STUDIA MIEJSKIE
tom 24 (2016)

Szilard KOVACS*, Gabor LUX**, Balazs PAGER***

MEDIUM-SIZED MANUFACTURING ENTERPRISES IN HUNGARY: A STATISTICAL SURVEY

ŚREDNIE PRZEDSIĘBIORSTWA PRODUKCYJNE NA WĘGRZECH: BADANIA STATYSTYCZNE

ABSTRACT: Recent studies in entrepreneurship and regional competitiveness reveal the increasing importance of medium-sized manufacturing enterprises, which represent an autonomous segment of the SME sector, and help explain the success of modern German industry. However, both developed and post-socialist economies are finding the development of medium-sized enterprises to be a challenging task, posing several obstacles. This paper presents the results of a statistical survey on existing and emerging medium-sized enterprises in Hungarian manufacturing. Using a full database of Hungarian enterprises between 2000 and 2013, it is found that the medium-sized enterprise segment has undergone shrinkage instead of expansion, although promising specialisation patterns are also apparent in selected regions, and even less successful regions have their competitive enterprises.

KEY WORDS: industry, SMEs, medium-sized enterprises, regional development, reindustrialisation

Introduction

This paper endeavours to investigate the role of medium-sized enterprises (MEs) in the development of manufacturing industry. Medium-sized firms have been receiving heightened attention in recent studies. They are increasingly considered to be the key actors within the broader small- and medium enterprise (SME) sector,[1] and to play

* Teaching assistant, József Eötvös College, Baja, k.i.szilard@gmail.com
** Hungarian Academy of Sciences CERS Institute for Regional Studies, lux@rkk.hu (corresponding author)
*** Hungarian Academy of Sciences CERS Institute for Regional Studies, pagerb@rkk.hu

[1] Through most of the study, we use the European Union's categories for the SME sector: small enterprises under 50 employees and € 10 mn annual turnover, and medium-sized enterprises between 50 and 249 employees under € 50 mn turnover. In a later part of the paper, we make an allowance for *potential* MEs between 30 and 50 employees.

a growing role in regional competitiveness, particularly in non-metropolitan regions. MEs can be interpreted as a distinct group from both small and large enterprises, with their own specific strengths in internationalisation, capital accumulation, and formulating competitive business strategies.

In our paper, we first provide a survey of the existing literature to trace the growing interest in the medium-sized enterprise tier from its German origins to broader interest across Europe. This is followed by a discussion of the difficulties facing the emergence of medium-sized enterprises in Hungary, highlighting the problems of business development in a post-socialist economy dominated by Foreign Direct Investment (FDI), and characterised by a "dual industrial structure", with deep imbalances between locally owned companies and international investors. In the third part, we provide statistical evidence of the protracted development process. Relying on a complete database of Hungary's 2,676 operating and potential MEs, and employing the Location Quotient (LQ) and Realised Competitive Advantage (RCA) indices, we describe the dynamics and spatial organisation of the ME sector. In the final part, we draw conclusions for theory and regional policy.

Exploring the "missing middle"

Although the importance of the SME sector has been treated as almost self-evident since the disintegration of Fordism and the rise of small firm-led flexible growth models, academics and policymakers have both tended to focus heavily on the "S" of small enterprises (Tunisini, Resciniti, 2013), to the extent that the SME sector is often identified with its smaller members. Until relatively recently, there has been a surprising deficit in publications dealing with medium-sized firms outside the comparatively rich German literature – calling into question the validity of findings in the myriad publications that deal with the issues of SMEs while treating the sector as essentially homogeneous. The results of this neglect can be found in the tendency to contrast small and large enterprises, or as Cassia and Colombelli (2010) note, to treat MEs as unstable, transitory organisational forms created either by the growth of small firms, or the "remains"/"cast-offs" of disintegrating or exiting large ones. However, if we accept that small and large enterprises face different challenges and have different strengths, it is not unreasonable to postulate the existence of a distinct category of MEs, which can be described by their distinct drawbacks and advantages.

