The Copying Paradox: Why Converging Policies but Diverging Capacities for Development in Eastern European Innovation Systems?

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1. Introduction

There seems to be almost decade long consensus on what are the key problems in innovations systems in Eastern European (EE) countries.[2] The consensus runs through social scientists in- and outside Eastern Europe to official statements of the European Commission. Briefly, there are two key challenges in the innovation systems in Eastern European countries: first, mismatch between R&D and education policies on the one hand and industry needs on the other (it can be also called a high-technology bias); second, strongly fragmented policy arena where coordination problems are rampant. (See for detailed country overviews European Commission's Innovation Trend-Chart, 2006 and 2007; see also Radosevic, 2004 and 2006; Reid and Peter, 2008) These problems were partially detected, or their emergence predicted, already in late 1990s (see, for instance, Radosevic, 1998 and 1999) and by the 2000s they formed the core of European Commission's message to the new member states on what they need to take into account while devising strategic plans for the implementation of EU's structural funding between 2007 and 2013. (for detailed overview, see Kattel, Reinert and Suurna, 2009) Yet, over the decade, the problems persist and seem to get worse. This article sets out to explore why this is so.

We argue that there are two main reasons. **First**, what we call copying paradox: EE countries have been policy takers from the start in early 1990s; at their core, economic and innovation policies have been copied and taken from, at the beginning, from the Washington Consensus toolbox and later from the European Union. The innovation policies in EE have as a result been converging with the developed countries' policies. Yet, we aim to show that this convergence in policy is accompanied by hollowing or non-emergence of local capacity to analyse and evaluate domestic policy issues because of de-contextualization of policy making through the very same convergence. That is, while EE countries are voluntarily or involuntarily increasingly copying and transferring policies from developed countries and international organizations, this usually exasperates their problems as local capacity development is thwarted. Thus, there is a copying paradox: the more EE countries are converging on the policy level (the more 'mainstream' policies they choose), the lower their actual capacity at development becomes, hence diverging capacities for development.

This paradox is, **second**, significantly enabled and enhanced by what we call path dependencies in the ways innovation systems have developed in EE. More precisely, we aim to show that the timing when EE economies rejoined the global capitalism was highly specific in terms policy and academic advice the new economies and their policy makers received. In

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[2] In the context of this article, Central and Eastern European countries are the following ten most recent member states of the European Union: Bulgaria, the Czech Republic, Hungary, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

fact, the article shows that in addition to initial timing specifics, also the accession into the European Union served as an additional element in certifying earlier developments. There are two key areas in policy and academic advice EE countries received since early 1990s (and in some cases, already during the 1980s): economic and innovation policy and governance. We argue that in both fields, early 1990s were a highly particular time in terms of what ideas dominated the respective discourses: in the former, Washington Consensus (WC) provided the most dominant ideas how to restructure the economy and in the latter, the New Public Management (NPM) provided the most dominant ideas how to manage democratic polities. While both discourses within and outside EE countries have noticeably evolved during past 20 years, we aim to show that the initial path determined by these two core ideas (WC and NPM) is still fundamental to EE innovation systems and, perversely, the accession into the EU has in many ways deepened the path dependencies because the capacity for policy development has been thwarted.

The paper is structured as follows. Firstly, we will provide a methodological note that explains the framework that we are using to highlight our main proposition of this article (existence of the copying paradox) and the reasons for its persistence (path dependency). Our approach in this paper is a rather unique one in a sense that we will borrow a lot of conceptual ideas and approaches from the public administration and policy discourse (policy convergence, policy diffusion, policy transfer etc.) to explain the development of innovation policy in a specific context, the EE. Our framework is largely based on the historical institutionalist analysis of the innovation policy development. We will use this approach to track the trajectory of the development of the innovation policy in EE. Further, we will use it as an explanatory tool to explain why despite the perception of policy convergence we can witness a divergence in the policy from the intended results and as a result can talk about limited and de-contextualised policy-making capacities. In the third part we will provide a stylised analysis of the evolution of innovation policy in EE during the last two decades. We will also explain why we can witness a perception of policy convergence in innovation, but actual capacity divergence in development. In the fourth part, we will discuss how the two discourses of innovation policy and public administration have evolved over the past 20 years and how they provide highly specific lenses for understanding EE innovation systems and thus provide fertile ground for the key problems to remain unsolved. To explain, the third part of our paper is analysing policy developments on the level of actions and outcomes and the fourth part on the level of talk and decisions (see section two for an explanation of the need to differentiate between the two levels of analysis; also Pollitt, 2002; 2001). Lastly, in the concluding discussion we will provide an summarising explanation why we can witness the copying paradox persisting over a considerable path of the policy development, that is we will highlight how the EE countries have moved in their policy-making from a period of ‘confusion in diffusion’ in 1990s to a period of ‘lost in transfer’ in 2000s without any significant increase in the actual policy analysis and policy capacities.

2. Methodological and theoretical approach for the analysis

Before explaining the theoretical and methodological approach we will firstly create a framework of analysis that we have used to place our core assumptions and reasons for the approach of this paper (parallel analysis of two distinct discourses) into a traceable frame of mind.

Background and framework of analysis

As noted, our approach in this paper is a rather unique one in a sense that we will borrow a lot of conceptual ideas and approaches from the public administration discourse to explain the actual development of innovation policy in a specific context, the EE. We believe that at least in the case of policy-making in developing or transition countries this adds value to the analysis in two ways. Firstly, we start with a working-hypothesis that in much of the theoretical and policy-relevant literature on industrial development and especially innovation policy we can witness a rather evident over-generalisation or simplification of the role of politics and policy-making. What do we mean, and explain in detail in the following sections, is that in most of these approaches there is a line of argumentation that prescribes or offers a particular view of the theoretical underpinnings of innovation and summarises it into a policy framework or mix (theory based ideal-type models). The actual implementation of the proposed 'policy' is usually presumed to take place as theorised (e.g., politicians should adopt what is prescribed by theories or ideal types) or explained to be dependent on the administrative capacity of a specific country or region (e.g., no significant differentiation made between political choices over policy and ability to implement policies). We believe that innovation policy discourse has much to gain from further elaborating on the role of government and governance. Therefore we make a difference between two generic discourses – innovation policy (IP), and public policy and administration (PPA) – and try to create added value to the academic research by analysing them in parallel.

Secondly, PPA literature is mostly concerned with the issues of policy and administrative capacity, that is with how policy decisions are made and implemented and not so much with the theoretical underpinnings of the different policy choices put in front of policy processes.[3] Therefore, the PPA discourse in the context of developing and transition states makes a sort of 'reversed-presumption' compared to the IP discourse: the PPA discourse does not question the theoretical validity and practical suitability of the dominant discourse on innovation put in front of the policy-making process. In essence, both PPA and IP discourses assume that the other one has got it 'right' and neither questions the validity of each others assumptions: IP discourse assumes presence of administrative capacity and PPA discourse assumes the presence of valid innovation policy choices. Thus, we analyze both discourses in parallel, yet our dominant approach comes from the PPA discourse. We will show that the analysis of the discourse of PPA will provide us with tools and arguments to explain the resulting path-dependencies in the IP development and policy results; the parallel analysis of discourses will hopefully bring us closer to comprehensively describing and explaining the specific trajectory of IP development in EE countries.

Therefore, our analysis is based on one core assumption: in order to analyse particular public policy one has to look at both the content of the policy (e.g., what is the perception about the main goals and content of innovation or development policy) and the capacity of actually achieving the results of the policy (e.g., does the institutional capacity of a particular country/context support achieving the defined goals of policy) (see also Painter and Pierre, 2005a; and for a wider context, Pollitt, 2008). However, we will track this relationship between goal-setting and implementation processes on two levels: first, actual developments on policy and implementation levels (effects level); second, on the level of policy and academic 'talk' and discourse (process level). In order to so, we use for the first level the

[3] We argue that at least in the context of transferring policies from more developed to developing countries, the contextualisation of policies through policy analysis is often done through incremental changes within the dominant policy discourse (in our paper WC and NPM). For similar argument placed into policy transfer literature, e.g., supply and demand based policy transfer, see Randma-Liiv (2005).

concepts of capacity and policy convergence/transfer; for the second level, we use concepts from historical institutionalism such as path dependency.

Theoretical and methodological approach

In order to specify the concept of capacity, we distinguish between three levels where discussion about the role of the state and public policies is of relevance (based on Painter and Pierre, 2005b, 2-7):

- The broadest concept can be defined as '*state capacity*' that means achieving appropriate outcomes such as sustainable economic development and welfare (based on values such as legitimacy, accountability, compliance, consent). In essence, development and innovation policy discourse is referring to this level when discussing the issues of administrative capacity or capacity of the government to implement theoretically sound or ideal-type innovation policies. It can be also viewed as the extent and depth of government involvement in the policy area. The public administration and policy discourse elaborates on this concept by distinguishing two subsidiary concepts (each with its own theoretical and analytical approaches) that are both preconditions for the state capacity to emerge:
- '*Policy capacity*' refers to ability to make intelligent policy choices (based on values such as coherence, public regardingness, credibility, decisiveness, resoluteness); in the context of innovation policy, policy capacity refers to the ability of the political system to decide upon the best approach (what is '*desirable'* and what is '*feasible'*) to innovation and development;[4]
- The level or quality of the policy capacity is dependent on the third concept, namely '*administrative capacity'* that refers to effective resource management (based on values such as economy, efficiency, responsibility, probity, equity); this capacity refers 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 institutional memory of a political system that is pivotal for making intelligent policy choices is largely stocked both in institutions of administration and institutions of policy-making.

This kind of analytical differentiation that we have provided has not been an inherent part of developing public policies in transition countries, such as the EE countries. The transition from the communist to the democratic societies has created the overwhelming challenge to look at once at all of these levels and create/reform/develop these capacities: the EE countries have had to reform and restructure their core institutions in parallel with introducing new policies. This has been a recognised task both at the level of public administration and policy (Agh, 2003; Verheijen, 2003; Aslund, 2002) and innovation and development (Radosevic, 2009; Tiits et al., 2008; Török, 2007). We will argue that this has been a considerable challenge precisely because the EE countries have "looked up" towards so called benchmark regions and institutions (the EU, the OECD, World Bank, IMF) and the lessons that the EE countries have been given and what they have themselves taken over (transferred) are rather

[4] For instance, the theoretical approached for technological catch-up and development can be divided into several opposing theoretical models e.g. from neoclassical to Schumpeterian/evolutionary/institutional schools (for more comprehensive overview see for example Nelson and Winter, 1982). In this context, the ideal-type policy mixes (e.g., the actual range of policy choices that could theoretically be made) for innovation and catching-up that the EE countries could have considered range from 'import substitution'-type policies to WC-based models to post-WC-based/EU-led approaches (for an excellent overview, see Radosevic, 2009).

generalised and de-contextualised, that is the policy development has not been substantive policy learning but often “fast-and-furious” copying of a specific policy discourse. By elaborating on the development of these three levels, the path dependency of the initial choices and their impact of unexpected results will hopefully become explicit. In the context of EE innovation policy development, we will try to track the development of these three levels of capacity since 1990.

