental state concept

Developmentalism as such goes beyond the specific case of East Asian countries. As Chang (2010, p.1) makes clear, if we appreciate the developmental state simply as "a state that derives political legitimacy from its record in economic development, which it tries to achieve mainly by means of selective industrial policy", then it makes sense to only understand it as a particular phenomenon which existed in East Asia at a specific historical time. However, to do so would be to miss the wider picture of developmental success – and failure – around the world, the point being that developmental success can take many forms as has happened at different times in history. As Chang argues:

> "[I]f we go down to the last details, all experiences – individual, regional, and national – are unique, making exact replication impossible. But does it mean that we should never look at experiences that developed under conditions that are different from what we are facing?" (Chang, 2010, p. 1)

The experiences of Japan, South Korea, Taiwan, Singapore, France, Sweden, Finland, Denmark, Norway and the United States – all of which have experienced different forms of developmental statuses at some point in their national history – demonstrate how the concept must be intended as one which can take various shapes, each modelled according to the unique political, ideological and economic conditions faced by the individual country, with different relative strengths and weaknesses.[13] If we let go of the political component of Chang's definition of the East Asian developmental state (deriving 'legitimacy' from economic development), we are left with a procedural explanation of a developmental state interested in promoting economic development by privileging certain sectors over others. This view is compatible with the need to include environmental sustainability within our definition of developmentalism.

Over the years, the development state paradigm has continued to evolve. However, its influence on development policy has been limited, in particular due to the increasing prominence of the neoliberal agenda. One argument for why – in spite of its charisma – the developmental state concept fell from grace in development policy has been the self-selection of successful cases, which meant that cases of failure tended not to be adequately understood (Fine et al., 2013). Another limiting factor, as explained by Whitfield, Therkildsen, Buur & Kjaer (2015) is that most studies were concerned with establishing that the state had a role to play in late industrialisation, rather than focusing on the political dynamics that made state intervention possible and successful. As such, in spite of its focus on the embeddedness and autonomy of the state, the politics of state interventions was rather narrowly understood. More recently, MacIntyre (1994), Khan

13 The case of the Scandinavian 'developmental welfare state' provides a good example. Although they may not fit within the 'classic' East Asian variety of developmental state, Scandinavian states have been promoting for a long time a "[s]trong universalistic welfare state [which] provided social insurance to workers against the risks emanating from structural changes, thus reducing their resistance to changes" (Chang, 2010, p. 3). While political legitimacy was obtained through the provision of the welfare state and full employment, the Nordic states also employed various kinds of industrial policies (although of a less selective type than in East Asia), strongly promoting research and development (R&D) in technology-intensive industries (Chang, 2010, p. 3). This case highlights how developmentalism can emerge through a variety of policy tools, combining various degrees of sectoral industrial policy and welfare-labour policy.

(2000), and Khan and Blankenburg (2009) among others, have elucidated further the political economy context of the developmental state.

3 Changing conditions for the developmental state

As discussed earlier, the developmental state paradigm attained considerable currency due to the extraordinary economic performance of the East Asian states between the 1950s and 1980s. We stressed that the achievements of East Asian states relate to the ability to climb up the technological ladder by means of interventionist ITT policies in selected sectors. Yet, it is legitimate to ask about the extent to which such a model could work in today's world, especially given the transformations that the global economy has undergone in recent decades.

The transformations of the past decades have resulted in several challenges for the 21st century, which we group into three main categories: 1) climate change and environmental degradation; 2) the increasing 'bit-driven' composition of the economy and the premature de-industrialisation affecting the developing world; and 3) changed policy space within which individual states can operate due to growing economic interdependency. As these trends are not only simultaneous but also reinforce each other, becoming increasingly inseparable, the 21st century has also been called "the age of accelerations" (Friedman, 2016, p. 27).

Below – after we describe each of these challenges in more detail – we will discuss what role the state should play in order to accomplish national projects of structural transformation in this changing environment. Emerging from each of these issues is the need to deepen state-society relations, and thus an augmentation of the developmental state paradigm. In Section 4 we will then elaborate on why we find this to be the case.

3.1 Climate change and environmental degradation

One of the most pressing needs relates to climate change and environmental degradation. After various unsuccessful rounds of high-level negotiation in earlier years, the recent Paris Agreement reached in 2015 at the UNFCCC (United Nations Framework Convention on Climate Change) Conference of Parties (COP21) signalled broad consensus for action to achieve a low carbon future. It remains to be seen how quickly implementation of measures will proceed, but it would seem that the 21st century should be one where economic growth – and thus industrial policy – must tackle the challenge of climate change and environmental degradation, a process that has often been dubbed 'green transformation'. State-driven industrial policy is considered to be essential, due to environmental externalities that are not reflected in market prices; systems change that is required in several sectors (such as energy and infrastructure) but is faced with coordination and information failures; and the need for accelerating innovation in green (alternative energy) technologies along with the progressive (and proactive) phasing-out of conventional energy by removing distorting incentives (such as fossil-fuel subsidies) (Altenburg & Pegels, 2011).

According to a broad consent in climate science, this is the first human-related transformation with a deadline.[14] While the risks of political capture and government failure are certainly present, the magnitude and urgency of global climate change calls for sweeping and well-coordinated state intervention. This is because, while the things we produce and consume are largely shaped by markets, markets are, on their own, unable to address many of the environmental challenges which we are confronted by.[15]

In an effort to conceptualise the type of industrial policy framework which would be required to address these challenges, Lütkenhorst et al. (2014, p. 1) articulate the concept of green industrial policy as "encompassing any policy measure aimed at aligning the structure of a country's economy with the needs of sustainable development with established planetary boundaries". This ambitious undertaking is an evolution from traditional industrial policy, representing a normative endeavour in which "a broad-based social vision and contract need to be forged – supported by change coalitions and coupled with policy process safeguards, openness to policy learning, and an alignment of green industrial policies with market mechanisms" (Lütkenhorst et al., 2014, p. 1). As the authors suggest, while sustainability of human life makes a strong case for the widening of the concept of industrial policy, so does the economic case for the adoption of green technologies. The success stories of green frontrunners such as Germany and Denmark are proof of the considerable competitiveness potential of these new technologies, thus offering the possibility of addressing some developmental bottlenecks. Green transformation will inevitably require a deep renovation of economic structures, technologies and institutions.

