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Grocery retailing in Poland: Structural changes and foreign direct investment

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**Zentrum für internationale Entwicklungs- und Umweltforschung
der Justus-Liebig-Universität Gießen**

**Grocery Retailing in Poland:
Structural Changes and Foreign Direct Investment ***

by

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No. 40

Giessen, February 2009

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1 INTRODUCTION

The development of the Polish food retailing sector is very interesting. With the transition from a socialist to a market economy, structural change in the retailing sector has been especially rapid and the new open markets in Poland have attracted foreign investors – throughout the economy in general and in the food-retailing sector in particular.

This article describes and analyses the major trends in Polish food retailing. It is organised as follows. The structure of food retailing is described and explained in Section 2, first at the store-type level and then at the firm level. How the powerful concentration process in food retailing has affected the marketing chain is also discussed. Inward foreign direct investment (FDI) in Polish food retailing is covered in Section 3. Given the special importance of FDI in the Polish economy during the transition process, an analysis is carried out of the determinants of FDI in retailing within a cross-country dataset and with a particularly detailed look at FDI in Poland. The results are summarised in Section 5.

2 STRUCTURAL DEVELOPMENT IN THE POLISH FOOD-RETAILING SECTOR

The Central and Eastern European Countries (CEECs) experienced fundamental economic and social change in the 1990s. In the communist era, markets were centralised and put under state control, so that the private sector was suppressed. An underdeveloped infrastructure was the consequence, and business and consumer behaviour deviated markedly from that in Western Europe. With the collapse of Communism, the CEECs opened their markets and attracted capital, primarily from foreign enterprises, since the post-communist economies did not have sufficient financial reserves at their disposal. Within the group of CEECs, Poland is of special interest, because on the one hand, with its 38 million inhabitants, it is the largest CEEC and, on the other hand, Poland had already taken part in the first phase of the transformation process at the beginning of 1990 (Dries, Reardon and Swinnen 2004). However, the transformation process could not be initiated until laws had been changed and it became possible to establish private firms.

Prior to the transformation process, the Polish retailing industry already comprised 155,000 shops and 77,000 registered kiosks and mobile traders. Of all these outlets, about 43,000 were privately owned. Thus, private enterprises already existed in the Polish retailing industry. Due to their small number and store size, however, the private sector remained relatively unimportant under Communism.

The transformation started in the beginning of the last decade of the 20th century, when a law on private business was enacted, enabling entrepreneurs to set up their own businesses, employ staff without reference to central agencies and operate business bank accounts. The new law had, however, only very limited impact, since its implementation was not clearly regulated (Dawson and Henley 2002).

According to Dawson and Henley (2002), three phases of the transformation process can be distinguished: (i) a pioneer phase, (ii) a colonisation phase, and (iii) a consolidation phase. The **pioneer phase** lasted from 1990 until the end of 1994. During this period, commodity prices were deregulated, export and import subsidies were removed and there was a substantial devaluation of the domestic currency, the Zloty (Gorynia 2002). Furthermore, large centrally

organised, state-run chains were denationalised. The markets were rather unstable in this period and the consumer price index showed an extremely high inflation of about 130 percent on average. Nevertheless, individual companies entered this difficult market, such as Billa, Rema 1000 and Makro¹, as well as other trading ventures, which gained early experience (Dawson and Henley 1999, Przybylska and Malina 2000). Not until further market regulations were adopted more investors were attracted to the upcoming market.

From September 1991 to the end of 1993 the initial adjustments in the move towards harmonisation with the European Union were introduced (Gorynia 2002).

In the era of **colonisation**, starting from 1995 onwards, many other European enterprises followed the first movers, some of which were the French retailers Leclerc, Auchan, Dock de France and Casino. In 1995, Jerónimo Martins, Tesco, Metro and Tengelmann entered the Polish food-retailing market, too (see Table 7). This phase was characterised by a more active trade policy and stimulated the restructuring of production and exports (Gorynia 2002).

The **consolidation** process began in the late 90s after the number of firms rose sharply, even though quite a lot of enterprises were eventually forced to leave the market again. The remaining companies began to concentrate on their most profitable areas of activity and thus sold the types of store that did not fit their business concept or they created joint ventures (Dawson and Henley 1999).

We now describe the structure and the changes in the grocery-retailing industry in Poland first at the store-type level and second at the level of firms.

2.1 Structure and Changes at the Store-type Level

In the privatisation process, prices were deregulated, and restrictions on product ranges, free trade and imports were eliminated (Burt 2006). As a consequence, the total number of stores skyrocketed between 1991 and 1995.

¹ Billa entered the market mainly by establishing supermarkets in Warsaw and Bielsko-Biala in 1990. Using a franchise system, Rema entered as a food discounter. Likewise, Makro had its beginnings in Warsaw and created its business there in 1994 (Dawson and Henley 1999: 41).

Table 1 reveals the total rose from less than 256,000 (1991) to more than 381,000 (1995) and, with much lower growth rates, to nearly 391,000 in the year 2000. Since 2000, the number of stores has declined again substantially.

The major increase in the number of stores, by about 50 % between 1991 and 1995, was the result of the privatisation process. It occurred mainly in the category of retailing firms with one or two shops, at the expense of large retailing firms with 50 stores and more. In the proceeding consolidation process, the large number of newly privatised firms with one or two stores suffered, as these could not compete in the medium term with the European retailing groups that had become established in the meantime.

Table 1: Number of Shops of Retailing Firms

	1991	1995	2000	2005
Total	255,787	381,392	390,748	318,443
up to 2 shops	252,001	377,109	386,612	314,086
3-10	1,631	3,037	3,243	3,525
11-20	1,195	907	682	565
21-50	857	308	187	195
51-100	88	25	17	48
101-200	11	4	5	18
more than 200 shops	4	2	2	6

Source: CSO, various years.

The very large number of single stores in Poland after privatisation was combined with small-scale and traditional organisation. The average sales area and product range was extremely low. During the 1990s, four new selling concepts were introduced in Poland, which had already been established in Western Europe as well as in other industrialised countries. These retailing formats were hypermarkets, supermarkets, discount stores and convenience stores. In line with the Central Statistical Office of Poland, the store types are defined as follows. In **department stores** the sales area exceeds 2000 m² and they carry a wide and universal assortment of foodstuffs as well as non-foodstuffs. **Shopping centres** have a sales area between 600 m² and 1999 m² and they usually have the same range of goods as department stores. **Hypermarkets**, which are stores with more than 2,500 m² of sales area, sell a

broad range of food and non-food products using self-service. **Supermarkets** occupy retail space measuring between 400 and 2,499 m². They also use the self-service principle to sell a wide range of frequently purchased food and non-food products (CSO 2003). These store types typically use a High-Low (HiLo) pricing strategy. **Discount stores** are self-service stores which carry a range of products – mainly foods – in a low-cost style of presentation. They typically concentrate on a limited number of articles with a high turnover, and they follow an everyday-low-price (EDLP) strategy (EHI 2006). And the last classical Western store type, the **convenience stores**, are stores with less than 400 m² of sales area, typically in favourable locations. In these stores, food and non-food products are sold to cater for consumers' daily needs (Auer and Koidl 1997). Convenience stores are in their infancy in Eastern Europe, and therefore they have not been part of official statistics up to now. **Other shops** have a retail area not larger than 119 m² - selling a narrower range of product groups than convenience stores (CSO 2003). This last class of shops is a relic of the old business structures (e.g. kiosks) in the communist era. Typical of this store type is low investment in shop equipment and a low level of service, as well as a poorly developed logistics and supply chain (Burt 2006). In addition, many small stores exhibit a high degree of specialisation. Thus, in conjunction with the new store types and their huge volume of non-specialised merchandise, they create a dual structure in retailing.