Further, our analysis utilizes the *policy convergence* approach (see, e.g., Bennet, 1991; Drezner, 2001; Heichel et al., 2005; Knill, 2005) that analyses the possible tendencies towards convergence of national policies in the sense of ‘*development of similar or even identical policies across countries over time*’ (Knill, 2005, 1), or ‘*the tendency of societies to grow more alike, to develop similarities in structures, processes, and performances*’ (Kerr, 1983), or ‘*any increase in the similarity between one or more characteristics of a certain policy (e.g. policy objectives, policy instruments, policy settings) across a given set of political jurisdictions (supranational institutions, states, regions, local authorities) over given period of time*.’ (Knill, 2005, 5) These processes are perceived to take place due to globalisation, Europeanization and other influences.

Policy convergence can be viewed as an umbrella concept to concepts or notions such as *isomorphism*,[5] *policy transfer*,[6] and *policy diffusion*[7] (see Knill, 2005). These concepts, especially policy transfer and policy diffusion, have grown in importance in the context of the transition in EE countries. The different notions exemplify that policy convergence in the form of taking over policies from other contexts and countries can happen in different ways (voluntarily or involuntarily; consciously or more or less unconsciously etc.).

Thus, the policy convergence and its related concepts shed light to the analytical levels that can be used for analysing the convergence trends as summarized in Table 1.

Table 1. Overview of policy convergence.

	Policy convergence	*Isomorphism*	*Policy transfer*	*Policy diffusion*
Analytical focus	Effects	Effects	Process	Process
Empirical focus	Policy characteristics	Organisational structures	Policy characteristics	Policy characteristics
Dependent variable	Similarity of change	Similarity of change	Transfer content and transfer process	Adoption patterns

Source: Knill, 2005.

Therefore we can see that there is a distinct difference between *effects* and *processes* within the context of policy convergence: similar process may and may not lead to similar effects or

[5] *Isomorphism* is defined as a process of homogenization that “*forces one unit in a population to resemble other units that face the same set of environmental conditions*“ (Knill, 2005, 5; DiMaggio and Powell, 1991, 66). Pollitt (2001) distinguishes between coercive, mimetic and normative types of isomorphism.
[6] *Policy transfer* is a „*process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political system*“ (Dolowitz and Marsh, 2000, 5).
[7] *Policy diffusion* refers to processes that might result in increasing policy similarities across countries hence leading to policy convergences. Though there are two different approaches to diffusion – it can be either described as the spread of policies independent of causal factors (e.g. it can be both voluntary and coercive) or it can be defined through voluntary adoption (as opposed to coercive) of different policies. (Knill, 2005, 3) In our paper we look at the diffusion in the more flexible sense allowing it to be caused by broad range of causal factors.

outcomes and similar effects may or may not be the result of similar processes or policies with similar characteristics. This differentiation we believe offers significant explanatory weight in discussing the policy reforms of transition/or catching-up countries. In our categorisation, *policy diffusion* describes mediated or managed spread of new policies and ideas that does not reflect conscious or intended learning or transfer from other context. *Policy transfer* on the other hand describes a policy-making process that reflects more conscious analysis of and learning from the experience of other regions and countries.[8]

By the term of 'copying paradox'[9] we claim that one can witness a policy convergence towards WC and NPM based policy approaches both in economic and innovation policy and in public administration and policy. This convergence is perceived to be happening in relation to the general 'mainstream' models in both of these strands that are presumed to be, on the one hand, ideal-type models of transition and economic development and, at the same time, to some extent also models that are the foundation of the economic growth and development in Western democracies. But, at the same time we argue and analyse in detail below that in EE there is a clear divergence in capacities (e.g., capacity for devising and implementing policies for sustainable economic development) compared to the results predicted by these ideal-type models and growth models showed by these Western democracies. Therefore, despite seemingly following or converging towards the ideal-type policy models, the EE countries are diverging in the results and capacities that are being achieved.

The lack of empirical findings of actual convergence is a well noted challenge faced by the convergence analyses. One of the opposing strands of theorising, the 'new-insitutionalist' studies of institutional and policy development, provides modifying or often challenging explanations to the convergence analysis (for a great overview, see Peters, 2005). These approaches emphasise the importance of different institutional variables (organisational structure, value systems, historical experiences etc.) that influence the path of development of public administration systems and policies and therefore we can witness more divergence than convergence across different contexts. Therefore, the context has always an important influence on the *desirability* and *feasibility* of implementing certain policies. Yet, in the pursuit of creating analytical models, providing generalisations and explicit policy advice, the importance of context and the relevance of history seem to be the issues most easily disregarded or not taken as relevant (for an excellent analysis, see Pollitt, 2008). We believe that parallel discussion of the emergence and development of IP and PPA discourses in this context will help us explain why we can witness the 'copying paradox'.

Therefore, we use the 'new-institutionalist' theories to analyse the emergence and development of the phenomena that we have depicted as the 'copying-paradox'. For tracking the trajectories of policy development over time and explaining changes or persistence of specific models and paths of development, the 'new-institutionalist' school offers 'historical institutionalism' as a tool for analysis (see Pierson, 2004). The starting point of this approach is the claim '*the policy choices made when an institution is being formed, or when policy is initiated, will have continuing and largely determinate influence over the policy far into the future*.' (Peters, 2005, 71) Therefore, we talk about '*path-dependencies*' in institutional

[8] For great literature review and discussion in the context of developing/transition countries, see Savi (2007).
[9] In the policy transfer and policy convergence literature the term '*copying'* is differentiated from concepts such as '*emulation*', '*combination*', '*inspiration*' to reflect a more conscious duplication of policies (for overview and explanation, see Savi, 2007). In our approach, '*copying*' in the concept '*copying paradox*' implies a lack of conscious and contextual policy analysis capacity that would result in more contextual modifications of innovation policy and therefore we argue that there is a general tendency towards copying rather than modifying.

development and in public policy-making. Yet, this has to be seen as a tendency and not a rule of thumb, for instance if the prevalence of path dependencies would be a universal phenomena, it would be futile to use this approach for assessing possibilities for fundamental transformations and changes of institutions and policies (Pollitt, 2008). Therefore, we use this approach to highlight the instances – *critical junctures* or *punctuations* – where fundamental changes in institutions and policies have or could have taken place, e.g. the instances where the tendencies towards path-dependency are potentially superseded by other factors. Also, we will use the approach to argue that by looking at the historical development trajectory of the IP from the perspective of the EE since its emergence (beginning of the 1990s), we can see that the changes of policy in essence reflect perceptionally significant, but still within a path changes – *cycles/alternations* – of the policy.

Therefore, the lens of 'historical institutionalism' provides both theoretical and analytical arguments to explain why we can witness contradictory tendencies of both seemingly converging policies and diverging outcomes in policy and policy-making capacity.

Further, from the historical institutionalist strand we can derive another tool that can be used for clarifying the level of analysis in discussions of policy convergence. The convergence as such can be divided into four layers that have different implications on policy development and on our understanding of convergence (Pollitt, 2002, 2001): *discursive convergence*, e.g. convergence at the level of talk; *decisional convergence*, e.g. convergence at the level of public decisions over policy, technique, organisational form; *practice convergence*, e.g. convergence on the level of working practices or policy mixes used; *results convergence*, e.g. the level where reforms and policies produce their intended (and unintended) effects so that the outputs and outcomes begin to converge. The former two are more in line with the *process level* analysis and the latter two with more *effects level* analysis. The empirical proofs of the policy development both in PPA discourse (for overview see, Pollitt and Bouckaert, 2004) and IP discourse (for latest overview, see Box, 2009) are largely limited to the process level analysis (e.g., analysing official governmental statements, policy documents, other public declarations, formal decisions and programs etc.). In the context of developing and transition countries this limited understanding of discourse and policy development has huge implications for policy transfer processes, and would seemingly logically create an essential need for elaborate capacities of contextual policy-analysis.

By looking together at the IP and PPA discourse we can highlight that the development of the innovation policy trajectories has depended on the specific development paths of each of the discourses. In the following section we will describe the *effects level* convergence of the innovation policy in EE, that is, we will provide a stylised description of the innovation policy development in EE and indicating how it has resulted in the 'copying paradox'. This will be followed by a discussion how innovation policy emerged and developed from specific discourses of IP and PPA that were largely based on *process level* convergence into policy models that lack empirical proof of success in at least developing country context. Then, we will discuss our findings in the historical-institutional framework to highlight how the discursive convergence of IP and PPA since the 1990s has locked the EE policies into a distinct path of development (the path dependency) that is becoming increasingly more difficult to break from.

Table 2 summarizes our approach to analyzing innovation policy from public policy and administration perspective. To put it into the context of 'typical' innovation policy analysis, our approach looks at the level of how innovation systems[10] are governed and managed.

Table 2. The levels and nature of analysis of innovation policy from the public policy and administration perspective.

	Effects level	**Process level**
Unit of analysis	Policies implemented, their impact on the real economy and innovation system	Discourses and policy choices in and around innovation system
Patterns of analysis	Levels of capacity (state, policy and administrative)	Levels of convergence (discursive and process)
Results of analysis	Tracing the changes in capacity (increasing, decreasing; contextualised, de-contextualised) and innovation systems	Identification of critical junctures and path dependencies

The effects level is analysed in sector 3; the process level in section 4.

3. Evolution of innovation policy in Eastern Europe since 1990

From the existing scientific and policy analytical literature we can distil two fundamental problems that persist in the innovation systems of EE countries since a decade if not for a longer period.[11] **First**, in most EE countries there is a long-standing and strong mismatch between R&D and education system outcomes and industry needs. This mismatch has in turn two mutually enforcing aspects: one the one hand, innovation policies in EE tend to focus on high technology (for instance, commercialization of R&D results, technology parks, incubators, etc); on the other hand, actual economic and industrial structure is characterized by low productivity growth and dominated by outsourcing activities with very low demand for R&D or indeed for most outcomes targeted by innovation policies. **Second**, in most EE countries innovation policies suffer from double fragmentation: on the one hand, there is a strong fragmentation and divide between various actors in the innovation system (universities, companies, governments); on the other hand, also within the public sector fragmentation between various policy areas (education, industry, energy etc) is strong. Such double fragmentation leads to massive and systematic coordination failures in policy design, implementation and evaluation. Clearly, the two challenges are connected and enforcing each other. In this section, however, we intend to show how these challenges originate from the application of Washington Consensus policy toolbox to EE economies and while the European Union recognized and emphasised these problems throughout the accession talks and during the negotiations for implementation of EU's structural funding in 2000s, EU's influence has, perversely, enforced or even deepened these challenges.

[10] We use innovation systems here in a rather generic meaning as a system of actors and features that determine, in the broadest sense of the word, how and why companies innovate; see Freeman, 1987; Lundvall 1992; and Nelson 1993.

[11] See for detailed country overviews European Commission's Innovation Trend-Chart, 2006 and 2007; see also Radosevic, 2004 and 2006; Reid and Peter, 2008; and Kattel, Reinert and Suurna, 2009. Best research on the EE innovation systems from the late 1990s also covers the earlier transition period, see in particular Radosevic 1998 and 1999.

We show below that the ‘original sin’ for the long-standing and systemic problems in EE innovations systems was misunderstanding the nature of Soviet R&D system and industry. This misunderstanding, as we will show in the next section, was largely caused by the timing of re-entry of EE countries into global economy, and later we will argue that policies based on this misunderstanding can be seen as the ‘critical juncture’ in creating the specific path-dependency in the innovation policy development in EE.