To this end, the role of the state becomes critical in setting the right incentives to disrupt old (polluting) development pathways and creating new ones, based on green technologies and the sustainable use of resources. Mazzucato (2015), for example, shows that countries/areas that are currently leading in green transformation (for instance, Germany, China, South Korea, Norway and the state of California in the United States) are those where public sector organisations have played an active role by 'directing' support to most innovative, risky and uncertain parts of the 'green' economy, acting as a 'leading entrepreneurial force'. As she argues:

> "[T]he state can act as a force for innovation and change, not only 'de-risking' the economic landscape for risk-averse private actors, but also boldly leading the way, with a clear and courageous vision – exactly the opposite image of the state that is usually sold". (Mazzucato, 2015, p. 3)

14 As Lütkenhorst et al. (2014, p. 10) explain, there remains a gap between mainstream development economics and the literature with an explicit sustainability focus: "While issues of factor costs, economic growth and trade dominate the former, it is the scarcity and waste of resources as well as the environmental impact of their exploitation that are emphasised in the latter. To date, we encounter high-profile publications by leading development economists without the slightest consideration of the sustainability dimension." Specific references are made to Lin (2012), Chang and Grabel (2014) and Salazar-Xirinachs, Nübler & Kozul-Wright (2014). For a discussion of the 'green developmental state', see Satgar (2014).

15 The German Advisory Council on Climate Change (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen, WBGU) maintains that the transition towards a low-carbon, sustainable global economic system will represent a transformation equivalent to the two biggest transformations humanity has faced up to this point: the pre-historic Neolithic settlement; and the transition from agrarian to industrial societies (WBGU, 2011).

The state, therefore, needs to enable policies to stimulate entrepreneurship and increase investment in infrastructure and basic research.

This is not expected to be a smooth process, free of challenges; strong opposition from vested interests and incumbent groups are likely to reinforce path-dependencies and lock-in into conventional systems for producing and consuming energy. Difficulties in articulating a long-term vision for the needed transformation and in experimenting with policy alternatives add to these challenges.

States, however, cannot act alone. Broader coalitions at different levels are necessary. At the international level, the Paris Agreement is an illustration of alliances needed to advance the agenda for climate change action, and to agree on adequate levels of intervention by both developed *and* developing countries. We have seen that lack of commitment to climate mitigation action – from large and influential economies such as the United States, India or Australia – can hinder investments and thus slow down investments in clean technologies.

At the national level, alliances between the public and private sector, and with civil society are necessary for advancing the complex goal of green transformation. Interventions for both mitigation of, and adaptation to, climate change can benefit from multi-stakeholder partnerships. Such alliances have the potential to address a number of gaps in the development and climate context: regulatory, participatory, resource and learning gaps (Pinske & Kolk, 2012). Apart from promoting clean technologies, changes in consumption patterns across society are necessary, supported by innovative institutions and regulations. Further, decentralised modes of energy-generation based on renewable energy technologies need to replace (and initially combine with) centralised systems of conventional energy technologies.

As dealing with climate change and environmental degradation is a new challenge that requires a steep learning curve, and as no actor by himself possesses sufficient knowledge to address it, such alliances are important to overcome learning gaps in particular, by creating new practices, rules, or technologies (Lawrence, Hardy, & Nelson, 2002). Close alliances across stakeholders can also result in new business models that are not only profitable for the private sector but also beneficial to local communities and the environment.[16]

Thus, development solutions that were optimal in the 20th century call for new and more agile responses to address challenges such as climate and environmental degradation. As Friedman (2016, p. 34) argues, the state has to "learn faster," "govern smarter," and "continuously reevaluate" the ways in which it serves society. Collaborative learning along with inclusiveness in decision-making processes and outcomes becomes now more important; and this is also reinforced by the second challenge, as discussed below.

16 An illustrative example here is the community wind power projects model in Germany.

3.2 The 'bit-driven' global economy

Today's global economy is increasingly 'bit-driven', with value added deriving from innovative modes of arranging information, in formulas, software codes and images rather than from the production of physical goods on its own (Evans, 2008; Surowiecki, 2015). The 21st century is also characterised by the increasing speed of scientific and technological innovation and the shifting value from knowledge stocks to knowledge flows (Friedman, 2016). This means that the source of economic growth rests progressively more on participation in knowledge/digital flows (rather than in the accumulation of knowledge), cross-border innovation, and adaptability to a changing environment.

In their book, *The Second Machine Age*, Brynjolfsson and McAfee (2014) call this period 'an inflection point' in the history of our economies and societies due to digitalisation. The authors argue that increasing technological progress will leave workers with only "ordinary skills and abilities" behind (2014, p. 11). In fact, they claim that, due to the impressive advances in computer technology (from improved industrial robotics to automated translation services), employment growth in the last 10-15 years in the United States has suffered. As such, they argue that, as compared to past decades of technological progress, the trends we observe today are more troubling because technological change is destroying jobs faster than it is creating new ones. The authors call this outcome "the great decoupling".[17]

Others, however, are less pessimistic. Autor (2015), for instance, argues that what we are likely to see is not a change in the total number of jobs, but rather a "polarisation" of the workforce and a "hollowing out" of the middle class, this itself not a positive effect. As Autor (2015, p. 5) argues, while technological progress will substitute for labour, "automation also complements labor, raises output in ways that lead to higher demand for labor, and interacts with adjustments in labor supply."