Growing European interest in this group of companies has been recently on the rise due to the increasingly visible post-crisis successes of the German SME sector (*Mittelstand*), one of the main pillars of German manufacturing competitiveness since the 1960s. By the 2010s, 1,400 of the 1,500 "world market leader" firms (i.e., holding a top-3 sales rank) operating in Germany were *Mittelstand* members, mostly medium-sized or at least smaller than 500 employees (Holz, 2013). *Mittelstand* companies have impor-

tant distinguishing characteristics which contribute to their successful internationalisation (Holz, 2013; Welter, Bijedić and Hoffmann, 2015):

– a focus on international niche markets, often producing highly specialised intermediate goods (sold through B2B channels) and avoiding mass production;

– long-lasting customer relations, a tendency for self-owned retail units, continuous communication and iterative product improvement based on customer feedback;

– family ownership and strong equity capital base enabling counter-cyclical investment strategies, reducing external dependency and avoiding short-termist pressures from banks or shareholders;

– skilled labour employed on long-term contracts, an involvement in dual vocational training and life-long-learning schemes.

The *Mittelstand* model also has important consequences for spatial organisation (Holz, 2013):

– 70% of *Mittelstand* companies operate in small towns or rural areas, contributing to local employment and avoiding the costs of metropolitan production sites;

– however, they enjoy the advantages of a developed highway network connecting them to large urban centres and export markets;

– many are involved in industrial clusters, often extending to multiple stages of the same product chain, and cooperating closely with local universities and research institutions;

– they benefit from a wide range of federal, regional and local business support schemes.

The German example has also given rise to interest in MEs in other European countries, where they had not previously enjoyed similar successes. This is the case in France, where the period following "technological Colbertism", or state-sponsored industrial policies focused on high-tech "national champions" (Cohen, 2007) has been followed by a growing interest in medium-sized companies, many of which are also involved in the high-tech sector, and are intricately tied to the ongoing transformation of urban growth poles (Egyed, 2014). In the UK, the importance of locally embedded MEs has often come to the forefront in regions undergoing de-industrialisation and the closure of previously dominant large enterprises. Similarly, there is an emerging literature on low-income countries, where the dilemma of the "missing middle" has become a growing subject of enquiry in developmental economics (Hsieh, Olken, 2014).

However, the most important "renaissance" of MEs seems to be ongoing in Italy, where their expansion has been in contrast with the stagnation of both small and large manufacturing enterprises in the last two and a half decades (Barbaresco, Salerno, 2013). It seems that Italian MEs show different patterns of organisation from their German counterparts, as shown by a series of recent publications (Morrison, 2008; Rabellotti, Carabelli and Hirsch, 2009; Cassia, Colombelli, 2010; Tunisini, Resciniti, 2013; Barbaresco, Salerno, 2013; Coltorti, Varaldo, 2013):

– only 15% of these MEs are the spinoffs or subsidiaries of large corporations; ca. two thirds have emerged from pre-existing industrial districts, where they often exploit their

economies of scale and knowledge base to become "system integrator" or "gatekeeper" firms controlling the production and innovation activities of their districts;

– 48% of MEs attained their current size between 2000 and 2012, but to this day, the group has shown strong fluctuation across the small/medium barrier;

– many MEs are intensively involved in business associations, working for common interests and sharing some of their corporate functions or business services;

– they are characterised by strong regional concentration; some 32% of the 3,200 medium-sized manufacturing enterprises are found in one northern region, Lombardy, and many more in its two neighbours, Emilia-Romagna and Veneto.

Altogether, the Italian example shows that the ME sector is not static but dynamic: its recent rise is a question of considerable importance, and probably a response to the pressures brought on by deepening globalisation.

Impediments before SME growth: the example of Hungarian manufacturing

Like all post-socialist countries, Hungary provides an example of economy where SMEs became a locus of structural transformation, experiencing spectacular expansion in the 1990s. However, the SME sector, and particularly the micro-enterprises that dominate it,[2] is characterised by significant internal differences. Notable works on industrial geography (Barta, 2005; Kiss, 2007) have called attention to the problem of *dual economic structure*, strong differences between the productivity, capitalisation, innovation activity, export potential, etc. of domestic and foreign-owned companies further exacerbated by the competitive pressures of EU integration and the global crisis.[3] Foreign Direct Investment (FDI) has not only been more competitive than domestic companies, but it also shows strong geographic concentration in Central Hungary and along the Vienna–Budapest corridor. As in the other Visegrad countries, FDI exacerbates regional differences instead of mitigating them (Rachwał, 2015). The problems of the dual economy are furthered by the lack of domestic national champions able to integrate local SME networks, and the fact that most SMEs possess a limited growth potential.

Hungarian research on the SME sector (mainly focused on small enterprises) has unveiled multiple important obstacles to the growth and internationalisation of domestic SMEs. Some of the most important barriers have been associated less with product

[2] In 2014, 553,645 of 588,263 registered firms were micro-enterprises with 0–9 employees; of the remaining 34,618, 29,250 were small enterprises, only 4,501 were medium-sized, and a mere 867 large enterprises.

