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The ICEG European Center issues its monthly publication, which includes 2-4 brief analyses on macroeconomic and microeconomic issues. The publication focuses on two groups of countries: **Commonwealth of Independent States - CIS** (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan) and the ten post-soviet New Member States of the European Union – **EU-10** (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia).

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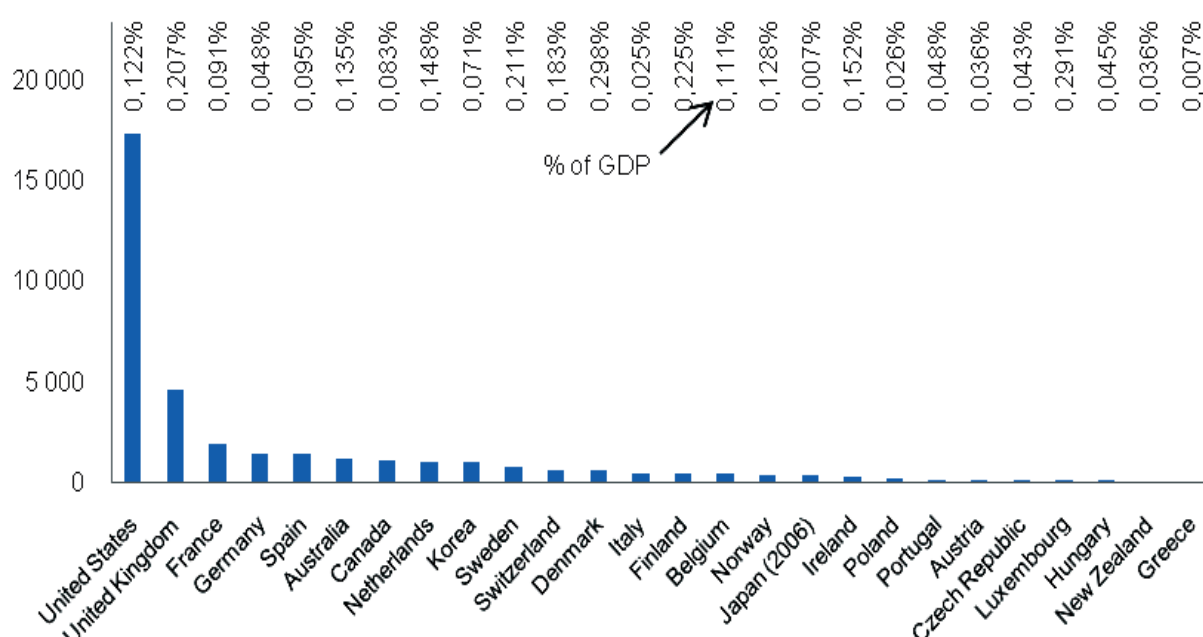
FOSTERING VENTURE CAPITAL IN THE CONTEXT OF ECONOMIC CRISIS

Olivér Kovács

In January, the Munich-based online venture capital data provider, Private Equity Analyzer, reported that the German VC firms have fared quite well than their European and American counterparts during the global financial and economic crisis. Apart from this exceptional case, our starting point in this article is the well-documented fact that venture capitalists' (VCs) behaviour has become predominantly more risk averse owing to the recent crisis. This is completely in accordance with the experience during the internet bubble in the early 2000s illustrating the VCs' sensitivity to an economic juncture. We argue that future expectations of VCs are one of the most important factors behind this shift. It per se calls on policymakers to refrain from such interventions which are most likely to degrade positive expectations. Specifically, while the upcoming fiscal consolidations of nations are imperative, governments should eschew inadequately composed fiscal consolidations after the stimulus-prone period.