Restructuring Soviet R&D system and industry

At the end of the 1980s, Eastern European and former Soviet economies were generally highly industrialized and many of these economies were seemingly on a similar industrialization and growth path as the East Asian economies. According to the World Bank data, countries like Estonia, Latvia and Hungary were ahead of Korea during in the early 1980s in terms of industrial value added per capita. (World Bank WDI online database) However, the industrialization of EE countries was widely understood to be highly artificial and ineffective, using in other words excessive amounts of resources and other inputs to produce goods. Thus, after regaining the independence, restructuring the economy and in particular the industry, was on top of the agenda for all EE countries. In fact, in many ways what was desired was not so much restructuring as outright replacement of old Soviet industry with one similar to the Western industries.

Washington Consensus policies, coming to full articulation and force around the same time, late 1980s and early 1990s, offered a very coherent and relatively simple set of policies to deliver the restructuring and replacement. Rodrik offers an interesting summary of what the Washington Consensus original was and how it changed during the 1990s into an augmented version. (Table 3)

Table 3. Washington Consensus and Augmented Washington Consensus.

Original Washington Consensus	“Augmented” Washington Consensus the previous 10 items, plus:
1. Fiscal discipline	11. Corporate governance
2. Reorientation of public expenditures	12. Anti-corruption
3. Tax reform	13. Flexible labor markets
4. Financial liberalization	14. WTO agreements
5. Unified and competitive exchange rates	15. Financial codes and standards
6. Trade liberalization	16. “Prudent” capital-account opening
7. Openness to DFI	17. Non-intermediate exchange rate regimes
8. Privatization	18. Independent central banks/inflation targeting
9. Deregulation	19. Social safety nets
10. Secure Property Rights	20. Targeted poverty reduction

Source: Rodrik, 2006, 978.

Interestingly, Williamson’s original list of policies that Washington can agree upon, included infant industry protection, and ‘*a moderate general tariff (in the range of 10 percent to 20 percent, with little dispersion) might be accepted as a mechanism to provide a bias toward diversifying the industrial base without threatening serious cost*’. (2002) While both belong arguably to classical canon of industrial policy and form mandatory passage points in industrialization and upgrading efforts (Reinert, 2007), neither made it into the Washington Consensus practices in the 1990s or into its augmented version of the 2000s.

For EE countries, however, only the original list (1-10 in Rodrik's table) is relevant. While all EE countries set out to implement WC-inspired reforms (see also Radosevic, 2009), Drahokoupil (2007, 90) offers a very interesting way how to group different strategies followed by EE countries in 1990s: '*The competition states in the Visegrád four can be called Porterian, aiming at attracting strategic FDI through targeted subsidies … The Baltic competition states can be called macroeconomic stability-driven neoliberal states with monetary institutions at their core. … Finally, Slovenia has developed a distinct type of competition state, which can be characterized as a balanced neo-corporatist*.' However, as Weissenbacher (2007, 71) argues, Hungary, Poland and Yugoslavia had experiences of dealing with IMF already during 1980s when they borrowed money from it and applied standard austerity programs. Thus, while there are clearly differences in accents, the general framework offered by WC was applied in all EE countries throughout the 1990s and indeed the policy sets were converging during the 1990s. (Drahokoupil, 2007)

Indeed, WC-inspired policies were considered by most EE countries as *the* innovation and industrial policy measures and in essence there were no other policy initiatives during 1990s. During this period, almost all of economic policy capacity building was directed towards macro-economic competencies (at central banks, ministries of finance, also think tanks). This was greatly helped by the advice and assistance from the Washington institutions such the World Bank and IMF, but also from OECD. Innovation policy was considered as secondary to transition related concerns (Mickiewicz and Radosevic, 2001, 10). As there were no innovation policies proper, there was also essentially no institution building for or in the innovation systems. WC-inspired policies were understood to deliver the economic stability to attract foreign direct investments that should become vehicles of delivering actual restructuring and replacement of Soviet industry. In other words, market demand was understood to deliver economic restructuring and along with it create also a need and direction for innovation system reform (R&D, education systems, labour policy etc). Building up capacity in specific areas of innovation systems seemed superfluous; indeed, R&D system was seen in many ways as too big (employing too many people) and ineffective (too far from the private sector). (Radosevic 1998 and 1999 offer good overviews)

Thus, market discipline in form of WC-inspired policies replaced actual capacity building; market was seen the producer of priorities. Indeed, this is perhaps the most important feature of WC: as it presupposed that all development problems are fundamentally alike (be it in Africa or Russia), it took away the burden of domestic capacity building and evaluation, and replaced it with a set of universal policies. This is directly the opposite to previous development consensus; as one of the classical development economists Hirschman argues, all development presupposes some form of priority setting through policy making. (Hirschman 1958) The Washington Consensus did away exactly with this assumption: since all development problems are assumed to be of the same nature, the solutions are bound to be the same as well, and this takes the burden of proof, so to say, away from domestic policy-making. (See further Kattel, Kregel and Reinert 2009)

However, it can be argued that for EE countries, the WC-based policies also created a relatively strong legitimization of newly written constitutions and laws, and for policy process based on these. Precisely because the impetus of reform was coming from the outside, these reforms were somewhat safe from being questioned than home-grown initiatives would have been. At the same time the legitimacy of the state or the understanding of the *state capacity* was highly reflective of the WC ideas resulting in no-policy policies in innovation and industrial policy areas; the existing policy measures where more in line with supporting or creating market forces than steering or managing the market for sustainable transition and catching-up, that has been a more traditional approach of developing countries throughout the past.

In reality, the Washington Consensus policies were even too effective in destroying the old industrial structure. After the fall of the Berlin Wall, most EE and other former Soviet economies saw deep dives in their growth rates and in industry as well as service sector value added. It took more than a decade for most EE countries to reach the growth and development levels of 1990 (see further Tiits et al, 2008). This is particularly so in the case of former Soviet republics. According the World Bank's (2006) calculations, the recession many former Soviet republics (e.g., Ukraine) experienced during 1990s, and are still experiencing, is worse than the Great Depression in the USA and the World War II in Western Europe (in both cases, recovery was considerably quicker).

This cognitive dissonance between promise of reforms and actual developments was caused by one of the most striking features of post-Soviet development in the 1990s: the rapid primitivization of industrial enterprises or even the outright destruction of many previously well-known and successful companies. This happened because of the way Soviet industrial companies and the industry in general was built up and ran in a complex web of planning and competition. (Radosevic 1998) A sudden opening of the markets and abolition of capital controls made these industrial companies extremely vulnerable. The partially extreme vertical integration that was the norm in such companies meant that if one part of the value chain ran into problems due to the rapid liberalization, it easily brought down the entire chain or complex. However, foreign companies seeking to privatize plants were almost always interested in only part of the value-chain (a specific production plant, infrastructure or location) and thus privatization turned into publicly led attrition of companies and jobs (see Frost and Weinstein, 1998; Young, 1994).

Such a drastic change made it relatively easy to actually *replace* Soviet industry: with the macroeconomic stability and liberalization of markets, followed by a rapid drop in wages, many former Soviet economies became increasingly attractive as privatization targets and outsourcing of production. Indeed, one of the most fundamental characteristics of EE industry (and services) since 1990 has been that the majority of companies have engaged in process innovation (e.g., in the form of acquisition of new machinery and mastery of production capabilities) in seeking to become more and more cost-effective in the new market place. (Tiits et al, 2008)

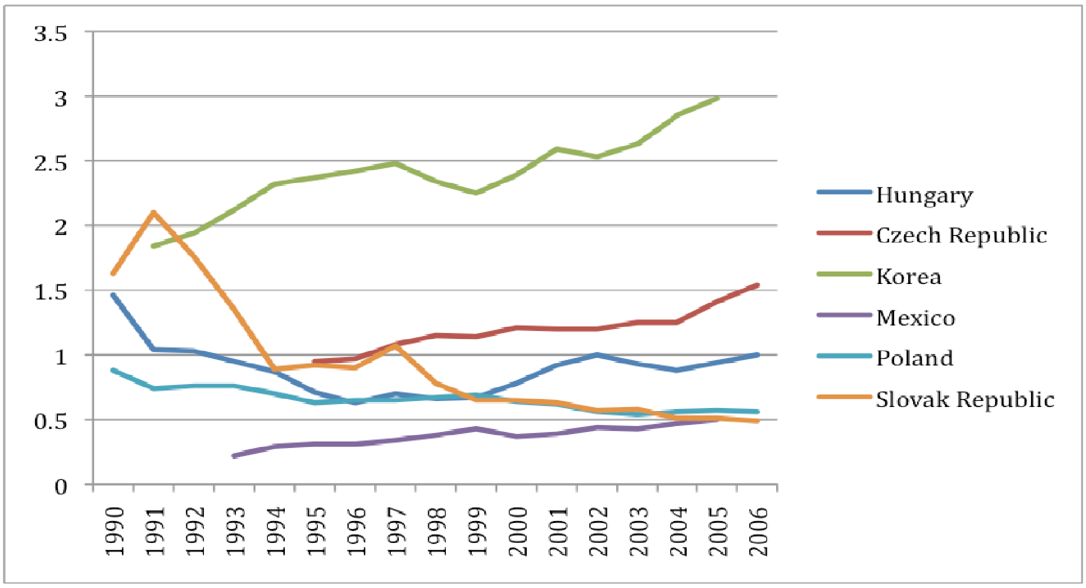
Perversely mirroring the above-described cluster-like characteristic of Soviet industrial activities, the Soviet R&D system was based on similar vertical integration of R&D into specialized institutions: '*Under socialism, most technical change was pushed from one institutional sector … which was essentially a grouping of R&D institutes and other related activities … This sector involved in activities far beyond R&D including design, engineering and often trouble-shooting activities*.' (Radosevic, 1999, 282) These institutions were usually also the originators and carriers of patents and forms of intellectual property rights. (Ibid., 285) This means that the Soviet-style R&D system had very low level of company in house R&D. (Radosevic, 1998, 80-81) Industrial conglomerates were effectively cut off from various potential learning and feedback loops; production and actual innovation (in particular in form of new products and processes) took place in different institutions, both however highly concentrated and integrated. Thus, in general the system was highly linear and supply based.

The once complex engineering, designing or similar tasks very rapidly replaced by significantly more simpler commodified support activities as many companies were wiped out, privatized or restructured. The former R&D institutes could have played key role in bridging academic research with industry needs as they were essentially the only existing link between the two. With the collapse of the institutes system, the link between academy-industry became, as Radosevic suspected in 1998, the weakest link in the EE R&D system. (1998, 90) Indeed, in '*conditions of high uncertainty and prolonged privatization, the intangible assets and know-how of industrial institutes, primarily embodied in R&D groups, probably erodes much faster than production skills in industry*.' (1998, 100)

Massive onslaught of FDI, in particular since the second half of 1990s and privatization of enterprises gave foreign enterprises key role in industrial restructuring and innovation. This, in turn, only reinforced severing of linkages between former R&D institutes and enterprise sector. (See also Radosevic, 1999, 297)

In particular when compared to East Asia's developments over the same period, EE transition in 1990s is in many ways a lost decade in terms of basic R&D indicators. In Figures 1-4, South Korea is used as a proxy for East Asian countries and Mexico for Latin America. The Figures show that EE countries converge with Latin American trends and not with East Asian ones.

Figure 1. General Expenditure on Research and Development as % of GDP, 1990-2006.

