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Please Close the Gap! New Development Models of CEE Economies?

Abstract

While East Central European economies have grown successfully since the mid-1990s, the economic catch-up processes has slowed down noticeably within the last few years. This can, at least in part, be explained by the recent problems in the development of higher economic capabilities, which are important to exempt these economies from their dependence on low wages. However, these problems are hitherto only partially understood and relevant insights are dispersed within various research strands. This makes our understanding of capability development rather fuzzy and fragmented. This paper therefore aims to focus on the topic of 'capability development', by approaching it more holistically and investigating its current state in East Central Europe. It focuses on three central aspects of capability development, namely the import of capabilities by foreign actors, the endogenous development of capabilities within the region, and efforts to govern their improvement. The paper shows that capability development in ECE faces many challenges. Firstly, the import of capabilities is slowing down noticeably, as foreign actors are embracing the status quo. Secondly, endogenous capability development is still insufficient due to feedback loops between highly diverging individual capabilities and little interaction. Thirdly, efforts to govern the capability development have had limited success so far.

Keywords

Capability development, East Central Europe, catching-up process, upgrading

Introduction

Since the mid-1990s, the East Central Europe[1] (ECE) countries' economies have grown successfully, and have been able to decrease the gap between them and the more developed economies of Northern and Western Europe. However, they have not been able to close the gap yet, and the catch-up process has

slowed down noticeably since the 2008 economic crisis. This relative stagnation can in part be explained by the macroeconomic aftermath of the crisis, such as the euro crisis, or by sluggish dynamics in many emerging markets (World Bank 2012). However, since these difficulties affect almost all countries, and considering that many of the most important export markets for the economies of ECE were able to regain growth quite shortly after the crisis, the relative weakness must in large part be caused by problematic internal structures and processes. Seemingly, the existing development strategy is no longer capable of adjusting to changing circumstances and requirements.

It is no new phenomenon that countries in a catch-up process face new challenges, which force them to update their development strategy. In fact, this phenomenon is for example investigated in the current discussion about the middle-income-trap (e.g. ADB 2011; Eichengreen et al., 2011; Paus 2012). According to this theory, newly industrialising economies typically start their catch-up process by attracting investors via low input costs (especially labour costs), which initially lead to an economy based on relatively simple tasks. When the labour costs rise this strategy leads into a trap, as other countries may undercut the advantage provided by low cost activities, while the newly industrialising economies still lack the capabilities to compete with the more developed economies in higher value activities. Eventually, the catch-up process is blocked. There are hardly any observers or commentators of the current economic development in ECE that do not stress the importance of these countries improving their capabilities and competencies to perform higher value tasks in order to catch-up to the more developed countries (see e.g. Bogumil and Wieladek, 2014; Drahokoupil and Galgóczi, 2015; EBRD 2014; Golonka et al., 2015; Veugelers and Mrak 2009).

This highly complex topic is discussed within many (often overlapping) research areas. One strand investigates the impact of foreign direct investments (FDI) and multi-national enterprises (MNEs) on industrial upgrading and knowledge spillover (Domanski and Gwosdz, 2009; Falk, 2015; Galgóczi et al., 2015; Hansen and Rugraff, 2011; Hardy et al., 2011); another, the regions' capabilities to create

knowledge and innovations on the level of specific actors or more comprehensive innovations systems (e.g. Gal and Ptacek, 2011; Gausselmann, 2013; Kravtsova and Radosevic, 2012; Lengyel and Leydesdorff, 2011; Rugraff, 2014; Veugelers and Mrak 2009); while other strands focus on the role of politics and political institutions (e.g. Becker et al., 2010; EBRD, 2013, 2014; Myant and Drahokoupil, 2011; Nölke and Vliegenthart, 2009). All authors address issues that influence the potential of the ECE's economies to upgrade to higher value activities, and all discuss important aspects of capability development.

The relationship between these research strands is often fuzzy, which is mainly caused by diverging theoretical (and sometimes political) perspectives. The aim of this paper is to scrutinize the topos of 'capability development' and to provide a structured understanding of the current state of different aspects of capability development and their relationship, namely, the import of capabilities by foreign actors, the endogenous development of capabilities within the region, and efforts to govern their improvement, all within the context of ECE. Hitherto publications typically focused on partial aspects of capability development, which were relevant for the respective research perspective. For example, Pavlinek and Zizalova (2014) and Rugraff (2010) investigated the role of MNEs on upgrading, whereas Gal and Ptacek (2011) and Kwiek (2012) investigated the role of universities in economic development. This paper, however, approaches capability development more holistically. Therefore, the paper follows a rather broad and deliberately open understanding of capabilities. Here capability development refers to all aspects that effect efforts by the ECE economies to carry out higher value tasks, which would allow them to catch-up to more economically advanced countries.

