

# Chapter 8

## The EU industrial policy and SME development in Central and Eastern Europe

Zhelyu Vladimirov

### 1. Introduction

The aim of the paper is to examine the effects of European Union (EU) industrial policy on small and medium-sized enterprise (SME) development in the new Member States (NMS) from Eastern Europe. It includes a short review of how EU industrial policy has evolved since the beginning of 1990s from a vertical to horizontal approach, and how these changes reflect on SME policy as part of overall industrial policy. The main thrust of the paper is that the effects of this policy on SME development in the new and the old Member States are unequal due to significant differences in their respective SME landscapes. The majority of SMEs in the NMS are younger, have less experience, and often work far from the technological frontier. For that reason, applying equal requirements to enterprises operating under unequal conditions leads to the reproduction, or even deepening, of the existing inequality. To be more precise, the EU initiatives for SME clustering and participation in global value chains (GVC) did not sufficiently contribute to improving SME competitiveness in Eastern European countries. The participation of SMEs from these countries in GVCs is concentrated predominantly in labour-intensive, low value-added manufacturing and services activities, while in many cases clusters are only important for project support.

These effects are explained by a neglect of the broader institutional and capability conditions required before an efficient horizontal policy can be implemented. Although the horizontal industrial approach prevails in the EU, it has also a sectoral dimension reflecting specific sector characteristics. At the same time, this policy neglects the specific institutional environment and capability shortages under which Eastern European SMEs operate. Building local capabilities requires huge investment in people and equipment, which many SMEs in NMS countries cannot shoulder alone. Weak technological capacity and the lack of sufficient state support explain why Eastern European SMEs are less prepared to follow the EU's innovation-driven industrial renaissance.

The paper thus concludes that industrial and SME policy in the NMS needs to be modified to reflect the specific situation in these countries. It means that SMEs should be supported by policies oriented towards both improving the institutional setting and developing innovation capabilities. Accelerating the catching-up process in Eastern European countries requires work to be done mainly on industrial upgrading, the adoption of new technologies, and skills development, rather than on immediate innovations. Therefore, SMEs in the NMS need dual support simultaneously – for innovation itself and for building innovation capabilities.

## 2. EU industrial and SME policies

### 2.1 Two types of industrial policy

The ‘industrial sector’ is made up of manufacturing enterprises, i.e. companies producing goods. It is also referred to as the secondary or the manufacturing sector, in contrast to the primary sector (raw materials) and the tertiary sector (services). The narrower meaning of ‘industrial policy’ (IP) reflects government efforts to encourage the development of part or all of the manufacturing sector. Some researchers, however, use the term in an extended meaning to encompass ‘non-traditional activities in agriculture or services’, as ‘there is no evidence that the types of market failures that call for industrial policy are located predominantly in industry’ (Rodrik 2004: 2). Bianchi and Labory (2006: 3) define IP as a set of government measures aimed at guiding the structural transformation of an economy to improve a country’s industrial performance. Formally, this policy differs from ‘competition policy’. However, as all government measures and policies affect industry in one way or another, ‘boundaries between competition/ industrial policy and other policies, such as technology policy, regional policy, structural policy, competitiveness policy, and even macroeconomic policy, are not always clear’ (Pitelis 2006: 435).

After the end of the WW II, most governments adopted *active industrial policies* to stimulate post-war economic recovery. These policies included direct state support for industries, known as a ‘*vertical approach*’ and combined with *state protectionism*. For example, France applied formal planning to support selected industrial sectors and build ‘national champions’ (Cohen 2007). A similar policy was used in Japan and other East Asian ‘tigers’. The *vertical approach* implies the application of different measures to promote successful firms able to compete on international markets.

The neoliberal revolution of the 1980s put an end to this type of industrial policy. Based on the argument that the market is the only driver of production optimization, it accepted that ‘the best industrial policy is none at all’ (Schrank and Whitford 2009: 523). Since the beginning of 1990s, *new industrial (horizontal approach) policy* was designed to respond to globalisation challenges, a shift supported by the ‘theory of clusters’ (Porter 1998) and the global value chain (GVC) approach (Gereffi *et al.* 2005).

All developed countries have applied and continue to apply industrial policies *under different forms* (Chang 2003). For example, US industrial policy goes beyond upholding market competition and macroeconomic stability. It is rooted in a number of agencies addressing company-specific needs (Schrank and Whitford 2009: 537). In Europe, the term ‘industrial policy’ was replaced in the mid-1990s by ‘competitiveness policies’, and in 1999 the term ‘enterprise policy’ was coined as part of a competitiveness policy dealing with SME issues and later used as a label for that part of competitiveness strategy dealing with industry. The notion of ‘enterprise policy’ was subsequently dropped due to increasing EU concerns about ‘*deindustrialization*’ (Pelkmans 2006: 54).

## 2.2 Changing European industrial policy

At the beginning of the 1990s, industrial policy in the European Community shifted from a vertical approach to facilitating *industrial clusters* and *innovation networks*. Instead of direct financial transfers to enterprises, the emphasis switched to R&D, innovation, and (clusters of) small firms (De Bandt 2006: 106). The new approach was defined in article 130 of the Maastricht Treaty, the Lisbon strategy, and subsequently developed in a number of the European Commission (EC) Communications: '*Industrial Policy in an Enlarged Europe*' (2002); '*Some Key Issues in Europe's Competitiveness - Toward an Integrated Approach*' (2003); '*Fostering Structural Change: an Industrial Policy for an Enlarged Europe*' (2004). The main goal of the new European industrial policy was to create an environment favourable to industrial development, and to overcome the negative effects of 'deindustrialization' (Pitelis 2006: 443-444).

Over the last two decades, Europe has experienced significant dismantling of its manufacturing sector, in terms of both its contribution to GDP (dropping from 18.5% in 2000 to 15% in 2012) and employment (with a total loss of 3.8 million jobs over the 2008-2012 period). The recent economic crisis, however, revealed the importance of the real economy, including industry. The EU manufacturing sector contributes disproportionately to exports (80%), productivity growth (60%) and innovation, accounting for 77% of business investment in R&D. In 2012, EU manufacturing companies employed 32 million people directly and approximately twice that number indirectly, mainly in SMEs (HLG-KET 2015: 6).

The new European industrial policy consists of three building blocks: *framework conditions*, the *horizontal* and the *sectoral dimension* (Pelkmans 2006). It 'combines a horizontal approach, aimed at ensuring cohesion and synergy among the various strategic sectors, with a *sectoral approach*, allowing the specific characteristics of the various sectors to be taken into account' (European Commission 2006). With its sectoral dimension, this policy thus contains some elements of the *vertical industrial approach*.