[3] The data by Barta (2005) show a 33% FDI/GDP ratio in 1997, which had increased to 52% by 2007 (Nölke, Vliegenthart 2009), the highest among the V4 (CZ: 48%, SK: 32%, PL: 25%), and particularly compared to Austria (23%) or Germany (16%). Lengyel (2014) shows a growing FDI dominance during the crisis years, showing an increase of the FDI share in manufacturing added value from 62% to 73% between 2008 and 2011.

quality, but inadequate capitalisation and the lack of market knowledge (Mikesy, 2013). Size definitely matters: Szerb, Márkus and Csapi (2010) have shown that in contrast with 22% of micro-enterprises, 50% of MEs were active exporters, and Mikesy also calls attention to a growing number of "born global" companies established specifically to enter international markets. Yet, according to a survey by Szerb (2010), even the strongest Hungarian SMEs showed critical failings in one or more pillars of competitiveness, particularly innovation, supply and networking; meanwhile, their strengths were found in selected soft factors, easily copied and imitated by competitors. In a complex measurement of entrepreneurial performance using the Global Entrepreneurship Index (GEI), Szerb, Komlósi and Páger (2016) found that Hungary ranked 37th in a survey of 93 countries, below Slovenia (23), Poland (29), Czechia (33) and Slovakia (35), themselves lagging performers. Particular weaknesses were identified in the pillars of Opportunity Perception, Start-up Skills, Product Innovation and Risk Capital.

The deficiencies of the SME sector do not apply equally to all size categories: micro-enterprises undoubtedly show a weaker average performance than medium-sized ones. However, both "ends" of the ME segment show growth problems. Even if we discount stagnating or declining small enterprises, the remaining firms can still lack the motivation or ability to become full-fledged MEs. Some owners prefer their companies to remain small for personal reasons, to avoid having to switch to a less hands-on model of management, to avoid scrutiny from public authorities, or to take advantage of support schemes and other incentives. Characteristically, they spin off some of their activities into new companies instead of keeping them within a single larger firm. Similarly, turning MEs into large enterprises requires another leap, whose success does not simply depend on doing "more of the same, just better". Multiple well-publicised cases in recent years show that firms considered to be iconic Hungarian success stories, and on the threshold of expanding on the European scale, were unable to manage this transition, and were bought out by foreign strategic investors.[4] These exit strategies contribute to domestic capital accumulation, but do not produce the stable, multi-generational firms which characterise the German *Mittelstand*. Indeed, generational change is always a challenge to SMEs, even in countries with well-established cultural patterns around business ownership, but it is becoming a particularly pressing issue in post-socialist economies, where the company managers of the 1990s entrepreneurial boom are increasingly in their sixties, and family succession, the professionalization of management, as well as buyouts are emerging as the typical solutions to the dilemma.

However, successful MEs do exist in the Hungarian economic space. Our previous empirical research (Lux, 2013, 2015) in two different projects – one surveying industrial estates and their companies, and one on development cooperation in city-regions – used semi-structured interviews to research the development challenges and

[4] The most prominent examples include Szentkirályi, Hungary's leading mineral water company; Fornetti, Europe's leading frozen bakery supplier; and Waberer's International, a transport and freight company.

opportunities of manufacturing enterprises in Hungarian city-regions. The results, which partially inspired our present study, have revealed that even regions with weak industrial dynamics had their successful manufacturing enterprises, and these firms showed many of the characteristics of the German *Mittelstand* companies (high value-added production for international niche markets, incremental innovation, long-term strategic focus, and a commitment to employ qualified labour). The successes of these companies were often rooted in exploiting positive path-dependent factors in local industrial milieus: the productive and institutional legacies of former state socialist firms and networks, particularly the skilled labour and technical know-how of blue- and white-collar employees. Some were the "successors" of former state socialist firms, others relied on re-configuring "loose" production factors and grew up from small enterprises, while only a few were created as entirely new investment projects. However, it must be noted that many of these enterprises were not *per definitionem* MEs, often being slightly under the 50 employee limit, and their expansion was more often than not limited not by market opportunities, but the shortage of locally available skilled labour.