Rise and relative stagnation of East Central European economies

The ECE countries followed relatively similar economic development within the last decades, which can be characterised by a largely successful transition from a centrally planned economy to an open market economy, and the accession to the European Union in 2004. After experiencing a politically and economically turbulent phase subsequent to the collapse of the Eastern Bloc, all ECE countries achieved considerable economic growth since the mid-1990s, which allowed for a reduction of the gap vis-à-vis high-income countries. However, this positive dynamic slowed down since the economic crisis of 2007/08, and as evidenced by many economic indicators, the distance to the top remains constant.

The catch-up process until the crisis is explained by multiple factors. Basically, all ECE countries pursued a global market integration by (neo-)liberal economic policies. Of central importance were the successful attraction of FDI based on low labour costs, a relatively high level of vocational education, and the proximity to the European market (Bellak et al., 2008; Drahokoupil and Galgóczi, 2015; Nölke and Vliegenthart, 2009). The establishment of a favourable institutional environment through the accession to the European Union (EU) and, for some states, a currency peg to or the adoption of the Euro, was also an important step to attract investors (Becker et al., 2010; Clausig and Dorobantu, 2005). This provided essential stability and predictability for foreign investors and permitted access to the European internal market. Nölke and Vliegenthart (2009) point out that the Visegrád states even transformed their economic institutional environment as a whole towards the attraction of FDI (see also Bohle and Greskovits, 2006; Roberts, 2001).

Within the Visegrád states, FDI enabled the establishment of a sizeable automobile industry (Pavlínek, 2015), electronics industries (Sass, 2015), and a service industry based on business process outsourcing

(Micek, 2015). In the Baltic States, the FDI went into the financial sector to a large extent, and also into smaller but often successful high-tech and service industries (see e.g. Tiits and Kalvet, 2012). Overall, foreign actors became very important, and even became dominating actors in some sectors within the ECE economies, which led Nölke and Vliegenthart (2009) to label these countries as dependent market economies. Although the dominant position of foreign investors is often viewed negatively in public discourse, it facilitated a necessary modernisation of the economies of ECE. FDI generated inflows of capital and knowledge[2], and led to higher productivity.

A distinct turning point in the development path of ECE has been the economic crisis of 2007/08. While the Baltic States were among the hardest hit countries in the world due to their high external indebtedness of the private sector and the dominant role of foreign banks, Poland was the only county in the EU which did not fall into recession (Connolly, 2012; Kattel and Raudla, 2013; Myant and Drahokoupil, 2013; Purfield and Rosenberg, 2010). However, all ECE countries recovered relatively fast from the direct effects of the crisis (World Bank, 2012: 6), and overall, were less negatively affected than, for example, the Southern European countries in the long term. However, the period of rapid catch-up seems to be over.

The relative stagnation vis-à-vis the most developed European countries is, thus far, only slightly evident in indicators such asper capita income, but it becomes more apparent in indicators of productivity and wage levels. Since 2008, both these indicators could not be improved in relation to the EU-15. Productivity stagnated between 30% and 50%, and the wage level remained between 30% and 40% of the EU-15 level. International investors also seemed to be losing interest in the ECE region. While the ECE countries in 2005 accumulated almost 29% of the value of all announced greenfield FDI investments in the EU (approx. US$40bn in total; the absolute highest value was approx. US$51bn in 2008), in 2015 it accumulated only 12% (approx. US$17bn). The value of all incoming FDI flows is also decreasing (Hunya and Schwarzhappel, 2016; World Bank, 2014: 17).

Identifying reasons for the stagnating catch-up process is no simple task. The problems can be partially attributed to a more challenging macroeconomic environment in Europe and globally (e.g. World Bank, 2012: 3). In many countries, structural economic and financial imbalances were revealed in the aftermath of the crisis. The Euro zone experienced its own crisis, and on a global scale many emerging economies could not sustain their pace of growth. Therefore, a stagnating export demand, which could restrict the growth potential of the ECE economies, could be assumed.

