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Lean knowledge of Hungarian SMEs and influence of German parent companies

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*"It is neither the strongest who stays alive, nor the smartest,
but the one who is the most receptive to changes. "*

Charles Darwin

The SME sector plays a major role in economy in Hungary, but it is also decisive in Europe and Germany. This raises the question of whether the lean approach, which could generate progress in case of large German companies, could be applied to SMEs as well. In my opinion, with the right adaptations yes, it could. For this I conducted lean device research in the local HU 221 region.

But what is the lean? Philosophy? Management toolbar? Or, in extreme terms, "the common sense"? Those who attack the lean point of view often claim it to be logical thoughts on paper and self-evident things put in words. In addition to routine use of the tools, respect for human beings is highlighted among its principles.

The introduction of lean management was not easy for German companies. Since then, many industrial companies have introduced lean-based production and their competitive advantage has increased along with it.

In Hungary, it has come to the fore in the past decade - especially in domestic companies having foreign parent companies in Germany - to improve efficiency by the help of lean and thus optimize processes.

My paper tries to draw attention to the fact that the situation of Hungarian SMEs has become problematic in areas that could be the source of their competitiveness. The competitiveness of Hungarian enterprises determines the whole economy, so it is important to pay serious attention to its strengthening.

After the EU's SME measures, I presented the relationship between German and Hungarian economies in data and contexts. I pointed to international lean literature and German and Hungarian lean usage. The methodology of my research, the statistical analysis is followed by the lean questionnaire analysis and the evaluation of results obtained. Finally, I take a look at lean and workforce retention, lean training opportunities. As a future possibility, I look at lean solutions as a response to labor force shortages.

"Future is a moving target. So good planning helps to better targeting" says IBM's motto highlighting the importance of strategic planning. Well, the arrows of Hungarians are (were) known all over Europe. well worked-out line of movements, precise targeting and hit from the reflex is like lean now. As future is a moving target, trained, skill-level lean planning helps in exact targeting, and results will not be missed, either.

Lord save us from the arrows of Hungarians!
(„A sagittis Hungarorum libera nos, Domine!”)

EU and SME

The Small Business Act in Europe (SBA) is EU's flagship policy initiative to support small and medium-sized enterprises. It includes wide range of policy measures and 10 principles structured around 9 strategic areas.

Hungary lags behind the EU average in most SBA areas. As regards to the 10 principles, the data for 2015 and 2016 show great inequality and fluctuation. In 2015, there are scores well below the EU average in 6 areas -2 of these are tailenders, stagnating in 1 and over the EU averages in 2 in SBA profile. By 2016, there was further declension in 3 areas, like *financing* measure, which was positive until that time. In general, according to the 2015 and 2016 briefings of European Small Business Act, among the 10 main principles examined in the SBA profile it is the field of "skills and innovation" that shows the biggest deficiency producing one of the lowest scores among the Member States, while "state subsidies and public procurement" are above EU average. (*European Commission, 2015; 2016*)

Several support schemes have been implemented to support innovative capacity of SMEs since 2008: introduction of financing and loan programs, various mentoring programs, incubator houses and innovation management. Hungarian SME sector only partially regained its pre-crisis self, according to the sector's 2008-2016 survey, employment decreased by 7%. Added value in the timeline showed an increase (11%), but decreased in the last two years (1.1%). SMEs are expected to continue the uneven development of recent years. According to forecasts, a further decrease (2-4%) is expected for both indicators. (*European Commission, 2015; 2016*)

Similar conclusion was found by *Szerb*: the weakness of the SME sector was driven back to its generally low corporate competitiveness. Analyses following the weakest link principle often show significant deficiencies even in the best performing companies. There is a critical lack of innovation, supply and networking.

Szerb et al (2016) in Global Entrepreneurship Index (GEI) comparing 93 countries – by the examination of 14 components – Hungary lags behind, particularly in perception of opportunities, the ability to set up a business, product innovation and venture capital in the Central European field.

Average added value of Hungarian SMEs does not reach half of the EU average (*Sasvári, 2014*).

The Hungarian entrepreneur is expected to do more than his foreign counterparts. The over-complicated legal, accounting and tax environment has not been business friendly for decades. Most of Hungarian SMEs lose chances as tenders are follow-up financed and they are unable to invest from their own sources thus miss the opportunity (*Szilágyi, Almádi 2015*).

It can be said that Hungarian SMEs do not consciously deal with the management of their finance, as they have neither the capacity nor the expertise. In many cases they are not conscious because they mostly rely on their own resources. If they miss resources they create it as the actual situation permits. (*Csiszárík-Kocsir, 2015; Csiszárík-Kocsir, Varga, 2015*).

SME Definition

In international practice, statistical demarcation is carried out only by staff category because of the lack of sufficiently comparable national data. Although more research has been carried out and is currently taking place within the European Union (eg MDL project 2 and SME Performance Review3) and Eurostat (the Statistical Office of the European Union), so far no harmonized methodology has been developed and adopted.

Following the criteria of the European Union all enterprises with a total number of employees less than 250 and an annual net sale of up to € 50 million or a balance sheet total of € 43

million are referred to as medium-sized enterprises. The total number of employees in the small business is less than 50 and their annual net sales or total assets are up to € 10 million. The total number of employees in the micro-enterprise is less than 10 and the annual net revenue or balance sheet total is up to € 2 million. These limits must be met in two consecutive reporting periods for the change of classification.

As an outlook, in Germany, IfM (Institut für Mittelstandsforschung; Research Institute for Central Enterprises) considers organizations with 250-500 employees and with a turnover not more than € 50 million medium-sized companies (Holz 2013), so for the years 2010 from the 1,500 global market-leading German companies 1400 belonged to "Mittelstand". Joining to EU has strengthened competition in the sector in whole Europe, and caused further market polarization between competitive, strategically strong-orientated SMEs with international presence and weaker, mainly regional or local competitors having more difficulty in operation. (Smallbone-Rogut 2005) My research is not intended to formulate a European SME definition. Based on the examination area I worked on the German and Hungarian definitions. Enterprises can not be appropriately separated on a scientific basis according to the legal classification. Based on Hungarian company data limits are set, which represent an appropriate separation.

SME and lean application - international outlook

The first traces of measuring efficiency appeared in Greek and Roman times. The book of Womack et al. (1990) "The Machine That Changed the World" was a turning point in modern times, after which this approach became more and more popular in Western culture. The book introduced the new term "lean manufacturing". Lean philosophy produces the same output or output of better quality from less input/resource - providing higher customer value. Lean often occurs - incorrectly - in LEAN spelling, though it is not an acronym abbreviation. In practice it became an accepted terminology by the end of the 90's.