Permanent market places are separate areas or buildings where permanent or temporary outlets conduct retail sales activities every day or for several days of the week. **Seasonal markets** operate in the main only for a defined period and are open no longer than six months each year.

Table 2 provides an overview of the relative importance of various store types in Poland in the period 1993-2005. The growth in the number of hypermarkets and supermarkets is striking.

Hypermarkets have only been included in the official Polish statistics since 2000, despite the fact that the first hypermarkets had already opened in the 1990s, mainly as a consequence of the large French and German retailing firms entering the market (Dawson and Henley 1999). There were 99 hypermarkets in the urban centres of Poland when the statistics were first recorded. Since 2000, more parts of the country have been opened up, and by 2005 the number of

hypermarkets was 374. It was noticeable that large retailing firms tried to be first to establish a hypermarket in the smaller cities (Dries, Reardon and Swinnen 2004).

Table 2: Shops and Petrol Stations in Poland by Organisational Form, 1993-2005

	1993	1995	2000	2005
Department Stores	129	134	135	95
Shopping centres	863	780	500	462
Hypermarkets	-	-	99	374
Supermarkets	673	752	1,602	2,716
Other shops	374,327	417,079	421,723	380,354
TOTAL	375,992	418,745	424,059	384,001
Petrol stations	4,559	5,344	7,744	10,036
Permanent market places	-	2,354	2,376	2,313
Seasonal market places	-	5,060	5,164	6,729

Source: CSO, various years.

It was not only hypermarkets that experienced strong growth. The number of supermarkets in Poland more than quadrupled between 1993 and 2005. At first, supermarkets were established in the higher-income urban areas. Then locations followed in municipal areas targeted at the middle-income and later at the lower-income households. In contrast to hypermarkets, supermarkets penetrated the poorest regions, too (Reardon and Swinnen 2004). The number of trade stores and shopping centres showed a negative trend; the number of department stores slightly increased until 2000 but fell considerably after 2000.

Apart from the stores described above, petrol stations are playing an increasing role in Polish retailing. The permanent markets have not shown substantial change over time and there are still about 2,300 of these markets in Poland. In contrast, the number of seasonal markets has increased, the figure in 2005 being 6,729. It is striking that seasonal and permanent markets were able to raise their market share between 1995 and 2005 even though foreign enterprises had successfully entered the Polish retailing sector. One important reason is the growth of tourism in Poland, mainly border tourism, which presented the permanent and seasonal markets with new opportunities.

Although Poland has seen a big increase in the number of hypermarkets, an international comparison reveals that the country still has a rather low concentration ratio. There is potential for more structural change in food retailing. In 1998, the ten most important firms among the 50 largest retailers had a market share of about 60 %. By 2002, this proportion had risen to 70 % (Slawinska and Malkowska-Borowczyk 2006). The top five food retailers captured a 48 % market share in 2001 (Dries, Reardon and Swinnen 2004, p.536). This is again quite a low figure – for comparison, the figure in Germany is higher than 60 %.

Table 3 illustrates the strong growth of the sales area in Poland’s retailing sector. Apparently, the impact of additional very large stores outweighed the effect of consolidation among the very small “other shops” in terms of retail space. At the end of the communist era in 1989, an average business had a sales area of 11 m² (Dawson and Henley 2002). After more than 15 years of development and much structural change, the sales-area share of traditional shops (<100m²) declined continuously, although they still accounted for 94 % in 2005. The larger sized stores, in particular stores with more than 400 m² sales area, gained substantially in terms of market share. These exhibited the highest growth rate in retail space between 1994 and 2005 with 1.2 %.

Table 3: Market Share of Sales Area (%)

	1994	1995	2000	2004	2005
Total	415,449	425,600	431,991	370,169	384,001
Sales area of shops in m²	19,177,886	19,792,640	26,933,785	26,438,595	28,064,516
below 50 m²	92.2	91.9	92.5	94.7	94.0
50 - 100 m²	4.7	4.8	3.8		
101 - 200 m²	1.9	2.0	1.8	2.4	2.7
201 - 300 m²	0.5	0.5	0.6	0.9	1.0
301 - 400 m²	0.2	0.2	0.4	0.5	0.6
above 400 m²	0.5	0.5	0.9	1.5	1.7

Source: Internal Market, various years.

Not only did the transformation process bring about advantages for foreign market participants but domestic enterprises also gained, in particular with the

large and growing number of small shops during the whole transition period up to today.

It has already been mentioned that the Polish retailing sector became attractive for many foreign firms. There was great market potential. Furthermore, no effective competition existed after the collapse of the communist system and firms were able to start with a systematic penetration of the market. Table 4 illustrates the relative importance of foreign companies in the different retail formats in the period 2001-2005. It gives both an overview of the proportion of domestic and/or foreign owners according to store type and the degree of privatisation within the industry, and it also shows that the commercial sector has been almost completely deregulated. According to Table 4, the share of the private sector in all retailing stores and petrol stations in Poland amounted to more than 99 % every year between 2001 and 2005.

Table 4 also reveals that the foreign share of all stores in the private retailing sector has increased from 0.7 % in 2001, but at 1.4 % in 2005 it is still low. The major reason for the low foreign share in total stores remains the continuing predominance of the traditional and small-scale store structure.

Whereas the foreign share is negligible in the small-scale category "other stores", the situation is very different with regard to the larger store types. As Table 4 illustrates, the foreign share was as high as 83.2 % for hypermarkets, 56.1 % for supermarkets and 20.3 % for shopping centres in 2005. Although the foreign share is clearly lower for department stores (9.5 %) and petrol stations (7.0 %), they are well above the foreign share of all shops in Poland (1.4 %).

Table 4 illustrates some interesting trends despite the short period covered. Between 2001 and 2005, the foreign share rose robustly for hypermarkets, i.e. by more than 30 %, and it declined markedly for department stores. For supermarkets (shopping centres), there was no continuous trend in the period 2001-2005, but the foreign share was clearly lower (higher) in 2005 than in 2001.

Table 4: Structure of Shops and Petrol Stations by Organisational Form and Ownership (%)

Sector and Ownership		Total Shops	Department Stores	Trade Stores/ Shopping Centres	Hypermarkets	Supermarkets	Petrol Stations
2001	Private sector	99.6	97.8	96.9	99.4	99.5	95.1
	<i>domestic</i>	98.6	59.9	83.3	53.8	16.3	72.6
	<i>foreign</i>	0.7	30.7	10.2	45.4	81.6	6.1
2002	Private sector	99.6	98.1	97.6	99.5	99.5	95.6
	<i>domestic</i>	98.6	78.3	76.8	20.8	48.7	74.2
	<i>foreign</i>	0.8	17.9	18.2	77.3	50.7	6.6
2003	Private sector	99.7	98.0	98.1	100.0	99.9	95.8
	<i>domestic</i>	98.6	79.4	72.0	17.1	50.0	76.1
	<i>foreign</i>	0.9	15.7	24.2	81.9	49.7	6.0
2004	Private sector	99.6	99.0	98.2	100.0	99.9	96.1
	<i>domestic</i>	98.3	83.8	72.3	16.0	46.0	74.4
	<i>foreign</i>	1.2	13.1	24.0	83.1	53.7	7.1
2005	Private sector	99.7	98.9	98.3	100.0	99.8	97.2
	<i>domestic</i>	98.0	87.4	76.0	15.5	43.6	76.5
	<i>foreign</i>	1.4	9.5	20.3	83.2	56.1	7.0

Source: Internal Market, various years.