As the trajectory of VCs is concerned, the figures unequivocally exemplify that the VCs' activity has undergone a sharp decline as a reaction to the recent financial and economic crisis. In 2006, The Global Venture Capital Survey presented by Deloitte revealed that most of European VCs declared an intention to expand investment into other European countries. 21% of respondents planned to favour Central Europe in the next five years. To the contrary, the recent crisis has caused an epochal transformation of this ambitious plan. An OECD (2010) report revealed that VCs turned mainly to emerging markets, especially to India and China.

CHART 1. VENTURE CAPITAL INVESTMENT IN 2008 (USD MILLIONS AND % OF GDP)



Source: OECD Science, Technology and Industry Scoreboard 2009

Since the access to traditional financial sources became very tight, venture capital also became rare as VCs were positioning themselves to see ‘which way the cat jumps ultimately’. There were dramatic drops throughout various VC-financed industries. For example, in the second quarter of 2009, VC investment decreased by more than 55% in case of early stage SMEs and start-ups in the United States. Let us add immediately that the industries facing the greatest VC-decline were those where the absolute volume of VC was relatively high from the onset (e.g., information technologies; biotechnology industry). Therefore, the European pattern of decline cannot be a uniform one through different regions, especially, if we take into consideration the situation in CEE countries where the market was scantily endowed by VC (Chart 1, Table 1).

TABLE 1. DIFFERENT TYPES OF INVESTMENT IN CEE AND EUROPE IN 2007 (IN THOUSAND EUR)

	Total CEE	% of total	Total Europe	% of total
Seed	3,673	0.1	170,67	0.2
Start-ups	24,198	0.8	2,287,142	3.2
Expansion	388,19	12.8	9,665,262	13.4
Rescue/turnaround	6,088	0.2	150,049	0.2
Replacement Capital	263,933	8.8	3,049	4.2
Buyout	2,319,079	77.2	56,843,899	78.8
Total 2007	3,005,162	100	72,175,484	100
Total 2006	1,667,013		67,807,541	

Note: Bank leverage is not included.

Source: Pereg_Analytics

Venture capital in the era of „Initialzündung”

Concerning the endowment of venture capital in the EU, policy should aspire to reach the self-sustaining VC market by taking into account the fact that VC is sensible to the business cycle, and the willingness to invest into SMEs mostly depends on future expectations. Giving the recent crisis, due to the substantial amount of fiscal stimulus representing the dominancy of the Keynesian renaissance or the Initialzündung-idea by Wilhelm Röpke (1942), the expectations on future fiscal adjustments including rising taxes and reducing expenditures are intensified. One line of thinking assumes that fiscal stimulus will have a positive impetus on demand through its so-called multiplier effect; however, policy faces a massive identification problem in each case regarding the issue of targeting: on what sector, or for instance, on what SMEs should the expenditures be concentrated? Contemporary studies have accentuated that picking the right system is much more important than picking the ‘winners’ (Kerr – Nanda, 2010). The fathomable reason behind this is the well-known asymmetric information (Akerlof, 1970). Firms always have more information about their market potential than the governments would ever have, accordingly, governments face an enormous problem even if they would be willing to put focus on selected companies.

Nevertheless, the financial resources are crucial for the enterprises, however, it would be a Hayekian fatal conceit to think that the direct financial support could per se ameliorate and stimulate further the SMEs without attempting to incorporate the fact that their investment decisions mostly depend on future expectations with regard to future demand, tax burdens, and transaction costs and so on. Consequently, the stimulus packages are hampering the evolvement of optimistic future expectations both on the side of enterprises and VCs. If we take a mere glimpse into the dataset on the performance of VC-backed companies, we can conclude that, on average, venture capital financed firms are more innovative and grow faster in terms of employment and

sales revenue than other firms. One should not neglect that this result is more or less a pure manifestation of the firm-selection behaviour of VCs, instead of any direct causal impact of VC-financing on innovation and firms' growth³. VCs predominantly tend to promote firms with above average levels of innovation rather than making the firms more innovative.

