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Determinants of German Foreign Direct Investment: A Case of Failure?

By

Dr. Ioannis-Dionysios Salavrakos (University of Ioannina, Greece)[i]

1. Introduction

The aim of this paper is to explain Foreign Direct Investment of German enterprises. The theory of Foreign Direct Investment identifies a variety of location-specific, strategic, financial, as well as other motives which firms have in order to become multinationals.

We apply the above theoretical schemata to the case of German enterprises and we also consider the evolution of German FDI in a historical context. The main conclusion of the research findings is that financial, strategic and location specific factors have been historically very influential in the decision of these firms to invest abroad. Thus both big businesses and SMEs invest mainly in Europe, with the US as the second-best location option.

However, nowadays, there is a limited but essential trend that this may change. We argue that although historically location specific factors have been the most influential for FDI activity, in the current globalisation process German enterprises tend to shape their investment strategy on broader factors which influence core developments in the international economy. Thus the emergence of the BRIC (Brazil, Russia, India, China) emerging markets may change for ever the character of German FDI. If however this does not occur, the German industry may face, severe competitive pressures form its foreign rivals over the next years.

2. Theories of Foreign Direct Investment

The development of the subject in the last fifty years has bequeathed us with a plethora of theoretical explanations as regards the motives and determinants of FDI. At the heart of most of them lies the idea of market failure (Casson 1987), be it structural or transactional (Dunning & Rugman 1985). We may find it convenient to group the various theories of FDI under the following five approaches: The first one is the market power paradigm, stemming from the seminal work of Hymer (1960, published in 1976), which emphasises the oligopolistic and proprietary advantages, such as patents of all kinds, including

[i] Address for correspondence: Lecturer Ioannis-Dionysios Salavrakos, University of Ioannina, School of Natural Resources and Enterprises Management, 2 Seferi Street, Agrinio, 30 100, Greece. Email: isalavra@cc.uoi.gr, Telephone: +30 26410-74100, Fax: +30 26410 39579

technology and product differentiation features, that firms try to exploit and/or defend by undertaking FDI (Caves 1971, 1974, 1996; Cowling & Sudgen 1987; Dunning 1974, 1981, 1993; Knickerbocker 1973). As mentioned earlier, the structural failure of oligopolistic competition at home provides the uninational firm with the motive to exploit its proprietary advantages abroad, by engaging in international production and, thus, becoming multinational.

The second approach that of internalisation extends the work of Coase (1937) on the nature of the firm and argues that, in much the same way that we need firms to save on transactions costs, firms become multinational to increase efficiency. This is achieved by replacing external markets through internalising various functions. Firms which have already ownership advantages find it more profitable to use such advantages them than, say, license and/or franchise them to foreign locations. Using the market entails brokerage and contractual costs and is fraught with information and opportunistic behaviour and/or agency problems, in addition to losing out on possible tax advantages. Thus, by internalising production abroad, various costs of using the market are avoided. Consequently, the internalisation paradigm stresses that firms can save on transactions costs and raise efficiency (Buckley & Casson 1976; Rugman 1980). Under this approach, it is the transactional failure of external markets which forces firms to engage in FDI.

The above two approaches lead to diametrically opposed welfare implications of the activities of multinationals. The market power paradigm implies that multinationals should be regulated to minimise the market failures they cause and, thus, their operations should be discouraged. On the other hand, the internalisation paradigm contends that multinationals are able to resolve transactional failures and to raise efficiency and, consequently, they should be encouraged (Pitelis & Sudgen 1991). In an effort to bring together the two earlier competing approaches and to provide a general explanation of FDI, in a series of articles, Dunning (1977, 1979, 1981, 1988) has proposed and popularised his 'eclectic theory' or OLI (Ownership, Location, Internalisation) paradigm. The theory synthesises various strands of economic thinking, such as industrial organisation, trade, location as well as internalisation and claims that the propensity of firms to engage in international production is a function of Ownership specific advantages, Locational advantages and Internalisation opportunities. As proposed by Dunning, the basic tenets of the 'eclectic theory' are that a firm will undertake international production if: (a) it possesses certain ownership advantages, which are exclusive or firm-specific proprietary rights, such as patents; (b) it is more beneficial to the firm to use such advantages itself than lease them to foreign firms, i.e., it pays the firm to internalise its activities through international production and (c) it must be profitable for the firm to utilise these advantages in conjunction with at least some factor inputs, including natural resources, outside its home market, otherwise foreign markets can be served by exports. The 'eclectic theory' contends that all kinds of FDI can be explained by reference to its conditions. However, the OLI paradigm, in its later versions, also recognises that advantages due to ownership, location and internalisation may change over time and accepts that if country-specific characteristics are important

determinants of FDI, it may be invalid to generalise from one country's experience to another.

In addition to the aforementioned approaches, in a survey of theories of international production, Cantwell (1991) has also identified another two, namely, the competitive international industry approach and the macroeconomic development approach. The former, echoing Knickerbocker's oligopolistic reaction thesis, stresses that international production tends to be associated with rivalry amongst multinationals, which helps sustain the process of technological competition and development amongst them (Graham 1978, Cantwell 1989). The latter approach emphasises macroeconomic considerations, such as for example, trade and tariffs, as in the case of the Product Cycle Model (Vernon 1966, 1979); balance of payments issues (Hufbauer & Adler 1968); foreign trade and its effect on the development of the host country (Kozima 1978), who has put forward his Japanese-type, trade-oriented FDI; and the investment-development cycle (Dunning 1981, 1988), which contends that the level of inward and outward direct investment of countries is a function of their national level of development. However, as newly industrialised or industrialising countries are now undertaking outward FDI much earlier in their development, than it was the case before, Dunning's proposition may have to be qualified, than simply to extrapolate from one country's experience to another. The above theoretical schemata provide the following motives for FDI inflow:

Financial motives

-Exchange rate differentials between the home and host countries currencies make the investment preferable to the host country. (X_1)
-Access to cheaper loan capital between home host countries, essential for portfolio FDI (X_2)

Firm-strategic motives:

-First mover advantage (X_3)
-The investment is a result of following a competitor from the domestic market (oligopolistic reaction) (X_4)
-The investment is part of a cost-leadership reaction (X_5)
-The investment is part of a product-differentiation strategy (X_6)
-The investment is part of a cost-focus strategy (X_7)
-The investment is part of differentiation-focus strategy (X_8)
-The investment is part of a geographical diversification strategy (X_9)
-Possession of better technology, compared to enterprises of host country (X_{10})
-Superior entrepreneurial and managerial capabilities, compared to enterprises of host country (X_{11})

Home- and host-country specific motives:

-High interest rates in native country render investment there unprofitable, so investing in these countries is a way to enhance our competitiveness in western markets (X_{12})
-Exploitation of host country's land and/or natural resources (X_{13})
-Exploitation of host country's infrastructure (X_{14})
-Exploitation of specific human capital in the industrial sector of the enterprise in host country (X_{15})
-Level and character of demand conditions of host country (X_{16})
-The investment is the outcome of the desire to overcome trade barriers (tariffs, quotas etc.) imposed by host country (X_{17})

From the above it is obvious that when firms decide to expand their activities abroad they have a variety of motives. These may change from one industrial sector to another, thus enterprises in the financial industry may expand their activities abroad for totally different reasons when compared to labour or capital intensive enterprises. Furthermore, SMEs may expand for totally different reasons when compared to big businesses. We know turn our attention to the specific evolution of German FDI across time.