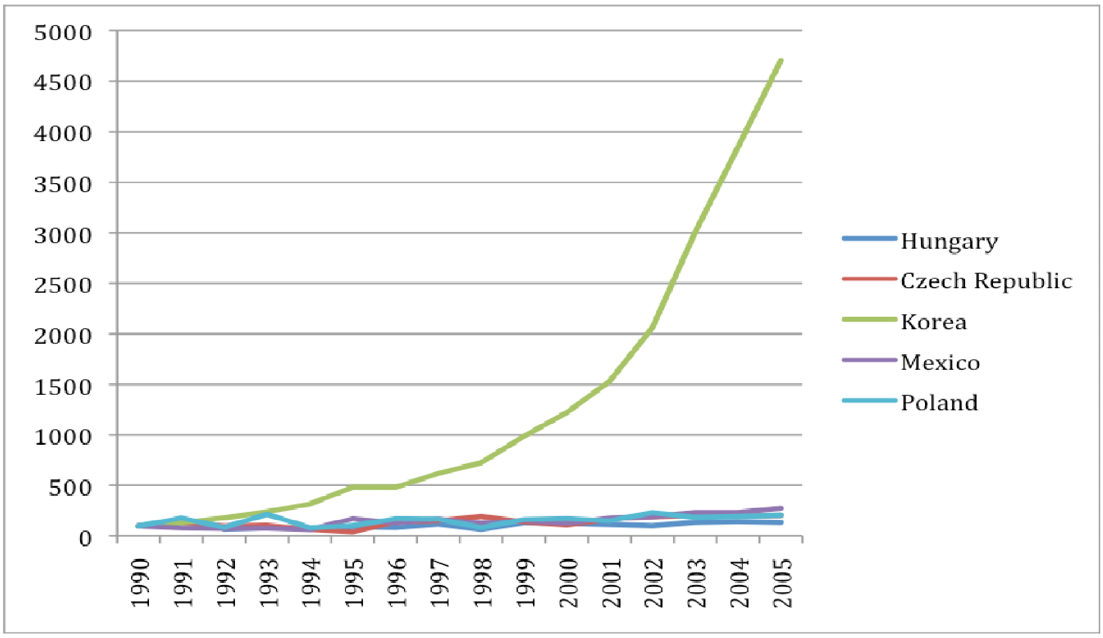


Source: OECD database.

The decrease in GERD from 1990 onwards until the end of the decade coincides, as we will show below, with big divide in EE innovation policies. With the beginning of the accession negotiations and increasing funding from the EU, EE countries' investments into R&D start to increase while the preceding decades mirrors the ideas of Washington Consensus policies that market initiatives (also in form of R&D investments) are more important and efficient than public sector intervention.

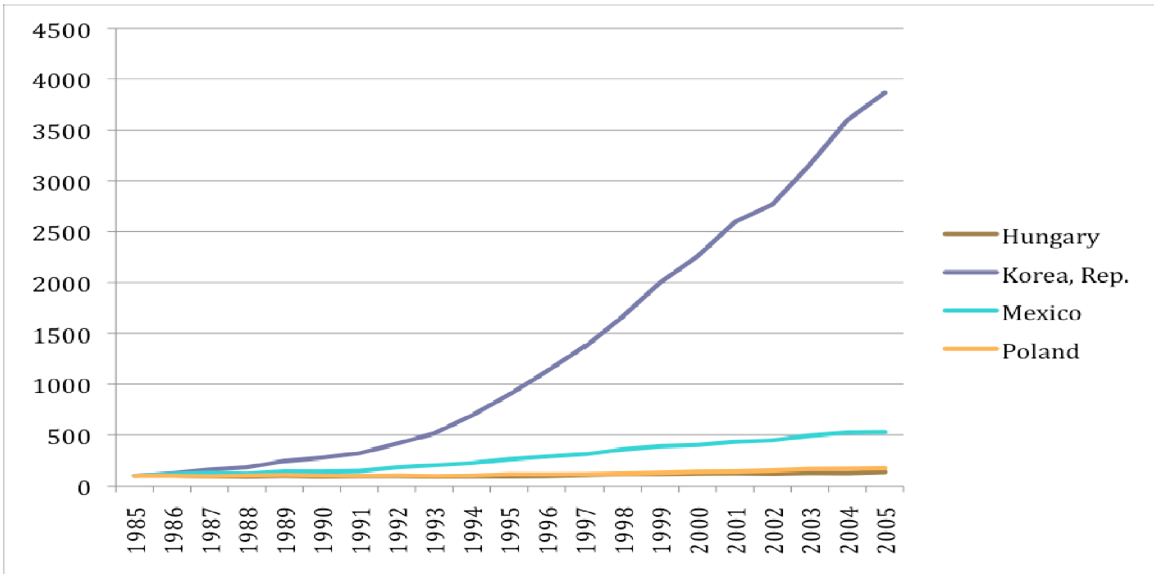
Figures 2 and 3 indicate very similar tendencies in patent applications and scientific publications in EE compared to East Asia and Latin America. While EE and Latin America are more or less flat-lining since 1990 or 1985 respectively, South Korea development is qualitatively highly different.

Figure 2. Patent application at European, US and Japanese patent offices, 1990-2005; 1990=100.



Source: OECD database.

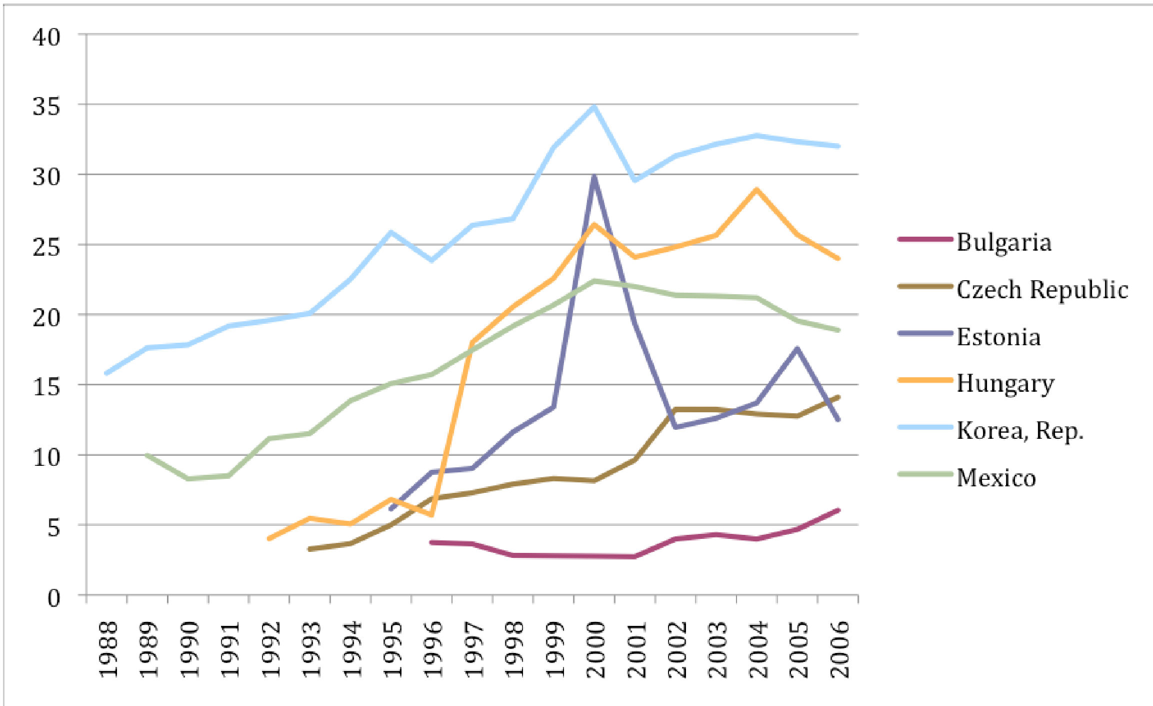
Figure 3. Scientific and technical articles, 1985-2005; 1985=100.



Source: World Bank WDI Online database.

Against this background the significance of rapid increase in high technology exports in EE countries becomes more clear (Figure 4). In high technology exports EE and Latin America are clearly following the same path as East Asian economies.

Figure 4. High technology exports as % of all manufactured exports, 1988-2006.



Source: World Bank WDI Online database.

Yet, dissonance between disintegrating R&D system, much slower catching up pace and rapidly growing high tech exports is perhaps the best indicator how importantly the change in the global production networks and in particular the rise of outsourcing production changed the perception of what is happening in EE countries. While exports indicate high growth in high technology areas, all other indicators show that this is largely an illusion based on deception created by outsourcing. What is statistically captured as high technology product may in reality be very different in nature: it can be touch screens for iPhones or it can be assembled mobile phones for any brand mobile producer. Both show up as high technology statistics, yet the former is a product at the beginning of its life cycle and the latter has clearly reached maturity. Indeed, when iPhone was introduced in 2007, Balda AG was the only company in the world able to produce high number of innovative touch displays used by Apple in iPhones. (Business Week, 2007) This is manifestly not the case in mobile phone assembly as such. Thus, even if high technology exports have been growing in developing countries such as EE, this does not mean that we deal with similarly dynamic sectors with significant increasing returns. (See also Krugman, 2008a) However, this deceptive picture created an image of EE countries as quickly catching up to developed countries and also that this catching up is based on high-tech exports. Consequently, the focus of innovation policies should be to intensify R&D content of exports. This is precisely what the EU set out to do in 2000s.

Thus, we can sum up the key features of EE innovation systems before the accession into the EU as follows:

- Privatization programs and other measures to attract foreign direct investments;
- Emphasis on macro-economic stability;
- Erosion and partial disintegration of the previous Soviet R&D system;
- Prevalence of macro-economic policy skills;

- Market demand as key force of restructuring and reform of innovation system.

The development of innovation policy capacities can be viewed in following terms:

- Relatively strong but peculiar state capacity as WC inspired policies offered legitimacy to new initiatives and policies;
- This was accompanied by weak to non-existent policy capacity development; EE countries act as policy takers and adopt massively from WC toolbox;
- Policy networking, coordination and cooperation were almost completely ignored;
- Policy capacity and administrative capacity development substituted by market reforms as market demand seen as key driver of changes in industry and innovation system.

Europeanization of innovation policy in EE since 1998[12]

While EU's importance for EE countries economic policies was visible already during early 1990s, the change that increased EU's impact considerably was the beginning of accession talks with most EE countries in 1998 and later. Indeed, Havlik et al. (2001) argue that the adoption of the EU's *acquis communautaire* has had a much stronger impact on the modernization of EE industry than official (often rudimentary) innovation policy during 1990s. The introduction of new regulation (usually with significantly higher safety, health and other standards) meant that EE industry "*was forced to choose whether to modernize their products and production facilities rather drastically, to subject themselves to mergers with bigger players with greater economies of scale, or to close down altogether*". (See Tiits et al 2008, 76-77) However, while harmonization with European standards is a distinct driver of changes in the private sector and also in legal infrastructure, it is also important to note that such harmonization made outsourcing and relocation of production much easier. In essence, on the one hand, the harmonization process was a continuation of restructuring processes that started during the previous period and were even significantly enforced. On the other hand, through so-called pre-structural funding and its management, many EE countries started to develop first strategic documents and policies related to innovation and R&D proper.

However, similarly to WC-inspired reforms in 1990s, harmonization process was seen largely as a further legitimization of EE's path. Thus, the end itself – accession to the EU – became much more important than what and how was being harmonized. Due to considerable self-imposed time pressure – harmonizing the legal infrastructure and preparing for accession in 6 years – meant that adoption of EU's legal infrastructure was done hastily and without much attention to local context. (PHARE Consolidated Summary Report, 2004; PHARE Consolidated Summary Report, 2007; see also Schimmelfennig & Sedelmeier, 2004; Goetz, 2001).