Publicly funded VCs do not seem a promising alternative in coping with low innovation activity during the global financial crisis, thus, preferring the self-sustaining VC market would be instructive, rather than a market dominated by public funds which are more or less able to crowd out VCs that are already in the market. However, there is a massive need for 'expectation-friendly' state interventionism. Importantly, fiscal stimulus cannot be a permanent tool but rather a temporary measure in order to bridge the existing gap between pre- and post-crisis demand levels⁴.

Since fiscal stimulus heightened the indebtedness of nations via triggering deficits, exit strategies should have been accurately considered in parallel. Nonetheless, only an abysmal proportion of European countries were considering the exit strategy as well. Most EU countries applying such spending should have envisioned incorporating the fact that the stimulus will require significant consolidations (increasing revenues, reducing expenditures) to be abreast of the requirement of fiscal sustainability (low deficits and public debts).

The composition of imminent consolidation is essential. The results of consolidation-related literature review are twofold. On the one hand, a revenue-based fiscal adjustment is more likely to distort income levels and lead to unsatisfactory consolidation. On the other hand, empirical studies have shown that capital gains tax or corporate tax may be harmful for VC financed entrepreneurship by deteriorating their financial conditions (Keuschnigg, 2009). If we take a look on the consolidation-related empirical literature, we can conclude that those consolidations were successful which concentrated primarily on the expenditure side (social transfers, public sector wages etc.).

There is a high degree of confidence in the broad conclusions of fiscal adjustment-related studies that the beneficial effect mostly depends on future expectations. If the actors anticipate austerity measures with the sheer concentration on tax increase, their willingness to be innovative and to invest into the company will sharply dampen.

Therefore, governments need a credible commitment to fiscal consolidation, which can be guaranteed for example by national numerical fiscal rules. In other words, VCs require a stable regulatory environment with transparent fiscal policy. The latter one can be significantly encouraged by fiscal rules inducing lower risk premia, better public finance and ultimately positive expectations.

Potential for tailoring innovation policy towards improved expectations

Beyond the fact that the willingness of VCs to invest more and more into innovation and R&D is withering, one should not neglect that, presumably, huge number of VCs are waiting for new territories and industries (e.g. quantum computer, synthetic life-forms, successful digitization of genomes, robotics, artificial intelligence, free voice within data network, small nuclear power plants, electric transport vehicles and so on) determining the lowering tendency of their activism. Accordingly, stimulating their activism in itself is not a panacea; innovation policy should handle the situation with meticulous care by focusing on a horizontal approach.

3 See for example the very comprehensive analysis on this issue by Aiginger and Schratzenstaller (2010).

4 As it was clearly pointed out in IMF (2010).

Innovation policy *inter alia* aims at encouraging innovation on the micro level in order to enable the whole economy to perform much better. For this, a complex institutional setting is necessary. Obviously, financial support (i.e., publicly funded VCs) may be useful, however, in the aftermath of the global crisis causing a high degree of uncertainty about the future sustainability of states, financial resources might have an infinitesimal effect on investment behaviour of firms. Therefore, a well designed innovation policy should couple with a horizontal approach impregnating the full gamut of policymaking including fiscal policy.

There is a widespread consensus on the positive effects of fiscal rules/institutions on future expectations of economic actors. Avoiding the default risk is the basis for a self-sustaining VC-market by creating positive expectations. Therefore the “first best” option for diminishing the financial constraints prevailing in the economy during the crisis and especially in the aftermath of significant “Initialzündungen” would be a credible exit strategy including expenditure side fiscal consolidation complemented by the introduction of fiscal rules and the establishment of independent fiscal institutions. Without such an exit strategy, any attempt to foster positive expectations might be barren of results.