According to many commentators, the underlying problem for ECE is that its old growth model reached its limit and may even have turned into a hindrance (see e.g. Bogumil and Wieladek, 2014; Drahokoupil and Galgóczi, 2015). It is hard to realise higher wages as long as the competitive position is based on low wages. To justify higher wages, productivity has to be improved by either higher capital endowment or higher competencies and capabilities. The latter is particularly seen as the key for a further successful economic development of ECE. Even though the past productivity growth was also based on total factor productivity, i.e. knowledge, it was mainly achieved by updating outdated production methods through knowledge and technology imports. However, for the future, it is necessary to augment own competencies and capabilities in order to capture and defend higher values in global markets. But this results in the ECE economies facing great challenges, and their difficulties to cope with them can explain the relative stagnation to a large extent.

Foreign investors in East Central Europe

In order to explain the capability development problems in ECE it is critical to highlight the role of foreign investors, as they have taken a dominant position within the ECE economy (see Nölke and Vliegenthart 2009). ECE has been integrated into global production networks since the 1990s, but within

these networks, it can only be classified as an assembly platform. Accordingly, the ECE economies engage in mostly simple and standardised tasks within the global production of goods and services (see Coe and Yeung 2015: 186). This position comes along with high dependencies from external influences, low prospects to capture value in the region due to, for example, low paying tasks or repatriated profits, and the danger of being excluded from the production networks if other regions offer more attractive factor endowments.

However, the influence of MNEs on capability development is ambiguous. In principle, a dominant position of foreign companies does not have to be negative for the host country. Successful economic development for any region would not be possible today without international integration. Within some regions, foreign actors almost single-handedly carry the economic development. Furthermore, to enhance the value capture, companies need to improve their capabilities to assume more complex or valuable tasks. This process of adopting such tasks is called upgrading and may refer to local subsidiaries of MNEs, local enterprises, or regions as a whole (see e.g. Humphrey and Schmitz, 2002). However, within the ECE context, studies show that upgrading is quite restricted and uneven between, as well as within different sectors (Drahokoupil and Galgóczi, 2015: 33). The same is true for knowledge spillover effects (Falk, 2015).

Additionally, the ECE countries increasingly suffer from the repatriation of profits by the MNEs. While it is clear that investments by MNEs create generally positive effects in the short term, within the long term it might be problematic as important capital for future developments may get lost. However, up to now, repatriation has not been a big problem. For the most part, incoming FDI succeeded repatriation by far, which seems logical as investments take time to make profit. Moreover, large shares of the created profits have been reinvested in the host countries. Larger repatriation only occurred when the economic crisis hit ECE, when many investors (especially from the financial sector) curtailed their activities and repatriated assets to stabilise themselves (Hunya, 2015: 43). After the crisis, this behaviour abated and reinvested

their profits again in large part. Today, reinvestment of profits already exceed the value of new FDI inflows (Hunya, 2015: 43; World Bank, 2014: 17). However, it is feared that in the long run larger parts of the profits will get lost because of repatriation (Pavlínek, 2015: 245). Hungary, for example, has already reached the point (Hunya, 2015: 43).

To further scrutinise the effects of MNEs on knowledge (i.e. upgrading and spillover effects) and capital (i.e. reinvestments vs. repatriation) within ECE, it is helpful to distinguish between four sectors: low-tech manufacturing, mid- to high-tech manufacturing, market oriented FDI, and business services.

Low-tech manufacturing

Foreign controlled low-tech manufacturing companies tend to have a negative effect on the long-term economic and capability development within ECE. They may even potentially restrain the catch-up process. Some of these companies originate from privatisations during the transformation and are usually found in classic old industrial industries (e.g. textiles, steel, mining), where there are hardly any expectations for future developments (Smith and Pickles, 2015; Trappmann, 2015). In contrast, many other companies originated from greenfield FDI through outsourcing and offshoring of simple tasks (e.g. metal products), which were attracted by the low wage level in ECE. Within these MNE subsidiaries, there would be some potential for upgrading, e.g. by switching to more complex or more specialised products, or by taking over additional higher value tasks. However, these companies specifically show little interest in upgrading (Drahokoupil and Galgóczi, 2015: 24). Additionally, they pose the threat of leaving the region should the wage level rise.

Even beyond the almost non-existent classical upgrading, low-manufacturing companies hardly set any impulses for regional development. They rarely engage in R&D, hardly emanate any demand, and tend to

repatriate their profits (Drahokoupil and Galgóczi, 2015: 24). The only positive effects are their contribution to exports and their effects on employment.

