

# **FOREIGN DIRECT INVESTMENT INTO INFRASTRUCTURE:**

**Analysis of determinants and modes of market entry**

—

**Empirical study of Poland during the  
transformation process 1989-2003**

vorgelegt von  
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**TABLE OF CONTENT**

<b>I. DECLARATION OF ORIGINALITY .....</b>	<b>5</b>
<b>II. ACKNOWLEDGEMENT .....</b>	<b>6</b>
<b>III. LIST OF ABBREVIATIONS.....</b>	<b>7</b>
<b>1 INTRODUCTION.....</b>	<b>9</b>
<b>2 HYPOTHESIS .....</b>	<b>11</b>
<b>3 THEORETICAL BASIS FOR THE RESEARCH.....</b>	<b>14</b>
3.1 FOREIGN DIRECT INVESTMENT.....	14
3.1.1 FDI Definition.....	14
3.1.2 Development of the FDI Theory.....	16
3.1.3 FDI Determinants .....	18
3.1.4 Motives of FDI.....	20
3.1.5 Modes of Market Entry.....	22
3.2 PROJECT FINANCE.....	24
3.2.1 Project Finance Definition .....	24
3.2.2 Comparison of Project Finance and Foreign Direct Investment .....	25
3.3 INFRASTRUCTURE .....	26
3.3.1 Infrastructure Definitions .....	26
3.3.2 Infrastructure Definition Applied for this Research .....	27
3.3.3 Specifics of the Chosen Infrastructure Sectors .....	29
3.4 POLAND.....	29
3.4.1 General Overview .....	29
3.4.2 Sector Overview.....	34
<b>4 DATA COLLECTION AND PREPARATION.....</b>	<b>38</b>
4.1 CRITERIA FOR FDI ANALYSIS .....	38
4.1.1 FDI Determinants .....	38
4.1.2 Modes of Market Entry .....	39
4.2 PAIiZ STATISTICS.....	40
4.2.1 Limitations of the PAIiZ Statistics .....	40
4.2.2 Other Limiting Aspects of the PAIiZ Statistics .....	42
4.2.3 Establishment of Company List.....	43
4.3 QUESTIONNAIRE.....	44
4.3.1 Market Research Theory .....	44
4.3.2 General Structure of the Created Questionnaire.....	48
<b>5 DATA ANALYSIS.....</b>	<b>52</b>
5.1 ANALYSIS OF QUESTIONNAIRE RETURN .....	52
5.2 NEW STATISTICS .....	53
5.2.1 Preparation Method.....	54
5.2.2 Comparison of the PAIiZ Statistics and the New Statistics .....	57
5.3 ANALYSIS OF FDI DETERMINANTS AND COMPANY FORMS.....	71
5.3.1 Criteria for Market Entry (Section A of the General Part of the Questionnaire).....	73
5.3.2 Market Entry Related Constraints (Section B of the General Part of the Questionnaire) .....	82
5.3.3 Mode of Market Entry (Section C of the General Part of the Questionnaire).....	93
<b>6 CONCLUSIONS.....</b>	<b>103</b>
<b>7 BIBLIOGRAPHY.....</b>	<b>110</b>
<b>8 ATTACHMENTS.....</b>	<b>122</b>

**FIGURES**

Figure 1:	Forms of Direct Investment Enterprises .....	15
Figure 2:	FDI In- and Outflow According to the IDP Theory.....	17
Figure 3:	Comparison of the OECD and PAIiZ Classifications of Business Activities .....	28
Figure 4:	Number of Foreign Direct Investors Before and After the Adaptation .....	43
Figure 5:	Market Research Methods .....	45
Figure 6:	Questionnaire and Question Types .....	47
Figure 7:	Overview of the Questionnaire's General Structure .....	49
Figure 8:	Summary of the Questionnaire's Structure .....	51
Figure 9:	Methodology for Listing Foreign Direct Investors' Names.....	54
Figure 10:	Relationship Between the Original, Non-amended, Amended and New Statistics .....	55
Figure 11:	Number of Foreign Direct Investors in the New and Amended PAIiZ Statistics.....	59
Figure 12:	Year when Majority of Foreign Direct Investors were in the Infrastructure Market.....	60
Figure 13:	All Sector Total FDI Stock for the New and Amended PAIiZ Statistics .....	63
Figure 14:	Sector FDI Stock for the New and Amended PAIiZ Statistics (in million USD) .....	65
Figure 15:	Doubled and Tenfold FDI Stock Based on New Statistics .....	66
Figure 16:	Comparison of FDI Stock Data from Various Sources.....	67
Figure 17:	Comparison of FDI Stock Growth Rates (1996 as base year) .....	68
Figure 18:	Investment Size per Company for Each Sector (in million USD) .....	69
Figure 19:	Section A - Thematic Blocks - Mean Values.....	73
Figure 20:	Section A- Single Determinants - Mean Values .....	76
Figure 21:	Section B - Thematic Blocks - Mean Values.....	83
Figure 22:	Section B - Single Determinants - Mean Values .....	86
Figure 23:	Section C - Thematic Blocks - Mean Values.....	94
Figure 24:	Section C - Single Determinants - Mean Values .....	96
Figure 25:	Number of Company Forms in the Infrastructure Sector Between 1989 and 2003 .....	98

**TABLES**

Table 1:	Inflation Rate and Real GDP Growth Rate Between 1989 and 2003 .....	32
Table 2:	Selection of Main Laws and Regulations .....	33
Table 3:	FDI Inflow Figures from Different Sources (in million USD) .....	34
Table 4:	Selected FDI Determinants .....	38
Table 5:	Reasons for a Particular Mode of Market Entry .....	39
Table 6:	Number of Contacted Companies and Received Answers .....	52
Table 7:	Calculations for the Kolmogorov-Smirnov-Test .....	53
Table 8:	Summary of Applied Methods to Prepare and Present the Collected Data .....	57
Table 9:	Market Share Ratio of the New Statistics .....	58
Table 10:	Year of the Highest Increase in Number of Foreign Direct Investors per Sector .....	60
Table 11:	Average Difference and Average Ratio in the Number of Foreign Direct Investors.....	61
Table 12:	Average Difference in the Investment Stock and Average Investment Stock Ratio .....	64
Table 13:	Section A - Most and Least Important Thematic Blocks.....	79
Table 14:	Section A - Most and Least Important Single Determinants .....	81
Table 15:	Section B - Most and Least Important Thematic Blocks .....	89
Table 16:	Section B - Most and Least Important Single Constraints .....	91
Table 17:	Section C - Most and Least Important Thematic Blocks .....	99
Table 18:	Section C - Most and Least Important Single Determinants .....	101
Table 19:	Summary of FDI determinants.....	109

**ATTACHMENTS**

Attachment 1:	Business Classifications.....	122
Attachment 2:	PAIiIZ Business Classifications.....	123
Attachment 3:	Overview of Regulations and Events.....	125
Attachment 4:	Sector List of Selected and Excluded Foreign Direct Investors.....	138
Attachment 5:	Exemplary Questionnaire.....	142
Attachment 6:	Letter of support from the Polish Embassy.....	147
Attachment 7:	Thematic Blocks and their Respective Questions.....	148
Attachment 8:	Companies who have answered the questionnaire.....	151
Attachment 9:	Market Entry - New Statistics versus Amended PAIiIZ statistics .....	152
Attachment 11:	New Statistics in Detail .....	161
Attachment 11:	Section A - Mean Values over Time .....	175
Attachment 12:	Section A - Mean Values by Company Form.....	178
Attachment 14:	Section B - Mean Values over Time.....	181
Attachment 15:	Section B - Mean Values by Company Form.....	184
Attachment 16:	Section C - Mean Values over Time.....	187
Attachment 17:	Section C - Mean Values by Company Form.....	190

## **I. Declaration of originality**

I, Julia Kowalle, being a candidate for a PhD in Economics from the Technical University Berlin, Germany, declare that this dissertation and the work described in it are my own work. The dissertation does not contain any material that has already been used to any substantial extent for a comparable purpose

Julia Kowalle  
London, 2008

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Julia Kowalle  
London, 2008

### III. List of Abbreviations

• AGBG	Allgemeines Bürgerliches Gesetzbuch
• AIG	American International Group
• AMO	Anti-Monopoly Office
• BGB	Bürgerliches Gesetzbuch (German Civil Code)
• BGZ	Bank Gospodarki Żywnosciowej
• BNP	Banque Nationale de Paris
• BOC	British Oxygen Corporation
• BOS	Bank Ochrony Środowiska
• BOT	Build-Operate-Transfer
• BTC	Bałtycki Kontenerowy Terminal
• BPH	Bank Przemysłowo-Handlowy
• BRE	Bank Rozwoju Eksportu
• BTUİR	Bankowe Towarzystwo Ubezpieczeń i Reasekuracji
• BWR	Bank Współpracy Regionalnej
• CEE	Central and Eastern Europe
• CEEC	Central and Eastern European Countries
• CEFTA	Central European Free Trade Area
• CENTREL	Central European Electricity Network
• CMEA	Council for Mutual Economic Assistance
• CoCOM	Coordinating Committee on Multilateral Export Controls
• DEC	Dyrekcja Eksploatacji Cystern
• DIW	Deutsches Institut für Wirtschaftsforschung (German Institute for Economic Research)
• DLD	Domestic long-distance
• EA	Europe Agreement
• EAC	European Activity Classification
• EBRD	European Bank for Reconstruction and Development
• EFL	Europejski Fundusz Leasingowy
• EFTA	European Free Trade Association
• EnBW	Energie Baden-Württemberg
• EU	European Union
• FDI	Foreign Direct Investment
• FPI	Foreign Portfolio Investment
• GDP	Gross Domestic Product
• GE	General Electric
• GINB	General Inspectorate of Banking Supervision
• GLS	General Logistics Systems
• HVB	Bayerische Hypo- und Vereinsbank AG
• IDP	Investment Development Path
• ITA	Information Technology Agreement
• ILD	International long-distance
• IMF	International Monetary Fund
• KIR	Krajowa Izba Rozliczeniowa (National Clearing House)
• KNUiFE	Komisja Nadzoru Ubezpieczeń i Funduszy Emerytalnych (Insurance and Pension Funds Supervisory Commission)
• KU	Korporacja Ubezpieczeniowa
• M&A	Merger & Acquisition
• MEAG	Mitteldeutsche Energieversorgungs AG
• MPP	Mass Privatisation Programme
• MTU	Moje Towarzystwo Ubezpieczeniowe

• NATO	North Atlantic Treaty Organisation
• NBP	Narodowy Bank Polski (National Bank of Poland)
• NIF	National Investment Fund
• O&M Contract	Operation and Management Contract
• OECD	Organisation for Economic Cooperation and Development
• OLI	Ownership, Location and Internalisation
• PAIiIZ	Polish Information and Foreign Investment Agency (Polska Agencja Informacji i Inwestycji Zagranicznych S.A.)
• PAIZ	See PAIiIZ
• PAR	Państwowa Agencja Radiowa (State Radio Communications Agency)
• PBK	Powszechny Bank Kredytowy
• PCA	Polish Classification of Activities
• PCBC	Polskie Centrum Badań i Certyfikacji (Polish Testing and Certification Centre)
• PITiP	Państwowa Inspekcja Telekomunikacji i Poczty (State Inspectorate for Posts and Telecommunications)
• PIU	Polska Izba Ubezpieczeń (Polish Chamber of Insurance)
• PKP	Polskie Koleje Państwowe (Polish State Railway)
• PPA	Pierwszy Polsko-Amerykański
• PPP	Program Powszechnej Prywatyzacji (Mass Privatisation Programme)
• PPTT	Polska Poczta Telegraf i Telefon (Polish Post, Telegraph and Telephone)
• PSE	Polskie Sieci Elektroenergetyczne (Polish Power Grid company)
• PTE	Powszechne Towarzystwo Emerytalne (General Pension Company)
• PUNU	Państwowego Urzędu Nadzoru Ubezpieczeń (State Insurance Supervisory Authority)
• PZU	Państwowy Zakład Ubezpieczeń
• S.A.	Spółka Akcyjna (Joint Stock Corporation)
• SEB	Skandinaviska Enskilda Banken
• SEZ	Special Economic Zone
• SNET	Société Nationale D'Electricité et de Thermique
• Sp z o.o.	Spółka z ograniczoną odpowiedzialnością (Limited Liability Company)
• SPV	Special Purpose Vehicle
• TGE	Towarowa Giełda Energi (Electric Energy Exchange)
• TP	Telekomunikacja Polska
• TRIPS	Trade-Related Aspects of Intellectual Property Rights
• TU	Towarzystwo Ubezpieczeń
• UCPTE	Union for the Coordination of Production and Transmission of Electricity
• UFG	Urząd Funduszu Gwarancyjnego (Insurance Guarantee Fund)
• UNCTAD	United Nations Conference on Trade and Development
• UNFE	Urząd Nadzoru nad Funduszami Emerytalnymi (Superintendency of Pension Funds)
• URT	Urząd Regulacji Telekomunikacji (Telecommunication Regulatory Office)
• URTiP	Urząd Regulacji Telekomunikacji i Poczty (Telecommunications and Mail Regulation Office)
• UTK	Urząd Transportu Kolejowego (Railway Transport Office)
• VAT	Value-added tax
• WARSET	Warsaw Stock Exchange Trading System
• WBK	Wielkopolski Bank Kredytowy
• WBR	Wielkopolski Bank Rolniczy
• WSE	Warsaw Stock Exchange
• WTO	World Trade Organisation



## 1 Introduction

Over the last couple of decades Foreign Direct Investment (FDI) has become an essential part of the development of countries worldwide. The effect of globalisation and the dependence of countries on these investments have had a substantial impact on the volume and importance of FDI.

For countries to enlarge and improve their economic base governments aim to convince and encourage foreign direct investors to enter their economy and to invest there. Some countries are more successful than others, and for economists it became of interest to analyse the criteria and modes of market entry for foreign direct investors. The economists came up with a quite general definition which provides a broad explanation for FDI.

As the business sectors of an economy are quite diverse, it was thought to be of interest to analyse whether sector specific reasons for Foreign Direct Investments could be found. Furthermore it was intended to see whether the criteria and chosen mode of market entry are stable over time or whether they are influenced by a country's development.

For the purpose of this analysis, it was considered that it would be appropriate to choose an Eastern European country as such countries have recently undergone a fairly rapid transition. Poland was chosen because of its reputation as a role model in Eastern Europe. Due to its perception as a country able to embrace economic, political and social change, foreign direct investors were keen to invest in such a relatively stable country, knowing that the risks of unexpected events occurring were low.

Within a few years, from 1989 to 2003, the transition was implemented in Poland. For the purpose of this study the entire time frame has been taken into consideration.

As it would not have been possible to analyse every business sector, it was decided to focus on five distinct business sectors, labelled as infrastructure sectors. The chosen sectors were banking, insurance, telecommunications, logistics and power.

The thesis consists of eight chapters. The chapter following the introduction and hypothesis presents the general features of Foreign Direct Investment that are of importance for this study such as FDI determinants, FDI motives and modes of market entry. Additionally an explanation of the infrastructure definition applied for this research and an overview of Poland's development in general and in the chosen infrastructure sectors in particular is provided, establishing the basis for data analysis and interpretation.

The focus of the following chapter is the establishment of the basis for the data collection. The chapter presents FDI encouraging and FDI preventing criteria as well as the modes of market entry chosen for further analysis. Even though efforts are made to unify FDI data and the basis of data extraction, the FDI data available for Poland is still quite different. In this chapter the downsides of the existing statistics are presented, and as it became necessary to establish a data basis for the five chosen sectors that would allow drawing unambiguous conclusions for the infrastructure sector, the modes of data collection are explained. The method for gathering information that was considered to be appropriate was the questionnaire. Company specific questionnaires were compiled and these individually-

tailored questionnaires were then sent out to the 169 identified foreign direct investors being active in the infrastructure sectors.

The method of analysis and results of this research are presented in chapter number five and conclusions are drawn. This chapter is therefore a fundamental part of the research. Newly created statistics that present FDI in more homogeneous detail are introduced and compared with existing statistics. It is pointed out that the created statistics are an extension and improvement of the existing statistics. Chapter number five also features which FDI criteria and modes of market entry in accordance with the answered questionnaires had been predominant in the chosen sectors and whether time and/or business sector related variations could be seen.

Before presenting the bibliography and attachments, in chapter six the results are summarised and conclusions concerning FDI in the Polish infrastructure sector during the transformation process and general conclusions about FDI into infrastructure are drawn. The attachments contain extensive additional material that had been used for the analysis.

## 2 Hypothesis

One of the most powerful tools for the development of a country's economy is Foreign Direct Investment (FDI). Up to now, different approaches describing FDI exist. The aim of this study is to analyse FDI data in the infrastructure sector in order to draw conclusions about the FDI mechanism.

The theory of FDI is not concerned with distinguishing between different business sectors and is therefore quite general when it comes to the definition of determinants that have an impact on the investment decisions made by the foreign direct investor. This is not very satisfactory if one wants to understand why the FDI stream into one business sector of a country is greater than the flow into another.

So far, the majority of the FDI research has focused solely on one particular determinant, or group of determinants, but no analysis has been done so far to distinguish determinants for business sectors and thus to refine the FDI definition on that basis.

The aim of this research is to analyse whether sector specific determinants for FDI exist. Different sectors have different needs and it is therefore assumed that for each business sector particular criteria are more important than for other sectors and that these criteria are crucial for the investors in that sector.

If the above assumption is correct then it would mean that the investment flows for different sectors in one economy will generally be inhomogeneous, as the criteria would not have the same impact on each sector. Indeed, it might sometimes even have an opposite impact. In order to enhance the investment flow into one particular sector the investment criteria for this sector would need to be identified and strengthened.

The FDI definition also lists several modes of market entry and explains under what conditions it is most likely that the investor will choose a particular mode of market entry. No real link between the mode of market entry and the FDI determinants is currently shown which gives the impression that there is no dependency. It is assumed that the FDI criteria are dependant from the mode of market entry, i.e. the mode of market entry has an impact on the importance of FDI determinants in each sector. The research will therefore also analyse whether links between certain FDI determinants and modes of market entry can be drawn. Additionally, the study will investigate the reasons for the foreign direct investor's choice of market entry mode.

Assuming that the above statements are correct, it would mean that if a country wants to attract investments into a particular sector it would need to concentrate on the sector specific determinants and the determinant-enhancing respective mode of market entry.

This study intends to analyse the above assumptions by focusing on one business sector, which is the infrastructure sector. This sector includes banking, insurance, telecommunications, logistics and power as sub-sectors.

The infrastructure sector has been chosen because most of the studies so far have focused either on the economy in general, or on the manufacturing sector, which is the sector that usually attracts the highest amount of FDI. Thus, quite often it could be seen that

determinants such as costs, cultural barriers and the level of corruption were named as being of high importance. It is assumed that these criteria might be less important for the infrastructure sector as the dynamics in that sector are different.

The infrastructure sector also appears to be worthy of analysis because this sector is crucial for all other business sectors in a country and is also more dependant on a country's policy. Usually governments tend to be very protective when it comes to the infrastructure sector while they are more open for other business sectors.

Previously there have been no studies that analyse the FDI determinants over a period of time and through different phases of the economic development. Thus, the FDI definition is not really making statements about the stability of determinants and modes of market entry. However, it is assumed that certain determinants will only be important under certain economic and political conditions, which would mean that there is a dependency between FDI determinants, the mode of market entry and a country's situation.

To analyse the above assumptions using an Eastern European country appears to be the best approach. In this study the aim has been to analyse whether the criteria for FDI are stable over time or whether they will be adjusted to the respective situation of a country. Eastern European countries have been deemed most suitable for the intended analysis as within a short period of time their entire economic, social and political system was replaced. If determinants, and thus the mode of market entry, are dependent on the market situation this should be clearly visible.

Poland was not only chosen because of its exemplary approach to and realisation of the transformation process but also because of its success in comparison to other Central and Eastern European countries in attracting a large number of foreign direct investors. This means that Poland had some attributes which were of interest to foreign direct investors. The aim of this paper was to see whether these characteristics could be detected in the investor's choice of determinants and modes of market entry.

The time frame 1989 to 2003 was chosen for this analysis as this period covered the entire transformation process, i.e. from its beginning in 1989 until Poland's joining of the European Union in 2004. If FDI determinants or the modes of market entry are linked to the country's economy, this should be identifiable.

The choice of transformation process strengthened the intention to focus on the infrastructure sector as this sector was of main concern for the countries in Eastern Europe. It was considered that the transformation process would only be successful if the establishment of a functioning infrastructure sector could be achieved.

To summarise the above, the main questions that the research has focused on are:

- Are there sector specific determinants for and against an investment made by a foreign direct investor?
- Are FDI determinants stable over time or do they adapt to the country's situation?
- Is there a link between FDI determinants and the mode of market entry?
- Are the reasons to choose a particular mode of market entry unique?

With the help of above questions it is intended to provide more clarity about the relevance of the business sector on the flow of FDI. If the five chosen infrastructure sectors show sector specific results, then it can be concluded that for all other sectors, sector specifics should exist. A refining of the FDI definition with respect to the individual infrastructure sectors should then be possible.

### 3 Theoretical basis for the research

#### 3.1 Foreign Direct Investment

The purpose of this chapter is to provide a brief overview and background of the term “Foreign Direct Investment” as used for this research, to explain the theory's development over the last decades, and to present specific features (i.e. determinants and forms) of Foreign Direct Investment that will be analysed.

##### 3.1.1 FDI Definition

Foreign Direct Investment (FDI) is defined as an investment made by an entity (“the direct investor”) in an economy other than its own. FDI is characterised by the fact that the foreign direct investor has a significant degree of influence and control in the management of the project invested (“the direct investment enterprise”). Furthermore, FDI involves a long-term relationship<sup>1</sup>, which reflects the foreign investor's lasting interest in the investment.<sup>2</sup>

FDI is part of the company's strategy and is therefore considered to be more stable than other capital flows as the investment is a long-term commitment and the determinants of FDI (see section 3.1.3) are less likely to change quickly.

If this definition is correct then transition specific determinants are unlikely as the transformation of a country would require that the investors adjust the determinants accordingly over time.

According to the OECD<sup>3</sup> (1996), the term “the direct investor” refers to either “an individual, an incorporated or unincorporated private or public enterprise, a government, a group of related individuals, or a group of related incorporated and/or unincorporated enterprises which has a direct investment enterprise”.<sup>4</sup>

“The direct investment enterprise” can be a subsidiary, associate or branch and thus will either be incorporated or unincorporated.<sup>5</sup> The differences and specifics of the direct investment enterprise forms are summarised in the graphic below:

---

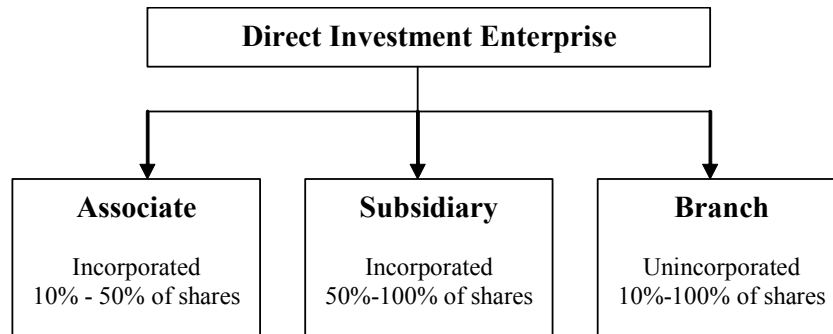
<sup>1</sup> This is due to the fact that FDI requires the establishment or acquisition of production facilities which are connected with high sunk costs (for a definition of sunk costs see Woll [2000]: page 443). These facilities, in general, cannot be sold easily and/or are linked to the company's overall production process. A quick market withdrawal of the foreign investor is therefore quite unlikely. (United Nations [1998]: page 14 ff., WTO [1999]: page 276 ff.)

<sup>2</sup> Source of information: Cluse [1999]: page 10 ff., EU Global Player [2004]: page 166 ff., OECD [1996, 2003a]: page 7, Reisen [1999]: page 166 ff., Wong and Adams [2002]: page 2 ff.

<sup>3</sup> OECD – Organisation for Economic Cooperation and Development.

<sup>4</sup> Source of information: Duce [2003]: page 3, OECD [1996, 2003a]: pp. 6-10.

<sup>5</sup> Source of information: Adam [1991]: page 36 ff., Duce [2003]: page 3, Falzoni [2000]: page 4.

**Figure 1: Forms of Direct Investment Enterprises**

Source: own presentation

Even though countries are not legally obliged, it is broadly accepted to apply the OECD's and IMF's<sup>6</sup> recommended benchmark of 10% of voting stock of the direct investment enterprise as a guideline in order to distinguish between FDI and FPI (Foreign Portfolio Investment)<sup>7</sup>. The acquisition of 10% or more of a company's capital stock is considered to demonstrate the investor's aim of gaining a lasting interest in that enterprise and is therefore representing FDI, while the acquisition of less than 10% is regarded as FPI.<sup>8</sup>

FDI involves the initial capital transaction as well as all subsequent transactions between the direct investor and the investment. The foreign direct investor's choice of FDI flow for the investment is strongly influenced by expectations about the development on the international financial market (e.g. exchange and interest rates). FDI flows consist of three components:

- Reinvested earnings – direct investor's share of earnings that have not been distributed.
- Equity capital – comprises equity in branches, shares in subsidiaries and associates, and other capital contributions (e.g. provisions of machinery).
- Capital (transfer) associated with inter-company debt transactions – this includes, among others, debt securities and trade credits between the direct investors and the affiliate enterprise.<sup>9</sup>

Other ways to finance the investment (e.g. local borrowing, local issuance of shares) do not belong to FDI.<sup>10</sup>

<sup>6</sup> IMF – International Monetary Fund.

<sup>7</sup> The term foreign investment is divided into two different forms: Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). One of the first researchers to distinguish between FDI and FPI was Hymer (in 1960). In contrast with FDI, FPI is characterised by the acquisition of financial assets (bonds, stock, and currencies) in order to have profit opportunities. In general, financial institutions, institutional investors (e.g. pension funds), and/or individuals belong to the group of portfolio investors. (Éltető [2000]: page 10 ff., OECD [1996, 2003a]: page 8, WTO [1999]: page 276 ff.)

<sup>8</sup> Source of information: Borrmann, [2003]: page 12, Éltető [2000]: page 10, Mooji and Ederveen [2001]: page 3, OECD [1996, 2003a]: page 8, OECD [2003b]: page 157.

<sup>9</sup> Source of information: 4manager [2004], Cluse [1999]: page 10 ff., Digitale Bibliothek der Friedrich Ebert Stiftung [2004], Duce [2003]: page 5, EU Global Player [2004]: page 166 ff., OECD [2003b]: page 157, Picciotto [2003]: page 3 ff.

<sup>10</sup> For further information and distinctions about investments that are not considered to belong to FDI please see OECD [1996, 2003a]: page 20.