3. The Historical Evolution of German FDI (1900-2007).

The German economic development started in 1871 after the re-unification of the various German states and principalities. Until 1914, Germany had become the most heavily industrialized country in Europe bypassing the UK, and was second, if not equal, to the USA in terms of industrial base and technological standards. The country in 1913 was producing the 90% of global production of dyes, the 30% of global production of pharmaceuticals, 35% of global production of electrical goods, 27% of chemicals, 29% of machinery and 17% of internal combustion engines.[i] The current section is divided between two main periods. The first one refers to the 1900-1945 period, when German FDI was influenced by political factors and from the economic doctrine of the "Grossraumwirtschaft" (=The Great Economic Zone). Under this doctrine, the German companies should primarily expand to areas which are rich in natural resources and raw materials. Both were desperately needed, from the advanced German industry, which could transform them to final industrial products of high added value.

3a. The 1900-1945 Period

The exact amount of German FDI before 1914 is still an issue of debate since different sources provide conflicting, and up to a point contradictory, information about the level of German foreign investments. According to one source, in 1913 the total FDI of Britain was £793 m. The total FDI of France was £357 m. Germany was in the third place with total FDI valued at £230 m. Finally

[i] See: Fear Jeffrey: "German Capitalism" in the volume: Th. Mc Craw (ed.): "Creating Modern Capitalism", Harvard University Press 1997, pages 135-182.

the total FDI of the US was just £139 m.[i] Contrary to the above evidence Dunning (1993) provides the following figures for 1914: The total British FDI was $6,500 m. (44.6% of global FDI at the time). Total US FDI was worth of $2,652 m. (18.6% of the global FDI at the time). The French was in the third place with total FDI of $1,750 m. (just 12% of global FDI at the time). Finally, Germany was in the fourth place with total FDI worth of $1,500 m. (just 10.3% of the global FDI at the time).[ii] Another source provides the following estimates: Total global FDI in 1914 was $45.4 billion. From that amount Britain had the biggest share (44%), followed by France with 19.9%, Germany with 12.8%, US with 7.8% and Holland with just 2.6%.[iii] Finally, according to one source, the geographical distribution of FDI from the main European economies, in 1914, was as follows: 47% of British FDI was invested in various colonies, protectorates and dominions of the Empire. The US and Latin America have absorbed another important, and equal share (20% each). Finally Europe had absorbed a modest 6% of total British FDI. The rest of the world had absorbed the remaining 7%.

French FDI was mainly European concentrated (61%). The French colonies have absorbed just 9%. Latin America had absorbed 15% of French FDI. Two semi-autonomous African states (Egypt and South Africa) had absorbed 7%. The whole of Asian continent and the rest of the world had absorbed just 5% each. Finally German FDI was predominantly European focused as well. Thus 53% of German FDI was in European countries. The US and Canada had absorbed the 16% of German investments. An equal share was absorbed by Latin America. Africa had absorbed 9% of total German FDI, whereas Asia had just 5% of total German FDI at the time.[iv] The end of the First World War in 1918 had perished German FDI across countries. All German foreign assets were confiscated by the Allies and most of them were sold in order to provide cash which was desperately needed for the reparations which Germany had to meet with the Versailles Treaty.

However during the interwar years (1919-1939) German enterprises started gradually but steadily to re-appear as foreign investors, in spite of the volatile domestic economic environment (hyperinflation of 1923) as well as the economic crisis due to the 1929 crash. According to one source the total global FDI IN 1938 was $54,950 m. and was distributed as follows: Great Britain had the highest share (41.7%), followed by the US (21.2%). Holland was in the third place (8.7%) and France in the fourth (7%). The fifth place was occupied by Japan (2.8%), the sixth by Soviet Russia (1.7%). Germany was seventh with just 1.3% of total global FDI.[v] Although globally the presence of German multinationals was very weak in 1938-1939, this was not the case for the countries of South-

[i] See: Charles P. Kindleberger: "A Financial History of Western Europe", London 1984, page 225.
[ii] See: John H. Dunning: "Multinational Enterprises and the Global Economy", London 1993, page 117.
[iii] See: D. Held & A. McGrew & D. Goldblatt & J. Perraton: "Global Transformations. Politics, Eonomics and Culture", Polity Press, 1999, page 193.
[iv] See: A. D. Edwards & G. W. L. Bearman: "Britain, Europe and the World 18148-1918", Heinemann Educational Books, London 1971, page 24. The data for Germany and France refer to 1914, whereas for Britain refer to 1913.
[v] See: D. Held & A. McGrew & D. Goldblatt & J. Perraton: "Global Transformations. Politics, Economics and Culture", Polity Press, 1999, page 193.

Eastern and Eastern Europe. Germany had a strong presence in Hungary, Czechoslovakia, Austria (which were both annexed to the Third Reich), Greece, Turkey, Bulgaria and Romania. To illustrate, in 1938 the German investments in Bulgaria, Roumania, Greece and Yugoslavia were $134.7 m. The French FDI were $292.1 m. and the British were $571.4 m. To provide just one example, chrome production in Yugoslavia increased from 76,779 tons in 1936, to 96,716 tons in 1937, to 103,197 tons in 1938. This immense increase occurred due to German FDI which increased from 1% of total FDI in 1937 to 20% of total FDI in 1940.[i] Just the steel industry "Krupp" invested in the chrome industry of Yugoslavia RM 500,000 alone. Furthermore, Krupp in association with other German industries such as the "Reichswerke Hermann Goring" and the "Berlin & Salzgitter" made immense investments in other resources of the country, which put under German control the "Jeserina" and the "Yugochrome" mines. Furthermore, the "Deutsche Bank" in association with the Austrian "Credit-Anstalt Bank", established the "Lozovac Mines". In addition German and Swiss enterprises established in 1936 the "Montania AG" in the Zajaca territory. Other German factories were made in the provinces of Olov, Srebrenica and Lisa, and by 1940, almost the total Yugoslav production of antimony was under German control.