A survey of Hungarian medium-sized manufacturing enterprises

In our quantitative analysis, we used corporate data from the National Tax and Customs Administration of Hungary. The data were supplied by the Databank of HAS CERS, and included indicators for a complete set of Hungarian enterprises in the 14 years between 2000 and 2013.[5] For our research, we narrowed our dataset to manufacturing enterprises. However, based on our experience in the aforementioned empirical studies, we relaxed our size constraints by including not just *operating* medium-sized enterprises, but also *potential* MEs with 30 to 49 employees. On the one hand, this makes the definition of MEs less accurate; but on the other one, it also considers the upper echelons of the small enterprise segment, with the assumption that many of them have a shot at growing into MEs under the right circumstances. Our filtered database included 3,187 manufacturing MEs with 250 thousand employees in 2000, and 2,676 MEs with 212 thousand employees in 2013. Without relaxing our definition to include potential MEs, there would have been 1,918 and 1,535 operating MEs with 201 and 164 thousand employees, respectively. The calculations using the narrower dataset – omitted here due to length considerations – show broadly similar results to our full dataset, albeit with somewhat stronger concentration in successful regions.

The data show that the ME sector had already been slowly declining through most of the 2000s due to post-socialist market selection and unfavourable growth conditions, but there is an especially notable die-off between 2007 and 2010, when Hungary's weak-

[5] Enterprises were identified by an anonymous serial number, their NUTS 2 region, NACE designation, year of observation, the number of employees, net sales income, operating income, and profits before and after taxes.

ening domestic economics and the global crisis combined to cause a 13% drop in the number of MEs. Although the number of MEs had not improved until 2013 (which was, however, a turnaround year for the Hungarian economy), the survivors seem to have improved their productivity and profits. More in-depth statistical analysis resulted in further findings concerning the internal restructuring of the ME sector. There was an ongoing shift among industrial branches: the food and material industries held steady, while employment in light industry and electronics fell by almost 50%. The decline of light industry represents a move towards higher value-added branches, while electronics in Hungary is an example of an industry, where many companies could not upgrade their production model from the low-cost, low value-added contract work of the 1990s, and are increasingly being displaced by Far-Eastern competitors. The largest expansion was seen in the machine industry, particularly vehicles, expanding from 21 thousand employees in 2000 to more than 30 thousand in 2013, while also quadrupling its profits. These changes are mostly in keeping with the common specialisation patterns of the Visegrad countries (Pavlínek, Domanski and Guzik, 2009; Domanski, Guzik, Gwosdz and Dej, 2013; Rachwał, 2015).

Figure 1 shows the regional breakdown of our dataset. Significantly, manufacturing MEs do not appear to follow the dominant patterns of Hungary's post-socialist industrial development: they are more or less evenly spread across the regions, corresponding to their population weights instead of being overwhelmingly found in Central Hungary, Central Transdanubia and Western Transdanubia as FDI projects are wont to. They

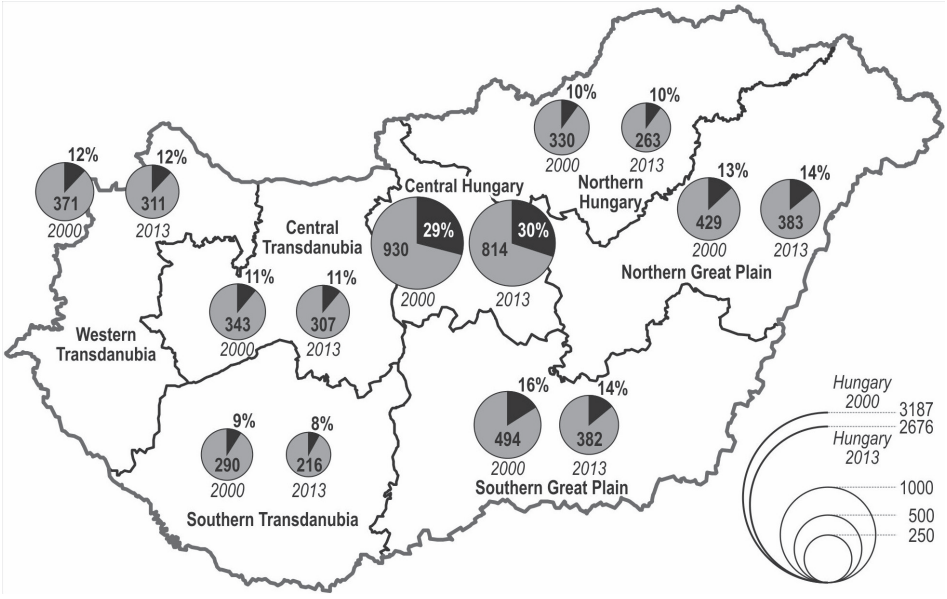

Figure 1. MEs in Hungarian manufacturing (number, national concentration), 2000 and 2013

Source: Authors' construction based on Databank data.

are found even in de-industrialised regions with weak fundamentals, and like German *Mittelstand* companies, many of them are located in small towns and even some rural areas. In the highly concentrated Hungarian space economy with its increasing centre-periphery relationships, MEs appear to represent an exception to the rule of "the capital takes all", and may hold so far untapped potential for more regionally balanced economic growth.