European trends account for the growing importance of medium-sized enterprises in small, open economies such as Hungary (Kovács et al 2017) Power of people is one of the driving forces stimulating the lean. It is built on employees and their ideas, so this is its critical point, too. In a society where brainstorming is not natural at the level of operators how can we reach to do it anyway (Sayer, Williams, 2012) Hammer et al (2004) also treat mental capital, developing humans as a priority. "Enhancing quality and productivity of intellectual work and services can only be achieved by employing adequately trained and competent workforce and evaluating and further developing this qualification and knowledge".

To increase productivity of intellectual workers expect the organization to involve deeper than in case of increasing productivity of physical workers. For the latter, it is enough to explain how to do the work, while for a spiritual worker it is a mental matter. Attitudinal changes must be made by the worker, the leader, and the organization itself. (Pankotay 2017)

"When we intervene in systems of intellectual work, workers are confronted with their ways of thinking, and we often call their attention to the fact that contradictions and imperfections may be found in it, which limit the volume or quality of intellectual production. As they are strong personalities, they can easily be harmed." (Pasmore and Purser, 1993)

A research conducted among Polish SMEs also identified the human factor, including management deficiencies, as a critical one. Inadequate information flow, lack of knowledge of the effects of the tasks to be performed and identification of lean activity as a downsizing activity will encourage workers to resist. (Ulewicz-Kucęba, 2016). Likewise, Achanga (2006), Arul-Arumugam (2015) places the focus on human.

Dora et al., (2013) by investigating SMEs concludes that skilled workforce and expertise are more prominent factors than commitment and support of management. One of the basic principles of agile project management is that a big elephant can be eaten in little bites. (*Koloszár, 2013*).

Hines et al. (2008) also emphasizes the role of organizational and cultural factors as of commitment, strategy, fitting and leadership. *Chong et al.* (2013) also emphasizes that the primary aspect of becoming lean sustainably is cultural change.

Netland (2016) analyzed critical factors on a contingency basis, depending on the organization, company size, and national culture. He has shown that rewarding and recognition, exploring and sharing good practices, and involving external experts are important for successful start in the SME sector.

Stepfen Parry's Corporate Lean Thinking: "Customer is at the heart of the process and the organization needs to respond holistically so customer can have impact on planning and delivery of products and processes." According to *Daniel T. Jones*, Chairman of Lean Enterprise Academy, a lean-minded company do not have to try to satisfy customer anymore, it has to give answer for a question that customer him or herself may not know: what he or she wants to attain, what is his or her aim. (*Barlow et al 2005*) (*Pankotay 2016*)

Lean, as a present-day forming science, is still vastly diversifying with its knowledge material expanding nearly day by day. This is confirmed by the non-uniform application of many different terms in international literature.

International analysis of lean usage is mainly concerned to multinational large corporations, typically compares different tools and methods. Time-reference of the tests is mixed.

The little number of SME analyses concerning lean usage and tools shows an eclectic picture. As an example, in *Spann's* analysis "5S" is the most well-known, most widely used tool, in *Deloitte's* 2001 research it is used moderately, while in *Netland's* study it is not even named.

Mark Walton, author of the *Deloitte & Touche* study, found that Eastern European producing companies surveyed became increasingly defenceless against global competitors. There is a 19% lag in manufacturing performance, 17% in organizational and human resource issues, 14% in the supply chain, and 13% in terms of preparedness for globalization. In contrast to multinational companies, local companies were the best in understanding their customers' needs. The survey examined 45 different indicators in 100 companies. The survey's most important finding is that producing companies must meet the key factors of production strategy, in particular the requirements of speed and flexibility. The lack of these skills is currently compensated by the low cost of cheap labor force. Joining European Union poses a significant risk to the region's low-cost production capacity. "As the workforce becomes mobile and the standard of living rises, EU integration leads to the drop-out of Central Europe as a low-cost geographic area," said *Walton*. (*Walton 2018*)

Netland deals with lean production put into practice in several studies. He notes that, although experts name many critical success factors, companies are still struggling to implement lean production. He analyzed similarities and differences between the PS principles in 30 famous multinational companies. (*Netland 2012*)

Spann et al. In 2011, saw that SMEs could become more competitive by the lean approach to technology and management. Analyzing 11 aspects of lean management, EP MEPs found that SMEs need regular training. (*Spann et al., 2011*)

Hungarian competitiveness

Profound changes have taken place in Hungarian economy since the regime change. Ownership circumstances changed radically. A significant proportion of the dominantly state owned property became private property - mostly by privatization. Economic planning turned into a market economy, which is basically based on small and medium-sized enterprises.

Since the regime change, basic criterion of Hungarian competitiveness was that cheap labor force and cheap site attracted capital to the country. This was also true after the change of regime and joining EU (2004). Before 2008 Hungary was well placed on competitiveness lists, since the crisis this indicator has weakened. In 2016 the country has a significant competitive disadvantage. It has the 63th place on WEF's rankings that lists 140 countries, have fallen back 25 places between 2005-2015. Among EU28 states Hungary has the 18.6th place as an average. The development of the neighboring countries has led to the situation that by 2017 Hungary became a tail-ender among V4 countries considering its competitiveness. Aging, lack of language skills, SME operating conditions, enterprise innovation capacities and VAT key can be named as competitiveness problems in Hungary (*Molnár-Udvardi, 2016*). The reasons are, among other things, that there is a growing development gap between certain regions of the country and the fact that there are fewer and fewer educated people in the country.

The EU has 263 different regions, seven of which are Hungarian regions (NUTS 2). The most advanced is the Central Hungarian, it is in the 84th place, and the other six Hungarian regions are among the last ones, Northern Hungary is, for example, the 256th. In fact, the West-Transdanubian region with the Audi factory, TDK-EPCOS, LUK, BPW factories and affiliated German suppliers is only the 209th.

Joining the EU, as in Western Europe, strengthened competition in the sector and market polarization between competitive SMEs having strong strategic orientation and international presence and those competing for national and regional markets and having weaker performance and more difficulties in reaction to the market. (*Smallbone-Rogut 2005*) In the Visegrád countries foreign working capital did not moderate, but significantly increased territorial differences. (*Rachwal, 2015*) The most outstandingly competitive SMEs are located unevenly like islands - mainly in the counties of Vienna-Budapest axis - due to their site choices. Based on the representative research sample we can see, that from 15 competitive Hungarian companies 5 are domestic subsidiaries of foreign - typically German - multinational companies. (*Szerb, 2010*) (*Figure 2*)

New opportunities given by EU accession were not exploited by a significant part of Hungarian SMEs, on the contrary: foreign companies and import pressures increased competition and made development more difficult for them. Hungarian small companies - already broken due to the declining demand - were hit below the belt by the financial crisis widening in 2008. (*Szabó-Farkas, 2011*) It is well known that SMEs are particularly sensitive to sudden and dramatic changes of the external environment. Companies that are unable to adjust or even radically change their business strategy in a changed environment will fail in a competition and will be permanently excluded from the market. (*Fischer-Johns, 2004*)

German-Hungarian economic relationship

The quality of German-Hungarian relations attracts attention of Europe not only today, it was true more than a thousand years ago. It is based on historical dynastic relationships and mercy. Over the centuries historical events, embarkings and relocations, high-impacting events of 20th century transformed the number of Germans in Hungary. Based on statistical summaries

the second largest nationality in today's Hungary means 200.000-220.000 people, accounting for 2.5% of the total population of the country.