During the Second World War (1939-1945) the development of German FDI was immense especially in Europe. The early German victories (1939-1942) resulted in the occupation of Western, South-Eastern Europe as well as huge parts of the USSR. The outcome was that German enterprises followed the armies and controlled most of raw materials and resources of the occupied Europe. Pool (1997) points out that Alfred Krupp acquired the best industries in Ukraine. (the huge Molotov industrial complex, one of the biggest steel industries in Europe and also two of the most modern machine tools industries in the world the Azova and the Ilyitch factories). Any factory or its equipment which the Germans believed to be old or outdated was simply destroyed. Also the mines of the Ukraine were exploited. However, the fact that during 1943-1945 the war took a reverse negative trend for Germany, affected both German FDI as well as German industries in the homeland, which, had to cope with the allied strategic air offensive from British and US bombers. By 1945 German FDI has seized to exist and also this time the home country enterprises had lost most of their assets.

3b. The 1945-2007 Period

The first decade after the Second World War (1945-1955) was a period of revival for the German economy. The new West German state has made its initial economic recovery during the 1950-1955 period. Thus GNP increased from DM 98 billion in 1950 to 181 billion in 1955. Private savings increased from DM 2 billion to DM 7 billion over the same period. Also by 1955 there was a surplus in the trade balance (DM 25,7 billion of exports, DM 24,5 billion of imports). By the

[i] See: P. N. Hehn: "A Low Dishonest Decade. The Great Powers, Eastern Europe, and the Economic Origins of World War II, 1930-1941", Continuum, London, 20002, pages 117, 278.

1970s the (West) German economy was the second largest in the capitalist world and again it was the biggest economy in Europe. This was the period of the export oriented "Wirtschaftswunder" (=economic miracle). For reasons of comparison the economy of the former East German state (GDR) was the second largest in the socialist block behind the USSR.[i] During this period (1955-1975) the revival of German international business took place. Thus German multinationals started to operate abroad once again. However Europe was again the most preferable location for foreign activities, just like the past. To illustrate, in 1977, total German FDI was DM 52.1 billion. From the above amount the DM 17.8 billion (34.1%) were invested in Western Europe (EEC of the time, thus excluding FDI in south and south-eastern Europe, i.e Greece, Spain, Portugal, Turkey, and Switzerland). In the US total FDI was DM 6.7 billion (12.8%). The other essential locations were Canada with DM 3.58 billion (6.8%), and Brazil with DM 4.03 billion (7.7%).[ii] In the 1980s, total German FDI increased rapidly, but Europe remained the most preferable location. Table 1 illustrates the above point.

TABLE 1: GERMAN FDI 1980-1989 (in billion DM and %) (*)

	1980	1981	1982	1988	1989
Total FDI	84.4 (100%)	101.9 (100%)	109 (100%)	185.4 (100%)	206.8 (100%)
Europe	41.3 (49%)	44.9 (44.1%)	45.9 (42.1%)	91.1 (49.1%)	104.5 (50.5%)
EEC	28.6 (33.9%)	30.4 (29.8%)	31.9 (29.3%)	72.9 (39.3%)	85.4 (41.3%)
Latin America	10.1 (12%)	12.1 (11.9%)	12.7 (11.7%)	15.7 (8.5%)	14.7 (7.1%)
Africa	2.4 (2.9%)	3.1 (3.1%)	3.6 (3.3%)	3.07 (1.7%)	2.7 (1.3%)
Asia-Oceania	3.5 (4.2%)	4.6 (4.6%)	5.0 (4.6%)	11.0 (5.9%)	11.6 (5.6%)
USA	18.2 (21.6%)	25.7 (25.2%)	28.0 (25.7%)	50.6 (27.3%)	56.2 (27.2%)

Source: A. Georgopoulos: "Modern Trends of Internationalization of Commercial, Productive and Financial Relations", Athens Papazisis editions, 1988, (in Greek), pages: 168-171. (*)=rounded numbers, for exact data and full list of host countries see the above reference.

The data of Table 1 demonstrate that throughout the 1980s the most preferable location for German FDI was Europe. The total European share was

[i] For the (West) German economy see: 1) Gerhard Kade: "The German Challenge. Model Germany for Europe?", Nea Synora, Athens, 1981 (Greek edition), 2) Jeffrey Fear: "German Capitalism", in the volume: Thomas McCrew (ed.): "Creating Modern Capitalim", Harvard, 1997, pages: 135-182. For the economy of former East Germany see: Jeffrey Kopstein: "The Politics of Economic Decline in East Germany, 1945-1989", University of North Carolina, 1997.

[ii] See: Gerhard Kade: "The German Challenge", Livanis editions, Athens, 1981, pages 57-61. (Greek edition).

between 42%-50.5% of total FDI. The US was the second-best location absorbing between 21.6%-27.3% of German FDI. The above trend continued in the 1990s as well. To illustrate, total German FDI in 1993 was DM 319.4 billion. From the above amount DM 188.3 billion (58.9%) were invested in Europe, and DM 153.2 billion were invested in the EEC (48%). Latin America had absorbed DM 21.8 billion (6.9%), Africa had absorbed DM 3.9 billion (1.3%), Asia and Oceania absorbed DM 16.4 billion (6.1%), the USA had absorbed DM 76.4 billion (23.9%).[i]

In the late 1990s, 60% of the German investments were (still) increasingly in Europe, particularly in Belgium-Luxembourg and the Netherlands. However, an increased movement towards Eastern Europe such as Hungary, the Czech Republic and Poland has also been recognised. Countries such as North America had a slightly decreased trend from 33% down to 27% (1985) and Latin America also from 9% to 5%. During that time 5% was invested in the Asian market with main receiver Japan (30%), Singapore (12%) and China with 1/5 of the total investments.[ii] In 1995, more than half of the German FDI was done in the EU and more than 1/5 in the USA. In countries such as East Asia and Eastern European countries Germany was underrepresented. At the end of 1999 German primary direct investment abroad summed up to a total € 392 billion which indicates an increase of four times within ten years. German investments in industrial countries accounted for 84%. A large part, € 180 billion, of these capital links was accounted for by EU countries. Main investment destinations were the United Kingdom (€ 40 billion), France (€ 23 billion) and the Netherlands (€ 21 billion). An additional sum of € 20 billion, were invested in the EU accession countries. The Czech Republic, Hungary and Poland were amongst the leading countries. € 25 billion; this was only 6% of the total outward FDI of German companies.

