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The Profitability of Austrian Foreign Direct Investment – Reinvestment or Repatriation?

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Abstract

Austrian foreign direct investment (FDI) increased quickly since 1992. The profitability of these investments did improve over the full period under consideration (1992 to 2005). In particular investments in Central and Eastern Europe became rather profitable. In 2005 total annual profits translate into an average return on equity (RoE) of 8.3%. However, returns differ to a large extent by regions. They are 5.1% and 9.7% for EU-14 and for CEE-5 respectively. The age of investment is the main determinate of profitability. Interestingly, there are strong differences between Greenfield investments and M&As. While the latter are always more profitable in EU-15 this is not the case for affiliates in CEE. In these countries we can observe a time-dependent development. During the first years of investments M&A are more profitable than Greenfield investments. However, the latter become more rewarding by older vintages. We further examine if profits are either reinvested (and thereby contribute to the existing stock of capital in the host country) or repatriated (and thereby improve the performance of home countries). The paper shows that patterns differ substantially by countries and over time. The share of reinvestment is much higher in CEE than in EU-15. Moreover, M&A show much higher rates of repatriation than Greenfield investments independent of host countries.

Keywords: *Foreign direct investment, profitability, EU enlargement, greenfield investment and M&As.*

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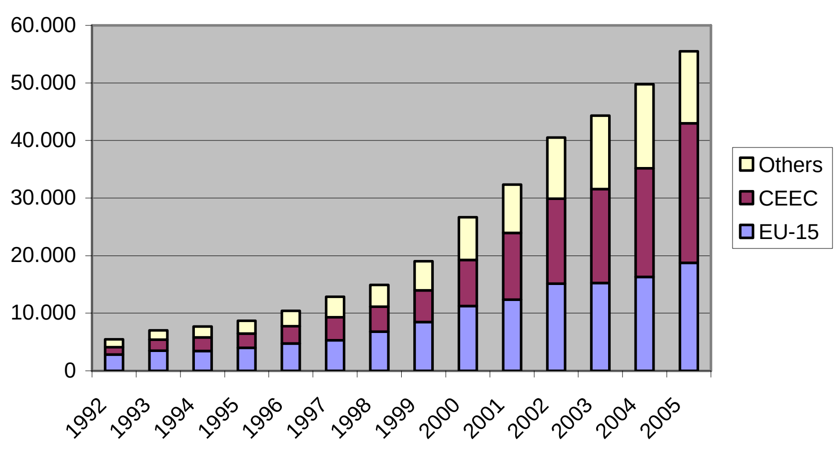
1. Introduction

The economic and political opening of Central and Eastern Europe[1] (CEE) has had a tremendous impact on the Austrian economy. Since Austria's economy is mainly dominated by small and medium enterprises its outward FDI stock (measured as a percentage of GDP) has been traditionally very low. In 1992, at the beginning of the transition period this share has been 2.1% whilst in 2005 it has increased to more than 21%. This exceptional boost of Austria's outward FDI was mainly due to the opening up of the CEE economies where Austrian firms invested rather heavily.

As shown in Figure 1 Austrian FDI in CEE increased strongly. Starting from a low of 1.3 EUR bn in 1992 the amount has increased up to 24.4 EUR bn in 2005 which accounts for 43.6% of total investment. Meanwhile this share is considerably higher than that for EU-15 (33.8%).

Figure 1: Austrian FDI by Host Country Groups, 1992-2005



Further enlargement of Austrian FDI can be observed at the regional level within the CEE-19. There we can see a very interesting regional pattern of development. Until

[1] Although eight out of 19 CEECs are already member of the EU we subsume under the heading of CEE-5 Poland, Hungary, Slovenia, Slovak Republic and Czech Republic. Under CEE-19 we subsume CEE-5 and Albania, Bosnia and Herzegovina, Bulgaria, Estonia, Croatia, Latvia, Lithuania, Moldavia, Romania, Russia, Serbia and Montenegro, Slovak Republic, Ukraine and Belarus.

1996 the four adjacent CEE countries accounted for more than 95% of all investment in CEE-19. However, in 1998/99 the picture changed considerably. Firstly, Poland became an important host country for Austrian firms and secondly, in particular the recent new EU-member countries Romania and Bulgaria as well as Croatia and also Russia became important destinations for Austrian investments.

The data show impressively the strong performance of Austrian firms in this region. Most of these activities can be explained by geography but also by cultural and historical ties. The most recent investments in Croatia, Bulgaria and Romania are strongly concentrated in finance and oil processing. Close to 40% of all outward investment in CEE is allotted to finance.