Germany is not only the most populous country in the Union, but also the largest according to its national economy. It gives 20% of the Union's economic performance. Germany was the world's third largest exporter of products after China and the United States in 2015. (*I. Destatis*) Hungary is the 15th most important export market of Germany. In terms of foreign trade and services, turnover grew by 32% in both directions compared to 2010. According to the data of the Federal Bureau of Statistics, Hungarian exports to Germany amounted to € 25 billion, imports to € 23 billion.

Strong economic ties between Hungary and Germany continued to grow even stronger after the economic crisis. This is well illustrated by the economic indicators of the two countries.

German operators have the largest capital stock in Hungary. This meant € 15.8 billion in 2010, € 19.5 billion in 2012; € 17.2 billion in 2015 in direct investment. This represents 22% of total capital investment in Hungary. At the end of 2015 our capital investment in Germany was 0.5%, 161.5 million euros.

If a Hungarian company wants to break into the German market, it must meet very serious quality requirements. Quality of German-based companies in Hungary is not the same as the one of a company intending to break into the German market.

On the German market, not only the language, but also the German culture should be known and, although to a lesser extent, it is true for Hungarian companies with German background. It is important to know Hungarian culture and mentality. This is currently a cornerstone of cross-border global work organization.

Hungary is a success story for German industry, because it uses the country as a cheap country. Employees in Hungary are well trained, trade unions have hardly any rights, workers are cheap, in exchange they adapt well and withstand load and logistics connections are very good. The government provides them with a number of tax incentives, so they face conditions similar to China and Russia. (*Benner, 2018*) Another great advantage is Hungary being a member of the European Union so both have access to the common market. There is mutual interdependence, so Hungary is risking a lot by anti-EU "struggle".

German government and politicians are keen to criticize Eastern and Central European countries for their anti-democratic steps. German businessmen get on well with governments moving away from democracy. Politics are not so important for them outside their home country. Decisions concerning merely business are more important to companies than political ideologies. Autocracy is only a problem when it reaches a certain level and social responsibility intensifies.

In Hungary, 48.2 percent of average wages are levied. (2016) The OECD average is only 26.6 percent. With this tax-level, Hungary is in a group with a much richer Germany (45.3%). But average wages are much higher in Germany, so no matter if half of the salaries are taken by the state, Germans still live on the same good level. German tax system has progressive tax rates taking into account not only income level, but also marital status and other factors, so it is hard to find an average, but we can say they cut down about one-third of the payment, while the Hungarian market is not solvent at all. (*OECD, 2017*)

According to the data of Central Statistical Office, the share of machinery and means of transport in Hungarian exports and imports connected to Germany is 11-12 percentage points higher than the total export and import between the two countries. German subsidiaries have a share of over 15% of the performance of Hungarian companies. It is Hungary's most important export and import partner, 15% of the value added by Hungarian companies was produced by the German subsidiaries in 2015.

In 2010, 2613 companies were controlled from Germany in our country, and in 2014 there were 3246 such companies, typically large and medium-sized enterprises, mainly in the manufacturing and service sectors. German subsidiaries strongly determine the performance of domestic companies and related suppliers. Compared to 2010, the value of our currency (HUF) declined 13%, which increased the competitiveness of exports to Germany.

Table 1: Economic data of Hungarian, German and EU28 SMEs (2015.)

Data of 2015	Hungary	Germany	EU28
<i>SMES in all enterprises</i>	99,8%	99,3%	99,8%
<i>added value of SMEs /thousand €</i>	55,1	354,5	
<i>net income of SMEs/thousand €</i>	295,9	1201,3	
<i>number of employees in SMEs/SME</i>	3,38	7,42	
<i>risk of income poverty /non-German citizens</i>	28%	20%/31%	24%
<i>youth income poverty >below 16 years</i>	36%	19%	27%
<i>Population 2016.01.01.</i>	9,81 million	82,2 million	738,65 million
<i>foreign citizens</i>		10,04 million	
<i>percent of population</i>	1,5%	11,1%	
<i>GDP/ person EU28 average =100%</i>	68	124	100
<i>Added value of industry (percent ofEU28)</i>	1,0	27,9	
<i>R+D+I in % of GDP</i>	1,4	2,9	

Source: [2, 1, 3, 4,] database

In Hungary after 2009 1% of gross national expenditure went to R & D & I, which increased to 1.408% to 2013 and 1.39% in 2015. The target for 2020 is 1.8% (EU average: 2%). Summary of economic data in Table 1.

Although multinational German car factories employing thousands of people are large, well-known and dominant, SMEs are the backbone of the country's economy with their 99.3%, of which 18.4% are small and medium-sized enterprises. In 2017 nearly 700 thousand companies operated in the country.

In Hungary, 70% of all employed people work in SMEs, accounting for only half of GDP. Larger companies are able to produce the same value with much less worker. In their foreign exports they are far behind big companies: they have only one-third of Hungarian exports, while large companies account for two-thirds. On the contrary: it generally characterizes Western European countries that, besides their large companies, their smaller enterprises also produce high added value.

Table 2: Import from and exports to Hungary

Year	Imports from Hungary				Exports to Hungary			
	2010	2016	2017	%*	2010	2016	2017	%*
Province/Sum	€ m	€ m	€ m		€ m	€ m	€ m	
Baden-Württemberg	2 538	6 410	6 324	249	2 538	4 525	4 888	193
Bavaria	2 362	8 570	9 123	386	2 362	3 345	3 811	161
Hesse	855	2 082	1 866	218	855	1 236	1 295	151
Lower Saxony	789	2 101	2 471	313	789	1 513	1 600	203
NorthRhine-Westphalia	2 265	2 276	2 484	110	2 265	3 271	3 666	162

Source: German-Hungarian Chamber [5]

Germany has traditionally played a leading role among Hungary's export markets by 25-27%, and even more, if the individual provinces were regarded as independent countries, Bavaria and Baden-Württemberg themselves are the most important markets for export products produced in Hungary. (Table 2)

In 2010-2017 the provinces colored in Figure 1 multiplied their imports, but their exports also increased significantly. Today, Hungary's competitiveness is highly dependent on German companies. (Figure 1)

The typical locations of German-based companies in Hungary are the regions of Vienna-Budapest axis, Hatvan (Bosch) and Kecskemét (Daimler). (Figure 2)



Figure 1: German partner provinces
Source: own edition



Figure 2: Typical axis of companies with German background in Hungary
Source: own edition

German industry and lean

In the 1990s, German industry shifted to flexible production methods, including lean management, instead of mass production. In the growing international competition, the manufacturing sites moving to the east urged its adaptation, which was not simple as trade unions protected workplaces. Industry and its suppliers first used 5S, switchover time decline, optimization, maintenance, and teamwork. The second wave of lean project thinking is value flow management, where flow of production has become a guiding principle. The results in the field of quality, productivity and stocks brought lean manufacturing projects to the fore. The third lean wave currently taking place in Germany focused on complex application for a sustainable, resourceful and open-minded organization, in which processes and employees develop at the same pace. (Staufen Ag 2016) As a fourth wave, the goal is to form a learning organization with a continuous multi-level practice until it becomes an instinctive routine activity and reaches the Toyota Kata state.