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THE INTERNATIONALISATION OF ICT R&D IN HUNGARY

Adrienn Fekó, Magdolna Sass

Introduction

The ICT sector is one of Hungary's most dynamic sectors but the related R&D activity is relatively low compared to the EU-27 average. This short paper focuses on ICT R&D activity of Hungary, and presents the main characteristics of the sector, based on the available statistical data and company interviews. The internationalisation of R&D is affecting Hungary as well, mainly on the receiving side. According to Sachwald (Sachwald, 2007) the typology of foreign R&D units is the following:

1. Local development centre (LDC) (traditional: supporting production abroad, in the host country). The number of this type of centres is the highest.
2. Global research laboratory (GRL) (home-base augmenting R&D units) – Their number is lower, and they are located mainly in developed countries, especially in the US.
3. Global development centre (GDC) (in charge of R&D tasks which can be separated and plugged back into the innovation process of the MNC) – Their number is growing, and besides developed countries, there are many less developed countries involved in the process, including India, China and CEE.

Methodology

The study was based on one hand on available statistics and on the other hand on interviews taken with the representatives of leading ICT or ICT related companies in Hungary. According to DG JRC-IPTS, European Commission, we used an aggregated definition of ICT sector (NACE rev 1.1) in our research:

Manufacturing:

30: Manufacture of office, accounting and computing machinery

32: Manufacture of radio, television and communication equipment and apparatus

33: Manufacture of medical, precision and optical instruments, watches and clocks

Services:

64: Post and telecommunications

72: Computer and related activities

Main limitations of our methodology

In the case of software sector, it is difficult to identify those software related activities which can be regarded as R&D. According to the Frascati Manual³ “For a software development project to be classified as R&D, its completion must be dependent on a scientific and/or technological advance, and the aim of the project must be the systematic resolution of a scientific and/or technological uncertainty. [...] The nature of software development is such as to make identifying its R&D component, if any, difficult.” The Manual contains lists of activities which can be regarded as R&D and of those which are not considered as such. However, this list admittedly does not contain all software related R&D activities and it allows for “reallocating” certain project from non-R&D to R&D. These uncertainties made also our task difficult.

Another problem arises from the fact that product and service classifications could not follow quickly enough the developments in the ICT sector, thus certain activities are not easy to classify into the categories used at present. A further problem is caused by the fact that data are not reliable enough. In Hungary, the CSO and the Tax Authority both collect data on R&D. The problem with the data provided by the CSO for earlier years is that it did not include all firms carrying out R&D (for example, companies with less than 5 employees while especially in the software industry there are many small or even micro enterprises). Moreover, these data are not controlled.

General ICT Indicators

Table I shows selected data of Hungarian ICT R&D, namely the total effective number of researchers and the R&D expenditures.

TABLE 1. ICT SECTOR NUMBER OF RESEARCHERS AND R&D SPENDING

ICT sector	2006	2007	2008
Total effective number of researchers	1865	2225	1972
R&D expenditures (EUR million)	53.092	67.831	56.564

Source: CSO, Hungary, 2010.

The share of ICT R&D expenditure in GDP in the period between 2006 and 2008 was very low in Hungary in international comparison; it is below 0.05%, while in the EU-27 the same indicator is above 1%. The effective number of researchers in the ICT sector was 1865 persons in 2006 in Hungary, it increased in 2007 to 2225 persons, but in 2008 it decreased and amounted to 1972 persons. The R&D expenditure of the ICT sector increased between 2006 and 2007, and decreased between 2007 and 2008. The ICT R&D expenditure amounted to EUR 56.56 million in 2008.

Estimated ranking of the biggest ICT R&D spenders in Hungary

Table 2 shows the estimated ranking of the Hungarian software and ICT industry firms on the basis of their R&D spending. The list contains only the first 16 actors; among them in the first three positions there are ICT industry firms. The number of R&D employees is unknown in most of the cases, and there are some missing data regarding R&D spending as well.

