



TECHNOLOGY GOVERNANCE

Working Papers in Technology Governance and Economic Dynamics no. 52

THE OTHER CANON FOUNDATION, NORWAY

TALLINN UNIVERSITY OF TECHNOLOGY, TALLINN

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# Public Management, Policy Capacity and Innovation

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May 2013

'Administration is the most obvious part of government; it is government in action; it is the executive, the operative, the most visible side of government, and is of course as old as government itself. It is government in action, and one might very naturally expect to find that government in action had arrested the attention and provoked the scrutiny of writers of politics very early in the history of systematic thought. But such was not the case.'

Woodrow Wilson (1887) *The Study of Administration*.

## **Abstract**

In this paper we discuss the question of what factors in development policy create specific forms of *policy capacity* and under what circumstances development-oriented complementarities or mismatches between the public and private sectors emerge. We develop the notion of policy capacity into a concept that reflects the variety of modes of making policy that originate from co-evolutionary processes between political and policy ideas, public management and private-sector dynamism. We argue that the interactions between these factors are reflected in three inter-linked policy choices, each fundamentally evolutionary in nature: policy choices on understanding the nature and sources of technical change and innovation; policy choices on the ways of financing economic growth, in particular technical change; and third, policy choices on the nature of public management to deliver and implement both previous sets of policy choices. Using the historical case studies of the East Asian developmental state of the 1960s-1980s and Eastern European development polices of the 1990s-2010s, we show how and why these economies developed almost opposite institutional systems for financing, building and managing techno-economic systems and how this led, through co-evolutionary processes, to different forms of policy capacity.

## Introduction

*Policy capacity* – simply understood as ‘the ability to marshal the necessary resources to make intelligent collective choices and set strategic directions for the allocation of scarce resource to public ends’ (Painter and Pierre 2005, 2) – is in many ways the holy grail of economic growth and development.<sup>1</sup> Both mainstream and heterodox theorists of development agree that having policy capacity holds the key to solving many developmental challenges, especially if policy capacity is understood to include abilities to maneuver international policy waters and power relations (Jayasuriya 2005). When policy capacity is seen to be the key, then technological change and innovation are widely acknowledged to be the locks that need to be unlocked for development and economic growth. However, in most debates that touch upon development policy, creating policy capacity is seen as a rather straightforward task that is dependent on the given forms of institutional context. Or, we can talk about *policy bias*: development discussions are mostly substantial; the ‘what’ is more important than the ‘how’. For instance, debates are about whether tariff policies are good or not for industry and innovation, not about how we design and implement such policies; debates are about subsidies vs loans for firms dealing with R&D, not which public organisation administers such programmes and how. Such policy bias makes implementation issues secondary and often leads to one-size-fits-all views of the institutional context (see Karo 2012).

However, we contend that strictly speaking there is no such thing as policy. Policies exist, that is they become reality, only through their implementation. Implementation means concrete people in a concrete organisation with their values, legal and power basis, coalitions and interactions with other public- and private-sector organisations. These public-sector organisations – the part of the public sector that we can call *public management* – have their rules how they recruit and promote people, how they understand their own, and others’ performance and accountability, indeed their entire set of tasks. Further, as concrete people, managers and civil servants are the ones implementing policy, and they are the ones having contact with the subjects of a given policy – in case of

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<sup>1</sup> In what follows we use *policy capacity* as a concept as it is used in public administration/management and public policy literature, referring to meso- and micro-level processes of public policy making, exemplified in the quote starting this paper and explained in detail in the first section of the article, and not in a much wider sense often used in mainstream institutional literature following Douglass North (1990) and others (i.e. looking at policy capacities as factors on the macro-level political deliberations between different actors – executive, legislative etc – where public policy implementation institutions, or bureaucracies, enter only occasionally and as tools of political deliberations).

economic and technology policy, private companies mostly, but also universities, labour unions, industry associations, etc. So, often implementation becomes crucial for what the given policy is and does. Because of learning and feedback mechanisms between civil servants and private-sector actors, entrepreneurs and others actors in the policy-implementation phases, implementation also becomes key for how the given policy is evaluated, and changed if needed. Thus, the realisation of policy ideas through implementation is conditioned by different factors from culture to geography to time. We argue that it is impossible to understand policy capacity, how it is generated, maintained and changed, without public management. Thus, in order to understand policy capacity we have to speak about *co-evolutionary processes* between political and policy ideas, public management, and private-sector dynamism.

In existing literature there are important attempts of using public management as one of the key explanatory factors of economic development and dynamism. Studies by Johnson (1982), Wade (1990), Amsden (1989), Evans (1995), to name but the best-known cases, have offered key historical insights on how bureaucracies – or Weberian public-management structures that rely on merit-based career systems and clearly established administrative procedures – have been fundamental to East Asian *developmental states*. Yet, there is no explicit attempt in these studies to theoretically explain how and why these Weberian elements managed to create policy capacity within government bureaucracies in a way that was supportive of technological and economic development in the private sector, and how capabilities evolving in the private sector influence in turn evolution of bureaucracies (see also criticism summarized in Yeung 2013). Rather, the existence of Weberian bureaucracy is seen as a historical and explanatory variable in the general explanations of the development trajectories.<sup>2</sup> As a separate stream, studies in *comparative capitalism* have explained the linkages between the development of public and private institutions using, first, the perspective of private-sector-led complementarities (*varieties of capitalism* approach, as in Hall and Soskice 2001); second, the more sociological perspectives on *governance of economic systems* (Hollingsworth and Boyer 1997; Amable 2004; Crouch 2005); and, third, the perspective of *financial systems* (Zysman 1983; Dore 2000). These studies have been mostly concerned with portraying pictures of relative stability and continuity in capitalist systems (and, as importantly, refuting the hypothesis of neoliberal convergence of capitalist development), where either firm or business systems can be taken to

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<sup>2</sup> See also Underhill and Zhang (2012), who provide a critical analysis of the developmental state approach and also discuss the limits of current co-evolutionary perspectives extending the developmental state approach.

be at the centre of analysis, and politics, policy, and especially public management tend to become secondary or reactive variables to market forces (from business preferences to firm-labour relations). Further, these analyses have generally lacked an explicit focus on developing economies and explanations of their development peculiarities.<sup>3</sup>

In our opinion the literature on economic development has so far not tried to deliver a systematic framework to understand how and why public-sector capacities and in particular policy capacities change and co-evolve with other variables in the capitalist systems.<sup>4</sup> In fact, there is a question that has not been asked in the economic development context: *what factors in co-evolutionary processes initiate and direct learning processes in public management*; that is, how and why policy capacity evolves; and why under certain circumstances complementarities or mismatches between the public and private sectors emerge or, to use a concept introduced by Yeung (2013), why in certain period governments strategically and successfully manage to *couple* efforts with private sector and in other periods the sectors remain de-coupled. This article sets out to explore these questions.

In what follows we assume that co-evolutionary processes are always taking place in capitalist development, yet these processes lead to varying socio-economic results; and that policy capacity exemplifies the nature of these co-evolutionary processes and their results. In other words, also poor development results from co-evolutionary processes. Thus, in this paper we intend to show that policy capacity is not so much a continuum of abilities (from less to more), but rather *a variety of modes of making policy* that originate from co-evolutionary processes in capitalist development, and therefore, belong at the core of development-policy research.

The paper is structured as follows. In the next section we develop a co-evolutionary framework in order to understand policy capacity in the context of development policy. Thereafter, we use this framework to look at two historical cases – East Asian economies in the 1960s to the 1980s and Eastern European economies in the 1990s to the 2010s – with different co-evolutionary processes and outcomes. Using our framework, we show what kind of policy capacity was created by, and evolved in, specific co-evolutionary processes; or how political vision, public policies

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<sup>3</sup> See, however, Whitley (1999) on East Asia and Eastern Europe; Lane and Myant (2007) and Myant and Drahokoupil (2010) on Eastern Europe; Walter and Zhang (2012) on East Asia.

<sup>4</sup> Public-management literature itself, however, deals with technology in a static way: technology becomes interesting when it starts to influence public-service delivery, that is, some services move online (see Pollitt 2012).

and their management and private-sector dynamism came together in these specific contexts. It is important to stress that we use historical cases to highlight our theoretical contribution, not the other way around: we want to understand evolution of policy capacity in economic policy making and factors playing key role in that. We hope that re-telling the well-known case of East Asian developmental state and less well-known yet largely positively viewed case of Eastern Europe in post 1990 period through our theoretical lenses explains and justifies the use of these lenses and concepts.

## **1. Co-evolutionary development processes and policy capacity**

### **1.1 Unpacking policy capacity**

In order to understand the role and dynamics of public management in development policy, we build the analytical notion of *policy capacity* by distinguishing between different concepts that reveal the political, policy and administrative underpinnings of public policies (based on Painter and Pierre 2005: 2-7; also Karo and Kattel 2010). The broadest concept can be defined as *state capacity*, that is, achieving appropriate outcomes such as sustainable economic development and welfare (based on values such as legitimacy, accountability, compliance, consent). In essence, development-policy discourse refers to this when discussing the capacity of the government to implement theoretically sound or ideal-type policies (for a broader critical discussion, see Grindle 1996, 2010). It can also be viewed as the legitimacy and extent of government involvement in a policy area, or the legitimacy (external and self-created) to intervene in private-sector activities through different means available to public authorities. From the perspective of public management this concept can be unpacked by distinguishing two subsidiary concepts that are both pre-conditions for state capacity. *Policy capacity* refers to the ability to make intelligent policy choices (based on values such as coherence, credibility, decisiveness, resoluteness). In the context of development policy, policy capacity refers to the ability of the political system to decide or compromise on the best approach to technological and economic development, or to distinguish between what is 'desirable' and what is 'feasible' through the processes of policy debate, interest coordination etc. The substance of policy capacity is dependent on the third concept, *administrative capacity*, which refers to effective resource management (based on values such as economy, efficiency, responsibility, probity, equity) and to the ability of the political system to use its resources for implementing the policy choices that have been made. Administrative and policy capacity have to be seen as interdependent because the institutional memory of a political system is largely stocked in both levels.

Thus, in what follows we will mainly talk about policy and administrative capacity under the joint headline of *policy capacity*. We are interested in how this capacity evolves; however, we assume that these three levels of capacity are often closely interlinked and indeed even difficult to separate from each other. Conceptually we can also dissect these levels of capacity into *macro*, *meso* and *micro* levels of capacity. This allows us to talk about a variety of external influences and contextual features, as well, such as political and legal systems and culture, techno-economic paradigms and prevalent development visions on the *macro level*; institutional interactions and coordination mechanisms (both within the politico-administrative system and in state-market interactions) on the *meso level*; and organisational practices (for example, personnel, motivation and performance systems) on the *micro level*.