Until now not much analysis has been carried out on the profitability of Austrian investments (Dell'Mour 2004, OeNB 2005). This paper tries to shed some new light on this important issue. Section 2 provides an overview on the determinants of profitability; section 3 describes the dataset and provides the empirical evidence; section 4 discusses policy implications and concludes.

2. Determinants of Profitability

2.1. Macro, industry and micro determinants

Most of the studies on profitability distinguish between macro-, meso- and micro determinants (for example Lehmann 2002; Lundan 2006).

At the macro level domestic and foreign demand are of primary interest. Foreign market growth should be weighted by export market shares of host countries. Additionally the development of local infrastructure is of great importance. One can use many different indicators for measuring infrastructure development. Each of them has specific advantages and disadvantages (Bellak, Leibrecht and Riedl 2008). As usual, factor costs, tax rates and host country risks are further determinants of profitability. We assume profitability decreases if host country risks decline. Also EU membership should decrease investor's risks considerably. Finally we should try to capture also specific regulations and competition policies of host countries. However, it is rather challenging to find the appropriate variables for such an empirical work.

At the industry level sector specific growth rates would be the main determinant of profitability. Additionally, one should try to include measures for specific market shares of the investing company. However, we are again restricted to proxies in this respect.

Finally, so-called ownership advantages at the firm level should provide us additional determinants of profitability. Technological, managerial and local knowledge should all raise productivity and thereby competitiveness of the investing firm. Further, advertising and a well established distribution networks should also improve profitability. Usually most of these determinants are captured by size variables (like total sales, number of parent and affiliate employees, numbers of total affiliates, etc.) which provide at least some indication on firms' capabilities. However, this list of determinants on profitability will certainly not capture all features.[2]

Since actually we do not have the appropriate data to test these considerations we will focus on an easier question, namely on the general development of affiliate profitability over time.

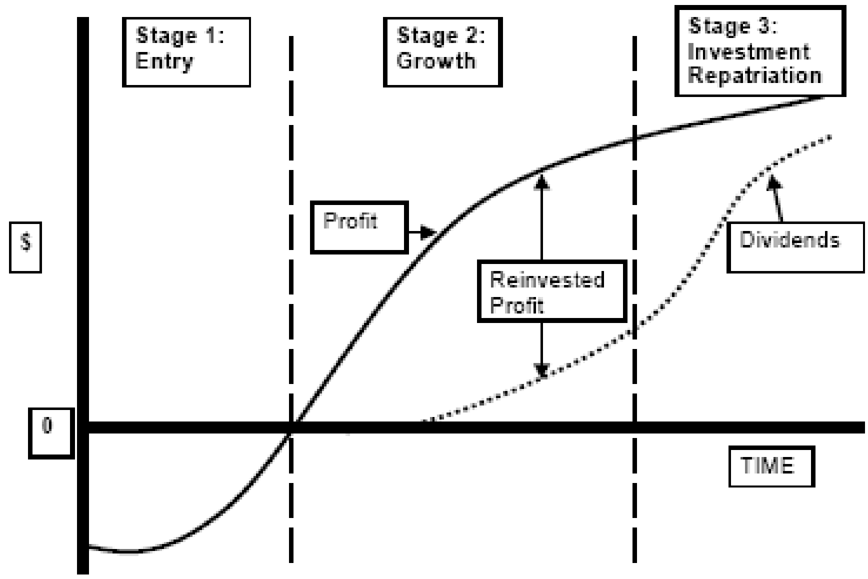
2.2. The FDI Financial Life Cycle

Firstly, we are in particular interested on the development of profitability over time. Secondly, we want to understand more clearly whether profits have been reinvested in the affiliates or repatriated back home to the parent firm. Hence we want to test a hypothesis which has been developed by Brada and Tomsik (2003) and is depicted in Figure 2.

[2] One issue which can not be captured here is the overall issue of transfer pricing and different accounting standards (see Lundan 2006). However, it has to be mentioned that serve problems might arise due to different practices in different countries.

The theory suggests distinguishing three different stages of investment. At the outset firms made an investment in the host country to found an affiliate. At first, due to start-up problems, affiliates will often operate with losses (Stage 1). In the case of an acquisition, this period may be short if the acquired firm can be easily reorganized to become profitable. In the case of a Greenfield investment, this period may be longer since the foreign firm has stronger adjustment problems to get acquainted with the economic and in particular with the political situation.