Apart from effects on the labour market structure, there is wide agreement that the future effects of digitalisation (and automation) will affect the type of jobs available (Frey & Osborne, 2013). Specifically, Ford (2015) argues that information technology is likely to erode entry-level jobs as well as employment for many skilled professionals, such as lawyers, journalists, pharmacists, scientists. Sachs and Kotlikoff (2012) stress that these effects will be stronger on the young generation entering the labour market, thus leading to each new-born generation being worse off than earlier ones. However, Florida (2014) argues that in the past decade we have seen a rise of the so-called 'creative class', the support of which will be critical for dealing with the major transformations that the global economy is currently experiencing.

In light of these expected developments, workers will face an unprecedented challenge as they attempt to adapt. As Brynjolfsson and McAfee (2011) and Ford (2015) argue, compared to previous waves of technological progress, information technology is currently not affecting only one sector at a time, but rather its impact appears across the board. Every industry is expected to become less labour intensive. Ford (2015) highlights

17 In their study on the „Future of Employment", Frey and Osborne (2013) argue that 47 per cent of US jobs are at risk of displacement due to the advance of digitalisation, mainly in transportation and logistics, production occupations, office and administrative support.

another process that is likely to manifest. Specifically, he refers to the examples of Google and Facebook, large and influential firms, investing heavily in technology, growing rapidly, while hiring a tiny number of people relative to their size. The author argues that such players are likely to out-compete smaller firms, will lower investment capacity and higher labour intensity, leading to a rise of 'winner-takes-all' markets. These processes will ultimately exacerbate inequality.

The effects of technological progress on the economy, on work and on prosperity, have been primarily discussed in the context of developed economies. However, it is likely that developing countries would be affected even more strongly. In a recent report, the World Bank (2016) stresses that, aside from the potential dividends, developing countries are especially at risk of experiencing higher levels of inequality and of suffering from the excessive concentration of market power, inhibiting future innovation. It is by now clear that developing countries are also turning into service economies but without having fully experienced industrialisation (Rodrik, 2015), posing serious difficulties to the creation of developmental policies oriented towards manufacturing. With 'premature deindustrialisation' affecting large parts of the developing world (with the main exception of East Asia), manufacturing in developing countries is shrinking at levels of income that are far lower than those at which developed economies started to deindustrialise.[18] In this new context, value added is expected to come less from the physical manipulation of materials (namely, tangible goods), but rather from advances in information and digital technology (that is, intangible services: ideas, skills and networks). This process could result in a displacement of low-and middle-skilled occupations. As the World Bank (2016, p. 22) shows, "the share of occupations that could experience significant automation is actually higher in developing countries than in more advanced ones, where many of these jobs have already disappeared". Thus, the effects of technological progress on inequality could be higher in developing countries. The negative effects, as further elaborated in the report, are exacerbated by the existing gap between institutions (especially in relation to rule of law; regulatory uncertainty; vested interests; and accountability) and technologies, which would prevent the materialisation of social and political inclusion that such technologies could bring.

On another level, until recently both developed and developing countries have also been struggling to compete with the growing Chinese economy. Currently, however, due to raising wages, China is shedding more job opportunities. The question, then, is to what extent developing countries can win back those jobs and how many jobs will be forever lost to digitalisation. The answer depends to a large extent on the effectiveness of national industrial policy to capitalise on such opportunities.

So what does this shift to a 'bit-driven' global economy mean for our discussion on the role of the state? The envisioned changes on employment and market structure call for the state to mitigate the negative effects in terms of rising inequality, to reorient the education system to the growing importance of knowledge flows and knowledge creation, and to level the playing field for economic actors.[19] Due to the rapid pace of the 'bit-driven'

18 Dasgupta and Singh (2006) appear to have first coined the term 'premature deindustrialisation'.

19 A higher level of digitalisation leads to higher amount of data, and thus market concentration and the "monopoly power of big data" (Friedman, 2016, p. 52). More competition policy could, for example,

global economy, the state should continuously re-evaluate the ways in which it can serve society, by adapting regulatory and institutional frameworks to the new realities.

This fast pace of change at the workplace and in the labour market, calls for new concepts of social security and new education models to cushion the negative effects and anchor people in the new realities. As people will no longer live from their productive employment and as routine jobs will be lost, new institutions will be needed to distribute available jobs as well as more social transfers, such as wage-insurance programmes[20] or an unconditional basic income, for instance. To support an increasing number of unemployed, new policies for generating additional sources of revenues are also needed, such as taxes on carbon or financial flows.

Moreover, the state should play a stronger role in education reform. The 'digital revolution' has fundamentally changed the way we access information, the way we communicate with each other, and the type of knowledge needed in the labour market, placing higher emphasis on lifelong learning. Thus, the education system needs to not only integrate new platforms for learning, but also to train for different skills (such as creative skills, tackling complexity, and co-production of knowledge). The traditional concept of schooling based on knowledge acquisition needs to be reoriented towards 'knowledge building/creation/transforming', so-called 'pedagogy in the information society' or 'deep learning' (Loyens & Gijbels, 2008; McFarlane, 2015). The state can support this process by creating the framework conditions for these changes to be integrated through new regulations in public schools, funding and monitoring implementation programmes and by the retraining of staff in teaching and administration. Such interventions call for a much closer societal engagement on the part of the state to identify the market needs and to orient action.