To investigate the regional concentration of manufacturing activity, we used the Location Quotient (LQ) index developed by Maurel and Sédillot (1999). From the perspective of our research, we can define the LQ index as a sort of quantitative concentration indicator, since we can assume that the number of employees and companies will show strong correlation.

$$LQ = \frac{e_{ij} / e_i}{E_j / E}$$

e_{ij} – employees in MEs in region "i" and industry "j"
e_i – employees in all MEs in region "i"
E_j – employees in MEs in industry "j" on the national level
E – employees in all MEs on the national level

To measure the competitiveness of MEs in specific regions, we extended our analysis to operating incomes by using the Revealed Comparative Advantage (RCA) index developed by Balassa (1965), which examines the significance of a specific industry within a specific region. Due to significant fluctuation in incomes, we calculated a four-year moving average.

$$RCA = \frac{x_{ij} / x_i}{X_j / X}$$

x_{ij} – operating income of MEs in region "i" and industry "j"
x_i – operating income of all MEs in region "i"
X_j – operating income of MEs in industry "j" on the national level
X – operating income of all MEs on the national level

The values of our calculated LQ indices show that manufacturing exhibits strong structural differences across Hungarian regions. Five regions show notable concentration (1.3 and higher) in different industries: the light industry in Southern Transdanubia (1.35), the food industry on the Northern Great Plain (1.50), the metal industry in Northern Hungary (1.51) as a result of path-dependent development patterns, as well as the machine industry in Central Transdanubia (1.38) and electronics in Central Hungary (1.41), which are more closely related to emerging FDI supplier networks. Low specialisation was found in the metal and electronics industries of the Southern Great Plain (0.72 and 0.80), and the food and electronics industries of Western Transdanubia (0.68 and 0.79). The modified RCA index also shows significant differentiation. The highest value (2.41) was found in the electronics industry of Central Hungary, followed by the

food industry on the Northern Great Plain. Values exceeding the 1.3 threshold were found in the light industry of the Southern Great Plain, the metal industry of Southern Transdanubia, the metal and machine industries of the Northern Great Plain, and the machine industry of Central Transdanubia. Demonstrating its heavy industrial legacy, Northern Hungary showed a structure, where two industries, the materials and metal industry showed high values (1.69 and 1.62), while the others were particularly low – electronics at 0.63, food industry at 0.42, light industry at 0.40, and machinery at 0.23.

Through a comparison of comparative advantages and the regional concentration of employment, we can identify region–industry linkages which show which regions can exploit comparative advantages through the spatial concentration of employment. This also allows us to identify regions, where certain industries have notable employment, but do not exhibit comparative advantages (Figure 2). Accordingly, we can identify four groups:

1. Regions and industries where there are both comparative advantages and regional concentration. These regions can be assumed to be capable of exploiting their comparative advantages.

2. Regions and industries where there are comparative advantages, but they remain unexploited due to the lack of regional concentration.