## 1.2 Co-evolutionary processes in development

While development research has a long tradition of dealing with the co-evolution of state and market institutions and processes (see Haggard 2004; Underhill and Zhang 2012), the roles of state, public policies and especially its management practices often remain simplified (Karo 2012). Furthermore, development policy research has also been rather 'light' on integrating into its core analytical focus the perspective of finance (see, however, Kregel and Burlamaqui 2006; Kattel *et al.* 2009). The roles of both public management and finance remain mostly on the level of *assumptions*, that is most development theories assume that public-management structures and financial institutions work in a specific way and thus can be treated as (mostly) exogenous factors in development proper (notwithstanding whether the latter is unleashed via technological or competitive pressures or via some sort of combination of both). In other words, even strictly evolutionary theories – and notwithstanding Schumpeter's original emphasis on finance in processes of development and innovation (1912, 189-207 and 1939, 109-129) – tend to view financial institutions and especially public-management practices as non-evolutionary in nature, or evolutionary only in as far as these react to changes in institutions or technology or both. We might say that even evolutionary economic theory treats financial institutions and public-management practices as quasi-evolutionary.<sup>5</sup>

Yet, in our view co-evolutionary processes between political and policy ideas, public management and private-sector dynamism as the key vari-

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<sup>5</sup> In Minsky's writings regulators of finance (government), structure of financial sector and productive sector are locked into co-evolutionary processes and engender different types of interactions that Minsky calls different types of capitalism (commercial capitalism, finance capitalism, managerial capitalism and managed money capitalism) that also correspond to different historical periods (see, e.g., Minsky 1988).

ables involved in economic development are realised in three interrelated complexes of *policy choices*, each fundamentally evolutionary in nature: policy choices on understanding the *nature and sources of technical change and innovation*; policy choices on the ways of *financing economic growth*, in particular technical change; and third, policy choices on the *nature of public management* to deliver and implement both previous sets of policy choices.<sup>6</sup> These choices go back to political and ideological factors characterising specific time periods, regions, and economies; and are characterised by long-term impacts and processes (via creating legacies and path dependencies), but also by punctuations (such as crises) that lead to important changes in the policy trajectories. The interaction between these policy choices and areas, and of policy outcomes (in terms of public-sector capacities, feedback and learning systems, and in terms of private-sector dynamics), leads to evolutionary changes in policy capacity: some ideas and ways to implement and coordinate them become dominant over others, also in their organisational forms and norms; this creates path dependencies and feedback mechanisms that in turn feed into policy learning and evaluation. The eventual impact of these choices and their co-evolutionary results are revealed in the techno-economic dynamism of the private sector, and thus also in the form of state-market interactions. It is important to note that all of these ‘choices’ take place over periods of time in often ‘messy’ political-historical contexts where clear-cut decisions rarely pose themselves and become clearer in hindsight. We can provide in each of the policy complexes a snapshot view of possible policy options (or alternative paths) and respective evolutionary processes often associated with these choices. The latter – evolutionary processes resulting from policy choices – are more important than the choices themselves as these can be often only conceptually delineated.

## **The nature and sources of technical change**

One of the fundamental issues of development is the understanding of what is the most sustainable way of creating and developing technological capabilities. This is partly related to understanding the dynamics of technological developments, such as the implications of different technological paradigms on production and innovation systems (see Ernst 2009; Perez 2002). Partly, it is also an ideological question conditioned by politico-economic traditions and context (including current levels of development, political constraints, and external political and economic pres-

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<sup>6</sup> Methodologically, our analysis follows the Schumpeterian socioeconomic co-evolutionary analysis, as summarised in Andersen (2012).



tures). The most robust options can be characterised by two extremes: technological development based on *foreign-investment-led processes vs domestic upgrading processes*. The former assumes technical change will happen through spill-overs and similar mechanisms (from transfer of knowledge, technology etc.); the latter assumes the importance of developing and nurturing domestic value-chains with a constant eye on building capabilities for technological upgrading within domestic companies. In many ways, however, the choices about the nature of technical change come down to understanding what competition does in an economy. One way is to understand competition as the main driver of innovation and technical change, and thus competition creates efficiencies in the economy. The other, almost opposing view is to understand technical change as asymmetric (benefits and profits bestowed on innovators are not proportional with other market actors), which leads to imperfect competition but also growth; thus competition is about bringing forth market inefficiencies in the form of new products, services, knowledge, etc. (See Kattel *et al.* 2009; Burlamaqui 2006) These assumptions obviously lead to a widely differing role for government involvement *per se*, but also in more specific policy choices in such areas as intellectual property rights, trade regulations, support for universities, vocational training and so forth. In our context what is important is that the array of these choices depends on existing institutional patterns and leads to evolutionary processes in economic structure and specialisation, and that feeds crucially into the financial system or how the financing of technological change is structured, but also into public management or how the different policy choices are implemented. And, of course, also vice versa: choices on financial institutions and public-management practices feed into choices on technology and innovation policies.

## **Financing technical change**

An equally important factor is the question of how to finance growth and investments in technological development. Here, again, we have alternative views that are conditioned and influenced by the understanding of the nature and sources of technical change, but also technological trajectories, and other political and economic concerns (from international relations to national politics). In short, choices or alternatives about financing of growth are about answering a seemingly simple question: where does the money come from that can be invested into technological upgrading (new machinery and factories, product development, marketing innovation, hiring engineers, etc.). While the answer to this question is about the nature of financial systems and regulations to deal with systemic fragilities, it also boils down to two extremes: *foreign vs domestic savings*. Particularly in the development context this is often a fundamen-

tal policy choice, whether to rely on foreign investments, aid and borrowing, or whether to mobilise domestic savings and to opt for an integrated central-bank-based approach (Kregel 2004). Development literature, especially in its early incarnation during the 1950s, has brought out ample strengths and weaknesses for both choices for financing technological change (Kattel *et al.* 2009). A foreign-savings-based strategy of development and growth is often prone to two problems: reversal of flows that plunges economies into deep crisis, and conflicts between the interests of foreign investors and domestic developmental needs. At the same time, with globalisation of finance, foreign savings are often readily at hand. Domestic savings and an integrated central-bank approach similarly runs a risk of leading to a vicious circle of mistrust and mismanagement of expectations in the form of high inflation (as the central bank finances government spending) and dependency on foreign earnings to pay for goods of vital importance (from energy to technology). (Kregel and Burlamaqui 2005, 2006) However, the choices of financing of growth run obviously deeper than a simple foreign vs domestic juxtaposition: capital controls, exchange-rate management, presence of foreign banks and/or public (developmental) banks, organisation of financial bureaucracy, sector-specific lending, etc. all offer a variety of areas where governments make decisions on the financing of growth. These choices obviously have various theoretical and ideological backgrounds; these in turn change strongly over time, etc. What is key in our context is that all of these choices depend again on existing institutional patterns (legacies, traditions, interests, skills etc.) and lead to manifold evolutionary processes in economic policies, structure and specialisation.

## **The nature of public management**

Choices on public-management systems tend to be both more long-term and historical (or with stronger path-dependencies), and much less clear-cut. While fundamental changes in public management are relatively rare (in the sense that for instance what is a ministry is radically redefined or the overall structure of governance is centrally re-drawn), incremental changes are seemingly permanent (see Pollitt 2008). However, there are few dimensions where choices can be brought out with relative clarity: decisions about public-sector *recruitment practices* (whether classic Weberian career or more open and flexible systems); decisions on *coordination practices* (whether these are based on hierarchical means, networks or market-like relations); decisions about the level of *centralisation or decentralisation* in public management (both in organisational structure and task allocation); decisions about the *levels of autonomy* in public-sector organisations (both in substantive policy choices and selection of administrative means) (see Pollitt and Bouckaert 2011). These choices

generate public-management systems with specific organisational interactions, coordination and access pathways (see also Verhoest and Bouckaert 2005); these systems in turn provide the implementation context for the above-described policy choices on financing and steering technical change. However, the public-management system is also where technical and other skills are located and where day-to-day interaction with policy makers, entrepreneurs and others take place. In essence, the public-management system is, then, fundamental to the way policies of financing and sustaining technical change are devised, implemented and evaluated.

### **Co-evolutionary processes at play**

Our contention is that the above-described three policy arenas, or policy choices, are tightly interlinked and three-way interactions between these arenas generate specific forms of policy capacity that lead to a specific path and type of economic development and technological processes in the private sector. Obviously, foreign-investment-led and -financed development policy ideally requires a different set of public-sector skills, coordination practices, decision-making structures and means of assessing performance and accountability than development policy based on building domestic value chains, either financed by foreign or domestic savings. However, these arenas have almost an infinite number of possible interactions.<sup>7</sup>

In order to highlight in more detail how these interactions lead to different types of policy capacity, we place the two contrasting historical cases of East Asia (from the 1960s to the 1980s) and Eastern Europe (from the 1990s to the 2000s) into our framework. In the case of East Asian economies, we mostly rely on the historical experience of the Republic of Korea (Korea) and the Republic of China (Taiwan) to build common narratives, but also to highlight diversities. In the case of Eastern European economies, we centre on countries that joined the European Union in 2004: the Czech Republic, Hungary, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia. Our contention is that these two historical and regional cases offer almost opposite examples of how specific forms of policy capacity can emerge. The comparability of the cases arises from the fact that both regions in these particular time periods started from rather similar conditions, both in economic development (see the argument in

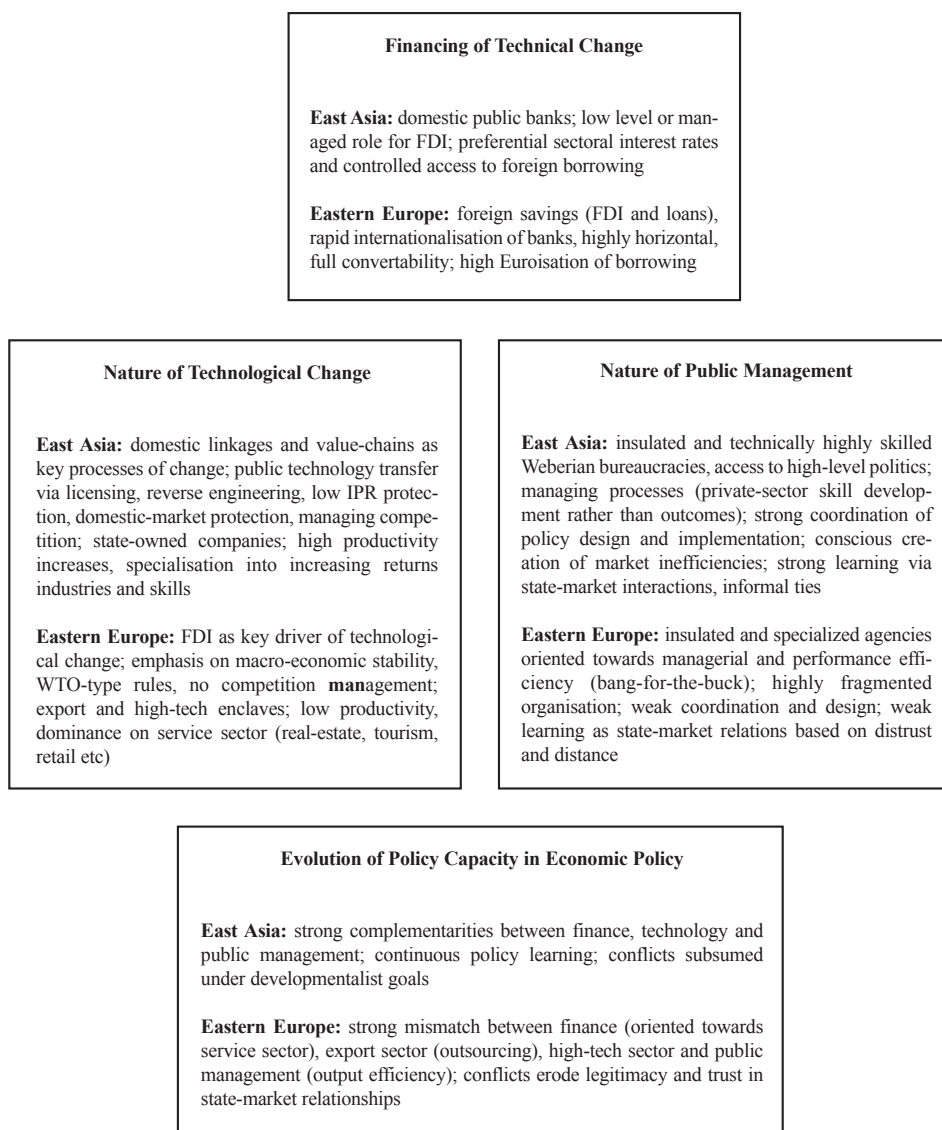
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<sup>7</sup> Furthermore, political and policy institutions have their own internal development paths and interests beyond the confines of development policy that stem from ideological, historical etc. reasons.