The EC recently recognised the importance of the manufacturing sector in its Communications on '*Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage*' (2010) and '*A Stronger European Industry for Growth and Economic Recovery*' (European Commission 2012), asserting that 'Europe needs to reverse the declining role of industry in Europe for the 21<sup>st</sup> century. This is the only way to deliver sustainable growth, create high-value jobs and solve the societal challenges that we face' (European Commission 2012: 3). The EC confirmed its commitment to *reindustrialisation* as part of its efforts to increase industry's contribution to GDP to 20% by 2020 (European Commission 2014a). The main pillars of the new industrial policy include: 1) an integrated and unified European market; 2) industry modernisation; 3) SMEs and entrepreneurship; and 4) internationalisation.

## 2.3 SME policy as part of EU industrial policy

Until the 1980s, the SME sector was regarded as not being able to compete at international level. This policy began to change due to the decline of the Fordist production system, and the success of a few innovative SMEs. European SME policy was launched in 1983 with the first *Community programme for SMEs*. Since then, various programmes have been adopted such as ‘*Growth, Competitiveness and Employment*’ (1993), the *Integrated Programme in favour of SMEs and the Craft Sector* (1994), and the *Integrated Programme for Small and Medium-sized Enterprises (SMEs) and the Craft Sector* (1996). European ‘enterprise’ policy now stresses the necessity to encourage an environment favourable to SMEs (Article 173, ex Article 157 TEC). This policy is *horizontal* in the sense that other policies need to take SME needs into account (Bianchi *et al.* 2006: 388).

The *European Charter for Small Enterprises* adopted in 2000 outlined 10 key priorities for developing the SME sector: education and training for entrepreneurship; cheaper and faster start-up; better legislation and regulation; availability of skills; improving online access to public authorities; getting more out of the Single Market; taxation and financial matters; strengthening the technological capacity of SMEs; successful e-business models and top-class small business support; and more effective representation of SME interests at EU and national level. In 2002, the MAP project – a project targeting enterprise clusters and networks – was launched, followed by the *European cluster initiatives (ECI)* in 2006. There has been a general tendency in promoting SMEs of favouring their clustering and their relationships with local institutions (European Commission 2014b: 14-17). The Zombori report (2013), however, found that only a minority of clusters had an internationalisation strategy, and only a minority of SMEs benefitted from internationalisation support.

The SME focus was strengthened under the *Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME)* programme and *Horizon 2020*. The COSME programme (2014-2020) marks a shift from cluster support towards the *internationalisation, competitiveness and innovation* performance of SMEs (European Commission 2014c: 42). These programmes also aim to increase SME access to financing through the *EU Finance for innovators (InnovFin)*. Promoting SME *internationalisation* is one of the main tasks of ‘Enterprise Europe’. Essential for SME competitiveness is also their enhanced use of *ICT*, as set out in the *Europe 2020 Digital Agenda* (2010).

In general, EU industrial policy devotes considerable attention to SME development. SMEs are supported financially by the Innovation and Competitiveness Programme, the European Structural Funds and other initiatives. Framework conditions for SME development have been improved by the ‘Small Business Act’ (SBA) (2008) and the Entrepreneurship 2020 Action Plan *Reigniting the entrepreneurial spirit in Europe* (2013). The EU has thus adopted an integrated approach to SME development, though unfortunately it takes no account of the differences between SMEs in the new and old member states.

### 3. SME development in the new and old EU member states

#### 3.1 Characteristics of the SME sector

The group of micro, small and medium-sized enterprises (SMEs) is made up of enterprises employing fewer than 250 persons and with an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. Within the SME category, a small enterprise is defined as employing fewer than 50 persons and with an annual turnover and/or annual balance sheet total not exceeding EUR 10 million. A microenterprise is an enterprise with fewer than 10 employees and with an annual turnover and/or annual balance sheet total not exceeding EUR 2 million (Official Journal of the EU, L 124/36, 20.5.2003)

Compared to large enterprises, SMEs have certain *advantages*, including a higher degree of flexibility, a simple organizational structure, closer perception of consumers' needs, etc. This allows SME managers to respond quickly to market signals. Because of their smaller size, however, SMEs also have *disadvantages* in terms of fewer resources, lack of access to information, insufficient management capacity, difficulty in attracting high-skilled employees (due to lower wages and fewer career prospects), restricted access to financial capital, etc. (Cowling and Storey 2002).

The term 'SME' does not denote a homogeneous category, but instead is a convenient notion allowing a simplification of a more complex reality. The vast majority of SMEs serve local markets, important for providing the majority of jobs. A much smaller number operate on the international market and play an important role as innovation catalysts. In practice 'SMEs are very heterogeneous, ranging from the rural family activity based on subsistence production to a firm with several hundred employees that sells on all world markets and frequently innovates' (Bianchi *et al.* 2006: 381).

The important demarcation line in the SME sector is between enterprises whose main purpose is to provide income for the owner ('life-style' oriented) and those who aspire to growth (Poutziouris 2003). Storey (1994) reveals that the majority of small entrepreneurs are not growth-oriented, although fast-growing enterprises contribute more to creating jobs, especially during a recession (Henrekson and Johansson 2010). 'The SMEs that do grow strongly are also responsible for a disproportionate amount of innovation and new economic activity. These firms are more likely to invest, to export, to undertake R&D, and to drive change in the economy' (Tewari *et al.* 2013).

SME support policies often make no distinction between a growing or entrepreneurial SME and others. These policies are based on the criterion of size and not on whether the activity in question has the potential to spawn new areas of specialization (Rodrik 2004: 22). 'Ostensibly, many existing interventions and structures have not been able to offer tailor-made supporting measures to 'growth-inclined' and 'growth-ambivalent' SMEs to enhance their internationalisation performance' (European Parliament 2016: 19-20). Therefore, SME policies should aim at creating more innovative firms, the ones that grow fastest.

In 2014 the SME sector accounted for 99.8% of all enterprises in the non-financial business sector in the EU-28, employed almost 90 million people (67% of total employment), and generated 58% of non-financial business sector value added (VA). The vast majority of SMEs (93%) are micro-enterprises. Statistics rarely provide information on which micro-enterprises are 'one-man shops' (the self-employed), and which are companies with less than 10 employees. According to Róna-Tas (2005), the self-employed differ radically from entrepreneurs and should be regarded rather as workers without a boss. Their businesses contribute to their survival, but not much to the innovative development of the economy. According to the latest data (from 2012), businesses without any employees within the micro SMEs accounted for 59% of all businesses (European Commission 2016a: 8).

About  $\frac{3}{4}$  of European SMEs are active in five key sectors: 'wholesale and retail trade', 'manufacturing', 'construction', 'business services' and 'accommodation and food services'. In the *manufacturing sector*, 99.2% of EU-27 companies are SMEs, accounting for 59% of employees, 45% of VA and 39% of sales. 'Manufacturing' is the most important sector for medium-sized SMEs, while 'wholesale and retail trade' is the most important one for micro and small SMEs in terms of VA, employment and the number of enterprises. Large enterprises create a higher share of VA in the 'high and medium/low tech manufacturing' sector, while SMEs create a higher share of VA in the services sector. The analysis found that 'particularly young firms active in knowledge-intensive service sectors and based in favourable macro-economic conditions were the main net job creators' (European Commission 2016a: 5).