There were two main vehicles of harmonization: PHARE funding mechanism and later pre-structural funding. PHARE was launched in 1989 as EU's financial instrument to assist the EE countries (initially only Hungary and Poland) in their political and economic transition from a centralised communist system to a decentralised liberal democratic system. In its initial phase, PHARE remained a project-based financial assistance scheme: it paid for inputs, rather than for results in terms of effective adoption and implementation of the *Acquis*. (Martens, 2001: 37; Grabbe, 2006: 80-81) As PHARE was reformed profoundly during 1990s, also the grasp of the EU became stronger: 1) PHARE was expanded to additional 11

[12] This sub-section builds on Kattel, Reinert and Suurna, 2009.

countries eligible for support, and 2) PHARE's goal as the EU's main financial instrument for support changed considerably: away from transition issues and economic restructuring towards support of the accession process. (Martens, 2000; Martens, 2001; Bailey and Propris, 2004)

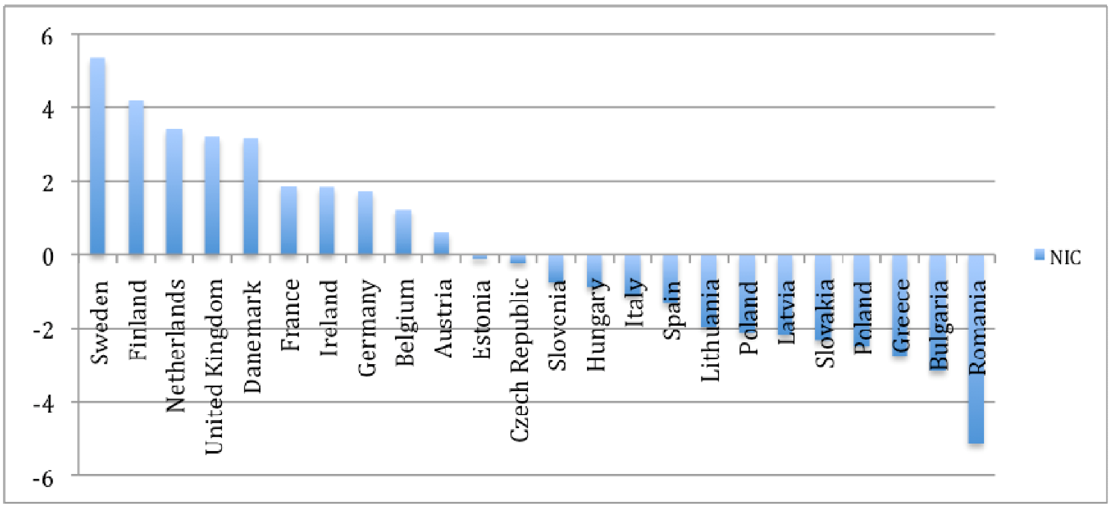
In the late 1990s, due to the progressive decentralization of the PHARE management structures as well as EU requirement for creation of regional and local institutions to administer the EU funds after the accession, a system of implementation agencies/administrative agents linked to the National Funds was created and pursued in EE (EC Regulation 1266/99; Commission Decision on the Review of the PHARE Guidelines for the period 2000-2006; Grabbe, 2006: 82). This marks the first step in EE towards managing economic policy, and thus innovation and industrial restructuring in a distinctly different manner from the previous period where the free market and external forces were seen as key drivers of change. However, it also important to see that these newly established agencies are mostly for managing external funding, policy creation and respective capacity building plays almost no role in these agencies. The compartmentalized and structured nature of EU support (PHARE Consolidated Summary Report, 2007) on the one hand, and from the 1990s inherited lack of tradition of partnership and inter-institutional coordination and cooperation between administrative levels on the other hand, meant that most positive effects of such agencies were not reaped and that they created in some cases more difficulties and problems than they solved (ESPON, 2005).

In sum, in many ways the harmonization with the EU rules is a period where policies supported the restructuring of the industry that began in 1990s under the Washington Consensus policies; on the other hand, during this period EU's influence on funding and administrative schemes brought creation of novel governance structures that play up to today key part in innovation policy in EE. Therefore, we can see this shift as a continuation of development of the WC-based state capacity that is largely equated with or seen as sufficient for policy capacity, and supplemented with managerial attention to administrative capacity.

However, if we look at what Radosevic calls '*national innovation capacities'* then these were by 2000 clearly underdeveloped in all EE countries compared to the 'old' member states. (Figure 5; Radosevic 2004)

Figure 5. National Innovation Capacity (NIC) index for EU member states, 2000.[13]

[13] The index is built from 4 sub-indexes that are in turn based on following data (in parenthesis): Absorptive capacity (Expenditures in education in % of GDP; S&E graduates (% 20–29 population); Population with 3rd level education; Participation in life-long learning; Employment medium/high-tech manufacturing; Employment high-tech services); R&D supply (Public R&D expenditures (% GDP); Business R&D expenditures (% GDP); R&D personnel per labour; EPO high-tech patents; USPTO high-tech patens; Resident patents per capita); Diffusion (Training enterprises as % of all enterprises; CVT in % of labour costs of all enterprises; ISO 9000 certifications per per capita; Internet users per 10,000 inhabitants; PC per 100 inhabitants; ICT expenditures (% GDP); Demand (Stock market capitalization in % GDP; Domestic credit provided by banking sector; Share of FDI in GDP; Share of trade in GDP; Index of patent rights; Registered unemployment). (Radosevic 2004)



Source: Based on Radosevic 2004.

Thus, the disintegration of the R&D system that began with the transition was still in full force during the harmonization period. And while it can be argued that by 2000, the EE economies and in particular their innovation capacities grouped these countries into two groups of stronger and weaker performers (Radosevic 2004: 660), most EE economies start to recover from the transition losses by 2000. However, in particular with increasing flows of FDI into EE and growing high technology exports, the recovering was interpreted as imminent catching up or convergence with the 'old' Europe. This misconception became the key driver of innovation policies in EE from 2004 onwards.

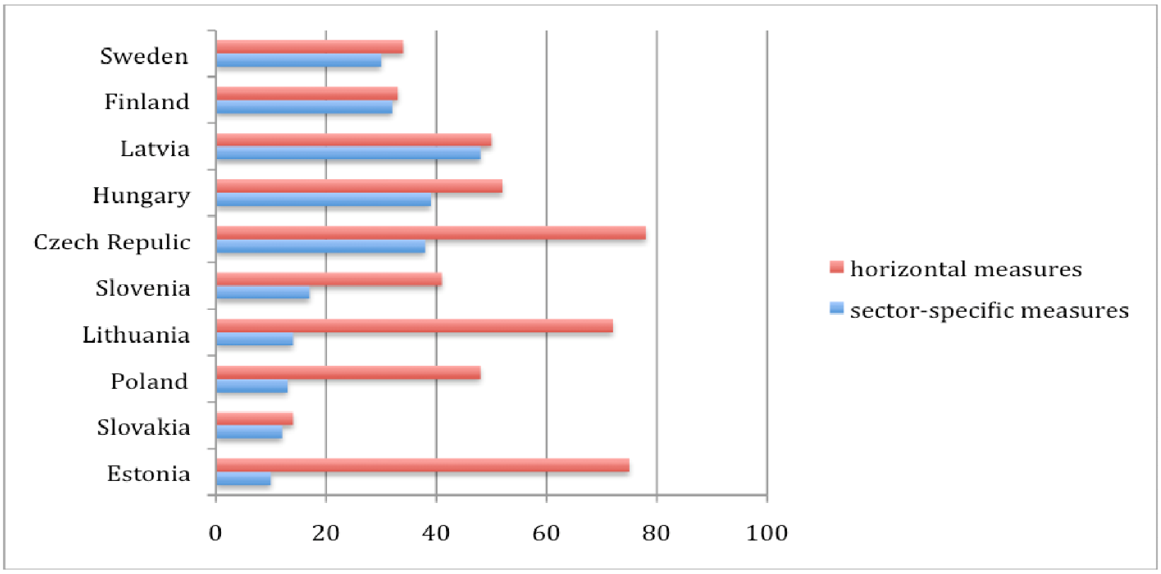
While harmonization with the EU legal infrastructure was important both in terms of actual changes it brought to industry and in terms of policy implementation/administrative agencies that were created to manage EU's financial help, the key changes in innovation policy proper came with EU structural funding[14] that started in 2004 and is set to continue at least until 2013. Indeed, as we will see below, the EU structural funding significantly changed both the policy content and implementation. However, as we will also see below, key problems that emerged during the harmonization period (low networking, weak coordination and significant cooperation problems) have been in fact deepened during the current period.

The key content for many innovation policy initiatives in EE emerging with after the accession was the underlying assumption that similarly to 'old' European countries, also the new members need to overcome the so-called '*European paradox*' (good basic research, low commercialization of the research results).[15] This is mostly due to miscued policy transfer from the EU to the member states. (See also INNO-Policy TrendChart Country Reports 2006 and 2007) Accordingly, innovation and R&D policies emerging in EE in mid 2000s were rife with linear understanding of innovation. Innovation is seen as something close to science and invention, and that there is a more or less linear correspondence between scientific discovery and high innovation performance; and that innovations behave like Nokia's mobile phones and thus search for the latter became the holy grail of EE innovation policy. Thus, EE innovation policies emerging in early and mid 2000s tend to concentrate on high technology sectors, on commercializing university research, technology parks for start-ups and similar

[14] For a general overview, see the EU's official homepage for structural funding, http://ec.europa.eu/regional_policy/funds/prord/sf_en.htm.
[15] An excellent discussion of the paradox is Dosi, Llerena and Labini 2005.

efforts. (Radosevic 2002, 355; Radosevic & Reid, 2006, 297; also INNO-Policy TrendChart Country Reports 2006 and 2007 for comprehensive overviews of EE countries' policies and challenges) In contents, overwhelming number of policy measures concentrate upon innovation programmes and technology platforms. (Reid and Peter, 2008) At the same time, the EE emerging innovation policies are characterized by their horizontal nature: policy measures typically do not specify sectors but are rather open too all sectors. (See Figure 6) Arguably, this has to do with they way EE policy makers understood EU state aid regulations (Reid and Peter, 2008). We argue that this has to do with both general neo-liberal outlook inherited from the 1990s (i.e., market demand is seen as key driver for R&D system) carried by most EE policy makers by early 2000s and also their particular skills that concentrated into macro-economic area. (See also Drahokoupil, 2007)

Figure 6. Innovation policy measures in EE, sector-specific measures vs. horizontal measures.[16]



Source: Based on Reid and Peter 2008.

Figure 6 also shows that EE countries have typically significantly more innovation policy measures than EU15 (especially if deflated by the size of respective economies). This can be interpreted as growing fragmentation of the policy arena between multitude of measures and implementation/administrative agencies.

In addition, as majority of EE measures are financed through EU structural funds, these instruments are mostly competition and project based. These aspects – project based implementation, multitude of horizontal measures – point to high fragmentation of the entire innovation policy field as well as to lack of policy priorities or the ability to set the latter. It is also evidence of the strongly market-driven understanding of innovation that is at odds with underlying assumption that innovation policies need to alleviate the 'European paradox'. That is, typical EE innovation policy measure aims to commercialize a certain R&D result, typically in an high-tech area, but the result and thus the initiative has to come from the market. This, however, has scarcely any justifications in reality: first, EE R&D systems and their performance disintegrated heavily during 1990s and fell noticeably behind East Asia;

[16] Sector-specific are policy instruments that deal with one sector (e.g. biotechnology) only; horizontal measures are allocated to multiple sectors or do not specify any sector at all. See for details Reid and Peter 2008.

second, this was complemented by the strong specialization into low-end of various value-chains meaning that the demand for R&D and skills remain relatively low.