Table 2 Ranking of Software developers and ICT Industry actors in Hungary based on their R&D spending

	Name of the company	Software/ICT Industry	Ownership structure (nationality)	Sales (2008) in EUR thousands	R&D spending in 2008 in EUR thousands
1.	Audi Hungary Motor Ltd.	ICT Industry	Germany	5 606 568	295 000
2.	Robert Bosch Electronics Ltd.	ICT Industry	Netherlands	97 353	36 0002
3.	Nokia Siemens Networks Ltd	ICT Industry	Netherlands	49 053	26 2952
4.	evosoft Hungary Ltd. I	Software	Germany (92,5%) – Hungary (7,5%)	25 748	not registered as R&D and not public
5.	Siemens PSE Ltd. I	Software	Austria	29 545	not registered as R&D and not public
6.	SAP Hungary Ltd.	Software	Germany	56 235	19 104 (not registered as R&D)
7.	Ericsson	Software	Sweden	184 985	17 714
8.	Knorr Bremse Ltd.	ICT Industry	Germany	123431	13 007
9.	GE Hungary Ltd.	ICT Industry	USA	2 656 490	5 031
10.	AVL Autókut Ltd.	ICT Industry	Austria	5 398	4 318
11.	Magyar Telecom Plc.	ICT Industry	Hungary-Germany	1 993 250	2 8702
12.	Graphi-soft R&D Company limited by shares	Software	Germany	23 867	2 524
13.	NI Hungary Ltd.	ICT Industry	Netherlands	225 639	2 256
14.	Meditech Ltd	ICT Industry	Hungary	1 772	1 118
15.	GlobeNet company limited by shares	Software	Hungary	3 035	1 020
16.	Kürt company limited by shares	Software	Hungary	4 480	812

1: business year 1 October 2008 – 30 September 2009, 2: for 2009, 3: in 2007

Note: Average exchange rate in 2008: 251.25, in 2009: 280.6. For ICT industry, total R&D expenditures are shown, but understandably only a certain part of it is spent on ICT R&D.

Source: own compilation

On the basis of Table 2 we can list a few characteristics of Hungarian ICT R&D.

First, in Hungary, inside ICT R&D, software development is one of the leading segments, similarly to other new Member States. Even in ICT industry R&D activities, it is usually software engineering, which is carried out (for example, in the case of the automotive firms).

Second, it is obvious that Hungarian subsidiaries of multinational companies dominate in Hungarian ICT R&D.

Third, on the basis of the interviews location of headquarters of the biggest R&D spenders is predominantly Budapest, but we can find important ICT Industry companies' locations also in other Hungarian cities such as: Győr, Hatvan, Kecskemét, Debrecen and Szolnok.

Fourth, based on the company interviews one of the main important results is that official statistical data on R&D personnel, R&D expenditures and R&D activities in the Software and ICT Industry sector must be considerably underestimated. Hungarian owned companies, where there is no additional benefit for example in the form of a tax allowance, do not declare neither their employees nor their activities as R&D related. Similarly, foreign owned affiliates in Hungary, even when carrying out highly complicated software development, in most of the cases for their parent companies, do not declare that as R&D if there is no specific interest.

Fifth, in the software field the internationalisation of software R&D is connected to the activities of highly export oriented affiliates, and besides these, there are a few Hungarian owned 'born globals' with rocketing output and exports, operating in niche markets. On the other hand, many medium-small sized Hungarian owned companies concentrate their activities on the domestic market. This results in a "dual structure" of software-related ICT R&D in Hungary.

Sixth, on the basis of the interviews we found that for foreign owned companies, their contacts with the local economy are quite limited though almost all of them seem to maintain extensive links with universities and research institutes. This type of links is also characteristic for the majority of Hungarian owned companies in the sector.

Seventh, as far as the forms of internationalisation is concerned, the internationalisation of ICT R&D is connected mainly to exports, only a few examined companies invested abroad but even in these cases R&D related considerations did not play an important role.

Eighth, we found that the affiliates of foreign companies are usually not independent in terms of taking strategic decisions, including international R&D cooperation. They work in global projects, with a strictly defined content usually.