Lim 2011) and in political context (fall of dominant powers and re-building of independent nation states). Further, both economies have largely tried to catch-up with the developed world through more or less explicit export-led development strategies. The contextual differences, which allow us to highlight the varieties in the evolution of policy capacity, are linked to important economic and political developments in the 1980s and 1990s: changes in techno-economic trajectories (emergence ICT-based economic thinking – see Ernst 2009 – and its implications of development strategies and policies – see Soete 2007), emergence of new dominant international policy ideas under the label of Washington Consensus recasting key understandings about development (see Hall 2003; Wade 2000) and redesigning policy spaces for developing economies (see Wade 2003). Further, we believe that looking at two different development periods in two different regions, or introducing the case of Eastern Europe to the developmental state debates, offers us, at least at this point, a clearer setting for using our theoretical framework than looking at East Asia at these two periods (as is done in Yeung 2013) because we can (to some extent) control for the impact of political and policy-level legacies and path-dependencies of the developmental state while depicting the development of policy capacities in the 1990s and 2000s. At the same time we recognise the need for such longer-term regional studies and largely subscribe to the arguments in Yeung (2013) while hoping that our contributions may add to the depth and rigour of at least meso- and micro-level analysis of how public and private sector institutions and capacities co-evolve.

In sum, East Asian countries in the 1960s-1980s and Eastern European countries in the 1990s-2000s started to pursue autonomous development strategies within clearly different techno-economic paradigms (mass production vs ICT-based production paradigm), and within largely different international policy and ideational contexts (post-WWII developmental, largely protectionist consensus vs Washington Consensus-based, clearly liberalisation-oriented strategy), different political systems (authoritarian vs liberal democracies), yet wanted to achieve similar larger policy goals: technological upgrading and economic catching-up via export-led growth. We show that these historical differences resulted in almost opposite institutional systems for financing, building and managing techno-economic systems in East Asia and Eastern Europe and led to different forms of policy capacity. In Figure 1 we have preemptively summarised the key factors we elaborate upon in the following sections.

**Figure 1.** Policy capacity for development in East Asia and Eastern Europe



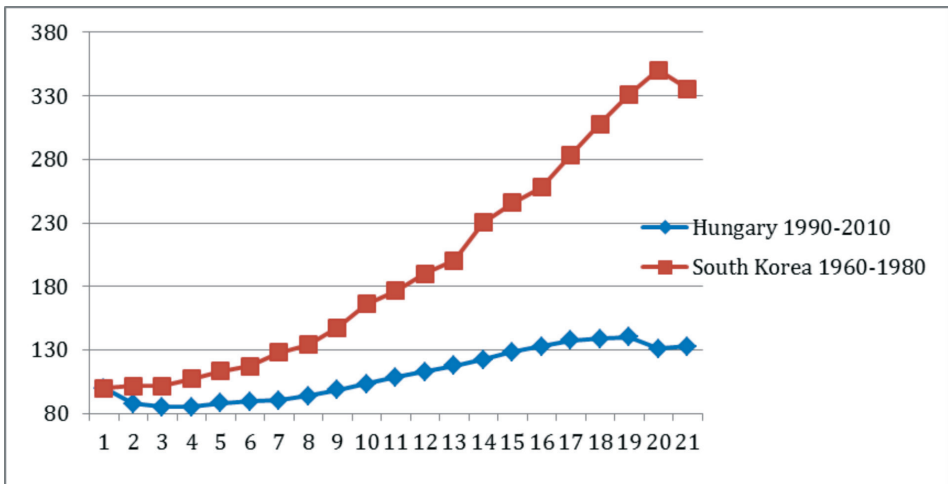
Source: Authors.

## 2. Policy capacities for development in East Asia and Eastern Europe

In the following section we place the cases of East Asia and Eastern Europe into our framework. One could argue that these different models are also cases of relative success and failure of development policies (see Figure 2) and attempts at industrialisation and structural change (see Fig-

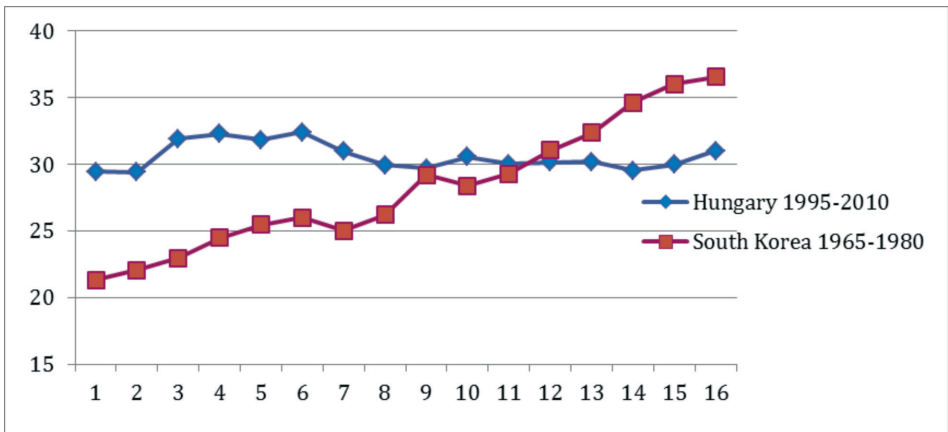
ure 3). Yet, our intention in this section is not to vindicate one development strategy over the other, but to show how the policy choices within our framework led towards specific forms of policy capacity and how the assessment or evaluation of this capacity is revealed in state-market interactions and feedback systems, and in private-sector dynamism.

**Figure 2.** GDP per capita in Hungary and Korea (in GK \$).



Source: The Conference Board. Total Economy Database, September 2011. Available at: <http://www.conference-board.org/data/economydatabase/>.

**Figure 3.** Industry value added as a percentage of GDP in Hungary and Korea.



Source: World Bank WDI Online Database, <http://data.worldbank.org/data-catalog/world-development-indicators>.

## 2.1 Policy capacity in the East Asian developmental state

East Asian development trajectories have shifted from import substitution industrialisation (in around the 1950s) to export-led growth phases (from the 1960s onwards) and further liberalisation and marketisation (since the 1980s) (for more details, see Haggard 1990; Lim 2011).<sup>8</sup> These shifts have, in turn, paved the way for competing neoclassical and heterodox explanations of East Asian development trajectories (see Haggard 2004). Most of the perspectives agree on the importance of the export-led growth strategy as the main factor of the developmental success. Also, the consensus is that next to macro-economic policies (which have been labeled both orthodox – see Lim 2011 –, but also heterodox – see Lee and Haggard 1995; Haggard *et al.* 1994), also micro-economic policies and how these incentivised the private sector need to be taken into account in explaining the development trajectories.<sup>9</sup>

### The nature and sources of technical change

Different studies (for example, Amsden 1989; Wade 1990; Haggard 1990) have shown how the imitation and learning-based strategy of *late industrialisation* was at the centre of most East Asian economies, especially during the 1960s and 1970s (Hong Kong being the most explicit exception at the time). Some of these studies (for example by Amsden and Wade) place their explanatory attention at the dynamics of economic and technological development trajectories and how different economies adjusted to these trends through public policies. Others (especially Haggard 1990) also centre on political variables and argue that the development strategies grew out of several political and economic factors, such as the legacies of the colonial domination of the economies and extending to domestic political characteristics (e.g. democratic vs authoritarian governance). Overall, the technological, economic and political constraints resulted in a rather complex situation where some factors (size of domestic economies, need for foreign exchange and need to reduce the extreme US aid dependency) pushed these economies towards openness, while other factors (mostly political concerns related to external threats of communist neighbours) pushed towards achieving national economic independence and self-reliance. Therefore, explanations of

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<sup>8</sup> Part of this story has been the role played by colonial legacies (of Japan in Korea and Taiwan and of the United Kingdom in Hong Kong and Singapore), which initially limited the role of Korea and Taiwan to primary-product exporters and Hong Kong and Singapore to entrepot economies (Haggard 1990).

<sup>9</sup> Amsden (1989) has famously described the impact of these policy mixes as 'getting the relative prices wrong' and Wade (1990) as 'governing the market'.

actual strategic choices are rather complex and debatable. For example, Lim (2011) argues that the export-led strategy of Korea (since 1960s) emerged from a series of 'historical accidents' from the failures of the nominally democratic but cronyism-prone import-substitution regime of the 1950s, to the shifts in US aid conditionalities, and to the centralisation of the political power from the 1960s onwards. At the same time the Taiwanese development strategy showed more signs of persistence already since the 1950s as the Koumintang regime did not face pressures (mainly from US aid conditionality) for democratisation and pursued its political strategies (keeping mainland continuity in Taiwan) with more coherence (Haggard 1990; Whitley 1999).

Still, one can derive from these conditions that both in Korea and Taiwan the emphasis on industrial deepening, initially through import substitution and later through export-led growth, was politically legitimised almost in counter-intuitive terms: increased integration with global economy through industrialisation and export-led development was seen as a means of securing national independence and self-reliance (Haggard 1990).<sup>10</sup>

In our framework, the general strategy for technical change in East Asia was based on *domestic upgrading processes* and *developing local value chains* through different policy instruments and interventions, such as: managed (and generally low-level) role for FDI; public technology transfer via licensing, reverse engineering; low IPR protection; domestic-market protection; and managing competition. Political conditionalities led, in turn, to different policy mixes across economies. In Korea, supporting and steering large horizontal companies (*chaebols*; originating already in the import-substitution regime, when government reduced its direct participation in the economy and established links with the private sector) and control of its financial management became the central vehicles through which government sought to implement export-led strategies (see also

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<sup>10</sup> The import-substitution phase was largely based on growing manufacturing activities (especially of consumer goods) and on policies of protection and fiscal support to industries (financed through exports of primary products and foreign borrowing). The export-led growth phase was initially pursued through manufacturing growth in labour-intensive goods (and light industry) supported by more complex policies (from devaluations to selective liberalisation and fiscal support) and grew into industrial deepening and export upgrading through more targeted and complex industrial policies in the 1970s. In this later phase, the adjustments to the external oil shocks, further decrease of the US aid, domestic growth and development pushed both Taiwan and Korea to rely on a mix of import-substitution industrialisation strategies and attempts at upgrading export sectors. For example, Haggard (1990) argues that the Heavy and Chemical Industries Plan in Korea was a combination of import-substitution and export-diversification strategies; while similar large plans lacked in Taiwan, it used a mix of market-based adjustments and selective support schemes to pursue industrial deepening and entrance into high-tech sectors.