China deserves special attention with over € 4 billion of direct investment from Germany. Investment in Russia remained restrained on account of the difficult political situation. German firms had direct investments in developing countries totalling of € 39 billion. This was less than 10% of their total outward FDI. African developing countries received less than 1/10. German FDI in (Latin) America developing countries was far larger. To illustrate, investments in Brazil were € 7 billion and in Mexico € 5 billion. Almost half of the direct investment enterprises in developing countries in which German investors were involved were located in Asia (including Oceania); the volume of funds invested in the region was € 14 billion at the end of 1999. This indicates at low wage rates encourage labour-intensive production methods.

At that time 8,304 German investors were registered abroad. By analysing the investment volume it becomes clear that the ten largest investors held 1/3 (€ 137 billion) of all German direct investment abroad. The 50 largest individual investors accounted for more than 1/2 (€ 230 billion) of the total. The 100 biggest

[i] See: A. Georgopoulos: "Modern Trends of Internationalization of Commercial, Productive and Financial Relations", Athens Papazisis editions, 1988, (in Greek), pages: 168-171, rounded numbers, for exact data and full list of host countries see the above reference.
[ii] See: Dicken, P.: "Global Shift", fourth edition, Sage publications, 2003, p.67

investors between them made up no less than 2/3 of the aggregate volume of investment in foreign enterprises. In terms of the size of the individual corporate investments abroad, large scale investments played a significant role. The ten largest direct investment enterprises abroad accounted for 1/6 of German firms' aggregate FDI, the 50 largest projects made up 30%, while the 100 largest investment projects had a share of almost 2/5, or € 157 billion, in total outward FDI of German companies. More than 70% of German FDI abroad was accounted for by direct investment enterprises which were wholly owned by German companies; similarly, 2/3 of all direct investment enterprises were 100% German owned. A further 14% of the outward FDI stock (and 20% of the direct investment enterprises) had a German participation of between 50% and 100%. Only 1/7 of all cases (and roughly the same proportion of total German direct investment abroad) related to German minority interests in foreign direct investment enterprises, defined as at least 10% of the capital shares or voting rights. [i] At the end of 1999 almost 2/3 (€ 100 billion) of the total FDI of German manufacturers (€ 158 billion) was invested in foreign industrial enterprises. A further € 23 billion was invested in distribution outlets, which are far less capital-intensive, and € 26 billion was invested in "other financial intermediaries". There were differences in the sectoral profile of the corporate assets in the EU region held by German investors. Most preferred sector in the UK, Belgium and Luxembourg was the financial industry. In Austria, France and Spain direct investments in the manufacturing or wholesale/retail trade sectors played an important role. At the end of 2002, the stock of German direct investment abroad was €651 billion. But by looking at the German investments it becomes clear that actually a big part of the investments 86% are made in other industrial nations—mainly western Europe (45%) and the U.S. (37%)—just 7% is in eastern Europe, and less than 1% is in China. Thus Europe remains the preferable location. Inside Europe, in 2002 main receivers of investments were the UK. But countries such as Romania, Bulgaria and EU accession countries indicated a fast growing potential. In 2002 Hungary, the Czech Republic and the Baltic states received numerous projects from German and Japanese automotive, electronics and machinery sectors. [ii] The above trend continued during the 2004-2007 period as Table 2 indicates.

TABLE 2: GERMAN FDI 2004-2007 (in billion € and %) (*)

	2004	2005	2006	2007
Total FDI	78.3 (100%)	91.5 (100%)	109.3 (100%)	162.5 (100%)
Europe	55.3	72.6	80.7	130.2

[i] Structure of German firms' international capital links at end-1999 Deutsche Bundesbank Monthly Report April 2001, for all the data above.

[ii] See: http://www.locate-in-europe.com/inv_trends.htm

	(70.6%)	(79.3%)	(73.8%)	(80.1%)
EEC (27)	53.4 (68.1%)	65.4 (71.4%)	75.1 (68.7%)	108.9 (67%)
Latin America	2.5 (3.1%)	1.6 (1.7%)	1.5 (1.3%)	4.9 (3%)
Africa	1.5 (1.9%)	1.8 (1.9%)	2.8 (2.5%)	1.6 (1%)
Asia-Oceania	5.7 (7.2%)	3.5 (3.8%)	3.8 (3.4%)	6.8 (4%)
USA	12.1 (15.4%)	9.4 (10.2%)	19.6 (17.9%)	17.8 (11%)

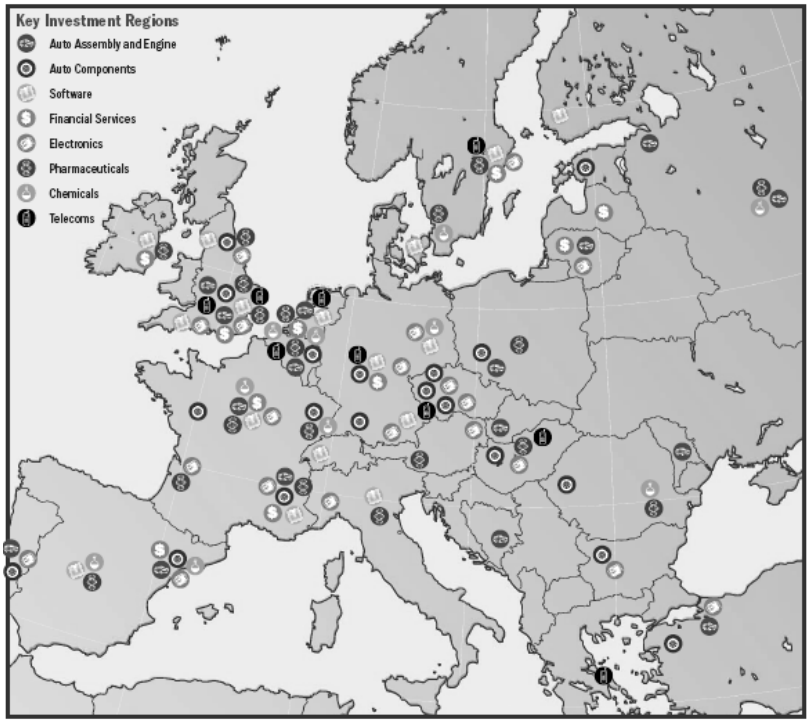
Source: Direktinvestitionen International, Zahlungsbilanzstatistik, various issues, republished by Deutsche Bundesbank. (*)=The data refer to new annual investments, without taking into consideration former investment projects or any disinvestment.

The data of Table 2 demonstrate that the trend of choosing Europe as the primary location for FDI, remains dominant until nowadays. Thus in 2007 the astonishing amount of 80% of German FDI was located in Europe (from that amount the 67% was in other EU countries). The remaining 20% of German FDI was spread across the globe, with the US absorbing 11%. Asia as well as Oceania absorbed only a small fraction of just 4%.