3.3 Changed policy space for individual states

According to Pirie (2013), the developmental state model pursued by the East Asian countries is currently unviable due to a comparatively reduced policy space within which individual states can operate. The rising dominance of MNCs at the global level, as well as the increase in the costs of technology, would have rendered unfeasible any attempt to achieve some extent of self-sufficiency in key industrial sectors via dirigiste means in developing economies. The weight of FDI inflows would also make it difficult for developing countries to use 'nationalistic' industrial policies that may deter MNCs from investing.[21] To gain national competitive advantages in this global environment, firms should aim for an ITT strategy involving 'embeddedness' within, rather than 'protection' from, the major global networks that are governed by MNCs – a "pragmatic form of

prevent the market domination of companies that rely on processing big data (such as Google, Facebook and Alibaba).

20 In the United States, for example, the Affordable Care Act offers insurance subsidies to those who have lost jobs, although the programme is currently limited. Also, the Trade Adjustment Assistance programme offers a wage-insurance programme (up to USD 10,000 a year during a multi-year transition period) to replace a portion of lost wages while workers train for, and search for, a new career (Muro, 2016).

21 To be sure, the increased difficulty of disciplining capital is a trend which is no longer limited to developing countries but affects advanced countries as well (Davis, 2004).

neoliberalism" (Pirie, 2013, p. 165). The state would then need to adapt its policies accordingly.[22]

What is more, as mentioned before, many of the traditional ITT tools used by successful industrialisers in the past have been either banned or severely restricted by the WTO. Quantitative restrictions (quotas) have been banned, tariffs have been reduced, and export subsidies have been banned, except in the case of least developed countries (LDCs). New issues pertaining to FDI regulation and intellectual property rights have been brought under the authority of the WTO, so that now developing countries find it more difficult to 'borrow' foreign technology or put performance requirements on MNCs (Chang, 2009). In fact, the increasing number of deep bilateral/plurilateral trade and investment agreements goes far beyond the WTO in restricting policy space. Given these constraints, has the time come to regard the developmental state as a "historical relic" (Pirie, 2013, p. 155)?

While it is undeniable that the landscape of the global economy has changed dramatically, inevitably affecting the replicability of the 'classic' developmental state model and the state's ability to discipline capital, we think that national ITT policies still have an important role to play. Firstly, it is not self-evident that the current trend in industrial concentration will continue unabated, in spite of trends that some analysts observe due to the advance of digitalisation. Following the potential decline of existing producers, developing country firms may succeed in climbing up value chains in a number of sectors. Also, as new industries surface, prospects could emerge for new entrants, as was the case in East Asia during the electronics revolution. In addition, with value chains becoming more segmented and international, developing country producers could find new ways of entering them (Chang, 2009). The recent failure in trade negotiations for the Trans-Pacific Partnership (TPP) and the Trans-Atlantic Trade and Investment Partnership (TTIP), as well as the re-emergence of protectionism and re-nationalisation trends, signify a potential shift to more nationalistic development policies.

Also, concerning the increase in levels of FDI, it is not clear that the current trend will carry on indefinitely.[23] The very mobility of MNCs varies widely across industries and countries, making it difficult to generalise about the impossibility of implementing industrial policies. It is important to consider that, with a large domestic market and good supply-side conditions, developing countries may put into action policies in low mobility industries (such as automobiles and steel). Evidence also shows that performance requirements on MNCs do not influence FDI decisions as much as market conditions, infrastructure and the quality of the labour force (Chang, 2009).

Thirdly, regarding changes in global rules on trade and investment, while clear limitations have been put in place, the WTO has not forced countries to abolish all tariffs. Tariff ceilings may be negotiated, there is still room for conditional emergency tariff increases, and LDCs can still benefit from export subsidies. Moreover, while the trade-related intellectual property rights agreement has increased the cost of technology absorption, this is likely to affect mostly middle-income countries, for countries at lower levels of income

22 We are grateful to Tilman Altenburg for articulating this point.

23 In fact, while growth trends in global trade and FDI have been positive in the past years, they have been lower than in the 1990s or early 2000s (WTO, 2016; UNCTAD, 2016). Slower economic growth in emerging countries is expected to keep these trends more modest.

require technologies which are too old to have patents. Also, while trade-related investment measures prohibit measures like local contents requirements and trade balancing requirements, developing countries can still enforce conditions regarding the hiring of local labour, technology transfer, and R&D. Measures for providing targeted subsidies, directed credits, and tailor-made infrastructures (which have been used by Ireland and Singapore to attract FDI into selected industries) are also allowed. In brief, developing countries determined to advance their economic status should make the most of the policy space at their disposal. Further, the increased 'density' of trade/investment agreements calls for states to be more agile and visionary in setting national priorities.

In this current global context where the interdependence of markets is much tighter, we argue that new opportunities arise for national industrial policy, facilitated also by the advance of digitalisation (that is, increasingly connected flows of knowledge). Not keeping pace with the rate of technological change and global integration can lead to a reinforcement of the anti-globalisation and protectionist/nationalistic discourse we see manifesting itself today (such as 'Brexit' or the anti-trade movements).[24] But, as Rodrik (2011) argues, among others, unfettered openness to global markets delivers on development expectations only when embedded within social, legal and political institutions that ensure broadly shared benefits across the society.

For these reasons, we reiterate that the developmental state of the 21st century should aim for embeddedness within, rather than isolation from, global networks and markets; should forge alliances with broader sections of society; and should promote effective institutions to harness benefits and mitigate losses from such economic integration. Understanding new sources of innovation, knowledge creation, and entrepreneurship in emerging or existing sectors requires a close engagement with economic actors at different levels. As technology and market dynamics change much faster, regulations should also adapt. Such regulatory agility can only be achieved through an emphasis on policy innovation and deliberative democracy/planning. Further, as local market conditions, infrastructure, and the quality of labour force become more important, the state has a much stronger role to play in creating the necessary framework conditions, while – as discussed earlier – at the same time channelling social assistance to alleviate adverse effects.