### 3.1.2 Development of the FDI Theory

Originally, the FDI theory had been part of the “Classical Investment Theory”<sup>11</sup> and the “International Capital Movement Theory”<sup>12</sup>. By the end of the 1950s the worldwide importance and amount of the FDI increased, thus more specific explanations and scientific foundations for this phenomenon needed to be found.<sup>13</sup>

Most of the early theories (e.g. “Portfolio Hypothesis”<sup>14</sup>) either could not be approved empirically or could not explain all forms<sup>15</sup> of FDI and it soon became obvious that, due to the complexity of FDI, it would be difficult to find a single theory that would fully explain the FDI phenomenon.<sup>16</sup> Other theories that were often applied are the “Product Life Cycle Theory”<sup>17</sup> developed by Vernon in 1966, Hymer’s “Monopolistic Advantage Theory” (1976)<sup>18</sup> and the “Internalization Theory”<sup>19, 20</sup>.

These theories do not compete with each other but focus on different aspects of FDI.

One of the mostly accepted theories to explain FDI is Dunning’s “Eclectic Paradigm Theory” from 1977, also known as the “OLI-Theorem”<sup>21</sup>. This theory combines several earlier FDI theories creating a broad basis to explain FDI.

Dunning’s theory defines three determinants as prerequisites for FDI:

- i) **Ownership specific advantages** (e.g. technological or organisational knowledge),
- ii) **Location specific advantages** (e.g. market size, labour costs abroad) and
- iii) **Internalisation advantages** (e.g. the existence of market imperfections such as negotiation costs).

The interaction between these three criteria influences the amount and form of FDI.<sup>22</sup>

<sup>11</sup> The “Classical Investment Theory” defines when an investment can be considered as profitable. The traditional way to evaluate an investment is the net present value method, whereby the future income payments are discounted by using a rate that is reflecting the investment risk. This method stems from Irving Fisher’s “The Theory of Interest” in 1930. (for further information, please see Eatwell et al [2001b]: page 369 ff.)

<sup>12</sup> For further information about Bertil Ohlin’s (1951) and James Edward Meade’s (1993) works on the Theory of International Trade and International Capital Movements see Eatwell et al [2001c]: page 410 f.

<sup>13</sup> Source of information: Cluse [1999]: page 51 ff., Éltetõ [2000]: page 10 ff., Mooji and Ederveen [2001]: page 4.

<sup>14</sup> The theory is based on Tobin’s and Markowitz’s “Theory of Portfolio Selection”. According to this theory FDI is the result of the company’s attempt to diversify its risk and to generate more return. (Cluse [1999]: page 52, Eatwell et al [2001c]: page 633 ff., Woll [2000]: page 552 f.)

<sup>15</sup> The different motives of FDI and modes of market entry will be explained further below in chapters 3.1.4 and 3.1.5.

<sup>16</sup> Source of information: Cluse [1999]: page 51 ff., Éltetõ [2000]: page 10 ff., Mooji and Ederveen [2001]: page 4.

<sup>17</sup> Vernon’s theory compares product moves to lower income countries with the concept of the “Product Cycle Theory”. The theory states that FDI flows to developed countries for innovation. Once the products have evolved from being innovative to being mass-produced, they move away from developed countries. (Beyfuss and Eggert [2000]: page 19, Cluse [1999]: page 59 ff., Eatwell et al [2001d]: page 806 ff.)

<sup>18</sup> The theory explains that companies invest abroad because they possess an advantage which enables them to gain an advantageous market position. (Cluse [1999]: page 59 ff.)

<sup>19</sup> The “Internalisation Theory” is based on the Coase and Williamson theorems (further information can be found in May und May [2001]). The theory’s fundamental statement is based on market inefficiency, i.e. companies will chose FDI when markets for supplies, production, or distribution fail to provide efficiency. (Cluse [1999]: page 56 ff.)

<sup>20</sup> Source of information: Cluse [1999]: page 51 ff., Éltetõ [2000]: page 10 ff., Mooji and Ederveen [2001]: page 4.

<sup>21</sup> OLI stands for **O**wnership, **L**ocation and **I**nternalisation.

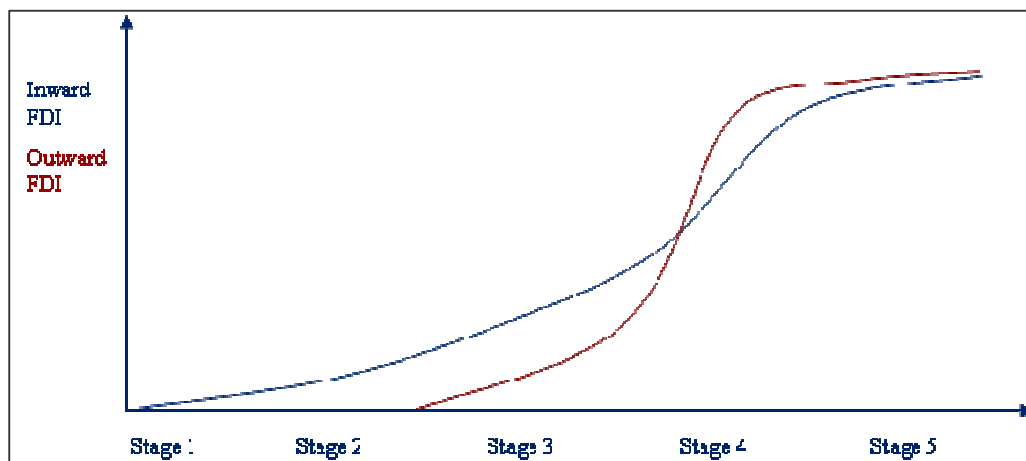


With reference to the “Eclectic Paradigm Theory”, Dunning also introduced the “Investment Development Path Theory” (IDP Theory). The IDP Theory states that FDI flows, which are influenced by the country's situation, change over time in accordance with the country's development. Dunning distinguishes between five development stages. These are only indicative and vary from country to country:

- Stage 1 is characterised by insignificant FDI flows as a result of the market either being small and undeveloped, or showing inappropriate infrastructure levels, etc. This development stage is often equated with a pre-industrialized economy.
- At Stage 2, the country is already able to attract an increase in FDI inflow as some country (or location) specific advantages could be established.
- Stage 3 is reached, when domestic companies have been able to establish and strengthen their ownership advantages, and thus start to increase their outward investments.
- Stage 4 is a further increase in outward FDI which will eventually be much higher than the FDI inflow.
- At Stage 5 the inward and outward FDI flows are approximately in balance, however both flows continue to increase but on a slower pace than before.

Figure 2 summarises the five different stages of the IDP Theory.

**Figure 2: FDI In- and Outflow According to the IDP Theory**



Source: own presentation

Developed countries are said to belong to Stage 5 while emerging markets start from Stage 1 or Stage 2.<sup>23</sup>

Dunning's “Eclectic Paradigm Theory” did not conclude the analysis and development of FDI theories. In fact, many new theories, such as the Evolutionary Perspective<sup>24</sup> of FDI have been developed, but the OLI–Theorem represents the basis for all of them.

<sup>22</sup> Source of information: Beyfuss and Eggert [2000]: page 19, Carstensen and Toubal [2003]: page 4, Cluse [1999]: page 51 ff., Döhrn und Heiduk [1999]: page 45 f., Dunning and Narula [1998]: page 12, Éltetõ [2000]: page 10 ff., Günther [2002]: page 7 ff., Markusen [1998]: page 5 ff., Mooji and Ederveen [2001]: page 4, Narula [1996]: page 12, United Nations [1998]: page 89.

<sup>23</sup> Source of information: Buckley and Castro [1998]: page 1 ff., Dunning and Narula [1998]: page 12.

### 3.1.3 FDI Determinants

The possibility to analyse FDI determinants is manifold. The number of determinants is “uncountable”, because location factors, economic, political and social circumstances as well as historic events have an impact.<sup>25</sup>

Researchers such as Ioannatos (2003), Markusen (1998), Mueller (2000), Witkowska (1994) and Zschiedrich (2001) have shown that the FDI stock and FDI flows are driven by several factors<sup>26</sup>. In their research they mainly focused on one particular aspect of the FDI determinants.<sup>27</sup>

Due to the multitude of determinants there exist several different approaches to determine and distinguish FDI criteria. Some approaches look at individual determinants, while others apply classifications. A selection of the most frequently applied classifications<sup>28</sup> is shown below:

- i. Traditional and Transition<sup>29</sup>-Specific Determinants,
- ii. Economic, Policy and Business Pro-active Determinants,
- iii. Economic, Social and Political Determinants,
- iv. Push- and Pull-factors, and
- v. Demand-side and Supply-side Determinants.

Among others Carstensen (1998) distinguished between traditional and transition-specific FDI determinants. Market size, trade costs, plant and firm specific costs as well as relative factor endowments<sup>30</sup> are regarded as traditional determinants, while the method of privatisation, country risk and the share of private businesses are considered to belong to the group of transition-specific determinants. In her paper Witkowska (1994) listed determinants (e.g. integration into world economy, organisation of a modern banking system) for the transformation process which themselves can also be classified as transition-specific FDI determinants. According to Schulz (1997) from the DIW<sup>31</sup>, market growth and cheap production and labour costs are considered to be transition specific FDI determinants. Narula (1996) stated that with the country's move towards an industrialised and market oriented country, the importance of country specific (transition specific) determinants reduces while the company specific determinants become more crucial for foreign direct investors.<sup>32</sup>

<sup>24</sup> The Evolutionary Perspective is also known as the “Uppsala model”. The theory describes the internalisation of a firm as an evolutionary process, i.e. acquired market knowledge affects future investments. For further information see for example McDougall and Oviatt [2003].

<sup>25</sup> Source of information: Cluse [1999]: page 61, Witkowska [1999]: page 410.

<sup>26</sup> In this study the terms “factors”, “criteria” and “determinants” are used interchangeably.

<sup>27</sup> See: Ioannatos: page 129 ff., Markusen [1998]: page 2 ff., Mueller [2000]: page 16 ff., Witkowska [1994]: page 128, Zschiedrich [2001]: page 207.

<sup>28</sup> In this study the terms “classification” and “category” are used interchangeably.

<sup>29</sup> In this study the terms “transition” and “transformation” are used interchangeably.

<sup>30</sup> Further information about the term “factor endowment” can be found in Hardwick et al [1990].

<sup>31</sup> DIW - Deutsches Institut für Wirtschaftsforschung (German Institute for Economic Research).

<sup>32</sup> Source of information: Carstensen and Toubal [2003]: page 6, Narula [1996]: page 3 ff., Schulz [1997]: page 3, Witkowska [1994]: page 128.

According to the United Nations' World Investment Report 1998, economic factors, the policy framework and business facilitation measures can be seen as an important classification of FDI. Together they influence the FDI inflow. The importance of these determinants and their respective bias however is not stable over time and also depends on the strategy of each foreign investor. Examples of economic and policy determinants are inflation and a liberal FDI framework. The provision of incentives<sup>33</sup> and the facilitation of bureaucratic hurdles are some of the business pro-active determinants.<sup>34</sup>

In comparison to the previous classification, this category states that FDI determinants can either be economic, social or political determinants.<sup>35</sup>

Cluse (1999) differentiated between push- and pull-factors. Push-factors influence the initial FDI decision of the company, whereby pull-factors are seen to affect the location of FDI. Push-factors as defined by Cluse have been featured in chapter 3.1.2 presenting the development of the FDI theory. According to Cluse (1999) and Calderón et al (2002) the most important pull-factors (location determinants) are: political and country risk, market size, growth expectations, wage costs, human capital, exchange rates, foreign trade policy, taxation policy, incentives, country regulations<sup>36</sup>, condition of the country's infrastructure, and geographic and cultural distance. For countries in transformation the privatisation process, external factors<sup>37</sup> and the intensification effect<sup>38</sup> are regarded as additional pull-factors.<sup>39</sup>

FDI determinants can also be divided into demand-side and supply-side determinants. Demand-side determinants consist of several factors, which can be associated with either an economic, social, or political category. Among others product life and the existence of intangible assets<sup>40</sup> are regarded as supply side determinants.<sup>41</sup>

The aforementioned classifications are not strict and exclusive, but represent the researchers' analysis approach. Several studies have analysed the correlation and significance of specific determinants and/or groups of determinants as well as the determinants' classifications. Below section provides a small overview of the variety of research and analysis done with respect to FDI determinants.

<sup>33</sup> The theory distinguishes between three different incentive forms, which are

- financial (e.g. grants),
- fiscal (e.g. tax exemption), and
- indirect incentives (e.g. protection from import competition). (WTO [1999]: page 277 ff., Cluse [1999]: page 78 ff., Éltető [2000]: page 16, Haderler [1990]: page 356)

<sup>34</sup> Source of information: Macroeconomic Analysis Team [2001]: page 5, United Nations [1998]: page 90 ff., United Nations [2001]: page 5.

<sup>35</sup> Source of information: Ioannatos [2003]: page 119.

<sup>36</sup> These regulations (e.g. market entry regulations, export regulations, production constraints) aim to influence the investor's attitude and behaviour. (Cluse [1999]: page 83 ff.)

<sup>37</sup> The increase in the global competition for FDI is regarded as an external effect. A definition of external effect can be found in Haderler [1990]: page 243.

<sup>38</sup> The intensification effect is based on the assumption that initial investments lead to further investments ("follow the leader" effect). (Cluse [1999]: page 289)

<sup>39</sup> Source of information: Calderón et al et al [2003]: page 17, Cluse [1999]: page 50 ff.

<sup>40</sup> A definition of intangible assets can be found in Eatwell et al [2001a]: page 130.

<sup>41</sup> Source of information: Ioannatos [2003]: page 119.

Ioannatos (2003), for example, showed that economic, social and political determinants are equally important to attract FDI and would not explain FDI to its full extent on their own.<sup>42</sup>

Bevan and Estrin's study (2000) was focused on specific determinants, and they showed that risk, input costs (including labour and natural resources costs) and the size of the host market have a strong influence on FDI. Bevan and Estrin defined risk as economic and political risk which is influenced by the macro-economic, institutional and political stability.<sup>43</sup>

According to Éltető (2000) there are several important FDI determinants: privatisation policy, fiscal policy and infrastructure facilities. Along with some other economic and political factors, these criteria determine the country risk. The country risk itself plays a vital role during the company's investment decision process.<sup>44</sup>

Government actions are considered to have a strong impact on FDI flows. Several studies have shown that the country's attractiveness as perceived by foreign investors is highly dependent on the country's economic and social policies. In order to attract FDI, it is therefore crucial for the host country to develop determinants which both distinguish the host country from other countries and, more importantly, represent those determinants that are required by the foreign company's business.<sup>45</sup>

The degree of influence of each determinant depends on the company's<sup>46</sup> business activities and the importance of each factor also varies over time.<sup>47</sup>

Some studies, Eliasson (1994) and WTO (1999), have shown that incentives belong to FDI determinants, but they cannot be considered as predominant determinants.<sup>48</sup>

According to the United Nations (1998), the impact of FDI policies is not symmetric, i.e. FDI encouraging measures do not automatically increase the FDI inflow and FDI stock. FDI policies that make investments more difficult and risky however will definitely reduce (or even prevent) FDI.<sup>49</sup>

The above mentioned studies have shown that FDI determinants have an impact on whether FDI is taking place or not.

### 3.1.4 Motives of FDI

The company's choice of the mode of entry<sup>50</sup> into a new market is a crucial aspect and depends on several factors such as the strategic intent of the company and the given FDI determinants.

<sup>42</sup> Source of information: Ioannatos [2003]: page 129 ff.

<sup>43</sup> Source of information: Bevan and Estrin [2000]: page 7 ff.

<sup>44</sup> Source of information: Éltető [2000]: page 15 ff.

<sup>45</sup> Source of information: Dunning and Narula [1998]: page 19, United Nations [1998]: page xxviii ff.

<sup>46</sup> In the study the terms "foreign direct investor", "foreign investor", and "(foreign) company" are used interchangeably.

<sup>47</sup> Source of information: Cluse [1999]: page 61, Evan [2001]: page 1, Witkowska [1999]: page 410.

<sup>48</sup> Source of information: Eliasson [1994]: page 3 ff., WTO [1999]: page 277 ff.

<sup>49</sup> Source of information: United Nations [1998]: page xxvi ff.

<sup>50</sup> Market entry mode is defined as the manner in which a firm chooses to enter a foreign market through FDI. (Mueller [2000]: page 2)

The theory mainly distinguishes between four investment motives, which are:

- i) Resource-oriented FDI (also called Asset-oriented or Vertical FDI),
- ii) Market-oriented FDI (also called Horizontal FDI),
- iii) Efficiency-oriented FDI (also called Global sourcing FDI), and
- iv) Strategic-FDI (also called Capabilities seeking FDI).

Resource-oriented investments stem from the company's aim to acquire resources<sup>51</sup>, which are either cheaper in the country of investment or not available in the home country. The company's intention is to produce intermediate goods that are either forward or backward used in the company's production and/or distribution chain. By choosing this investment motive the company is not only spreading the production risk and exploiting cost differences between the countries but at the same time the company also stays competitive.

Market oriented FDI is chosen when the company's intent is to enter a new market, i.e. the company invests in the same industry in the host country as in the home country. Thereby the company simultaneously aims among other reasons to overcome trade barriers, avoid tariffs, currency and exchange rate fluctuations, reduce transportation costs and improve the knowledge of the local market.

Efficiency based FDI is optimising the company's overall strategy, efficiency and structure by applying a regional diversification of either resource-oriented or market-oriented FDI. The company aims to benefit from economies of scale and scope<sup>52</sup>. This investment motive is mainly used by companies that are globally active.

The aim of strategic FDI is to secure the long-term competitive market position. This is mainly achieved through the acquisition of companies or assets in order to enlarge the investor's field of activity. Strategic FDI increases the company's ownership specific advantages.<sup>53</sup>

Research has shown that market-oriented FDI is mainly occurring between high-income countries, while resource-oriented FDI tends to take place in countries possessing the required resource and/or with lower production costs. From this definition one intuitively could assume that for Poland resource-oriented FDI would be predominant.

It needs to be noted that it is not always possible to explicitly distinguish between the four investment motives as the motives are usually overlapping or correlated.<sup>54</sup>

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In this study the terms "market entry mode", "mode of market entry", and "company form" are used interchangeably.

<sup>51</sup> The resources can either be of physic nature, such as raw materials and minerals, man power, or human capital. (Cluse [1999]: page 61)

<sup>52</sup> A definition of economics of scale and scope can be found in Dichtl et all [1993a]: page 1888 f. and Dichtl et all [1993b]: page 487.

<sup>53</sup> Source of information: Cluse [1999]: page 61 ff., Éltető [2000]: page 11 ff., Evan [2001]: page 5, Markusen [1998]: page 2 ff., Picciotto [2003]: page 9, United Nations [1998]: page 90 ff., United Nations [2003]: page 86 ff.

<sup>54</sup> Source of information: Cluse [1999]: page 61 ff., Éltető [2000]: page 11 ff., Markusen [1998]: page 2 ff., Picciotto [2003]: page 9.

### 3.1.5 Modes of Market Entry

Once the foreign company has decided to enter a new market through FDI, the mode of market entry needs to be analysed carefully. There are several modes of market entry for FDI. The most common are:

- i) Merger and Acquisition (M&A),
- ii) Greenfield investment,
- iii) Brownfield investment, and
- iv) Joint Venture.

For each mode of market entry, the amount of production that takes place in the host country and the degree of proprietary control over the production and distribution process differs and thus influences the company's required efforts for integration and adaptation.<sup>55</sup>

- i) Merger and Acquisition (M&A)<sup>56</sup>

Often the terms M&A, merger, and acquisition are synonymously used but to be exact, there is a difference between a merger and an acquisition.

A cross-border merger is establishing a new, in general larger entity by (voluntarily) joining together assets and operations of firms from different countries, while a cross-border acquisition is the take-over of an existing firm in the host country, thus changing the ownership and transforming the acquired company into an affiliate<sup>57 58</sup>.

For this research, it is the acquisition that is of interest from a FDI perspective. An acquisition helps the investing company to reduce the risk that is based on the lack of knowledge of the specific characteristics of the local market. Furthermore, an acquisition allows the investor to get immediate access to the foreign market and resources (raw material, qualified people, local network, etc). This market entry form is favoured when the company's strategy is to seek a new market, which is highly competitive, and thus the market entry is difficult, or when the investment depends on local resources. However, an acquisition is also characterized by the fact that at the beginning the foreign investor is only able to use the given facilities of the acquired company.

Acquisitions as a form of FDI became very popular in the process of privatisation of state-owned companies, but often those acquisitions included constraints for the investor (e.g. restrictions placed on the levels of employee redundancy).<sup>59</sup>

<sup>55</sup> Source of information: 4manager [2004], Fölster and Nyberg [1993]: abstract, Markusen [1998]: page 2 ff., Meyer and Estrin [1998]: page 1 ff., Mooji and Ederveen [2001]: page 3 ff., Mueller [2000]: page 2 ff., Scholz [1996]: page 16 ff., Wong and Adams [2002]: page 5 ff., WTO [1999]: page 275, Zschiedrich [2001]: page 212.

<sup>56</sup> "M&A is by definition of UNCTAD (United Nations Conference on Trade and Development) a change of assets from domestic to foreign subjects and, and at least initially, they do not add to the productive capacity of host countries." (Macroeconomic Analysis Team [2001]: page 3)

<sup>57</sup> An affiliate is "partly or wholly owned by another company". (Adam [1991]: page 17)

<sup>58</sup> Source of information: Calderón et al [2002]: page 5, Mueller [2000]: page 2 ff., Reisen [1999]: page 166 ff.

<sup>59</sup> Source of information: Calderón et al [2002]: page 5, Dunning and Narula [1998]: page 15, Fölster and Trofimov [1994]: page 3, Macroeconomic Analysis Team [2001]: page 3 ff., Meyer and Estrin [1998]: page 7, Mueller [2000]: page 2 ff., Norbäck and Persson [2002]: page 2, OECD [2003b]: page 157, Reisen [1999]: page 166 ff., Schulz [1997]: page 2, WTO [1999]: page 275.

## ii) Greenfield investment

Greenfield investment involves the creation of a new production facility by setting up a new foreign affiliate according to the investor's own technological specifications and requirements. The set-up costs for this mode of market entry are generally very high, and the host market is only gradually entered.

If the investing company possesses a strong competitive advantage<sup>60</sup>, or if the investors' resources can be transferred easily (e.g. public good<sup>61</sup> character competences) and reflect the core competence of the new business unit, the investor's preferred choice will be Greenfield investments. Greenfield investments are also more likely to be chosen when the cultural distance or the technological gaps are very large.

According to several studies, host countries prefer Greenfield investments as this investment form generates new jobs and establishes a modern and efficient plant.<sup>62</sup>

## iii) Brownfield investment

Brownfield investment is a mixture of Greenfield investment and acquisition.<sup>63</sup> The term Brownfield investment is applicable when the foreign investor enters the market via acquisition and transforms the investment then into a Greenfield investment. The transformation into a Greenfield investment can either occur through the (almost) entirely replacement of the plant, organisation structure, equipment and/or through the establishment of a new facility, also called "follow-up investments". The follow-up investment is in general larger than the initial acquisition.<sup>64</sup>

Brownfield investment is preferred when the investor's growth strategy is dependent on local resources, but the quality of the local firms is poor, or when the firm is just interested in acquiring the local brand name, market share, supply or customer relationship. The acquisition itself may therefore play a minor role in the process and the acquired firm may even be in a different business. The advantage for the investor is that this widens the choice of potential target firms and enables cheaper acquisitions.<sup>65</sup>

The concept of Brownfield investment is mainly discussed and analysed in literature about FDI into transition economies.

## iv) Joint Venture

Joint Ventures are quite common as a market entry form when an investor plans to enter an unfamiliar market, and the market is additionally characterised by many restrictions (e.g. administrative constraints).

By establishing a Joint Venture, the counterparts, the foreign investor as well as the local company, create a "win-win" situation, i.e. they both profit from the Joint Venture because they bring valuable knowledge and skills into the partnership. The advantages the local partner possesses are, for example, the knowledge of the local market, bureaucracy and

<sup>60</sup> Further information about the term "competitive advantage" can be found in Adam [1991].

<sup>61</sup> A definition of public good can be found in Hadelér [1990]: page 594.

<sup>62</sup> Source of information: EU Global Player [2004]: page 166 ff., Fölster and Nyberg [1993]: abstract, Gray [1995]: page 101, Macroeconomic Analysis Team [2001]: page 3 ff., Meyer and Estrin [1998]: page 5 ff., Mueller [2000]: page 2 ff.

<sup>63</sup> Often Brownfield investment is defined as a special case of acquisition. (Meyer and Estrin [1998]: page 1 f.)

<sup>64</sup> Source of information: Kalotay [2001]: page 259 ff., Meyer and Estrin [1998]: page 3 ff.

<sup>65</sup> Source of information: Kalotay [2001]: page 259 ff., Meyer and Estrin [1998]: page 3 ff.

regulations as well as established market connections while the foreign partner brings in technological and management skills, knowledge linked with money and cross-border connections. Furthermore, the capital commitment from each involved party is also lower than on a “stand alone basis”.<sup>66</sup>

The most common forms for foreign direct investors are Acquisitions, Greenfield investments and Joint Ventures. The study will focus on these three modes of market entry. Brownfield investments have not been further analysed in this paper as it is difficult to determine when an acquisition becomes a Brownfield investment, and it is even more unlikely companies would be able to differentiate between these company forms because there is no fixed borderline.<sup>67</sup>

The initial assumption was that at the beginning of the transformation process Joint Ventures would be predominant and later depending on the business sector Acquisitions (due to the privatisation process) and Greenfield investments would become more important.

## 3.2 Project Finance

In the literature the terms “Project Finance” and “FDI” are sometimes used interchangeably. However, the concept behind these two terms is not the same which is shown in below chapter. This study is therefore excluding the term “Project Finance” in its further analysis.

### 3.2.1 Project Finance Definition

Project Finance is a method to finance large, risky and long-term international projects. Project Finance is widely used, but especially common in the telecommunications, power, transportation and infrastructure sector. Due to the importance of these sectors for the country's overall economy, these projects are often supported by the government.<sup>68</sup>

The concept of Project Finance has its origins in the United States of America. The most commonly accepted and applied definition of Project Finance is shown in the Financial Accounting Standard No. 47 from 1981. According to this standard, Project Finance is defined as a method to “finance a project whereby the focus lies on the project's cash flow”.<sup>69</sup>

The organisational and financial structure of Project Finance is usually very complex. The project is generally established through a separate company, called “SPV” (Special Purpose Vehicle).

In general, several companies, called the sponsors, participate in a Project Finance transaction. They provide the equity put into the project, and they are responsible for the planning, financing, construction and management of the project. The equity portion being very small in comparison to the transaction size, the majority of the required financial means

<sup>66</sup> Source of information: Macroeconomic Analysis Team [2001]: page 3 ff., Markusen [1998]: page 2 ff., Zschiedrich [2001]: page 212.