Mid- and high-tech manufacturing

Within industries that produce goods that are more complex, the situation is more positive. This sector comprises automobile, pharma, optical, and electronics industries for example. Companies in these industries produce significant exports, tend to reinvest their profits, engage increasingly in R&D, and overall show a stronger tendency towards upgrading. However, the picture is not only positive. On the one hand, there is a large variation between different companies. On the other hand, upgrading these sectors does not generally improve the relative position vis-à-vis the MNEs' home countries. For the highly important automobile industry in ECE, Pavlínek (2015) (see also Pavlínek and Zizalova, 2014) finds that although automobile companies do upgrade, it typically only follows the usual technological change in the industry. Therefore, the relative position of the ECE subsidiaries within the global automobile production networks does not change. Moreover, knowledge spillover effects to the local economy are scarce (Pavlínek and Zizalova, 2014; Rugraff, 2010). Local companies indeed became more productive and adjusted to international standards, but these are generally the result of improvements in management and organisation, and not in innovation activities. Accordingly, local companies have learned to adapt to new technologies quickly, but not how to develop technologies by themselves (Domanski and Gwosdz, 2009).

The reason for the limited upgrading and spillover dynamics in the automobile industry lie in the relatively stable hierarchies between the MNEs' headquarters and their subsidiaries in ECE, as well as between companies (Pavlínek, 2015: 242). The hierarchies between companies range from large international carmakers, to other international first-tier suppliers (which usually followed the lead producer to ECE), and to local producers of simple components. This system is, meanwhile, well

established and consolidated. The advantage for ECE is that the various companies are highly embedded within the localised production systems, and therefore, within the region (Domanski and Gwosdz, 2009; Pavlínek, 2015). Accordingly, the industry is not likely to relocate, especially since large investments in equipment and facilities have already been made. The disadvantage is, of course, that an upward move in this hierarchy is hardly possible. The hierarchies within the MNEs enhance this. Subsidiaries in ECE typically focus on production, as the MNEs develop new technologies in their home countries or in global high-tech regions. While there is some automotive R&D done within ECE, it is usually only testing and adaption rather than development of fully new technologies (Domanski and Gwosdz, 2009: 469).

Overall, mid- and high-tech manufacturing sectors in ECE show some potential for the further development of the region, but it should not be taken for granted. In the future, the ECE countries must offer more than just low labour costs in order to give the MNEs incentives to upgrade their activities within the region. They must offer the companies, both foreign and domestic, conditions that will give them a competitive advantage and which cannot be reproduced elsewhere easily, if the catch-up process is to be successfully completed.

Market oriented FDI

Foreign-owned companies, which aim to sell their products and services within the ECE region, play an ambiguous role regarding the capability development in the region. They work for example within the infrastructure sector (e.g. energy, logistics, and telecommunications), financial services, real estate, retail and wholesale. The companies tend to repatriate their profits as soon as the markets are fully tapped (Drahokoupil and Galgóczi, 2015: 23). In contrast to low-tech industries, they do not even balance out the repatriation with exports, and even tend to raise imports (especially wholesale and retail). For market-oriented companies, however, the risk of leaving the region should wage levels rise is quite small, since

they are not interested in low input costs but rather in the market potential. If their input costs should rise, they will pass them onto their customers. Therefore, the biggest problem with them is the loss of capital.

The influence of market-oriented FDI on capability development is hard to assess. On the one hand, they rarely engage in R&D, but on the other hand, they may demand high-valued business services (e.g. financial services or marketing). Furthermore, they can act as a nucleus for business process outsourcing, which may have positive impacts on the development of the ECE region.

Business services

Over the last 20 years, ECE increasingly gained importance as a location for business services (Hardy et al., 2011; Micek, 2015). This was driven by business process outsourcing (BPO). Many foreign companies relocated service activities that did not need direct face-to-face contact with customers to low wage countries. Many larger cities within ECE profited from this phenomenon. BPO created many jobs that are comparatively well paying and often more sophisticated than those in manufacturing. Young academics in particular were able to find jobs that actually corresponded to their studies (Micek et al., 2011: 1663). The predominant part of these jobs, however, require relatively low qualifications, and the very high paying jobs are still scarce (Capik and Drahokoupil, 2011: 1626).