Conclusion

In Hungary, ICT R&D expenditure is relatively low in manufacturing and services, but it is growing steadily over time. This growth can partly be attributed to the new international division of labour in ICT R&D. Hungary takes an ever increasing part in the internationalisation of ICT R&D, especially starting from around 2000. The country has a competitive advantage in the ICT sector, which is based on its relatively good education system and strong tertiary education in mathematics and informatics in certain universities. Thus the main attracting factor for the foreign owned companies is the relatively cheap and relevantly skilled labour force. The level of internationalisation is understandably high for foreign owned companies. However, there are some Hungarian (or

formerly Hungarian as in the case of Graphisoft) owned companies, which not only have a high export intensity but also established their own affiliates on their main markets abroad.

On the basis of the company interviews it is most probable that R&D expenditures and the number of R&D employees in the sector are underestimated, due to the fact that some companies have no interest in registering these neither at the Central Statistical Office nor in their balance sheets.

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OIL VALUE CHAIN AND INVESTMENT STRATEGY OF THE MOL GROUP

Ede Borbély

This paper analyses the MOL Group itself and its close and broad environment. In the first section, I will give a short analysis about the trends of the energy industry globally. Secondly, going through the main elements of MOL Group's oil production circuit, will give us a clearer view about the company's international strategy in the turbulent environment. Our goal is to examine the capital flows of MOL mainly to other countries and elaborate on the nature of current and future decisions. (For instance: integration of INA or acquiring stake in Pearl project.) MOL, as the biggest Hungarian exporter, has such investment practices which can show us an interesting business strategy in the post-crisis era.

Global trends in the energy industry

Considering the supply side a worldwide shift from oil to gas is probable due to the facts that unconventional exploration technologies (for instance shale gas) hit the breakeven point in their lifecycles and also pipeline-free transportation in the form of LNG is becoming more and more cheap and thus widespread. Apart from this shift from oil to gas, IEA expects fewer producers and bigger quantity in oil production worldwide. They claim "production rises most in Saudi Arabia and Iraq, helping to push OPEC's market share from 41% today to 52% by 2035, a level last seen prior to the first oil shock of 1973-1974." (IAE, 2010:9).

Furthermore, after checking the natural supply of oil and gas, we should also measure the willingness to invest in the market players. KPMG's Energy Survey shows (KPMG, 2010:3) the willingness to increase capital spending from 2009 to 2010: 61% of the respondents said that there will be an increase in capital spending and 39% said that this increase will be more than 10% of the spending amount in 2009. I believe that in the second part of the financial crisis, these numbers are more than impressive, because they are testifying about swift recovery and strong strategic intentions, which are aiding stable market structure. Only few industries can show such rapid recovery.

The oil production circuit of the MOL Group

According to HVG Top 500 study (HVG, 2010), in 2009 MOL Plc. was the biggest exporter among Hungarian companies. Of course, MOL's rank in this list is highly dependent on the actual crude oil price. It is true that in the ownership of the company there is a foreign majority, but that does not equal to foreign control: the Hungarian management takes the strategic decisions. Moreover, the Hungarian government has a golden share with veto right in decisions of strategic importance. MOL's oil production circuit constitutes two parts. The first part is the upstream, where we deal with field exploration (seeking for oil) and production (bringing up the oil). The MOL Group is carrying out exploration activity in 14 countries: Hungary, Croatia, Romania, Russia, Pakistan, Kazakhstan, Syria, Kurdistan region of Iraq, Cameron, Angola, Namibia, Egypt, Oman and India (MOL, 2010a:6).

In the exploration process geologists are making seismic tests to measure the potential amount

of hydrocarbon underneath the surface. With reflection technology they make a map about the quantity and position of layers. For MOL in terms of technological innovations there isn't much space for maneuver. New methods often developed by industry leaders. Nonetheless the physical drilling activity is outsourced to drilling companies (such as Crosco etc.).