These differences between the SME shares of total employment and valued added in the non-financial business sector reflect the fact that their activities are typically more *labour intensive*, while those of large enterprises are more *capital intensive*. Only two sectors (business services and information and communication) account for a larger share of SME value added compared to their share of total SME employment (respectively 13% and 11%, and 5% and 4%), while the manufacturing sector accounts for 20% of SME added value and 20% of total SME employment. Therefore, revitalising manufacturing requires a specific focus on increasing SME productivity and VA.

The European Competitiveness Report (European Commission 2014b) showed that SMEs' level of internationalisation remains low, a fact particularly true for one-man shops and young SMEs in traditional industries. Among the roughly two million manufacturing SMEs in the EU-28, 14.3% export goods to other EU countries and 9.7% to countries outside the EU. Export participation strongly reflects company size: 7.9% of micro enterprises, 37.5% of small firms, and 67.0% of medium-sized enterprises export to internal markets, compared to 85.4% of large manufacturing firms (EC 2014b: 81). SME size is thus crucial for export performance. Not only in Europe, but in most countries throughout the world, SMEs are responsible for less than half the value of gross exports (OECD and World Bank Group 2015: 21).

The number of exporting SMEs is highest in *manufacturing* (51.7%), followed by information and communication services (40.9%) and transportation (36.2%). The gap in export participation between SMEs and large firms is much less pronounced

in specific service industries, i.e. in information and communication services and in finance. Exporting is the preferred internationalisation mode for SMEs, and only very few European SMEs have foreign affiliates outside the EU/EFTA region – 1.2% compared to 11.4% of large firms (European Commission 2014b: 82, 85).

### 3.2 Differences between SMEs in new and old EU member states

SMEs are also important for the New Member States (NMS), although they differ significantly from their counterparts in the old member states. The majority of NMS SMEs are younger, have less experience, and often work far from the technological frontier. Most have emerged in traditional sectors with low entry barriers, and have followed survival strategies instead of growth paths. Not surprisingly, the economic contribution of SMEs varies significantly across member states. For example, in 2014 the number of SMEs per € million of VA generated in the non-financial business sector ranged from 2 in Luxembourg to 27 in Bulgaria. Overall, most Eastern European (CEE) countries are characterised by a high number of SMEs per € million of VA generated compared to Western European countries (European Commission 2016a: 9). Borbás (2014: 100-101) also shows decisive differences between SMEs in Austria and SMEs in Poland, Czechia, Slovakia, Hungary and Romania, with Austria clearly in the leading position.

For example, only 0.8% of Bulgarian SMEs operate in high-tech and medium-tech manufacturing industries (compared to the EU average of 2) and only 16% in the knowledge-intensive services sector (28% average in the EU). 95% of Bulgarian SMEs also show a *low level of internationalisation*. The greatest share of the country's exports stem from medium-low (36%) and low technological (21.4%) activities, compared to high (6%) and medium-high (19.4%) activities (Ministry of Economy and Energy, 2012). The share of new-to-the-market products in the industrial firms' total turnover is only 2.9%, while the share of new-to-the-company but not new-to-the-market products is 3.7% (NSI 2016).

No CEE country features among the EU innovation leaders, and only Slovenia is classified as a 'strong innovator'. Czechia, Hungary, Slovakia and Poland are classified as 'moderate innovators', while Bulgaria and Romania are 'modest innovators'. The Summary Innovation Index 2015 (relative to Germany) was equal to 38% for Bulgaria, 69% for Czechia, 56% for Hungary, 46% for Poland, 28% for Romania and 55% for Slovakia (the CEE average was 49%) (European Commission 2016b). Consequently, SMEs in leading EU countries have more capabilities, as they combine in-house innovation activities with joint innovation activities with other companies or public-sector organisations (European Commission 2016b: 23).

The data shows that, of all EU countries, only Finland, Sweden and Denmark exceed the 'Europe 2020' target of 3% R&D, while Germany and Austria both fall just short of it. The current average R&D intensity in the EU is around just 2%, while in nine EU countries it is less than 1%. Among the CEE countries, Slovenia has caught up with the EU average GERD ratio of around 2%, while R&D expenditure in other CEE economies is

systematically below the EU average (Eurostat 2015). The situation is similar in respect to the *Industrial Performance Scoreboard*, where none of the CEE counties feature in the well-performing clusters. Slovenia alone belongs to the moderate cluster, while all other CEE countries are in the catching-up cluster (European Commission 2013b: 5).

With respect to changing industrial structures, the EC has outlined *four groups* of countries. The *first group* is dominated by technologically advanced sectors, and consists of Austria, Belgium, Denmark, Finland, France, Germany, Ireland, the Netherlands, Sweden and the United Kingdom. The *second group* consists of countries where industry is specialised in less technologically advanced sectors: Cyprus, Greece, Italy, Luxembourg, Portugal and Spain. The *third group* comprises countries catching up in terms of GDP per capita, although they are specialised in sectors with a high innovation intensity and in technology-driven industries (Czechia, Hungary, Malta, Poland, Slovakia and Slovenia). The *fourth group* also contains catching-up countries, but ones specialised in technologically less advanced sectors (Bulgaria, Estonia, Latvia, Lithuania and Romania) (European Commission 2011: 4-5). As can be seen, the first two groups comprise 16 old EU member states, while the last two groups consist of ten CEE countries and Malta.

This means that the industrial structures of the old and new member states differ in terms of technological progress and innovation capacity, with more industrial enterprises, including SMEs, from the advanced groups better prepared to absorb EU financial and technical support, compared to those from the less advanced groups. For this reason, applying equal innovation criteria to enterprises operating under unequal conditions will, at least, reproduce the existing inequality, if not deepen it. Borbás (2014: 101) considers that if no new policies are initiated or specific measures taken soon, the *gap* between Western and Eastern European SMEs will widen further. The European Commission (2013a: 5) has already noted that '*differences in innovation performance* in the EU have started to increase, signalling a possible halt to convergence in Member States' innovation performance'. This suggests that the current innovation policy may not properly reflect countries' level of innovation capacity.

In summary, industrial and SME policies in the NMS have followed a pattern similar to that of EU policies (switching from a vertical to a horizontal approach), but under *unequal conditions*. While the horizontal approach has replaced key industries' previous reliance on state support, it has not led to any significant industry upgrading. The question arises as to what extent CEE enterprises are able to participate in the new world of super-advanced industrial development. Given their technological and skill deficits, to what extent can they contribute to the development of space technology, clean motor vehicles, nanotechnologies and bioengineering innovation? (Bartlett 2014: 36). As EC general guidelines are not issued specifically to serve the interests of SMEs from this peripheral EU region, there is a need for specific solutions to upgrade these SMEs.