<sup>67</sup> Source of information: Markusen [1998]: page 2 ff., Meyer and Estrin [1998]: page 1 ff., Mooji and Ederveen [2001]: page 3 ff., Mueller [2000]: page 2 ff., Wong and Adams [2002]: page 5 ff., Zschiedrich [2001]: page 212.

<sup>68</sup> See: Brealey & Myers [2000]: page 559 f., Jürgens [1994]: page 28 ff.

<sup>69</sup> See: Tytko [1999]: page 7 ff.



is provided through bank loans. Due to the size of the project, the loan is usually granted by a group of banks. The loan is in these cases known as syndicated credit.<sup>70</sup>

As the definition stated, Project Finance is characterised by the fact that the project is evaluated by the SPV's forecasted cash flow, i.e. the interest and principal (debt repayments) payments depend only on the project's performance. In the literature this feature is called "stand alone nature" of the project, and this financing method is therefore also known as "cash flow related lending".

The parent company's assets are generally not taken into consideration when evaluating the project. The liability of the parent company is therefore minimal.<sup>71</sup> The transaction risk however can be reduced by the value of the project's assets<sup>72</sup> as well as contracts and guarantees from suppliers, customers, the government, or any other involved party.

It is common for Project Finance transactions that the project risk is shared (e.g. through hedge, swaps<sup>73</sup>, insurances and guarantees). This financing method ensures that each party involved in the project bears only those risks they can handle best.<sup>74</sup>

Another feature of Project Finance is that the project is usually not shown in the balance sheet of the sponsors, but in the SPV's balance sheet. Project Finance is therefore also often called "off balance sheet financing". This accounting treatment reflects the fact that the parent companies generally are not exposed to the project's risk.<sup>75</sup>

### 3.2.2 Comparison of Project Finance and Foreign Direct Investment

In the literature the terms "Project Finance" and "Foreign Direct Investment" are often used interchangeably. However, the preceding chapters have shown that the two terms do not refer to the same thing.

The main differences are:

- Project Finance is very common in areas where private investors provide state services (e.g. construction of hospitals, prison and roads), whereby FDI occurs in all sectors that are open to private investment.
- The provision of state services through Project Finance generally requires for each individual transaction the active involvement of the government or a governmental institution. Where rules for FDI are established, further involvement by the government is not required.
- The transaction size of FDI can, in comparison to Project Finance, be very small (e.g. less than USD 1.0m).
- FDI does not need to include several parties, and the project risks are not necessarily shared amongst the parties involved.

<sup>70</sup> See: Brealey & Myers [2000]: page 559, Hainz [2002]: page 2, Jürgens [1994]: page 7 f., Nicklisch et al [1996]: page 19, Sader [1999]: page 13 ff., Schmitt [1989]: page 18 ff., Tytko [1999]: page 7 ff.

<sup>71</sup> See: Brealey & Myers [2000]: page 723 ff., Hainz [2002]: page 2 f., Jürgens [1994]: page 4 ff., Schmitt [1989]: page 19, Tytko [1999]: page 9 ff.

<sup>72</sup> In case of failure, the project's assets however are typically difficult to liquidate.

<sup>73</sup> A definition of hedges and swaps can be found in BPP Professional Education [2003].

<sup>74</sup> See: Hainz [2002]: page 7 f., Jürgens [1994]: page 26 ff., Schmitt [1989]: page 187 ff., Tytko [1999]: page 10 f.

<sup>75</sup> See: Jürgens [1994]: page 26 ff., Schmitt [1989]: page 20 ff., Tytko [1999]: page 11 f.

- FDI can represent an investment into an existing company or project (e.g. through the acquisition of shares in the foreign company), while Project Finance is mainly establishing a new project (SPV).
- FDI is not a financing method, but part of the company's strategy.
- Project Finance can occur domestically (i.e. within one country), while FDI is defined as cross-border investment.

As shown above FDI and Project Finance are not the same and thus, the terms will not be used interchangeably in this research.

### 3.3 Infrastructure

As stated in the hypothesis this research is focusing on the infrastructure sector. Below chapter is presenting the definition applied for this study and excluding those features that are not of importance for this research.

#### 3.3.1 Infrastructure Definitions

There exists no unique definition for the term "infrastructure". The word can refer to different fields such as the infrastructure of a country, city, or building. The underlying concept however is generally the same, whereby infrastructure is regarded as the provider of structure and support for a system or an organisation and is therefore crucial for its functioning.

According to Zimmermann and Henke (2001) the totality of institutions and facilities that are vital for economic activity is called infrastructure. Investments in these institutions and facilities are therefore regarded as infrastructure investments. However, this definition does not consider investments in human capital. The more encompassing definition of "infrastructure in the broader sense" takes such investments into account.<sup>76</sup>

Usually the following services are included when talking about infrastructure: roads, airports, ports, railways, public transport, energy generation and distribution, telecommunications, education, research, health, water and waste treatment.<sup>77</sup>

As Brücker (1996) states, traditionally the theory distinguishes between material and immaterial infrastructure, whereby know-how and the social system, for example, are regarded as immaterial infrastructure, while the energy supply and the road system belong to material infrastructure.<sup>78</sup>

Investments into infrastructure can either be public or private. Material as well as immaterial infrastructure can be influenced through the state, private enterprises and households. Traditionally it was perceived that it is the responsibility of the public sector to invest in and provide these services. However, due to the fact that the dissatisfaction of infrastructure quality and quantity provided by the state had increased, other solutions needed to be considered.<sup>79</sup>

<sup>76</sup> See: Henke [1997]: page 125, Zimmermann and Henke [2001]: page 476.

<sup>77</sup> See: Sader [1999]: page 1 ff., Zimmermann and Henke [2001]: page 403 ff.

<sup>78</sup> See: Brücker [1996]: page 2, Henke [1997]: page 125, Zimmermann and Henke [2001]: page 411 ff.

<sup>79</sup> Source of information: Sader [1999]: page 1 ff., Zimmermann and Henke [2001]: page 403 ff.

A tendency shown over the last decade is to involve the private sector in the provision of infrastructure services. This is achieved either through privatisation, BOT<sup>80</sup> investments, or contractual arrangements such as leases, concessions, O&M contracts<sup>81 82</sup>.

It is assumed that the efficiency and endowment of the infrastructure providing company will increase through privatisation. Characteristics of infrastructure projects are that the demand of infrastructure services is predictable, the benefit of infrastructure investments occurs over a long period of time, and the infrastructure project quite often represents a monopoly in its field of activity. Therefore they are generally of high interest for private investors.<sup>83</sup>

However private sector involvement in infrastructure investments is only feasible to a limited extent, especially in those cases when

- the infrastructure in question is of socially sensitive nature (e.g. defence),
- the required financing is very high (e.g. roads), and thus the financing cannot be provided by a single company, or
- the benefits are not easy to determine (e.g. education).<sup>84</sup>

### 3.3.2 Infrastructure Definition Applied for this Research

This research is not focusing on public infrastructure such as the construction of roads and schools but on private business infrastructure.

As one aim of this research is to analyse whether sector specific determinants exist and as sector specific determinants will only become apparent if sectors are analysed separately, it has been necessary to split the infrastructure sector into several sub-sectors.

When searching for Polish FDI statistics within different sources (e.g. OECD, IMF, United Nations and PAIiZ<sup>85</sup>), a variety of business classifications can be found<sup>86</sup>. Especially in the early 1990s, the classifications applied were generally heterogeneous, but also showed some similarities. The dissimilar classifications made comparisons of data difficult. The IMF, for example, distinguished between four institutional sectors<sup>87</sup> while the OECD classification consisted of eleven economic sectors.<sup>88</sup>

The majority of the statistics using the above mentioned business activities criteria did not provide the information needed for the analysis, i.e. these data did not allow splits of the infrastructure sector. However the OECD and PAIiZ statistics appeared to be the most

<sup>80</sup> BOT = Build-Operate-Transfer. BOT contracts are typical for Project Finance transactions.

<sup>81</sup> O&M contracts = Operation and Management contracts. This is one of the typical contract forms for Project Finance transactions.

<sup>82</sup> See: Brücker [1996]: page 2, Picciotto [2003]: page 11 f., Sader [1999]: page 1 ff.

<sup>83</sup> See: Brücker [1996]: page 2, Picciotto [2003]: page 11 f., Sader [1999]: page 1 ff.

<sup>84</sup> See: Brücker [1996]: page 2, EBRD [1997]: page 22, Sader [1999]: page 1 ff.

<sup>85</sup> The PAIiZ, Polish Information and Foreign Investment Agency (Polska Agencja Informacji i Inwestycji Zagranicznych S.A.) was established in June 2003. The Agency is the result of the merger of the Polish Agency for Foreign Investment (PAIZ) and the Polish Information Agency (PAI). The PAIZ had been founded in 1992 in order to promote investments in Poland. (CBI [1994]: page 9, PAIiZ [2004a]: page 2, PAIiZ [2004b]: page 2, United Nations Economic Commission for Europe [2000]: page 61 ff., Website 1)

<sup>86</sup> See Attachment 1 for a presentation of further classifications of business activities.

<sup>87</sup> These four sectors are monetary authority, bank, general government, and other resident sector. (Duce [2003]: page 5 f.)

<sup>88</sup> The OECD sector classification is shown in Figure 3 on page 2.

comparable statistics and were therefore analysed in more detail. The PAIiZ's original classification (called "Sector of Economy") was kept until 1996, when the OECD definition of FDI was taken over and the PAIiZ statistics were made more consistent with the OECD's applied European Activity Classifications (EAC).

**Figure 3: Comparison of the OECD and PAIiZ Classifications of Business Activities**

<b>PAIiZ</b>		<b>OECD</b>
<b>1993-1996</b> (Sector of Economy)	<b>1996-2003</b> (PCA <sup>89</sup> )	<b>(EAC)</b>
<b>Manufacturing</b>	<b>Manufacturing:</b>	<b>Manufacturing</b>
## food processing	## food drinks and tobacco products	<b>Financial intermediation (consulting)</b>
## manufacture of machinery	## transport equipment	## monetary intermediation
## mineral	## other non-metal goods	## financial intermediation
## chemical	## wood and wooden products	## insurance and other activities
## wood and paper	## fabrics and textiles	<b>Wholesale &amp; Retail trade, repairs<sup>90</sup></b>
## light industry	## pulp and paper printing and publishing	<b>Construction</b>
## fuel-energetic industry	## chemicals and chemical products	<b>Transport, storage and communication</b>
## metallurgical industry	## electrical machinery and apparatus	of which
## others	## machinery and equipment	## land, sea and air transport
<b>Construction</b>	## rubber and plastics	## telecommunications
<b>Finance</b>	## metals and metal products	## transport
<b>Telecommunication</b>	## furniture and consumer goods	<b>Hotels and restaurants</b>
<b>Trade</b>	## leather and leather products	<b>Community, social and other services</b>
<b>Transportation</b>	## others	<b>Power, gas and water supply</b>
<b>Agriculture</b>	<b>Financial intermediation</b>	<b>Real estate, renting and business activities</b>
<b>Insurance</b>	<b>Trade and repairs</b>	<b>Real estate, hunting and forestry</b>
<b>Municipal Economy</b>	<b>Construction</b>	<b>Quarrying and mining</b>
	<b>Transport, storage and communication</b>	<b>Unallocated</b>
	<b>Hotels and restaurants</b>	
	<b>Community social and personal services</b>	
	<b>Power, gas and water supply</b>	
	<b>Real estate and business activities</b>	
	<b>Agriculture</b>	
	<b>Quarrying and mining</b>	

Source: OECD [1999]: page 274, OECD [2000a]: page 304, OECD [2001]: page 312, PAIiZ [2003c]: page 7, several Excel documents received from the PAIiZ [2006].

It can be seen that the PAIiZ classification used for the statistics since 1996 is for some activities more detailed than in the earlier version, while others are less detailed (e.g. the telecommunications, transport and storage sector have been put together).

The main points of the OECD classification are similar to the PAIiZ classification. The difference is that the OECD statistics do not show further details of the manufacturing sector, but provide more detailed information of the financial intermediation sector as well as the transport, storage and communication sector. However, the OECD statistics do not provide the names and investment details of foreign direct investors in each sector.

The aim of this research is to focus on FDI into infrastructure. The following business activities (PAIiZ labelling) were considered to reflect infrastructure sectors:

- financial intermediation,
- transport, storage and communication,
- power, gas and water supply.

The business activities manufacturing, trade and repairs, construction, hotels and restaurants, community social and personal services, real estate and business activities, agriculture, and quarrying and mining were left out of further analysis because they were not regarded to reflect investments into infrastructure.

<sup>89</sup> PCA - Polish Classification of Activities.

<sup>90</sup> In some OECD documents this class was only labelled "trade and repairs".

It was assumed that investors in the transport and storage area might be influenced by other criteria than investors in the communications sector. The same applied for companies in the financial intermediation sector. However, differences would only become apparent if the business activities would be split into sub-sections.

The OECD classification enabled a further division of the PAIiZ business sector financial intermediation as well as the transport, storage and communication sector, i.e. the financial intermediation sector was further divided into banking and insurance, while the transport, storage and communication field was split into telecommunications and logistics. This split was adopted for this research, and the analysed business areas in this study consist therefore of five sectors which are labelled as follows:

- Banking,
- Insurance,
- Telecommunications<sup>91</sup>,
- Logistics (including transportation and storage), and
- Power (containing power, gas and water).

In this study, the general term used to put these five sectors together is “infrastructure” because when looking at the infrastructure definition these sectors are part of the country's infrastructure and are crucial for the economy's functioning.

### 3.3.3 Specifics of the Chosen Infrastructure Sectors

The classification used by the PAIiZ as shown in Figure 3 could mainly be found in the statistics presenting the overall FDI flow into Poland. However, when looking at the PAIiZ statistics which reflected the foreign direct investors' names, several different descriptions<sup>92</sup> were used to explain the companies' business activities.

For most activity descriptions, it was clear to which sector the respective company belonged; other descriptions however were more difficult to understand, changed over time, or did not reflect the company's entire business activities.

Some of the sectors also incorporated several business activities, e.g. the Power sector included, for example, water and petroleum companies and the Logistics sectors incorporated transportation and storage companies. Car manufacturers and car suppliers were not considered to belong to the Logistics sector.

## 3.4 Poland

### 3.4.1 General Overview

The development of Poland in general and in the chosen infrastructure sectors was analysed in order to see whether changes in the FDI flow and determinants are linked with Poland's transformation process.

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<sup>91</sup> In figures and tables the term “Telecommunications” is often replaced by the word “Telecom”.

<sup>92</sup> See Attachment 2 for a list of the sectors' activity descriptions used in the PAIiZ statistics.

Below overview does not claim to be exhaustive but presents those facts that were considered to be of importance for this research and helped to understand the development in the infrastructure sector.

#### *3.4.1.1 FDI until 1989*

At the beginning of the transformation process in Poland, the amount of FDI inflows and the FDI stock were very low. This was due to the following reasons:

Until 1989, Poland and the other Eastern European countries had not been open to foreign investments, thus foreign investors faced many restrictive regulations. The political and economic system was based on a central administration which did not allow much private business, which furthermore prevented foreign investments.

In the late 1970s Poland began to gradually open selected sectors to foreign investors. However, due to the fact that the government imposed tight regulations (e.g. import and export regulations, repatriation of profits), only a few investors entered the Polish market. These investors mainly chose Joint Venture as their preferred company form and since they were generally former Polish citizens, these ventures were called Polonia companies.

The Act on Companies with Foreign Capital Participation of 23 April 1986 is regarded as the turning point of the FDI policy in Poland and reflects the country's first real attempt to attract foreign investors.<sup>93</sup>

By the end of 1989, following the election of the new reformist government, the establishment of a free market economy started.

It immediately became apparent that in order to be competitive on an international basis, Poland needed to increase the quality of its products, distribution system and business management. Due to the fact that there were neither sufficient domestic savings nor a well developed banking system, foreign capital was regarded as being crucial for the country's development. Another reason to support and enhance FDI was that it was hoped that through the inflow of capital, technology and expertise, the transformation process could be accelerated.

Like almost all CEEC (Central and Eastern European Countries), Poland was convinced that it could offer many advantages to foreign investors, such as low labour costs but simultaneously highly qualified people as well as a high demand for consumer products and new technology in the Telecommunications and Power sectors, and the country would therefore attract much FDI.

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<sup>93</sup> Source of information: CBI [2000]: page 177, Cluse [1999]: page 15 ff., Dobosiewicz [1992]: page 42 ff., Estrin et al [1994]: page 219 f., Jeffries [1993]: page 303 f., Schulz [1997]: page 2 f.

The transformation process started with the “Balcerowicz Plan”<sup>94</sup> (also known as “Shock Therapy” or “Big Bang”), introduced in 1989. The plan's main focus lay on privatisation, liberalisation and stabilisation of the market and economy (e.g. control of inflation, the freeing of wholesale and consumer prices), establishment of a restrictive fiscal and monetary policy (i.e. fiscal consolidation, reduction of government's spending) and the convertibility of the currency.<sup>95</sup>

### 3.4.1.2 Development from 1989 until 2003

#### i) General situation

The transformation process that strongly changed the country's economic, political and social landscape did not always progress as smoothly as hoped.

The implementation of the “Shock Therapy” resulted in an initial strong slowdown of the economy. Between 1989 and 2003 Poland was also hit several times by internal as well as external shocks (e.g. downsizing of the primary sectors, agriculture and mining, the collapse of the CMEA<sup>96</sup> and the Russian crisis respectively).

The implementation of the social, political and economic reforms faced strong opposition. Especially the sale of state assets to foreign investors was for a long time seen as “selling the family silver” and increased the perception that Poland would lose its sovereignty.

Despite these obstacles Poland continued its path of transformation and efforts to attract FDI. Once it became apparent to local as well as foreign investors that the country's reforms would sustain and be enforced through further amendments in the regulatory and legal framework, the economy's recovery began.

The debt remission granted by the Paris and London Club also helped to boost the economy, and in the mid 1990s Poland belonged to the fastest growing economies in CEE (Central and Eastern Europe).

Between 1989 and 2003 the annual FDI inflows increased on a constant basis. The liberalisation of the FDI regime, the substantial progress in reducing market entry restrictions, and the continuous promotion of FDI were some of the most important factors for this development. The number of business activities requiring licences had constantly been reduced, and if permits were required, they were in general granted without any complications. The late 1990s showed that the discrepancy towards Western European countries had strongly decreased.<sup>97</sup>

<sup>94</sup> L. Balcerowicz was the Finance Minister of the first freely elected Polish government formed in September 1989. (Cioclea [1999]: page 11)

<sup>95</sup> See: Balcerowicz et al [1997]: page 134 ff., Bishop and Mickiewicz [2001]: page 8, Blanchard et al [1994a]: page 51 ff., Blanchard et al [1994b]: page 111 ff., CBI [1991]: page 29 ff., CBI [1994]: page 20 ff., Cluse [1999]: page 17 ff., Dobosiewicz [1992]: page 13 ff., Franzke [2000]: page 17, Jeffries [1993]: page 341 ff., Kalotay [2001]: page 260 ff., Lingelsheim-Seibicke [2000]: page 15 f., Picciotto [2003]: page 1 f., Sachs [1993]: page 48 ff., Schularick [2001]: page 16, Welfens and Wiegert [1997]: page 13 f., Winiecki et al [1997]: page 1 ff., Zschiedrich [2001]: page 210.

<sup>96</sup> CMEA - Council for Mutual Economic Assistance. The CMEA, also known as Comecon, was an economic organisation established by the countries in Central and Eastern Europe. (Dichtl et al [1993a]: page 386, Website 2.

<sup>97</sup> See: Bishop and Mickiewicz [2001]: page 8, Blanchard et al [1994a]: page 51 ff., Blanchard et al [1994b]: page 111 ff., CBI [1991]: page 29 ff., CBI [1994]: page 15 ff., CBI [2000]: page 9 ff., Cluse [1999]: page 231 ff., Dobosiewicz [1992]: page 13 ff., Franzke [2003]: page 20, Lingelsheim-Seibicke [2000]: S. 15 f., Macroeconomic Analysis Team [2002]: page 1 f., Sachs [1993]: page 48 ff., Schularick [2001]: page 16, Sinn and Weichenrieder [1997]: page 3, Wallace and Mayhew [2001]: page 6, Winiecki et al [1997]: page 1 ff., WTO [1999]: page 274., Zoubir and Lhabitant [2003]: page 137 f.

### ii) Economy

The first years of the transformation were marked by a high inflation rate, which was the result of the price liberalisation. The low GDP<sup>98</sup> growth rates, high inflation and budget deficits resulted in reluctant initial FDI flows. Furthermore still existent restrictions for foreign investors made investments unattractive.

As Table 1 shows, the inflation rate declined continuously from 1989, and the GDP growth rate was positive from 1992 onwards.<sup>99</sup>

**Table 1: Inflation Rate and Real GDP Growth Rate Between 1989 and 2003**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Inflation rate (in %)	3900.0	250.0	70.0	44.0	38.0	29.0	22.0	20.0	16.0	11.8	7.0	6.5	5.3	1.9	0.8
Real GDP growth (in %)	0.2	-11.6	-7.0	2.6	3.8	5.2	7.0	6.0	6.8	4.8	4.1	4.0	1.0	1.4	3.6

Source: Bank Austria Creditanstalt [2002]: page 21, Bishop and Mickiewicz [2001]: page 2 f., Cluse [1999]: page 237, EBRD [1996]: page 112 ff. and 201, Economist Intelligence Unit [2004]: page 5, EPIT [2004]: page 1 ff., Macroeconomic Analysis Team [2000a]: page 1 ff., Macroeconomic Analysis Team [2000b]: page 5, NBP [2004]: page 8 ff., Schitag, Ernst & Young Gruppe [1995]: page 11, Segura [2002]: page 2 ff., Wallace and Mayhew [2001]: page 5 ff.

The drop of the inflation rate was strongly connected with the National Bank of Poland's independence and its tight monetary policy implementation. The high GDP growth rates in later years had a strong positive impact on the FDI flow, i.e. helped to attract FDI.

During the transformation process, the private sector, which in 1989 was almost non-existent, had constantly grown. The private sector's share of the country's activity had therefore increased too, amounting to approximately 65% in 1997 and 70% in 2002.<sup>100</sup>

Poland also created so called Special Economic Zones (SEZ) where investors could receive high investment benefits.<sup>101</sup>

### iii) Privatisation

Privatisation was regarded as being crucial for the transformation process and thus, the government soon concentrated their efforts to start the privatisation process. The Law on Privatisation of State Companies, which was launched in 1990, focused on two privatisation methods, capital privatisation (through sales) and direct privatisation (through liquidation). The privatisation process however was not straight forward and did not progress as fast as originally hoped because the populations' perception was initially very negative. The implementation of the process did not start until 1996 with the Mass Privatisation Program (MPP), i.e. 5 years later than initially planned.

The five sectors this research is focusing on; i.e. Banking, Insurance, Telecommunications, Logistics and Power, belong to those areas where privatisation progressed rather slowly. This was linked to the fact that the Polish government regarded these sectors as being of strategic importance. These sectors were therefore for a long time dominated by companies where the majority shares were held by the Polish state.<sup>102</sup>

<sup>98</sup> GDP - Gross Domestic Product.

<sup>99</sup> See: Blanchard et al [1991]: page 12 ff., Cluse [1999]: page 248 ff., CBI [2000]: page 177, Zecchini et al [1997]: page 6 ff., Zoubir and Lhabitant [2003]: page 138

<sup>100</sup> Source: CBI [2000]: Page 8.

<sup>101</sup> See: Blanchard et al [1991]: page 12 ff., CBI [1994]: page 8, CBI [2000]: page 177, Cluse [1999]: page 248 ff., Macroeconomic Analysis Team [2000a]: page 1 ff., PAIiZ [2003b]: page 5 ff., Zecchini et al [1997]: page 6 ff., Zoubir and Lhabitant [2003]: page 138.

<sup>102</sup> See: Blanchard et al [1994b]: page 166 ff., CBI [2000]: page 177 ff., Cluse [1999]: page 274 ff., Estrin et al [1994]: page 227 ff., Foreign Trade Research Institute [1992]: page V/1 ff., Jeffries [1993]: page 341 ff., Winiecki et al [1997]: page 27 ff., Zecchini et al [1997]: page 283 ff., Zoubir and Lhabitant [2003]: page 146 f.



*iv) Laws and Regulations*

The Polish Civil Code was largely based on the Napoleonic Code, the German Civil Code (BGB<sup>103</sup>) and the Austrian Civil Code (ABGB<sup>104</sup>).

With the beginning of the transformation process however, the entire legal system in Poland was subjected to reformatations and amendments. Table 2 provides a selection of the main law changes.

**Table 2: Selection of Main Laws and Regulations**

Year	Law/regulation
1989	Banking Law
1990	Act on Insurance Activity Law on Property Acquisition by Foreigners Communication Act
1993	Law on the Financial Restructuring of Enterprises and Banks Mass Privatisation Programme
1996	Law on Commercialisation and Privatisation of State-Owned Enterprises
1997	Energy Law
2000	New Telecommunications Law
2001	Law on Road Transport
2002	Law on Financial Support for Investment
2003	Bankruptcy and Compensation Law

Source: Balcerowicz et al [1997]: page 152 ff., CBI [2000]: page 11 ff., Economist Intelligence Unit [2003]: page 22 ff., Gray [1995]: page 47 ff., NBP [2001]: page 2 f.

These new laws or law amendments helped to progress the market liberalisation and strengthened the path of transformation. Obstacles, such as investment application procedures, for domestic as well as foreign investors were removed or simplified and clear rules for investors were set (e.g. through the Anti-monopolist Law).<sup>105</sup>

*v) Membership*

From the beginning of the transformation process, Poland focused on increasing the country's acceptance and on reducing the perceived country risk by joining international organisations and initiatives. One of Poland's main aims was to join the European Union, and this ambition (which included the adoption of the "Community Acquis"<sup>106</sup>) strongly influenced the government's political and economic actions. In the course of the transformation, Poland among others also became member of the OECD and NATO<sup>107</sup> in 1996 and 1999 respectively.<sup>108</sup>

*vi) FDI in Poland*

The FDI inflow has constantly grown since 1989. The majority of the investments were made in the manufacturing and financial services sector.<sup>109</sup>

<sup>103</sup> BGB – Bürgerliches Gesetzbuch.

<sup>104</sup> ABGB - Allgemeines Bürgerliches Gesetzbuch.

<sup>105</sup> See: Blanchard et al [1994b]: page 296 ff., CBI [1991]: page 31 f., CBI [1994]: page 245 ff., CBI [2000]: page 24., Eliasson et al [1993]: page 10 f., Schulz [1997]: page 2 f., Winiecki et al [1997]: page 27 ff., WTO [1999]: page 277 f., Zoubir and Lhabitant [2003]: page 137 f.

<sup>106</sup> "The Community Acquis or Community Patrimony is the body of common rights and obligations which binds all the Member States together within the European Union." (Website 3)

<sup>107</sup> NATO – North Atlantic Treaty Organisation.