"95% of respondents adopted lean management, 28% of them only focus on introducing sustainable development processes (level 1). They use tools, methods, but do not live in a lean culture. A further 40% extended the lean principles to the entire value creation process (level 2) 20% applies them on indirect fields, too. (level 3). A few companies, 7% of respondents fully applied the strategic and organizational approach of lean philosophy (level 4). In a branch consideration, lean's popularity is typical of the automotive and the electronic industry. The larger the size of a company is, the more it strives to build the lean method." A detail of the study.

Hungary and lean

In Hungary, these are large companies and their suppliers with foreign background that are characterised by the presence of lean. It is present from the 2000s, but along with joining the European Union this management method became also widespread. Large companies know much about it, but these are mainly tool-users, not lean companies. Lean Enterprise Institute Hungary is the largest professional organization [7], founded in 2009. 85% of its members are large corporations with a foreign background, 15% are Hungarians. For example, large Hungarian-owned companies using lean are MOL, Kürt Academy, MVM, MKB, Color Pack, Onlinetgroup. 31% of foreign companies are German (Bosch, Eon, Elmű, Audi) 22% USA, 6% -6% French and English, 4-4% India and Belgium, 2-2% Mexicans, Danish, Dutch, Luxembourg, Austria. The membership composition of this professional organization characterizes the role of lean in Hungarian market. The largest lean countries, Germany and USA has the biggest influence on its spreading.

Based on the 2007 Lean Project Survey of the Hungarian Automotive Industry Association (650 companies / 63 respondents) lean production was known by 47%, kaizen by 51% and 5S by 49%. (*Veresgyhazy 2008*) Lean industry is typical in automotive industry, so I consider the number of respondents who know the lean to be low.

From the survey it can be stated that lean is applied in Hungary at the production level and is not considered as a comprehensive system. Characteristically knowledge and words, Japanese, German, Hungarian translations and corporate culture use different words, so the measurement and comparison of knowledge does not start from the same knowledge material.

Research methodology

The purpose of my quantitative research is to understand the causes of the lean application problem and to determine the lean in practice. I have categorized the many lean approaches and expression-usage I found during literature analysis.

I did my research for local reasons at NUTS3 / HU221 level; in Győr-Moson-Sopron county. After a national outlook, I examined the number of small and medium-sized companies registered in the county and their economic sector and form of enterprise. I based my SME lean application survey on manufacturing industry and tourism, although transport, delivery and health are meaningful application areas, too. 35% of the 1,587 small and medium-sized enterprises in the county work in these two research sectors. Of the potential 551 small and medium-sized enterprises I got to 420 with a questionnaire request. I strived to create a correct subset for getting a representative survey. I extracted answers that did not come from the target audience or target area. The survey includes those companies that have a site in the county. The 62 sample with relevant responses show the real features. By a probable sampling procedure, the data received are satisfactory and relevant to the survey. During the analysis of the questionnaire, I used the SPSS program. After encoding the data, I made averages and a cross table. I supported the understanding of the result obtained by qualitative interviews to help thinking patterns and corporate internal values emerge. Though responses were subjective, the results behind the quantitative questionnaire were largely supported by them and helped to draw conclusions.

Statistical analysis

The SME sector, in line with EU28 data, accounts for 99.8% of businesses. According to data for 2015-2016, there was a 0,1% decline in the number of micro-enterprises in Hungary, while in the EU28 there was 0.1% increase. Small companies decreased by 0.1% in the EU28, stagnated in Hungary. The moderate fluctuations in the number of domestic SMEs have been induced by a decline in population due to the number of SMEs projected per thousand inhabitants.

The number of enterprises not belonging to the SME sector increased by 4.3%. The reason for this is activity expansion of the operating companies and the consequent change of their category and on the other hand – in my opinion - the appearance of new large companies as a result of foreign investment.

70% of the employed work in SMEs, accounting for nearly 53% of GDP and the third of exports. 94.2% of the SME sector is made up of micro-enterprises, which provide half of the sector's employment and one-third of the GDP produced by the sector.

Within the SME, the applicability of lean asset and lean benefits are much lower in micro enterprises compared to small and medium-sized enterprises, thus, adapting to foreign practice in the study I mean small and medium-sized enterprises without micro-enterprises under the notion of SME.

Western Transdanubia (HU22) is in the midfield from the point of view of national coverage of small and medium-sized enterprises. 40-42% of small and medium-sized enterprises are located in Central Hungary (NUTS2-HU1) (due to the capital's attraction), while the other regions have a maximum deviation of 6% compared to each other. In the last 5 years, a remarkable change was observed only in the Northern Great Plain (HU32), the number of medium-sized enterprises grew, while Southern Transdanubia (HU23) continued to decline. Western Transdanubia showed a stable position in the midfield in the examined period of time both for small and medium-sized enterprises. The industrial output of Western Transdanubia decreased by 4.1%. The European Regional Competitiveness Index 2016 data show deterioration in all regions compared to the previous 2013 survey. (Table 3)

Table 3: SMEs in the regions of Hungary 2016

2016	Small-sized enterprises %	Medium-sized enterprises %	European RCI
<i>Central Hungary (HU10)</i>	44,8	42,7	-0,16
<i>Northern Great Plain (HU32)</i>	10,5	13,0	-0,96
<i>Southern Great Plain (HU33)</i>	12,1	11,4	-0,83
<i>Western Transdanubia (HU 22)</i>	9,2	9,6	-0,66
<i>Central Transdanubia (HU21)</i>	9,4	9,0	-0,65
<i>Northern Hungary (HU31)</i>	7,0	7,1	-0,95
<i>Southern Transdanubia (HU 23)</i>	7,0	7,2	-0,67
%	100	100	

Source: own collection, data source [2,6]

In Győr-Moson Sopron County, among the types of companies, a number of limited liability companies (in Hun:Kft.) shows a steady increase of 1-2% per year, while the number of companies limited by shares (in Hun:Rt.) is growing in a wavy mood; while the number of limited partnerships (in Hun:Bt.) decreases continuously (by 6-6 and then 2-3 per cent). In the 2010-2015 period of time limited liability companies and companies limited by shares produced 17 and 14 per cent growth, while limited partnerships showed 22 per cent decrease in their number (Table 4)

In 2015 in the examined county, the number of employees looked like this: there were 10 -19 employees in 886 small and medium-sized enterprises, 20-49 people in 463 and between 50 and 249 people in 218. In the 10674 limited liability companies (Kft) of the county 10-19 people are employed in 690, 20-49 in 387 and 50-249 in 183 medium-sized enterprises. 75 of the 130 companies limited by shares (Rt), 100 of the 3765 county-based limited partnerships (Bt) are small and medium-sized enterprises based on the staff figures.