## 4. Effects of EU industrial policy on Eastern European SMEs

It is difficult to examine the effects of EU industrial (and SME) policies on SME performance, because so many factors are at play (Bianchi *et al.* 2006: 385). Evidence shows that SMEs can improve their performance via two strategies: go it alone or become part of a local *cluster* and/or a *global value chain*. The cluster approach assumes that upgrading is driven by local firms and institutions, while the GVC approach views this upgrading as a result of participating in GVCs (Humphrey and Schmitz 2002: 1020).

### 4.1 Effects of SME clustering initiatives

Although some clusters have performed relatively well over last decades, they are experiencing significant difficulties with globalization. For the archetypical *industrial districts* in Northern Italy for instance, globalization has created intense pressure from competitors in Asia and Eastern Europe. Certain activities have been outsourced, and there are serious concerns that this will undermine the basis of this traditional industrial region (Porter and Ketels 2009: 172).

While successful clusters emerge from grassroots, many efforts to create clusters from above have failed. The main factor distinguishing successful clusters is the level of *social capital*, a factor including existing norms, networks and social confidence (Putnam 1993). The *confidence* embedded in social relations is the most important factor for clusters to succeed. But this is exactly what is *lacking* in many CEE countries, a deficit characterised by the lower quality of their institutions rather than any lower trustworthiness of members of society (Lissowska 2013). Without trust, SMEs *restrain from collaborating* with other businesses, associations and local authorities.

Researchers highlight the significance of clusters for SME growth (Hagen *et al.* 2012), but there is not much empirical proof of transitioning countries showing any positive signs of cluster effects (Karaev *et al.* 2007). For example, clusters in the Eastern part of Romania have been identified as being local and dependent on natural resources rather than made up of trading industries (e.g. wood, textiles, tourism, etc.), as being based on horizontal relations (e.g. clothing, wood, metallurgy, etc.) rather than vertical ones, and as being latent or potential rather than working clusters (Constantin *et al.* 2011). Similarly, Akbar and Ferencikova (2007: 248-249) found that, in Slovak automotive sector clusters, many of the companies surveyed were not really functional. There is little intentional technology transfer from MNEs to their suppliers, as well as little evidence of cooperation in such areas as marketing, export promotion or investment. With the exception of a local market for skilled workers, the supplier sample displayed few of the cluster attributes identified in the extant literature. According to Gîrneară and Maşcu (2014), the striking aspect of the textile clusters in the six CEE countries is that they belong to the ‘Moderate and Modest Innovators’ category.

The Mawell Stamp PLS (2012: 40) research on the *EU Best Practice in Cluster Development Policy* commissioned by the Government of Croatia revealed that the key lesson is the need to put a strong emphasis on innovation within clusters. ‘The cases have

all shown that, although networking amongst SMEs is important, the primary thrust of clustering should be to strengthen *technology transfer and innovation*. Therefore, to cope with the new challenges clusters have to move towards higher quality, based on knowledge and innovation. Today's successful clusters are those which base their production on technological frontiers and actively participate in GVCs (Humphrey and Schmitz 2004). According to Nadvi and Halder (2005), linkages external to the local cluster but internal to the value chain in areas of complementary and new knowledge are of key importance to succeed in GVCs.

## 4.2 Effects of SME participation in GVCs

In the early stages of transition, economic growth depended on the speed and effectiveness of privatisation, while in subsequent phases FDI played an important role. During the transition process, Czechia, Hungary and Poland were the most attractive FDI destinations. 'In 2000, these three countries received 76.36% of the total FDI that went to the region, while in 2011 this was 70.21%' (Török *et al.* 2013: 20). In the period between 1995 and 2008, FDI to Romania and Bulgaria continually increased as well. However, after 2009, it dropped considerably in all these countries. Generally speaking, FDI can have both a positive and negative impact on local SMEs (Drahokoupil and Galgóczi 2015: 24). The negative impact refers to increased product market competition, which threatens the survival of local SMEs, while the positive effects are related to SME inclusion in GVCs and knowledge spillover.

According to Gereffi *et al.* (2005: 78) there are five types of GVC governance – hierarchy, captive, relational, modular and market – relating to the level of coordination and power asymmetry. In all types of GVCs, local producers can learn from global lead companies about how to improve their processes, and there is also scope for functional upgrading. Kaplinsky and Readman (2001) argue that, through accumulating international experience, most SMEs can move from low value-added to high value-added, knowledge-intensive production and high return rate of ODM (original design manufacturer) or OBM (original brand manufacturers). Moving up the GVC hierarchy relies on the assumption that local firms can upgrade their knowledge and increase their productivity through 'learning from global buyers'. The ability of small firms to move to 'high-end' GVC activities depends on their *absorptive capacity* and government support (Palit 2006). For example, the more advanced CEE countries have been successful in boosting exports in higher-end technology industries, while less advanced ones have continued to grow exports in lower-end technology industries (Damijan *et al.* 2013).

In *captive* value chains, however, small suppliers are much more dependent on larger buyers. Bearing in mind that many CEE manufacturing SMEs work as subcontractors to large EU and other world buyers, factors hampering their technological upgrading like *power asymmetries* are not much discussed. 'Captive inter-firm linkages control opportunism through the dominance of lead firms, while at the same time providing enough resources and market access to the subordinate firms to make exit an unattractive option' (Gereffi *et al.* 2005: 87). Consequently, many of the upgrading activities supported by buyers may be related to their appropriability strategies, rather

than to providing innovation opportunities to local producers (Morrison *et al.* 2008). Bazan and Navas-Aleman (2004: 115) found that 'buyers have resisted sharing their knowledge on higher valued added activities such as design, branding, marketing and chain coordination'. It is this power asymmetry which often prevents local suppliers from benefiting from global buyers in terms of innovation upgrading.

Staritz and Plank (2013: 4) have shown the limits of the conventional view of economic upgrading as a process where local firms 'learn from global buyers' and subsequently move up the VA hierarchy. This ideal trajectory is but one of many possible outcomes resulting from participation in GVCs which in a worst case may even lead to economic 'downgrading'. Their analysis revealed that the potential positive effects from MNE investments in Hungary and Romania, as reflected in the relevance of local linkages and knowledge spillovers, have remained *low and below expectations*. Besides the often cited 'lack of capacity' of local firms, the common industry practice of negotiating supply contracts at global level between headquarters leaves little room for local suppliers (Staritz and Plank 2013: 15). This business model, which relies heavily on imported inputs manufactured by established foreign-owned suppliers that relocate with the MNEs, might be one of the key reasons for the *limited integration* of local firms in electronics GPNs. Additionally, the strategic interest of MNEs may not allow any greater involvement of local suppliers beyond the provision of non-core products and services. For example, Akbar and Ferencikova (2007: 246, 248) found a mixed bag of 'spillover' prospects for local producers in the Slovak automotive cluster. MNEs appear to maintain *tight control* over relations with their suppliers, offering little technology transfer, restraining options regarding to whom suppliers can sell and restricting the use of multiple company tendering.