<sup>108</sup> See: CBI [1994]: page 15 ff., Cluse [1999]: page 231 ff., Jeffries [1993]: page 475, Picciotto [2003]: page 21 ff., Schitag, Ernst & Young Gruppe [1995]: page 10, Zoubir and Lhabitant [2003]: page 137 ff. and page 143.

<sup>109</sup> See: Blanchard et al [1991]: page 75 ff., CBI [1994]: Page 49 ff., CBI [2000]: page 8 f. and 177 ff., Direction des Relations Economiques Extérieures [1995]: page 97, Dobosiewicz [1992]: page 42 ff., Lingelsheim-Seibicke [2000]: p. 86 f., KPMG [2003]: page 13 ff., Major [1993]: page 116, Meyer and Estrin

As described earlier, initially foreign investors faced many problems and difficulties such as the non-existence of an appropriate legal and institutional framework and the long and complicated investment procedures. However, in the course of the transformation, many of these issues disappeared or decreased substantially, e.g. through the Joint Venture Act in 1991. By the end of the 1990s, the investment procedures almost resembled EU<sup>110</sup> and OECD regulations.

In order to attract FDI in the early 1990s, the Polish government introduced incentives (e.g. tax exemptions).

Table 3 shows that statistics present different FDI figures which can be up to five times higher in one statistic than in another. This volatility prevented direct comparisons.

**Table 3: FDI Inflow Figures from Different Sources (in million USD)**

FDI inflow (in million USD)	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Autschach [1997]			298	865	1,697	1,846	2,500								
Kalotay [2001]	11	88	359	678	1,715	1,875	3,659	4,498	4,908	6,365	7,270				
Lill [2003]			437	678	1,715	1,491	2,510	5,197	5,678	9,574	7,891	10,601	7,118	6,064	6,420
Lingelsheim-Seibicke [2000]					1,100	1,300	2,500	5,200	6,600	8,500					
Macroeconomic Analysis Team [2001]		10	117	284	580	542	1,134	2,741	3,034	5,129	6,757	8,291			
Ministry of the Treasury [2002]	10	100	220	1,080	1,420	1,490	2,510	7,200	3,680	9,570	7,890	10,600	7,140		
Modrzejewski [2002], Wallace and Mayhew [2001]					580	542	1,134	2,741	3,041	4,966	6,348	9,299	6,356	6,000	
OECD [2007]		110	316	945	937	1,482	4,054	3,620	3,126	7,890	3,599	8,154	7,021	6,647	9,940
PAIILZ [2003], PAIILZ [2004]	10	100	220	1,080	1,420	1,491	2,510	5,197	5,678	9,574	7,891	10,601	7,146	6,064	6,420
Picciotto [2003]					1,109	1,096	3,659	4,498	4,908	6,365	7,270	9,342			
Smarzynska [2002]					1,715	1,875	3,659	4,498	4,908	6,365	7,270	9,341			

Source: Autschach [1997]: page 21, Kalotay [2001]: page 267, Lill [2003]: page 2, Lingelsheim-Seibicke [2000]: page 26, Macroeconomic Analysis Team [2001] - page 7, Ministry of the Treasury [2002]: page 12, Modrzejewski and Modrzejewski [2002]: page 104, OECD [2007]: page 25, PAIILZ [2003a]: page 3, PAIILZ [2004a]: page 3, Picciotto [2003]: page 4, Smarzynska [2002]: page 27, Wallace and Mayhew [2001]: page 8

### 3.4.2 Sector Overview

#### 3.4.2.1 Banking

At the beginning of the transformation process, the Polish National Bank was split into nine medium size regional banks. In the course of the reform of the Polish banking system these nine banks were transformed into independent commercial banks. Additionally, two savings banks, a foreign trade bank and a bank for agriculture were set up.

In the early 1990s the Banking sector was marked by a high level of bad loans and low capital amounts.

The privatisation process in the Banking sector started quite late. In 1995 Bank Gdanski was the first bank to be privatised. By 2001 one state-owned bank and two banks, where the state was the major shareholder were set for privatisation.

The worldwide wave of mergers and acquisitions in the late 1990s had an impact on Poland too. Several mergers and acquisitions took place in the Polish Banking sector.

The Banking Law, Law on the National Bank of Poland and the Foreign Exchange Law (with all subsequent amendments) were of great importance for the reform of the Banking sector. By 2003 the Polish bank system was regarded as being one of the best regulated and supervised in CEE.

[1998]: page 16 ff., OECD [2003b]: page 168 f., Schitag, Ernst & Young Gruppe [1995]: page 20 ff., Zschiedrich [2001]: page 210.

<sup>110</sup> EU – European Union.

Due to the consistency in the sector's liberalisation many foreign investors were attracted. By the end of 1997 29 out of 83 banks were foreign-owned. By 2003 more than 70% of the Polish Banking sector was owned by foreign investors.

Since its opening in 1991, the Warsaw Stock Exchange's importance has continuously increased. While in 1991 only 6 enterprises were listed, 202 companies, 14 NIFs (National Investment Funds), several T-Bond series and derivatives<sup>111</sup> were quoted by 2003.<sup>112</sup>

#### 3.4.2.2 Insurance

The Polish Insurance market is the largest in CEE and thus, was very attractive for foreign companies.

Prior to 1990, two state-owned enterprises, Państwowy Zakład Ubezpieczeń (PZU) and Warta existed. Warta was privatised in 1993. In the late 1990s the Insurance market was still dominated by the state insurance company PZU, by the end of 2003 however the company was almost fully privatised.

With the start of the transformation, the Insurance sector, through the Insurance Law, immediately opened to foreign investors.

The introduction of the new pension system in 1999 resulted in insurance companies offering pension funds.<sup>113</sup>

#### 3.4.2.3 Telecommunications

At the beginning of the transformation process the Telecommunications sector in Poland was underdeveloped. Poland was among the countries with the lowest telephone line penetration and the growth rate this sector experienced was therefore one of the highest in Europe.

In 1989, Telekomunikacja Polska (TP) S.A.<sup>114</sup> was the sole telecommunications operator in the Polish market, and the sector was under the responsibility of the Polska Poczta Telegraf i Telefon (PPTT – Polish Post, Telegraph and Telephone). PPTT was a state-owned enterprise which belonged to the Ministry of Post and Telecommunications.

The Polish government immediately focused on improving the situation. In the Telecommunications Law from 1991 the legal basis for the market liberalisation was set up. In the same year, PTP Centertel, a joint venture between TP S.A., France Telecom and Ameritech became the first mobile telecommunication services operator in Poland. In 1992 both, the local call market and the telecommunications services sector were liberalised. Between 1992 and 1993 all five major telecommunications equipment supply companies (namely Telfa S.A., PZT S.A., Teletra S.A., ZWUT S.A. and Elwro S.A.) were involved in privatisation, whereby the majority of the shares were acquired by foreign investors. In 2000 the domestic inter-city call market was liberalised, customs duties on telecommunications

<sup>111</sup> Further details about derivatives and T-Bonds can be found in Köhler et al [2007]: page 274 ff. and BPP Professional Education [2003]: page 46.

<sup>112</sup> See: Balcerowicz and Bratkowski [2001]: page 14 ff., Blanchard et al [1994a]: page 67 ff., CBI [1994]: page 20 ff., CBI [2000]: page 9 ff., Gray [1995]: page 115, Jeffries [1993]: page 431 ff., Ministry of the Treasury [2002]: page 23 ff., Modrzejewski and Modrzejewski [2002]: page 91 ff., NBP [1999]: page 4 ff., NBP [2001]: page 2 ff., Weller [1999]: page 9, Zoubir and Lhabitant [2003]: page 141 f.

<sup>113</sup> See: Bovermann [1998]: page 13, Foreign Trade Research Institute [1992]: page IV/1 ff., Zoubir and Lhabitant [2003]: page 141 f., Website 4.

<sup>114</sup> S.A. = Spółka Akcyjna (Joint Stock Corporation).

products were removed for the EU and CEFTA<sup>115</sup> countries, and by 2003, the Telecommunications sector was fully liberalised and de-monopolised.<sup>116</sup>

#### 3.4.2.4 *Logistics*

In 1989, the Polish railway system was one of the most developed in CEE. This was mainly due to the fact that the transportation of people and goods had been handled through the railway. However, equipment upgrading and expansion were required. The railway lines in Poland were owned and operated by the Polish State Railways (Polskie Koleje Państwowe - PKP).

The existing road system and air service were also relatively well developed. However, they required more extensive modernisation and development in order to meet Western European standards than the railway system. Furthermore, as the freight structure<sup>117</sup> and transport geography<sup>118</sup> changed, it was necessary to react accordingly. The Polish government was aware of the fact that a well-functioning transportation system was crucial for the economy. Since the early 1990s, no permits have been necessary for the transport of freight to and from Poland. With the Law on Road Transport and the Law concerning drivers' working time, the transportation market was further liberalised and regulated. In November 1999 LOT, the Polish airline, was privatised, and by 2001 the aircraft equipment regulations were consistent with those in place in the EU and USA.<sup>119</sup>

#### 3.4.2.5 *Power*

The Polish Power sector is one of the largest in CEE. At the beginning of the transformation process, the energy distribution network was already well established.

Until 1990 the electricity, gas, heat and water prices had been subsidised. With the "Shock Therapy" the reformation and modernisation process of the sector started and thus, the electricity prices were freed to reflect market prices. Within 3 years, from 1990 to 1993, the electricity prices increased by 60% for industrial users and by 300% for residential users.

The privatisation process in the Power sector started in 1993, when three power plants were transformed into joint stock companies. In 1995, the first foreign companies entered the Polish petroleum market. The Energy Law from 1997 was a major step to remove and reduce obstacles faced by foreign investors. In the late 1990s, the privatisation of the state-owned petroleum refining and distribution companies started. Polskie Sieci Elektroenergetyczne (PSE) S.A., the Polish Power Grid Company, was privatised in 2002.<sup>120</sup>

<sup>115</sup> CEFTA - Central European Free Trade Area.

<sup>116</sup> Source of information: CBI [1991]: page 142 ff., CBI [1994]: page 123 ff., CBI [2000]: page 11 ff., EBRD [1997]: page 22 ff., PAIZ [2001a]: page 8 ff. PAIZ [2001b]: page 2 f.

<sup>117</sup> Similar to Western Europe the railways lost their position as the main mean of goods transportation. In 2001, approximately 81.4% of the total shipments of goods occurred through road transport in comparison to 12.7% through the railway. (PAIZ [2002a]: page 5, PAIZ [2003d]: page 2)

<sup>118</sup> Poland intended to create a road network connecting Western Europe with Eastern Europe. (CBI [1991]: page 155)

<sup>119</sup> See: CBI [1991]: page 25, CBI [1994]: page 123 ff. and 213 f., CBI [2000]: page 78 ff. and 169 ff., Kunert und Link [1997]: page 20 f., Economist Intelligence Unit [2003]: page 22 ff., Zoubir and Lhabitant [2003]: page 142 f.

<sup>120</sup> See: CBI [1991]: page 23, CBI [1994]: page 123 ff., CBI [2000]: page 78 f., Central Statistical Office [2000]: page 3 ff., Foreign Trade Research Institute [1992]: page II/4 ff., PAIZ [2000]: page 13 ff., PAIZ [2002b]: page 2 f., Zoubir and Lhabitant [2003]: page 139 f.

The above abstract has provided an overview of the development in Poland between 1989 and 2003. Further important laws and regulations for Poland in general and the five infrastructure sectors in particular are listed in Attachment 3.

## 4 Data Collection and Preparation

### 4.1 Criteria for FDI Analysis

One of the main questions of this research is to analyse whether sector specific determinants exist, whether these determinants are stable over time, and whether the modes of market entry have an impact on the determinants' importance. It was crucial to collect and analyse data in a consistent and credible way. Based on the theory, FDI determinants that were considered to be of relevance were chosen and criteria for the three main FDI related company forms were collected.

#### 4.1.1 FDI Determinants

As previously shown, the amount of determinants is very large and it was therefore necessary to focus in this study on a selection of FDI determinants. Based on considerations, both theoretical and in relation to the chosen sectors, the determinants shown in Table 4 have been selected.

**Table 4: Selected FDI Determinants<sup>121</sup>**

<b>FDI encouraging determinants</b>	<b>FDI preventing determinants</b>
<ul style="list-style-type: none"> <li>- Access to natural resources and / or production material<sup>122</sup></li> <li>- Availability of human capital</li> <li>- Company strategy</li> <li>- Competitors are in the market</li> <li>- Cost pressure</li> <li>- Country's geographical situation</li> <li>- Country's openness to foreigners</li> <li>- Country's worldwide political and economical integration</li> <li>- Current clients are in the market</li> <li>- Distance<sup>123</sup></li> <li>- Investment incentives</li> <li>- Market growth expectations</li> <li>- Market size</li> <li>- Possession of competitive advantage</li> <li>- Progress in economic, political and institutional stabilisation, new regulations in sector</li> <li>- Progress in facilitation of investment approval procedures for foreign investors</li> <li>- Progress in market infrastructure conditions: banking system, telecommunication, transportation</li> <li>- Progress in sector with reference to privatisation, opening of the market, private sector developments</li> </ul>	<ul style="list-style-type: none"> <li>- Ability of the authorities to keep their promises</li> <li>- Access to financial means</li> <li>- Bureaucratic hurdles</li> <li>- Corruption</li> <li>- Costs for staff training, establishment of management, etc.</li> <li>- Country's reputation and perception</li> <li>- Cultural and language barriers</li> <li>- Economic situation: inflation, GDP growth, budget deficit</li> <li>- Fiscal framework</li> <li>- Host country's restrictions to FDI</li> <li>- Infrastructure level: telecommunication, banking system, transportation</li> <li>- Political stability</li> <li>- Progress of transformation</li> <li>- Riskiness of business</li> <li>- Speed of privatisation in sector</li> <li>- Strong labour force</li> <li>- State interference</li> </ul>

Source: Bandelej [2002]: page 6 ff., Carstensen and Toubal [2003]: page 6, CBI [1994]: page 13 f., Evan [2001]: page 1, Fölster and Nyberg [1993]: page 9, KPMG [2003]: page 13 ff., Krkoska [2001]: page 3 ff., Markusen [1998]: page 5 f., Moran [1998]: page 89, Mueller [2000]: page 16 ff., Narula [1996]: page 11 ff., OECD [2003b]: page 159, ff. Picciotto [2003]: page 7 ff., Raff and von der Ruhr [2001]: page 15, Schnitzer [2000]: page 2, United Nations [1998]: page 36 ff.

<sup>121</sup> The determinants in the table are put into an alphabetical order.

<sup>122</sup> It was not assumed that this determinant would be predominant for the chosen sectors. This determinant was selected as a mean of verification. If companies understood the questionnaire correctly it was assumed that this criterion would be regarded as non important.

<sup>123</sup> This determinant refers to the distance between the foreign direct investor's home country and the foreign country.

The above list of determinants presents a variety of reasons for and against a market entry. These two fundamentals need to be considered when further progressing with the research as they are the aspects this study wants to focus on.

While most researchers apply a quite broad classification of determinants, this study focuses on single determinants and “only” distinguishes between FDI encouraging and FDI preventing determinants. This approach has been chosen because this study does not intend to analyse the linkage between determinants but aims to present which criteria are important for the infrastructure sectors and whether these criteria differ among these sectors.

#### 4.1.2 Modes of Market Entry

FDI is realised through different modes of market entry. The intention is to investigate whether certain company forms are preferred by the infrastructure sectors and what the motive behind the choice of mode of market entry is. Therefore the relationship between company forms and determinants as well as possible changes of company forms over time need to be analysed. Several reasons for the different modes of market entry have been collected and Table 5 presents the rationale for each company form.

**Table 5: Reasons for a Particular Mode of Market Entry**

Criteria	Acquisition	Greenfield	Joint Venture
Access to companies already established in the market	+		(+)
Ability to construct an establishment according to specific requirements of the business		+	(+)
Sharing of business risk	(+)		+
Access to local resources (e.g. customers, employees, suppliers, etc. )	+		+
Gaining experience before fully establishing company in the market	(+)		+
Ability to locally evaluate the market conditions	(+)		+
(Partly) Avoidance of bureaucratic hurdles	+		+
Market restrictions	(+)		+
Common strategy within the company (i.e. same company type for all markets)	+	+	+
Existence of competitors in the market	+	(+)	(+)
Gaining proprietary control (e.g. over production and distribution)	+	(+)	(+)
Immediate possession of market share	+		(+)
Market different to home country (e.g. cultural and/or economic differences)	(+)	+	+
Acquisition of brand name	+		(+)
Least expensive form to enter the market	+	(+)	+
No choice of market entry form (e.g. foreigners are not allowed to enter in a different way)	+	+	+

Source: own presentation

The above table suggests that not all features will be unambiguous as sometimes the border between the modes of market entry might, in reality, not be as clear as presented by the theory.

It has been attempted to state unique reasons for each company forms, but it has not always been achievable. When a reason could also be directly or indirectly<sup>124</sup> applied for another company form the following symbols “+” and “(+)” have been used. The symbol “(+)” reflects that the criterion might be applicable, but it is not as explicit as for another company form.

## 4.2 PAIiZ Statistics

As shown in chapter 3.3.2, the breakdown of FDI flows and FDI stocks in the statistics has been quite diverse. Only the statistics provided by the PAIiZ showed the required split of FDI data. They enabled the preparation of a list of all company names which needed to be contacted and gave a first impression about the companies' market entry date, investments, and investment amounts. However these statistics also had some disadvantages, which will be explained in the following chapter and which eventually resulted in the amendment of the PAIiZ statistics.

### 4.2.1 Limitations of the PAIiZ Statistics

The main issue was that the FDI statistics for Poland, gathered by the PAIiZ, were only available from 1993 onwards. Furthermore, the statistics between 1993 and 1996 did not provide a split into the respective foreign investors. Additionally, the FDI data collection and creation of consistent and comparable statistics by applying the OECD's definition only started in 1996. Until 1996 different FDI definitions had been applied and no regular statistics had been produced. Therefore, between 1989 and 1995, FDI statistics were either not available or not comparable.<sup>125</sup> As the time frame of interest for the purpose of this research already included years prior to 1996 it was necessary to acquire the missing FDI data.

When extracting data from the PAIiZ statistics it became apparent that for companies who were active in several sectors (e.g. Siemens AG), it was not possible to split the FDI amount accordingly. This made it difficult to calculate FDI inflow and FDI stock amounts for each sector and to compare these amounts between the sectors and over time.

Another difficulty experienced was that sometimes companies disappeared from the statistics, but no explanation was given as to why this company did not appear any longer. Examples of this were the following companies: Enron, SAirGroup, Aral and Banque Nationale de Paris. To understand whether the company had left the country due to bankruptcy or changes in the company's strategy, resulting in the sale of their Polish investments, or whether the company had merged with or been acquired by another company, it was necessary to specify the circumstances for each company.

The knowledge of mergers and acquisitions in each sector was very essential as this directly influenced the number of contactable foreign direct investors.

When comparing the companies' websites with the information as stated in the statistics, it occurred that in a few cases companies after their merger still appeared separately in the statistics. Since 2002, for example, DHL Worldwide Express belonged to Deutsche Post

<sup>124</sup> It is sometimes a question of interpretation.

<sup>125</sup> Source of information: PAIiZ [2003c]: page 5, PAIiZ [2004a]: page 7, PAIiZ [2004c]: page 1.



World Net, and since that point in time both companies did not act separately anymore on the Polish market. In 2002 however both companies were individually listed in the PAIiZ statistics.

To avoid overrating such as double counting of the FDI amounts and of the number of foreign direct investors in the Polish market, and thus receiving misleading results of the research, it was crucial to understand whether the stated investment amounts reflected the merger or acquisition, i.e. whether, for example, the investment amounts of the incorporated company had been included in the presented figures of the acquiring company.

Among the group of companies suddenly removed from the PAIiZ statistics, there were also companies that are still active in the Polish market (e.g. Easy Call TM, formerly known as Bel Pagette).

It was not always clear from the statistics whether a company's name had changed over time or whether some companies were connected with each other, and this required further analysis.

It was also necessary to exclude some names of foreign investors from the list of companies as they, according to the FDI definition applied in this research, did not belong to the group of companies of interest. From the FDI definition's perspective the investment approach of these companies was different. The companies in questions were for example private equity investors, funds, or international organisations, such as the EBRD<sup>126</sup>, HM Capital (formerly Hicks Muse Tate & Furst) and Argus Capital Partners. As their investment approach is either more risk or return oriented (equity investors), or intended to support the economy, a specific sector in a country or region (international organisations), these investments strictly seen could not be regarded as FDI and were therefore not of interest for purpose of this research.

The PAIiZ statistics also contained some names of foreign investors (e.g. Necoless Investments B.V., RCI Rocon, and Cassa di Risparmio di Padova) where it was not possible to find further information about the company itself or their investments made in Poland. Due to these issues those companies could not be contacted, and the obtained information from the PAIiZ statistics could not be verified. These companies were therefore left out of the following analysis and comparison.

It occurred that there were some cases where the name of the investment in Poland was stated instead of the foreign investor's name or where the investor itself was Polish and thus, the investment couldn't be interpreted as FDI. One example is K. Olszewski and his creation of Solaris Bus & Coach (formerly Neoplan Poland<sup>127</sup>). Again as these foreign investors and their investments did not fit into the definition used in this study they were not taken into further consideration.

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<sup>126</sup> EBRD - European Bank for Reconstruction and Development.

<sup>127</sup> See: [http://www.solarisbus.pl/english\\_site/historia.html](http://www.solarisbus.pl/english_site/historia.html)

#### 4.2.2 Other Limiting Aspects of the PAiIZ Statistics

Another difficulty experienced was the question whether the FDI definition's three capital components (see chapter 3.1.1) had been taken into consideration. It needs to be noted that the PAiIZ statistics did not provide an explanation which investment amounts had been considered to belong to FDI.

The exchange rates applied in the statistics were another issue that required some reflections. The statistics itself did not reveal whether and what rates had been used. However, as this study focuses on investments made between 1989 and 2003, during which time the exchange rates strongly fluctuated; the need to apply consistent conversion methods became apparent.<sup>128</sup>

The sector definition in the PAiIZ statistics is different in comparison to the definition used in this study (see chapter 3.3.2 and 3.3.3 for further explanations), therefore the data extraction from the statistics needed to be adapted accordingly.

Some companies that had merged or been incorporated since 1989 stated ambiguous information on their websites. Commercial Union, for example, was incorporated into CGU which was then renamed into AVIVA. AVIVA stated on its website that the company is active in Poland since 1992, while Commercial Union presented 1991 as the market entry date<sup>129</sup>. A possible explanation for this discrepancy might be the fact that for a long time<sup>130</sup> the foreign companies were required to receive the Polish ministry's permission to enter the Polish market, before they actually could start with any investments. The dates mentioned on the companies' websites can therefore refer to different years; depending on how the word "market entry" had been defined, i.e. whether the start of real business activities or the date of certificate application was considered.

As this research aims to analyse whether the market entry date had an impact on the company's determinants to enter the Polish market it was necessary to define how to approach this issue in a consistent way.

In relation to the foreign direct investors' websites another issue often experienced was the discrepancy between stake figures or investment amounts as shown in the statistics and on the respective website (e.g. The PAiIZ statistics for 2003 stated that Commerzbank AG held a 50% stake in BRE Bank S.A. The company's website however mentioned a share of 72.16%.<sup>131</sup>). This also required further investigations.

In the course of the verification of the PAiIZ statistics some new company names could be added to the list and some existent names could be linked to one or several other of the infrastructure sectors. Tryg i Denmark, for example, had not been part of the FDI company list, and the comments for General Electric did not include the company's investments in the Insurance sector.

<sup>128</sup> The method used for this research is explained in chapter 5.2.1.

<sup>129</sup> The compared websites are <http://www.aviva.com> (referring to year 1992) and <http://www.morgan-consulting.net/McmEnglish/english/Articles/PolishLifeIns.html> (referring to year 1991).

<sup>130</sup> The time frame differed among the business sectors.

<sup>131</sup> For reference please see: <http://www.brebank.pl/brebank/index.jhtml?context=63015>.

### 4.2.3 Establishment of Company List

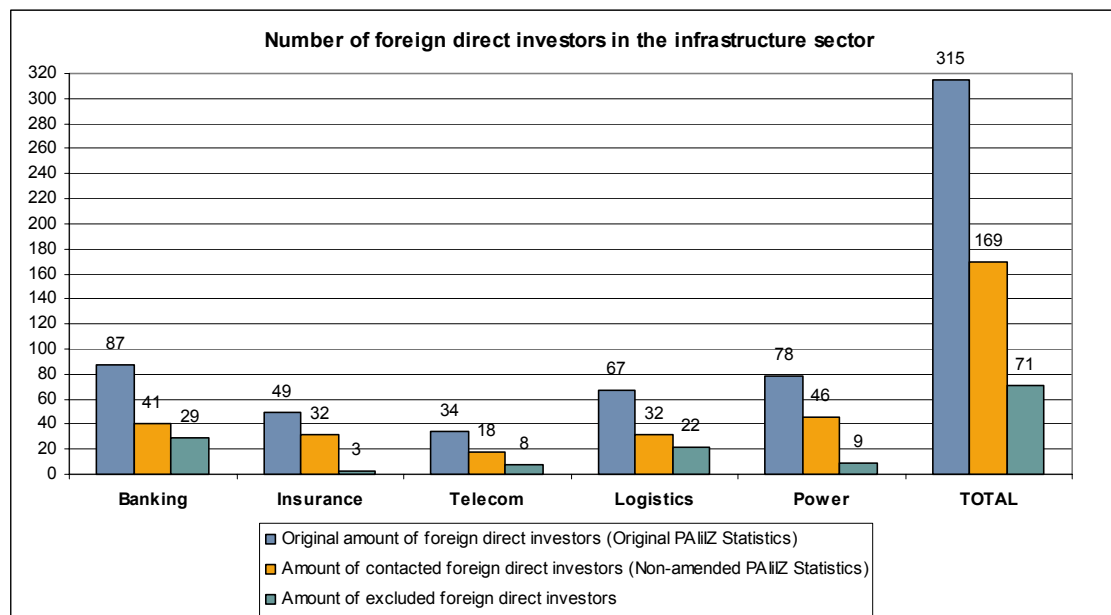
The discrepancy and sometimes heterogeneity of statistical data showed that the information received from the PAIiZ statistics (secondary data<sup>132</sup>) could not be used without verification, i.e. the existent statistics were not sufficient and did not match the requirements of the research. The acquisition of primary data was therefore necessary. This resulted in the target and goal to prepare an improved and extended table of the FDI stock for each of the chosen infrastructure sectors in Poland between 1989 and 2003.

The adaptation of the statistics involved the verification of the data and, if necessary, the data's amendment. The initial information was taken from the PAIiZ statistics and was then compared with information from official sources such as the company's website and press announcements. Additionally, it was aimed to get further confirmation from the foreign companies themselves.