The overall picture shows that the Polish retailing sector offers many opportunities for domestic firms even after foreign companies successfully entered the market. The rising domestic firms' share of Polish supermarkets, i.e. 43.6 % in 2005 compared with 16.3 % in 2001, is a case in point, as is the still huge number of small "other shops" operated by Polish entrepreneurs. Furthermore, Dawson and Henley (2002) state in their article that there were already seven Polish controlled hypermarkets in 1997. It can be seen that there are significantly more today from Tables 3 and 4.

Another important feature of food retailing in Poland is the development of discounters. Although they are not included in the official Polish statistics, discounters have established themselves in Poland, albeit their importance lags behind that in other European countries. Dawson and Henley (2002) report that more than 500 discount stores already existed in 1998 and they were operated

by six companies. That number had more than doubled by 2004, as Table 5 documents. Most discount stores – run at a long distance from headquarters – are maintained by Biedronka, a subsidiary company of Jerónimo Martins. This Portuguese company leads the market, with more than 60 % of all Polish discount food stores belonging the chain, followed by the German retailer Plus, which maintained 160 discount stores in 2004 and achieved high growth rates in 2003 and 2004, as did the Danish retailer Netto. The most impressive market entry can be ascribed to the German retailer Lidl that opened 70 new stores in 2003. But in the following year, only two further shops were opened, indicating that Lidl has concentrated its activities on the major economic centres in Poland. The German retailer Aldi entered the Polish discount market in 2008, too (LZ-Net, 28.2.2008).

Altogether the market segment occupied by discount stores developed dynamically, but the growth rate declined in 2004. This is evidence that discounters, like companies with other store types, targeted the large cities first. They are now experiencing slower growth as the remaining areas are developed.

Table 5: Number of Discounters per Retailing Company

Firm	2002	2003	2004
Biedronka	627	670	725
Netto	65	73	81
Plus	137	152	160
S-Sklepy Dyskontowe	125	125	133
Lidl	5	75	77
Total	959	1095	1176

Source: Ullmann (2004), p. 26.

2.2 Structure and Changes at the Firm Level

There were powerful incentives for Western European retailers to enter the Polish market. Given the high ratios of supply concentration and strong price competition on their domestic markets, retailing firms suffered from low profit margins and were on the lookout for promising new markets. As a result, large foreign retailers now occupy a significant position in the Polish retailing sector.

Table 6 gives an overview of the 20 most important retailing firms in Poland in terms of turnover in 2005. Metro is by far the largest retailer in Poland, followed by Jerónimo Martins and Tesco. Among the 10 most successful companies is only one domestic enterprise - Ruch. All other companies have their head offices in Western Europe. Of the top ten, four originate in Germany (Metro, Euro Cash, Schwarz-Group and Rewe) and three in France (Carrefour, Auchan and Géant). One trading venture is of Portuguese origin (Jerónimo Martins) and one is UK-based (Tesco). In contrast, there were five Polish companies (Milo, Bos, Polski Tyton, Eldorado and Polska Siec Handlowa Unia) ranking between 11 and 20 in 2005. Since 2005, new merger activities have taken place. Meanwhile, Milo has become part of the German firm Lekkerland, which is now positioning itself in the growing markets of Central and Eastern Europe (LZ|Net 2006a), and Bos has become part of Eldorado, Poland.

The fact that four domestic companies could rank among the top twenty retailers in Poland underlines again that the developing food markets provide new opportunities for all market participants.

The general development of the Polish retailing sector can be compared with the colonisation phase during the transformation process. The large cities were targeted first, and now the smaller cities and average-income regions are following in the retailers' strategies.

Burt (2006) denominates Poland as so called "battleground" market (besides the Czech Republic and Hungary). The promising Polish retail market attracted most of the international players in the sector competing among each other for market shares. The process of entry, competition and finally exit or survival was influenced by three different effects. A first reason for consolidation was characterized by market exits due to "strategic realignment of activities". The exits from the Cash&Carry sector by Karsten/Maxa (1991-1996), and Booker from the joint venture with Jerónimo Martins (1995-1998) as well as the sale of Dohle's Hit hypermarkets to Tesco in 2002 are examples for this point.

Second, merger and takeover activity within the wider European grocery market also contributed to consolidation in the Polish market. The mergers of Billa by Rewe (1996), of Docks de France by Auchan (1996), of Allkauf by Metro (1998) and of GIB by Carrefour (2000) were cases in point. The bankruptcy of Interkontakt is indicative of this type of consolidation, too.

Table 6: Top 20 Leading Retailers in Poland, 2005

Position	Company	Channel of Distribution	Net Sales 2005 in Mill. Euros
1	Metro	Makro Cash & Carry, Real, Media Markt, Saturn	2,907
2	Jerónimo Martins	Biedronki	1,334
3	Tesco	Tesco, Savia	1,329
4	Carrefour	Carrefour, Champion	1,168
5	Auchan	Auchan, Schiever, Elea	1,133
6	Ruch	Ruch	950
7	Géant	Geant, Leader Price	901
8	Eurocash	Eurocash, KDWT	809
9	Schwarz-Group	Lidl, Kaufland	721*
10	Rewe	Minimal, Selgros	687
11	Milo ^{a)}	Milo	679
12	Plus Discount	Plus Discount, Obi	634*
13	Bos ^{b)}	DLS, Express Podlaski, Bos, Sygel-Jool	560
14	Ahold	Hypernova, Albert	522*
15	ITM	Intermarché, Bricomarche	487
16	E. Leclerc	Leclerc	447
17	Polski Tyton	Polski Tyton	319
18	Eldorado	Eldorado, Stokrotki, Groszek	318
19	Zabka	Zabka	309
20	Polska Siec Handlowa Unia	PSH Unia	279

^{a)} Part of Lekkerland. ^{b)} In the meantime part of Eldorado. * Estimated.

Source: LZ|Net (2006b).

The third type of consolidation arose from the tendency of the retailing firms to concentrate on individual core areas. This led to leaner and probably a more efficient firm structure within Poland. Store types which did not belong to the core authority were sold.

Jerónimo Martins focused on discount stores and therefore took control of Metro's discount chain TIP (1999). In contrast, the established hypermarkets and the cash & carry stores were sold to Ahold (2002) and Eurocash C&C (2003) respectively. Ahold concentrated on supermarkets (Albert) and on compact hypermarkets (Euronova). For this reason, the Sesam discount chain was converted into Albert supermarkets and the large hypermarkets were transferred to Carrefour (2002/03). The German retailer Rewe expanded into Cash & Carry (Selgros) and the discounter market (Penny). As a consequence, some Billa supermarkets were sold to Ahold.

Structural change in the retailing industry, which was precipitated by the transformation process, is not necessarily advantageous to Polish retailers only. The primary sector may benefit from this development, too. In particular, new markets will be created for the agrarian sector, provided farmers are able to meet the retailers' requirements for local products in sufficient quantities and at a predetermined quality level. However, the necessary adjustments mean that farmers face major challenges. It may well be that smaller farmers are among the losers, as a fixed transaction cost component plays an important role in the farmer-retailer relationship, and retailers cooperating with a higher number of small farmers will have higher costs than retailers working only with fewer and larger farmers. In addition, smaller farmers often lag behind in terms of investment due to insufficient financial resources and/or disadvantages in imperfect rural credit markets (Dries, Reardon and Swinnen 2004).