Baldwin (2012: 6-7) considers that current GVCs include 'headquarter' economies (whose exports contain relatively few imported intermediates) and 'factory economies' (whose exports contain a large share of imported intermediates). There is a hub-and-spoke asymmetry in the dependence of factory economies on the headquarter economy's intermediate exports. If Germany is the hub in Europe, CEE countries belong to the factory economies due to the relocation of lower technology intensive stages of production to them. The offshoring of lower value-added stages of production (assembly, fabrication stages) has led to a deepening of the so-called smile curve, while preserving high value-added stages (product specification, design, R&D, sales, marketing and after-sales services) at home. The GVC participation of CEE SMEs is concentrated in labour-intensive, low value-added manufacturing and services activities, where entry costs are lower. Therefore, the inclusion of CEE countries in GVCs through FDI has resulted in a spatial assignment of skill-intensive stages to high-wage nations and labour-intensive stages to low-wage nations, i.e. 'headquarter economies' offshoring to 'factory economies' (Baldwin 2012: 13-14).

Today, CEE countries operate mainly as *manufacturers of intermediate goods* within GVCs, contributing to the increase in the share of manufactured products in their exports from 80% in 1999 to 85% in 2013 (Bierut and Kuziemska-Pawlak 2016: 12). At the same time, over the 1995-2011 period, the manufacturing share of domestic VA in gross exports declined in most CEE countries, meaning that they are not moving up

the GVC ladder. The other problem in these economies is the lack of linkage between the manufacturing sector and services, i.e. manufacturing does not serve as a ‘carrier function’ for services to contribute to a country’s export performance (Olczyk and Kordalska 2016: 20). Not surprisingly, the share of high-tech exports in total exports from the region remains more than 10 p.p. below that of more advanced EU countries, with the exception of Hungary (Bierut and Kuziemska-Pawlak 2016: 16). Generally speaking, CEE exporters are located more in *downstream production segments* than in upstream markets (Cieřlik 2014: 25).

## 5. EU industrial policy and challenges for Eastern European SMEs

Now that the crisis and FDI period are over, the issues of innovation and the knowledge economy have moved up the agenda in CEE countries. Adopting a sectoral industrial approach, the EC has identified specific high-tech sectors to be supported through implementing advanced technologies, employing highly qualified workers and promoting innovation. *Innovation is thus at the heart* of both the horizontal and sector-specific approaches found in the new EU industrial policy. ‘The pace of innovation is a key factor determining the potential of industries that are intensive in both technology and human capital and which play a significant role in Europe’ (Heymann and Vetter 2013: 12). Innovation is stimulated by various external and internal conditions. While the former refer to the institutional and business environment, the latter reflect a company’s capabilities in terms of knowledge, human capital and absorptive capacity (Bianchi and Labory 2006: 20-21).

### 5.1 Institutional challenges

Researchers have found that the *effectiveness of decentralizing industrial policy* presupposes the existence of *well-functioning markets*, an *entrepreneurial class* and the *institutional framework* needed for its implementation (Pitelis 2006: 446). Also important is the promotion of *attitudes, values and culture conducive to innovativeness*. This is evidently not the case in some CEE countries. Based on their analysis of a number of contextual restrictions, Sepulveda and Amin (2006, p. 333) concluded that ‘building the baseline conditions for a decentralized policy framework is demanding and not open to easy or quick policy fixes’. This is because a culture of cooperation matures over decades. In a context of institutional uncertainty, small firms in particular see innovation as a high-risk activity vis-à-vis cutting labour costs and avoiding regulation and tax compliance (Sepulveda and Amin 2006: 330).

For this reason, any emphasis on innovation-driven growth is confronted with significant differences in SME capacities between countries with different institutional, business and physical environments. For example, the *national innovation systems* in old EU member states are geared towards meeting demand from companies (European Commission 2016b: 23), while those in the NMS are still in the process of creating ticker relationships with businesses. SME performance is also affected by the quality of physical infrastructure, such as roads, ports and airports, as well as the efficiency of their

operations (OECD and World Bank Group 2015: 60). Merely improving the transport infrastructure in the NMS is a challenge requiring significant investments (European Commission 2011: 9).

Significantly weaker in the NMS is the capacity of *public administrations* to deliver high-quality public services. E-government initiatives have been undertaken, but businesses in many of these countries still suffer from a lack of one-stop-shops. The literature also highlights the role that *local governments* play in providing ‘a framework in which clusters of SMEs can flourish’ (Humphrey and Schmitz 1996: 1861). Competent bureaucracies, however, are a *scarce resource* in many CEE countries.

Therefore, one of the limits to the ‘horizontal’ approach is the *lack of broader institutional conditions* required before any decentralized policy can be implemented. Analysing the EU’s industrial renaissance strategy, the Confederation of Independent Trade Unions (CITUB) in Bulgaria arrived at the conclusion that the EC *Industrial Renaissance* report did not take into consideration institutional differences between old and new EU member states. For example, the measure to improve SME access to financing through issuing securities would hardly help CEE enterprises, given the relatively underdeveloped capital markets in certain CEE countries (CITUB 2014).

In summary, NMS enterprises – and particularly SMEs – operate in a less friendly environment (business, institutional, and physical) than their counterparts in the old member states. These institutional differences call for a careful evaluation of the thresholds of critical mass necessary for decentralization such as the number and types of firms, technological capacities, social and human capital, institutional quality and physical infrastructure. Improving SME innovation capacity in CEE countries thus requires a *mix of policies* specifically addressing these local challenges rather than a single policy instrument.

## 5.2 Capability challenges

There are cases where highly innovative SMEs can internationalize directly (‘born global’). The majority of SMEs, however, i.e. those relying primarily on cost or specialised in certain types of services, are more likely to participate in GVCs as domestic suppliers (OECD and World Bank Group 2015: 22). Local companies’ lack of technological and organizational *capabilities* is highlighted as a key obstacle to supplier integration. Indeed, many CEE SMEs do not meet the size and quality requirements necessary to qualify as MNE suppliers. In particular, *the missing layer of medium-sized firms* with appropriate technological capabilities and financial strength is generally pointed out as a major obstacle (Staritz and Plank 2013: 14).