The PAIiZ statistics (further "Original PAIiZ Statistics") initially contained 313 names of foreign direct investors for the five sectors of interest. Having perceived the above-mentioned difficulties, the PAIiZ statistics were amended accordingly, i.e. it was assessed whether all 313 names could be taken into consideration for further analysis and research. The amount was eventually reduced to 169 names of foreign companies (further "Non-amended PAIiZ Statistics") which then were contacted in the course of this research, while 71 foreign direct investors were fully left out from further consideration.

Figure 4 shows the number of foreign companies before and after the adaptation belonging to each of the chosen infrastructure sectors.

**Figure 4: Number of Foreign Direct Investors Before and After the Adaptation**



Source: own presentation

<sup>132</sup> See Saunders et al [2000] for more explanations about primary and secondary data.

The figure reflects that the sum of the number of contacted companies and the number of excluded companies is not equal to the original number of companies. This is due to the fact that the original number of companies contained inconsistencies (as explained above).

For the individual company names please refer to Attachment 4.

### 4.3 Questionnaire

#### 4.3.1 Market Research Theory

For the collection of primary data, the market research theory<sup>133</sup> had been chosen. This study only focuses on the aspects that were important for the research. For more detailed information about market research please refer to Hague and Jackson (1998) and Saunders et al (2000).

##### 4.3.1.1 Survey Type

The theory distinguishes between total and partial surveys. A total survey examines all units (totality) of observations of the field of interest, also called the population<sup>134</sup>, while the partial survey focuses on a selection of units from the population, defined as sample.<sup>135</sup>

In case the population, i.e. its total amount of observations is not high<sup>136</sup> and thus, it is possible to capture all units, it is most appropriate (and recommended) to apply the total survey. However when a partial survey is the best mean to gather the needed data, the sample's criteria<sup>137</sup> need to be clearly determined to assure unbiased samples.<sup>138</sup>

The population in question for this research were all foreign companies that have chosen FDI to enter the Polish infrastructure market. The companies of interest were those who had been active in the Banking, Insurance, Telecommunications, Logistics and Power sector. As according to the statistics available ("Non-amended PAIiZ Statistics") the totality within one and among all chosen sectors was manageable (169 companies in total), the examination of the population was reasonable and thus a total survey was executed.

<sup>133</sup> The aim of market research is to systematically collect, analyse, and interpret heterogeneous data in a meaningful way and thus to reflect the reality. The received data are understood as statements about the reality. The result will either approve or reject the hypothesis in question, (Dichtl et al (1993b): page 1401 f. and Hague and Jackson [1998]: page 3 ff.)

<sup>134</sup> A population, which must be clearly defined, is a collection of individuals or items and can refer to any field of interest for observation (e.g. people, events, objects). (Saunders et al [2000]: page 150, Website 5)

<sup>135</sup> Source of information: Hague and Jackson [1998]: page 38 ff., Kotzent und Waiguny [2002]: page 15 and 22 f., Mansfield [1990]: page 4 f., Saunders et al [2000]: page 150 ff., Website 5, Website 6, Website 7.

<sup>136</sup> In general there are cost and time constraints in place that prevent an observation of the population. It should also be noted that often access to these data is restricted; however for most purposes a total survey is not necessary as the accuracy levels of the sample can be determined. (Hague and Jackson [1998]: page 38 ff., Saunders et al [2000]: page 150 f.)

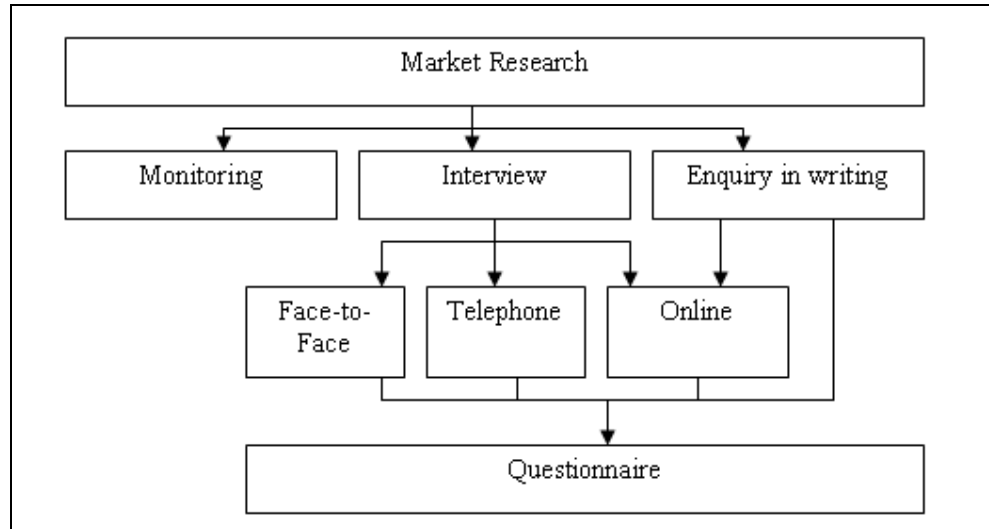
<sup>137</sup> A sample is the random extraction of a certain amount of units from the population under pre-defined criteria. For further information about samples and the selection of samples please see Kotzent und Waiguny [2002]: page 22 f., Hague and Jackson [1998]: page 38 ff., and Saunders et al [2000]: page 150 ff.

<sup>138</sup> Unbiased samples are a representative selection of the population. They correctly reflect the population's characteristics and therefore allow a credible and convincing analysis and interpretation. (Hague and Jackson [1998]: page 38 ff., Website 5)

#### 4.3.1.2 Market Research Method

Market research can be undertaken through the application of different methods such as an interview, an enquiry in writing, or monitoring. Figure 5 gives an overview of these methods:

**Figure 5: Market Research Methods**



Source: own presentation

For the purpose of this research, monitoring as a mode of data collection was not applicable as the required data refer to past events (retrospective research). Thus, only the interview or the enquiry in writing had to be assessed against each other in order to choose the most appropriate method.

Interviews can either be face-to-face, online, or telephone interviews. Like enquiries in writing, they require the preparation of a questionnaire, whereby only in the case of an online interview or an enquiry in writing the interviewee is able to see the questions directly.<sup>139</sup>

Due to the fact that the companies in question for this research are internationally active and due to time and cost constraints it was not feasible to choose the face-to-face interview as the applied market research method. An online interview requires the possession of specific software, and was thus difficult to apply. A telephone interview also did not appear to be practicable as there were no established company contacts. Furthermore, due to the nature of the questions a random person in the contacted companies would not have been able to answer the questionnaire.

The data required from the companies mainly refer to the companies' corporate strategies, and thus are highly confidential and sensitive. The questions needed to be answered by

<sup>139</sup> Face-to-face and telephone interviews are difficult to implement when there is no established direct contact, and they can also be very time consuming. The advantage of these methods however is the fact that the interviewer can directly see the interviewee's reaction to the raised questions. However a questionnaire in writing (via mail or e-mail) as well as an online interview gives the interviewee the possibility to answer when convenient. Furthermore, it ensures that the questions are always raised in the same way. The disadvantage of a questionnaire in writing is that it is not possible or very difficult to go back to the interviewee in case an answer is not entirely clear: (Hague and Jackson [1998]: page 38 ff. and 86 ff., Saunders et al [2000]: page 242 ff., Website 8.)

someone who not only possesses the knowledge, but who also would be authorised to provide this information.

An enquiry in writing therefore appeared to be the most appropriate way to establish confidence in the request, research, expressed guarantee of confidentiality and information treatment.

#### 4.3.1.3 *Questionnaire Theory*

The intention of a questionnaire<sup>140</sup> is to acquire the precise information needed for the research. The questionnaire's content, type and form are influenced by different sources such as the chosen market research method, the theory in question, existing questionnaires referring to the subject and experience with questionnaires.

A questionnaire mainly consists of several thematic blocks containing questions. These blocks and questions are put in a logical order to guide the interviewee through the questionnaire.

Questions, also called items or statements, can be classified in the following way: open and closed questions. As it will be shown later, both question types have been applied in the created questionnaire.

Closed questions are also called multiple choice or closed-ended questions, while another term commonly used for open questions is open-ended questions.<sup>141</sup> A mixture of both questions, called hybrid questions, is also possible. In that case it is common to start with the closed question followed by an open question.

In most cases closed questions apply a scale also known as "Likert Scale" or "Likert-scaled items"<sup>142</sup>. Research has shown that a scale consisting of 5 steps (answer possibilities) is most credible and appropriate. The created questionnaire therefore also applied a "5 step" scale.

In general, answers to open questions are coded in order to allow their comparison and analysis. The coding however is only appropriate when there are enough answers and when it makes sense to compare the results.

Each question type classification has its advantages and disadvantages for the interviewer as well as for the interviewee<sup>143</sup>. Open questions, for example, are regarded as less influencing for the interviewee however the answering is in general more time consuming than closed questions. From the interviewer's point of view, open questions are difficult to analyse and require much time, but simultaneously they allow the questions to be asked in a different (and more explanatory) way. Due to the predefined band of answers closed questions can be

<sup>140</sup> Saunders et al (2000) define a questionnaire as a set of questions in a predetermined order (that a interviewee is asked to answer). (Saunders et al [2000]: page 278)

<sup>141</sup> See: Hague and Jackson [1998]: page 52 ff., Saunders et al [2000]: page 290 ff., Website 8.

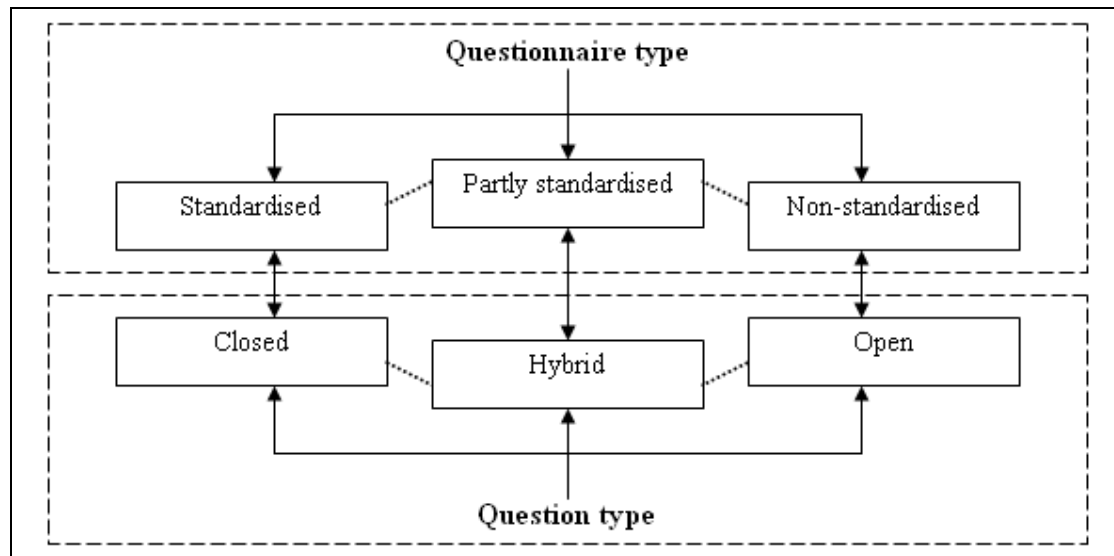
<sup>142</sup> Rensis Likert developed in 1932 a method to measure given answers. The method applies scales, whereby the pre-defined answers are a mixture of numbers and words. Mostly the outer answers are words and numbers while the other answer possibilities are only shown as numbers (e.g. 1 = very important, 2, 3, 4, and 5 = not important at all). For further information, please see Dichtl et al (1993b): page 1320 f. and Hague and Jackson [1998]: page 108 f.

<sup>143</sup> The following paragraph only presents the most important pros and cons for each question type. For further distinctions, please refer to literature focusing on this subject (e.g. Website 7).

answered and analysed more quickly and easily. The danger of closed questions however is that due to this predetermination the given answers can be less accurate and thus, the result can be seen as less significant.<sup>144</sup>

A summary of questionnaire types and the respectively applied question type is shown in the figure below:

**Figure 6: Questionnaire and Question Types**



Source: own presentation

When setting up a questionnaire, several important issues need to be taken into consideration. The failure of paying attention to them can lead to incorrect answers and results. It is, for example, crucial to highlight and reassure that the interviewee's answers will not be revealed on an individual basis but will be merged together with answers from several other interviewees. The interviewer also needs to explain the questionnaire's format and the purpose of the research. The questionnaire's structure, i.e. the order of thematic blocks, has to follow a certain logic, and the interviewer should be aware that the questionnaire's length as well as the way and order the questions are raised will always influence the interviewee's answer(s). Questions need to be non-ambiguous (e.g. avoidance of abbreviations) and neutral (e.g. avoidance of double negations).<sup>145</sup>

It is recommended to perform pre-tests of the created questionnaire, but this is only possible when the population is large enough.<sup>146</sup> The size of the population in question for this research did not allow considering pre-tests. However, feedback received on the first questionnaires sent out was used to analyse the suitability and comprehensiveness of the questionnaire. Therefore the feedback could be interpreted as a specific form of pre-testing.

<sup>144</sup> Source of information: Saunders et al [2000]: page 292 ff., Website 7, Website 8.

<sup>145</sup> The presented issues are not exhaustive, but intend to give some ideas of the complexity of questionnaires. For further reflections with respect to these issues please see Hague and Jackson [1998].

<sup>146</sup> See: Kotzent und Waiguny [2002]: page 18 ff., Saunders et al [2000]: page 305 ff.

### 4.3.2 General Structure of the Created Questionnaire

The questionnaire was designed in below described way as it was intended to facilitate the completion of the questionnaire and reduce the time required for the completion.

The opening letter of the created questionnaire<sup>147</sup> briefly explained the aim of the research and the subsequent need of information from the contacted company. Furthermore, it contained an assurance and statement that as the requested data was highly confidential all given answers would be treated confidentially and made anonymous. Following the short introduction, the questionnaire's structure and pre-defined answer possibilities were presented.

The questionnaire prepared and used for the purpose of data collection consisted of two parts, which are the General and the Company Specific Part.

The focus of the questionnaire's part one (labelled "General Part") was to collect data from each identified foreign direct investor which could then be compared against each other while the second part, i.e. the "Company Specific Part", aimed to verify and enlarge the data gathered from the Non-amended PAIiZ Statistics.

The question type used in both parts of the questionnaire was different, i.e. the General Part was applying closed questions, while the Company Specific Part used open questions. The questionnaire was therefore composed of two questionnaire types, the standardised and the non-standardised. It was understood that the closed questions limited the interviewee's answer possibilities; therefore the option for additional comments was given.

The closed questions applied the "Likert scale" with answer possibilities from 1 to 5. In the case of this research it was not necessary to set up a code as the raised open questions were company specific and aimed to verify the existing statistical data.

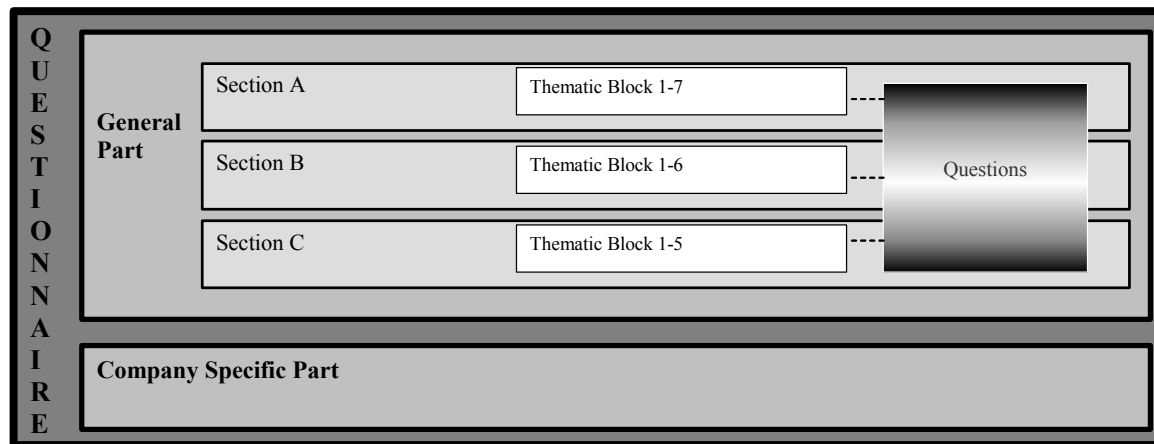
Figure 7 provides an overview of the general structure of the questionnaire.

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<sup>147</sup> An exemplary questionnaire can be found in Attachment 5.

Note: A letter of support granted by the Polish Embassy (i.e. the Commercial Attaché) accompanied the questionnaire sent out to the foreign direct investors. This letter of support can be found in Attachment 6.



**Figure 7: Overview of the Questionnaire's General Structure**

Source: own presentation

The structure of the questionnaire reflects a tree structure. As shown in Figure 7, the questions raised in each section were not always independent, i.e. some questions needed to be repeated in one of the other sections, where they were referred in different contexts and thus provided different answers.

#### 4.3.2.1 General Part of the Questionnaire

The General Part of the questionnaire was further split into three sections. The questions in the three sections reflect the chosen criteria for FDI analysis (see chapter 4.1). The first two sections are aimed to focus on FDI determinants, while the third section is emphasizing the FDI company forms.

Each of the first two sections contained one table with several questions. These questions were grouped into thematic blocks, whereby the order of the questions did not necessarily reflect the order of the thematic blocks.

Section A is titled “Criteria for market entry” and aimed to investigate which determinants had been of importance for the company when deciding about their entry into the Polish market.

The section's questions were grouped in the following way: The first questions were related to the market and the access to natural resources and/or production material. The following three thematic blocks focused on the country's economic and political situation, the market infrastructure and the progress in the respective sector. The subjects of the final thematic blocks were company internal criteria and the country's efforts to attract FDI.<sup>148</sup>

The second section, Section B, focused on the “Market entry related constraints” and its purpose was to investigate which determinants had posed the strongest constraint for the company's entry into Poland. The six thematic blocks chosen for this section were:

<sup>148</sup> For more details about the questions belonging to each thematic block, please refer to Attachment 7.

country's reliability, company internal criteria, economic situation, market infrastructure, country's regime and country's FDI policy.<sup>149</sup>

The section "Mode of market entry" was the third and final section of the General Part of the questionnaire (Section C). The intention of the questions raised in this section was to analyse whether

- i) the company form had changed over time,
- ii) certain company forms were predominant in specific infrastructure sectors, and
- iii) the chosen company forms could be connected with unambiguous reasons.

Section C contained two tables. The first table's questions referred to the initial and all subsequently chosen company forms. The table also applied closed questions; however the answer scale differed in comparison to the other questions in the General Part. The answer possibilities for this table were pre-defined company forms. The questions in the second table of Section C inquired the reasons for the company form chosen for the initial market entry. This table consisted of five thematic blocks which were company internal criteria, country's given situation, access, sharing and ability to construct an establishment according to specific requirements of the business.<sup>150</sup>

#### 4.3.2.2 *Company Specific Part of the Questionnaire*

As mentioned earlier, the aim of the questionnaire is not only to acquire new primary data<sup>151</sup> but also to confirm and upgrade the existing secondary data (received through the Non-amended PAIiZ Statistics). This aim was achieved by incorporating a Company Specific Part into the questionnaire.

The Company Specific Part of each sent questionnaire contained at least one<sup>152</sup> table representing the investment information as received from the Non-amended PAIiZ Statistics and through own research (company websites, etc.).

The table following the presentation of the company's investments raised questions referring to this information. The number of questions differed from one questionnaire to another. It depended; for example, whether the information as stated in the Non-amended PAIiZ Statistics had been confirmed by the information gathered from other public sources.

Even though the questions differed from one questionnaire to another, each questionnaire nevertheless contained identical questions, which referred to the year of market entry and the request to correct and/or add missing information.

<sup>149</sup> For more details about the questions belonging to each thematic block, please refer to Attachment 7.

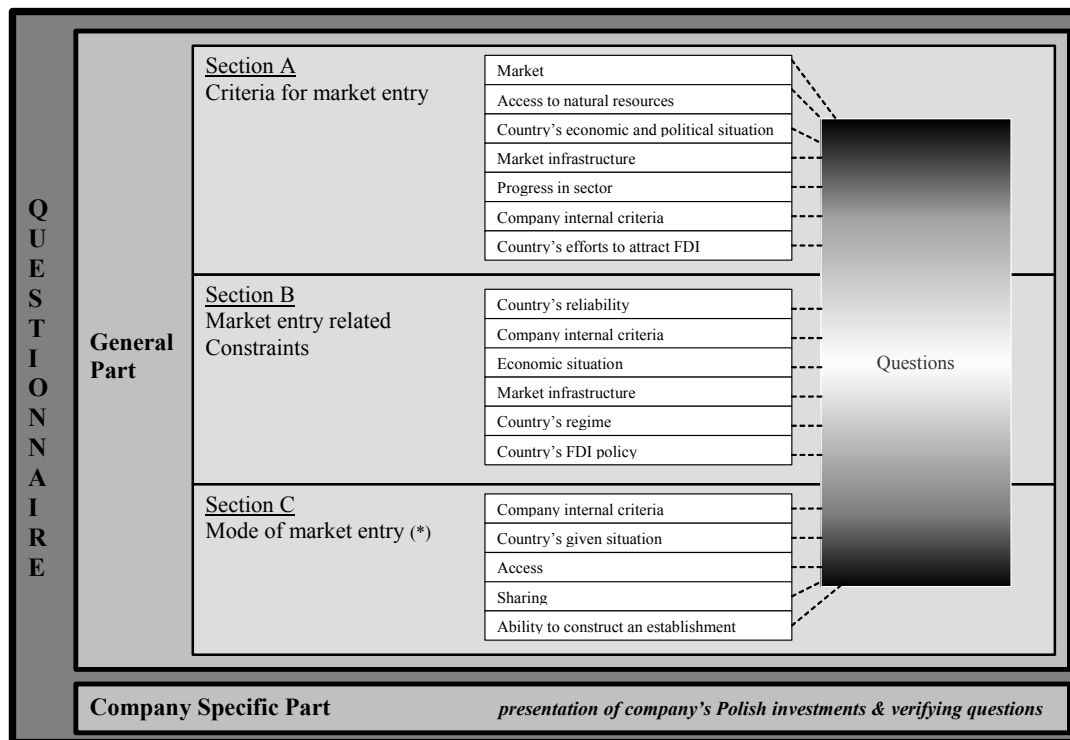
<sup>150</sup> For more details about the questions belonging to each thematic block, please refer to Attachment 7.

<sup>151</sup> Primary data are further explained in Dichtl (1993b): page 1401 f.

<sup>152</sup> Note: In case the foreign company had merged with or was incorporated into another company the information of the related companies was as well shown in the questionnaire. Aviva, for example, which originally was named CGNU, was the result of the merger of CGU and Norwich Union. CGU itself was established through the merger of General Accident and Commercial Union. Prior to the establishment of Aviva, Norwich Union as well as Commercial Union and thus also CGU had been active in the Polish market. The questionnaire for Aviva therefore not only showed Aviva's Polish activities, but also included a table representing Commercial Union's, CGU's, and Norwich Union's pre-merger investment activities.

Figure 8 provides a summary of the questionnaire's detailed structure.

**Figure 8: Summary of the Questionnaire's Structure**



(\*)Table 1 in Section C, which is enquiring the company's initial and all following modes of market entries is not shown in Figure 8. This is due to the fact that the three questions raised in that table were separate from the other thematic blocks. However, these questions were a pre-requisite for the interpretation of the received answers.

Source: own presentation

Even though some of the thematic block's names within the questionnaire's General Part are identical (e.g. company internal criteria) the questions raised in that block were not automatically identical. This is due to the fact that each section's and thus also the thematic block's focus and context is different.

#### 4.3.2.3 Specific Features of the Questionnaire

As the research focused on several infrastructure sectors, it was also necessary to adapt the questionnaire to each sector, i.e. when contacting a company active in a specific sector, the questions needed to refer to this particular sector.

The questionnaire's sector reference was very important for this research because one of the fields of interest was to analyse whether the FDI determinants and company forms are linked to the sector of the company's activity.

When a company operated in several sectors (e.g. Siemens AG) a questionnaire for each sector was prepared and the company was asked to answer them separately.

An exemplary questionnaire can be found in Attachment 5. In this questionnaire the areas of adaptation are marked through [xxx].

## 5 Data Analysis

### 5.1 Analysis of Questionnaire Return

Out of a total of 169 contacted companies 72<sup>153</sup> companies answered the questionnaire, which equals a return rate of approximately 43%. The usual return rate of questionnaires lies in general below 10%. Therefore an answer rate of 43% represents a very good result.<sup>154</sup>

Table 6 shows that approximately one third of the received answers stems from the Power sector, which had also been the sector with the highest amount of contacted companies.

The lowest return rate was achieved in the Telecommunications sector where only 5 out of 18 contacted companies answered the questionnaire. These five companies however were those with the highest investment amounts in the Telecommunications sector (see Table 9 on page 58).

**Table 6: Number of Contacted Companies and Received Answers**

Sector	Contacted companies	Received answers	Return rate
Banking	41	16	39.02%
Insurance	32	13	40.63%
Telecommunications	18	5	27.78%
Logistics	32	13	40.63%
Power	46	25	54.35%
<b>TOTAL</b>	<b>169</b>	<b>72</b>	<b>42.60%</b>

Source: own calculation

In order to determine whether the received amount of answers could be considered to represent the population, the Kolmogorov-Smirnov-Test had been performed. This test is in comparison to other (distribution) tests applicable for small populations.

The Kolmogorov-Smirnov-Test analyses whether the sample is representative of the population by determining whether two datasets differ significantly from each other.

In the case of this research, the sample is the amount of answered questionnaires, and the population is the amount of contacted companies.

The formula of the Kolmogorov-Smirnov-Test is as follows:

$$D = \max \text{ABS}(F_n(x) - F(x))$$

whereby  $F_n(x)$  represents the distribution function of the sample,  $F(x)$  the hypothetical distribution function of the population, and ABS the absolute value.

<sup>153</sup> Please see Attachment 8 for the list of company names that have answered the questionnaire.

<sup>154</sup> See: Website 10.

Table 7 presents the calculations for the Kolmogorov-Smirnov-Test.

**Table 7: Calculations for the Kolmogorov-Smirnov-Test**

Sector	Contacted companies F(x) (cumulative proportion)	Received answers F <sub>o</sub> (x) (cumulative proportion)	Deviation D
Banking	24.26%	22.22%	2.04%
Insurance	43.20%	40.28%	2.92%
Telecommunications	53.85%	47.22%	6.62%
Logistics	72.78%	65.28%	7.50%
Power	100.00%	100.00%	0.00%

Source: own calculation

The deviation D is the difference between the cumulative proportions of the contacted companies and the answers received from the companies. The largest deviation amounts to 0.0750 (7.50%) which is lower than the critical value<sup>155</sup> obtained from the Kolmogorov-Smirnov-Table<sup>156</sup> for a sample size of 72 and a significance level  $\alpha$  of 0.01 (1%).