The next section concentrates on foreign direct investment (FDI) flowing into the Polish grocery-retailing industry. FDI captures long-term investment by a non-resident combined with control over a share of 10 % or more. How FDI developed and changed during the different stages of transformation is analysed. Furthermore, attention is drawn to what characterises the companies which have the biggest interest in foreign direct investment.

3 FOREIGN DIRECT INVESTMENT

The rising global importance of Multinational Enterprises (MNEs) and the consequential increase of foreign direct investment (FDI) have been researched massively for the last 30 years. In his basic approach, Dunning (1977) argues that an entrepreneur's decision whether to serve a market by trade or investment depends on the possibility to exploit ownership-location-internalisation-(OLI) advantages. Ownership advantages include for example location-independent firm-specific advantages like patent rights, strong brands, and superior management abilities, whereas location advantages might be lower wages, easier access to raw materials, favourable tax environment, and, especially important for retailing, proximity to markets and consumers. Internalisation advantages occur, when internal production abroad induces higher benefits compared to other solutions like franchising, licensing or exports. Other authors tried to integrate the theory of multinational enterprises into international trade theory. Helpman (1984) and Helpman and Krugman (1985) focused on the development of vertical MNEs via factor-price differences. Markusen (1984) concentrates on horizontal MNE due to trade costs. Further steps include the introduction of ownership and location advantages into general-equilibrium trade models (see e.g., Brainard 1997 and Markusen and Venables 1995 and 1996). The implicit assumptions of endogenously arising MNEs and two-way FDI were the main issues of several empirical studies using the gravity model (Brainard, 1997; Eaton and Tamura, 1996; Brenton, 1996).

Empirical studies about determinants of FDI flows into Central and Eastern European Countries show, amongst others, a strong impact of market size and potential, low relative unit labour costs (Bevan, 2004; Carstensen, 2004; Clausing, 2005), national incentive-based FDI policies and institutional quality of the host country (Disidier, 2004; Witkowska, 2007) and EU Accession proposals (Bevan, 2004; Clausing, 2005) as main driving forces for FDI.

The reasons for foreign direct investments are multilayered and usually firm-dependent. This topic is dealt with in detail in the literature on industrial organisation and microeconomics. Burt (2006) elaborated that market entry by firms in CEECs was crucially affected by the following factors: a) market

opportunity; b) cost advantages; c) chances of profit; d) public relations and reputation; e) historical and cultural relationships.

Points a) and c) in particular are very relevant in the case of the Western European retailing companies (for example in Germany), since their domestic markets are often characterised by low growth rates as a consequence of high concentration ratios and strong price competition. It was disadvantageous to the domestic Polish economy that no capital reserves were formed during the communist era, or could be formed, which could have been invested when the transformation process started. Therefore, the funds urgently needed for restructuring could originate only from foreign countries (Przybylska and Malina 2000).

Even with this working in Poland's favour, there were still obstacles to FDI. The potential barriers are, on the one hand, the culture of Poland and, on the other hand, structural and political characteristics. The problems include logistics and supply, communication, management abilities, unstable prices, hyperinflation, political and economic instability as well as black-market and investment risks (Burt 2006).

Economic instability is highly relevant to the initially slow progress of the Polish transformation process in the early nineties and, for example, explains why the hypermarkets were late in entering the market.

Despite these difficulties, potential investors in Poland can see that the developments in the country's structural data have been positive. Thus, the annual growth rate of real GDP amounted to 4.5 % on average (1995-2007). Moreover, Poland is the largest Central and Eastern European Country with a population of 38 million. Since 2000, the inflation rate has been at the same level as in other member states in the European Union. The political risk declined substantially when Poland was admitted to OECD (1996) and NATO (1997). Poland's export industry has been limited mainly to the EU, with two-thirds of exports being shipped to EU countries. As stated in Chapter 2 above, the crucial factor has been the changes to the basic legal conditions, which have resulted in markets being opened up. The attractiveness of the Polish food-retailing sector lies in the high level of expenditure on food – as much as a third of household incomes (Dawson and Henley 1999) - thus making Poland the sixth largest food-retailing market within the European Union.

Table 7 lists the foreign investors and when they entered the market. In some cases, their year of withdrawal from the market is also shown. Companies from Austria (Karl Wlaschek), Belgium (GIB) and Netherlands (Karsten/Maxa) were the pioneers in the Polish retailing industry. They entered the growing market as early as 1991. From 1994, they were followed by the large German, French and Dutch retailers.

Table 7: Western European Retailers and Year of Entry and Exit in Poland's Food-Retailing Industry

Company	Origin	Years of Entry / Business
Julius Meinl	Austria	1997
Schwarz Group	Germany	2002
Metro	Germany	1994
Rewe	Germany	1996
Tengelmann	Germany	1995
Dansk Super	Denmark	1995
Auchan	France	1996
Carrefour	France	1998
Casino	France	1996
Intermarché	France	1997
Leclerc	France	1996
Ahold	Netherlands	1995
Jerónimo Martins	Portugal	1995
Tesco	United Kingdom	1995
<i>Previously operating</i>		
Karl Wlaschek	Austria	1991-2006
GIB	Belgium	1991-2000
Interkontakt	Czech Republic	1997-1999
Allkauf	Germany	1995-1998
Dohle	Germany	1994-2002
Edeka	Germany	1997-2003
Docks de France	France	1995-1996
Reitan	Norway	1998-2003
Karsten/Maxa	Netherlands	1991-1996
Makro	Netherlands	1994-1997
Booker	United Kingdom	1995-1998

Source: Burt (2006), pp. 145 et seq.

In the meantime, German and French companies have become the main foreign investors in the Polish food-retailing sector (e.g. Metro, Carrefour, Auchan). Between 1996 and 1998 in particular, German and French firms more than doubled their number of stores with high levels of financial investment (Dawson and Henley 2002).

It seems that German retailers enjoyed a competitive advantage on the Polish market in various regions. They had already experienced privatisation of the sector in the former German Democratic Republic. Additionally, German – but also Austrian – firms benefited from their proximity to Poland, in terms of both geographical distance and cultural background. An interesting feature of the competition on the Polish food market in transition was that, before the larger formats followed, most retailers conquered the new market primarily with medium-sized store types.

It is noticeable that almost all foreign companies which entered food retailing before 1994 have now left the Polish market again. There is only one exception: Metro was the only firm among the early newcomers which coped successfully with the difficulties of the Polish market in transition. Whereas Metro became the most successful retailer and a market leader in Poland, most companies withdrew from the Polish market during the second stage of the transformation process (e.g., Docks de France, Allkauf and Makro), and very few stayed until the third stage, namely reorganisation (e.g. Interkontakt, Karl Wlaschek, Dohle, Edeka and Reitan).

Table 8 summarises the investment undertaken by foreign enterprises in the Polish retailing and repair sector, as well as the investment activities of the Polish sector abroad in the period 1994-2004. The Polish retailing and repair sector is characterised by a high net inflow of foreign capital. The ratio between the inward position, i.e. FDI stocks of foreign firms in Poland, and the outward position, i.e. FDI stocks of Polish investment abroad, was as high as 38.2:1 in 2004. It can also be seen that the inflow of financial funds grew robustly from 161 million US\$ in 1994 to 1,482 million US\$ in 2004. It appears that the Polish retailing sector in general and food retailing in particular continue to attract foreign capital. This holds true despite rising concentration and increasing price competition.