24 Friedman (2016, p. 155) argues that disconnecting from these trends and global realities, which are a "vital source of fresh and challenging ideas, innovation, and commercial energy" is not likely to lead to developmental outcomes in the current era.

4 The need to forge developmental alliances between the state and society

The previous section examined the relevance of the developmental state paradigm in today's global economy. It was argued that the concept remains important since it is compatible with the requirements for transitioning to a low-carbon, sustainable economic system, and for responding to increased levels of digitalisation. The concept also presents a strong case for strategic integration within the global economy. Yet, such an endeavour requires more agile and inclusive state institutions than in the past.

Here we analyse the way in which different combinations of state-society relations may contribute to the effectiveness of political institutions. For a developmental state to be successful in the present climate, its policies will have to be based on a joint project of transformation with society – essentially a 'new social contract' providing a sense of collective vision – that is both economically developmental and socially inclusive.[25] The developmental states of the past succeeded in advancing projects of national transformation by closely tying themselves to specific social classes at different points in time. It is possible that this would now be the case as well, and may perhaps be even more important than in the past. To respond to climate change and environmental degradation, a broad social consensus on the direction of change and the related long-term objectives will be imperative, given the long process of transformation that this agenda entails (Lütkenhorst et al., 2014). This is the case because, in contrast to the developmental process of the recent past, structural transformation towards sustainability is contested by vested interests; requires fundamental changes in consumption patterns (across societal groups); and calls for more decentralised power systems (based on renewable energy technologies) and distributed entrepreneurship. Within the context of increased digitalisation, the state is also expected to play an increasing role in mitigating the potentially negative effects on society and promoting innovation-led growth, thus calling for a higher level of social inclusion. The changed policy space also demands closer state-society relations (which are, however, much more in line with the developmental processes of the past), as engaging in global knowledge flows becomes essential for structural transformation and as changed investment and trade rules create opportunities for national industrial policies to identify new sources of comparative advantage.

Our academic appreciation of developmentalism must move *beyond* an assessment of the bureaucratic ability of state institutions to identify the most strategic sectors leading to growth and to disciplined national capital (and labour) accordingly – which is essentially the story described by early literature on the developmental state. Our analytical 'toolkit' should expand in the direction of recognising successful patterns of state-society alliances, which can sustain the implementation of developmental agendas (including industrial policy) in various different developing countries, in line with their political configurations and levels of economic development.

In today's global economy, the difficult task of providing social inclusion and sustainable economic development in an integrated manner will press developing countries as never before. This is primarily because the fast pace and simultaneous progression of climate and environmental degradation, the rate of digitalisation and technological progress, as

25 On social inclusion in a developmental setting, see Mkandawire (2004) and Kwon, Mkandawire and Palme (2009). WBGU (2011) also stresses this point, given current global challenges.

well as levels of market interdependencies are likely to marginalise parts of the society much more than in the past, if people and governance systems do not adapt and learn to manage these changes. Any political project aimed at tackling these issues will require effective national institutions capable of adapting to the reality of the global economy in a strategic manner, as well as state-society ties that can support such an institutional set-up.

We next consider the way in which the state-society relations of developing countries have enabled or constrained the emergence of developmental politics among 'late developers' historically, followed by the implications of such an analysis for state-society alliances at the present juncture.

4.1 Historical interaction between political institutions and social forces

The question regarding the type of state-society alliances that can foster effective technological upgrading and structural transformation takes us to address issues of power and conflict as crucial in defining developmental trajectories. This task should be based on a careful examination of the historical interaction between political institutions and the various different social forces in each developing country, so as to reveal the constraining, as well as the enabling factors behind a country's developmental strategy.

According to Amsden (1989), successful industrial development is dependent upon the imposition of performance standards on industrial firms, and the use of such standards in order to benchmark future financial assistance. In such a way, firms can be held accountable for their relative levels of productivity and economic success. However, as Davis (2004, p. 6) points out, Amsden expected developmental states to be autonomous, without any form of class interference, implying that the bureaucratic configuration of the state would by itself produce the necessary source of discipline on the different social forces. The first author to actually suggest that the origins of such a disciplinary structure were based on specific state-class interactions was Evans, who attributed to industrial capitalists the fundamental role of developmental partners with the state.[26]

Khan (1995, 2000) took the debate further by suggesting that, in order for such a political cooperation to be sustainable, developing countries were required to align their developmental policies to their own internal 'political settlements'. This concept, defined as "the balance or distribution of power between contending social groups and social classes, on which any state is based" (Di John & Putzel, 2009, p. 4) has been utilised to provide an account of how power structures function in developing countries. According to Khan (2010, p. 1) a political settlement surfaces "when the distribution of benefits supported by its institutions is consistent with the distribution of power in society, and the economic and political outcomes of these institutions are sustainable over time".