From a report (MOL, 2008:63) about the performance of the Exploration and Production Division we can see that the major projects for research are in connection with chemical processes and laboratory work.

The company itself doesn't develop technologies for getting oil and gas to the surface. By this reason, the intensity of R&D is not that high compared to other sectors, for example to the pharmaceutical industry. The group is engaged in producing activity in seven countries: Hungary, Croatia, Russia, Syria, Pakistan Egypt and Angola (MOL, 2010a:5). In Table 1 we can see that both in expenditures and earnings upstream has the biggest stake. Plus the downstream part is a little bit more capital-intensive than lucrative.

After exploring and mining the crude oil it is crucial to refine and market it. There are five major refineries within the MOL Group. In the order of capacity they are: Duna-, Bratislava-, Matova-, Rijeka- and Sisak Refinery (MOL, 2010a:10). We should not forget that it is vital to utilize the by-products after refining. Evidently the overall capacity of these refineries is enough to accommodate the 78.29% (see Table 2) of the group's production. (Only the CEE onshore and offshore production is refined here.) But apart from capacity also the efficiency of these refineries are important. The efficiency is measured by a special index called the Nelson Complexity Index (NCI).

TABLE 2. MOL GROUP'S PRODUCTION IN BOEPD AND %⁴

Hungary and Croatia onshore	Croatia offshore	Russia	Syria	Pakistan	Egypt and Angola
91950	14140	20050	4110	1400	3860
67.86%	10.43%	14.80%	3.03%	1.03%	2.85%

Source: MOL (2010a:5)

According to Maples (Maples, 2000:37-39) the NCI is averaging around 6.5 in Europe, 9.0 in Asia and 9.5 in the United States. (Other parts of the world are below these numbers.) The Nelson Index for the Bratislava-Slovnaft Refinery is 11.5 and 10.6 for the Duna Refinery (MOL, 2010b). This shows an incredibly efficient functioning compared to competitors not just in Europe, but worldwide.

During the refining process a lot of by-products precipitate. Among others: ethylene and propylene. The disposal or neutralization of these substances would be neither cheap nor rational. With the Petchem business function the ethylene and propylene can be transmitted to polyethylene and polypropylene factories for further processing to become raw plastic at the end (TVK, 2008).

As we can see in Table I the Petrochemical business unit accounts only 0.65% of the EBITDA, but the planned expenditure for it is 4%. This imbalance shows that for the MOL Group the two petchem units (at Tiszaújváros-TVK and Bratislava-SPC) holding major importance. Without processing the by-products of oil refining, huge sums of money ought to be spent on chemical treatment.

Going through the upstream, downstream and petchem we can see a clear chain of oil production and processing. (I left out the trading and retail (gas stations), the last part of downstream, because it is less relevant from our point of view.)

⁴ Boepd is barrel of oil equivalent per day.

The specific structure and the set of vertically integrated functions establish a creative basis for corporate strategy. Now, when we are familiar with the system of the group, we should examine the foreign investment priorities.

Analysis of the group's investment priorities and types

The MOL Plc. is probably the leading Hungarian 'multinational'. The strategy of a firm, which enjoys such a particular status, surely is interesting. In the Exploration and Development update, MOL gives utterance to the highlighted areas of medium-term strategy (MOL, 2010c:1):

„Key focus areas are:

- (i) the CEE with strong reserve base and production in Hungarian and Croatian on-shore assets supplemented by Adriatic offshore JVs already in the production and/or development phase;*
- (ii) Russia and Kazakhstan with significant recent discoveries and fields under development;*
- (iii) the Middle-East with large-scale development projects in Syria, Pakistan and Kurdistan and*
- (iv) Africa mainly represented with exploration assets.”*

We can draw the conclusion that the company has a clear view about its growing potentials and under which circumstances should these potentials be developed. Establishing a strong presence and market leadership on its home CEE market is a typical 'inner' development. On a global sphere the MOL Group is only a minor player, but overcoming local challenges is making him a regional multinational company. The strategy on local level is dominated by acquisitions and ownership in companies along the whole value chain. In the group, apart from MOL Plc., we can find INA (with an ownership of 47 per cent), the Slovnaft refinery and gas stations, TVK and SPC (Bratislava) petchem factories and FGSZ national gas transmission company.