Table 8 reveals that Polish FDI in the retailing sector of other countries experienced ups and downs. There were even some years of disinvestment (1998-1999 and 2002-2003). The high increase in outward FDI in 2004 suggests a strong investment boom as a consequence of Poland joining the EU.

Table 8: Direct Investment in the Polish Retailing and Repair Sector, Million US\$, 1994-2004

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<i>Direct Investment from Abroad</i>										
161	512	612	433	782	834	749	824	758	699	1,482
<i>Inward position</i>										
446	885	1,335	1,704	2,767	4,708	5,720	7,386	8,186	11,087	15,310
<i>Direct Investment Abroad</i>										
6	18	15	7	-16	-5	6	24	-17	-4	205
<i>Outward Position</i>										
82	136	117	94	100	138	151	90	93	159	434

Source: OECD (2003).

Table 9 provides additional information on the significance of individual foreign retailers for and during the transformation process in Poland. The information refers to the capital invested by the major foreign investors in the retailing sector, their country of origin, their activities and the rank of the firm among all foreign investors in the Polish economy.

It can be seen that the five most important foreign investors in retailing belong to the top fifty foreign investors in the Polish economy. Two firms – Metro with 1.5 and Tesco with 1.3 billion US\$ capital invested in 2004 – rank among the top-ten foreign investors. This is a remarkable situation, given that FDI in retailing amounted to 12.2 % of total FDI in the period 1994-2002. All five leading foreign firms in the retailing sector, i.e. Metro, Tesco and the three French firms Carrefour, Casino and Auchan, invested more than 600 million US\$ each in Poland. It is striking that 18 out of the top twenty foreign investors in retailing are engaged in food retailing. Only two firms in the top twenty are non-food retailers alone.

Table 9: Major Foreign Investors in the Polish Retailing Sector, December 2004

Overall Position	Investor	Capital invested (mill. US\$)	Origin	Activities
5	Metro Group	1508.0	Germany	Wholesale and retail trade
8	Tesco	1300.0	UK	food retailing
17	Carrefour	980.0	France	food retailing
22	Casino	801.0	France	food retailing
28	Auchan	672.2	France	food retailing
51	Jerónimo Martins	386.3	Portugal	food retailing
136	Kingfisher	104.0	UK	other retail sale of new goods
143	NETTO A/S	100.0	Denmark	food retailing
212	Royal Ahold	59.0	Netherlands	food retailing
227	Rewe	53.5	Germany	food retailing
228	Fegro-Markt Corporation	53.5	Germany	food retailing
230	Leclerc	52.0	France	food retailing
289	Interkontakt Group	36.0	Czech Republic	wholesale food
306	Plus Trading Company	32.4	Germany	food retailing
370	Rossmann	22.0	Germany	retail sale of cosmetics and toiletries
397	Politra (Eurocash)	18.6	Netherlands	food retailing
498	KIPI (Eurocash)	12.4	Netherlands	food retailing
524	Reitangruppen	11.1	Norway	food retailing
544	Neinver	10.0	Spain	food retailing
667	Julius Meinl International	6.5	Austria	food retailing
863	Harris	2.8	Austria	food retailing
902	Docks de France	2.5	France	food retailing
953	Danish Fast Food	2.0	Denmark	manufacture and retail of food
1028	HTS Duisburg	1.3	Germany	retail sale of cosmetics and toiletries
	<i>Sum</i>	<i>6227.1</i>		

Source: PA|i|Z (2005), pp. 10 et seq.

Another remarkable fact emerges from Table 9 - the absolute dominance of EU firms in all FDI in the Polish retailing sector. Among the 26 firms listed in Table 9, all home countries of the FDI stocks are EU countries. 25 of the 26 firms are from "older" EU member states and only one – Interkontakt Group of the Czech Republic – is from one of the new EU member countries. This suggests not only that the food trade is mainly intra-EU trade but also FDI is almost exclusively intra-EU FDI.

4 DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN THE POLISH RETAIL TRADE

The objective of this section is to identify determinants of FDI in the retailing sector. Since a comprehensive dataset for FDI in Polish food retailing is not available, the analysis does not focus exclusively on Poland. Eight European countries – including Poland – are covered by the investigation.

Table 10: Foreign Direct Investment in Selected European Countries (Average 1996-2003)

Country	Inward position of <i>FDI</i> in the Retailing and Repair sector		Inflows of <i>FDI</i> in the Retailing and Repair sector	
	FDI (Mill. US\$)	FDI/GDP (%)	FDI (Mill. US\$)	FDI/GDP (%)
Poland	4,623.80	23.79	656.80	3.65
Hungary	1,206.61	50.98	325.75	5.92
Slovakia	926.46	55.23	171.21	7.22
Czech Republic	2,615.74	48.38	645.32	10.08
Italy	4,838.23	4.69	538.73	0.46
Portugal	2,123.43	29.13	642.99	5.56
Germany	22,589.41	14.21	1,836.30	0.86
France	14,575.09	11.69	-92.17	-0.01

Source: Own computations with OECD 2004 and IMF 2007.

Comparative data on FDI in several countries are available from the OECD. Two different specifications of FDI were used in our analysis: first the inward position of direct investments from abroad as a cumulative stock and second the inflow of FDI. In Table 10, 8-year averages of different measures of FDI reveal in detail how countries have received various levels of foreign direct investment from abroad. Additionally, the respective indicators are weighted by GDP in the individual countries to account for differences in country size and economic wealth.

As described in Section 3, Poland's retailing sector received a considerable amount of FDI. Consequently, Table 10 indicates that Poland is the most important host country for FDI stocks and flows in absolute terms among the CEECs. Yet the level is still considerably lower than direct investment from abroad in Germany or France. The case of Italy illustrates the influence of different FDI indicators. Whereas the average inward position of FDI in Italy is

higher than in Portugal, the average inflow of direct investment is higher in Portugal.

The rest of this section is structured as follows: Section 4.1 outlines the hypotheses regarding FDI determinants and describes the model and data. The empirical results of the analysis are discussed in Section 4.2.

4.1 The Analytical Concept: Potential Determinants of Foreign Direct Investment

There is a broad theoretical literature on the determinants of FDI (Markusen 1998) as well as empirical evidence of their relative importance (see, for example, Wheeler and Mody 1992 or Culem 1988). In recent years, there has been increasing interest in what drives the location decisions of foreign firms in the European transition economies (Bevan and Estrin 2004, Carstensen and Toubal 2004). Individual studies have concentrated on Poland in general (Przyblyska and Malina 2000) and on the Polish food-manufacturing sector (Walkenhorst 2001). In the following multivariate analysis, FDI stocks and flows in the retailing sector are explained across countries and over time by structural differences in the retailing sector, including market size, proportion of specialised stores, personnel costs, and former investment behaviour².

The individual explanatory variables and hypotheses regarding their marginal impact on FDI are the following:

(i) Market size

An indicator of market size of the retailing sector is turnover. We posit that the existence of a rapidly expanding market in the host country is an important argument for the selection of the country in which FDI takes place (Przyblyska and Malina 2000, Wendt and Pederson 2006). Therefore, increasing turnover in

² In Central and Eastern Europe the privatisation process can be considered a major factor for attracting FDI (see Section 2). Therefore we were looking for an indicator describing the degree of privatisation in the respective countries. The European Bank for Restructuring and Development (EBRD) publishes an indicator for the degree of privatisation, which ranges from 1 to 4 (with 1 a low degree of privatisation and 4 a high one). Unfortunately, in the years from 1996 to 2003, no changes over time could be observed.

the retailing sector appears to be an incentive for FDI abroad. Two different indicators are included in the analysis: the absolute turnover in the respective countries and years (*TURNOVER*) and the turnover per enterprise, i.e. the relative turnover (*TURNOVER_{rel}*). Data on turnover in the retailing and repair sector³ are contained in EUROSTAT 2007 and are measured in US\$.