According to the Kolmogorov-Smirnov-Test, it can be concluded that the distribution of the received answers does not differ significantly from the total population and with a probability of less than 1% two populations are independent from each other. Therefore the received answers are representative and reflect the distribution between the sectors.

This result shows that it was possible to analyse the received data and draw conclusions about the population.

## 5.2 New Statistics

The newly created statistics for FDI data in the infrastructure sector in Poland within this study will be referred to as “New Statistics”. They cover the period between 1989 and 2003, while the PAIIZ statistics are only available for the years 1996-2003. Hence, the following comparison will mainly focus on the results from 1996 to 2003.<sup>157</sup>

The New Statistics do not claim to be entirely correct, however they are more consistent in their approach and thus are more likely to be accurate (than the existing statistics) as many details such as year of market entry and the investment amount have been confirmed by the companies and other sources (e.g. company websites). Furthermore, due to added comments, the New Statistics permit easier examination and understanding of the development in each sector.

<sup>155</sup> The critical value amounts for this sample size and deviation to 0.1921 (19.21%).

<sup>156</sup> The Kolmogorov-Smirnov-Table can be found here:

<http://www.eridlc.com/onlinetextbook/index.cfm?fuseaction=textbook.appendix&FileName=Table7>

For more detailed information about the Kolmogorov-Smirnov-Test, please refer to Saunders et al [2000]: page 360 ff. or Bleymüller et al [1994]: page 133 ff.

<sup>157</sup> The graphs in the analysis below however represent all available information, i.e. also reflect received data and figures prior to 1996.

### 5.2.1 Preparation Method

With the help of the answers from the Company Specific Part of the questionnaire the New Statistics for each sector were set up. In order to be consistent and to enable others to analyse the statistics and to understand what had happened in the chosen sectors over time with respect to the FDI flows and FDI stock, certain rules and procedures had to be applied when establishing the statistics and preparing them for further analysis.

A table for each of the chosen infrastructure sectors was set-up. Thus, it was possible to quickly examine each sector's foreign direct investment activities.

In the New Statistics the year of the market entry for each company was marked in yellow. This gave a brief overview of the distribution and trend of market entry dates.

For each selected infrastructure sector, the order of foreign company names shown in the New Statistics was established with the following method:

The foreign companies in the initial year<sup>158</sup> (year x) were ordered alphabetically. In the following year (year x+1) this order was kept and all newly entered foreign direct investors were put below, again in an alphabetical order. The order from year x+1 again was kept for the next year (year x+2) and the newly arrived foreign companies were added in alphabetical order below. This method was kept throughout the entire period of analysis.

Figure 9 shows an example of the method applied.

**Figure 9: Methodology for Listing Foreign Direct Investors' Names**

<u>Year x</u>	<u>Year x+1</u>	<u>Year x+2</u>
Company aa	Company aa	Company aa
Company ac	Company ac	Company ac
Company ba	Company ba	Company ba
	Company ab	Company ab
	Company bb	Company bb
		Company ca

Source: own presentation

The method described above ensured that the company's name was always listed in the same position in the statistics and thus it was easy to follow whether the company was still active in the respective infrastructure sector or whether the company had, at a later point in time, left the country, been acquired by, or merged with another company.

It has to be noted that the New Statistics did not solely contain information received through the answers from the questionnaire. Foreign direct investors' names were also listed if they had merged with, or been acquired by another company, at any time throughout the transformation process, and one of the companies involved had answered the questionnaire. Bank Austria, for example, which now belongs to the HVB Group had answered the questionnaire, and thus both companies were included in the statistics. Due to this approach, it was possible that the number of companies stated in one year for one particular sector was higher than the total number of actual answers received for this sector<sup>159</sup>. Companies that did

<sup>158</sup> The initial year for the analysed infrastructure sectors is either 1989 or 1990, depending on the first confirmed market entry.

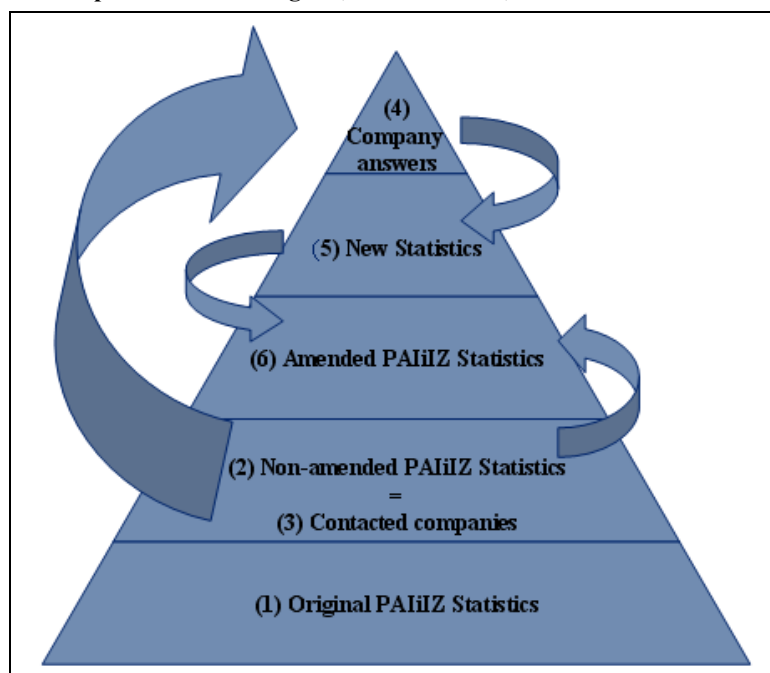
<sup>159</sup> This however was only possible in the New Statistics. The amount of answers analysed in the General Part of the questionnaire could not be greater than the amount of received company answers.

not reply or were not directly linked through a merger or acquisition to one of the foreign investors that had replied were not listed in the New Statistics. This method was chosen to ensure the consistency of results and to provide an explanation as to why some companies (later) disappear from the statistics.

For the purpose of comparability, the PAIiZ statistics used for the analysis did not take all foreign investors that had entered the respective sector into consideration, but only presented those that had been considered in the New Statistics. All other company names in these sectors had been left out of further analysis as there was no verified data to compare with. These shortened statistics will be called “Amended PAIiZ Statistics”.<sup>160</sup>

Figure 10 shows the link between the Original, Non-amended, Amended and New Statistics.

**Figure 10: Relationship Between the Original, Non-amended, Amended and New Statistics**



Source: own presentation

The numbers (1) to (6) in the figure above indicate the steps taken for the creation of the New Statistics and the decrease in the number of foreign direct investors.

The order of companies in the Amended PAIiZ Statistics was adjusted from a descending order with respect to the FDI amount to the order chosen for the New Statistics (reflecting the market entry). In the Amended PAIiZ Statistics, the names of the foreign direct investors were also highlighted when appearing for the first time. This facilitated the comparability of both, the Amended PAIiZ and the New Statistics, and also highlighted some of the earlier described PAIiZ inconsistencies.<sup>161</sup>

<sup>160</sup> **Note:** The Non-amended PAIiZ Statistics are not equal to the Original PAIiZ statistics, but represent the totality used for this research, i.e. those foreign direct investors that have been contacted. The Non-amended PAIiZ Statistics contain in each sector less company names than the Original PAIiZ Statistics because as explained earlier (see chapter 4.2.3) there were companies that had been excluded from further analysis.

<sup>161</sup> See chapter 4.2 for a more detailed description of the difficulties experienced with the PAIiZ statistics.

Foreign direct investors' names in the Amended PAIiZ Statistics were not corrected, whilst the names applied in the New Statistics reflect organisational changes. Furthermore, companies that had been listed in the Amended PAIiZ Statistics for too many years<sup>162</sup> were also kept to present the data as received from the PAIiZ.

The above approach represents some of the reasons why the number of foreign direct investors in the Amended PAIiZ and New Statistics was not identical. However, the number of foreign direct investors as shown in the New Statistics was not necessarily lower than the number of companies in the Amended PAIiZ Statistics. A detailed analysis of the number of foreign direct investors in both statistics is presented further below (see chapter 5.2.2.2).

The detailed structure of the Original PAIiZ Statistics with regards to the FDI amount and investment comments was largely kept, but some features such as the country of origin and planned investment amount were left out as they were not of interest for this research and had not been inquired in the questionnaire.

A small amount of companies was only able to provide investment amounts in a currency other than USD (e.g. PLN<sup>163</sup>, DM and Euro). In these cases the average exchange rate for the respective year, as provided by the website <http://www.oanda.com/convert/fxhistory>, was used to convert the investment amount into USD. This amount was kept and investments occurring in later years were then converted at the exchange rate of the year in question and were then added to the previous investment amount.

Several companies supported this study with answers for the General Part of the questionnaire but were not allowed (e.g. due to company policy) to answer any question in the Company Specific Part. Furthermore some companies, mainly those that were active in several sectors<sup>164</sup> (e.g. Siemens AG) were in general not able to provide the investment amounts for each sector. In these cases the FDI information as gathered from different sources was used for the New Statistics, while the investment amounts as stated in the Amended PAIiZ Statistics were used in the New Statistics. A note was added to highlight that the investment amount had not been confirmed and was therefore taken from the Amended PAIiZ Statistics. In case the foreign investor was active in several sectors, it was pointed out in both statistics (the Amended PAIiZ and the New Statistics) that the investment amount was overstated. However, as both statistics applied the same investment figures, they were both overstated, and thus they distorted the FDI inflow and FDI stock equally.

The New Statistics and Amended PAIiZ Statistics were additionally equipped with comments to further explain certain company developments.

The changes described above were the only amendments made to the Amended PAIiZ Statistics, but they were necessary for the analysis below.

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<sup>162</sup> ERGO International AG, for example, acquired Alte Leipziger's Polish investments in 2000. Alte Leipziger however appeared in the statistics until 2003.

<sup>163</sup> PLN is the currency code of the Polish zloty.

<sup>164</sup> In the New Statistics, the investment information shown for foreign direct investors that were active in several sectors were always adapted for the respective sector, i.e. investments outside the sector were not stated. This again aimed to ensure a visibility of the investments made in the sector.



Table 8 provides a summary of the rules and methods applied to present the New Statistics and to make the Amended PAIiZ Statistics comparable.

**Table 8: Summary of Applied Methods to Prepare and Present the Collected Data**

Applied method	New Statistics	Amended PAIiZ Statistics
Highlighted market entry date for each foreign direct investor	yes	yes
Companies in alphabetical order in respect to market entry date	yes	yes (*)
Exclusion of companies from the statistics where no answers had been received	yes	yes
Exclusion of companies from the statistics that were not linked through a merger or acquisition	yes	yes
Exclusion of investment information for companies that were active in several sectors that did not belong to the presented sector	yes	yes
Correction of investment amounts	yes	no
Correction of period (length) of the company's presence in the Polish market	yes	no
Takeover of PAIiZ investment figures in case no answer had been provided	yes	n/a
Provision of additional comments for the statistics	yes	yes

(\*) The order of the companies in the Amended PAIiZ Statistics reflects the alphabetical order of the New Statistics.

Source: own presentation

In Attachment 9 the company names and their appearance in the respective years and sectors in the Amended PAIiZ Statistics and New Statistics are shown. The investment amounts gathered in the New Statistics are presented in Attachment 10 in more detail.

## 5.2.2 Comparison of the PAIiZ Statistics and the New Statistics

### 5.2.2.1 The New Statistics in Comparison to the Non-amended PAIiZ Statistics

The New Statistics can be regarded as being representative for each of the chosen sectors. As stated in chapter 5.1 the received answer distribution does not differ significantly from the population.

Additionally, Table 9 shows that the infrastructure market share covered through the questionnaires is in general above 50%, i.e. the foreign direct investment amounts in the New Statistics represent more than 50% of the investment amount as stated in the Non-amended PAIiZ Statistics.

**Table 9: Market Share Ratio of the New Statistics**

Sector	Banking	Insurance	Telecom	Logistics	Power	Total
Market share ratio <sup>165</sup>	64.11%	69.17%	67.14%	42.54%	33.47%	55.96%

Source: own calculation

In three sectors, namely the Banking, Insurance and Telecommunications sector, the market share ratio is even higher than 60%. The Logistics and Power sector reveal only a ratio of 42% and 33% respectively, but it would not be correct to conclude that the received data is not representative for these two sectors.

The market share ratio for the Logistics sector is not entirely accurate as the Non-amended PAIiZ figures are overstated. The investment amounts stated in the Non-amended PAIiZ Statistics for Alstom and GATX Overseas Holding Corporation, for example, are respectively up to 6 and 2.3 times higher than the figures received through the questionnaires. This difference might be the result of ambiguities with respect to the term foreign direct investment and the investment amounts regarded as FDI.

The same overstating argument applies to the Power sector. Vivendi, for example, from whom no answer was received, possesses a high share (approximately 26%) in the total foreign direct investment amount as shown in the Non-amended PAIiZ Statistics. This strongly influences the market share ratio in the table above. However, when taking into consideration that the company is active in several sectors, the actual amount invested in the Power sector must be lower, hence Vivendi's market share is lower too and the calculated market share ratio for the Power sector would be higher.

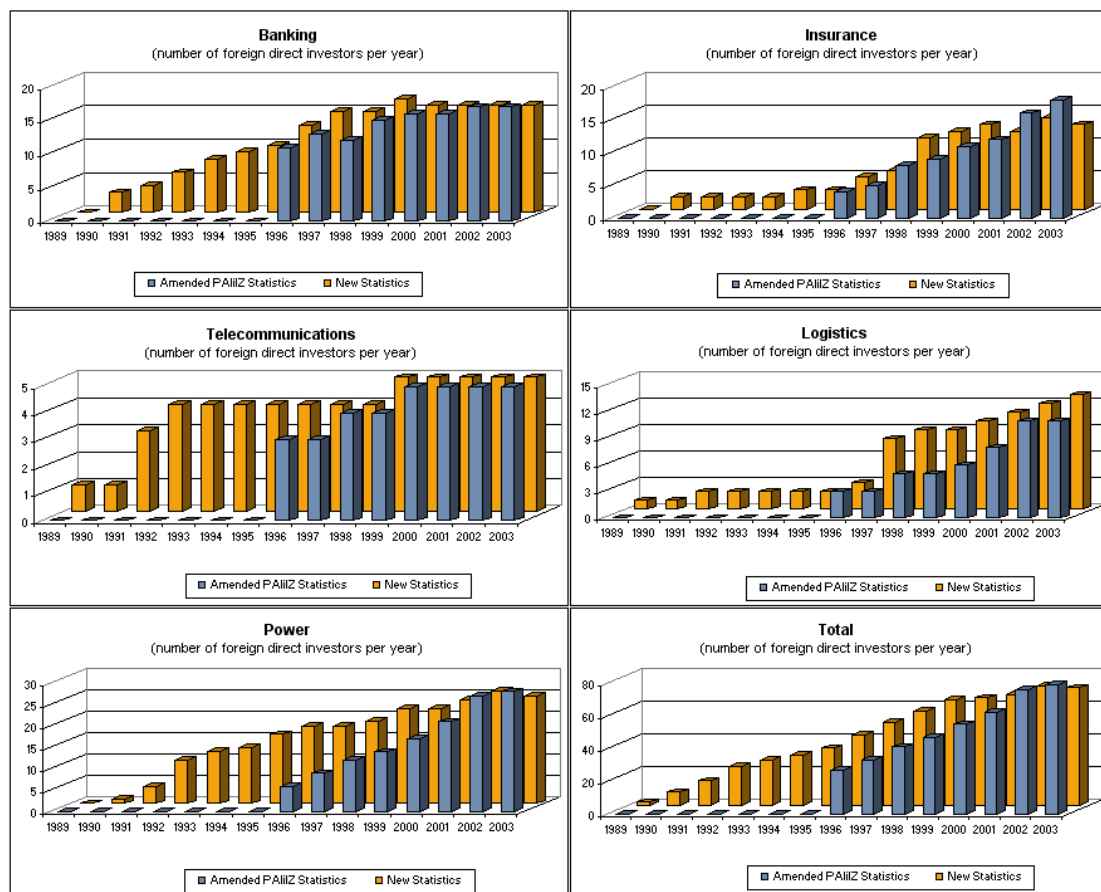
The given reasons for an overstatement of the Non-amended PAIiZ figures also apply for the Banking, Insurance and Telecommunications sectors. It therefore can be concluded that the actual market share ratio covered by the received answers is even higher than shown in the table above.

#### 5.2.2.2 Number of Foreign Direct Investors

The figures representing the number of foreign direct investors in each of the chosen Polish infrastructure sectors show that the results for each year (in total and for each sector) differ slightly.

<sup>165</sup> The market share ratio for each sector is calculated in the following way: Average of the cumulative investment amount (cum\_new\_inv) as stated in the New Statistics divided by the cumulative investment amount as presented in the Non-amended PAIiZ Statistics (cum\_non\_amended\_inv).

$$\text{Market share ratio} = \text{AVERAGE} \left( \sum_{\text{For } i = 1989}^{2003} \frac{\text{cum\_new\_inv } [i]}{\text{cum\_non\_amended\_inv } [i]} \right) \text{ whereby } [i] \text{ stands for year } i$$

**Figure 11: Number of Foreign Direct Investors in the New and Amended PAIIZ Statistics**

Source: own calculation

Figure 11 illustrates that in all five sectors the market entry of the first foreign investors occurred immediately with the beginning of the transformation process, i.e. in 1989/1990.

The market entry of the analysed companies, however, occurred neither evenly nor was it concentrated at one point in time. The next table presents the year with the highest amount of new sector entrants.

**Table 10: Year of the Highest Increase<sup>166</sup> in Number of Foreign Direct Investors per Sector**

Sector	New Statistics		Amended PAIiZ Statistics
	Period 1989-2003	Period 1996-2003	Period 1996-2003
Banking	1990 & 1996	1997 & 1999	1999
Insurance	1998	1998	2002
Telecommunications	1991	1999 (*)	1998 & 2000 (*)
Logistics	1997	1997	2002
Power	1992	1999	2002
Total	1992	1997	2002

(\*) Due to the small number of answers in the Telecommunications sector, the increase amounted only to 1 and thus, this could not be considered as the highest increase.

Source: own calculation

It can be seen that the peak dates in both statistics differ, even when only looking at the time frame 1996-2003, for the New Statistics. In the New Statistics, the largest amount of market entries occurred much earlier than in the Amended PAIiZ Statistics.

According to the overall New Statistics, i.e. when analysing the time frame 1989 to 2003, the Power, Banking and Telecommunications sector seem to have attracted a large number of foreign direct investors at an early stage of the transformation process while the Insurance and Logistics sector experienced such a development in the late 1990s. This development is not visible in the Amended PAIiZ statistics as the (consistent) data collection started only in 1996.

As shown in chapter 3.4.2, from an early stage the Polish government tried to attract FDI in the Banking and Telecommunications sector by setting up new regulations. The market growth expectations in both sectors were high and thus appealing for foreign investors.

In the early 1990s, the Power sector mainly attracted gas network companies, while a second wave of new market entries occurred at the end of the 1990s, when the sale of Polish power stations began and the Energy Law was announced.

The Logistics as well as the Insurance sector attracted more foreign investors once the economy had stabilised and market conditions had improved. The slow market entries in the Insurance sector could also be the result of the relatively late establishment of regulations in that sector. Only by the end of 1997, for example, had the Pension Fund regulations for the Insurance sector been agreed. The created Pension Funds were the result of changes in the social security system.

Figure 12 represents for each sector in the New Statistics the year in which the majority, i.e. more than 50% of foreign investors, had entered the respective sector, in contrast to the total number of foreign direct investors in that sector as by year 2003.

**Figure 12: Year when Majority of Foreign Direct Investors were in the Infrastructure Market**

Source: own presentation

<sup>166</sup> The calculation applied is as follows: the amount of foreign direct investors in year (x) minus the amount of foreign direct investors in year (x-1).

Figure 12 reflects that the improvements of the Polish economy and changes in the laws and regulations had a strong impact on the activity of foreign direct investors. In some sectors, investors were more dependant on the overall economic development while in other sectors regulations in the sector itself were crucial for the investor in the decision making process. The Telecommunications, Insurance and Banking sector experienced the highest increase in the number of foreign direct investor's market entries after the establishment of important regulations for the respective sector. The Power and Logistics sector reflect that once the market conditions had improved, foreign investors in these sectors were more likely to enter the market.

By 1994 three of the five analysed sectors had already attracted more than 50% of the foreign direct investors that in year 2003 were in the respective Polish sector.

Figure 12 confirms the results of the table above, i.e. it can be seen that the foreign investors had been very keen to enter the Telecommunications, Banking and Power sectors, while it took more time to attract investors for the Logistics and Insurance sectors.

Table 11 reflects the average difference in the number of foreign direct investors between the two statistics, i.e. the New and Amended PAIiZ Statistics and the average ratio of the difference in the number of foreign investors and the number of foreign investors in the New Statistics.

**Table 11: Average Difference and Average Ratio in the Number of Foreign Direct Investors**

Sector	Banking	Insurance	Telecom	Logistics	Power	Total
$\Delta \text{com\_num}$ <sup>167</sup>	0.88	0.38	0.38	2.88	5.00	9.50
$\Delta \text{com\_num ratio}$ <sup>168</sup>	6.00%	6.45%	8.75%	30.30%	26.16%	17.65%

Source: own calculation

The number of foreign direct investors listed in the New Statistics is, when looking at the average difference, always higher than the number in the Amended PAIiZ Statistics.

The number of foreign investors differs most for the Power and Logistics sector. On average, the number of foreign direct investors listed in the New Statistics for the Power and Logistics sector is higher by 5 and 2.88 respectively. The Insurance and Telecommunications sector

<sup>167</sup> The average difference in the number of foreign direct investors for each respective sector ( $\Delta \text{com\_num}$ ) is calculated in the following way: Average of number of foreign direct investors stated in the New Statistics ( $\text{new\_num}$ ) minus the number of foreign direct investors in the Amended PAIiZ Statistics ( $\text{amended\_num}$ ) for each year.

$$\Delta \text{com\_num} = \text{AVERAGE} \left( \sum_{\text{For } i = 1989}^{2003} (\text{new\_num}[i] - \text{amended\_num}[i]) \right) \quad \text{whereby } [i] \text{ stands for year } i$$

<sup>168</sup> The average ratio of the difference in the number of foreign direct investors and the number of foreign direct investors in the New Statistics ( $\Delta \text{com\_num ratio}$ ) is calculated in the following way: Average of the difference of both, foreign direct investors stated in the New Statistics ( $\text{new\_num}$ ) and the number of foreign direct investors in the Amended PAIiZ Statistics ( $\text{amended\_num}$ ), divided by the number of foreign direct investors in the New Statistics ( $\text{new\_num}$ ) for each year.

$$\Delta \text{com\_num ratio} = \text{AVERAGE} \left( \sum_{\text{For } i = 1989}^{2003} \frac{(\text{new\_num}[i] - \text{amended\_num}[i])}{\text{new\_num}[i]} \right) \quad \text{whereby } [i] \text{ stands for year } i$$

show the highest equality, i.e. the lowest average difference. The total average difference is the sum of all individual average differences and amounts to 9.50.

It can be seen in Figure 11 (on page 59) that in early comparable years (i.e. from 1996 to around 2001) in almost all infrastructure sectors the number of foreign direct investors as determined through the answers from the questionnaires was higher than in the Amended PAIiZ Statistics, while afterwards, mainly in the last two years of the analysed time frame, the Amended PAIiZ Statistics listed more foreign direct investors.

Mainly in early years both statistics differ most and this causes a ratio above 26%, especially in the Logistics and Power sector (see Table 11), which reflects that on average the difference in the number of foreign direct investors represents more than 26% of the total number of investors as presented in the New Statistics. The difference reduced over the years and suggests that at the beginning of the set-up of the PAIiZ statistics not all companies have been included.

The reasons for the results described above are manifold. This might be due to the fact that initially the FDI definition was not unambiguous and only later the data collection became more consistent. The Original PAIiZ Statistics also did not list the foreign investor's name when the company's investments were below an investment amount of USD 1.0m and when the foreign investor's share in the company amounted to less than 10%<sup>169</sup>. This could mean that some of the companies' initial market entries were not necessarily shown. Especially in early years, companies had often explained in the questionnaire that they had entered the market by opening a representative office and according to several company statements the investments into these representative offices were regarded as being negligible, i.e. they were below USD 1.0m. These companies would only start to appear in the statistics once their investment amounts had increased to values above USD 1.0m.

It is not fully known how the information for the Original PAIiZ Statistics was gathered. However, it is assumed that the PAIiZ sent out questionnaires to the respective companies in the market<sup>170</sup>. As company mergers and acquisitions are not always easy to follow and as the answer rate of the questionnaires is in general not high, it is likely that some companies did not appear in the statistics even though they were active in the market and other company names would still appear in the statistics (because of the usage of previous year's results) even though, for example, they had been acquired by another company.

Another reason might be that the regulations and required permissions differed from one sector to another and thus (especially at the beginning of the transformation process) the awareness of foreign investors being in the market might have been incomplete.

The above statements reveal that a critical approach with respect to conclusions drawn from the existing PAIiZ statistics is recommendable. It also highlights the importance of consistent and unambiguous data gathering, analysis and whether conclusions have been put into context, i.e. in relation to the time frame of the data collection.

In some sectors, such as the Banking, Insurance and Power sector, the number of foreign direct investors, as shown in the New Statistics, decreased slightly at some point. In the Insurance sector, for example, the number decreased in 2001 in comparison to the previous year from 13 to 12 and in the following year, the number increased to 14 before then falling

<sup>169</sup> PAIiZ [2004]: page 2 ff./15.

<sup>170</sup> This assumption was confirmed in Borrmann [2003].

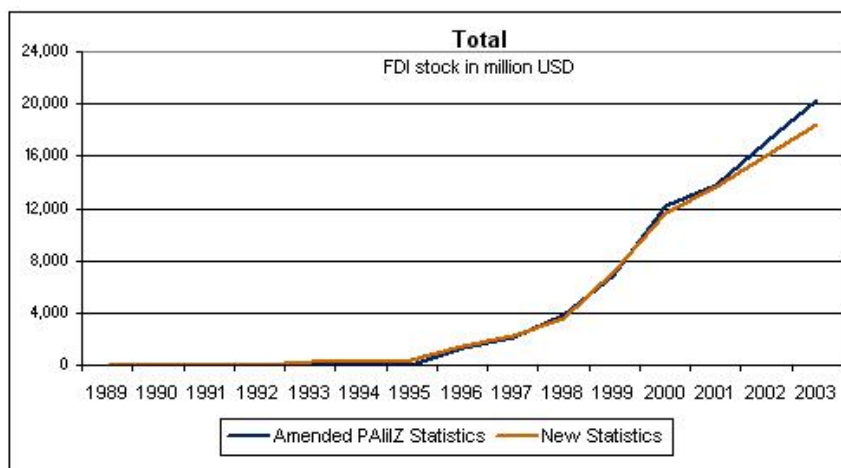
again to 12. However this does not automatically mean that foreign direct investors have left the Polish market, but is in general the result of company mergers and acquisitions in these sectors.