These limits to SME upgrading may however be temporary, as chain governance is a dynamic process. If local producers can develop new capabilities, this can change power relationships within a chain. One basic requirement for upgrading is ‘the strategic intent of the firms involved. Without intra-firm investment in equipment, organisational arrangements and people, no substantial upgrading of any kind is possible’ (Humphrey

and Schmitz 2002: 1024). Gereffi (1999: 55) demonstrates that East Asian countries, after entering GVCs as first-tier suppliers of large buyers, evolved into full-package suppliers and ‘thereby forged an innovative entrepreneurial capability that involved the coordination of complex production, trade and financial networks’. This success was made possible by extensive organizational learning at company level. Therefore, although external sources of knowledge are essential, the most important factor is the creation of internal technological capabilities. Lall (2006: 95) similarly concludes that the success of East Asian countries would not have occurred without developing *local capabilities*. Building local capabilities requires huge investment in people and equipment, which many SMEs in CEE countries cannot afford alone. The only way to increase SME innovation capabilities is through major government support. However, with the withdrawal of the state from the economy, the majority of local CEE enterprises are falling into a state of dependency, becoming increasingly peripheral parts of large multinational alliances (Chlumský 2002: 4).

Except for the East Asian examples, there are few other success stories on how local companies bound to GVCs succeed in upgrading from a captive situation to a higher-value-added form of exporting. All these examples stress the fact that *increasing supplier competences* has been the main driver behind this shift (Gereffi *et al.* 2005: 99).

The weak technological capabilities and the lack of state support explain why CEE SMEs are less prepared to follow innovation-based EU industrial renaissance policy. The NMS ‘face significant challenges, as they move towards more knowledge- and skills-oriented industries, even if it is hampered by weaknesses in innovation capacity and knowledge transfer’ (Török *et al.* 2013: 19). Additionally, changes in the MNE approach to local suppliers (selecting and sticking to a few ‘half-tier’ suppliers) is limiting the impact on the host economy and on host country suppliers.

## **6. Conclusions: modifying industrial policy in CEE countries**

Although current EU industrial policies do not allow a return to old-style policies (involving direct state support to industries), it appears that certain elements of old-style industrial policies are particularly *useful at earlier stages* of development (Bianchi and Labory 2006: 24). Rodrik (2004: 15) argues that ‘industrial restructuring rarely takes place without significant government assistance’. In the same vein, Shafaeddin (2008: 16) considers that both selective and functional government interventions are required to address obstacles to ‘capability building’.

There is a growing consensus that state interventions are often necessary when market failures prevail. Economists recognise that public measures can boost certain development factors, which market forces alone cannot generate. Government programs need to subsidize SME capability development in terms of quality, innovation, training, R&D, networking, infrastructure investment, adaptation of foreign technology to local conditions, risk and venture capital, and so on. The advantage of such cross-cutting programs is that they span several sectors at once and directly target market failures (Rodrik 2004: 23).

A stronger argument for modifying industrial policies in the CEE countries is provided by the (neo) Schumpeterian growth theory (Aghion and Howitt 1998), under which successful innovation policies should take the *technological level* of individual countries into account. The CEE countries are operating as peripheral economies in terms of technology generation. Consequently, a single policy may not be effective in countries at very different distances from the world technology frontier. In less advanced countries, technology transfer and non-R&D innovation activities are more important drivers of innovation. Therefore, increasing the level of technology transfer and absorptive capacity through R&D and training should be a priority in these countries (Kaderabkova and Radosevic 2011: 2-3).

This raises the question whether unconditional government support for FDI is justified or whether government resources could not be better used on more proactive policies aimed at building up *local industrial structures* (Staritz and Plank 2013: 19). The identified low level of technology transfer from MNEs to local suppliers undermines one of the main policy arguments in favour of host governments encouraging FDI in Slovakia (Akbar and Ferencikova 2007: 259). Olczyk and Kordalska (2016: 20) argue that CEE industrial policies will have to be *modified* to improve CEE positions in GVCs. This involves introducing measures to facilitate the inclusion of SMEs in the early (research, conception and product design) and final (sales, marketing and distribution services) stages of GVCs. The OECD and World Bank Group (2015: 34) conclude that improved upstream integration in Mexico and Hungary could be achievable through *upgrading the SME* population to meet the quality standards and specifications of exporting firms.

The *policy implications* of these conclusions point to the necessity of: (1) increasing skill levels and R&D, thereby indirectly boosting SME export activities; (2) helping SMEs improve the quality of their products and services; and (3) stimulating SMEs to collaborate more with large foreign firms (European Commission 2014c: 95). Increasing SME productivity in current tasks can be achieved through capacity upgrading, and not necessarily through market innovations. Veugelers (2015: 23) also considers that ‘more emphasis in innovation policy on supporting the *absorption and adaptation* of existing frontier technologies by industry would make more sense for the EU countries in catching-up mode. Particularly for countries in less advanced innovation development phases, more attention to stimulating the quality of *human capital* formation and supporting firms’ incentives to adopt *new technologies* would be more effective rather than supporting creative capacity building to improve the country’s innovation potential.’

CEE countries have specific innovation strengths and weaknesses, which call for the development of customized policies and not the blinkered application of a ‘Europeanized’ policy approach (Reid 2011). This means that SMEs should be supported by *policies* oriented towards both improving the institutional environment and developing innovation capabilities. It is not enough to transpose EU directives into national legislation, as many CEE countries need additional measures to enforce this legislation. Moreover, support for SME innovativeness should be concentrated more on *innovation capacity development* rather than on immediate innovations. SMEs need simultaneous dual support – *for innovation itself and for their capacity to undertake innovation*. Therefore, accelerating the catch-up process in CEE countries presupposes

the implementation of policies devoted primarily to *industrial upgrading, the adoption of new technologies and skills development*. Such policies were applied as state aid, regional cohesion and trade policies in advanced EU countries 10 or 20 years ago (European Commission 2006).

Aghion and Akcigit (2017: 65) consider that the EC has been remarkably effective in limiting the scope of state aid. They recommend that the Commission move from a legalistic ‘*ex ante*’ approach to sectoral state aid to a pragmatic ‘*ex post*’ approach where state aid is only sanctioned when it can be proved that it reduces market competition. Otherwise, the application of the *same measures* to boost competitiveness through innovation will boost the competitive edge of companies from more advanced EU countries, without any significant impact on less competitive firms from less advanced countries. To be successful, EU industrial and SME policies should take greater account of the identified differences (1) between SMEs in more technologically advanced and catching-up member states; and (2) inside the group between life-style and growth-oriented SMEs.