Figure 2: The FDI Financial Life Cycle



Source: Brada and Tomsik, 2003

After the initial start-up problems fade away affiliates should start to grow and to become profitable (Stage 2). However, in particular in this stage affiliates do still have strong needs for restructuring. Thus most of the profits might be reinvested to meet these needs. As time passes and profits continue to grow, the affiliates may start to remit at least some of their profits to the parent company.

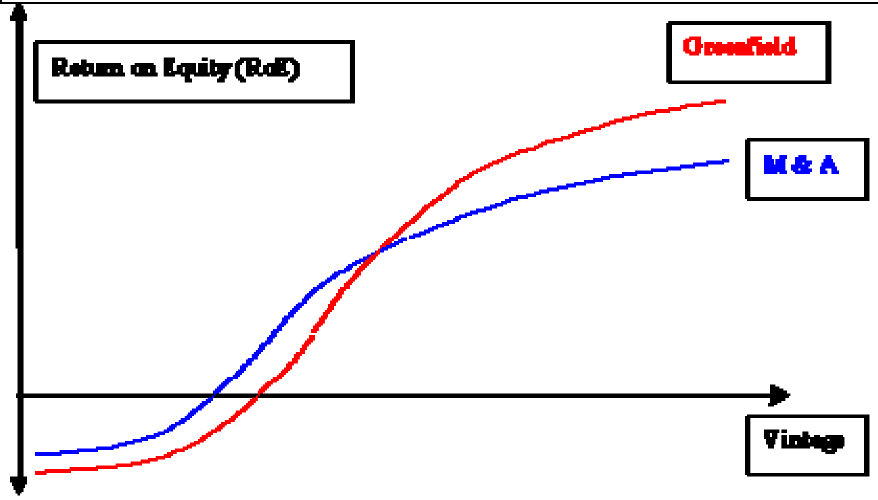
Finally (Stage 3), the affiliate has reached a mature stage, the parent firm will choose to repatriate a larger share of profits in the form of dividends so that these funds can be used to finance investment opportunities that offer more dynamic prospects elsewhere, and reinvested profitability will decline.

Concerning this stylized time pattern the questions arises if there might be any differences between Greenfield investments and mergers and acquisitions? With regard to Brada and Tomsik (2003) at least the following issue has to be taken into account:

> *"In the case of a Greenfield investment, during the time taken to acquire a site, build and equip a production facility, train workers and begin production, the interest on the capital invested may result in sizable and longer lasting start-up losses. Thus, in Stage 1, the affiliate operates at a loss and pays no dividends."* (Brada and Tomsik, 2003, p.5).

Additionally, it might be the case that Stage 1 lasts longer for Greenfield investments than for M&As. However, the main advantage of Greenfield investment might be that the firm can be built and organised by most advanced standards, technologies and organisational structures. The likelihood that investors use more advanced and up-to-date technologies is also higher for Greenfield investments. Based on these arguments, we would expect that in the long-run profitability of Greenfield investment is higher than that of M&As. In contrast, the main advantage of M&A in transition countries could be that acquisitions could have been bought relatively cheaply (i.e. below the market value). Moreover, acquisitions which have been carried out through the privatization process have also included repeatedly large (i.e. former state owned) market shares of the acquired firm. The latter arguments would expect a higher profitability for M&As than for Greenfield investments whilst the former ones would favour Greenfield investments. However, since the above mentioned advantages of M&As in transition countries would occur in particular during the first stage of investment whilst the other arguments which are in favour for Greenfield investment would occur in particular after the restructuring period (Stage 2) we would expect a time-dependent profitability pattern which is depicted in Figure 3.

Figure 3: The FDI Financial Life Cycle for Greenfield Investment and M&A



Concerning the issue on repatriation vs. reinvestment we would expect that M&As are more shareholder-oriented and hence show ceteris paribus relatively higher repatriation rates than Greenfield investments whilst the latter ones may have more long-lasting interests and hence invest more than M&As *ceteris paribus*.

Concerning the decision between repatriation vs. reinvestment of profits Lundan (2006, p.57) states that the American pattern of foreign investment has been characterized by high levels of reinvested earnings that are stable over time while European firms show a pattern where reinvested earnings are an important component in some years, only to be reversed in subsequent years. Lundan assumes that these differences might reflect among others European firms' agency problems related to their stock of investment in the United States, which has grown as a result of extensive mergers and acquisitions rather than Greenfield investment. Hence, we would expect that M&As show higher repatriation rates than Greenfield investments.