The upgrading dynamics of BPO companies can be appraised as the highest of all investigated sectors, even though it is also relatively uneven (Micek, 2015: 311; Sass and Fifekova, 2011). This industry is relatively flexible since it requires only minor investments and there are no strong hierarchies between different companies. These circumstances allow for easier upgrading, since the efforts for offering new or additional services are quite low (Capik and Drahokoupil, 2011: 1628). The share of higher paying jobs is slowly but constantly increasing, and employees often benefit from in-house qualification programs, e.g. learning new languages, or by working in an international environment. However, the knowledge

spillover effects and the interaction of the service companies with their local environment are unsatisfying. According to Sass (2011: 62; see also Micek 2015) there are three explanations for this: firstly, these companies are relatively new to ECE and therefore did not have much time to build ties with other local companies; secondly, they usually export their services and do not offer them to local customers; and thirdly, they only demand simple services like cleaning, security, and infrastructure from local companies.

The flexibility of this sector does come with certain dangers as well. Many tasks are relatively simple and are still kept in the ECE region by low labour costs, even though the proximity to European markets and the skills of the workforce are important locational factors. The risk that BPO companies relocate again is real and should not be underestimated, especially since the sunk costs and locational embeddedness are both low (Capik and Drahokoupil, 2011: 1626-27; Micek et al., 2011; Micek, 2015: 312). Therefore, the flexibility is both a threat and an opportunity.

Innovations systems in East Central Europe

As numerous foreign actors slow down their upgrading efforts, and thereby, do not import capabilities as much as before, it becomes increasingly important to develop them within the region. However, endogenous capability development is not just an important substitute for shrinking capability imports. It is also essential in its own right. As seen, domestic companies rarely profit from knowledge spillover, and therefore rely on the region's internal capabilities and their development. Even more importantly, endogenous capability development is the best way to replace low wages as the main locational advantage of ECE.

A good way to evaluate the state of endogenous capability development is to analyse innovation systems. Unfortunately, the ECE economies currently have a relatively weak position in this regard. Both inputs, measured as the percentage of GDP spent on R&D or as the share of R&D workers, and outputs, measured by the patents, are below EU average. Innovation related activities in ECE are therefore quite inefficient (Kravtsova and Radosevic, 2012: 111). The Global Innovation Index, a ranking of the innovation capacities of almost all countries in the world based on 79 different indicators, ranks the ECE countries only in the upper middle field. Estonia leads the group at position 23 (14 within Europe), while Poland trails at position 46 (31 within Europe) (Dutta et al., 2015: xxx (Roman numeral)). The inefficiency of the ECE's innovation systems can be explained by various factors. Firstly, the foreign MNEs and their specific interests are partially responsible. Furthermore, innovation systems in ECE are characterised by a relatively low level of interactions between the actors participating in the innovations. Additionally, they often lack a sufficient absorptive capacity and have a relatively weak public research environment.

R&D within ECE is largely performed by foreign MNEs (Rugraff, 2014). Most R&D by foreign actors occurs in manufacturing, particularly in the automotive industry. In contrast, R&D activities by domestic companies occur predominantly in pharmaceutical, electronics and optical industries (Rugraff, 2014: 13). MNEs began their R&D activities in ECE in the early 2000s and since then have steadily increased their efforts. This trend was supported by the strategy to attract industries that are primarily R&D intensive (Kostvec et al., 2011: 163). Relocation of R&D to ECE is mostly motivated by cost reductions or by the need to adapt innovations to the local market. It is usually not motivated by the desire to tap into a specific local knowledge pool or to benefit from knowledge externalities, as it is in the case of global high-tech regions. Accordingly, R&D activities in ECE are generally restricted to common testing, to support production, or to adapt existing technologies. Truly new, and therefore valuable, innovations and

developments still take place within the MNEs' home countries or in global high-tech centres (Domanski and Gwosdz, 2009: 469; Myant and Drahokoupil, 2011; Rugraff, 2014: 22-23; Sass, 2015: 271).

In order to assess the capabilities of an economy, it is not enough to examine isolated actors. The generation, distribution and application of innovation, knowledge and capabilities are interactive processes. Companies, in their role as either suppliers or customers, universities, research centres, consumers, and political or societal actors engage in different roles and together constitute an innovation system (Lundvall, 1992). The efficiency of such a system depends both on the quality of the different actors, as well as on the quality and structure of their interactions. Both the quality of the actors and their relations are interdependent.