3. Regions and industries where there is no comparative advantage, but there is regional concentration.

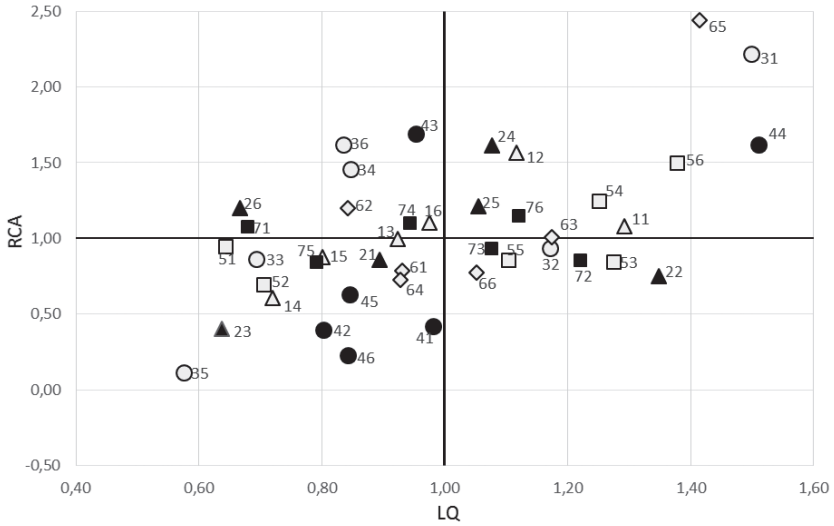

Figure 2. Comparison of RCA and LQ indices. Legend: The numbers next to the points refer to regions (first digit) and industries (second digit). Region codes: 1 – Southern Great Plain, 2 – Southern Transdanubia, 3 – Northern Great Plain, 4 – Northern Hungary, 5 – Central Transdanubia, 6 – Central Hungary, 7 – Western Transdanubia. Industry codes: 1 – food industry, 2 – light industry, 3 – materials industry, 4 – metal industry, 5 – electronic industry, 6 – machine industry.

Source: Authors' calculations and construction based on Databank data.

4. Regions and industries where neither comparative advantages nor regional concentration can be found.

Based on our results, we could identify four region–industry linkages, where both RCA and LQ values were over the 1.3 threshold:

- food industry on the Northern Great Plain;
- metal industry in Northern Hungary;
- machine industry in Central Transdanubia;
- electronic industry in Central Hungary.

Further investigation will be needed in the case of those industries which have as of yet been unable to exploit their comparative advantages, and regions, where industrial concentrations exist in the absence of comparative advantages. In sum, it is shown that medium-sized enterprises in the Hungarian manufacturing industry show diversification across both industries and regions (a characteristic which differentiates it from Slovakia, whose recent successes have been at the cost of increasingly mono-structural development patterns focusing on automobile production). All regions have industries which were successful after the turn of the millennium, and which could weather the crisis, while on the other hand, all regions have industries which have found it hard to step up to the challenges of the 21st century.

Conclusions for theory and policy

We can reasonably expect that medium-sized enterprises will play an increasing role in the regional competitiveness of European manufacturing. This question will be particularly important for the relatively small, open economies of the Visegrad countries. The contribution of MEs to domestic capital accumulation and endogenous development, their strategic focus and ongoing internalisation mark them as enterprises deserving closer attention. MEs can contribute to reindustrialisation strategies through their role in shaping the local and regional business environment and their willingness to participate in development coalitions. The restructuring of manufacturing in Hungary has resulted in the combined presence of strong concentration and revealed comparative advantages in the case of four out of seven regions (this analysis obviously did not extend to large FDI-based enterprises, which represent the dominant share of industrial production and employment.)

However, we must also exercise caution. The example of the Hungarian ME sector and its slow shrinkage shows that the expansion of the "middle" cannot be taken for granted. Although there are manufacturing enterprises with similar characteristics to the German *Mittelstand* companies, they are not numerous, and many of them stand on unsure footing. There is an observable shift towards more competitive industries (machinery) and away from branches with typically low value-added production (light industry), but as the example of electronics shows, global pressures can also erode the

successful industries of the 1990s and 2000s, and current market positions cannot be taken for granted.

Since there are no viable alternatives to FDI-dominated industrial development, and it is not realistic to expect the emergence of new, large "national champion" companies, the economic policy in the Visegrad countries should place a stronger focus on encouraging the growth of the ME sector through both direct and indirect measures. Policy approaches which deserve particular attention include the strengthening of *operating* MEs, but especially helping competitive small enterprises (*potential* MEs) to expand into mid-sized ones. With the right policy mix, the ME sector can help mitigate the inequalities of dual industrial structures and play a role in revitalising the economies of small and medium-sized towns which have often been the "losers" of post-socialist restructuring.

General policy instruments deployed through regional and state support initiatives should be focused on the following fields in particular:

– encouraging knowledge transfer between higher education and local enterprises, and nurturing strategic cooperation in the fields of education, training and innovation;

– fostering the internationalisation of enterprises, with a focus on network-building and the exploration of new, high-growth markets;

– encouraging the banking sector to develop new, accessible financial products targeted at supporting enterprise growth strategies;[6]

– developing the management skills of entrepreneurs, mainly in areas showing notable deficiencies (i.e., the weak pillars identified by Szerb, Komlósi and Páger, 2016).