In advanced countries, the distribution of power is generally founded on the distribution of income created through formal institutions and rights. In this sense, power and formal institutions manage to match each other. The distribution of power in developing countries, on the contrary, depends considerably on organisational abilities based in non-

26 Evans first presented this argument in his book *Dependent Development* (1979) and subsequently elaborated it in *Embedded Autonomy: States and Industrial Transformation* (1995).

capitalist sectors, with the historical origins of these capabilities going back to colonial history or even earlier. In much of the developing world, institutions by themselves are not able to support the distribution of benefits awarded by institutional structures in line with the distribution of power. As political settlements differ from country to country, Khan suggests, they can account for the differing institutional structures and explain why similar institutions may perform differently from country to country. For this reason, "[a]n understanding of the political settlement can […] provide a framework for looking at institutional performance and evolution across countries" (Khan, 2010, p. 1).[27]

Although they look at the matter from two different perspectives, both Evans and Khan stress the significant role that industrial capitalists played in the political economy of those late developers who succeeded in transforming their productive structures and reached high-income levels (see Evans, 2008; Khan & Blankenburg, 2009). Evans's main argument is that an embedded but autonomous bureaucracy is essential for more growth and development. The 'good governance' agenda later integrated the 'autonomous' aspect of Evans's argument. But for Khan and Blankenburg, autonomy of the state from society is less of a precondition to growth; rather they stress embeddedness, and see growth and development as leading to changed political settlements over time, in favour of the middle class, and hence towards stronger societal checks on the state (for instance, lower levels of corruption, better rule of law, more democracy).[28] This represents a significant contribution to our understanding of the political economy of industrialisation. We build on this argument later on and argue that the 21st century challenges call for an augmented notion of embeddedness of the state in the society at large.

In her seminal work *Discipline and Development*, Davis (2004) attempts to expand on the state-society model that emphasises the role of industrial capitalists as the protagonists (together with the state) of the successful industrialisation of late developers. By looking at the case of two successful industrialisers (South Korea and Taiwan) and two unsuccessful ones (Argentina and Mexico), substantial evidence is provided to suggest that an initial alliance between the 'rural' middle classes and the state was at the foundation of the so-called 'disciplinary regimes' which enabled the state to impose stringent performance requirements on industrial firms (and labour) in successful industrialisers. According to Davis' account, such an objective was attained by forcing industrialists to 'behave like small producers', that is to say, they were induced to act in line with the cultural values (such as thriftiness and industriousness) as well as material

27 This is especially important in the case of governmental efforts aimed at promoting successful technological learning through rent management, intended as creating and withdrawing opportunities for highly profitable investments (see Schmitz, Johnson, & Altenburg, 2013). Managing rents for technology acquisition is not simply limited by state capacities but also by political obstructions that hinder targeted strategies of rent management from being implemented. It follows that the success or failure of rent-management strategies "is largely determined by the *compatibility* of technological and institutional strategies for late development with political constraints arising from inner-societal power constellations as well as from transnational–external–influences" (Khan & Blankenburg, 2009, p. 21). The varied history of success and failure experienced by late industrialisers in the 20th century is a reflection of such a compatibility issue.

28 We are grateful to Elvis Melia for clearly articulating these two arguments.

conditions faced by the rural middle classes.[29] Practical measures through which such a disciplinary regime and its associated hierarchy of class aims and social needs was established, involved the maintenance of a base of support among the rural middle classes by nurturing their productive gains along a sectoral dimension.[30] Only at a later developmental stage did the urban capitalists overtake the rural middle classes in their position as privileged interlocutors of the state and beneficiaries of its policies.

In the debate on the political economy of industrialisation, this account takes to centre stage the importance of class culture – and of rural middle-class culture in particular. In this way, it advances the claim that discipline is actually a cultural construct, which depends on a synergic contribution by both societal and institutional forces. By arguing for the primacy of rural middle-class embeddedness in the take-off phase of industrialisation, this analysis challenges the very notion of state 'autonomy', imbuing instead political institutions with the disciplinary ethics of a specific social class.[31] Nevertheless, even if the rural middle classes *did* represent such a fundamental point of inception for the industrialisers of the past, it is uncertain whether they could play the same role in developing countries nowadays. As Davis herself points out, it is becoming harder in the 21st century for state institutions to discipline capital and labour. This is due to a number of reasons, including the fact that 'space and location' seem to matter less and less in developmental trajectories. On the one hand, foreign investments and a globalising economy are limiting the possibility of disciplining capital at the national level in the same way as in the past. On the other, the ever-increasing role of cities and urban centres in the global economy is diminishing the strategic significance of rural areas at the national level, thus rendering it less likely that rural middle classes would be included in institutional alliances.

Such a comparative and historical framework represents an attempt to move beyond a straightforward appreciation of the ways in which industrial policy strategies are practically implemented, in an attempt to look for the societal 'origins' of developmental regimes. If such an approach were to be elaborated further, it could allow us to better understand the points of connection between early developers and subsequent (or late) developers. Having stressed that political settlements play an important role in development but that their composition may vary, we turn now to the relevant state-society alliances for the future.

29 Davis (2004, p. 13) maintains that "small-scale agrarian production, by its very nature, generally entails a much greater degree of self-regulation, austerity and savings than urban-based artisan production". This would still be the case in contemporary developing countries.

30 This sectoral focus included the implementation of land reform, internal agricultural terms favourable to agriculture, the articulation of effective rural-urban linkages, increased domestic and external demand for goods produced in and by the rural sector, as well as the application of strict governmental control on banking and investment capital to discipline industrialists.

31 This opens the door for the possibility that, as has been argued in the sociological literature by authors such as Moore (1966), understanding agrarian relations may be fundamental in order to account for successful capitalist development trajectories. Evidence seems to suggest that rural middle classes would have been significant, at different points in time, for early developers such as the United States and Britain.

4.2 Alliances for the future and their challenges

Given the current configuration of the global economy: Could there be a different social class or social combination that might provide the developmental alliances of the future? In an attempt to address this question, Evans and Heller (2015) suggest that states with developmental ambitions should be looking out for new social interlocutors, as part of a bottom-up form of engagement which focuses on as wide a segment of society as possible – instead of relying on a single social class (such as the business elites). Stirling (2014) also calls for public-private alliances and "engaging across society" to address current global challenges. This proposition would appear to be supported by the very evolution of the global economy.