Currently in ECE, the innovation systems are relatively inefficient as both elements discussed are often underdeveloped. The central problem is low interaction between the various actors, which decreases the possibility of knowledge spillover or learning-by-interacting. Again, this phenomenon is partly a consequence of the interest and strategies of dominant foreign MNEs (Páger 2014). As described above, they are often only loosely integrated into the local environment and if they are locally embedded in their own production systems, as observed in the automotive industry, they hardly ever engage in relations with actors beyond these systems. From the MNEs' point of view this is not problematic as they innovate and maintain their related interactions elsewhere. However, the behaviour of the MNEs regarding innovation related interactions varies, depending on the companies' characteristics and its strategies. The larger a foreign subsidiary is, and the higher the autonomy vis-à-vis the headquarter, the more likely they are to engage in local relationships (Gauselmann, 2013: 16-17). However, the low interaction within the innovation systems is not only a consequence of the MNEs' strategies. Local companies also rarely interact with others to develop innovations. The reasons for this behaviour are not quite clear. A possible explanation is that there seems to be a lack of trust in possible cooperation partners and their capabilities (World Bank Group, 2016: 83).

Another problem for the whole innovation system is that many actors are comparatively weak, since they rarely engage in innovation and R&D. Many companies do not see the need for driving their own innovation as they are already established and perceive innovation as unimportant for their competitiveness (World Bank Group, 2016: 81). A consequence is that local companies, in particular, have a relatively low capacity to absorb complex knowledge (Falk, 2015; Kravstova and Radosevic, 2012: 123), and therefore, they are rather unattractive as cooperation partners for more capable actors, like foreign MNEs. The same is true for universities. Their underwhelming performance is not just a consequence of their own insufficient capabilities but also of the absence of a critical mass of potential cooperation partners (Gal and Ptacek 2011: 1686; Kwiek, 2012: 111-112).

Governing capability development in East Central Europe

As a matter of course ECE governments realised the challenges of capability development, and made deliberate efforts to influence it using public policy. As a general foundational requirement, basic political and societal institutions were of central importance. The rule of law is especially essential, as well as democratic structures and the absence of corruption. Transformation economies often faced deficits in these fields, especially in the first few years after the collapse. However, the ECE countries were less affected by these problems compared to other transition economies, such as those in South East Europe or Central Asia. Basically, the ECE countries today do not deviate much from western countries, especially post the EU accession. However, the political institutions are still not optimal or fully stabilised (Cuaresma et al., 2012: 23-25; EBDR, 2013; Roaf et al., 2014). Recently some countries, especially Hungary and Poland, even curtailed their constitutional and democratic institutions (see Berend and Bugaric, 2015). This is partly the result of growing social and regional disparities within ECE, which arose during the transformation and are now fuelling populist developments.

Besides the general political situation and the basic political direction, practical regulation in different political areas can also have an impact on capability development. Besides public education policy (see below) and labour policy, (see e.g. Nölke and Vliegenthart, 2009) economic development programmes are of importance. In the ECE context, programmes and regulation to attract FDI play a particularly important role for economic and capability development (see Antalózy et al., 2011; Kostevc et al., 2011). All ECE countries made deliberate efforts to attract FDI since the mid-1990s, by offering financial incentives (e.g. subsidies, loans, warrants), tax reliefs and other incentives like business-friendly regulations or business parks, which offered low priced space and additional services (Kostvec et al., 2011: 159). At first, FDI policy aimed at quantitatively maximising the investments, but soon focused on targeting high-tech industries and even tried to embed the new companies as much as possible within the region in order to benefit from knowledge spillovers (Kostvec et al., 2011: 163). Accordingly, the problem of low interaction has been recognised, and attempts were made to improve interaction through targeted measures (usually through rewards and financial incentives).

There are some studies, which investigated the FDI promotion strategies. In general, they conclude that the quantitative goals were achieved, although it is not clear if the promotion was actually necessary (Kostvec et al., 2011: 173). But since all countries offer some kind of promotion and investors did indeed factor them into their decisions, a single country could not afford to abstain from it. More qualitative instruments, which should have motivated the investors towards more interaction or R&D, were less successful (Antalózy et al., 2011: 204; Kostevc et al., 2011: 173; Rugraff 2014: 23). Although these programmes were generally well designed, they mostly missed their goals, as the investors were not interested in these activities. However, some commentators argue that the different policies on FDI, R&D, and public research were not sufficiently aligned, and hence were not able to generate synergies (Capik and Drahokoupil 2011: 1628; Domanski and Gwosdz 2009: 478).