In regions already showing successful (re-)specialisation processes, the development of their specific industries should also be supported through targeted measures, most prominently through industry-specific workforce training and capacity-building programmes. Smart specialisation (S3) strategies, focused on exploiting the exploratory behaviour of local enterprises to develop new, innovative industrial specialisations are particularly appropriate measures to enable successful firms to grow further.[7] However, economic policy cannot be restricted to helping the winners. We should not avoid the development problems of regions which either show weak comparative advantages, or insufficient regional concentrations in otherwise efficient industries. In their case, we must find routes towards sustainable industrial development to forestall the negative consequences of de-industrialisation, and the functional hollowing-out of the economy space.

---

[6] A working example includes the Hungarian National Bank's Funding for Growth Scheme, launched to stimulate corporate lending, reduce interest costs, and increase enterprises' willingness to invest in the post-credit crunch environment.

[7] However, in spite of their appropriateness and considerable entrepreneurial interest, the implementation of S3 strategies in Hungary is plagued by the same problems of bureaucratisation, top-down control and rent-seeking behaviour as earlier development schemes, reproducing the problems of a dysfunctional institutional system.

Acknowledgements

This research has been supported by project #115577 of the Hungarian National Research, Development and Innovation Office. While writing this paper, Gabor Lux was supported by the Research Scholarship of the Hungarian Academy of Sciences. The data for the research were supplied by the Databank of Hungarian Academy of Sciences Centre for Economic and Regional Studies.

References

Balassa B., 1965, *Trade liberalisation and "revealed" comparative advantage*, "The Manchester School" Vol. 33. No. 2, p. 99–123.

Barbaresco G., Salerno E., 2013. *Mid-sized companies according to Mediobanca-Unicamere*, In: *Mid-sized Manufacturing Companies: The New Driver of Italian Competitiveness*, red. F. Coltorti, R. Resciniti, A. Tunisini, R. Varaldo, Springer-Verlag Italia, Milano, p. 13–40.

Cassia L., Colombelli A., 2010, *Growth factors in medium-sized enterprises: The case of an Italian region*, "International Entrepreneurship and Management Journal" Vol. 6. No. 4, p. 437–458.

Cohen E., 2007, *Industrial policies in France: The old and the new*, "Journal of Industry, Competion and Trade" Vol. 7. No. 3, p. 213–227.

Coltorti F., Varaldo R., 2013, *Implications for managerial and industrial policy*, In: *Mid-sized Manufacturing Companies: The New Driver of Italian Competitiveness*, red. F. Coltorti, R. Resciniti, A. Tunisini, R. Varaldo, Springer-Verlag Italia, Milano, p. 137–146.

Domański B., Guzik R., Gwosdz K., Dej M., 2013, *The crisis and beyond: The dynamics and restructuring of automotive industry in Poland*. "Int. J. Automotive Technology and Management" Vol. 13. No. 2, p. 151–166.

Egyed I., 2014, *Területfejlesztés vagy iparpolitika? A francia versenyképességi pólus program tapasztalatai* [Spatial development or industrial policy? The experiences of competitiveness poles in France], "Tér és Társadalom" Vol 28. No. 2, p. 159–175.

Holz M., 2013, *Strategies and policies to support the competitiveness of German Mittelstand companies*, In: *Mid-sized Manufacturing Companies: The New Driver of Italian Competitiveness*, red. F. Coltorti, R. Resciniti, A. Tunisini, R. Varaldo, Springer-Verlag Italia, Milano, p. 147–168.

Hsieh C.-T., Olken B. A., 2014, *The missing "missing middle"*, "Journal of Economic Perspectives" Vol 28. No. 3, p. 89–108.

Kiss É., 2007, *Foreign Direct Investment in Hungary: Industry and its spatial effects*, "Eastern European Economics" Vol. 45. No. 1, p. 6–28.

Lengyel I., 2014, *Reorganization of Hungarian manufacturing sector: Impacts of EU accession and global crisis*, "European Journal of Business Research" Vol. 14. No. 2, p. 93–100.

Maurel F., Sédillot B., 1999, *A measure of the geographic concentration in French manufacturing industries*, "Regional Science and Urban Economics" Vol. 29. No. 5, p. 575–604.

Mikesy Á., 2013, *A magyarországi mikro-, kis- és középvállalatok nemzetköziesedése és a külföldi értékesítést nehezítő akadályok. Egy vállalati felmérés tanulságai* [The internalisation of Hungarian micro, small and medium enterprises and the barriers to export sales: Lessons from a corporate survey], „Külgazdaság" Vol. 57. No. 1, p. 92–120.