## References

- Aghion P. and Akcigit U. (2017) Innovation and growth: the Schumpeterian perspective, in Blundell R. *et al.* (eds.) *Economics without borders. Economic research for European policy challenges*, Cambridge, Cambridge University Press, 29-72.
- Aghion P. and Howitt P. (1998) *Endogenous growth*, Cambridge, MA, MIT Press.
- Akbar Y. H. and Ferencikova S. (2007) Industrial clustering and global value chains in Central and Eastern Europe: role of MNEs in industrial upgrading, *Prague Economic Papers*, 3, 237-251
- Baldwin R. (2012) Global supply chains: why they emerged, why they matter, and where they are going, CTEI Working Papers CTEI-2012-13, Geneva, The Graduate Institute, Centre for Trade and Economic Integration.
- Bartlett W. (2014) Shut out? South East Europe and the EU's new industrial policy, LEQS Paper No. 84/2014, London, London School of Economics and Political Science.
- Bazan L. and Navas-Aleman L. (2004) The underground revolution in the Sinos Valley: a comparison of upgrading in global and national value chains, in Schmitz H. (ed.) *Local enterprises in the global economy*, Cheltenham, Edward Elgar, 110-139.
- Bianchi P. and Labory S. (2006) From 'old' industrial policy to 'new' industrial development policies, in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 3-27.
- Bianchi P., Labory S., Paci D. and Parrilli M.D. (2006) Small and medium-sized enterprise policies in Europe, Latin America and Asia, in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 380-402.
- Bierut B. K. and Kuziemska-Pawlak K. (2016) Competitiveness and export performance of CEE countries, NBP Working Paper No. 248, Warsaw, Economic Institute.
- Borbás L. (2014) Supporting SMEs in Central-Eastern Europe, Management, Enterprise and Benchmarking - In the 21ST Century, Budapest. [https://kgk.uni-obuda.hu/sites/default/files/05\\_Borbas.pdf](https://kgk.uni-obuda.hu/sites/default/files/05_Borbas.pdf)
- Chang H.-J. (2003) *Kicking away the ladder: development strategy in historical perspective*, London, Anthem Press.

- Chlumský J. (2002) Problems of economic convergence between Czechia and the EU. <http://www.ies.ee/iesp/chlumsky.pdf>
- Cieślak E. (2014) Post-communist European countries in global value chains, *Ekonomika*, 93 (3), 25-38
- CITUB (2014) Industry renaissance in Bulgaria. General analysis, Sofia, July 2014 [In Bulgarian].
- Cohen E. (2007) Industrial policies in France: the old and the new, *Journal of Industry, Competition and Trade*, 7 (3-4), 213-227.
- Constantin D. L., Bodea C., Paula C. B., Goschin Z., Dragusin M., and Stancu I. (2011) The question of clusters in less developed areas. Empirical Evidence from Romania's eastern region, paper presented at The 50<sup>th</sup> Congress of European Regional Science Association, 19-23 August 2010, Jönköping, Sweden, <https://ideas.repec.org/p/wiw/wiwsa/ersa10p1157.html>
- Cowling M. and Storey D. J. (2002) The quality of work in SMEs, Sofia, Friedrich Ebert Foundation.
- Damijan J., Kostevc Č., and Rojec M. (2013) FDI, structural change and productivity growth: global supply chains at work in Central and Eastern European countries, GRINCOH Working Paper Series No. 1.07, Ljubljana, Institute for Economic Research.
- De Bandt J. (2006) Do informational service activities translate into new industrial policy requirements?, in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 98-111.
- Drahokoupil J. and Galgóczi B. (2015) Introduction. Foreign Direct Investment in Eastern and Southern European countries: still an engine of growth? in Galgóczi B., Drahokoupil J. and Bernaciak M. (eds.) *Foreign investment in Eastern and Southern Europe after 2008. Still a lever of growth?*, Brussels, ETUI, 19-35.
- European Commission (2006) *Management Capacity Building*, Brussels.
- European Commission (2011) *Industrial policy: reinforcing competitiveness*, COM(2011) 642 final, 14 October 2011. <http://ec.europa.eu/transparency/regdoc/rep/1/2011/EN/1-2011-642-EN-F1-1.Pdf>
- European Commission (2012) *A stronger European industry for growth and economic recovery. Industrial policy communication update*, COM(2012) 582 final, 10 October 2012.
- European Commission (2013a) *Industrial competitiveness of EU member states: some progress made, but many challenges still lay ahead*, 25 September 2013. [http://europa.eu/rapid/press-release\\_MEMO-13-816\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-816_en.htm)
- European Commission (2013b) *Industrial performance scoreboard and member states' competitiveness performance and implementation of EU industrial policy*, SWD(2013) 346, 20 September 2013.
- European Commission (2014a) *For a European industrial renaissance*, COM(2014) 12 final, 22 January 2014.
- European Commission (2014b) *European competitiveness report, 2014. Helping firms grow*, SWD(2014) 277 final. <http://ec.europa.eu/DocsRoom/documents/6706/attachments/1/translations>.
- European Commission (2014c) *Evaluation cluster initiatives managed by DG Enterprise and Industry, Final Report*, 23 September 2014. <http://ec.europa.eu/smart-regulation/evaluation/search/download.do?documentId=12844810>
- European Commission (2016a) *Annual report on European SMEs 2014 / 2015, SMEs start hiring again, SME Performance Review 2014/2015, Final report*, <http://www.pmievolution.it/wp-content/uploads/2016/04/annual-report-SME-2015.pdf>
- European Commission (2016b) *European Innovation Scoreboard 2016*, Brussels.