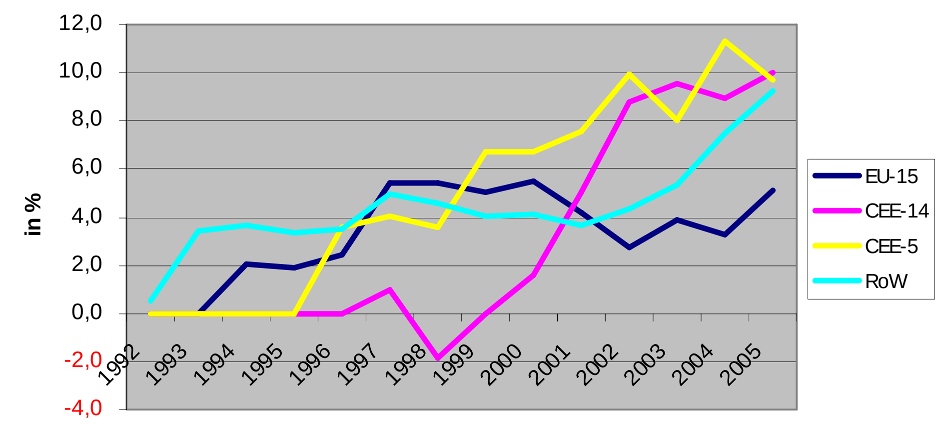
However, all the above mentioned arguments can be examined empirically only. Hence, in the next section we will investigate this hypothesized time pattern for Austria's outward FDI for the period 1992 – 2005.

3. Development of Austrian FDI and Affiliate Profitability by Countries

3.1. The Profitability of Austrian FDI

To compare the profitability of Austrian affiliates we sub-divide all affiliates into four regions, EU-15, CEE-5, CEE-14 (see endnote 2) and RoW (Rest of the World; these are mainly US, Canada and Switzerland). We analyse the development by the median return on equity (RoE). The median provides us a pattern of the average profitability of firms independently of their size and impact on total profitability. In particular the development over time can be traced better by the median profitability instead by the average.[3]

Figure 4: Return on Equity (RoE) be Regions (Median), 1992-2005



The profitability of direct investments was not always substantial in CEE (see Figure 4). At the beginning of the 1990s, when Austria's wave of investment in CEE began, profitability was rather low, even resulting in net losses. The median of profitability was zero for all CEECs. In CEE-5 these initial period of investment (Stage 1) lasted until 1995. However, in CEE-14 where the first investments took place much later this period lasted until 1999. Only then investments became profitable. However, the period 1992-

[3] We measure profitability by return on equity (RoE). This is net profit (excluding profits and losses carried forward) by the year divided by equity (minus profit or loss for that year). Two indicators for the RoE can be calculated: *Firstly*, an average RoE by countries or regions which is the total sum of net profits dived by total equity of countries, regions or sectors with aggregate data. *Secondly*, the median of RoE can be calculated with firm level data only. The first measure can be strongly biased by a few large (loss or profit) making firms. The second measure provides a more general pattern of the development. We have to add that only the aggregate data are free available. The firm level data have been calculated by senior officials at the Austrian National Bank by request only.

1995 was characterised by a worldwide recession. Hence also investments in EU-15 show partially losses. However, in this period the RoE in EU-15 was always above that of CEE.

In the second half of the 1990s, the picture changed significantly. Profitability in CEE-5 gained a strong wind and from 1999 onwards it improved to levels far above those measured in the EU-15. Profitability was boosted, among other things, on the back of the rise in labour productivity (sales per employee). However, the high profitability of affiliates since 1996 applies only to CEE-5. The upswing in profitability started nearly in tandem in all CEE-5. Three to four years after the initial investment the median profitability became positive. During the period 2000-2005 the profitability was quite favourable for all CEE-5.

In contrast, affiliates in CEE-14 became profitable in 2000 only. However, since that time the median caught up quickly to the CEE-5 median. Since investments in CEE-14 are more recent ones it is rather interesting to look closer at these developments. At the beginning in the early 1990s these investments were relatively small in numbers but did strongly grow in the period 1997-2000. Most of these investments became profitable in 2001, again three to four years after the initial investment. However, since then profitability increased quickly. In 2005 the most successful affiliates have been those in Croatia (13.1%) followed by Romania (12.1%) and Bulgaria (8.5%). Since current Austrian investments in CEE are strongly assigned to these new and forthcoming EU-member countries the prospects of these Austrian investments seem to be rather pleasant.