4. Motives for German FDI and Entry Modes

From the above presentation it is obvious that for more of a century German FDI demonstrated a unique location consistency. German enterprises constantly favour Europe, compared to other markets of the world as their primary location of activity. In terms of locations and types of investment, these are best captured by Map 1 which demonstrates the types of German FDI across Europe during the 2003-2004 period.

MAP 1: Key Investment Regions of German FDI according to activity (2003-2004)



Source: www.ey.com.global/download.nsf/ (data retrieved 22-07-2008).

Why Europe has been so important to German industries across time? What are the motives behind the above decision? Furthermore, what entry modes German multinationals choose in order to penetrate foreign markets? In order to answer the above questions we have to take into consideration some special characteristics of German business and industry. These are as follows:

4a. Characteristics of German Business

The first important industrial characteristic is associated with the presence of a large number of SMEs which are also very successful in the domestic as well as international economy. These "Mittelstand" SMEs are the backbone of the economy. Their number is around 3.3 million and their employment rate lies at 70% of the total labour force. Almost 2/3 of all German SMEs is 75% owned by the manager or the head of the company. Thus the old family firm (U-firm) where ownership and control is not separated is still present in the German economy. The minimum annual turnover of such company was around € 125,000 (2004 data). However under the current globalised economy these "Mittelstand" SMEs face severe economic pressure which made many of them insolvent or even forced them to engage in international production and thus move to Eastern European countries which by 2004 entered the EU (mainly Czech Republic, Hungary, and

Poland).[i] Thus these firms can continue to compete by reducing labour costs, since they do not have the ability for high R&D which could provide new products or innovative production techniques. Thus for these firms the engagement in short distance FDI (many times just cross-border activity) is a way to remain alive in the current globalized environment.

The second important characteristic of German business is that it is characterized by the presence of big businesses which became legends of success in various industries of the international economy, such as: automobiles [Daimler-Benz, Bayerische Motorenwerke AG (BMW), Volkswagen], chemicals [Baddische Annilin und Soda Fabrik (BASF), Bayer, Hoechst] electronics [Bosch, Siemens, Grundig] banks [Deutsche Bank, Dresdner Bank, Disconto-Gessellschaft], mechanical engineering [Krupp-Thyssen], energy [E.ON, RWE (Rheinisch Westfälische Elektrizitätswerk AG)]. These big businesses from the early years have created new managerial structures (M-form enterprises) and achieved economies of scale and scope.[ii]

However, the problem which German big business faces is that they are practically operating in declining industries. The Germans are still leaders but in wrong economic activities. Cars, chemicals, machine tools and electronics were the industries of the second industrial revolution (i.e. the late nineteenth and twentieth centuries). The 21st century and the new globalised environment is a completely different phenomenon with different economic characteristics, consumer needs, and competitive challenges. Micro-electronics, semiconductors, artificial intelligence, environmentally clean and friendly products, ICT business as well as infrastructure and e-commerce (B-B / B-C / C-B) are the current infant, but future industries, as well as products. Gradually but steadily, technology is making the capital intensive industries of the era of industrial revolution declining. German firms have invested millions in traditional these industries (cars, chemicals, electronics, machinery) and in high cost locations facing nowadays enormous exit barriers. Furthermore the problem becomes bigger if we consider that these declining industries can nowadays assemble if not produce their products, in the low labor cost countries of South East Asia (Tigers) as well as in the new emerging economies of China and India.

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[i] See: Statistiches Bundesamt, http://www.destatis.de/basis/d/insoltab1.htm and Sinn, H.W. (2003): "Ist Deutschland noch zu retten? ", Econ, Germany, page 411.

[ii] For the development as well as characteristics of big business in Germany see: 1) Youssef Cassis: "Big Business. The European Experience in the Twentieth Century", Oxford University Press, 1999, pages: 24-27, 46-54, 78-101 (for comparative analysis with French and British companies), 2) Wilfried Feldenkirchen: "Germany: The Invention of Interventionism", in the volume: J. Foreman-Peck & G. Federico (eds.): "European Industrial Policy. The Twentieth Century Experience", Oxford University Press, 1999, pages 98-123, 3) A.D. Chandler: "Scale and Scope. The Dynamics of Industrial Capitalism", Harvard University Press, 1990, pages: 393-592. For selected case studies see also: Lothar Gall & Gerald D. Feldman & Harold James & Carl Ludwig Holtfrerich & Hans E. Büschgen: "The Deutsche Bank 1870-1995", Weidenfeld & Nicolson, London, 1995 and Werner Abelshauser & Wolfgang von Hippel & Jeffrey Allan Johnson & Raymond G. Stokes: "German Industry and Global Enterprise: BASF: The History of A Company", Cambridge University Press, 2004.

German investors, both of SMEs as well as the big businesses, were affected by the structural problems of German production. Therefore they felt forced to continue production in Germany. As result other locations in other countries became more competitive. German investors had to face in addition to the high labour costs, a high level of subsidisation, and a strong currency, the costs of the unification. The main motives for German FDI in Europe can be grouped in three main categories and are as follows:

4b. Motives for FDI

The motives for FDI can be identified across the types that we have already mentioned. Thus out of the set of 17 different motives which we pointed out in the previous theoretical section at least three main sets apply, for different types of firms and industries. These refer to motives $X_{5,}$ $X_{7,}$ $X_{14,}$ $X_{15,}$ $X_{16,}$ $X_{10,}$ $X_{11,}$ $X_{1.}$

4b1. Cost leadership and cost-focus strategies associated with level and character of demand conditions of host country and exploitation of specific human capital in the industrial sector of the enterprise in host country and local infrastructure

Even before unification, German investors had already started moving their production facilities to countries such as Spain and Portugal where labour costs were lower, also to the USA. German efficiency, thoroughness, and quality control could only compensate up to a point for the cost advantage that producers in other countries increasingly enjoyed.

Under the current globalization constraints reduction of labour costs is a primary target for both SMEs as well as big businesses. The total hourly labour costs in the (West) German manufacturing sector were EUR 26.36, which is equal to 28% that is above the average for the 20 industrialised countries in 2002. In eastern Germany, total hourly labour costs of EUR 16.43 in 2002.[i] The following table provides an overview of labour costs in EU and other western countries.