In terms of implementation, the trend initiated during the harmonization period through creation of financial and management agencies has been intensified with the structural funds. (See INNO-Policy TrendChart Country Reports 2006 and 2007 for an overview) It is fair to say that the problems with these agencies that started during the harmonization period are partially deepened since 2004. Indeed, it can be argued that most problems summarized above in EE innovation policies, go in one way or other back to the institutional framework of agencies. Almost all EE innovation policy implementation problems go back to very weak and disorganised actors, coordination problems are rampant in policy design and implementation (see also Radosevic 2002, 355). On the one hand, there is a clear separation of policy responsibility between education/science and innovation/industry on the ministerial level and its delivery system (Nauwelaers and Reid, 2002, 365; also see INNO-Policy TrendChart Country Reports 2006 and 2007). On the other hand, this kind of fragmented policy-making system has in its turn resulted in the lack of inter-linking and cooperation between different innovation-related activities and actors such as research organisations, government and industry (see INNO-Policy TrendChart Country Reports 2006 and 2007).

While the creation and role of innovation policy agencies is in very positive terms praised by the official European Innovation Progress Report (2006, 65), we argue that precisely this agencification is at the root of many EE innovation policy problems. But the problem as such are not so much problems of agencification recognised in the mainstream research in the field (Pollitt et al., 2004; Pollitt, 2005; Christensen and Laegerid, 2005 and 2006; Verhoest and Bouckaert, 2005). We argue that the agencification process has not only brought about autonomy, coordination, regulation and control problems between ministries and agents. More importantly, because agencification emerged in a context of market-forces-driven policy framework, the problem is firstly policy-related and only thereafter managerial. What do we mean is that the no-policy period of innovation policy was based on lacking policy capacity in innovation policy and the following period has largely neglected the issue of policy capacity and mainly concentrated upon developing administrative capacity. Therefore, even if administrative capacity is increased, contextual policy capacity as such has been neglected, or if looked outside the borders of the WC-based state capacity limits, even decreased.

Thus, due to the emphasis on efficiency, agencification based innovation policy implementation model favours outsourcing of programme management and is generally highly market friendly as signals from the market are believed to be best policy guide (see European Innovation Progress Report, 2006, 65-66). However, many EE countries have seen their economies massively restructured during the 1990s that resulted, as we saw above, in economic structure oriented towards outsourcing and low value added activities or sectors where networking and linkages are naturally very low. Indeed, agencification in these kinds of circumstances does not foster networking practices but rather may cause severe problems in policy design and implementation as agencies are by definition at arm’s length to government offices. Such tendencies tend to cause instability in a system as a side effect (see here case studies about the old member states by Pollitt et al., 2004). That is why the issue of agencification and in particular in innovation policy has been heavily raised by OECD in one of its latest reports (2005).

Thus, to sum up, while with the introduction of structural funds and through strong influence from the European Commission, EE innovation policies are significantly changing since mid-2000s, there are also serious problems that emerged with this trend. First, as we argued, the emerging innovation policies tend to be based on rather linear understanding of innovation (from lab to market) whereas most EE countries are specialized into low end production activities virtually void of any research and with low demand for high skills; in addition, R&D system as such has been under constant pressure since the transition and its performance has been clearly lacking. Thus, EE innovation policies tend solve problems not existing in the respective economies and in this context the problem of misunderstanding of the Soviet R&D and industry in 1990s is replicated to the policy-making model of the 2000s.

Second, through creation of innovation policy implementation/administrative agencies (for structural funding and beyond), the innovation policy landscape is fragmented and previous problems in policy creation (lack of strategic skills and capacity, networking and coordination non-existent) and implementation (competitive grant-based programming that relies on market signals without being able to follow set priorities and goals) are only deepened. One can argue that the innovation policies emerging in the process of Europeanization are based on the assumption that policy design and implementation follow public-private partnership model, yet in reality EE countries singularly lack the ability to implement such a model and what is more, actual developments in industry seem to suggest that such a model is particularly ill-fitted to EE context. Therefore, the 2000s instead of emphasising policy capacity as the centre of the innovation policy-making has limited itself to policy transfer with attention to mainly administrative capacity.

In addition, there is an essential problem that EE economic and innovation policy making ignored throughout 1990s and 2000s in devising policies to deliver economic restructuring and growth. Stable macro-economic environment envisioned to enable FDI inflow – in which EE were indeed spectacularly successful – also encouraged massive private foreign lending (mostly through foreign banks settling into EE markets that borrowed in foreign currency). This drove in particular since the mid 2000s consumption and real-estate booms in all EE countries. (See, e.g., Fitch, 2007a, 2007b and 2007c; see also Krugman, 2008b in this context) Indeed, most EE countries are highly dependent on foreign investments and private borrowing and thus they were caught in a macroeconomic dead end with appreciating exchange rates, negative current account balances and growing private indebtedness. This led to increased financial fragility through deteriorating balance of payments account and left EE countries starving for new foreign lending and investments that however stopped in the aftermath of the global financial meltdown in 2008. In essence, EE industrial restructuring and innovation model became a giant Ponzi scheme. As global, and especially inner-EU demand slows, so do EE exports and by early 2009 most EE currencies have seen massive drops in their value and foreign investors seem to flee en masse. (See also Fitch, 2009) At the same time, in particular Central European countries such as Slovakia, Hungary and Czech Republic have achieved high levels of integration with the EU: merchandising exports in worth of up to 60% of GDP goes in these countries to the EU. (IMF DOTS database) Debt deflation looks very likely. Fragmented innovation policy scene, inherited from the accession into the EU, paralyses EE countries into inaction as there seems to be no serious policy evaluation capacity present and coordination problems prevent quick reaction to radically changed environment.

Thus, we can sum up the influence of the EU upon EE innovation systems as follows:

- Much more active role of the state in structural and innovation policies;

- Policies concentrate on commercialization and other R&D aspects; high technology bias certified;
- Increasing fragmentation of policy arena through agencies that results in strong coordination problems;
- Growing mismatch between R&D system, high-tech biased innovation policy and actual industry needs.

The development of innovation policy capacities can be viewed in following terms:

- Relatively strong but continuingly peculiar state capacity development as EU inspired policies offer legitimacy to new initiatives and policies;
- Growth of implementation agencies is seemingly enhancing administrative capacity; however, this happens at the expense of ever-weakening policy capacity to analyse domestic situation and generate policy responses and in fact weakened administrative capacity as well;
- Policy networking, coordination and cooperation were almost completely ignored;
- Policy capacity and administrative capacity development substitute by market reforms as market demand seen as key driver of changes in industry and innovation system.

To sum up, we can draw a table that depicts how innovation policy, capacity and their effects evolved in the last two decades in EE economies (Table 4). This table is a snapshot of what we mean with copying paradox: EE countries adopt increasingly policies that imitate the developed country innovation policies, yet this very process seems to hollow out local policy and administrative capacity creation and development.

Table 4. Evolution of innovation policy, capacity and effects in EE, 1990-2009.

	Washington Consensus	**Europeanization**
Key innovation policy characteristics	No policy policy; FDI and increased competition; private sector main R&D provider; economic restructuring as source of innovation.	Overcoming 'European paradox': commercialize research; horizontal and demand oriented R&D policies.
Key capacity characteristics	- Relatively strong state capacity as WC inspired policies offered legitimacy to new initiatives and policies; - This was accompanied by weak to non-existent policy capacity development; EE countries act as policy takers and adopt massively from WC toolbox; - Policy networking, coordination and cooperation were almost completely ignored; - Policy capacity and administrative capacity development substituted by market reforms - market demand seen as key driver of changes in industry and innovation system.	- Relatively strong state capacity development as EU inspired policies offer legitimacy to new initiatives and policies; - Growth of implementation agencies is seemingly enhancing administrative capacity; however, this happens at the expense of ever-weakening policy capacity to analyse domestic situation and generate policy responses and in fact weakened administrative capacity as well; - Policy networking, coordination and cooperation were almost completely ignored; - Policy capacity and administrative capacity development substitute by market reforms as market demand seen as key driver of changes in industry and innovation system.

Key effects of policy	- Productivity increases through slashing liabilities and employment; - Replacement of products and machinery; - Foreign ownership provides key access to management and marketing know-how and production networks; - Modularity and outsourcing in production.	- Contract work for European companies; - Process innovations prevail through cost-cutting initiatives, new machinery; - Marketing and brand creation for home markets in certain industries (media, food);

Thus, it can be argued that there are strong path dependencies how innovation policy evolved in EE countries. In the next section we argue that these path dependencies originate from the particular timing when EE countries re-entered global capitalism.

4. Discourse analysis – why the 'copying paradox' has persisted?

The previous section of our paper was mainly dealing with the *effects level* analysis of EE innovation policy and its development. In this section we will show how the EE countries entered the global capitalism at a distinct time in history where *process level* debate about innovation, development, catching-up and policies reflected a rather particular, even partly ideological, movement that was inevitably proposed and taken over by the EE policy communities. To follow the line of argumentation of our paper, we will concentrate on the parallel trajectories of innovation policy (IP) and public policy and administration (PPA) discourses from the transition/developing country perspective.

From our preceding analysis, we can bring out three claims that we have explicitly or implicitly made about the development of the IP trajectory in EE:
- The 1990s period of innovation policy was inevitably a no-policy policy period because of the role of the WC policies;
- Instead of emphasis on developing policy capacity for a transition state, IP and PPA discourses combined resulted in over-emphasis on administrative reforms and development that was perceived to positively affect the emergence of policy capacity;
- Despite the peculiar but noticeable capacity (and legitimacy) of the state in IP and development of administrative capacity, the expected policy outcomes have not emerged, and de-contextualised policy-making through policy transfer has remained the dominant policy mode.

We will now turn to discourse-based analysis to explain why these processes have been an inevitable result stemming from the 1990s WC based policies and understanding of the state capacity. Note that our explanations and arguments here are developed for the context of IP development and we look at these questions from the context of IP. Therefore, our claims are contextual.

Why no policy innovation policy in the 1990s, or, why 'confusion in diffusion'?

In our previous sections we have argued that the EE countries have introduced innovation policy proper only during the EU harmonization and accession periods and the 1990s had largely been the domain of no-policy innovation policy. This section argues that in fact the no-policy policy period together with the WC macroeconomic policy model can be viewed as a market forces dependent approach to innovation, catching-up and industrial development, and therefore the lack of innovation (and in some cases industrial) policy during the 1990s in

EE has been a conscious or inevitable result of the diffusion of the macro-economic stabilization policy to the domain of innovation policy. Therefore, we call the period 'confusion in diffusion'.

Briefly, it can all be linked universal acceptance of the WC policies as the mode for achieving macro-economic stabilization.[17] Yet, as has been argued in this paper and elsewhere (Tiits et. al., 2008; Török, 2007) the EE countries faced a two level economic policy challenge: macro-economic stabilization and industrial restructuring on a structural scale. As the WC policies where solely concerned with the former, the EE countries faced a policy lacuna due to the lack of a model that would accommodate both the needs of the latter challenge and be in line with the WC stabilisation policies. The mainstream macro-economic stabilisation policies of the time were the WC policies. We will later shortly indicate that at the time there was no mainstream approach or concept of industrial or innovation policy for developing countries, at least in the policy-making discourse of the time.