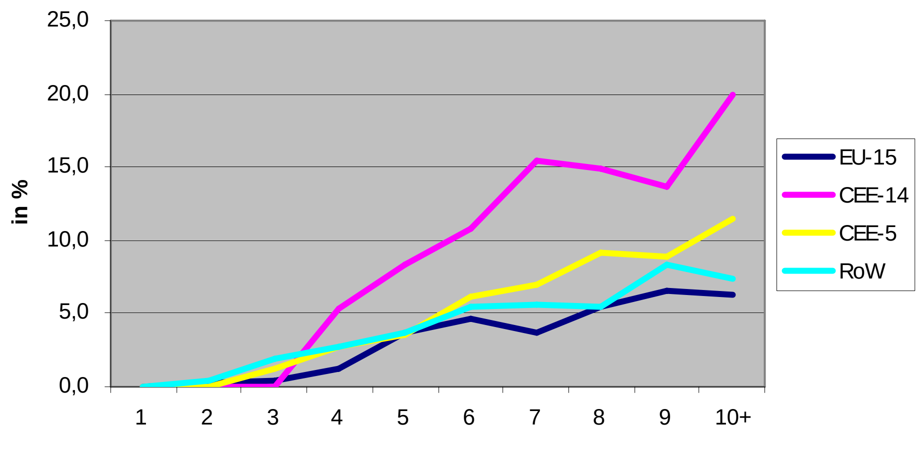
To conclude, in 2005 the RoE was 5.1% for EU-15 whilst it was 9.7% for CEE-5 and 10.0% for CEE-14 respectively. Hence profitability in CEE has overtaken profitability in the EU-15 by far.

3.2. Age and Profitability

Since it is quite obvious that the vintage of investment is a detrimental factor for the profitability of investments we will look at his relation more thoroughly. Therefore we have pooled all observations for the period 1992-2005 by regions and years of investment (N = 27275). We can see the strong increase of the median profitability for all regions after the third year of the initial investment (see Figure 5). The starting-up problems can be observed nearly in parallel for all regions. Nevertheless, these troubles lasted shorter for investments in CEE-14 and moreover, the profitability reached far higher values thereafter. Hence it seems to be the case that Austrian investors in CEE-14 may have taken serious advantage from *learning effects* of the previous investments in CEE-5. One further explanation might be that the CEE-14 markets do have less competitive regulations and hence are more of a monopolistic nature that those in CEE-5. Both reasons could help to explain the exceptional profitability in CEE-14.

To conclude the empirical evidence of Austria's investment supports strongly the FDI financial life cycle pattern which has been explained and hypothesised in section 2.

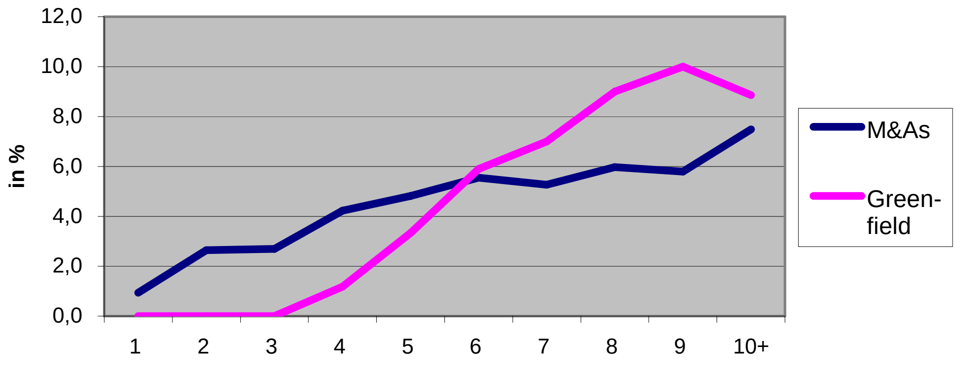
Figure 5: Return on Equity by Age of Investment, 1992-2005



3.3. Are there any differences between Greenfield Investments and M&As?

Since we know already that vintages of investments are a detrimental factor of profitability we compare profitability of M&As and Greenfield by vintages. Figure 6 presents the overall comparison, whilst Table 1 shows the specific differences.