Building out a complex system of companies in each other's geographic proximity, supplementing each other's functions (in the downstream and petchem businesses) is the best strategy to develop a strong company base for 'outer' investments. The 'outer' investments and developments are in the upstream business, where geographical proximity isn't necessarily a priority. These are relating to exploring and drilling activities, where concessions are made among energy companies. The location of production is where a well can be found. The location of headquarters is not interfering with this. MOL Group's this kind of vertical foreign direct investment is resource-seeking. For crude oil, they need to drill where crude oil is efficiently exploitable.

I would like to give examples for both 'inner' development and 'outer' development. For the first, the integration of the Croatian INA is highly illustrative. And for the second, acquiring a stake in the Pearl project in Iraq can be a good example. After buying additional 22% share in INA in 2008, MOL took over operational control. The two companies accounting system became unified from Q3 2009. Integrating INA made the MOL Group bigger in all of its core businesses. The acquisition aimed existing resources, physical equipment and contracts.

On the other hand, getting a 10% stake in the Pearl Company in Kurdistan is another type of strategic move. Along with INA's integration, the Pearl project was the other 'big hit' in the past years. 19% of planned capital expenditure for the period 2010-2012 will be spent on developing the field (MOL, 2010a:31). For the whole CEE region the same number is 35%. Investing in the Kurd region in Iraq

with such a capital sum is a risky but – in case of positive outcome – lucrative decision. Given the fact that the region's gas and oil contracts signed by the Kurdish Regional Government are considered illegal by the oil minister, Hussain Al-Shahristani in Baghdad, investments in Kurdistan are less predictable (Scotia Capital, 2010:8). Of course, for Iraq selling oil is a national interest.

Therefore, in spite of signs of political instability the economic ventures are seem to be protected. From MOL's side the reasons for investing in the project are the following: possible remittance from first-mover advantage and ensuring a supply source for Nabucco. After the war with the USA, Iraq is open for energy companies. The ones who are quick enough to get concession can enjoy the benefits for a long period.

Nonetheless MOL is a contracting party of the Nabucco project and shareholder of the Nabucco International Plc. In this way it has bigger bargaining position for partially supplying the pipeline in the future. Additionally, as long as Nabucco is under construction and its finishing date is unsure the MOL Group can sell oil and gas to Iran, Turkey and chiefly to Iraqi industries. On the whole, there is a major difference between 'inner' and 'outer' investments at MOL.

It is a strategic objective to broaden the company structure with integration of nearby companies. Also refining capacity and retail can be enhanced in this way. On the flipside of the coin, long-term and substantial investments ought to be made, to strengthen and to increase the number of supply sources. With the Pearl Company, the group could gain competitive advantage.

Concluding remarks

Although the MOL Group is a big player in the CEE region it has no significant influence on energy demand neither locally nor globally. The whole industry is demand-driven. Companies – except for prices – cannot drive the market easily. Nonetheless, MOL has a small room for maneuver to increase efficiency and hence profits. Seeing that the downstream business with petchem is closely related to each other geographically, we can think that the company values organic organizational development.

On the contrary, the upstream is resource-driven and determined by the number and quality of wells. Therefore exploration and production activity is carried out in three continents.

To conclude, each big project or foreign investment (among others: INA's integration or Pearl project) has its separate role in re-organizing the company's asset structure. But it is not irrelevant whether one of them is diversifying the source of the basic product or aiding the internal structure of the organization.

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