Overall, the following can be stated for the chosen infrastructure sectors: Right from the beginning of the transformation process, the Polish market became a focus of foreign direct investors; however the market entry of the foreign direct investors differed between the sectors. The number of foreign direct investors increased in both cases (Amended PAIiZ Statistics and New Statistics) steadily during the transition which illustrates that the Polish market's attractiveness even increased over time.

### 5.2.2.3 FDI Stock

At first glance the FDI stock for all sectors, i.e. Figure 13 with the all sector total FDI stock, showed almost no difference between the Amended PAIiZ and the New Statistics results. However, when analysing the values for the sectors in more detail, it can be seen that the results were not as homogenous as initially thought.

**Figure 13: All Sector Total FDI Stock for the New and Amended PAIiZ Statistics**



Source: own calculation

Table 12 presents the average difference in the investment stock and the average investment stock ratio:

**Table 12: Average Difference in the Investment Stock and Average Investment Stock Ratio**

Sector	Banking	Insurance	Telecom	Logistics	Power	Total
$\Delta \text{ inv\_stock}^{171}$ (in million USD)	-187.73	-243.13	219.27	-175.46	-45.94	-432.99
$\Delta \text{ inv\_stock ratio}^{172}$	3.36%	7.78%	4.44%	30.47%	4.33%	2.02%

Source: own calculation

For all, except the Telecommunications sector, the cumulative investment amounts as received through the questionnaires from the companies were lower than those figures stated in the Amended PAIiZ Statistics. The lowest average difference could be seen in the Power sector, while the Insurance sector showed the highest difference.

The Insurance sector stated an average difference of minus USD 243.13m, i.e. the amounts in the New Statistics were in average lower by USD 243.13m in comparison to the Amended PAIiZ Statistics. This figure however represented only 7.78% of the Amended PAIiZ Statistics' cumulative investment amount in the Insurance sector and was therefore negligible.

When looking at the average difference in the investment stock, the results for the Banking and Logistics sector were almost the same. However, it would be wrong to conclude from this figure that both sectors showed the same investment stock development. This result stemmed from the following fact: The Banking sector's investment stock was very high (up to a total of USD 7,000m in comparison to USD 1,200m in the Logistics sector) and thus, a small difference was not easy to spot in the figures for the Banking sector, but would influence the average investment stock.

As Table 12 reveals, the average difference in investment stock in the Banking sector reflected only 3.36% of the Amended PAIiZ Statistics' investment amount, while this average difference in investment stock figure for the Logistics sector represented more than 30% of the FDI stock in that sector and thus showed a much higher discrepancy of Amended PAIiZ Statistics and New Statistics figures. This also became evident when looking at Figure 14.

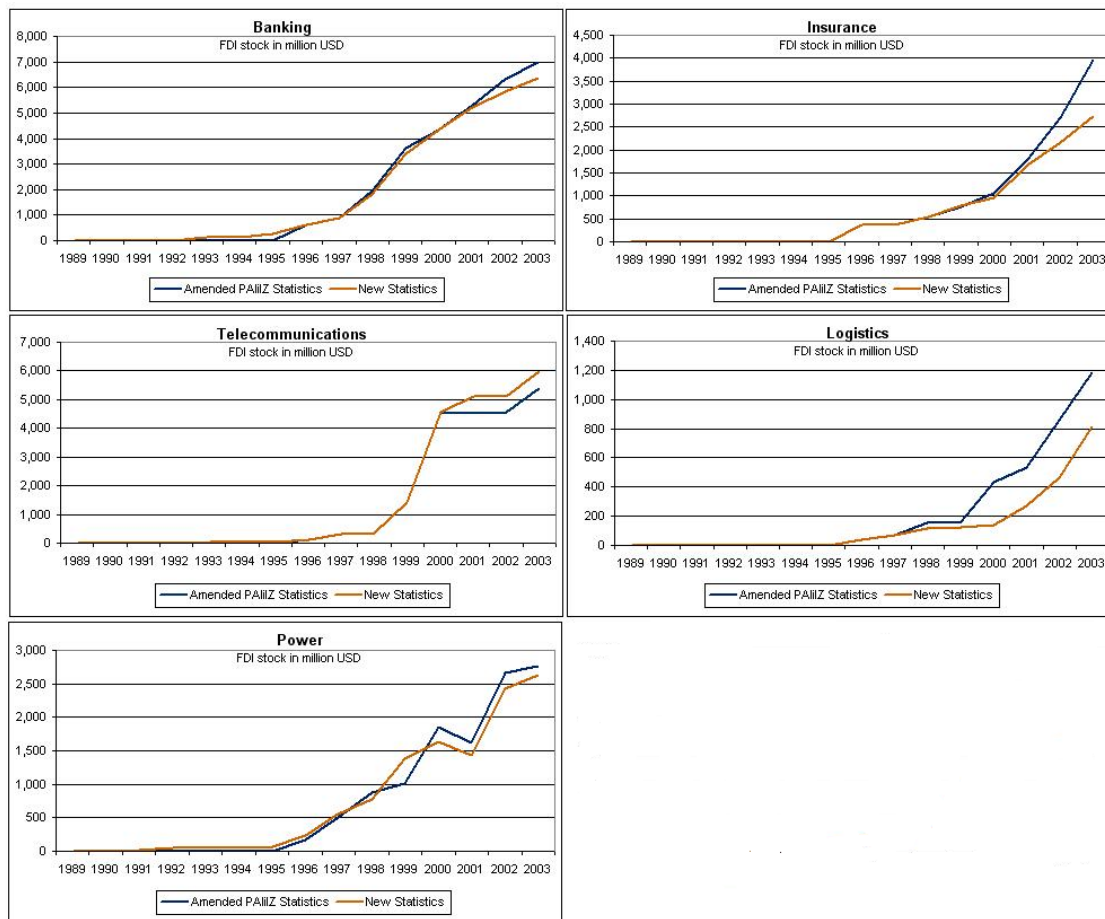
<sup>171</sup> The average difference in the investment stock ( $\Delta \text{ inv\_stock}$ ) for each sector is calculated in the following way: Average of the cumulative investment amount as stated in the New Statistics ( $\text{cum\_new\_inv}$ ) minus the cumulative investment amount as stated in the Amended PAIiZ Statistics ( $\text{cum\_amended\_inv}$ ) for each year.

$$\Delta \text{ inv\_stock} = \text{AVERAGE} \left( \sum_{\text{For } i = 1989}^{2003} (\text{cum\_new\_inv } [i] - \text{cum\_amended\_inv } [i]) \right) \quad \text{whereby } [i] \text{ stands for year } i$$

<sup>172</sup> The average investment stock ratio ( $\text{inv\_stock ratio}$ ) for each sector is calculated in the following way: Average of the ratio of the investment stock ( $\text{inv\_stock}$ ) and the cumulative investment amount as stated in the Amended PAIiZ Statistics ( $\text{cum\_amend\_inv}$ ) for each year, whereby the investment stock ( $\text{inv\_stock}$ ) is the absolute value of the difference of the cumulative investment amount as stated in the New Statistics ( $\text{cum\_new\_inv}$ ) and the cumulative investment amount as stated in the Amended PAIiZ Statistics ( $\text{cum\_amended\_inv}$ ) for each year.

$$\Delta \text{ inv\_stock ratio} = \text{AVERAGE} \left( \sum_{\text{For } i = 1989}^{2003} \frac{\text{ABS}(\text{cum\_new\_inv } [i] - \text{cum\_amended\_inv } [i])}{\text{cum\_amended\_inv } [i]} \right) \quad \text{whereby } [i] \text{ stands for year } i \text{ and ABS represents the absolute value}$$



**Figure 14: Sector FDI Stock for the New and Amended PAIiZ Statistics (in million USD)**

Source: own calculation

It can be seen in Figure 14 that after year 2000 the FDI stock in the Telecommunications sector as stated in the Amended PAIiZ Statistics was significantly lower than the figures received through the questionnaires. The Logistics and Insurance sector however reflected that from 1998 and 2000 respectively onwards the cumulative FDI stock as presented in the Amended PAIiZ Statistics was always higher than the amounts shown in the New Statistics. The Banking sector revealed a small difference between those two statistics while the Power sector suggested the weakest correlation. However, when comparing these results with the average difference in investment stock figures in Table 12 it can be seen that the results are opposite, i.e. the average difference in investment stock amount in the Power sector is much lower than in the Banking sector.

The graph for the Power sector illustrates that from 1996 to 1998 the results are quite similar, i.e. the cumulative investment amounts stated in both statistics are similar. In year 1999 however the New Statistics reflect much higher investment stock figures than the Amended PAIiZ Statistics. From year 2000 onwards the PAIiZ figures always exceed the New Statistics figures. This fluctuation leads to the sector's relatively low average difference in investment stock.

It can also be seen that since the Energy Law of 1997 the FDI stock in the Power sector has shown a sharp increase. The reasons for the decrease in 2001 should be further investigated.

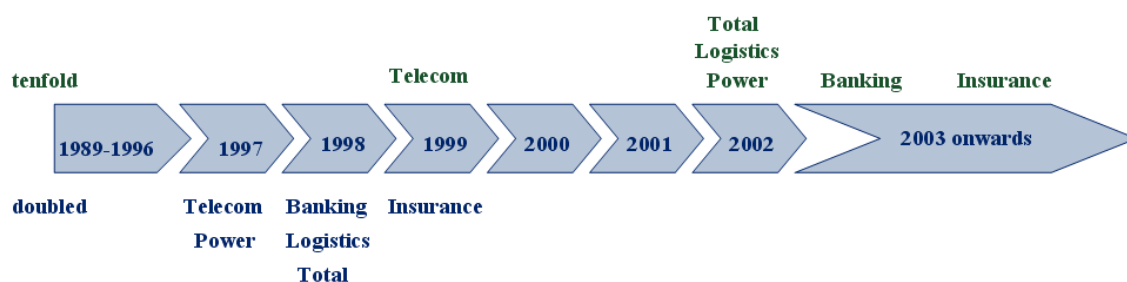
Even though the FDI stock amounts are variable, the upward trend is similar for all sectors and both statistics, i.e. no stagnation in the FDI inflow in these sectors was experienced. It can therefore be concluded that the shown FDI stock upward trend is correct. Possible reasons for this development are a steady increase in the foreign investor's confidence of the Polish transformation process and the constant improvement of the economy which was reflected in strong GDP growth figures.

Figure 14 reveals that the highest investment amounts are experienced in the Banking and Telecommunications sectors, while the Logistics sector has attracted the least FDI.

The figures in the New Statistics show that between 1996 and 2003, the investments in the Banking and Telecommunications sectors are in average approximately up to 18 respectively 12 times higher than the amount of FDI in the Logistics sector.

The FDI stock graphs also illustrate that, depending on the sector, from around 1996-1998 onwards the FDI stock increased rapidly. Within a few years the amount in each sector in comparison to the investment stock in year 1996 has doubled. As Figure 15 shows, according to the New Statistics by the end of year 2002, i.e. within less than 7 years, most of the sectors had reached a foreign investment stock that was ten times (tenfold) higher than the FDI stock in the year 1996.

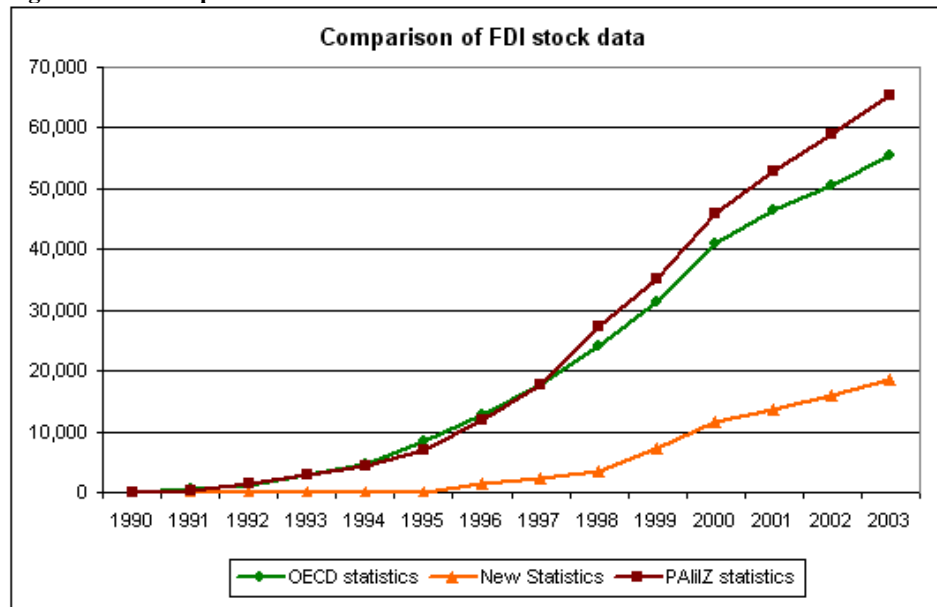
**Figure 15: Doubled and Tenfold FDI Stock Based on New Statistics  
(Base FDI Stock as Shown in Year 1996)**



Source: own presentation

Figure 15 also reflects the strong dynamic in the market, i.e. the constant increase in the inflow of FDI. By 2003 no sector showed signs of stagnation with respect to the inflow of FDI.

The below figure presents Poland's total FDI stock as shown in the OECD statistics, the PAIIZ statistics and the FDI stock of the infrastructure sector as shown in the New Statistics.

**Figure 16: Comparison of FDI Stock Data from Various Sources**

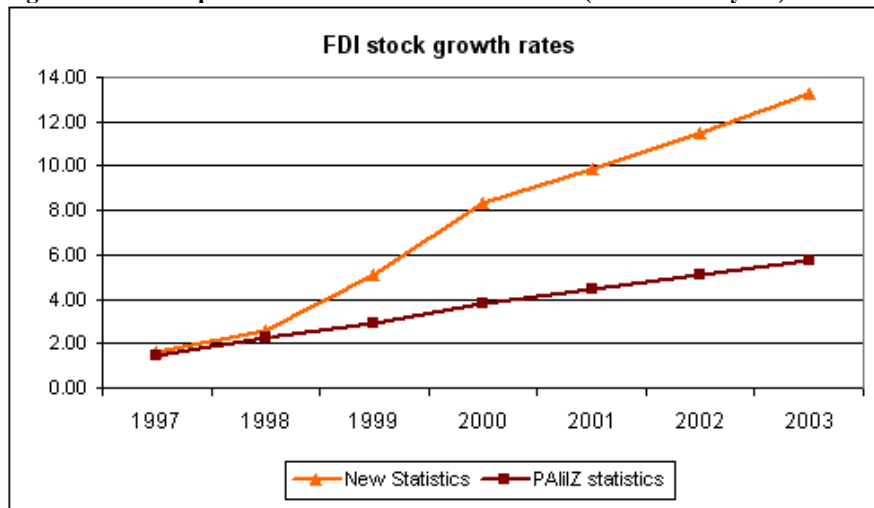
Source: own calculation, OECD [2007]: page 25, PAIiZ [2003a]: page 3

Figure 16 confirms that Poland's FDI stock in general as well as in the infrastructure sector steadily increased over time.

The figure also reflects that the FDI stock figures of the OECD statistics and the PAIiZ statistics differ, but it can be seen that the difference is not material. On average the PAIiZ investment stock in comparison to the OECD statistics is higher by 1.06x. However, between 1994 and 2003, the OECD figures are greater than the PAIiZ figures, and only since 1998 the investment stock as shown in the PAIiZ statistics is greater than the figures from the OECD statistics. The difference in the FDI stock amounts can be explained by the fact that the methodology applied by the PAIiZ to collect FDI data is not entirely identical with the OECD's approach.<sup>173</sup>

Even though the infrastructure sector only reflects in average approximately 21% of Poland's total FDI stock (as shown in the PAIiZ statistics), whereby the share has increased from 12% in 1996 to 28% in 2003, the growth of the FDI stock in the infrastructure sector is impressive, which is shown by Figure 17.

<sup>173</sup> See Borrmann [2003]: page 10 ff. for more details.

**Figure 17: Comparison of FDI Stock Growth Rates (1996 as base year)<sup>174</sup>**

Source: own calculation

As Figure 17 illustrates, the foreign direct investment stock for all Polish business sectors (PAIiZ statistics) did not show such a strong dynamic as the total investment stock for the five infrastructure sectors (New Statistics). Within two years (when setting year 1996 as the base year), the investments stock in both, the New and the PAIiZ statistics had doubled. By the end of year 2003, the investment stock in the New Statistics was more than 12 times greater than the FDI stock based on figures from 1996, while the investment stock of the PAIiZ statistics was only approximately 6 times greater. Especially from 1998 until 2000, the FDI stock in the infrastructure sector experienced a strong inflow of FDI. The pace afterwards was less strong, but still stronger than for the total FDI stock amount.

This result reveals that the five infrastructure sectors were especially attractive for foreign direct investors, and that the amounts invested in these sectors were in comparison to the entire Polish economy over-proportional. This reflects the strong “catch-up” demand and thus growth potential of the infrastructure sector.

The above figures also confirm the IDP Theory. It can be argued, that according to the theory, the infrastructure sector started at Stage 1 because the FDI flows were at the beginning of the transformation period quite insignificant. As explained in this chapter, throughout the transition process the Polish infrastructure market managed to strongly increase the FDI inflow. The FDI outflow has not been analysed in this research, however it can be assumed that the infrastructure sector according to the IDP Theory has reached Stage 3 to 5.

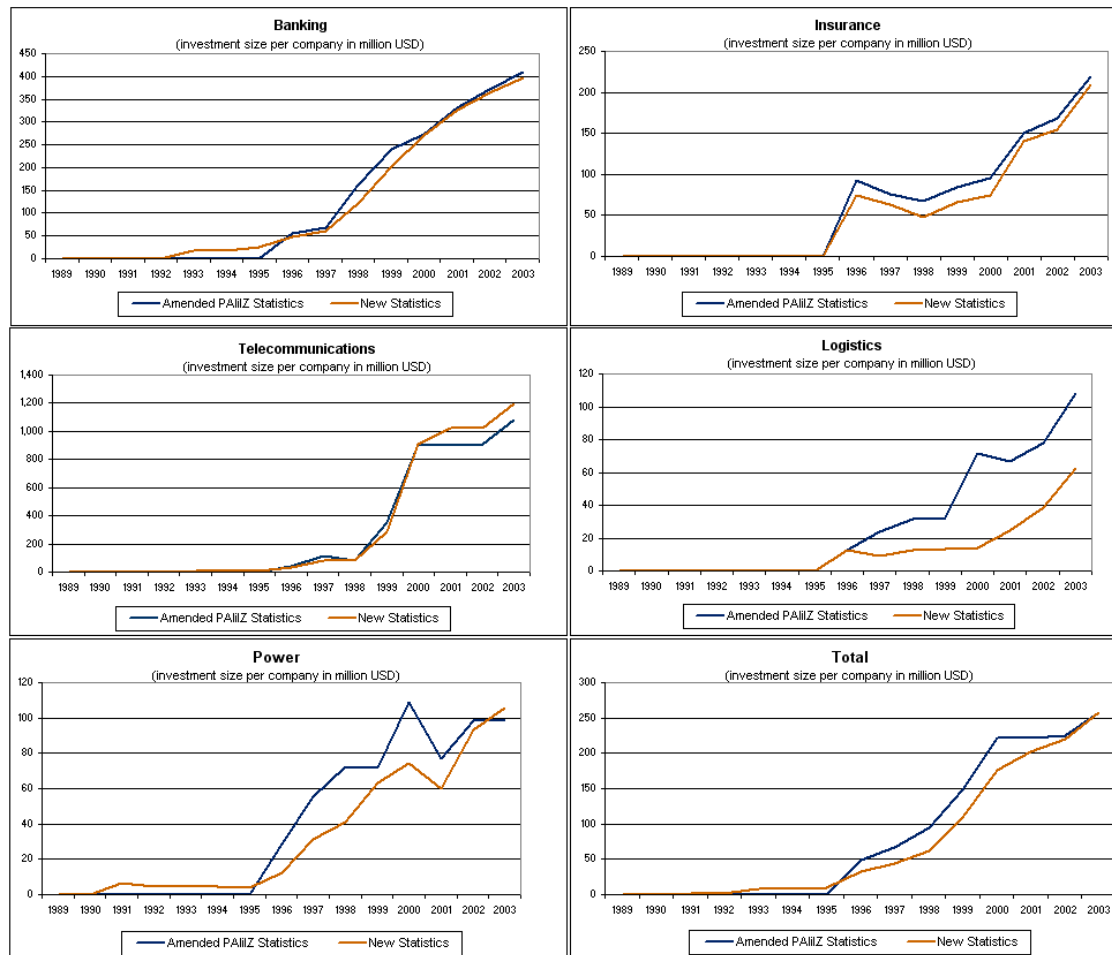
<sup>174</sup> The growth rate was calculated by respectively taking the FDI stock figures from 1996 as the base FDI stock amount and then dividing the FDI stock for each year with the base.

### 5.2.2.4 Investment Size per Company

The analysis of the investment size per company<sup>175</sup> was applied to provide a more precise view of the sectors and the FDI development in these sectors.

The figure titled “Total” (see Figure 18) takes the entire FDI amount of all analysed infrastructure sectors into consideration, and it can be seen that (except from the last 2 years) the PAIiZ figures were always higher than the New Statistics results.<sup>176</sup>

**Figure 18: Investment Size per Company for Each Sector (in million USD)**



Source: own calculation

When analysing the investment size per company figures it became clear that even though the results are quite diverse, they all showed the same upward trend. It could also be seen that

<sup>175</sup> The investment size per company ( $[k\_inv\_size\_com]$ ) in each sector for each year is the ratio of the cumulative investment amount ( $cum\_ [k\_inv]$ ) and the number of foreign companies ( $[k\_num]$ ) active in this sector.

$$[k\_inv\_size\_com] = \frac{cum\_ [k\_inv] [i]}{[k\_num] [i]} \quad \text{whereby } [i] \text{ stands for year } i \text{ and } [k] \text{ for either new or amended}$$

<sup>176</sup> Between 1999 and 2001/2002, the total amended PAIiZ statistics show signs of stagnation. This has not been further analysed in this study, however might be of interest for additional research.

the range of the investment size per company is quite broad, whereby the Telecommunications sector suggested the highest values and the Logistics sector the lowest values (respectively, approximately USD 1,200m and USD 65m per company in year 2003).

For almost all infrastructure sectors the upward trend (gradient) was from 2001 onwards higher for the New Statistics than for the Amended PAIiZ Statistics. The figures in the New Statistics also appeared to fluctuate less, which could be interpreted as a sign of them being more consistent.

In year 2003, the New Statistics' investment size per company figures for the Power as well as the Telecommunications sectors are in comparison to the other infrastructure sectors higher than the Amended PAIiZ Statistics results.

In all analysed sectors, except from the Power sector, the results approach each other by the end of year 2003. This is also visible in the Total graph that combines all infrastructure sectors.

When looking at Figure 18, the Power and Logistics sectors seem to be the most volatile with respect to the Amended PAIiZ and New Statistics results.

The average difference in the investment size per company<sup>177</sup> reveals that the Logistics and Telecommunications sector show the largest difference, with amounts of minus USD 29.59m and plus USD 30.11m respectively. The figures reflect that for the Logistics sector the figures in the New Statistics are in average lower while they are higher for the Telecommunications sector. The Banking, Insurance and Power sectors reveal a much lower (between USD 5.4m and USD 16.5m) figure for the average difference in the investment amount per company, which means that the results in these sectors are more homogeneous than those for the Telecommunications and Logistics sectors.

In the New Statistics, the increase in the investment size per company from 1996 to 2003 is very steep for the Telecommunications sector amounting to 36.4x, i.e. the value in 2003 is 36.4 times higher than the amount in 1996. This shows that over a period of 7 years, the foreign investors have strongly increased their investments in this sector and thus showed a high demand and a dynamic market.

#### 5.2.2.5 Summary

The comparison of the number of foreign direct investors, the foreign direct investment stock and investment size per company proves that the trends in both statistics are the same, i.e. the New Statistics and Amended PAIiZ Statistics illustrate that the number of foreign direct investors as well as the investment amount had increased throughout the transformation process. This reflects that the attractiveness of the Polish market has enhanced over time and thus, foreign direct investors were not only willing to enter Poland, but later also increased

<sup>177</sup> The average difference in the investment size per company is representing the average difference of the investment amounts as stated in the New Statistics (new\_inv\_size\_com) less the investment amounts as stated in the PAIiZ statistics (amended\_inv\_size\_com):

$$\Delta \text{inv\_size\_com} = \text{AVERAGE} \left( \sum_{\text{For } i=1989}^{2003} \text{new\_inv\_size\_com } [i] - \text{amended\_inv\_size\_com } [i] \right) \quad \text{whereby } [i] \text{ stands for year } i$$

their investment in this market. Within the analysed time frame, the FDI inflow did not show any signs of stagnation.

The results from both statistics have revealed that there is almost no difference in the number of foreign direct investors while the FDI amounts suggest some more discrepancies. However, the differences are never that fundamental that it could be concluded that one of the statistics is reflecting wrong results, but the FDI flows into the infrastructure sectors as shown in the New Statistics are more even and consistent.

Even though data for the first years of the 1990s were not available, the existing data has shown that in the late 1990s the FDI stock in the analysed sectors increased strongly, and in some sectors, such as the Telecommunications sector, the investment size per company reached values of up to USD 1,200m.

The results presented above have also shown that the realised growth in the number of foreign direct investors and the FDI stock is different from one sector to another. The Banking and Telecommunications sector attracted the highest amounts of FDI, but it should also be noted that the Insurance sector that initially started on a slower and at a much lower pace than the Banking and Telecommunications sectors showed strong growth figures since the end of the 1990s. The sector with the lowest volume of FDI inflow was the Logistics sector. However, this does not mean that this sector was not of importance to foreign direct investors. It needs to be noted that the required investment volumes for the Telecommunications and Power sectors are in general much higher than for the Logistics sector.

### **5.3 Analysis of FDI Determinants and Company Forms**

The quality of the responses of the questionnaire, especially the General Part of the questionnaire, was considered to be satisfactory. The received answers from the companies showed that the questions generally had been understood. Only a few questions appeared to be difficult to answer (see highlighted questions in Attachment 7) and therefore these questions were left out of any further analysis.

Even though the companies had been given the opportunity to add comments, this option was very rarely used.

The analysis of the General Part of the questionnaire required a different approach than the analysis of the Company Specific Part and establishment of the New Statistics. The intention of this chapter was to compare received answers of companies in the same sector and among the five infrastructure sectors. The ultimate aim was to analyse whether the answers followed a certain pattern and thus whether certain rules could be determined.

The approach chosen for the analysis of the General Part of the questionnaire was as follows: Either no distinction was applied or the answered questionnaires were sorted by the sector they are active in, the date of market entry, or the chosen company form.