- European Parliament (2016) Tailor-made support for SMEs towards effective implementation of the EU's trade and investment strategy. [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/535025/EXPO\\_STU\(2016\)535025\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/535025/EXPO_STU(2016)535025_EN.pdf)
- Eurostat (2015) Statistics on small and medium-sized enterprises. [http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics\\_on\\_small\\_and\\_medium-sized\\_enterprises](http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_small_and_medium-sized_enterprises)
- Gereffi G. (1999) International trade and industrial upgrading in the apparel commodity chain, *Journal of International Economics*, 48 (1), 37-70.
- Gereffi G., Humphrey J., and Sturgeon T. (2005) The governance of global value chains, *Review of International Political Economy*, 12 (1), 78-104.
- Gîrneacă A. and Maşcu M. (2014) Development discrepancies between Western and Eastern EU countries: a statistical analysis of textile and apparel clusters, *Proceeding of the 8<sup>th</sup> International Management Conference 'Management Challenges for Sustainable Development'*, November 6<sup>th</sup> -7<sup>th</sup>, 2014, Bucharest, Romania.
- Hagen B., Zucchella A., Cerchiello P. and De Giovanni N. (2012) International strategy and performance -Clustering strategic types of SMEs, *International Business Review*, 21 (3), 369-382.
- Henrekson M. and Johansson D. (2010) Gazelles as job creators: a survey and interpretation of the evidence, *Small Business Economics*, 35 (2), 227 - 244.
- Heymann E. and Vetter S. (2013) Europe's re-industrialisation: the gulf between aspiration and reality, *Deutsche Bank Research: EU Monitor European integration*, 26 November 2013.
- HLG-KET (2015) KETs: Time to act, Final report June 2015. <http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=22113&no=2>
- Humphrey J. and Schmitz H. (1996) The triple C approach to local industrial policy, *World Development*, 24 (12), 1859-1877.
- Humphrey J. and Schmitz H. (2002) How does insertion in global value chains affect upgrading in industrial clusters?, *Regional Studies*, 36 (9), 1017-1027.
- Humphrey J. and Schmitz H. (2004) Chain governance and upgrading: taking stock, in Schmitz H. (ed.) *Local enterprises in the global economy*, Cheltenham, Edward Elgar.
- Kaderabkova A. and Radosevic S. (2011) Innovation policy in multi-tier Europe: introduction, in Radosevic S. and A. Kaderabkova (eds.) *Challenges for European innovation policy: cohesion and excellence from a Schumpeterian perspective*, Cheltenham, Edward Elgar, 1-8.
- Kaplinsky R. and Readman J. (2001) Integrating SMEs in global value chains: spreading the gains from globalisation, *IDS Bulletin*, 32 (3).
- Karaev A., Koh S. C. L. and Szamosi L. T. (2007) The cluster approach and SME competitiveness: a review, *Journal of Manufacturing Technology Management*, 18 (7), 818-835.
- Lall S. (2006) Industrial policy in developing countries: what can we learn from East Asia? in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 79- 97.
- Lissowska M. (2013) The deficit of cooperative attitudes and trust in post-transition economies, *EAEPE No. 10*, European Association for Evolutionary Political Economy [http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE\\_10.pdf](http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE_10.pdf).
- Maxwell Stamp (2012) EU best practice in cluster development policy. <https://poduzetnistvo.gov.hr/UserDocsImages/EU%20projekti/IPA%20IIIC/Podr%C5%A1ka%20razvoju%20klastera/5.Izvje%C5%A1taj%20o%20najboljoj%20praksi%20u%20EU.pdf>
- Ministry of Economy and Energy (2012) Operational Programme on the development of Competitiveness of the Republic of Bulgaria, Sofia, [http://www.opcompetitiveness.bg/images/filerepository/2046\\_OPCompetitiveness\\_En\\_2012.pdf](http://www.opcompetitiveness.bg/images/filerepository/2046_OPCompetitiveness_En_2012.pdf)

- Morrison A., Pietrobelli C. and Rabellotti R. (2008) Global value chains and technological capabilities: a framework to study learning and innovation in developing countries, *Oxford Development Studies*, 36 (1), 39-58.
- Nadvi K. and Halder G. (2005) Local clusters in global value chains: exploring dynamic linkages between Germany and Pakistan, *Entrepreneurship and Regional Development*, 17 (5), 339–363.
- NSI (2016) R & D and innovations, Sofia, National Statistical Institute. <http://www.nsi.bg/en/content/6733/rd-and-innovations>
- OECD and World Bank Group (2015) Inclusive global value chains policy options in trade and complementary areas for GVC Integration by small and medium enterprises and low-income developing countries. <https://www.oecd.org/trade/OECD-WBG-g20-gvc-report-2015.pdf>
- Olczyk M. and Kordalska A. (2016) Gross exports versus value added exports: determinants and policy implications for manufacturing sectors in selected CEE, GUT Faculty of Management and Economics Working Paper Series A No. 10/2016, Gdansk, University of Technology.
- Palit A. (2006) Technology upgradation through global value chains: challenges before BIMSTEC Nations, CSIRD Discussion Paper No. 13/2006, Kolkata (India), Centre for Studies in International Relations and Development.
- Pelkmans J. (2006) European industrial policy, in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 45-78.
- Pitelis C. N. (2006) Industrial policy: perspectives, experience, issues, in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 435-44.
- Porter M. E. (1998) Clusters and the new economics of competition, *Harvard Business Review*, 76 (6), 77-90.
- Porter M. E. and Ketels C. H. M. (2009) Clusters and industrial districts - common roots, different perspectives, in Becattini, G., Bellandi M. and De Propriis L. (eds.) *A handbook of industrial districts*, Cheltenham, Edward Elgar, 172-186.
- Poutziouris P. (2003) The strategic orientation of owner-managers of small ventures: evidence from the UK small business economy, *International Journal of Entrepreneurial Behaviour & Research*, 9 (5), 185 -214.
- Putnam R. (1993) *Making democracy work*, Princeton, NJ, Princeton University Press.
- Reid A. (2011) EU innovation policy: one size doesn't fit all!, in Radosevic S. and Kaderabkova A. (eds.) *Challenges for European innovation policy: cohesion and excellence from a Schumpeterian perspective*, Cheltenham, Edward Elgar, 112-149.
- Rodrik D. (2004) *Industrial policy for the twenty-first century*, KSG Working Paper No. RWP04-047, Cambridge, MA, John F. Kennedy School of Government.
- Róna-Tas Á. and Sagi M. (2005) Entrepreneurship and self-employment in transition economies, *Research in Sociology of Work*, 15, 279-310.
- Schrank A. and Whitford J. (2009) Industrial policy in the United States: a neo-Polanyian interpretation, *Politics & Society*, 37 (4), 521-553.
- Sepulveda L. and Amin A. (2006) Decentralizing industrial policies: threat or opportunity in developing countries? in Bianchi P. and Labory S. (eds.) *International handbook on industrial policy*, Cheltenham, Edward Elgar, 321-341.
- Shafaeddin M. (2008) Is industrial policy relevant in the 21st Century. <http://www.twn.my/title2/t&d/tnd36.pdf>.
- Staritz C. and Plank L. (2013) Precarious upgrading' in electronics global production networks in Central and Eastern Europe: the cases of Hungary and Romania, Working Paper No. 31, Manchester, Capturing the gains, University of Manchester.
- Storey D. J. (1994) *Understanding the small business sector*, London, Routledge.

- Tewari P. S., Skilling D., Kumar P. and Wu Z. (2013) Competitive small and medium enterprises. A diagnostic to help design smart SME policy, Washington, The World Bank.
- Török Á, Csuka G., Kovács B. and Veres A. (2013) The 'resurrection' of industrial policy in the European Union and its impact on industrial policy in the new member countries, Working Paper No. 26, Vienna, Austrian Institute of Economic Research.
- Veugelers R. (2015) Do we have the right kind of diversity in innovation policies among EU Member States?, Working Paper No. 108, Vienna, Austrian Institute of Economic Research.
- Zombori Z. (2013) What do EU clusters still need to go international?, TCI News, 23 January 2013. <http://www.tci-network.org/news/557>.<http://www.tci-network.org/news/557>.<http://www.tci-network.org/news/557>.

All links were checked on 10.08.2017