Lim 2011 and 2012). In Taiwan a specific form of dual economy emerged, where the large state-owned sector (as the location for the Kuomintang policy powers and support) was complemented by a more export-oriented small enterprise sector (dominated by native Taiwanese business networks whose growth and consolidation was controlled by government) (see Whitley 1999).<sup>11</sup> A further characteristic of these models was their narrow orientation towards state-led economic development as opposed to broader societal development as it was seen as a key means for legitimising political elites. This also resulted in relatively weak labour interests and government-industry linkages that were at the same time narrow in scope and intensive in its' forms (Haggard 1990).<sup>12</sup>

### **Financing technological change**

As new economies, East Asian countries (and especially their companies) did not have much experience (and creditworthiness) in the international financial markets. Further, Korea and Taiwan were hugely dependent on US aid (which pressured for the application of orthodox financial policies) and the constant threat of losing this source of financing exerted pressure to seek new avenues for finding greater autonomy. Given the political determinants of the development strategy, reliance on foreign direct investments and foreign ownership of local economy was also a politically rather sensitive issue. These constraints resulted in a common trajectory of rather repressed financial systems with emphasis on state-led centralisation, regulation and protection of the financial system. On the other hand, given other national constraints, this system was either subordinated to the goals of industrialisation and development (Korea) or not used as means of industrial policy (Taiwan).

In Korea, the main determinants of the system of financing were the government control (ownership) of the banking sector; subordination of the central bank and other financial policy agents to development planning institutions; regulation of the foreign investments and borrowing policy through government approval of foreign loans and foreign investment;

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<sup>11</sup> In Singapore, similar to Taiwan, political and ethnic divisions led to large state-owned sectors and tight relations between the state and multi-national enterprises with local business left outside of development strategies and labour-market (wage) policy becoming one of the crucial policy tools (Haggard 1990).

<sup>12</sup> The labour was either naturally weak (in Taiwan because of ethnic divisions) or politically weakened (Korea and Singapore). As for the role and access of the business sector to politics, in the case of Taiwan and Singapore it was limited to the state-owned sectors (in Singapore also to multi-national companies) and in the case of Korea explicitly limited to government-chaebols links as opposed to broader and more general government-industry linkages. (Haggard 1990; Whitley 1999)

preferential treatment of export sectors through below-the-market interest rates, policy loans etc. (see Haggard *et al.* 1994). Lim (2011) describes the system as a rather specific form of 'state-backed foreign debt financing' where local commercial banks acted as intermediaries in government-led borrowing strategies and policies. Lee and Haggard (1995; also Nam and Lee 1995) see the Korean case as an almost archetypical example of the 'hierarchical system of credit allocation' as an alternative system to the orthodoxy for financial management in developing economies. Overall, this system was at times the cause of its own fragility (for example allowing over-investing during the Heavy and Chemical Industries Plan; creating general problems of financial instability, inflation etc.), but also a window for using a large variety of industrial policy tools because finances for fiscal incentives and policy loans were readily available and use of preferential interest rates, financial guarantees and tax deductions were not constrained by the central institutions of the financial system.

In Taiwan, the linkages between financial instability and the demise of Kuomintang power on the mainland (see Lee and Haggard 1995), complemented by a relatively smaller market and higher trade dependence than in Korea, made the Taiwanese elite especially careful in using financial policy for industrial policy purposes. This led to rather orthodox fiscal and monetary policy.<sup>13</sup> Overall, the financial system has been rather closely regulated and repressed in Taiwan to the extent that commercial banks were established as state-owned enterprises and tightly controlled by the government (up to the 1990s), which made them concentrate on financing mainly state-owned enterprises (Lee and Haggard 1995; Chou 1995). Also, Taiwan's use of industrial policy instruments (next to a large sector of state-owned enterprises) has mostly concentrated on tax benefits to selected sectors, control of tariffs and import licenses and similar instruments, instead of more direct financing of development projects (for example, through policy loans as in Korea). As an important peculiarity, Chou (1995) argues that the crucial financing for the export sector (that is, small Taiwanese enterprises and their networks) came from the informal curb-market which government policies largely neglected. Thus, financing and development of export-led strategy was two-dimensional: indirect spill-overs from the state-owned sector and informal financing outside the formal financial system.

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<sup>13</sup> When Korea responded to the first oil crisis in 1973 with devaluation, borrowing to support investments etc., Taiwan followed an alternative path with fixed exchange rate policy and adjustment through domestic recession, restrained growth of imports etc. (see Haggard 1990).

## Public management of development policies

In some of the more complex institutional analyses of East Asian development policies (how governments solve *credible commitments* problems; see Haggard 2004), there have been two competing explanations that emphasise either the impact of Weberian institutions on policy quality or the specific forms of business-government networks as sources for public-private coordination. Yet, there are several historical facts to challenge the sole power of either of these explanations. In Taiwan, the economic bureaucracy was less formalised and more fluid, and Weberian recruitment (entrance exams) and career systems were not as important for staffing development bureaucracies as in Korea (see Cheng *et al.* 1998). At the same time, the developmental state division between political 'ruling' and bureaucratic 'reigning' (see Johnson 1982) was much more pronounced in Taiwan than in Korea (Haggard 1990). Further, government-business relationships were also rather different, as in Taiwan the government mostly had ties with 'itself' (through the state-owned sectors), while in Korea in the 1950s the government was largely captured by the business interests, but during the export-led growth periods the political centralisation and increased bureaucratic leverage in fact shifted the relations around (see Cheng *et al.* 1998; Gomez 2002; Whitley 1999).

One of the crucial differences between East Asian economies before and during the export-led growth phase was their political systems. As Korea was a nominally a democratic system (although with long spells of what was in essence military rule) it had to accommodate to some basic democratic principles (and develop basic political and policy institutions, at least formally), which arguably limited its autonomy vis-à-vis different stakeholders in society and established a long-term co-dependence between economy and politics. In this context, the centralisation of bureaucracy for increasing the power of the political elite was a necessary condition that also allowed it to use bureaucracy and its role in industrial policy as a tool for steering the private sector (Cheng *et al.* 1998). At the same time, in countries like Taiwan and Singapore, the one-party rule and limited US pressure for democratic institutions gave the governments much more formal autonomy from the start, and this had different implications, also for the structuring of the bureaucracy.<sup>14</sup> In Korea, the importance of industrial policy for political legitimacy increased the political salience of the policy itself, led to overall centralisation and high involvement of central political institutions (office of the president)

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<sup>14</sup> The same applies to the more technocratic governance of Hong Kong.

in the daily affairs of industrial policy, and also to explicit attention to relations between a limited number of key economic actors (chaebols) and government. In Taiwan, the political stability and coherence of the development vision resulted in rather weak government institutions for interactions with the private sector, but also established a more technocratic bureaucracy in industrial policy-making and implementation (from the independent central bank to the division of tasks between different agencies). Despite these differences, which mainly led to different scopes of industrial policy, in general, East Asian governments steered development policies through relatively centralised political institutions, coordinated policy implementation through risk-sharing instruments between public and private sector, and evaluated policy performance based on international competitiveness.

The central location of these policy and administrative powers was at the *development agencies* (for example, the Economic Development Board in Korea and the Economic Stabilization Board in Taiwan). These development agencies were in charge of both devising and implementing development plans and also *de facto* in charge of the wide mix of policy areas highlighting relatively strong institutional centralisation that allowed also more in-house (or hierarchical) policy coordination and high levels of policy and administrative autonomy for the bureaucracy. Given the different political constraints on the policy scope, development policy agencies in Korea, as opposed to Taiwan, also gained important leverage over financial policy institutions – such as the Central Bank and the Ministry of Finance. In summary, while development agencies as a generic source for policy capacity is emphasised in development-policy research (Wade 1990 proposes this as one of the policy lessons), the historical differences (only briefly described here, see Cheng *et al.* 1998 for more details) reveal that how these agencies related to political authorities (that is, levels of policy and administrative autonomy), how they were organised (from recruitment to administrative affairs to links with business), and what they were doing (task allocation etc.) was all related to broader political constraints, goals of the development strategies and resulting systems of financing industrial policy, which created specific policy spaces and roles for these agencies. At the same time, these agencies and the way economic bureaucracies were set up, were important means for legitimising the more abstract principles of development strategies and financial policies, as the work of these agencies resulted in concrete policy actions, strategic choices and created a feedback system between the policy and the private sector; and the role of the bureaucracy was further to translate this feedback into policy shifts and adjustments. Thus, a common trend across these economies was the relative flexibility or fluidity of the development bureaucracies, either in terms of structural

reforms in the organisation, or in terms of relatively fast shifts in policy orientation. This again implies that the political control of development bureaucracy, complemented by relatively high levels of policy and administrative autonomy and tight linkages with private-sector counterparts resulted in much more agile public-management systems than usually expected from hierarchical bureaucracies.

If we look at how these feedback systems functioned then, given the export-led development strategies, the governments had rather explicit policy goals or performance targets against which to assess the overall policy performance (for example, amounts of foreign exchange earned through exports, as was publicly counted in Korea) and specific policy instruments (success of supported products, sectors, firms in export markets). This performance system was functioning on two levels. Policy agents were evaluated (internally within the politico-administrative system) on their success in contributing to the development goals, and fast policy reforms often followed policy failures (either as general shifts in the structure of development agencies or in terms of cancellation and shift of development plans, lists of preferential industries etc.). The second side was the evaluation of the performance of economic agents in exports markets that led, depending on policy instruments, to either further incentives (for example, successful exporters qualified automatically for new instruments and incentives), out-payment of agreed-upon incentives (tax deductions, further import licenses etc.), or access to new industrial sectors etc. Amsden has emphasised the importance of this type of performance orientation of East Asian developmental states in both historical case studies (Amsden 1989) and in more recent studies of technological and industrial upgrading (Amsden and Chu 2003). In addition, according to her, the focus of these performance assessments was not only on achieving agreed-upon *outcome or output targets* (patents, foreign supply- and export-contracts), but also on a more qualitative evaluation of *process improvements* within domestic value chains.<sup>15</sup>

## **Policy capacity of East Asian developmental state**

How does all this add-up to policy capacity? We argue that the policy capacity is not reflected in specific policy institutions *per se*, but in how the policy system manages to translate developmental goals into policy action and more importantly into private-sector dynamism and continuous policy learning. The key feature of the East Asian export-oriented devel-

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<sup>15</sup> Though, the effectiveness and functioning of this systems is also contested in literature (see Kang 2002; but also Gomez 2002).

opment strategies was bold prioritisation of economic activities with potential increasing returns and feedback linkages over other sectors. The institutionalisation of the mix of policy goals, politico-administrative institutions and state-market interactions started with some form of reform de-privileging or controlling existing wealth-based elites (also labour and business) and reached to sector-specificity from macroeconomic policies (in the form of preferential interest rates and loans to targeted industries etc.) through to industrial policies (in the form of foreign technology licensing, local content requirements, state-owned enterprises, government research institutes etc.). While the ultimate goal or performance criteria of industrialisation and development policies was external competitiveness or export-performance, the domestic markets were insulated behind protective tariffs and other administrative means, which made it possible to use the domestic market as experimenting and learning ground. However, the developmental state typically attempted to retain (managed) competition within the prioritised sectors through such measures as 'sunset clauses' and performance targets (especially related to export success), set both on bureaucracy and the private sector. Such a policy intervention model was assumed to engender dynamic inefficiencies (in essence to create market 'failures' or 'getting the prices wrong') in the form of faster productivity growth in prioritised sectors and diffusing through supplier and other networks into wider economy as enforced learning processes (and also higher wages). Such inefficiencies brought about 'feedback' loops into the political governance of the economy as previous policy choices – in terms of the activist role of the government, broad strategies and more detailed selections of instruments – were regarded as validated, and thus further priorities-based policy action became strongly legitimised. Thus, the inter-linkages and tight interdependence between politics, policy and business became self-legitimising tools for the development model and the political system in particular. This also formed the basis for policy learning processes. This can be also described as a strategic coupling of domestic private companies to politico-economic structures (Yeung 2013). It can be also argued that since East Asian strategic coupling was so successful in terms of industrialization that it led to its own 'demise' in 1990s and beyond when key industrial giants such as Samsung decoupled from domestic structures as they became embedded into key positions in various global production chains. (Ibid.) This also gradually changed the nature of policy capacity and learning processes prevalent in Korea and Taiwan.