Table 4: Changes in Business Forms (Hu221)

<i>Year</i>	2010	2011	2012	2013	2014	2015
<i>limited liability c. (Kft)</i>	9 332	10 008	10 362	10 457	10 553	10 674
<i>c. limited by shares (Rt)</i>	111	117	124	124	129	130
<i>limited partnerships Bt)</i>	4 832	4 529	4 236	3 997	3 859	3 765

Source: own collection, data source [2]

The number of enterprises with direct foreign investment is 1175 in the examined county in 2015, which represents a decrease of 10% compared to 1301 in 2010.

The 1587 small and medium-sized enterprises of the county, based on sector-connected classification - typically 2/3 - operate in the field of manufacturing (416), trade (337), construction (183) and tourism (135).

Based on the utilization of the lean, small and medium-sized businesses involved in manufacturing and tourism were mainly asked to fill in my research questionnaire - these two branches make up 35%.

Groups of manufacturing industry according to their number of employees: 183 employs 10-19 employees, there are among 20-49 people in 126 of them, and 50-249 employees are registered in 107 enterprises according to the CSO databases [2]. (Table 5)

Table 5: Number of employees/number of enterprises

	10-19 employees	20-49 employees	50-249 employees	all
<i>manufacturing</i>	183	126	107	416
<i>tourism, accomodation and catering</i>	91	32	12	135
<i>all</i>	274	158	119	551

Source: own collection based on data source [2]

Lean questionnaire analysis

The following information was used to filter and categorize respondents: number of employees, balance sheet total / net income, TEAOR/industry branch code, postal code.

According to the number of employees, 84% of the respondents are small businesses between 11 and 50 people, and 16% are between 51 and 250 people. In my analysis, I examined enterprises of net sales between HUF 6 million and HUF 33.6 billion from the manufacturing and from service and tourism sector. 35% of enterprises are in large cities, while 65% can be found in small towns and villages according to their postcode.

The professional questions of the questionnaire sought to find out whether company executives were using lean tools – according to their own declaration, then I asked them about the usage of more familiar tools one by one according to the quality of their use. The basic principle of lean is continuous improvement, so I asked about the training system and development habits, in which areas there are shortnesses of skill and labor force connected to lean priority.

The questionnaire asked about the following concepts of lean:

** Actively using, using, knowing, but not using responses

Table 6: Lean Knowledge

Notion	Knowledge of responders in %**
Toyota/ lean philosophy	60,5%
Kazein	45,9%
5S's	79,5%
Pulling workflow	35,1%
Continuous flow	42,4%
Kanban	18,8%
Value Stream Mapping	21,1%
Problem solving	85,4%
Reward systems for lean mfg.	74,2%
Visual factory	69,2%
Standardization	62,2%
Just in Time	63,2%
Work balancing	44,1%
Productionline Development	44,7%
Jidoka	30,3%

Source: own research 2017

Respondents are less familiar with the term "lean / TPS / continuous improvement" than with the parted tools one by one – this supports the lack of notion knowledge.

The "Toyota / lean philosophy, quality work environment-5S, problem-solving methods, suggestion / motivation systems, visual control, standardization, Just in Time" questions proved the companies' awareness of the tools (at least above 50%) in spite of the fact they said they did not know lean.

Kanban and the value process map are exceptionally high 81% among "not knowing", but active users are also in the first third of respondents (12.5%). 5S leads in active lean device usage by 37%, followed by standardization (16.2%) and visual control (15.4%), these are the most used tools. There is no respondent who actively uses six tools.

In *Figure 3*, I present to what extent lean devices are known and used by enterprises based on their responses. I distinguished four categories: actively use; know and use in some areas; know but do not use; do not know.

During the research, interviews with executives of small and mid-sized companies supported that there are more people who use lean devices than said yes in responses. On the one hand, several names live in practice for the same activity, and on the other hand, there is a dislike against foreign words. "*What are these many acronyms, foreign expressions? I do not even know them, how should I use them.*" During systematizing interviews showing connections however, it turned out that enterprises used a significant proportion of the tools, but they were not aware until now.

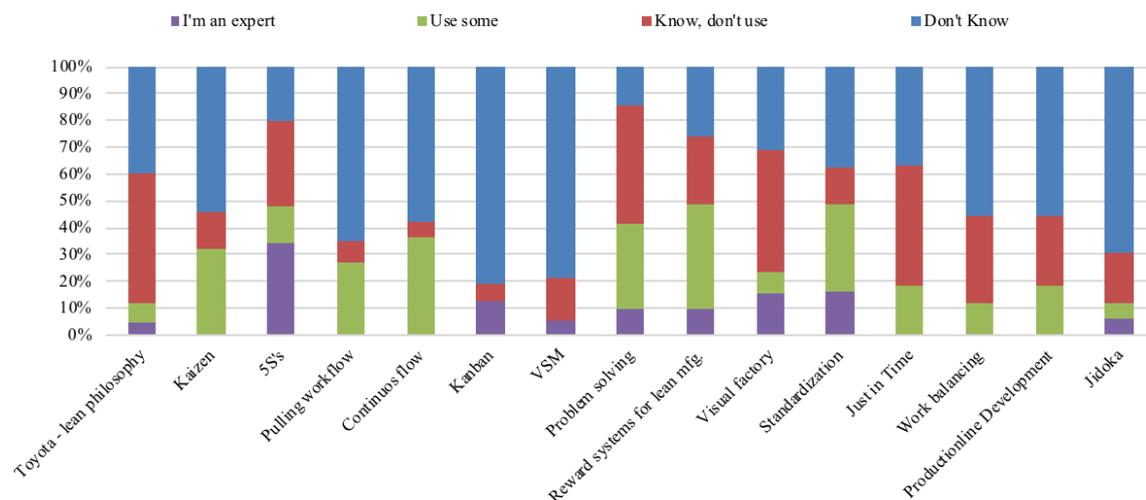


Figure 3: SME's Knowledge /Use of lean manufacturing (NUTS3-HU221) -2017

Source: own research 2017

Lean Training

With the group of questions dealing with training I wanted to justify or reject practical application of a lean principle: continuous development.