In response to climate change and environmental degradation, the green transformation calls for broader and more diverse state-society relations in order to disrupt old pathways and lay the ground for a new broad-based social contract. WBGU, the German Advisory Council on Climate Change, (2011, p. 6) articulates the need for a "proactive state", which it defines as "a state that actively sets priorities for the transformation, at the same time increasing the number of ways in which its citizens can participate, and offering the economy choices when it comes to acting with sustainability in mind." Assuming a given level of autonomy is present (as defined by Evans) and taking a fairly normative stand, WBGU (2011) sees a proactive state as one that gives change-agents leeway and supports them actively.

The increasingly 'bit-driven' model of economic growth, propelled by creative ideas and flows of knowledge, is gradually replacing the 'transformation of nature', which defined industrialisation in the 19th and most of the 20th century (Evans, 2008). Hence, a sustainable course of social and economic transformation will increasingly have to rely on producing intangible assets (ideas, skills and networks) rather than simply on stimulating investment in machinery and physical goods as in the past, thus rendering the nurturing of human capital of the utmost importance (Evans, 2014).

This is of course not a simple task for developing countries, given that ideas can be monopolised through intellectual property rights, a reality which puts developing countries at a disadvantage vis-à-vis advanced countries.[32] Harvesting returns from ideas will also require the ability to utilise them together with co-dependent inputs such as capital, skilled labour and, fundamentally, institutional frameworks. In the current environment of strong market interdependencies reinforced by the 'bit-driven' economy and climate change concerns, states that seek to achieve developmental outcomes should make the most of the existing policy space to improve market conditions and the quality of the labour force. In essence, institutions need to keep up with the 21st century challenges.[33]

While the concept of embedded autonomy would still be crucial for the attainment of developmental objectives in the 21st century context, the specific form of state

32 As Tilman Altenburg pointed out, this argument can be contested, as the (old) manufacturing know-how may have been easier to protect through patents than the (new) internet economy. It remains to be seen to what extent this presents a challenge or an opportunity for developing countries.

33 Friedman (2016, p. 33) talks about the need for "social technologies" keeping up with the three main accelerations taking place in the 21st century: Moore's law, referring to increased digitalisation; Mother Nature, referring to environmental degradation; and the Market, referring to globalisation.

embeddedness in society should take an 'augmented form' in which the state should 'engage' with more diverse stakeholders, to include civil society groups, communities, and so on, and thus become more 'embedded' in society. This is because state-society relations are intimately tied to state capacity, while greater political inclusion is crucial for enhancing the quality of state intervention through processes of monitoring and feedback:

> Active participation by citizens is in fact a key ingredient for many social policies. Education is co-produced by students (and their families). Health is "co-produced" by patients, their families and their communities (Ostrom, 1996). Environmental regulation is effective only when the state has allies in civil society capable of monitoring and exposing environmental problems. (Evans & Heller, 2015, p. 9)[34]

As Evans and Heller suggest, this form of augmented embeddedness would seem to conform with theories of industrial policy which emphasise the need for constant experimentation, feedback and bootstrapping (a self-starting process that is supposed to proceed without external input) (see Sabel, 1995; Rodrik, 2007) and theories which suggest that deep state-society interactions are fundamental to policy innovation (see Baiocchi, Heller, & Silva, 2011). At the heart of this alternative approach is the idea that, contrary to top-down methods which depend on technocrats and foreign advisors for their implementation, local knowledge can and should support the formation of institutions through the aggregation of local information. According to Rodrik (1999, p. 19), participatory political institutions are best suited for accomplishing this task, as they represent a form of "meta-institutions that elicit and aggregate local knowledge and thereby help build better institutions". Evans (2004) provides the instances of Porto Alegre (Brazil) and Kerala (India) as two valid examples of how society may participate in the policy process and simultaneously improve bureaucratic capacities through forms of so-called 'deliberative democracy'. Drawing on Fung and Wright (2003, p. 18), Evans (2004, p. 36-37) explains that this term intends to express an exercise of:

> joint planning, problem-solving and strategizing' involving ordinary citizens, in which 'strategies and solutions will be articulated and forged though *deliberation* and *planning* with the other participants,' such that 'participants often form or transform their preferences in light of that undertaking,' thus allowing solutions that would have been impossible given initial preferences. If it were possible to implant this sort of deliberative process in political units large enough to impact developmental trajectories – say, the provincial or municipal level – we would have something that could be called 'deliberative development.

Evans further argues that Amartya Sen's work on social choice and development supports the importance of participatory political institutions. Sen's arguments are in fact based on the assumption that thickly democratic "decision-making institutions built on public discussion and exchange of ideas, information and opinions offer the *only* way to adequately define desirable developmental goals […] [S]uch institutions offer the opportunity to exercise one of the most important of all human capabilities: the ability to choose" (Sen, 1999, referenced in Evans, 2004, p. 36).

34 We recognise that the notion of 'civil society' is a debated one, especially between those who see it as a harmonious site in which different actors come together, and those who see it as a bitter arena of ideological contestation in which the state intervenes to promote its interests. (For a discussion of civil society within a developmental context, see El-Mahdi, 2011).

The instances of Kerala (democratic decentralisation) and Porto Alegre (participatory budgeting at municipal level) show how participatory political institutions can be implemented in different ways. Such cases challenge the assumption that there can be just one single, technocratic set of political institutions, which should be bestowed upon developing countries by global elites. They also show how wider constituencies can contribute towards improving bureaucratic efficiency and how – differently from what has often been advocated by the IFIs – *better* governance does not necessarily imply *less* governance. Involving the grassroots in projects of participatory development also goes beyond an understanding of popular participation limited to some conformity to electoral norms, as in an electoral democracy, putting instead participation and deliberation at the centre of the provision of essential services.