Besides formulating general economic policy and promotional programmes, states can engage in shaping the educational training systems to influence their capability development. Like all other societal subsystems in ECE, the education system was subject to comprehensive change after the collapse of the socialist economies, which resulted in severe problems arising in the early phase of the transition and an adjustment to the roles of the various actors in the system. Analogous to socialist times, and even though many details have changed, the emphasis of the whole education system still lies on vocational training rather than on academic education as seen in many western countries[3]. According to some commentators, the most striking feature of the educational systems within ECE is their focus on the foreign investors' needs (Nölke and Vliegenthart, 2009: 686; Roberts, 2001: 316; West, 2013). While these investors need a generally well-educated workforce with basic and common skills in their respective fields, they usually have no need for highly trained experts. Furthermore, the MNEs tend to avoid cumbersome on-the-job training as much as possible and therefore, vocational training is performed by vocational schools rather than by apprenticeships in companies (Nölke and Vliegenthart, 2009: 687; see also OECD, 2015a). Overall, the education system is characterised by a vocational training system with low levels of specialisation, coupled with a relatively underdeveloped academic education.

This system is not motivated simply by anticipatory obedience towards potential investors, but it is also shaped by the circumstances during the transition phase. During socialist times, the educational systems in ECE already focused on vocational training (Roberts 2001: 318). The training, however, was not carried out by vocational schools, but rather within state-owned enterprises. As those enterprises often collapsed during the early years of transition, the system was forced towards school-based training with limited practical exercise (Roberts, 2001: 319-320). However, in many ECE countries, a work-based or dual vocational training programme survived, and there are currently efforts to get companies more firmly involved in the training again (Poulsen and Eberhardt, 2016: 44-45).

While the quality of the vocational training in ECE is usually quite good (again), the situation in the universities needs improvement (EBRD, 2013: 6). Although the teaching is relatively good, the research drops away. This can also be explained by the universities' situation during the transition phase. Even at that time universities focused on teaching, while research, and more specifically applied research, was conducted by the academies of sciences or the state-owned enterprises and their affiliated research centres (Gal and Ptacek, 2011: 1674). Hence, research universities have no tradition in ECE, and even today often lack the capabilities and experience in research. In fact, problems faced during the transformation even intensified the focus on teaching. Budget cuts led to retrenchments in equipment and forced the personnel to offer additional teaching to generate further income (Gal and Ptacek, 2011: 1675; Kwiek, 2012: 114). A positive side effect was that the share of university graduates increased, due to the structural problems in the vocational training system, the primary focus of universities on teaching, and also since many young people preferred studying rather than being unemployed. While the share of university graduates was markedly below that of western countries, today it is well above the European average in the group of 25-40 year olds in almost all ECE countries (Eurostat Database 2016). Another positive fact is that primary education in ECE does not deviate from the European average. In the PISA test, an OECD comparison of school achievements of 15-year-old students, Estonia and Poland rank above average, while Slovakia, Hungary, Latvia and Lithuania are only slightly below the average (OECD, 2015b: 5).

For all ECE countries, the expenditure on education, as measured by the share of total expenditures, is below the OECD average (OECD, 2015a: 359-360). This is also true for tertiary education, where only Estonia is slightly surpassing the average, although all ECE countries show a positive tendency in that regard (OECD, 2015a: 228). The low absolute expenditure on education can partly be explained by relatively small national budgets, which are in turn a consequence of low tax levels that are offered to attract foreign investments (Nölke and Vliegenthart, 2009: 687).

A serious problem for the ECE countries is the emigration of young and well-educated professionals. An IMF study (Atoyan et al., 2016: 5) found that emigration reduced the size of the labour force, as well as productivity, and thereby slowed per capita income growth. Although emigration served as a safety valve for unemployment, and generated significant inflows of remittances, it led to problematic skill shortages and reinforced the already difficult demographic situation (see also OECD, 2013). Unfortunately the emigration seem to be permanent, and policies to encourage remigration or to engage the diaspora have had limited success thus far (OECD, 2013: 12).

Conclusion

Many aspects of the recent capability development within ECE are quite well understood. While the inflow of external capabilities continues to decrease, as foreign MNEs increasingly refrain from subsidiary upgrading, endogenous capability building remains weak due to several structural challenges. This results in sluggish productivity growth and consequently contributes to a slowing catch-up process.

Foreign investors, especially foreign MNEs play a centrally important role in both the ECE's past and future economic development. Until now, they induced predominantly positive effects on ECE, as they provided inflows of capital and knowledge, and integrated ECE into the world economy. Now, however, ECE has entered a phase where MNEs and other foreign investors no longer fuel the catch-up process as much as they did over the last two decades. Many sectors, especially manufacturing, show increasingly low incentives for subsidiary upgrading which leads to diminishing knowledge inflows into the region. The positive effects of FDI on the local knowledge base are further restricted because the knowledge is retained by the foreign MNEs and it rarely spills over into the local economy. Furthermore, the MNEs operating in ECE increasingly cause other effects that may have a negative impact on capability

development. They establish hierarchies that may impede their local partners, increasingly repatriate their profits, and obtain a stronger bargaining position vis-à-vis employees or governments.