(ii) Proportion of specialised shops in the retailing sector

FDI in the retailing sector in Poland is concentrated in specific store types (see Section 3). The Polish retailing sector is dominated by a large number of small and specialised shops. But non-specialised stores like supermarkets, hypermarkets or discounters capture the major share of FDI, whereas specialised stores like fruit and vegetable grocers are typically not affected. Therefore, a structural indicator is incorporated which describes this dual structure in the retailing sector. Since food products are sold either in non-specialised or specialised stores, the turnover in non-specialised stores vs. specialised stores is a structural indicator which characterises the retailing sector as more modern or more traditional. Especially in Poland, the proportion of non-specialised stores compared with specialised stores was very low in the years analysed, indicating that the retailing sector consisted mainly of specialised stores, and that it therefore follows a more traditional pattern than in other CEECs (see Table 11). In contrast, the structure of Hungarian retailing is similar to the retailing patterns in Germany and France, with a high proportion of non-specialised shops. Two different specifications of the structural indicator are taken into account in order to reflect the differential retailing sectors of the CEECs. Both indicators were computed with data from EUROSTAT 2007.

STRUCTURE1 shows the turnover in non-specialised stores in retailing which sell food and luxury articles, beverages and tobacco products (sector G5211 in the definition of EUROSTAT 2007) as a share of *TURNOVER* in specialised stores for the same category (e.g. fruit and vegetable grocers) (sector G522):

$$STRUCTURE1 = TURNOVER\ G5211 / TURNOVER\ G522. \quad (1)$$

³ Detailed figures for the retailing sector alone are not available (EUROSTAT 2007).

STRUCTURE2 reflects the fact that in Eastern Europe sales from market stalls are typical. Therefore, this indicator includes the turnover of stalls in the denominator (sector G5262):

$$STRUCTURE2 = TURNOVER\ G5211 / (TURNOVER\ G522 + G5262). \quad (2)$$

Table 11: Average Proportion of Non-specialised vs. Specialised Stores (1996-2003), Selected Countries

Country	STRUCTURE1 (%) ^{a)}	STRUCTURE2 (%) ^{a)}
Poland	3.14	2.64
Hungary	9.12	8.12
Slovakia	5.43	4.91
Czech Republic	n.a. ^{b)}	n.a. ^{b)}
Italy	3.93	3.07
Portugal	3.44	3.21
Germany	8.36	7.01
France	12.15	9.58

^{a)} The structural indicators are defined in the text. - ^{b)} Not available.

Source: Own computations with EUROSTAT 2007.

Increasing activity by foreign retailing companies in the host market raises *STRUCTURE1* and *STRUCTURE2*, as the number of non-specialised stores grows and the percentage of specialised stores declines.

Two opposing hypotheses seem plausible regarding the impact of *STRUCTURE1* or *STRUCTURE2* on FDI: first, as the number of non-specialised stores rises, the host population is becoming familiar with those store types. Consumers may increasingly value the advantages of one-stop shopping, which is what supermarkets and hypermarkets provide, and the opportunities of HiLo pricing by these store types. These trends in consumer behaviour would favour additional FDI. Another reason for the positive impact of *STRUCTURE* on FDI could be the higher proportion of the larger store types, as this means there is more potential for merger activities and for investment abroad in the host country.

Second, a negative sign seems possible, too. In the CEECs in particular, the variables *STRUCTURE1* and *STRUCTURE2* have continued to be below average. We can expect these variables to converge at a higher level across EU countries in the medium term. Therefore, it might be that FDI is attracted more to those countries where the average store size is still low and the backlog in investment is particularly high. This would be a rationale for a negative impact of *STRUCTURE* on FDI.

iii) Personnel costs

Personnel costs (*PC*) are considered to be another potential determinant of FDI in the retailing sector. The underlying hypothesis is that countries with lower personnel costs would attract more foreign direct investment from abroad as the lower factor costs are an incentive to invest in a specific location. Personnel costs in the retailing and repair sector (in mill. US\$) are defined as the total remuneration payable by an employer to an employee. It includes taxes and employees' social security contributions. The relevant data are contained in EUROSTAT 2007.

iv) Former investment behaviour

Apart from structural differences in the retailing sector, former investment behaviour is likely to influence actual decisions. As pointed out in Sections 2.1 and 3, cautious investment by foreign retailers in the initial stages of the transformation process is followed by further investment decisions as customers get used to the new retail formats, thus resulting in an increasing number of stores owned by foreign enterprises. Therefore, the stock of FDI in the previous year is included as an additional explanatory variable ($FDI_{Stock\ i,t-1}$)⁴.

As explained above, two specifications of the dependent variable FDI in the individual years and countries are used: first, the inflow of direct investment from abroad and, second, the cumulative stock of FDI, which is analysed in our case study. The reason for using the stock of FDI as a dependent variable is that investment behaviour is unlikely to be based only on contemporary

⁴ Unfortunately, the consideration of former investment behaviour as an explanatory variable reduces the number of observations.

decisions but takes into account direct investment in former years⁵. Walkenhorst (2001) argues that some initial foreign investment triggers follow-up investment in subsequent years, for example, in order to achieve a controlling share in the foreign market or company. The use of cumulative stocks of FDI is more likely to describe this kind of investment behaviour.

Based on these arguments and hypotheses, the following economic relationship is suggested:

$$FDI_{Stock\ i,t} = f(Turnover_{i,t}, Structure_{i,t}, PC_{i,t}, FDI_{Stock\ i,t-1}) \quad (3)$$

where $FDI_{Stock\ i,t}$ is the stock of foreign direct investment in country i in year t . $TURNOVER_{i,t}$, $STRUCTURE_{i,t}$ and $PC_{i,t}$ stand for the turnover in the retailing and repair sector, the proportion of specialised stores and the personnel costs in country i in year t respectively. $FDI_{Stock\ i,t-1}$ is the previous stock of foreign direct investment in country i .

Walkenhorst (2001) uses a panel model to investigate the determinants of FDI flows in the Polish food industry. Based on the geographical distance from Poland, he establishes three home country groups which invested in Poland and analyses twelve food branches. Due to limited data availability a similar Poland-specific analysis of FDI is not possible and we have selected, therefore, a cross-country dataset in which Poland is included as one of several Central and Eastern European transition countries. An econometric model is used with several dummy variables capturing the country-specific effects. The basic model is:

$$\begin{aligned} FDI_{Stock\ i,t} = & \beta_1 + \beta_2 Turnover_{i,t} + \beta_3 Structure_{i,t} + \beta_4 PC_{i,t} + \beta_5 FDI_{t-1, i,t} \\ & + \beta_6 DPOLAND + \beta_7 DHUNGARY + \beta_8 DSLOVAKIA + \beta_9 DGERMANY \\ & + \beta_{10} DFRANCE + \beta_{11} DPORTUGAL + \varepsilon_{i,t} \end{aligned} \quad (4)$$

Seven country dummies are included in equation (4), but not Italy, i.e. the benchmark country. $\varepsilon_{i,t}$ is a normally distributed error term.

⁵ The decision to use the stock of direct investment from abroad as the dependent variable is justified by the statistical analysis presented in Section 4.2. The estimation with inflows of foreign direct investment as the dependent variable has a considerably lower R^2 and less significant variables.