Figure 6: RoE by Age of Investments (all observations for 1992-2005)
M&As versus Greenfield



Positive values in Table 1 imply a better performance of M&As, whilst negative values indicate a better performance for Greenfield investments. Interestingly, the last column (and Figure 6) shows clearly that on average the advantage of M&As prevails only for younger investments whilst thereafter the pattern changed into a reverse direction, i.e. Greenfield became more profitable. However, we can see strong differences between investments in the EU-15 and in CEECs. In EU-15 it is evident that M&As perform independently of their vintages always better than Greenfield investments. In contrast, in all other regions, in particular in CEECs, M&As perform better only in the fist five to six years after their establishment. Thereafter Greenfield investments become more advantageous.

One explanation might be that Austrian companies acquired in the EU-15 mostly well performing firms (*cheeries*), whilst in the transition countries the acquired more badly performing firms (*lemons*). One further explanation for these obvious differences could be that the setting-up costs for Greenfield investments are higher but in the long-run these higher investments leads also to higher efficiency and higher profitability. M&As in transition countries might have been acquired by relatively cheap prices and additionally might have acquired large market-shares and hence perform better in the early stage of investment. After indispensable restructuring measures where large amounts of capital had to be (re-)invested profitability declined. However, they never can achieve the efficiency of mature Greenfield investments (Stage 3).

Table 2: Difference of Profitability between M&A and Greenfield by Vintages, 1992-2005 (N=27275)					
	EU-15	**CEE-14**	**CEE-5**	**RoW**	**Total**
1	0,4	3,8	0,9	3,2	0,9
2	1,8	6,5	2,8	3,9	2,6
3	1,3	0,9	4,0	4,3	2,7
4	1,6	1,1	3,8	4,7	3,0
5	0,8	0,3	2,0	2,9	1,5
6	0,7	-6,8	0,5	0,7	-0,3
7	1,2	-13,3	-2,1	-0,2	-1,7
8	4,6	-13,0	-4,2	-5,6	-3,0
9	1,0	-12,6	-5,4	-6,3	-4,2
10 +	1,1	-6,8	-4,2	-0,7	-1,4
Total	***0,9***	***-1,0***	***-0,5***	***1,3***	***0,1***

3.4. Are the Profits Reinvested or Repatriated?

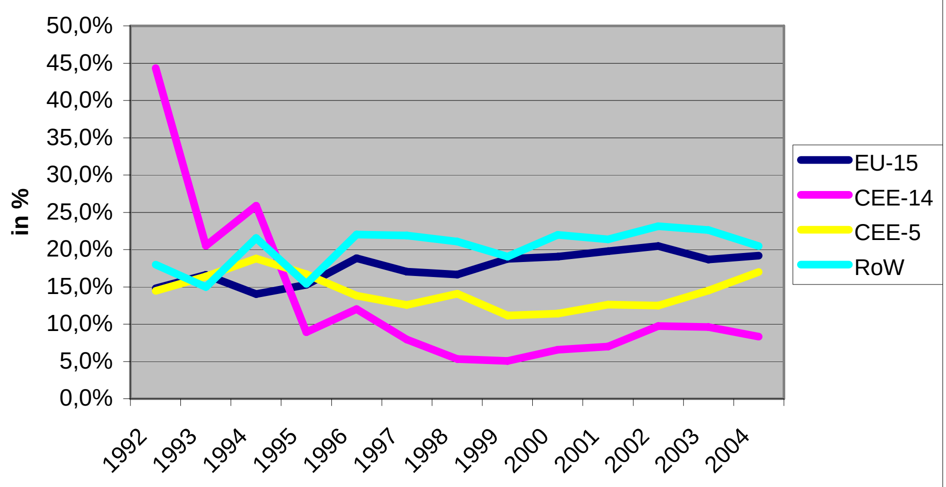
3.4.1. The general pattern

Finally, we want to have a look at the issue what happens with the profitability of investments. Are they reinvested or repatriated? In respect to the financial life cycle (see section 2) we expect that the share of repatriations will be rather low at the early stage of investment but will increase subsequently.