In Korea, these interactions were more widespread as political actors actively intervened in daily policy-making, the industrial policy space and scope was very broad (industrial policy residing over macroeconomic policy), and the state had very close ties with limited business actors. As

a result, bureaucracy was rather centralised (in terms of political control, but also task accumulation) and more generalist in its expertise and orientation. The blurring of political and bureaucratic tasks diffused political and administrative autonomy and made policy rather fluid. In Taiwan, political stability, importance of macroeconomic stability over industrial policy priorities, and relatively more established borders between government and the private sector reduced the (political) fluidity of policy and the scope of industrial policy, established a more explicit division between political (reigning) and policy-level (ruling) tasks in industrial policy, and created a relatively specialised bureaucracy with both more limited concentration of policy tasks and more concentrated competences (importance of engineering skills etc.).<sup>16</sup> There are both earlier historical case studies (for example, Jacoby 1966) and more recent studies (Cheung 2012) that, firstly, highlight the path-dependencies in public-management systems in East Asia and, secondly, show the importance of maintaining vs eroding these contextual forms of policy and administrative abilities of governments to devise and implement policy-reform strategies (for example, for financial liberalisation and technological upgrading) in a manner conducive to the adaptive and development-oriented governance that can combine domestic and external economic and political constraints and pressures (Amsden and Chu 2003; Breznitz 2007; Thurbon and Weiss 2006; Thurbon 2003).

## 2.2 Policy capacity in the Eastern European economies

Eastern European economies have grown, especially since the late 1990s, into what can be labelled the Eastern European version of the *Post-Washington Consensus* on economic development that combines orthodox macro-economic policies, openness to foreign investments, and a rather limited role for the state in steering development processes (Karo and Kattel 2010; Kattel *et al.* 2011; Radosevic 2009). In this context, the traditional industrial-policy discourse has been taken over by innovation policy and systems-of-innovation thinking as the central policy concepts, where the European impacts (Europeanisation) on the scope, content and structure of the policy have been the prevalent trend setters (see Suurna and Kattel 2010). This model is critical of both socialist hierarchical/dirigiste development models for creating mostly perverse and non-competitive economic structures and also the market-rational/ideological Washington Consensus of the early 1990s for failing to provide significant structural change as part of the convergence with the Western economies. Thus, while the government lacks both substantive capacities and political legitimacy to select and treat preferentially industries and/or firms

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<sup>16</sup> Singapore falls more closely to the Taiwanese model than to the Korean one.

either through state-led or corporatist industrial policy; the government has the legitimacy and capacities to rely on fully representative institutions that parallel private-sector (market-based) approaches and deal mostly with systemic failures in the markets (see also Karo 2012).

Yet the path of convergence on this model has been anything but straightforward. For example, Bohle and Greskovits (2009) have divided the Eastern European economies into neoliberal (Baltic States), embedded neoliberal (Central Europe – Poland, the Czech Republic, Hungary, Slovakia) and neocorporatist (Slovenia) development models. As the external political and economic pressures have been rather similar, the sources of these differences come mostly from the diversity of socialist political and economic legacies (of different socialist systems) and current political and economic constraints that have also impacted the policy and administrative capacities for managing these development models (for recent comprehensive political economy analyses of the socialist models, their legacies and transformations, see Myant and Drahokoupil 2010; Tridico 2011).

### **The nature and sources of technical change**

One of the central interpretations of the collapse of the socialist economies has been that these economies and their planning institutions (that had been relatively efficient for the import-substitution industrialisation strategies) missed the techno-economic transformations of the 1980s when Western economies shifted towards services- and ICT-based industries and socialist economies remained committed to the stagnating heavy industries as the engine of economic development (see Tridico 2011; Myant and Drahokoupil 2010). After the collapse of the socialist systems, Eastern European economies were faced with several challenges from shifting the orientation to Western markets (and accommodating with the soft and hard conditionalities of international trade regimes) to sorting out positive economic legacies (relatively high levels of education and technological capabilities in some sectors) from negative ones (non-competitive industries and their over-capacities). Despite this common challenge, the socialist systems of centralised planning had been rather diverse.

In the Baltic States the legacy of the Soviet Union resulted in weak economic and R&D related policy traditions and also over-capacities in many industries (as all this had been collected into the highly centralised Soviet planning system; Myant and Drahokoupil 2010). In Slovenia, the collapse of the federal system (Yugoslavia) brought about a more gradual shift, as the old-regime principles of self-management, the relatively decentralised



policy system and the more liberalised and also West-oriented economic system (Slovenia acted as the export-hub for Yugoslavia) allowed and demanded (that is, labour interest and decentralised management systems at the firm level) a more gradual change process (Mrak *et al.* 2004). Török (2007) argues that this also led to limited attention to explicit innovation policy *per se*, at least until the late 1990s (see also Karo and Looga, forthcoming). In other Eastern European economies the socialist legacies showed a more mixed context as these countries had followed import-substitution industrialisation more clearly on a nation-state level.<sup>17</sup> As a result, similar to Slovenia, these economies had local industries with important capabilities, but also with significant labour interests and union power (especially in countries trying to introduce decentralised planning systems at the firm level) pressuring for more gradual transformations of the economic systems and emphasis on supporting firm-level restructuring, maintaining levels of employment etc. (see Myant and Drahoukoupil 2010; Török 2007). Though, according to Tridico (2011), economic thinking behind policies varied rather significantly in these economies, with Slovenia and Hungary showing relatively coherent traditions (see also Mrak *et al.* 2004; Myant and Drahoukoupil 2010), while in other cases political contradictions (Poland) and the weakness of traditions/capacities (the Czech Republic and Slovakia) led to less coherent paths.

Regardless of these differences, given the politico-economic importance of the fall of the socialist systems for the Western economies, Washington Consensus policies became, at least on the international level, a rhetorically coherent and politically legitimate set of answers to most perceived and real legacies and constraints, which gradually mixed with ideas and conditionalities of Post-Washington Consensus and the EU accession processes (see Karo and Kattel 2010; Radosevic 2009). Part of this consensus was the understanding that technological change and catching-up can be best achieved through integration to the EU and global innovation and production systems as economic openness and foreign investments were expected to contribute to the transformation of business practices, increase technological catch-up through spill-overs etc. Further, the increasing impact of the EU since the mid-1990s on economic-development policies led towards the view that socialist legacies and subsequent development challenges were leading towards mismatches and weak interactions between industrial and R&D capabilities, especially because of weak capabilities of the industrial sector (for critical views on this perspective, see also Piech and Radosevich 2006). Given these weak capabilities that also made low labour costs and taxes the

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<sup>17</sup> Except for the Comecon wide agreements and the subsequent impacts of splitting-up between the Czech Republic and Slovakia.

only immediate comparative advantage, integration with foreign innovation and production systems required both macro-economic stability and relatively open orientation towards foreign capital (see more below). While Eastern European countries were converging on this trajectory by the late 1990s and 2000s (see Kattel *et al.* 2011; Kattel 2010), they had started in the early 1990s with relatively different acceptance of this international consensus, which was also highlighted in the diversity of the means for financing technological change.

## Financing technological change

As was argued above, the Washington Consensus narrative on development emphasised macro-economic stability as a *sine qua non* for technological and economic catching-up, as it was perceived that foreign capital and investments, which could bring technological upgrading and spill-overs, required financial and macro-economic stability as key incentives. Gabor (2012) gives a comprehensive overview of different competing policy discourses prevalent in the context of Eastern Europe and how (mainly due to the impact of international interest) *financialisation* of the Eastern European economies can be linked already to the stages of the early transition process (such as privatisation and liberalisation). As a corollary, Eastern European economies have also tended to subject industrial/innovation policy to the more important concerns of macroeconomic stability.

Thus, one can argue that financing of development policies has been built on *external financing of technical change*. There have been several means for attracting and accumulating external sources of financing starting with the speed and scope of privatisation and its openness to foreign capital up to the role of foreign financing in the banking systems and capital markets. In all socialist economies banking systems and capital markets as such were repressed and instead of reliance on monetary and price signals the entire financial system was largely based on central planning (of prices, capital accumulation and supply etc.); this was again most explicitly established in the Soviet Union (see Myant and Drahokoupil 2010). These legacies and subsequent reform paths can be summarised into few key aspects. The first implication of economic legacies has been the relative weakness of capital markets across all Eastern European economies leading to a higher dependence on other sources for financing development (such as privatisation returns, foreign borrowing, aid). Secondly, one can detect two speeds of economic liberalisation in Eastern Europe: relatively swift economic liberalisation, notably in the Baltic States, Poland and also the Czech Republic, which followed the more radical 'shock therapy' type liberalisation vs the more gradualist

alternative in other economies (see Myant and Drahokoupil 2010; Tridico 2011). Thirdly, explicit government attempts at building industrial and innovation policies capable of financing firm-level technological change through R&D emerged across Eastern Europe only when the EU opened structural-assistance (aid) finances (see Suurna and Kattel 2010).

From the early 1990s, the Baltic States were explicitly oriented towards a market-led transformation of industrial structures and reliance on foreign capital (also in privatisation) and foreign direct investment as sources of economic and technological transformation. This was based on relatively hands-off innovation policies and an emphasis on macroeconomic stability (see Karo 2011a). Thus, these economies developed into highly foreign-capital-dependent economies, where banking sectors were also largely foreign-owned. By the late 1990s and 2000s, again influenced by the requirements of the EU accession, this became an increasing trend across Eastern Europe. (See Kattel 2010) Before this convergence, Slovenia and Slovakia had instituted a more state-controlled inflow of foreign capital both into the banking sector and into the real economy as part of privatisation and foreign investments policies (see Mrak *et al.* 2004; Duman and Kurekova 2012). Thus, these economies put more emphasis on firm-level restructuring (and rehabilitation) and reforming and rebuilding national political and economic elites through more controlled industrial transformations, respectively (see more in Mrak *et al.* 2004; Duman and Kurekova 2012). According to Duman and Kurekova (2012), Hungary opted, compared to Slovakia, for a more embedded system combining its foreign capital dependency with domestic upgrading and development activities as part of a relatively vertical industrial policy. Similarly to Hungary, also Poland faced relatively strong foreign capital dependency, as it had financed its industrial development already during the socialist era through foreign borrowing; thus, the high levels of external debt became a constraining factor in development policies and also pushed for more liberalised and foreign-capital friendly development models, despite local political and interest-group concerns (see Török 2007).<sup>18</sup> According to Török (2007), the innovation policy of the Czech Republic was at the beginning rather 'invisible' and fluid, as it was delegated out of the government centre to financial institutions that mostly accommodated with labour interests (unemployment) and old industrial legacies leading to subsidies-based policy.