For the question *Have you ever conducted a survey on the training needs of your human resources?* 27% responded yes, and 6% of them regularly revises their training needs. 30% did not consider it necessary to train employees in their own enterprise, while 43% of respondents have not measured and / or have not prepared a training plan due to lack of capacity. The nature of responses was influenced by the size of the business, typically small businesses named lack of capacity. Internal training is 61%.

Entrepreneurs struggling with labor shortages consider internal training to be more appropriate for "labor-retaining", adapted to their daily routines. As the aim of internal training, 47% of the respondents indicated acquisition of qualifications, acquisition of new knowledge and the development of the staff, 22% found it important to get acquainted with new information, 4% to get prepared for market trends and new needs. (27% did not answer.)

"Were there any periods of time in the life of the organization when it was not possible to find an appropriate employee for a long time or you had to be satisfied with a workforce with abilities worse than expected?" To this question 71% of respondents answered yes, which matches with our daily experience, and supports the importance of training.

85% of respondents prefer realization of training in working time, and the majority finds their own workspace and factory to be practical for small-group training courses (control over trainer and trained), while in case of training for specialized skills, training material, training place and time adapted to the enterprise are considered to have advantage, too.

Employee training is considered important by 85% of respondents, 62% of them apply it. 37% of respondents would take part in lean knowledge training. Due to the fact that foreign working capital and foreign management - mainly from German speaking areas - are typically

present in the region, the questionnaire asked the language of the training. Respondents would apply for a course to refresh and update management knowledge - 76% of them in Hungarian and 12-12% in German and / or English.

The Hungarian labour market

Developing and retaining workforce is a determining factor for both the company and the employee. From the company's point of view less and less skilled people are in Hungary. Experienced workers with more complex abilities and skills are needed. Companies make more and more effort to retain the loyalty of key employees. In Hungary in 2017 the intellectual market has not expanded with potential workforce fresh enough to the needed extent, in some sectors quite many experts are missing. Demand and supply does not meet each other. (*Hays, 2017*) New investments, expanding industries lead to growing shortages in engineers, logistics and operators. If employees are badly qualified, they cannot develop the company they are working in. Companies are experiencing a boom now in Hungary, their orders are increasing. Lack of staff "automatically" generates the fact that a worker who remains in his or her workplace needs to do more.

Value of loyalty and career changed. Nowadays to be open for lifelong learning is the most important. Workers need to be flexible to find their place in the new digital working environment. Companies strive not only for low costs, but also for quality development. The possibility for financial compensation of employees is restricted to a narrow field; so far cheap labour force was one of Hungary's attractions. If wage spiral grows stronger, companies will find cheaper but still EU member labour force on the southeast from us. Simpler tasks and functions are delivered to other, more cost-effective locations. (Ukraine) There is no point in competing on the level of assemble factories, as the tasks become more and more complex, the retention and training of workforce gets more and more appreciated.

The economy is increasingly project-based. Job leasing in the blue-collar area is still popular, professionals are borrowed only for as long as they are needed.

In 2017, nearly 130,000 people worked in Hungary in this. (*Hays, 2017*)

Speaking English is a basic requirement, German means an advantage, but there is also need for Central and Eastern European languages. Foreign language skills are indispensable today for another reason, too: in many cases employees must be able to keep daily connection with foreign colleagues also in Hungarian constructions.

It is an old philosophy that the cheapest recruitment is to keep people. Even though, this is one of the cornerstones on Hungarian labour market.

The social phenomenon of recent past is migration to the West, which has had serious impact on changes in Hungarian labour market. Another new phenomenon is that workers do not want to get engaged, they want to stay free in changing workplace. In the absence of standby workforce, companies cannot but seduce people from each other. Hungarian labour market still remains closed for foreign workers not speaking Hungarian. The professionals who stayed at home have been overloaded due to cost-effectiveness. This has led to the fact that, unlike the trend so far, workers do not consider change to be a risky decision. In many cases, they do not go to another workplace for better salary, but because they no longer withstand the load at that place. More and more people work in 3 shifts and many work 12 hours a day. The situation is not good for anybody, results in termination, overtime, loss of health, inaccurate work, accidents. The staff selection protocol has now been overwhelmed by life. Learning times are shortened, the trainers are undereducated, incompetent. This has a powerful workflow risk. Due to wage-stress and low earnings, the employee works also in second, third jobs, so he or she cannot concentrate on his or her main job.

The 18 to 30 year-olds are much more self-confident in seeking balance between work and private life than the previous generations. He or she goes to another job easier and earlier, even abroad, if he/she has no established bonds, no development and career opportunities at the company.

The losers of this process are clearly the middle-aged and the elderly ones. They are older, they like the company, they do not speak languages, are less mobile, but are overloaded and exhausted because of the extra work due to the lost labour force. Younger families are threatened by the family's falling apart. Dedicated young leaders are expected to work in an informal, often 24-168-hour long duty. But this is stressful psychically and physically. In many cases, the only way out is changing job. However, fluctuation is not good for anyone, not even for employees. A large part of termination results from the fact that the worker is already fed up with the atmosphere in his or her workplace. He or she cannot tolerate the over-expansion of unskilled and poorly selected leaders in the past few years and lack of competence.

Employee can no longer be considered to be as one who can easily be replaced, and this has an influence on corporate culture. Companies must also make sacrifice to work with sufficient number of employees. Health and exhaustion cannot be measured in money.

An inspirational environment should be created. It is not necessarily financial benefit that makes the employee loyal on the long run. Good corporate communication, corporate culture, esteem, recognition of loyal and productive workers, professional development and flexibility of working hours are being revalued. In addition to home-based work and flexible working hours, the attempt for introducing 4-day work week and a flexible holiday system has also appeared in our country. In the country, the wage gap between the East and West is still significant, often 20%. (*Hays 2017*) Employers encourage labour mobility through mobility support packages, thus internal mobility of Hungarian labour force has improved.

Industry 4.0

The idea of continuous development and optimization of Industry 4.0 have their challenges nowadays. Companies need to be able to position themselves, become smart factories. Automation and digitization can replace and reduce many manual, simple jobs. This will release some workforce, which is a solution for a part of labour market problems, but not a goal for the economy as a whole. Automation, Industry 4.0, Smart Factory has four principles: interoperability, transparency of information, technical assistance, and decentralized decisions. They are based on cloud-based computing. But this does not worth much without people being able to operate, to manage and to maintain it properly. Loyal employee with complex knowledge, understanding languages and digitization is still a priority. Lean management and lean companies are the right answers to this challenge.