Thus, in light of the 21st century global challenges discussed earlier, these insights lead us to argue that to promote sustainable and inclusive structural transformation the state should rely on augmented forms of state-society alliances, based on participatory political institutions that elicit and aggregate local knowledge.

The three global challenges, which feed on and reinforce each other, can 'make or break' societies depending on whether or not policy interventions reflect current realities. An environmentally unsustainable growth model based on centralised conventional energy systems and the inefficient use and consumption of resources can lead to further environmental degradation and ultimately to conflict over resources. Increased digitalisation of economic activities can increase market concentration and raise inequality, leading to instability. Similarly, current market interdependencies can contribute to economic isolation, if openness and participation in global value chains is not embraced.

To overcome such outcomes and to keep up with the global trends (in the environment, technology, and global market realm) the developmental state in the 21st century must focus on stabilising society's foundation, through social policy innovations; new policies to raise revenues (such as carbon pricing); education reform; and investment in sustainable energy technologies/systems; as well as through incentivising and enabling experimentation and innovation at all levels. This would require a shift towards more decentralised systems and decentralised decision-making, and thus a new social contract based on inclusive institutions. As Altenburg and Lütkenhorst argue:

> [P]olitical leadership should be able not only to establish and enforce clear rules for market-based competition but also to formulate, in close collaboration with the private sector and other stakeholders, a strategy for socio-economic transformations; to create a social contract in support of this strategy; and to implement the strategy effectively, which in turn presupposes institutional reforms that encourage efficiency, transparency and accountability. (Altenburg and Lütkenhorst, 2015, p. 90)

This becomes increasingly important in our present reality of technology-enabled networks that speed-up the flow of information, empower collective action, and undermine command-and-control systems.

Suggesting that developmental states in the 21st century should be based on augmented forms of embeddedness in society does not mean that we can forget about the political

constraints and conflicts that shape state-society relations.[35] Rather, our intention is to highlight the fact that state-society alliances will have to be more inclusive and agile to advance the process of structural transformation, given the simultaneous challenges of climate change and environmental degradation, digitalisation, and changed policy space due to globalisation.

5 Conclusions

In this paper we argued that major historical shifts in the character of development call for a new reflection on the developmental state concept. We discussed three main challenges for development in the 21st century (climate change and environmental degradation; increased digitalisation or 'bit-driven' economy; and changed policy space for individual states due to increased market interdependencies) and stress that in this context (of progressive and cumulative change on all three fronts at once) the role of the state needs to be reassessed. To respond to these challenges, the developmental state has to be grounded in a new social contract based on augmented forms of embeddedness in the society, supported by participatory political institutions and processes, and oriented towards promoting economic growth within planetary boundaries.

The developmental states of the 21st century advanced projects of national transformation by closely aligning themselves to specific social classes at different points in time. That type of state embeddedness was mostly top-down, based on close (and often collusive) alliances between the public bureaucracy and privately owned business. To effectively engage with and address the development challenges of the 21st century, such alliances need to be enlarged to include other societal groups/interlocutors grounded in deliberative decision-making processes. The fast pace of climate and environmental degradation, the rate of digitalisation and technological progress, and the strong market interdependencies are likely to marginalise parts of the society if governance systems do not adapt and learn to manage these changes. An environmentally sustainable growth model requires a shift away from large-scale to more decentralised energy-generation systems, a change in consumption patterns, and more community-based entrepreneurial business models. The 'bit-driven' economy is also likely to leave behind certain societal groups and foster market concentration. Thus, we argue, bottom-up forms of engaging across society, focused on policy experimentation and learning, through deliberative processes, are more suitable to address such complex problems. Deliberation and participatory governance promotes not only conciliation between the various actors affected by a policy (critical especially in the case of 'green transformation' faced with strong vested interests), the

35 Efforts towards achieving higher levels of inclusiveness in political processes can also backfire and undermine the intended goal. One such example is the NIMBY ('not-in-my-back-yard') syndrome that often materialises in environmental or climate mitigation actions. We could refer here to the failure of the German government to achieve a consensus for building transmission lines from the north to the south of Germany for clean electricity delivered from large-scale wind parks in the North Sea. Understanding the source of opposition from different societal groups (rather than dismissing their interests through a top-down autocratic approach in the interest of climate) is, nevertheless, critical to finding an effective and long-term solution. This is especially the case as the costs of non-action are likely to be higher (and borne by a larger group) than the benefits enjoyed by blocking such sustainability-oriented initiatives. Hence, inclusive institutions for deliberative development are nonetheless superior to the autocratic variant of the developmental state.

emergence of an informed and engaged public (essential for changing consumption patterns, effectively targeting social policy, and orienting research effort and investment in lifelong learning), and the use of research-based knowledge to guide decision-making (important for responding to the urgency of action and the acceleration of the three main global trends). Deliberative processes also emphasise and promote more transparency, legitimacy and accountability in decision-making, stressing the importance of state autonomy, as envisioned earlier by Evans. Such forms of augmented embeddedness, along with autonomy, should define the developmental state of the 21st century, rendering it more agile and responsive to the fast and complex changes that are the reality of our times.

Redefining the social contract along these lines is of course determined by national and regional politics shaping state-society relations. Thus, how states can achieve developmental outcomes in less than 'optimal' political economy environments (that is, where state capabilities are weak and the risk of political capture by elites is high) requires more attention in development studies. Further research should also shed light on innovative modes of inclusive and deliberative development, allowing us to develop a richer understanding of the ways in which technological development and globalisation may interact effectively to achieve the goals of a sustainable and inclusive economic transformation.

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