Under the impact of the (Post-) Washington Consensus and the EU conditionalities, financing of technological change in Eastern Europe has

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<sup>18</sup> For how Slovenia dealt with similar external debt issues inherited from Yugoslavia, see Mrak *et al.* (2004).

developed over two decades into a system based on foreign savings (high penetration of foreign owned banks and foreign direct investments, loans, aid/EU funding), leading to a rapid internationalisation of banks (further cementing the bank-based financial system reliant on foreign savings and loans); highly horizontal, full convertibility; and high Euroisation of borrowing etc. (see also Becker and Weissenbacher 2007). As a result foreign direct investment has been the key driver of economic and technological change supported by local policies with an emphasis on macroeconomic stability, WTO-type rules, no-competition management. Given the variations of this model in the early 1990s, Eastern European economies have also faced difficult tasks of building bureaucracies able to both reform socialist legacies in the 1990s and support the convergence with the EU.

### **Public management of development policies**

As shown above, the development-policy thinking in Eastern Europe has been relatively hands-off. The relationship between this policy thinking and public management has presented two interdependent trends. Until the late 1990s, the Washington Consensus thinking did not pay much attention to the structuring and functioning of the bureaucratic systems as its policy emphasis was on macroeconomic stabilisation and relatively limited state involvement in development. Yet, Eastern European economies still had to implement democratisation reforms, which meant that the public-management systems went through important changes (see Bouckaert *et al.* 2008) that eventually also impacted development policies. At the same time, Eastern European economies also had differed significantly in their economic policy-making and planning traditions, especially in the context of market economy. Radosevic (1998) has also shown how the logic of industrial planning and management during the socialist period was extremely distorted with a limited division of tasks according to the logic of market economies; that is, R&D activities from both academia and industry were concentrated in specialised public-research institutes that were conducting R&D and consulting activities for industries; further, planning of these activities was coordinated at the central planning institutions. Thus, especially the Baltic States showed the largest weaknesses and traditions related to market-based economic planning (see Tridico 2011) and also became economies showing the highest levels of neoliberal thinking in economic reforms (see Török 2007) as well as in building development bureaucracies (see Karo 2011a). Other countries followed a more gradual and incremental reform path at least until the late 1990s when both in general public management (see Nemeč 2008) and in development bureaucracies (Suurna and Kattel 2010) the emphasis on neoliberal managerial thinking was becoming

increasingly prevalent. Thus, as a second trend, while local legacies and constraints led to different speeds in these reforms (see Nemec 2008 for a comparison), most Eastern European economies were at least by the late 1990s converging on testing different public-management reforms, where the central focus was placed on issues such as managerial efficiency; adoption of private sector-management practices in the public sector; formalisation, specialisation and contractualisation of public management and policy practices; individualisation of policy goals etc. (see Bouckaert *et al.* 2008).

This trend of convergence has also become especially visible in the case of development bureaucracies. According to the Post-Washington Consensus logic on development policies (see Radosevic 2009) supported by the European conditionalities for financing these policies (see Suurna and Kattel 2010), the role of the state is mostly to fix different types of system failures in the economy that inhibit the self-organising evolution of development networks, cooperation between R&D and economic agents, and private-sector dynamism. The system-failures-based policy focus reflects the process in development discourse of moving away from centring on firm-level capabilities to a wider set of innovation and educational capabilities with less explicit political and policy-level targeting. The choice of sectors as such and the emphasis on coordinated development of local value chains does not play such an important role anymore in policy formulation as does spotting various mostly systemic (or market) failures. It is also presumed that this requires more agile, flexible and modern forms of public management than the classic Weberian bureaucracies. Thus, while in the beginning public management *per se* was not seen as an important variable in development processes, since the late 1990s it became one of the crucial vehicles for rectifying existing system failures partly inherited from the socialist and partly from the Washington Consensus era.

Eastern European economies have almost universally sought to locate these development policy functions and capacities into the so-called *innovation agencies* designed as pockets of efficiency for governing industrial policy mixes (and EU finances), building networking capabilities within the innovation systems etc. While different countries have created and implemented this model with different speeds and slight variations (for example, in terms of the number of agencies and ministries involved – for good overviews see Cunningham and Karakasidou 2009; Suurna and Kattel 2010), there are several common trends as well. The main goal of these agencies has been to reduce bureaucratic characteristics in state-economy relations but also in internal procedures of public policies. The former is expected to take place as the public sector becomes more like the

private sector (see Karo 2012). The latter is achieved through more explicit changes in the institutions and processes of state policy-making and implementation where stable public sector career systems are explicitly substituted with open recruitment outside national bureaucratic traditions, personalised performance orientation, more flexibility and private-sector-type incentives, contracts etc. The creation of innovation agencies in fact epitomised this shift, as the EU sought to create clear lines of accountability for controlling the utilisation of its structural assistance and nation states used this conditionality (with the support of the EU's innovation-policy expert communities) as a source for a broader shift towards a Post-Washington Consensus innovation-policy system (see Suurna and Kattel 2010). Institutionally, these changes have led to specialisation within these agencies, both in terms of tasks (agencies specialised in basic research vs innovation) and policy processes (planning, implementation and evaluation tend to be also specialised into different institutions with varying policy and administrative autonomy). Further, most attention in building these pockets of efficiency has been given to technocratic capacities (fine-tuning international best-practices etc.) presumed to be the key for success according to both the general globalisation logic (of reduced policy space) and the logic of specialisation. As a result, issues of policy coordination have become a prevalent challenge, often being solved through contradictory means of formalisation/contractualisation of performance and strategic goals and attempts to create more informal networks and trust-based ties, both within the bureaucracy (from working groups to boards for strategic coordination) and between bureaucracy and the market through public-private-partnership-like relationships. Inevitably, the contractualisation (between different institutions and between institutions and their workers through performance contracts etc.) and quantification/formalisation (ex-ante performance agreements on desired output and outcome indicators etc.) of policy systems, together with a high emphasis on international benchmarking, policy evaluation by foreign experts etc., have reduced the effectiveness of informal ties and resulted in fragmentation (or 'siloesation') according to the prevalent administrative lines of national bureaucracies. As a result, feedback systems between policy and economic actors follow similar lines of fragmentation and often remain rather formal leading to similarly fragmented policy-learning processes that contribute relatively little to broader policy reforms and structural adjustments.

## **Policy capacity of Eastern European development**

The evaluation of private-sector dynamics in Eastern Europe during the last two decades is much more fluid and open-ended than in the case of East Asia. On the one hand, many Eastern European economies have

been highly successful in receiving massive amounts of foreign direct investments that have indeed turned most of the Eastern European industry upside down, replacing almost all capabilities within a very short period of time (see Havlik 2005). Eastern European economies are also highly open and strong in exports. On the other hand, various assessments (summarised in Karo and Kattel 2010; Suurna and Kattel 2010; Aidis and Welter 2008) bring out major vulnerabilities in Eastern European private-sector developments: large parts of export industry have been foreign-owned and tend to be oriented towards relatively simple production, with limited and often no linkages among local suppliers and other market institutions (universities, research institutes etc.). Also, a massive influx of foreign funding created real-estate and other asset bubbles during the 2000s, skewing the economic structure towards non-technological and non-exporting sectors. (See Kattel 2010; Havlik 2005) In general, private sectors tend to be fragmented into groups with diverging interests: exporters tend to need cheap labour and pressure towards low taxes; the service sector tends to need easier access to finance and investment, and low taxes.<sup>19</sup> This has also had important implications on the feedback linkages between the public and private sectors and the scope of policy as well.

Within our framework, it seems reasonable to argue that Eastern European industrial and innovation policies have had relatively little political importance (see also Piech and Radosevic 2006). In the early 1990s, it was mostly related to general Washington Consensus created discourse; since the late 1990s, industrial and innovation policy has been mostly financed by the EU, and as a result the policy has had limited redistributive implications in national politics (Karo 2011b). As a result, the key focus of policy has been on building *technocratic and managerial capacities* as opposed to being able to use political and policy-level autonomy for leading structural-change processes. Thus, the state and the market are increasingly seen as parallel and not complementary institutions. With this, the focus of policy intervention has moved away from state-led creation of dynamic inefficiencies in the market to generating and evaluating the efficiency of government intervention in terms of private-sector institutional logic. Thus, expectations on bureaucratic organisations and processes are reflecting dominant paradigms in the private sector. This, in turn, affects the relationship both between politics and bureaucracy and policy institutions and market actors. In both cases informal (administra-

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<sup>19</sup> See, for example the analysis in Mrak *et al.* (2004) that shows how even the relatively stable economic change in Slovenia has been threatening to create a dual economy through sectoral export specialisation, where most competitive firms are trading with the EU and less competitive firms find their markets in ex-Yugoslav markets, which limits the upgrading incentives and local production linkages.

tive-guidance-type) ties between different stakeholders become less relevant as the rather narrow focus of policy (stemming from external financing, external policy transfer, emphasis on technocratic efficiency) formalises policy processes and limits the potential for substantive change. Therefore, bureaucracy tends to lack policy-level autonomy for industrial and innovation policy planning, which means that there is limited explicit need for specialised training and recruitment of either highly skilled engineers or even highly skilled generalist bureaucrats into the development bureaucracy. While there is limited research on these detailed issues in the context of development bureaucracies, there is some indication that these trends have been rather explicitly developing in the Baltic States (Karo 2011a), whereas in the case of more embedded systems and longer state traditions, such as Slovenia, this transformation has been more incremental (Karo and Looga, forthcoming).

In addition, there is limited indigenous need to build ties between industry on the one hand and politics and bureaucracy on the other, as the former has little to contribute to the technocratic focus of policy-making and the latter collect their legitimacy from the international policy arenas through policy transfer and benchmarking. Thus, the domestic legitimising power of policy successes (and subsequent policy autonomy) remain limited as these are almost by default linked to private-sector successes with limited recognition given to policy choices and actions. In fact, the key feedback loop in policy is formed by emphasising avoidance of government capture and failure in the form of monopolistic markets and emergence of business models based on government support. In essence, the fragmented private sector is 'complemented' by a technocratically fragmented public sector. This mismatch leads to self-repeating policies that agree on the lowest common denominators (macro-economic stability, low public debt and low taxes), as the potential for public policies to bring about structural shifts is impeded by institutional constraints. At the same time such mismatch also feeds mistrust between the state and market actors as state interventions, also into R&D, are seen as zero-sum games and often, in fact, are. In sum, government activities and investment into structural change tends to have low returns because of the way private-sector capabilities have evolved and because of fragmented and mistrustful learning linkages between public- and private-sector actors. In Yeung's framework of coupling and decoupling used above in the case of East Asian economies, we can argue that Eastern European countries sought in 1990s to actively decouple economic interests from domestic political structures and that by now we see increasing discussions about the need to re-couple technological and industrial processes into domestic political and policy structures. This is perhaps best exemplified by current initiatives, led by European Commission, in the region of established 'smart



specialization' policies that should concentrate policy efforts into few key sectors, from science to export measures. These efforts can also be taken as sign of evolving policy capacity in the region and how this evolution is influenced by nature of prevalent economic specialization and its form of financing.