The slowdown of growth and knowledge inflows generated by foreign companies and investors was not unexpected. The difference between wages in ECE and higher developed countries diminished during the successful catch-up period, which lowered the incentives for investors to relocate activities into the region. The basic problem is that nothing has replaced the low wage level as the main locational advantage yet. Endogenous capabilities to innovate and improve productivity are still weak and unable to compensate for sinking inflows of external capabilities. The low efficiency of the innovation systems within ECE is caused by feedbacks loops between weak individual capabilities and low interaction between the respective actors. The foreign subsidiaries, domestic companies, universities, and other research institutions are limited in their innovation capabilities. In the case of foreign subsidiaries, this is deliberate as the MNEs carry out their R&D and the respective interactions elsewhere. The reasons for the low innovation performance of domestic companies (and universities) as measured by inputs and outputs are not yet fully understood (see below).

The prospect for the ECE states to govern their capability development is rather limited. While their measures undertaken to attract FDI were quantitatively successful, they largely failed qualitatively, i.e. they were only partially attracting high-tech and knowledge intensive industries and, in particular, failed to intensify the local involvement of foreign investors. The education and training systems in ECE are relatively solid, although academic education and high-class public research are still underdeveloped, and emigration by highly educated and young professionals remains a serious problem for the capability development.

Although we can identify many problems and difficulties with the capability development in ECE, several aspects need further examination. One point, that stands out in particular, is the capability related

activities of domestic firms. Until now, research had a strong focus on foreign actors and FDI, which is coherent with their prevailing importance for the region, and generated valuable insights. However, for future research it may be essential to increase the focus on domestic actors and their capabilities, since they will have to play a more central role for the economic development as foreign MNEs become satisfied with the status quo. This especially concerns the innovation performance and the managerial skills of domestic companies. While we know that their innovation performance is insufficient, it is not clear why. We know that they are hardly profiting from knowledge spillover, and that strong hierarchies may restrain them if they are integrated in global production networks. Additionally, studies found that they often interact with others insufficiently and many domestic companies show little commitment towards innovation. However, we know little about the reasons behind this. Possible explanations are a (perceived) lack of own capabilities to begin with, overly defensive strategies, a lack of trust, or satisfaction with their current status as innovation takers.

Therefore, the factors, which hinder domestic companies from innovation, should be further investigated. It is necessary to identify their motives and actual practices rather than just the inputs and outputs of the innovation processes. This demands a focus on micro processes, and will probably be investigated best, by using qualitative methodologies. Important questions concern the attitudes and expectations of domestic companies regarding innovation, which can partly explain their behaviour or power relations, and reveal innovation cultures and the influence of institutions or trust. Equally important is an investigation of their actual capability related practices and routines, in order to understand what is actually happening and how the actors cope with difficulties. This could also open up an evolutionary perspective on the capability development within ECE. Furthermore, the interactions and networks of domestic firms with different actors have to be investigated further. Analysing these structures, and the dynamics within them could deepen the insight on the configuration of innovative processes, show why

the level of interactions is relatively low, and why they are often ineffective for innovation and capability development.

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[1] In this paper, the East Central Europe countries comprise the Visegrád-Group, namely the Czech Republic, Hungary, Poland, and Slovakia, as well as the Baltic States of Estonia, Latvia and Lithuania although they are not situated in ECE per se. The selection is motivated by their comparable development path in the last 25 years and their comparable current economic situation.
[2] Studies have shown the most important factor for the productivity growth in ECE was total factor productivity (Alam et al., 2008; Vamvakidis, 2008: 6). Total factor productivity is a measure used to explain productivity growth. It accounts for those factors of productivity growth, which cannot be explained by the growth of the traditional input factors, i.e. labor and capital. These residual factors are interpreted as technological change and knowledge.
[3] There are, however, notable differences between various western countries in this regard, which for example are discussed within the Varieties of Capitalism approach (see Hall and Soskice, 2001). Liberal market economies (e.g. Anglo-American countries) emphasize academic education, while coordinated market economies (e.g. German speaking countries) focus on vocational training.

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