Thus, the common vision of the reformers (both local and international) was following a rather clear idea that past Soviet legacies (both in policy and in policy-making) where largely detrimental and inefficient at achieving fundamental socio-economic turnarounds (classic path-dependent presumptions). Therefore, it can be said that the EE started with a clear understanding of what was not desirable (e.g., strong role of the past communist state institutions) and though we have argued that during that period relatively strong state capacity emerged, it was strongly constrained by the WC. This made it inevitably obvious for the industrial restructuring to be based on a similar mode of policy thinking, i.e. relying on the market forces to sort-out the industrial challenges. This is what we call *policy diffusion*: the spread of the WC policy that is firstly macroeconomic stabilisation policy also to IP discourse.

We believe that the uniqueness of the period, more precisely the lack of explicit innovation policy discourse for the EE countries comes from the particular moment of time in the development of the 'mainstream' industrial and innovation policy discourses that could have been used as a basis of more conscious policy transfer or policy modelling for the EE countries.

We can see that at end of the 1980s and beginning of the 1990s (see for detailed historical account Soete, 2007; for analysis of concept/discourse development, Sharif, 2006) the international/Western discourse was facing a rather significant shift in understanding and approaching technological and industrial development. Since the end of the WWII, the cornerstone of the economic policy in Europe had been *industrial policy* (sectoral policy with discernible strategic policy interventions in specific sectors and technologies, including also 'picking winners'). This has gradually been developing into *innovation policy*. During the 1970s and 1980s there was a shift in emphasis of industrial policy from low-tech to high-tech industries. This has been followed by the emergence and development of innovation policy that has moved towards the '*systems of innovation'* approach and offering more systematic policy views by looking together at the innovating firms and their external environment. Therefore, this kind of analysis highlights a path-dependent development of the policy discourse in more developed European countries.

[17] We have already discussed it in detail and argued that the relevance of the model has had a different impact in different regions of the EE (see section 3 and Drahokoupil, 2007), but we still argue that the core of the policy thinking and policy analysis had the WC ideas as its base.

Thus, the developed world itself was largely facing a huge challenge to rethink policies and models for economic growth and technological advance. At least part of it can be put on the account of techno-economic paradigm shift (see Perez, 2002; 2007) that brought about new policy challenges as modularity in production processes (e.g., possibilities for outsourcing etc.) changed the context of growth and development. Above, we have argued that the lack of attention to this issue at the developing context has been one of the main policy challenges in EE as well. Furthermore, the spread of the WC policies implied that it was against the idea of general discourse of the economic restructuring to consider industrial policy ('picking winners' requires considerable policy capacity) as a policy tool that could be taken from the past experience of the developed Western economies (see also, Radosevic, 2009).

The mid-1980s were witnessing an emergence of an alternative policy-model of organising and managing for technological development, the concept of '*national innovation systems'* (Freeman, 1987; Lundvall, 1992; Nelson, 1993) that quickly spread around the academic and policy discourse. System of innovation approaches, similar to other closely linked approaches – e.g., clusters (Porter, 1998, 2000) – are largely aimed at systemising the different factors relevant in the context of innovation. Yet, Sharif (2006) has given thorough account of the confusion and ambiguities around the emergence of the concept and its use in policy discourse. Furthermore, the approach was largely developed based on the experiences of mostly developed countries – e.g., Japan by Freeman (1987), US, Japan, Germany; Britain, Korea, Denmark, Sweden, Canada, Australia (Nelson, 1993). The concepts itself is largely relying on the Schumpeterian/evolutionary/institutional theories. These approaches are based on rather specific presumptions about the characteristics of firms and entrepreneurs (e.g., routines, search practices etc.) in the context of innovation and technological development that are presumed to differ considerably depending on the level of development (see for example, Nelson and Winter, 1982).

We have already argued above that the innovation policy measures of the EE have lacked the ability to tackle the core challenges of the systems of innovations. These challenges are largely issues that the developed countries had been dealing or accommodating with already through industrial policy and the innovation policy as such can be viewed as a redefinition of industrial policy through re-prioritization or shift in emphasis, but not a shift in understanding what the underlying causes of innovation are. Discussions over systems of innovation in the context of developing countries have only been a much more recent phenomenon (see Lundvall et al., 2009).

Thus, the emergence of the period of 'diffusion in confusion' can be explained from the point of innovation discourse through several factors:

- Transition process or catching-up of the EE countries was largely foreign-led, i.e. the ideas or 'best-practice' policy examples came from the Western countries;
- The general discourse of innovation and development was passing through a rather significant transformation and;
- This created a situation where on the one hand, the discourse was dealing extensively with the issues of innovation and innovation policy (as a next level after industrial policy), but it did not pay attention to the developing country challenges;
- The EE countries had a past experience with seemingly inefficient industrial policy because of weak state, policy and administrative capacity;
- The WC discourse offered a suitable context and therefore become a substitute for innovation policy.

Why over-emphasis on a distinct mode of administrative capacity?

We have argued above that the emergence of the attention to innovation policy proper in the end of the 1990s has been based on a much more conscious attention to issues of innovation and development, though still missing the point of the core challenges.

It can be stated that the beginning of the 1990s was rather similar for the EE countries from the perspective of the PPA discourse as well, i.e. similarly to economic policy, it was all about restructuring. The EE countries where facing a double challenge – to create basic institutions and to reform the state administration to free it from the 'shackles' of communist bureaucracy and past inefficiencies (Randma-Liiv, 2009; Agh, 2003; Veheijen, 2003). Therefore, the challenge could be interpreted as re-establishing a belief in the state, and increasing policy and administrative capacity. It all had to be done in the context of the international discourse development facing ideological and policy turmoil.

Pollitt (2002, 2001), while developing his convergence approach, has argued that much of the public administration debate has converged around the concept of '*new public management*' denoting a specific model of public administration based on private sector management principles (for more detailed accounts, start with Osborne and Gaebler, 1992 and move to Pollitt and Bouckaert, 2004 for a detailed overview of the literature and practice; for arguments on the narrow neo-liberal ideological background of this model, see Drechsler, 2005). The NPM movement has filled the public administration and policy arena with concepts such as privatisation, quasi-markets, performance management, specialisation, delegation, agencification, contracting-out etc. But this convergence around the concept of NPM has to be understood as a discursive or talk level convergence because there is a rather convincing lack of empirical evidence of the positive impact of the reforms.

Nevertheless, it has not been limited to the level of talk only, different countries have tried and succeeded or failed in introducing different concepts at different rates of speed and scope. These ambiguities and differences are largely the reason why there is only emerging empirical evidence of the scope of different administrative reforms being pursued and not comparative evidence of the results being achieved.[18] In essence, the success of reforms or administrative models can only be measured in relation to wider policy or even state goals, such as sustainable economic growth. In this context, the famous Evans and Rauch (1999) study arguing for the role of Weberian elements (career system and merit based recruitment) has not been proven wrong, especially as most of the NPM theorising and policy designs have been developed in the context of developed states, while their research has been done in the context of developing states.

Therefore, the last three decades of administrative development in Western democracies has been characterised by a theoretical and ideological battle between institutional, organisational and sociological theories and approaches that have highlighted the specificity of the public sphere and the theories from mainstream economics (public choice models etc.) that have argued against the specificity of the public sector (for classics see Osborne and Gaebler, 1992;

[18] In addition, the research in the context of European countries (Pollitt and Bouckaert, 2004; Drechsler, 2005) has limited the viability of concept of NPM to only Anglo-Saxon countries and offered a more European (contextually more suited to the European scene) model or approach – the *Neo-Weberian State* – that has a central emphasis on maintaining the Weberian-type policy capacity that can be only supplemented by increasing administrative capacity through private sector management techniques.

Mintzberg, 1996; for empirics, start again with Pollitt and Bouckaert, 2004). Because of the dominance of the neoclassical economics in the discussions of the content of economic policy (at least as prescribed for the EE countries), it has also been easier to legitimise (on the discursive level) administrative theories and approaches based on similar theoretical assumptions in the public administration and policy discourse – Reagan and Thatcher are highlighted as the most influential public persons developing the debates both in economic policy and public administration reforms (see, e.g., Williamson, 2000; Pollitt and Bouckaert, 2004). This argument has been explicitly pronounced also in the context of the EE countries, especially as it is line with both theoretical and ideological premises of the WC.

In principle, there can be a similar argument made from two sides. The WC economic policies were particularly market-friendly and argued that the EE governments should contract and give as much as possible for the markets forces to sort out. The NPM movement was based on the public choice school of taught that, on the one hand, prescribed policies that's content was based on the primacy of the market (e.g., limited role for the government in the spheres where market does function), and on the other hand, prescribed managerial principles based on the same private sector management techniques. Therefore, it is rather obvious that these discourses have the theoretical arguments to support each other's claims and to offer remedies for each other in policy-making and implementation.

In the innovation policy context, we have argued that the no-policy policy period was followed by rather explicit increase in the role of the government and the state, though as providing only incentives for the market forces to sort out policy challenges. We have also highlighted that the governmental interventions, as prescribed by the EU, where largely based on the idea of creating new 'legacy-free' administrative agents for implementing innovation policy. The core argument behind the idea can be seen so that the problem with current administrative structure was its path-dependent inefficiency (e.g., ministries were part of the old system) that could have been solved through agents independent both from past legacies and political intervention (for general theoretical argumentation of agencification, see for example Christensen and Laegreid, 2006; Pollitt et al., 2004). In essence, the ideal-type model was based on the presumption that increase of autonomy of the agents will be accompanied by the increase in control and regulation by the principals to sustain policy comprehensiveness and accountability.

Yet in the context of the EE, it can be argued that the NPM movement, and its concepts such as agencification, has largely been taken out of the context where the main challenge has been to first and for most to increase the efficiency of the public management system, to the context where the primary concerns has been to create or increase the effectiveness of the government and the state. In our analytical distinction, the issues and medicines for increasing *administrative capacity* have been largely equated to the issues and remedies for increasing *policy and state capacity*. But this can be seen as looking at fundamentally contradictory goals with the same glasses – managerial efficiency and effectiveness is about organising and managing resources necessary for policy implementation (in essence, cost-efficiency); policy efficiency and effectiveness is about creating and maintaining capacities necessary for designing proper policies (in essence, investments for future).

The critique of NPM has always included a portion of emphasis on the fact that even if increasing the managerial efficiency is achieved, it can be accompanied by loss of existing policy capacity or ability to create new policy capacities required in changing circumstances.[19]

Why innovation policy is still 'lost in transfer'?

We have argued that in the context of the EE countries and their innovation policy development, the period of 'confusion in diffusion' has been followed by an explicit emphasis on innovation policy that has been based on firstly, misunderstanding the problems of innovation in EE, and secondly, misinterpreting the policy problem as merely managerial issue. As the 1990s of the EE have been infused with the public choice based discourse both in terms of the content of innovation policy and context of innovation policy making and implementation, the influence of the EU in the end of the 1990s was largely based upon the same policy context: the EE countries had lacked conscious emphasis on developing policy analysis and policy development skills and because of lack of innovation policy proper, these capacities and skills had not had any incentive to emerge in process or unconsciously. Therefore, the conscious attempts at innovation policy development have been also foreign-led, more specifically based on the ideas and models proposed by the EU. Thus, the development of innovation policy for EE has largely been based on the discourse of the innovation policy that limits the due attention that has to be paid to the contextual characteristics of the EE. And these have been lost in the context of policy transfer.