### **3. Summary and Conclusions**

In this paper we have looked at policy capacity not as a continuum of abilities, but as *a mode of making policy* that originates from co-evolutionary processes between politics, policy and economy. We have argued that the specific forms of policy capacity, at least in the context of development policies, are revealed in the feedback linkages between policy and market actors; and given the specifics of development policy these interactions are realised through three interlinked policy choices, or evolutions: understanding the nature and sources of technological change, financing technological change, and forms of public management. Using the case studies of East Asia's developmental state and Eastern European development policies, we have tried to show how these three policy evolutions have co-evolved and created the specific feedback linkages with private-sector dynamism. In Table 1 we have summarised the key characteristics highlighted in our analysis.

**Table 1.** Two types of policy capacity in development policy

	<b>East Asian development</b>	<b>Eastern European development</b>
<b>Macro-level characteristics of policy institutions</b>	<b>Partially representative and autonomous institutions:</b> - selective access to state institutions and insulated bureaucracy	<b>Representative institutions:</b> - high transparency and access to state institutions; stakeholder equality; public accountability as control mechanisms
<b>Institutions of the policy design processes</b>	<b>Distinction between political and bureaucratic policy design:</b> - political strategy-building as ideological vision-setting - bureaucratic policy design as plan-rational accommodation and interpretation of ideological visions - state-led interactions with market actors for feedback	<b>Blending of political and bureaucratic policy design:</b> - technocratic strategy-building based on globally converging ideas and best-practices - strategies and visions through interest competition (no political selection) - parallelism between state and market institutions reducing feedback
<b>Institutions of policy implementation processes</b>	<b>Bureaucratic policy institutions</b> - centralised development agencies based on Weberian principles - consolidation of industrialisation-related policy domains and tasks	<b>Managerial policy institutions</b> - innovation agencies based on private-sector managerial principles - specialisation of policy institutions (both in terms of domains and tasks)
<b>Key policy delivery institutions</b>	<b>Mix of formal and informal tools</b> - <i>regulations</i> and <i>subsidies</i> for selective steering and protection of local market actors - <i>state entrepreneurship</i> – state R&D institutions, development-oriented SOEs - <i>administrative guidance</i>	<b>Formalisation of policy delivery</b> - <i>regulations</i> – creating framework conditions and setting the scene for market competition and collaboration - <i>subsidies</i> – main subsidies for R&D (both private and academic), increasingly for collaborative R&D (between academic and market actors)
<b>Key policy evaluation and performance criteria</b>	<b>Process improvements</b> - in export, R&D capabilities etc. - substantive bureaucratic accountability (internal) - private-sector performance as part of policy performance	<b>Policy outputs and outcomes</b> - emphasis on external accountability through ideal-type ex-ante determined formal outputs and outcomes (for example, patent statistics)
<b>Types of state-market interactions</b>	<b>State-led networks and state-corporatist ties</b> - basic normative goals and direction determined by political institutions	<b>Non-hierarchical networks and social-corporatist ties</b> - competitions between local search networks and external pressures
<b>Private sector dynamics</b>	<b>Strong evolution of linkages throughout value-chains</b> - strong linkages among exporters, supplier networks and market institutions - linkages ensure effective public interventions and legitimise the latter in the process	<b>Weak linkages among foreign-owned exporters and domestic companies</b> - fragmented private sector with diverging interest and mistrust towards the public sector - public-sector interventions often do not complement private-sector capabilities, further de-legitimising state activities

Source: Authors.

If we compare the two cases, we see that there are significant differences, especially in the context of general ideas behind technological change, but also in financial systems. At the same time, there are also some important similarities, especially in political constraints (need to rely on export-led strategies, dependence on aid etc.), but also in some public-management aspects (creation of pockets of efficiency in development/innovation agencies). East Asian developmental states in general can be characterised by a more political and broader approach to development policies than Eastern European economies; Eastern European development policies have been much more narrow, both in terms of political importance and actual scope of activities. Thus, the role of the state has differed quite significantly between these cases, and the scope of this role can be quite directly linked to the general mix of political and economic concerns related to steering and financing technological change. In East Asia the governments have used (more or less) these instruments for broader political and developmental goals. In Eastern Europe, the states have been more distant in the processes of technological change. In this context, the systems of public management received rather different tasks and expectations.

In East Asia, public-management systems became integral and substantive parts of state-market interactions in the sense of information exchange and feedback and also policy learning. The institutional features (from the emphasis on merit to centralisation of tasks and functions) created a rather coherent group of key public and private institutions for pursuing also informal interactions. In Eastern Europe, the role of public management and bureaucracy as such became much more limited and technical, dealing mostly with following market dynamics or implementing international policy prescriptions and trends. Therefore, there has also been less need for substantive development bureaucracy, both in terms of institutional features and in terms of policy skills. Thus, Eastern European pockets of efficiency tend to be efficient in a narrow and managerial sense, and this also limits the role of public management in terms of building policy feedback and learning systems; and subsequently impacts the way how development policies are updated and reformed.

In summary, in East Asia the mix of strategies for technological change, its financing systems and the systems for its management created a self-reinforcing logic in policy capacity: policy successes legitimised the further role for policy and its institutions. In Eastern Europe the mix of technological change strategies, its financing and the systems for its management have created an almost perverse logic in policy capacity whereby policy successes by nature are almost impossible to measure in terms of public-sector activities and therefore policies re-create a continued

emphasis on avoiding government capture and failure, instead of focusing on substantive issues. Thus, in these two cases, institutions of public management – where policy capacity is located – are able to achieve very different things in the development-policy context: substantive effectiveness vs technocratic efficiency. At the same time in both cases, the way public management systems have been evolving and institutionalised over time is relatively in sync with the broader logic of how technological change processes and the means for their financing have been understood. The differences in state-market interactions – *developmentalist embeddedness vs neoliberal distance* – reflect these differences in the broader context of economic development.

We hope that our theoretical contribution and especially the analysis of the Eastern European development sheds some new light on the importance of analysing state, policy and administrative capacities even at the time of globalization of innovation and production networks. While the most recent contribution to the East Asian developmental state debates (Yeung 2013) has offered important source for critical reflection on developmental state literature, we think that his proposal to concentrate on firm-level and production network dynamics and reorient analytical focus away from state policies and capacities (see Yeung 2013: 8) may be too radical. If one subscribes to the ideas of legacies and path dependencies, one cannot fully neglect the importance of developmental state legacies – that we argue have co-evolved with private-sector dynamics – even in today's economic system. We have shown that the Eastern European economic systems and companies have been almost fully decoupled from its' national political systems for a decade or even more, but have not been able to build sustainable strategies for dynamic or virtuous integration with the global production and innovation networks. Further analyses could still contribute importantly to economic development debates (both theoretically and in the context of East Asian regional development) by analysing the path-dependent impacts of developmental state institutions – and how these have evolved in the 1990s and 2000s – on if and how East Asian governments have managed to support the global integration pathways of its companies. Or in other words, how have the policy capacities of East Asian economies evolved over the last two decades.

## References

- Aidis, R. and Welter, F., eds (2008), *The Cutting Edge: Innovation and Entrepreneurship in New Europe* (Cheltenham: Edward Elgar).
- Amable, B. (2004), *The Diversity of Modern Capitalism* (Oxford: Oxford University Press).
- Amsden, A. (1989), *Asia's Next Giant: South Korea and Late Industrialization* (Oxford: Oxford University Press).
- Amsden, A. and Chu, W. (2003), *Beyond Late Development: Taiwan's Upgrading Policies* (Cambridge: MIT Press).
- Andersen, E.S. (2012), 'Schumpeter's Core Works Revisited: Resolved Problems and Remaining Challenges', *Journal of Evolutionary Economics*, 22, pp. 627-648.
- Becker, J. and Weissenbacher, R., eds (2007), *Dollarization, Euroization and Financial Instability Central and Eastern European Countries between Stagnation and Financial Crisis?* (Marburg: Metropolis).
- Bohle, D. and Greskovits, B. (2009), 'Varieties of Capitalism and Capitalism "tout court"', *European Journal of Sociology*, 50, pp. 255-386.
- Bouckaert, G. et al., eds (2008), *Public Management Reforms in Central and Eastern Europe* (Bratislava: NISPAcee).
- Breznitz, D. (2007), *Innovation and the State: Political Choices and Strategies for Growth in Israel, Taiwan and Ireland* (New Haven: Yale University Press).
- Burlamaqui, L. (2006), 'How Should Competition Policies and Intellectual Property Issues Interact in a Globalised World? A Schumpeterian Perspective', *The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics*, 6. Available from [www.technologygovernance.eu](http://www.technologygovernance.eu) [accessed 1 September 2012].
- Cheng, T.J., Haggard, S. and Kang, D. (1998), 'Institutions and Growth in Korea and Taiwan: The Bureaucracy', *Journal of Development Studies*, 34, pp. 87-111.
- Cheung, A.B.L. (2012), 'Public Administration in East Asia: Legacies, Trajectories and Lessons', *International Review of Administrative Sciences*, 78(2), pp. 209-16.
- Chou, T.C. (1995), 'Taiwan', in S. Haggard and C.H. Lee, eds, *Financial Systems and Economic Policy in Developing Countries* (Ithaca, NY and London: Cornell University Press), pp. 56-75.
- The Conference Board. *Total Economy Database, September 2011*. Available from: <http://www.conference-board.org/data/economydatabase/> [accessed 1 September 2012].
- Crouch, C. (2005), *Capitalist Diversity and Change: Recombinant Governance and Institutional Entrepreneurs* (Oxford: Oxford University Press).

- Cunningham, P. and Karakasidou, A. (2009), 'A Better Understanding of the Governance of Innovation Policy', *ProInno Europe Policy Brief*, 3. Available from: <http://www.proinno-europe.eu/inno-policy-trendchart/page/thematic-papers> [accessed 1 September 2012].
- Dore, R. (2000), *Stock Market Capitalism: Welfare Capitalism. Japan and Germany vs the Anglo-Saxons* (Oxford: Oxford University Press).
- Duman, A. and Kurekova, L. (2012), 'The Role of State in Development of Socio-Economic Models in Hungary and Slovakia: The Case of Industrial Policy', *Journal of European Public Policy*, 19(8), pp. 1207-28.
- Ernst, D. (2009), 'A New Geography of Knowledge in the Electronics Industry? Asia's Role in Global Innovation Networks', *Policy Studies*, 54, East-West Center. Available from: [http://www.east-westcenter.org/fileadmin/stored/pdfs/ps054\\_2.pdf](http://www.east-westcenter.org/fileadmin/stored/pdfs/ps054_2.pdf) [accessed 1 September 2012].
- Evans, P. (1995), *Embedded Autonomy: States and Industrial Transformation* (Princeton: Princeton University Press).
- Gabor, D.V. (2012), 'The Road to Financialization in Central and Eastern Europe: The Early Policies and Politics of Stabilizing Transition', *Review of Political Economy*, 24(2), pp. 227-49.
- Gomez, E.T., ed. (2002), *Political Business in East Asia* (London: Routledge).
- Grindle, M. (2010), 'Good Enough Governance Revisited', *Development Policy Review*, 29, pp. 199-221.
- Grindle, M. (1996), *Challenging the State: Crisis and Innovation in Latin America and Africa* (Cambridge: Cambridge University Press).
- Haggard, S. (2004), 'Institutions and Growth in East Asia', *Studies in Comparative International Development*, 38(4), pp. 53-81.
- Haggard, S. (1990), *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries* (Ithaca, NY and London: Cornell University Press).
- Haggard, S. et al., eds (1994), *Macroeconomic Policy and Adjustment in Korea, 1970-1990* (Cambridge: Harvard University Press).
- Hall, P.A. and Soskice, D., eds (2001), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford: Oxford University Press).
- Hall, R.B. (2003), 'The Discursive Demolition of the Asian Development Model', *International Studies Quarterly*, 47, pp. 71-99.
- Havlik, P. (2005), 'Central and Eastern European Industry in an Enlarged European Union: Restructuring, Specialization and Catching-up', *Économie internationale*, 102, pp. 107-32.
- Hollingsworth, J.R and Boyer, R. (1997), *Contemporary Capitalisms: The Embeddedness of Institutions* (New York: Cambridge University Press).