TABLE 3: LABOUR COSTS IN SELECTED COUNTRIES

Hourly labour costs in the manufacturing sector in selected countries. 2002 (in €)			
.	Labour costs	Hourly wages	Non-wage labour costs
Norway	28.52	19.20	9.31
Western Germany	26.36	14.74	11.62
Switzerland	26.24	17.20	9.03
Denmark	25.73	19.64	6.09
Belgium	23.35	12.22	11.12
Finland	23.20	13.05	10.15

[i] http://www.eiro.eurofound.eu.int/2003/10/inbrief/de0310101n.html

Netherlands	22.64	12.63	10.01
USA	22.44	16.18	6.26
Sweden	21.86	12.90	8.97
Austria	21.64	11.19	10.45
Japan	20.18	12.06	8.12
UK	19.89	13.76	6.14
Luxembourg	19.67	13.03	6.64
France	19.50	10.20	9.30
Canada	17.44	12.58	4.86
Ireland	17.17	12.29	4.88
Italy	16.60	8.53	8.08
Eastern Germany	16.43	9.96	6.47
Spain	15.37	8.42	6.96
Greece	9.47	5.64	3.82
Portugal	6.59	3.74	2.84

Source: Cologne Institute for Business Research (IW), 2003.
http://www.eiro.eurofound.eu.int/2003/10/inbrief/de0310101n.html

The data of Table 3 demonstrate the problem of German multinationals, at least those operating in big businesses. Big business such as banking, car manufacturing, chemicals, electronics, are associated with skilled labour force as well as advanced related and supporting industries. These production factors and inputs could be found mainly in the advanced countries of Western Europe and the USA for many decades.

When German multinationals (MNEs) made the necessary (massive) investments to these countries, were obviously creating high exit barriers as well in the above locations, which, nowadays, do not possess any more competitive advantages. Thus investments by car manufacturers or electronic firms in the US or Japan, which were sensible in the 1980s, are not any more, due to the emergence of similar producers in China, India or even Brazil.

Furthermore, the level and character of demand conditions of host country (in this case Western Europe and the US) were ideal for the high quality products of German industries. Thus the high income West European or American consumer was able to purchase the expensive German brands (cars, electrical appliances etc), again an essential motive for German big business MNEs to operate in these markets.

For the big business obviously nowadays countries such as Poland, the Czech Republic and China show dynamic growth markets therefore they are being preferred by companies. Market growth, the ability to achieve a leading market position and political and economic stability in the host country are traits of the emerging markets.

The preference to the above high labour cost regions can be explained by other advantages which used to offset the above weakness. Thus the skilled labour force of Western Europe and the US was needed for the production of the highly advanced German products. Furthermore the high income consumer of the US as well as Western Europe was also needed in order to absorb the luxury branded German goods. Finally cheap raw materials could be obtained from south and south-eastern Europe.

The SMEs, on the other hand, which as noted earlier, almost exclusively follow a cost-focus or cost-leadership strategy, will have to select the low cost countries of Eastern Europe as their ideal locations, since at this case, transportation and monitoring-transaction costs are also very limited.

4b2. Possession of better technology, compared to enterprises of host country and superior entrepreneurial and managerial capabilities, compared to enterprises of host country

The firm-specific advantages which German firms enjoy over other European firms have been obvious already in the 1970s. To illustrate, in 1972 German share contribution to R&D expenditure in Europe was 47.3%, followed by France (40%), Italy (7.5%), Belgium (3.1%), Holland (2.1%). In 1977 the shares were as follows: Germany: 36.2%, France: 26.1%, UK: 20.8%, Holland: 6.4%, Italy: 5.3%, Belgium: 3.5%, Denmark: 1.4% and Ireland: 0.3%. The leading industrial position on R&D continued throughout the 1980s and 1990s. Furthermore, productivity levels between Germany and the other industrial nations have changed to Germany's favour. To illustrate in 1950 the productivity levels were as follows: USA=100, UK=56, Germany=33. In 1973 the indexes were: USA=100, UK=64, Germany=71. In 1989 they were: USA=100, Germany=82, UK=78.

4b3. Financial and foreign exchange motives for German FDI

The final set of factors which explain German FDI is the strength of the German currency compared to other foreign currencies. To illustrate under the initial fixed exchange rate regime of the Bretton Woods system the initial rate between the $ and the DM was $1=4.20 DM. However, in March 1961, the DM was overvalued to the $ by 4.76%. This initial overvaluation was reflected in the exchange rates of the DM with the other European currencies as well. In the 1970s the two oil crises created huge volatility in the foreign exchange markets (FX), however by between 1972-1976 the DM was overvalued against the US$ by 32%, against the FF by 29%, against the British £ by 76% and by the Italian lire (IL) by 91%.[i] The strong DM allowed the German firms to acquire cheaply all kinds of assets across Western Europe and the USA. In the 1980s and 1990s, the German firms had to meet the competitive pressure, which accrue from Japanese

[i] See: Gerhard Kade: "The German Challenge", Livanis editions, Athens, 1981, pages 42, 65 and 68. (Greek edition).

MNEs. It was the 1980s which created the first essential change in the post war international economy. Japan in the end of the 1980s, was the second biggest western economy and for the first time the German economy became the third largest in the western world (still the largest in Europe). At the end of the 1980s the Japanese FDI was higher than the German, however in the 1990s it was evident that certain investments of the Japanese MNEs, were too risky, compared to the ones of the German MNEs. This was evident especially by the end of the decade with the Asian crisis (1997-1999 period).

4c. Modes of Entry

Entry strategies differ across regions. Strategic alliances and joint ventures are preferred for entering the Asian market. To enter the eastern European market acquisitions are preferred, by German MNEs. Furthermore, German industrial companies follow some distinct globalisation strategies. To illustrate, automotive component suppliers and firms that make special machinery and industrial systems serve the world's key markets from local production and sales hubs, primarily in Asia and North and South America. Special machinery and industrial systems manufacturers and also automotive component suppliers and electronics firms examine cost and quality criteria to determine the best location for every corporate function. Then they establish an efficient global network and maintain a genuinely global footprint. Many companies in the electrical engineering industry transfer labour-intensive activities in the production process to low-wage regions such as Eastern Europe and Asia. This last group manufacture in Germany and use this as the base from which they serve global customers. Many of these firms produce technology-intensive machinery or operate highly automated, capital-intensive plant.[i] Thus it is obvious that big businesses have no other option. They have to reduce production costs by exploiting the low cost labour of the emerging markets and thus by establishing assembly lines throughout them. On the other hand the R&D facilities will have to remain either in the home country (Germany) or in other part(s) of the developed world (Western Europe, Japan, USA).

5. German FDI in BRIC countries and selected case studies.

We have already pointed out that for more than a century German FDI is concentrated mainly in Europe; the US follows as the second best location. We have pointed out that the above trend can be analysed by economic theory as follows: The German industries historically produced advanced products in the electrical, chemical and mechanical engineering industries. In order to produce the above products skilled labour force, associated with other related traits is needed (infrastructure, low level of bureaucratic barriers, low taxation etc). Furthermore, the above products could be absorbed by high income consumers, which could be found in western European states and in the US.