4.2 Empirical Results

Based on the basic econometric model explained above, very different model specifications have been estimated. The results of four multiple regression models are presented in Table 12. Models 1 to 3 take into account that the cumulative stock of foreign direct investment is more likely to describe the underlying hypotheses that initial investments were followed by additional investments in subsequent years. Consequently, the cumulative stock of FDI is used as the dependent variable. In Models 1 and 2, the FDI_{Stock} , as well as the explanatory variables turnover and former investment behaviour (FDI_{t-1} ; incorporated only in Model 1), are weighted by the GDP of the respective countries to take into account differences in country size. In Model 3 the dependent variable FDI_{Stock} is unweighted, and in Model 4 the inflow of FDI as a share of the GDP is used as the dependent variable.

The results are largely consistent with expectations. Only the variable personnel costs was statistically insignificant in all specifications. This suggests that labour costs might be less relevant in retailing than in other sectors of the economy as an explanation for the decision where to locate FDI. Hence, this variable was excluded from the estimations presented.

One important result in Table 12 is that the basic explanatory model for the FDI decision is clearly more suitable for FDI stocks than for FDI flows in the retailing sector. The corrected coefficients of determination are much higher for Models 1 to 3 than for Model 4. With the exception of four countries' dummy variables, the explanatory variables are not statistically significant in Model 4 and the adjusted \bar{R}^2 decreases from 0.98 in Model 1 to 0.47 in Model 4.

In Models 1 to 3, the structural variable $STRUCTURE2$ is significantly different from zero and has a positive sign. It is apparent that countries with an increasing share of unspecialised and large-scale retailers attract more direct investments from abroad than countries with a lower share of non-specialised shops. This result implies that FDI becomes more likely in a country when customers are already used to modern retail formats, indicating that consumers value the advantages of unspecialised and large retail stores like one-stop shopping and the regular price discounts these stores offer.

In each model where the stock of cumulative FDI is used as the dependent variable (Models 1 to 3), the coefficient for turnover is significantly different from

zero and, as expected, has a positive sign. Thus, the existence of a large and/or rapidly increasing market in the host country influences the decision where to locate FDI and attracts it to that country.

In Model 1, the positive and statistically significant coefficient for former investment behaviour implies that investment decisions are influenced by investment in previous years in the same country. Investment by foreign retailers in the early stages of the transformation process is followed by more intense investment decisions as customers get used to the new retail formats.

All coefficients of the dummy variables except for Germany and France are significantly different from zero and have a positive sign in Model 1. The interpretation of the coefficients for the dummy variables follows the procedure suggested by Halvorsen/Palmquist (1980). Among the CEECs, Slovakia is the most successful in attracting FDI in the retailing and repair sector. *Ceteris paribus*, the FDI share of GDP in Slovakia is 35.7% above the reference country Italy, followed by Poland with 19.7%. These results imply that country characteristics matter in the investment decision, too, even after taking differences in the structural indicator into account. Cultural as well as geographical proximity to the most important investing countries Germany and France might explain why Poland attracts more foreign direct investment than Hungary. The high attractiveness of Slovakia as host country for direct investment from abroad is in line with results concerning the retail transformation in CEECs reported by Dries/Reardon/Swinnen (2004). They show that Slovakia outperforms Poland and Hungary in terms of their shares of modern retail (supermarkets, hypermarkets and discount stores) and achieves more retail sales of foreign food per urban resident than Poland.

Table 12: Determinants of Foreign Direct Investment in the Retailing Sector of Eight European Countries Including Four Transition Economies, 1996-2003^{a)}

Dependent Variable	Model 1: Stock of <i>FDI</i> normalised with <i>GDP</i> (FDI_{Stock}/GDP)	Model 2: Stock of <i>FDI</i> normalised with <i>GDP</i> (FDI_{Stock}/GDP)	Model 3: Stock of <i>FDI</i> (FDI_{Stock})	Model 4: Inflows of <i>FDI</i> normalised with <i>GDP</i> (FDI_{Inflow}/GDP)
Explanatory variables				
<i>STRUCTURE2</i>	0.5659* (2.50)	1.1104*** (7.75)	0.5840* (2.81)	0.0796 (0.10)
(<i>Turnover/GDP</i>)	0.8617** (3.06)	1.3902*** (5.52)	1.3423*** (3.76)	1.1513 (0.88)
($FDI_{Stock, t-1}/GDP$)	0.3783* (2.53)		0.2318 (1.48)	
(FDI_{Inflow}/GDP)				20.6164 (0.26)
D_{Poland}	1.0892*** (3.93)	1.7040*** (12.40)	2.2762*** (3.98)	2.1333** (2.81)
$D_{Hungary}$	0.7531** (3.60)	1.0054*** (5.65)	2.5195** (3.23)	2.4296* (2.32)
$D_{Slovakia}$	1.5203*** (4.87)	2.0961*** (16.73)	4.1480** (3.39)	3.0252*** (3.53)
$D_{Germany}$	0.1866 (1.21)	0.1670 (1.02)	0.0692 (0.51)	1.3200 (1.40)
D_{France}	-0.2631 (-1.35)	-0.6273** (-3.48)	-0.3366(*) (-1.85)	0.8535 (0.77)
$D_{Portugal}$	0.8649** (3.27)	1.4644*** (10.83)	2.2997** (3.50)	1.8124* (2.60)
<i>Constant</i>	-2.3726** (-2.94)	-4.0915*** (-7.91)	-10.3680** (-3.02)	-6.0717* (-2.51)
\bar{R}^2	0.98	0.97	0.99	0.47
<i>n</i>	30	33	30	30

^{a)} Dependent and independent variables are defined in the text. In Model 3, the variables *TURNOVER* and former investment behaviour (FDI_{t-1}), as well as the dependent variable, are in absolute terms. *t*-values in parentheses. - *** (**, * (*)) statistically significant at the 99.9 %- (99 %-, 95 %-, 90 %-)level.

Source: Own computations.

5 SUMMARY AND CONCLUSIONS

Major trends in Poland's food retailing are described and analysed in this article. It has been shown that structural change in grocery retailing has been particularly rapid given the transformation from a socialist to a market economy. In the first half of the 1990s, the number of stores increased sharply due to deregulation. In particular, the number of very small stores grew and then declined again, but nevertheless remained at a much higher level than under socialism. A parallel boom occurred in the case of large retail outlets, in particular hypermarkets and supermarkets. This positive development raised the overall sales area in Poland's retailing sector and was driven by high FDI from major European food-retailing chains. Thus, the Polish food-retailing system is characterised by a dual structure of small "other shops" and the growing proportion of large store types in the style of Western Europe. This development has been accompanied by increasing concentration ratios of returns per unit of sales area.

Some findings on FDI in Poland's retailing sector are striking. FDI in food retailing as a proportion of FDI in total retailing is very high, and major investors like Metro and Tesco ranked among the top ten foreign investors in Poland. As in the case of the food trade, FDI in food retailing is almost exclusively intra-EU.

A more detailed analysis of the determinants of foreign direct investment in eight European countries – including Poland – yields several interesting results. The FDI stock in the retailing sector can be explained very well across countries and over time. As a percentage of GDP, FDI stocks are determined by the size of the retailing sector measured as a percentage of GDP, by a structural indicator of the retailing sector expressing the ratio between non-specialised and specialised stores, and by structural differences across countries. In all model specifications, the structural indicator is significantly different from zero and has a positive sign, indicating that countries with a more modern retailing structure attract more FDI than countries with a more traditional structure.