- Jacoby, N.H. (1966), *U.S Aid to Taiwan: A Study of Foreign Aid, Self-Help, and Development* (New York: Frederick A. Praeger).
- Jayasuriya, K. (2005), 'Capacity Beyond the Boundary: New Regulatory State, Fragmentation and Relational Capacity', in M. Painter and J. Pierre, eds, *Challenges to State Policy Capacity: Global Trends and Comparative Perspectives* (Basingstoke: Palgrave Macmillan), pp. 19-37.
- Johnson, C. (1982), *MITI and the Japanese Miracle: The Growth of Industrial Policy* (Stanford: Stanford University Press).
- Kang, D.C. (2002), *Crony Capitalism: Corruption and Development in South Korea and the Philippines* (Cambridge: Cambridge University Press).
- Karo, E. (2012), 'Modernizing Governance of Innovation Policy through "Decentralization": A New Fashion or a Threat to State Capacities?', *Innovation: Management, Policy & Practice*, 14(4), forthcoming.
- Karo, E. (2011a), 'Evolution of Innovation Policy Governance Systems and Policy Capacities in the Baltic States', *Journal of Baltic Studies*, 42(4), pp. 511-36.
- Karo, E. (2011b), *Governance of Innovation Policy in Catching-up Context: Theoretical Considerations and Case Studies of Central and Eastern European Economies* (Tallinn University of Technology Press).
- Karo, E. and Kattel, R. (2010), 'The Copying Paradox: Why Converging Policies but Diverging Capacities for Development in Eastern European Innovation Systems?', *International Journal of Institutions and Economies*, 2(2), pp. 167-206.
- Karo, E. and Looga, L. (forthcoming), 'Evolution of Economic Restructuring Policies in Slovenia and Estonia: Competing Views on Institutions and Change in Central and Eastern Europe', *Journal of International Relations and Development*.
- Kattel, R. (2010), 'Financial and Economic Crisis in Eastern Europe', *Journal of Post-Keynesian Economics*, 33(1), pp. 41-60.
- Kattel, R., Kregel, J.A. and Reinert, E.S. (2009), 'The Relevance of Ragnar Nurkse and Classical Development Economics', in R. Kattel, J.A. Kregel and E.S. Reinert, eds, *Ragnar Nurkse (1907-2007): Classical Development Economics and its Relevance for Today* (London: Anthem Press), pp. 1-28.
- Kattel, R., Reinert, E.S. and Suurna, M. (2011), 'Industrial Restructuring and Innovation Policy in Central and Eastern Europe since 1990', in M. Cimoli, G. Dosi and A. Primi, eds, *Learning, Knowledge and Innovation: Policy Challenges for the 21<sup>st</sup> Century* (Oxford: Oxford University Press), forthcoming.
- Kregel, J.A. (2004) 'External Financing for Development and Interna-

- tional Financial Instability', *G-24 Discussion Paper Series*, 32. Available from: [http://www.unctad.org/en/docs/gdsmdp-bg2420048\\_en.pdf](http://www.unctad.org/en/docs/gdsmdp-bg2420048_en.pdf) [accessed 1 September 2012].
- Kregel, J.A. and Burlamaqui, L. (2006), 'Finance, Competition, Instability, and Development Microfoundations and Financial Scaffolding of the Economy', *The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics*, 4. Available from: [www.technologygovernance.eu](http://www.technologygovernance.eu) [accessed 1 September 2012].
- Kregel, J.A. and Burlamaqui, L. (2005), 'Innovation, Competition and Financial Vulnerability in Economic Development', *Revista de Economia Política*, 25(2), pp. 5-22.
- Lane, D. and Myant, M., eds (2007), *Varieties of Capitalism in Post-Communist Countries*, Studies in Economic Transition Series (New York: Palgrave Macmillan).
- Lee, C.H. and Haggard, S. (1995), 'Introduction: Issues and Findings', in S. Haggard and C.H. Lee, eds, *Financial Systems and Economic Policy in Developing Countries* (Ithaca, NY and London: Cornell University Press), pp. 1-30.
- Lim, W. (2012), 'Chaebol and Industrial Policy in Korea', *Asian Economic Policy Review*, 7, pp. 69-86.
- Lim, W. (2011), 'Joint Discovery and Upgrading of Comparative Advantage: Lessons from Korea's Development Experience', in S. Fardoust, Y. Kim and C. Sepulveda, eds, *Postcrisis Growth and Development: A Development Agenda for the G-20* (Washington: The World Bank), pp. 173-226.
- Minsky, H. (1988), 'Schumpeter: Finance and Evolution', Hyman P. Minsky Archive, Paper 314. [http://digitalcommons.bard.edu/hm\\_archive/314](http://digitalcommons.bard.edu/hm_archive/314).
- Mrak, M., Rojec, M. and Jauregui, C.S., eds (2004), *Slovenia: From Yugoslavia to the European Union* (Washington: The World Bank).
- Myant, M. and Drahokoupil, J. (2010), *Transition Economies: Political Economy in Russia, Eastern Europe, and Central Asia* (New Jersey: Wiley-Blackwell).
- Nam, S.W. and Lee, C.H. (1995), 'Korea', in S. Haggard and C.H. Lee, eds, *Financial Systems and Economic Policy in Developing Countries* (Ithaca, NY and London: Cornell University Press), pp. 31-55.
- Nemec, J. (2008), 'Public Management Reforms in CEE: Lessons Learner', in G. Bouckaert *et al.*, eds, *Public Management Reforms in Central and Eastern Europe* (Bratislava: NISPAcee), pp. 343-71.
- North, D. (1990), *Institution, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press).
- Painter, M. and Pierre, J. (2005) 'Unpacking Policy Capacity: Issues and Themes', in M. Painter and J. Pierre, eds, *Challenges to State*



- Policy Capacity: Global Trends and Comparative Perspectives* (Basingstoke: Palgrave Macmillan), pp. 1-18.
- Perez, C. (2002), *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages* (Cheltenham, UK: Edward Elgar).
- Piech, K. and Radosevic, S., eds (2006), *The Knowledge-Based Economy in Central and East European Countries: Countries and Industries in a Process of Change* (Basingstoke: Palgrave Macmillan).
- Pollitt, C. (2012), *New Perspectives on Public Services: Place and Technology* (Oxford: Oxford University Press).
- Pollitt, C. (2008), *Time, Policy, Management: Governing with the Past* (Oxford: Oxford University Press).
- Pollitt, C. and Bouckaert, G. (2011), *Public Management Reform: A Comparative Analysis – New Public Management, Governance, and the Neo-Weberian State* (Oxford: Oxford University Press).
- Radosevic, S. (2009), 'Policies for Promoting Technological Catch Up: Towards a Post-Washington Approach', *International Journal of Institutions and Economies*, 1(1), pp. 22-51.
- Radosevic, S. (1998), 'The Transformation of National Systems of Innovation in Eastern Europe: Between Restructuring and Erosion', *Industrial and Corporate Change*, 7(1), pp. 77-108.
- Schumpeter, J. A. (1912), *Theorie der wirtschaftlichen Entwicklung* (Berlin: Duncker&Humblot).
- Schumpeter, J. A. (1939), *Business Cycles. A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, Volume 1 (London and New York: McGraw-Hill).
- Soete, L. (2007), 'From Industrial to Innovation Policy', *Journal of Industry, Competition and Trade*, 7(3-4), pp. 273-84.
- Suurna, M. and Kattel, R. (2010), 'Europeanization of Innovation Policy in Central and Eastern Europe', *Science and Public Policy*, 37(9), pp. 646-64.
- Thurbon, E. (2003), 'Ideational Inconsistency and Institutional Incapacity: Why Financial Liberalization in South Korea Went Horribly Wrong', *New Political Economy*, 8(3), pp. 341-61.
- Thurbon, E. and Weiss, L. (2006), 'Investing in Openness: The Evolution of FDI Strategy in South Korea and Taiwan', *New Political Economy*, 11(1), pp. 1-22.
- Tridico, P. (2011), *Institutions, Human Development and Economic Growth in Transition Economies* (Basingstoke: Palgrave Macmillan).
- Török, A. (2007), 'Industrial Policy in the New Member Countries of the European Union: A Survey of Patterns and Initiatives since 1990', *Journal of Industry, Competition and Trade*, 7(3-4), pp. 255-71.
- Underhill, G.R.D. and Zhang, X. (2012), 'The Changing State-Market

- Condominium in East Asia: Rethinking the Political Underpinnings of Development', *New Political Economy*, 10(1), pp. 1-24.
- Verhoest, K. and Bouckaert, G. (2005), 'Machinery of Government and Policy Capacity: The Effects of Specialization and Coordination', in M. Painter and J. Pierre, eds, *Challenges to State Policy Capacity: Global Trends and Comparative Perspectives* (Basingstoke: Palgrave Macmillan), pp. 92-111.
- Wade, R. (2003), 'What Strategies are Viable for Developing Countries Today? The World Trade Organization and the Shrinking of Development Space', *Crisis States Programme Working Papers Series*, 1. Available from: <http://eprints.lse.ac.uk/28239/> [accessed 1 September 2012].
- Wade, R. (2000), 'Wheels Within Wheels: Rethinking the Asian Crisis and the Asian Model', *Annual Review of Political Science*, 3, pp. 85-115.
- Wade, R. (1990), *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton: Princeton University Press).
- Walter, A. and Zhang, X. (2012), *East Asian Capitalism: Diversity, Continuity and Change* (Oxford: Oxford University Press).
- Whitley, R. (1999), *Divergent Capitalisms: The Social Structuring and Change of Business Systems* (Oxford: Oxford University Press).
- Wilson, W. (1887), 'The Study of Administration', *Political Science Quarterly*, 2(2), pp. 197-222.
- World Bank. *WDI Online Database*. Available from: <http://data.worldbank.org/data-catalog/world-development-indicators> [accessed 1 September 2012].
- Zysman, J. (1983), *Governments, Markets, and Growth: Financial Systems and the Politics of Industrial Change* (Ithaca, NY: Cornell University Press).
- Yeung, Henry Wai-chung (2013), 'Governing the market in a globalizing era: development states, global production networks and inter-firm dynamics in East Asia', *Review of International Political Economy*, <http://dx.doi.org/10.1080/09692290.2012.756415>

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