The recent 'stock-taking' on innovation policy development by OECD (Box, 2009, 2) summarises the development of the innovation policy discourse as follows:

> *The stocktaking highlights that much work, both theoretical and empirical, has already been done to identify the policies, institutions and framework conditions that can provide the most effective means of supporting innovation. However, evaluation of specific government support policies and their impacts on innovation is generally sparse and there is a need for more and better evidence on the costs and benefits of government support for innovation.*

Therefore, the current discourse lacks evidence of the results convergence; that is, there is no clear-cut evidence of the best policy, even in the context of developed countries. As the same assessment further highlights (Box, 2009, 14-16) the systems of innovations approach provides a generalised model for assessing innovation policies in different systems. The policy mix to solve the challenges of the system has to be mostly context-dependent because '*there are major national differences in comparative and competitive advantages, implying potentially different patterns of response to similar policy instruments*'. Therefore, we can also conclude that despite discursive and formal decisional convergence in innovation police debates, we can not presume and also lack in-depth evidence that there is convergence in actions, i.e. that generic policy measures that seem to have similar labels in different countries carry identical content across contexts. Rather, there seems to be more weight to the argument that universalistic policy discourse and formal decisions are facing contextual feasibility and desirability challenges once implemented in specific systems, countries.

Therefore, we believe that herein lays the problem why the assessment of EE innovation policy mixes that we have discussed and elaborated in section 3 has emerged. Innovation policy proper arrived at the policy-making arena only in the end of the 1990s by which the WC based economic policy and NPM dominated administrative reform model (e.g.,

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[19] For a great theoretical and conceptual analysis in context of agencification and its impact on specialisation and coordination and the eternal dilemmas between these contrasting ideas, see Verhoest and Bouckaert, 2005.

increasing managerial efficiency before policy effectiveness had been created and then secured) had created a discernable path of state's role in economic development and policies that by most accounts misinterpreted the situation. For example, Tiits et al. (2008) have argued that in terms of policy impact in economic policy (e.g., increasing the competitiveness of the countries), the 1990s has been a "lost decade" because the catching-up effect presumed to take effect in the transition processes has not realised, and the CEE countries are actually falling behind the industrialised economies. Further, they argue (ibid.: 81) that EE '*countries mistook initial and continuing rapid growth for a response to their development policies. In reality, large parts of the success are attributable to two factors: techno-economic paradigm change and globalization with liberalization of markets*'.

Therefore, the innovation policy development since the late 1990s was based on the presumption that chosen policies and paths had been the cause of the success in terms of economic growth and that growth represented a proof of sustainable economic restructuring. This means that, although we could witness a considerable shift in the EE discourse over innovation policy (from no-policy policy to explicit public policy) it was still just an incremental change (or cyclical alternation) in the initial policy path because the problems of innovation where seen as merely market-failure problems that can be solved by 'non-too-interventionist' policy measures (horizontal innovation policy measures) and policy problems where seen more as administrative capacity problems than policy capacity challenges. This in our view and analysis has created a situation where innovation policy measures have been transferred to the EE countries without a comprehensive policy analysis capacity to truly assess the suitability and theoretical validity. In this context, policy analysis is mostly dealing with analysis of the administrative capacity for implementing ideal-type models designed from other context ('*feasibility studies'*) and not as much with analysis of the suitability and contextual applicability of the ideal-models ('*desirability studies'*). The issue of policy capacity has hardly been at the centre of discussions in the context of innovation policy development and implementation already since the beginning of the 1990s.

Thus, the 'lost in transfer' period can be summarised into several discernible developments:

- External economic forces created a misconception about the impact of chosen WC path on the economic restructuring and sustainability of growth;
- The emerging innovation policy proper represents only a partial shift within the larger WC trajectory of policy-making;
- International administrative reform discourse has limited the emphasis to administrative capacity and managerial efficiency, disregarding the interconnections with policy capacity;
- The resulting policy and administrative capacity is largely de-contextualised and therefore lacking ability for substantive policy analysis.

5. Conclusions

In our paper we have followed the development of the trajectory of the innovation policy in EE since the beginning of the 1990s and we have argued that it has been, since its emergence as a no-policy policy in the 1990s, a path-dependent process with changes that at first are seemingly fundamental (the changes in 2000s induced by the harmonization process and the EU policy models) are, if looked in more detail, representations of cycles/alternations within the limits set by the initial starting point and understanding of the policy challenge.

We have argued that within the innovation policy development we can witness misunderstandings or misconceptions both from the perspective of IP discourse and from the perspective of PPA discourse.

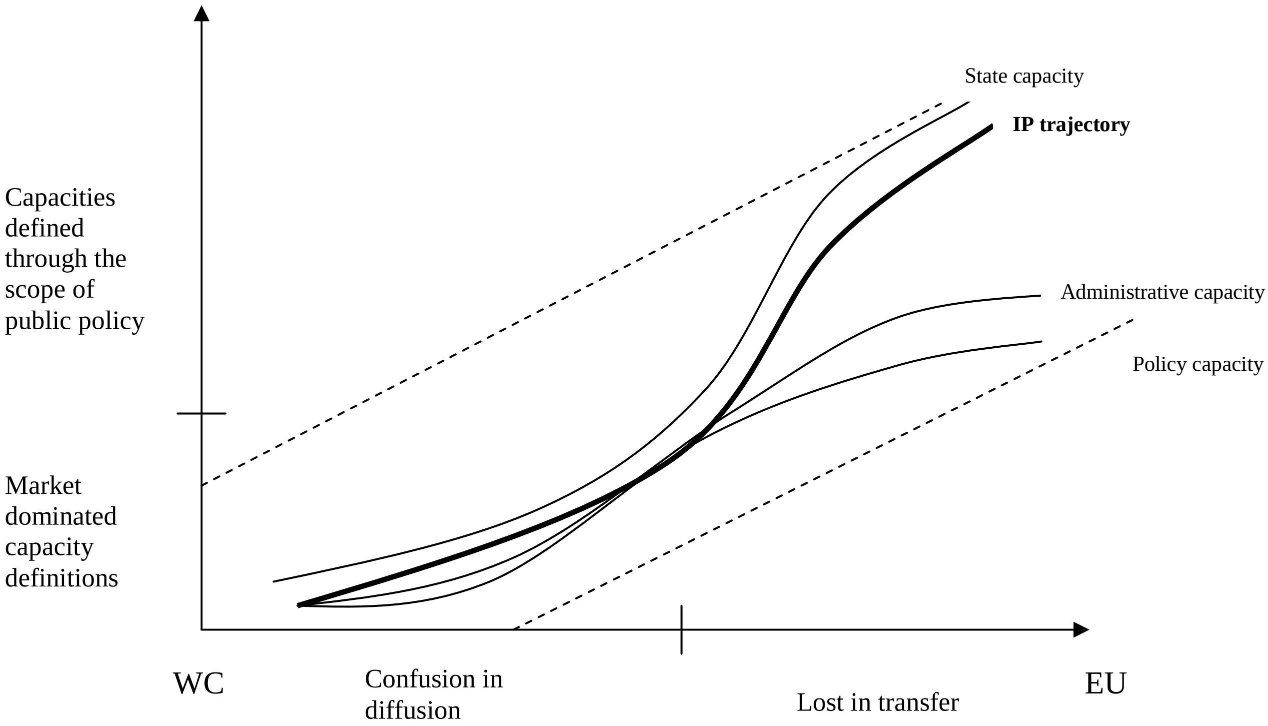
Based on the former, the initial mistake of the 1990s was to misunderstand the nature of Soviet R&D systems and industry – in the perspective of two decades and more this can be seen as the critical juncture that re-defined the role of the state in industrial and innovation policy from over-involvement of the Soviet era to explicitly market-led and -dominated policy models. We have argued that this was mainly caused by the peculiar state capacity definition and state legitimacy that was brought about by the wider WC policy toolbox and that diffused into the innovation policy arena. Later in the 2000s, the same mistake/misconception was redefined into the 'European paradox' that was followed by the policy-transfer from the EU toolbox.

Based on the latter discourse, by end of the no-policy policy that was triggered by the external forces such as the EU, the innovation policy problem was seen as an administrative capacity problem that was to be solved by administrative reform. Yet, we have shown that all of this has resulted in non-emergence of policy capacity that would seem to be pivotal for contextual analysis of feasible and desirable policies. To date, the feasibility and desirability of the role of public policies in innovation has been constrained by the initial WC ideas e.g., even if the EU toolbox, compared to the WC, has increased the legitimacy of state intervention in this policy area, it is still largely based on the primacy of the market-forces (policies are horizontal and implemented through market principles such as competition). Therefore, the changes of innovation policy in the end of the 1990s and 2000s, both in the content and context of innovation policy trajectories have largely been cycles or alternations in the initial policy mode.

This is summarized in Graph 1. The vertical axis reflects a continuum of definition of state capacity, e.g. *capacity defined through market forces* indicates that the market is a more effective decision tool over the content and context of policies; *capacity defined through the scope of the public policies* indicates the opposite or that the market-forces face significant challenges in creating optimum solutions and the state can either create additional incentives from the market-forces or act instead of the market forces. By definition, the latter would presume stronger and more developed policy and administrative capacity. The horizontal axis is essentially 'time' perspective from the beginning of the 1990s (WC) until 2000s (EU), but also reflective of the two analytical/ideal types of policies – the WC policies and the EU policies – and the description of the emergence of these policies (e.g. from *diffusion in confusion* to *lost in transfer*). The dotted diagonal lines indicate the *constraints of the policies created by the WC* – e.g., despite witnessing an increase in government/public policies, we can still argue that these policies (horizontal policy measures, for example) are still closer to market-based approaches as opposed to other more state-interventionist policies (setting sectoral preferences and measures etc.). In addition, the graph contains indicative lines of development of the innovation policy trajectory and respective capacities to graphically illustrate the contradictions in policy development.

Graph 1. The path-dependency of the innovation policy development trajectory in EE, within the limits of the WC created policy feasibility and desirability constraints, and the indicative impact on the emergence and development of different capacities.[20]

[20] The graph is inspired by Pollitt, 2008: 51-63.



Therefore, the EE countries have been largely moving towards de-contextualisation of policy making and have followed a trajectory of development that has made it increasingly difficult to firstly, realise the need for fundamental changes, and secondly, to have capacity to carry these changes through. Thus we can track the emergence of a peculiar mode of state capacity that paradoxically or actually characteristically for ex-Soviet countries over-estimates the power of market forces in the context of economic restructuring, technological development and innovation ('creative destruction') and creates what we call the 'copying paradox'.

Therefore, we are also witnessing a modest or even significantly decreasing policy capacity in these countries that does not seem to have been an issue of importance throughout the 1990s and 2000s. As a result, the only recognisable level of reform and development seems to be administrative capacity. But this has resulted in almost extreme complexity: fragmentation of policy measures and implementations means that are detrimental for any policy capacity emergence. Therefore, over the last two decades the EE countries have misinterpreted their problems, misread their development, and misunderstood the international policy arenas from where they are copying policy ideas. The innovation policy of the EE countries has been playing with the fire by constantly moving closer to locking itself into the worst possible policy modes – implementing 'wrong things' badly/, or even worse, implementing 'wrong things' well. Paradoxically, the 'wrong thing' may just be overestimation of the level of development and adoption of too complex policies. And this is precisely a problem of policy capacity.

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