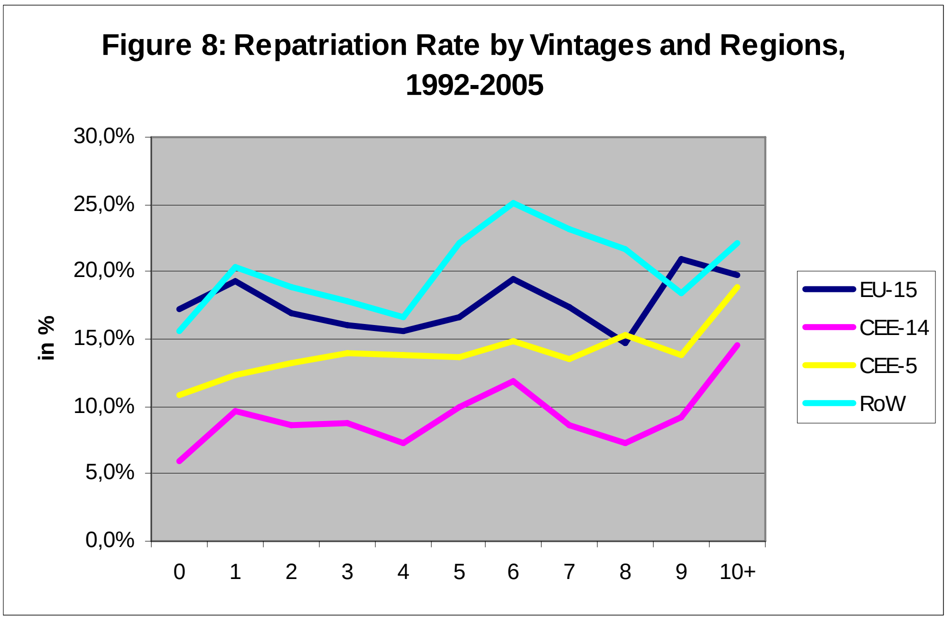
Figure 7 provides a pattern of the repatriation rates by different groups of countries. This figure shows two important features. Firstly, the share of repatriated profitability in CEE-14 was very high within the early transition period 1992 to 1994. This exceptional huge share can be explained only because at that time investors opted exclusively for projects with a guaranteed high return in an uncertain period. They were making probably quick profits without any long-lasting objectives. However, the numbers of these investments are very low. Hence, we can (and should) ignore these three years

(1992-1994) for CEE-14. Secondly, at least since 1996 the share of repatriations has been always much lower for CCE-5 and CEE-14 than for EU-15. The main reason for this might be that by far the largest part of total profits in the transition countries has been reinvested due to strong restructuring needs of the affiliates. Only in more recent years the share of repatriated profits increased slightly.

Figure 7: Repatriation Rate, 1992-2005



Comparing the share of repatriated profits by vintages (see Figure 8) we see the expected pattern for all regions. The older the affiliates are the more they repatriate to the parent firm. Firms which are older than 10 years show significantly high repatriation rates. Only in this specific age group investments by countries do not differ that much. However, the share of repatriated profitability in CEE-14 is always below that one of CEE-5 and this one is again lower than that of the EU-15 and the RoW. Also this pattern emphasizes that the need for reinvestments to reorganize and reconstruct the new affiliates in CEE has been (and may be still is) rather urgent. Hence both figures demonstrate that Austrian affiliates in CEE reinvest much more than those in more advanced countries (EU-15; RoW). We may finally also assume that these investments do not only improve the competitive strength of the parent company but the overall competitiveness of the host countries as well.



3.4.2. Differences between Greenfield investments and M&As

Lastly we want to look at differences between specific modes of entries, namely Greenfield vs. M&As (Table 3). Positive values indicate higher repatriation rates for M&As, negative ones indicate that Greenfield investments repatriate more.

We see that independently of regions and vintages that M&As nearly always show higher repatriation rates than Greenfield investments. These figures might demonstrate that M&As are driven more by (short-term) shareholder interests than by pure (long-term) owner interests (see also Lundan 2003). On average this result holds for all regions and moreover also for all vintages. However, differences are definitely stronger for investments in CCE-14 where shareholder and owner interest differ most strongly. Generally speaking, it seems to be the case that Greenfield investors to reinvest much larger shares of their profits than M&As do.

Table 3: Differences of Repatriation-Shares between M&A and Greenfield by Vintages

	EU-15	CEE-14	CEE-5	RoW	Total
0	-0,8%	4,6%	5,1%	1,3%	2,9%
1	3,5%	10,9%	4,1%	-2,0%	4,3%
2	2,3%	10,5%	4,0%	7,8%	5,4%

3	1,8%	4,5%	1,4%	13,0%	4,4%
4	0,7%	1,8%	9,2%	1,8%	5,0%
5	3,1%	14,7%	6,4%	5,7%	6,8%
6	6,3%	10,7%	3,3%	8,7%	6,7%
7	4,2%	8,9%	0,2%	6,0%	3,8%
8	1,0%	9,9%	3,8%	-9,5%	1,2%
9	5,9%	5,3%	-2,0%	-0,6%	2,3%
10 +	5,7%	7,5%	-1,9%	4,5%	3,4%
Total	**3,1%**	**6,9%**	**1,7%**	**2,9%**	**3,2%**