The data that in the 21st century only 61.4% of Hungarian businesses have their own websites really makes us think [2] In the business use of digital technologies, Hungary has a very low performance compared to the EU average: electronic information exchange is used by only 16% of enterprises, cloud services by 5% and social media by 8.9%. Without digitalisation, businesses will not be able to survive even in the domestic environment. The SMEs using it are increasingly aware of the dangers of computer offenses and of the resulting reputational damages, but they do not do anything against it because of their own omissions. They do not protect themselves digitally, they rather tend to block usage. SMEs are innovative by their very nature, so their customers' are target for hackers. The numbers appear in a better colour as the majority of foreign - German-owned – SMEs has a foreign-language home page and design in the motherland, but they are not accessible directly for the Hungarian market, for the Hungarian interested.

Finding a way out of the checkmate situation

The establishment of a strong domestic SME sector being competitive also in the international sphere is one of the key aims behind the convergence of Hungarian economy. In the above sector, as much in management as on other levels of business, in organizational culture, modern management, which does not require significant body, is less visible, and the level of management also influences the launch of the technological innovation potential in the enterprise. SMEs have shown a shrinking tendency since the early 2000s. This was reinforced by the economic crisis and industrial rearrangements as well as by the ownership structure (Kovács et al., 2017).

The role of strong SMEs is re-evaluated by branch rearrangement in industry and region-specific incentive, since the employment and self-organizing capacity of small towns and rural areas has not only economic, but also sustainability and social utility. Reorganization can be observed in sectoral and spatial dimensions, too.

Supply markets adapting a more complex form, shrinking capacities on the market are a kind of responses to labour shortages. Companies first respond to changes in the market environment by their purchasing decisions. In competition, simultaneously there is the possibility of own production and the outsourcing of the workflow. SMEs may have the advantage of being more flexible than large companies, with more informal internal relations and shorter communication chains.

Competition is getting more and more serious; companies constantly need to find innovative solutions to ensure the presence of outstanding professionals who are indispensable for the company's stable operation.

Quality is primarily a result of the acts and decisions of top management. Today it is the leadership learning process that has to be improved. *"The point is not the leadership "at all, but what the management brings to reality. While a system depends on "leadership", it is brittle and - literally - depends on the person who is the responsible leader just now "* [7] An attentive, caring management style will be needed. Employer Branding is one of the tools to secure the company's persistence. It is based on building trust and helps companies in a competitive environment. Quality management areas, management methods, such as lean management are expected to be highlighted in the future. The goal is to improve operational efficiency by sharing best practices of operation. These all can stabilize workplace communities and slow down fluctuation. Today, the value for the customer is given not only by the product but also by the way, the conditions and the environmental impact of its production. Value of social responsibility is growing.

Due to the speed of change, traditional business planning and management is no longer enough for organizations to maintain and develop their market position. There is a need for fundamental renewal, a change of attitude, both in terms of strategy, organizational efficiency, management and, last but not least, corporate culture. Nevertheless, traditional management methods are applied by SMEs.

Lean

It came to the fore in Hungary over the past decade, mainly in domestic companies with a foreign parent company to improve efficiency by the lean, thus optimizing processes and standardizing best practices. Lean-based corporate management became popular, usage and literature of lean methods and tools have been developing. Lean management has become more and more popular also among SMEs in recent years. There is huge potential in the SME sector for its application. Lean is often not an independent initiative: the buyer of the

company insists on its introduction, as part of the lean development program suggested for the supplier.

The situation is similar between the foreign parent company and the subsidiary. The success of lean execution is not the result of success in synchronizing the different national cultures, but in synchronizing the culture of the parent company and the culture of the subsidiary - and/or in their usage on the right place. With global corporate management and work organization, there are significant differences even if the same lean methods and lean tools are used. Strong fluctuation alone does not favour the lean approach. Without continuous maintenance after the introduction, lean devices do not bring the expected results to the parent company. Typically, as the survey underlined, they only know and use lean tools, but do not adapt lean philosophy, these are not lean companies. While subsidiaries and suppliers do not work close to the same level, the whole company cannot be considered a lean company.

Cooperation with Hungarian German-owned companies still offers a great opportunity for domestic companies, including SMEs. Nevertheless, the existing lags, the 20th-century approach and the shortage of skilled labour force make the Hungarian SME sector strongly two-poled: developing supplying companies and/or ones with a foreign background - and lagging Hungarian servers. This, in a way or another, has an impact on the whole economy.

References:

- Achanga P., Rajkumar E. S., Nelder R. G. (2006): Critical success factors for lean implementation within SMEs. *Journal of Manufacturing Technology Management*, 17(4), pp. 460–471
DOI:[10.1108/17410380610662889](https://doi.org/10.1108/17410380610662889)
- Arul T. G., Arumugam C. (2015): Implementation of Lean Manufacturing Technique in Indian Manufacturing Industries. *International Journal of Innovative Research in Science, Engineering and Technology*, 4(6), pp. 1847–1853
- Barlow S., Parry, S, Faulkner, M.,(2005): Sense and Respond, A Journey to Customer
- Benner, T. (2018): Corporate social responsibility in Hungary *Global Public Policy Institute*
- Chong M. Y., Chin J. F., Loh W. P. (2013): Lean Incipience Spiral Model for Small and Medium Enterprises. *International Journal of Industrial Engineering*, 20(7-8), pp. 487–501
- Csiszárík-Kocsir, Á. – Varga, J. (2015): Tudatos vállalatfinanszírozás az alkalmazott finanszírozási stratégiák tükrében, "Kitekintések - 25 éves a győri közgazdászképzés" Kautz Gyula Emlékkonferencia, 2015. június 11.
- Csiszárík-Kocsir, Á. (2015): A hazai vállalkozások által alkalmazott finanszírozási stratégiák egy kérdőíves kutatás eredményeinek tükrében, *Vállalkozásfejlesztés a XXI. században V. – Tanulmánykötet*, Óbudai Egyetem, Keleti Károly Gazdasági Kar, 33-55. pp
- Dora M., Kumar M., Van Goubergen D., Molnar A., Gellynck X. (2013): Operational performance and critical success factors of lean manufacturing in European food processing SMEs. *Trends in Food Science & Technology*, 31(2), pp. 156–164
DOI:[10.1016/j.tifs.2013.03.002](https://doi.org/10.1016/j.tifs.2013.03.002)
- Fischer G., Lee J., Johns L., (2004): An exploratory study of firm turnaround in Australia and Singapore following the Asia Crisis, *Asia Pacific Journal of Management*, 21 pp149-170
- Hammer, M., Leonard, D. & Davenport, T. (2004): Why don't we know more about knowledge. *MIT Sloan Management Review* Vol. 45 (4) pp 14 – 18.
- Hays Hungary (2017): *The 2017 Hays Salary Guide* Recruiting experts worldwide In: Nagy-Stellini T., (Ed.) 44 p.