Morrison A., 2008, *Gatekeepers of knowledge within industrial districts: Who they are, how they interact*, "Regional Studies" Vol. 42. No. 6, p. 817–835.

Nölke A., Vliegenthart A., 2009, *Enlarging the varieties of capitalism: The emergence of dependent market economies in East Central Europe*, „World Politics" Vol. 61. No. 4, p. 670–702.

Pavlínek Petr., Domański B., Guzik R., 2009, *Industrial upgrading through Foreign Direct Investment in Central European automotive manufacturing*, "European Urban and Regional Studies" Vol. 16. No. 1, p. 43–63.

Rabellotti R., Carabelli A., Hirsch G., 2009, *Italian industrial districts on the move: Where are they going?*, „European Planning Studies" Vol. 17. No. 1, p. 19–41.
Rachwał T., 2015, *Structural changes in Polish industry after 1989*, "Geographia Polonica", Vol. 88. No. 4, p. 575–605.
Szerb L., 2010, *A magyar mikro-, kis- és középvállalatok versenyképességének mérése és vizsgálata* [Measuring and analysing the competitiveness of Hungarian micro, small and medium enterprises], „Vezetéstudomány", Vol. 41. No. 12, p. 20–35.
Szerb L., Márkus G., Csapi V., 2014, *Versenyképesség és nemzetköziesedés a magyar kisvállalatok körében a 2010-es években* [Competitiveness and internationalisation among Hungarian enterprises in the 2010s], „Külgazdaság", Vol. 58. No. 5, p. 53–75.
Szerb L., Komlósi É., Páger B., 2016, *Measuring entrepreneurship and optimizing entrepreneurship policy efforts in the European Union*, "CESifo DICE Report", Vol. 14. No. 3, p. 8–21.
Lux G., 2013, *A Baranya megyei ipari parkok közlekedési adottságai és fejlesztési problémái*, In: *A hazai ipari parkok különböző dimenzióban* [The transport characteristics and development problems of industrial estates in Baranya county], red. É. Kiss, Dialóg Campus, Budapest–Pécs, p. 111–126.
Lux G., 2015, *Minor cities in a metropolitan world: Challenges for development and governance in three Hungarian urban agglomerations*, "International Planning Studies", Vol. 20. No 1–2, p. 21–38.
Tunisini A., Resciniti R., 2013, *Background and goals of the book*, In: *Mid-sized Manufacturing Companies: The New Driver of Italian Competitiveness*, red. F. Coltorti, R. Resciniti, A. Tunisini, R. Varaldo, Springer-Verlag Italia, Milano, p. 1–11.
Welter F., Bijedić T., Hoffmann M., 2015, *Triebwerk des Erfolgs – Der deutsche Mittelstand im Fokus*, GE Capital Deutschland – Institut für Mittelstandsforschung, Bonn.

ŚREDNIE PRZEDSIĘBIORSTWA PRODUKCYJNE NA WĘGRZECH: BADANIA STATYSTYCZNE

ABSTRAKT: Obecne badania nad przedsiębiorczością i konkurencyjnością regionalną odsłaniają rosnące znaczenie średniej wielkości przedsiębiorstw produkcyjnych, które reprezentują autonomiczny segment sektora MŚP (małych i średnich przedsiębiorstw) oraz są pomocne w wyjaśnieniu sukcesu nowoczesnego przemysłu Niemiec. Jednakże, w przypadku zarówno rozwijających się, jak i post-socjalistycznych gospodarek rozwój średniej wielkości przedsiębiorstw jest zadaniem trudnym, napotykającym szereg ograniczeń. Artykuł prezentuje rezultaty badania statystycznego nad istniejącymi oraz powstającymi przedsiębiorstwami średniej wielkości w węgierskim sektorze produkcyjnym. Wykorzystując pełną bazę danych węgierskich przedsiębiorstw pomiędzy 2000 i 2013 rokiem wskazano, że segment średniej wielkości przedsiębiorstw poddawany jest procesowi 'kurczenia się' zamiast ekspansji, pomimo obiecujących wzorców specjalizacji obecnych w kilku regionach, a nawet występowania konkurencyjnych przedsiębiorstw w mniej pomyślnie rozwijających się regionach.

SŁOWA KLUCZOWE: przemysł, MŚP (małe i średnie przedsiębiorstwa), średnie przedsiębiorstwa, rozwój regionalny, reindustrializacja