Ceteris paribus, Poland attracted more FDI – normalised with the GDP – than all other countries except Slovakia. On the other hand, the more traditional retailing structure in Poland hampered inward FDI compared with some other European Countries like Germany or France and – among the CEECs – Hungary and Slovakia.

6 REFERENCES

- Auer, S. and R. Koidl (1997), Convenience Stores – Handelsform der Zukunft. Frankfurt/Main: Deutscher Fachverlag.
- Bevan, A. A. and S. Estrin (2004), The Determinants of Foreign Direct Investment into European Transition Economies. *Journal of Comparative Economics*, Vol. 32, No. 4, pp. 775-787.
- Brainard, S. L. (1997). An Empirical Assessment of the Proximity-Concentration Trade-off Between Sales and Trade. *American Economic Review*, Vol. 87, No. 4, pp. 520-544.
- Brenton, P. (1996), The Impact of the SingleMarket on Foreign Direct Investment in the EU. Report for DGII, European Commission.
- Burt, S. (2006), Retailing in Eastern Europe – Emerging Markets within the European Union. In: J. Zenges (ed.), *Handbuch Handel. Strategien – Perspektiven – Internationaler Wettbewerb*. Wiesbaden: Gabler, pp. 139-159.
- Carstensen, K. and F. Toubal (2004), Foreign Direct Investment in Central and Eastern European Countries: A Dynamic Panel Analysis. *Journal of Comparative Economics*, Vol. 32, No. 1, pp. 3-22.
- Clausing, K.A. and C.L. Dorobantu (2005), Re-entering Europe: Does European Union Candidacy Boost Foreign Direct Investment? *Economics of Transition*, Vol. 13, No. 1, pp. 77-103.
- CSO – Central Statistical Office (various Years), *Internal Market – Information and Statistical Papers*. Warsaw: Statistical Publishing Establishment.
- Culem, C. G. (1988), The Locational Determinants of Direct Investments among Industrialized Countries. *European Economic Review*, Vol. 32, No. 4, pp. 885-904.
- Dawson, J. and J. Henley (1999), Internationalisation of Hypermarket Retailing in Poland: West European Investment and Its Implications. *Journal of East-West Business*, Vol. 5, No. 4, pp. 37-52.
- Dawson, J. and J. Henley (2002), The Internationalization of Grocery Retailing in Poland after 1989. In: M. A. Marinov (ed.), *Internationalization in Central and Eastern Europe*. Burlington: Ashgate Publishing Company, pp. 169-180.
- Disidier, A.-C. and T. Mayer (2004), How Different Is Eastern Europe? Structure and Determinants of Location Choices by French Firms in Eastern and Western Europe. *Journal of Comparative Economics*, Vol. 32, pp. 280-296.
- Dries, L., T. Reardon and J. Swinnen (2004), The Rapid Rise of Supermarkets in Central and Eastern Europe: Implications for the Agrifood Sector and Rural Development. *Development Policy Review*, Vol. 22, No. 5, pp. 525-556.
- Dunning, J. H. (1977). Trade, Location of Economic Activity and the MNE: A Search for an Eclectic Approach. In: Ohlin, B., P. O. Hesselborn and P. M. Wijkman (eds.). *The International Allocation of Economic Activity*. London: Macmillan, 395-431.

- Eaton, J. and Tamura, A. (1996), Japanese and US Exports and Investment as Conduits of Growth. NBER Working Paper 5457.
- EHI (Euro Handelsinstitut) (2006), Handel aktuell. Cologne. 2006.
- Eurostat 2007. Online access: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL (13.04.2007)
- Gorynia, M. (2002), Internationalization of a Post-Communist Economy – Opportunities and Threats: The Case of Poland. In: M. A. Marinov (ed.), Internationalization in Central and Eastern Europe. Burlington: Ashgate Publishing Company, pp. 76-104.
- Halvorsen, R. and R. Palmquist (1980), The Interpretation of Dummy Variables in Semilogarithmic Equations. American Economic Review, Vol. 70, No. 3, pp. 474-475.
- Helpman, E. (1984). A Simple Theory of Trade with Multinational Corporations. Journal of Political Economy, Vol. 92, No. 3, pp. 451-471.
- Helpman, E. and P. R. Krugman (1985). Market Structure and Foreign Trade. Cambridge, MA: MIT Press.
- International Monetary Fund, World Economic Outlook Database, September 2006. Online access: <http://www.imf.org/external/pubs/ft/weo/2006/02/data/index.aspx> (12.04.2007)
- LZ|Net (2006a), Lekkerland übernimmt Milo. Online access: <http://www.lz-net.de/archiv/lznet/mylznet/pages/show.prl?params=keyword%3D%26all%3D%26type%3D%26where%3D%26suchid%3D270132%26quelle%3D1%26laufzeit%3D&id=50882&currPage=1> (25.06.2007)
- LZ|Net (2006b), Top 20 Handel Polen. Online access: <http://www.lz-net.de/rankings/handeleuropa/pages/show.prl?id=186> (10.01.2007)
- Markusen, J. R. (1984). Multinationals, Multi-Plant Economies and the Gains from Trade. Journal of International Economics, Vol. 16, No. 3/4, pp. 205-226.
- Markusen, J. (1998), Multinational Firms, Location and Trade. The World Economy, Vol. 21, No. 6, pp.733-756.
- Markusen, J.R. and Venables, A.J. (1995), Multinational Firms and the New Trade Theory. NBER Working Paper 5036.
- Markusen, J.R. and Venables, A.J. (1996), The Theory of Endowment, Intra-Industry and Multinational Trade. CEPR Discussion Paper N. 1341, February.
- OECD (2003), International Direct Investment Statistics Yearbook 1991-2002.
- OECD (2004), International Direct Investment Statistics Yearbook 1992-2003.
- PA|i|Z – Polish Information & Foreign Investment Agency (2005), The List of Major Foreign Investors in Poland. Warsaw.

- Przybylska, K. and A. Malina (2000), The Determinants of Foreign Direct Investment in Transforming Economies: Empirical Evidence From Poland. *Statistics in Transition*, Vol. 4, No. 5, pp. 883-899.
- Reardon, T. and J. Swinnen (2004), Agrifood Sector Liberalisation and Rise of the Supermarkets in Former State-controlled Economies: A Comparative Overview. *Development Policy Review*, Vol. 22, No. 5, pp. 515-523.
- Slawinska, M. and M. Malkowska-Borowczyk (2006), Methodik der Messung des Wettbewerbsvorteils von Einzelhandelsunternehmen auf dem polnischen Markt. *Handelsforschung*, Vol. 20, pp. 183-198.
- Ullmann, H. (2006), Die Situation des Einzelhandels in Polen. *Osteuropa-Wirtschaft*, Vol. 51, No. 1 pp. 17-29.
- Walkenhorst, P. (2001), Determinants of Foreign Direct Investment in the Food Industry: The Case of Poland. *Agribusiness*, Vol. 17, No. 3, pp. 383-395.
- Wendt, M. and G. Pederson (2006), Foreign Direct Investment in the Food Manufacturing Industry. The Food Industry Center, University of Minnesota, Minnesota. http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=24941 (11.10.2007)
- Wheeler, D. and A. Mody (1992), International Investment Location Decisions. The Case of US Firms. *Journal of International Economics*, Vol. 33, No. 1/2, pp. 57-76.
- Witkowska, J. (2007), Foreign Direct Investment in the Changing Business Environment of the European Union's New Member States. *Global Economy Journal*, Vol. 7, No. 4, Art. 2, pp .

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