[i] See the following internet address: http://www.rolandberger.com/press/en/html/releases/514-press_archive2004_sc_content/pr74.html

However, the twenty-first century may change the above trend. The new emerging BRIC markets possess huge economic advantages. To begin with, Brazil, the country is an important market with 190 million population. In terms of GNP the country, expressed at PPP this has reached the $1.8 trillion, thus putting the country in the eighth place of world ranking.

Russia in the end of 2007 has recorded a total GNP of $1.3 trillion, 6.4 times higher than 1999, putting the country in the eleventh place of world ranking.

India, one the other hand, has recorded a GNP of $1.25 trillion and an annual growth rate of 9-10%. Finally China has experienced in the 1990s an equally high annual growth rate and in 2004 the country's GNP expressed in PPP terms was the second in the world ($7.1 trillion). All the above states have high growth rates, big domestic markets, rapidly increased per capita income, a developing trend in new industries (artificial intelligence, computers etc.). Furthermore, low labour cost is associated with increasingly skilled and disciplined labour. Obviously the BRIC countries still have many barriers such as bureaucracy, high foreign exchange risk, due to the volatility of local currencies, political instability, inadequate infrastructure etc. However, in the long run the disadvantages will diminish and thus under a cost-benefit analysis the FDI will be associated with higher benefit than cost. Thus, the German firms have not benefited as much as the enterprises of other EU countries due to their strategy of focusing mainly in Europe. This is illustrated in Table 4.

TABLE 4: German FDI in BRIC countries viz. a viz. other EU countries 2004-2007 (in m. €)

Country	**Brazil 2004-7 average**	**Brazil 2007**	**Russia 2004-7 average**	**Russia 2007**	**India 2004-7 average**	**India 2007**	**China 2004-7 average**	**China 2007**
Belgium	336	-139 *	403	958	33	28	68	369
Germany	1,073	1,147	2,189	6,698	864	1,719	2,712	2,246
Spain	2,013	2,467	127	81	n/a	90	n/a	783
France	910	1,085	569	603	255	316	1,179	1,751
Italy	160	160	33	19	39	35	251	394
UK	529	956	n/a	n/a	572	567	4,659	3,437
EU-27	**6,404**	**7,143**	**10,844**	**17,106**	**4,376**	**10,947**	**10,454**	**7,780**

Source: Eurostat Statistics, No.64 / 2008, page 4. *=disinvestment

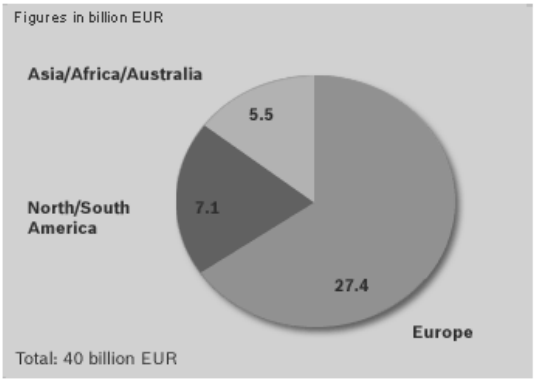
The data of Table 4 demonstrate total EU FDI inflows to BRIC countries and also selected data by the major European investors. The above data demonstrate that in three out of four countries (Brazil, Russia, India), German enterprises have been the main investors. However, for the case of China it is the British multinationals which have invested heavily and possess the top place. Taking into consideration that Russia is mainly a European country it is obvious that the trend of the German enterprises is explained since these investments are under the "European net". Although for the 2004-2007 period total German FDI to China is higher compared to Russia the data for 2007 demonstrate a different evolution. If this trend continues in the following years is still unknown, however,

if it is going to be continued, it will certainly marginalize the other BRIC countries in favour of the "European" Russia.

In order to cement our argument we shall provide evidence of FDI which is composed by case-study approaches, across industries. The cases of German firms illustrate the preference to the previous specific investment locations and to the previous motives for FDI as well as to the modes of entry which we have described in the previous paragraph. We consider three cases studies which represent the main industrial sectors of the German economy. Thus we consider: 1) The electronic industry, 2) The automobile industry, 3) The chemical industry. Due to limitations of space we have to be brief.

In the electronic industry the sector is dominated by two enterprises. These are Siemens and Bosch. At the beginning of 2004, the Bosch Group had approximately 232,000 associates, more than half of which were outside Germany. The company has around 258 subsidiaries and associated companies in over 50 countries. A total of 249 manufacturing sites, 185 of which are located outside Germany, support the international activities.[i] As of 2005 the company has facilities at 57 locations with 111,000 employees in Germany and worldwide at 236 locations with 243,000 employees. More than 10,000 employees are in China. In 2004 the sales was about €40 billion worldwide while in 2003 it was €36.4 billion.[ii] Only for the automotive branch the company's sales were € 25.3 billion in 2004. The automotive operations of the company contributed 63.25% of Bosch's 2004 sales. In 2003 they were 64.8%. About 71% of the company's 2004 sales were generated outside of Germany, consistent with sales in 2003.[iii] Bosch has been making investments in new facilities and expanding existing sites within Europe and in a growing number in America and Asia.

Bosch Group sales by region in 2004



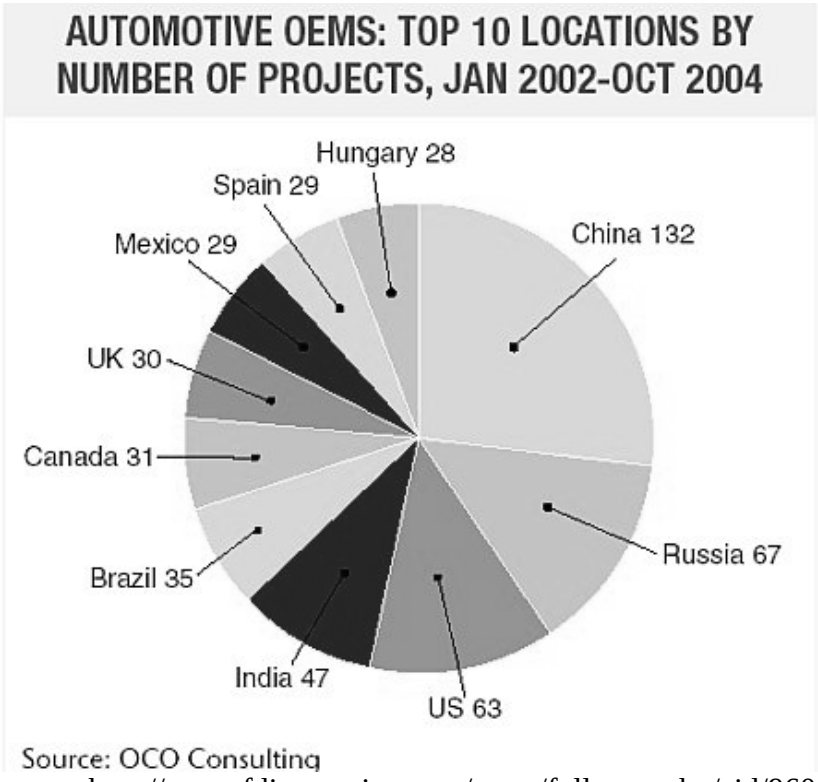
Source: http://www.bosch.com/content/language2/html/2241.htm