- Hines P., Found P., Griffiths G., Harrison R. (2008): *Staying Lean*. Cardiff University, Cardiff, 99 p.
- Holz, M. (2013): Strategies and policies to support the competitiveness of German Mittelstand companies. In: Coltorti, F.–Resciniti, R.–Tunisini, A. – Varaldo, R. (Eds.): *Mid-sized Manufacturing Companies: The New Driver of Italian Competitiveness* pp. 147–168., Springer-Verlag Italia, Milano.
- Kolozsár, L.,(2013): *Vállalati integrációs rendszerek* Nyugat-magyarországi Egyetemi Kiadó Sopron 183 p.
- Kovács, Sz.- Lux, G.- Páger, B. (2017): A középvállalatok szerepe a feldolgozóiparban: egy magyarországi kutatás első eredményei *Területi Statisztika*, 2017, 57(1) pp 52-75 DOI:[10.15196/TS570103](https://doi.org/10.15196/TS570103)
- Molnár L., Udvardi A.,(2016): Versenyképességi évkönyv 2016. *GKI Gazdaságkutató Zrt, Friedrich-Ebert-Stiftung kiadvány* 70p.
- Netland, T. H. (2016): Critical success factors for implementing lean production: the effect of contingencies. *International Journal of Production Research*, 54(8), pp. 2433–2448 DOI: [10.1080/00207543.2015.1096976](https://doi.org/10.1080/00207543.2015.1096976)
- Netland, T.H.; (2012): This is an Author's Original Manuscript of an article published in the *International Journal of Production Research*, Vol. 51 (2012), Iss. 4, pp. 1084-1097. Exploring the phenomenon of company-specific Production Systems: One-best-way or own-best-way? 1,2 1 NTNU, Industrial Economics and Technology Management, Trondheim, Norway 2 Georgetown University, McDonough School of Business, Washington, D.C., USA
- OECD (2017): Taxing Wages 2015-2016 *OECD Publishing Paris* 584 p. DOI:[10.1787/tax_wages-2017-en](https://doi.org/10.1787/tax_wages-2017-en)
- Pankotay, F.,(2016): Lean projekt a gyakorlatban *In: Kolozsár L.,(Ed.) Talentum a tudományban Nyugat-magyarországi Egyetem Kiadó Sopron* pp 75-94
- Pankotay, F.,(2017): Vállalati hatékonyságmérés kritikája a közszférában *In: Keresztes G.,(Ed.) Tavaszi Szél 2017 tanulmánykötet II.* 570 p Miskolc Magyarország 2017.03.31.-04.02. Doktoranduszok Országos Szövetsége 2017. pp 382-396
- Pasmore, W.A., Purser, R.E .,(1993): Designing work systems for knowledge workers. *The Journal for Quality participation* Vol. 16 (4) pp 78-83.
- Rachwal, T. (2015) Structural changes in Polish industry after 1989 *Geographia Polonica* 88 (4): pp. 575–605.
- Sasvári, P. (2014): A KKV-k Informatikai Infrastruktúrájának vizsgálata a Visegrádi országokban, *XXVIII. microCAD International Multidisciplinary Scientific Conference*, Miskolc, pp. 1-9.
- Sayer N. J., Williams B. (2012): *Lean for Dummies, 2nd Edition*. Wiley Publishing, NJ, 408 p.
- Smallbone, D.–Rogut, A. (2005): The challenge facing SMEs in the EU's new member states *International Entrepreneurship and Management Journal* 1 (2): pp 219–240.
- Spann, S. M., Adams, M., Rahman, M., (2011): Transferring Lean Manufacturing to Small Manufacturers: The Role of NIST-MEP 15 p.
- Staufen Ag (2016): 25 éves a lean menedzsment, tanulmány *Staufen Ag és Institut PTW der Technischen Universität Darmstadt* In: Goschy W.,(Ed.) 76 p.
- Szabó J., Farkas Sz., (2011):–A válság hatásai a magyar kis és középvállalati szektorban *Vezetéstudomány 2011. XLII évf. 9 szám*
- Szerb L. (2010): A magyar mikro-, kis- és középvállalatok versenyképességének mérése és vizsgálata *Vezetéstudomány* 41 (12): 20–35.
- Szerb L.; Komlósi, É.; Páger, B., (2016): Measuring entrepreneurship and optimizing entrepreneurship policy efforts in the *European Union CESifo DICE Report* 14 (3): 8–21.

- Szilágyi T. P., Almádi B. (2015): Beruházási – projekt kockázatok vizsgálata és feltárt dimenziói primer kutatási eredmények alapján In: *Keresztes Gábor (Ed.) Tavaszi Szél 2015 Konferenciakötet II.* 659 p., Eger, EKF Líceum Kiadó. pp. 601.
- Ulewicz R., Kucęba R. (2016): Identification of problems of implementation of Lean concept in the SME sector. *Ekonomia i Zarzadzanie (Economics and Management)*, 8(1), pp. 19–25
DOI: [10.1515/emj-2016-0002](https://doi.org/10.1515/emj-2016-0002)
- Veresegyházy, R.(2008): Lean felmérés vezetői összefoglaló *MGSZ Benchmarking Munkabizottság 2007-2008*
- Walton, M., (2018): Versenyképességi Indikátor Jelentés Feltörekvő középvállalatok 2017-2018. *Deloitte Touche*
- Womack, J.P., Jones, D. (1996): Lean szemlélet – A veszteségmentes, jól működő vállalat alapja, HVG Könyvek, Budapest (fordítás) eredeti mű: Womack, J. – Jones, D. (1990): “Lean Thinking”, Simon and Schuster, New York, NY

- [1] destatis.de; Statistisches Bundesamt;
- [2] ksh.hu; Hungarian Central Statistical Office (HCSO)
- [3] ec.europa.eu/eurostat Eurostat
- [4] A Magyarország és Németország közötti kapcsolatok: *Statiztikai Tükör* 2017. január 13. Központi Statisztikai Hivatal Kiadó 9 p.
http://www.ksh.hu/docs/hun/xftp/stattukor/mo_nemet_kapcs.pdf
- [5] Német - Magyar Ipari és Kereskedelmi Kamara (DUIHK)
- [6] http://ec.europa.eu/regional_policy/en/information/maps/regional_competitiveness/
- [7] <http://lean.org.hu/vezetes/direktvezetes>; John Shook
2004. évi XXXIV törvény
https://net.jogtar.hu/jr/gen/hjegy_doc.cgi?docid=a0400034.tv
European Comission (2016): 2016 SBA Fact Sheet – Hungary, 20 p.
<http://ec.europa.eu/DocsRoom/documents/21188> (elérés: 2018. 04. 12.)
European Comission (2015) <https://ec.europa.eu/docsroom/documents/22382>
OECD,(2015) <http://www.oecd.org/tax/tax-policy/taxing-wageshungary.pdf> (elérés: 2017. 11.18.)