4. Conclusions

Mainly due to the opening-up of the CEECs Austrian foreign direct investment increased rather strongly. This development has enforced Austrian international economic activities considerably. Starting from nearly zero in 1992 Austrian investment in CEE accounted for 43.6% of Austrian total outward investment in 2005. Austrian investments in CEE started in 1990 with many loss making investments. However, current investments are rather profitable. Most of the initial investment period and its start-up problems are already over. In 2005 total annual profits translate into an average return on equity of 8.0%. However, the rates differ quite substantially by region. They are 5.1% for investments in the EU-15 but 9.7% for CEE-5 and 10.0% for CEE-14. In particular the most recent investments in Croatia, Romania and Bulgaria became rather profitable. The vintage is the main determinate of profitability. However, controlling for age of investment affiliates in CEE are more profitable than affiliates in EU-15. Moreover, we do find strong differences between different mode of entries, namely M&As and Greenfield investments. Whilst the former are all the time more profitable in the EU-14 we find a distinctive time patter for this development in CEE. There Greenfield investments are less profitable at an earlier stage of investment but they took over and show a much better performance after five to six years of investment. That means that Greenfield investments in transition countries show in the long-run a better performance than M&As.

As explained, profits can be used in two different ways. They are either reinvested (and thereby contribute to the existing stock of capital in the host country) or they are repatriated and thereby improving the profitability of the parent firm. These two options differ substantially by countries and over time. There are once again strong differences of Austrian investments in CEE and old EU member countries. The share of reinvestment is much higher in CEE. This may be mainly due to larger needs for restructuring and expanding current investments. Interestingly, M&A show much higher rates of repatriation than Greenfield investments, independently by host countries.

The results of this study show rather clearly the superior profitability of Austrian affiliates in the new EU member countries. However, the explanation of this superiority is still missing. In particular, it remains an open question if the determinants of the extraordinary profitability are micro or macro economic issues. On the micro level the better efficiency of the new established affiliates might be one reason for higher profitability whilst at the macro level (lower) factor costs, (more) tax exemptions, (higher) risks, oligopolistic market structures, (low) purchase prices for acquisitions during the privatization process, less developed competition supervision, etc. might all lead to higher returns on equity. Hence, further research on these topics is a necessary precondition to come up with conclusive policy recommendations.

Without doubt the remarkable profitability of Austrian affiliates in CEE confirms the general notion that the opening-up of CEE economies has helped to improve the overall competitiveness of the Austrian firms considerably.

References

Bellak, Christian, Markus Leibrecht and Aleksandra Riedl (2008); Labour costs and FDI flows into Central and Eastern European Countries: A survey of the literature and empirical evidence, *Structural Change and Economic Dynamics,* forthcoming.

Brada J. C. and V. Tomšík. 2003. Reinvested Profitability Bias, The "Five Percent" Rule and the Interpretation of the Balance of Payments – With an Application to Transition Economies. *William Davidson Working Paper no. 543.*

Dell'mour, R. 2004. Direktinvestitionen Österreichs — Ergebnisse der Befragung 2002 und Entwicklung ausgewählter Indikatore. *OeNB Statistiken - Daten und Analysen, 43-58*

Lehmann, A. 2002. Foreign Direct Investment in Emerging Markets: Income, Repatriations and Financial Vulnerabilities. *IMF Working paper 02/47*

Lundan, S. 2003. The role of reinvested profitability in foreign direct investment: A conceptual model of the determinants of affiliate reinvestment. *Working Paper, Faculty of Economics and BA, University of Maastricht.*

Lundan, S. 2006. Reinvested Profitability as a Component of FDI: An Analytical Review of the Determinants on Reinvestment. *Transnational Corporations, Vol.15, (3), p.33-64*

OeNB. 2005. (Austrian Central Bank), *Direktinvestitionen 2003 -Österreichische Direktinvestitionen im Ausland und ausländische Direktinvestitionen in Österreich.* Wien.

WIIW. 2005. (The Vienna Institute for International Economic Studies), *WIIW Database on Foreign Direct Investment in Central, East and Southeast Europe, Opportunities for Acquisition and Outsourcing.* Vienna