[i] See the following internet address: http://www.bosch-presse.de/TBWebDB/en-US/PressText.cfm?CFID=155637&CFTOKEN=92a8dda7b9f8a84f-75610834-F2DB-EEB7-DAAAB1AFB25AF15B&Search=1&id=1902

[ii] http://en.wikipedia.org/wiki/Robert_Bosch_GmbH

[iii] http://support.youruk.net/uploadedpdfs/Bosch.pdf

In the case of the automobile industry Volkswagen AG, group is one of the world's leading automobile manufacturers and the largest car producer in Europe. The second largest market behind Germany which VW is serving with a market share of more than 30% is China where its subsidiary, Volkswagen Group China is the largest foreign automaker. There are four areas of responsibility worldwide (European Union, North America, South America/South Africa, and Asia-Pacific region).



Source: http://www.fdimagazine.com/news/fullstory.php/aid/960/

It is obvious that the BRIC countries have 281 projects, the rest of locations have 210 projects. The distribution inside the BRIC states is also interesting. Thus 47% of the projects is in China. The remaining 53% is distributed across Brazil (12%), India (17%) and Russia (24%).

In the case of the chemical industry BASF AG is one of the biggest German chemical companies in the world. With headquarters in Ludwigshafen am Rhein the BASF Group consists of more than 160 subsidiaries and joint ventures and operates production sites in 41 countries in Europe, Asia, North and South America.[i]

In the 1960s the company expanded the production abroad and plants in Argentina, Australia, Belgium, Brazil, France, United Kingdom, India, Italy, Japan, Mexico, Spain and the United States. In 1965 the company changed its corporate strategy and focused on higher-value products such as coatings,

[i] See: http://www.corporate.basf.com/en/?id=V00-LjIlM7L_bbcp3TB

pharmaceuticals, crop protection agents and fertilizers. After the reunification, BASF acquired a site in Schwarzheide, East Germany, in 1990.

In order to expand the international activities the company invested in its sites near Nanjing and Shanghai, China and other €5.6 billion in Asia between 1990 and 2005.[i] Asia plays an important role for the company. As it expects that the Asian chemical markets (excluding Japan) will grow very strongly in the near future and will reach the size of the European chemical market by 2010. The average annual growth rate in the Asian chemical market will be 6% in next 10 years, higher than the average annual growth rate of 3.4% in the world chemical market.[ii]

In 2001 the worldwide sales revenue reached €32.5 billion.[iii] In 2003, BASF sales were €33.4 billion. Its income from operations before special items was about €3 billion. At the end of 2003, 87,000 people were employed with over 48,000 in Germany alone.[iv]

BASF focus their resources on expanding selected businesses in specific regions. A crucial element of their strategy is building local production capacities in growth markets so that the company supplies regional markets locally. Consequently, the local production supports the increase of the company's flexibility in high growth markets and the decline of risks produced by short-term currency fluctuations and weak regional growth.[v] BASF is active in a variety of markets. BASF has customers in over 170 countries and supplies about 8,000 products to a wide variety of industries. BASF covers business in segments such as the chemicals, plastics, performance products, agricultural products and nutrition and oil and gas.[vi]

Customers for the chemical business are the pharmaceutical, construction, textile and automotive industries. BASF as international leading producer of styrenics, sells engineering plastics to injection molders in a variety of industries. Customers for the performance chemicals are the automotive, oil, paper, packaging, textile, sanitary products, detergents, construction materials, coatings, printing and leather industries. BASF supplies the pharmaceutical, food and cosmetic industries with agricultural products and fine chemicals for agriculture and animal nutrition. BASF explores for and produces oil and gas through its subsidiary Wintershall AG which works with its Russian partner Gazprom in Central and Eastern Europe.[vii]

The company concentrates its resources and uses growth potential in business which they have competitive advantages over other chemical producers in Europe and North America.[viii] By comparing BASF, Bayer and Hoechst, it can be said that BASF can be characterised by a stronger orientation towards primary

[i] See: http://berichte.basf.de/en/2002/jahresbericht/strategie/?id=DwfnS6nXxbir4-6
[ii] See: http://www.findarticles.com/p/articles/mi_hb048/is_200207/ai_hibm1G189971433
[iii] See: http://www.findarticles.com/p/articles/mi_hb048/is_200207/ai_hibm1G189971433
[iv] See: http://en.wikipedia.org/wiki/BASF
[v] See: http://www.findarticles.com/p/articles/mi_hb048/is_200207/ai_hibm1G189971433
[vi] See: http://berichte.basf.de/en/2002/jahresbericht/strategie/?id=DwfnS6nXxbir4-6
[vii] See: http://en.wikipedia.org/wiki/BASF
[viii] See:http://berichte.basf.de/en/2002/jahresbericht/strategie/?id=DwfnS6nXxbir4-6

and intermediate products (i.e. basic chemicals). The company has continuously adapted its production structure to changing needs instead shifting towards new long-term goals. BASF still operates within its existing core business areas (e.g. organic and inorganic chemicals, plastics and fibres, pigments and dyes, gas and oil) and continues to strengthen them.[i]

6. Concluding Remarks

We have demonstrated that historically German FDI has been focused in the European countries, and the US has been the second best location. As gradually but steadily, the new emerging BRIC markets become the dominant locations of economic activity and absorb massive FDI inflows it seems that the German multinationals have, initially, selected China as their primary location of activity. However there is a strong tendency that German FDI will mainly concentrate in Russia. If this occurs it will once again confirm the German preference for European destinations. However, this may be a very risky strategy, since in the long run both India and China have better prospects compared to those of Russia. Thus in the long run the competitors of German multinationals (MNEs) may possess a stronger position both in the above emerging markets, as well as in the international arena.

Focusing primarily in Europe may be Germany's gravest mistake. The EU itself is not an optimum currency area, as many economists have demonstrated.[ii] Furthermore, the rapid de-industrialization of the EU is associated with immense changes in the labour market. The EU becomes the region of the elderly. To illustrate, according to certain research by the year 2020 out of 1 billion individuals between 15-29 years of age, only 65 million will be located in Europe creating immense pressure in the social security systems, productivity levels etc.[iii] Focusing in Europe and preferring Russia as a primary location for FDI, compared to the other BRIC countries, may be a fatal blow for German industry compared to its rivals.

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