For the analysis over time, the received company answers were classified according to the market entry date in order to be able to analyse whether the date of the market entry had an impact on the importance of FDI determinants and whether the determinants were stable over

time. The period 1989-2003 was divided into 4 sub-periods, which are 1989-1992, 1993-1995, 1996-1999, and 2000-2003. This distinction had been chosen for the reasons set out below. The first period 1989-1992 was marked by the initial decision to change the political and economic system of the country and the successive first steps towards this goal. The first difficult years of the implementation of the country's transformation are reflected by the time frame 1993-1995. The mid 1990s marked the turning point in the Polish transformation process, i.e. the political and economic changes started to be fruitful, and an impressive economy growth rate could be seen. This effect on the determinants is shown in the period between 1996 and 1999. The last period (the years 2000 to 2003), had been chosen as these years had already been influenced by the impending EU accession that followed in 2004.

In order to examine whether company form specific determinants exist the company answers were sorted by the chosen company form for the initial market entry. The received answers were split into Acquisition, Greenfield and Joint Venture.

With the received answers not every sector and period could be referred to and therefore not all sectors are presented in every graph. Furthermore, in sectors where only one company answer had been received for a particular data split, these answers have been left out of the respective analysis in order to:

- a) ensure the company's anonymity, and
- b) avoid distortions of the results and thus, wrong conclusions as the a weighting of the sector's answer would have been too high.

To enable a comparison and interpretation of the received answers, the mean value<sup>178</sup> had been calculated.<sup>179</sup> The mean value calculation had not only been chosen to sum up the results for one particular sector<sup>180</sup> or all infrastructure sectors (labelled "Total"<sup>181</sup>) and provide a respective answer trend, but also to ensure the comparability of results between the sectors.

Mean values higher than zero (positive values) illustrate that the respective criterion was considered to be of importance, while negative mean values (smaller than zero) reflect the non-importance of the criterion.

The following distinctions of the mean values have been applied

- mean value [general analysis]
- mean value over time [analysis over time]
- mean value by company form [analysis by company form]

<sup>178</sup> The mean value had been calculated by applying the following formula: The answer possibilities where 1, 2, 3, 4, and 5 – which were for the purpose of the below formula labelled as a, b, c, d, and e respectively.

$$\text{mean value} = (2*a) + (1*b) + (0*c) + ((-1)*d) + ((-2)*e)$$

It can be seen that the outer answers of the Likert scale were more heavily (with a value of 2 and minus 2) weighted than answers in between. (Hague and Jackson [1998]: page 108 f.)

The terms "mean value" and "results" are used interchangeably.

<sup>179</sup> Because of the small number of contacted companies in each sector it was considered that other statistical tests were not appropriate.

<sup>180</sup> The mean value for one sector is the mean value based on all received answers from companies in one particular sector.

<sup>181</sup> "Total" means that the answered questionnaires were not further split and thus represents the (weighted) sum of all received answers.



As presented earlier (see also Attachment 7) the questions raised in the General Part of the questionnaire were part of a particular thematic block. In order to determine whether conclusions could be drawn from thematic blocks about single determinants and vice versa, the mean values of both, the thematic blocks and single determinants had been calculated and analysed.

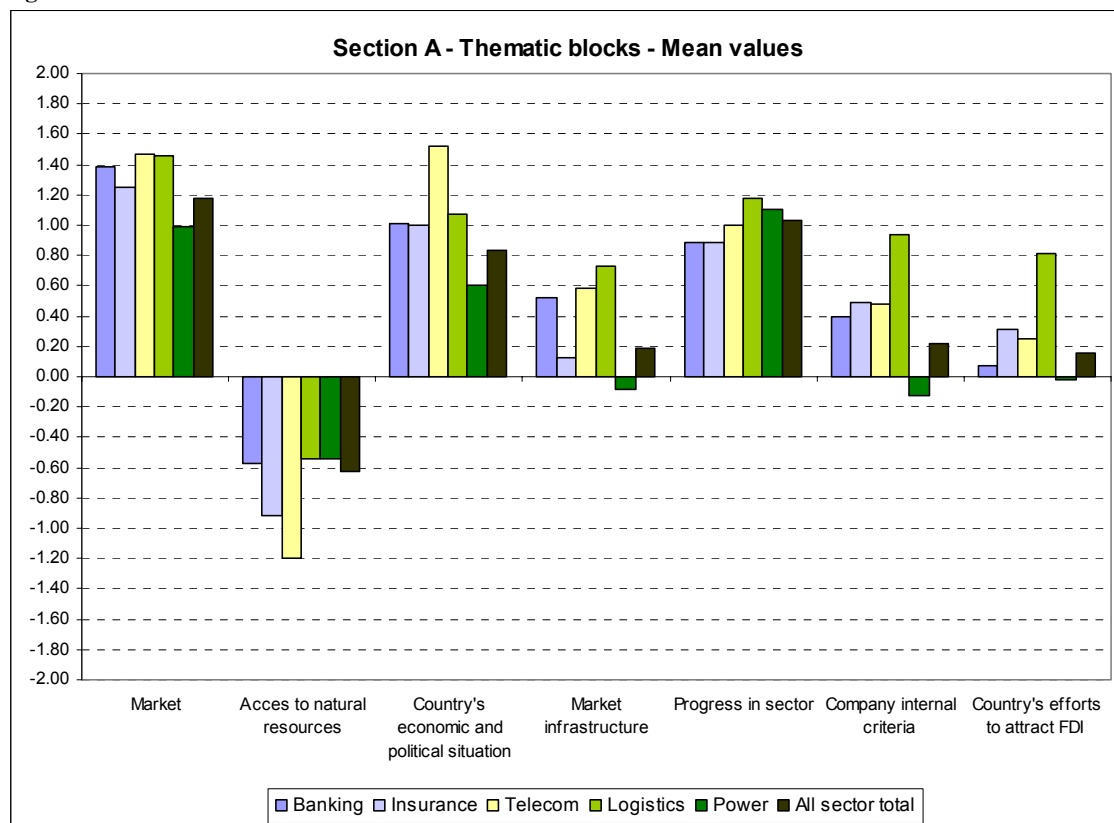
The figures for the “mean values over time” and “mean values by company form” are shown in the Attachments number 11 to number 16.

### 5.3.1 Criteria for Market Entry (Section A of the General Part of the Questionnaire)

When comparing (see Figure 19) the mean values of the thematic blocks for each sector it can be seen that even though the magnitude<sup>182</sup> of the mean values of the received answers from the companies differed slightly, the overall trend for all sectors was similar.

The only exception visible is the Power sector's result for the thematic blocks “Market infrastructure”, “Company internal criteria” and “Country's efforts to attract FDI”. While these three thematic blocks seem to have been rather important for the other four sectors, companies active in the Power sector regarded them as not being of importance when deciding about the Polish market entry.

**Figure 19: Section A - Thematic Blocks - Mean Values**



Source: own presentation

<sup>182</sup> The magnitude reflects the difference between the values of the least and most important criterion.

The above results might lead to the conclusion that the five sectors were mainly focusing on the same determinants, which were market related criteria, while they neglected criteria belonging to the thematic block "Access to natural resources". In order to verify this conclusion, it was necessary to analyse the answers in more detail, i.e. not the thematic blocks, but the respective questions belonging to the thematic blocks (see Figure 20).

The criterion "Market growth expectations" [3]<sup>183</sup> seemed to have been the main driver for market entries in the Banking, Insurance and Telecommunications sector as this criterion had been the sectors' predominant criterion. It had the highest mean value in comparison to the results of the other questions. In the Telecommunications sector, this criterion even showed a mean value of 2.00x (see Figure 20), which reflected that all foreign investors had expressed, that this criterion had been crucial to them. The Logistics and Power sectors also regarded this criterion to be of importance; however the criterion's mean value was not the highest in these sectors which reflects that other criteria had a stronger impact on foreign investors in these two sectors.

In case the mean value results for one determinant were different across the infrastructure sectors, the deviating sectors in general were the Logistics and Power sectors.

In comparison to the other sectors, the Logistics sector considered the criteria "Progress in market infrastructure conditions: Transportation" [12], "Cost pressure" [19] and "Investment incentives" [22] to be of importance. This result is understandable and reflects the specifics of the sector. The Logistics sector is, in comparison to the other four sectors, highly dependent on the country's given transportation system (e.g. the road, rail, sea and air transport conditions). The Logistics sector is furthermore highly competitive and thus very sensitive to cost pressure and open for investment incentives.

The foreign direct investors in the Power sector stated that they had not been influenced by whether "Current clients are in the market or intend to enter the market" [17] or "Progress in facilitation of investment approval procedures for foreign investors" [24] had been made. In comparison to the other sectors this was the opposite result and reflected that the Power sector felt (sufficiently) confident to find new clients in the new market and was thus not reliant and dependent on the current customer base. The result that the "Progress in facilitation of investment approval procedures for foreign investors" [24] was, in comparison to other sectors, considered to have no positive impact on foreign investors in the Power sector illustrates that the Power sector was accustomed to strict bureaucracy and rules.

For all sectors except the Power sector, the determinant with the lowest mean value was "Access to natural resources and/or production material" [4]. In the Power sector the determinant "Cost pressure" [19] with a mean value of minus 0.91x (in comparison to minus 0.55x for the criterion "Access to natural resources and/or production material" [4]) had been the least significant criterion. The majority of the other sectors had also stated that "Cost pressure" [19] had not been important to them.

Three further criteria that most of the sectors had considered as not having an impact were "Progress in market infrastructure conditions: Transportation" [12], "Distance" [21] and "Investment incentives" [22]. This demonstrates that foreign direct investors did not (mainly) enter a new market in order to save costs, but to "conquer" new markets.

<sup>183</sup> **Note:** The number [x] behind the criterion represents the number of the question in the respective table of the questionnaire.

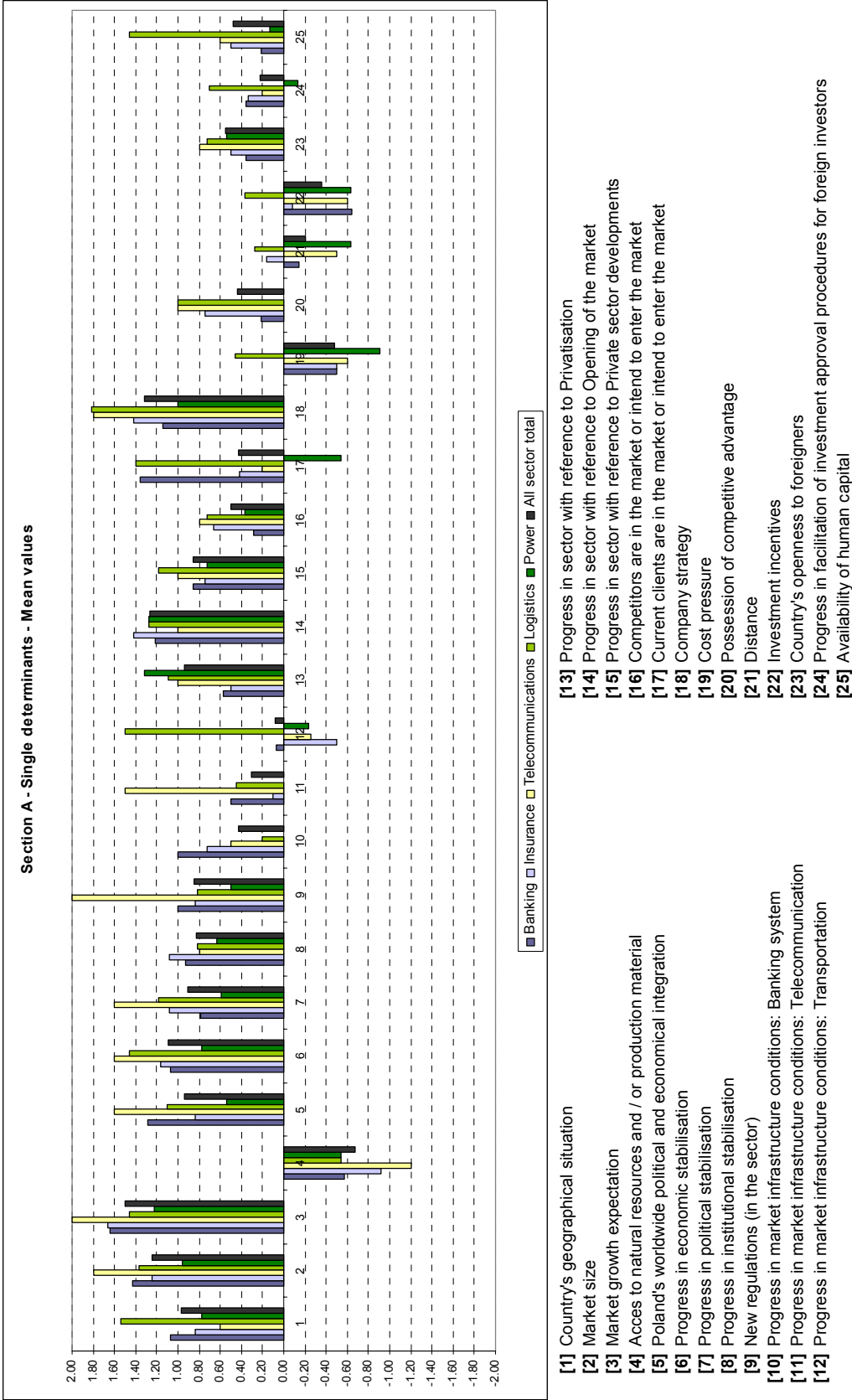
The results for all other criteria showed the same trend among the sectors and also reflected that the majority of the criteria had played a role (but not necessarily a predominant one) in the foreign direct investor's decision making process.

When looking at the determinants with the highest mean value, then "Market growth expectation" [3] and "Company strategy" [18] can be considered as the main drivers of FDI.

Overall, it could be seen that the magnitude of the received answers was very high in every sector. This illustrates that the foreign investors had been aware of all determinants and had distinguished between them. Foreign direct investors who answered the questionnaire had a clear perception of the different determinants and their impact on the market entry decision making process.

The difference of the mean values between the five sectors however reflects that the foreign direct investors were not affected in the same way by the determinants. This means that sector specific determinants do exist, but they are not predominant and don't have an impact on the overall result for the infrastructure sector. Therefore by only looking at a particular mean value it would not be possible to conclude which sector the mean value represents.

Figure 20: Section A- Single Determinants - Mean Values



Source: own presentation

### 5.3.1.1 *Analysis over Time*

Throughout the entire period (time frame), the sectors' mean values over time and resulting trends of the thematic blocks (see Attachment 11) were mainly equal for each sub-period and also reflected the mean value results as presented in Figure 19. It appeared that time had no major impact on the given answers in each thematic block and thus the overall result.

All thematic blocks except from the block "Access to natural resources" had an impact on the investor's market entry decision. The most important thematic block was "Market". Again, the respective mean values over time were quite high and homogeneous within one sector. This reflected that in all periods, companies in one sector were (likely) to provide the same answers. This answer trend was also similar to those of investors in the other sectors, which means that independently they felt that the same determinants had been of importance to them.

For each individual determinant (see Attachment 11), the mean value over time for each sector as well mirrored that the results were very similar to the respective mean value results as shown in Figure 20. The criteria "Access to natural resources and / or production material" [4], "Progress in market infrastructure conditions: Transportation" [12], "Cost pressure" [19], "Distance" [21] and "Investment incentives" [22] were throughout the entire period considered to mainly be of no relevance for each infrastructure sector. This confirms Eliasson's (1994) and the WTO's (1999) statements that incentives are not predominant FDI determinants.

When looking at the development in each of the five sectors over time the following can be stated. The determinants "Access to natural resources and / or production material" [4], "Progress in market infrastructure conditions: Transportation" [12] and "Availability of human capital" [25] showed in the Banking, Insurance and Power sectors a trend from a negative mean value to a positive mean value which reflects that the importance of these criteria had increased over time.

The Logistics sector revealed that all determinants had been regarded to be of relevance and only the question about "Access to natural resources and / or production material" [4] had been neglected in the market entry decision making process. This shows that the Logistics sector was the most vulnerable among the five sectors.

The breakdown of the data over time revealed that the impact of time on the importance of the determinants was minimal. Additionally, the development of the determinants over time does not reflect that initially transformation specific determinants had been the main driver to enter the Polish infrastructure market. It rather appeared that the main determinants, which are "Market growth expectation" [3], "Progress in sector with reference to opening of the market" [14], and "Company strategy" [18] had been stable over time in their predominance as criteria for a market entry. These results for the infrastructure sector did not confirm Schulz' (1997) statements about transition specific FDI and reflected that the transition specific aspect was not as visible as presented by some researchers.

One could argue that "Progress in sector with reference to opening of the market" [14] is a transformation specific determinant, but then this criterion's importance should have decreased over time as the Polish transformation progressed. However, this criterion was still

predominant by year 2003 which shows that this determinant cannot really be considered to be transformation specific.

Another argument to strengthen the conclusion that the criterion is not transformation related is that one of the major criteria for Poland's EU membership was that the Polish market should be open like the other member states. Since Poland was successful in joining the European Union in 2004 it is unlikely that in 2003 it was still assumed that the transformation process was continuing, and thus, the opening of the market was not yet finished, which would then have explained the criterion's high mean values.

#### 5.3.1.2 *Analysis by Company Form*

The sectors' thematic block results for each company form (i.e. the sectors' mean values by company form) as presented in Attachment 12 were very homogeneous, which illustrates that there was no visible link between the importance of a thematic block and the company form.

The answer magnitude was again very high. The least amount of deviating sectors occurred for the company form Acquisition and the highest for Joint Ventures. The sectors where the mean values deviated most were the Banking and Power sectors and the thematic blocks concerned were "Market infrastructure", "Company internal criteria" and Country's efforts to attract FDI".

The thematic block results for each company form (i.e. the mean values by company form for each sector) reflected the mean values as shown in Figure 19, which leads to the conclusion that the results are generally independent of the chosen company form. The most important and least important thematic blocks were "Market" and "Access to natural resources" respectively.

In accordance with the single determinant results of the general analysis and analysis over time (see for comparison Figure 20 and Attachment 12, the least important criteria from a company form perspective for all sectors were as well "Access to natural resources and / or production material" [4], "Progress in market infrastructure conditions: Transportation" [12], "Cost pressure" [19], "Distance" [21] and "Investment incentives" [22]. All other criteria had been of relevance.

One exception was the Logistics sector where only the criteria "Access to natural resources and / or production material" [4] and "Distance" [21] were regarded to be of no importance. The Logistics sector here clearly revealed its particularity, i.e. its difference to the other four sectors.

The magnitude of the answers in each sector reflected as well that the foreign direct investors were aware of the determinants. The answer trend among the sectors is the same and only the mean value amount differs. This reflects that the sector the investor is active in had an impact on the importance of determinants, however overall they feel influenced by the same criteria.

### 5.3.1.3 Most and Least Important Thematic Blocks and Determinants

When looking at the most and least<sup>184</sup> important criteria and thematic blocks over time and by company form, the following can be stated.

When comparing the importance of the thematic blocks for each sector in Section A, the answers received from the companies show almost no difference. Table 13 reflects that throughout the entire transformation period, the thematic block “Market” had been the main driver for the foreign investors. The thematic block focused on questions about the market's location, market size and growth potential. This result confirms Bevan and Estrin's (2000) conclusions that the host market size has a strong influence on FDI.

**Table 13: Section A - Most and Least Important Thematic Blocks<sup>185</sup>**

<b>Most important</b>	<b>1989-1992</b>	<b>1993-1995</b>	<b>1996-1999</b>	<b>2000-2003</b>	<b>Acquisition</b>	<b>Greenfield</b>	<b>Joint Venture</b>
<b>Banking</b>	Market	Progress in sector	Market	---	Market	Market	Market
<b>Insurance</b>	---	---	Market	Market	Market	Market	Market
<b>Telecom</b>	Market	---	---	---	Progress in sector	Market	Country's economic and political situation
<b>Logistics</b>	Company internal criteria	---	Market	Market; Progress in sector	Market	Market	Market
<b>Power</b>	Progress in sector	Market	Market; Progress in sector	Market	Progress in sector	Market	Progress in sector

<b>Least important</b>	<b>1989-1992</b>	<b>1993-1995</b>	<b>1996-1999</b>	<b>2000-2003</b>	<b>Acquisition</b>	<b>Greenfield</b>	<b>Joint Venture</b>
<b>Banking</b>	Access to natural resources	Access to natural resources	Access to natural resources (*)	---	Access to natural resources	Access to natural resources	Access to natural resources
<b>Insurance</b>	---	---	Access to natural resources	Access to natural resources	Access to natural resources	Access to natural resources	Access to natural resources
<b>Telecom</b>	Access to natural resources (*)	---	---	---	Access to natural resources	Access to natural resources (*)	Access to natural resources
<b>Logistics</b>	Access to natural resources	---	Access to natural resources	Access to natural resources	Access to natural resources	Access to natural resources (*)	Access to natural resources
<b>Power</b>	Access to natural resources	Access to natural resources	Access to natural resources (*)	--- (**)	Market infrastructure	Access to natural resources	Access to natural resources

(\*) mean value is equal to zero

(\*\*) no negative mean value

Source: own presentation

The results appear to be homogeneous for all sectors. They are homogenous regardless of the time of market entry or market entry form. This suggests that the reasons to enter the Polish market were only marginally driven by transformation specific determinants.

In the second period, from 1993 to 1995, the Banking sector, for example, stated that the thematic block “Progress in sector” was most important. This thematic block included questions with regard to the progress of the privatisation, opening of the market and the development of the private sector. This result could reflect the fact that the sector's privatisation was not as fast as initially expected and hoped and thus, at that stage the thematic block “Progress in sector” became more important which could be interpreted as a transition related determinant). In the mid 1990s, when the market opening had progressed, the sector's main focus then turned back to the thematic block “Market”.

Foreign investments in the Power sector were also strongly influenced by the thematic block “Progress in sector”. One could argue that the results for the Power sector reflect the sector's development. Whenever major market changes occurred, foreign investors in this sector focused on this thematic block, for example the reformation of the sector started immediately

<sup>184</sup> The most and least important thematic blocks and criteria are those with the highest and respectively lowest mean value.

<sup>185</sup> When only one company in a sector for a particular period of time or company form was given, the company's answer was left out to guarantee the company's confidentiality and also to avoid misleading results as one answer could not be considered to be representative.

Additionally, when for a particular period or company form the sector's mean value equalled zero, or there was either not a positive or negative mean value for the most and least important thematic block or determinant, the result was left out of further consideration and highlighted respectively.

in 1990, during the second half of the 1990s, the petroleum market was opened and the Energy Law from 1997 reconfirmed and reinforced the sector's reformation process. In both periods the foreign direct investors seemed to have closely looked at the sector's developments.

The above results reflect that the progress of the transition in Poland influenced the criteria's importance. However, the impact on the sectors was neither similar nor simultaneous. It also needs to be highlighted that the change in the most important thematic block does not mean that the replaced thematic block was not considered anymore. The result "only" reflects that this criterion in that particular period was not the most important criterion anymore.

When looking at the results for the company forms, the Banking sector did not reveal a difference in its result for the different modes of market entry, which reflects, that the company form had not the same impact on the importance of criteria in the Banking sector as the date of market entry. It can be concluded that time has an impact on the importance of determinants while the mode of market entry does not seem to affect the determinants' importance.

The results for the Telecommunications and Power sector however revealed that depending on the company form a different thematic block was predominant. The company form Acquisition, for example, was not only influenced by the thematic block "Market" but also by the thematic block "Progress in sector". This result could reflect the fact that these two sectors have the highest proportion of sunk costs and thus, they needed more reassurance about the market's opening, because they would not be able to quickly leave the country without major losses.

Throughout the entire period, the five sectors, except from the Power sector, regarded the thematic block "Access to natural resources" as not important. In the Power sector the thematic block seemed to have gained importance over time, which is reflected by the fact that the mean value increased. Initially the thematic block had a negative mean value and in the last sub-period, the value was positive. This again could be linked to the opening of the petroleum market and the fact that among the five sectors analysed in this research only the Power sector is dependent on natural resources.

The results in Table 13 also illustrated that the company form had no impact on the least important criterion, i.e. they confirmed earlier findings

The results of the individual determinants are less homogenous than for the thematic blocks (see Table 14). For many sectors there was not one particular determinant at some point in time or for a particular company form that was outstanding in comparison to the other criteria.

As demonstrated in the thematic blocks, the foreign investors considered market related criteria to be of relevance. Within that thematic block, the criterion "Country's geographical situation" was considered to be less important than the determinants "Market growth expectations" and "Market size".



**Table 14: Section A - Most and Least Important Single Determinants**

Most important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
<b>Banking</b>	(1)	(1); (2); (3); (4); (5); (6)	(7)	---	(1)	(11)	(1)
<b>Insurance</b>	---	---	(6)	(1)	(1)	(6)	(1)
<b>Telecom</b>	(1); (3)	---	---	---	(1); (3); (12)	(1); (2); (3); (8); (13); (14)	(1); (3); (8)
<b>Logistics</b>	(8); (9)	---	(8)	(8)	(8)	(8); (9)	(8)
<b>Power</b>	(5)	(1); (8)	(2)	(1); (6); (8); (10)	(1)	(1)	(5)

Least important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
<b>Banking</b>	(15)	(15)	(16)	---	(15)	(17)	(16); (17); (18)
<b>Insurance</b>	---	---	(15); (16)	(16)	(15); (16)	(15)	(15)
<b>Telecom</b>	(15)	---	---	---	(15)	(15) (*); (16) (*); (17) (*)	(15)
<b>Logistics</b>	(4) (*); (15) (*)	---	(15)	(15)	(15)	(4) (*); (15) (*); (19) (*)	(15)
<b>Power</b>	(15); (16)	(16); (17)	(16)	(16)	(16)	(16)	(16)

(1) Market growth expectations

(2) Market size

(3) New regulations

(4) Progress in market infrastructure conditions: Banking

(5) Progress in sector with reference to Privatisation

(6) Progress in sector with reference to Opening of the market

(7) Poland's worldwide political and economical integration

(8) Company strategy

(9) Availability of human capital

(10) Country's geographical situation

(11) Current clients in the market

(12) Progress in market infrastructure conditions: Telecommunication

(13) Progress in political stabilisation

(14) Possession of competitive advantage

(15) Access to natural resources and / or production material

(16) Cost pressure

(17) Investment incentives

(18) Progress in market infrastructure conditions: Transportation

(19) Progress in institutional stabilisation

(\*) mean value is equal to zero

Source: own presentation

As shown in Table 14, when analysing the most important criterion as stated for the company forms it can be seen that for all sectors, with exception of the Logistics sector, the criterion “Market growth expectations” was predominant.

The Logistics sector mainly stated that the decision to enter the Polish market was part of the “Company Strategy” (8)<sup>186</sup>. The Logistics sector was also affected by the “Market growth expectations” (1). However, this criterion, which refers to the market growth within the country, was not predominant. Logistic companies often argued that they regarded Poland as the “Gate to the East”<sup>187</sup>. The market size and market growth expectations were not as crucial to them as the possibility to expand their territory of activity. By entering Poland they brought themselves into the position to connect Eastern and Western Europe. It could be argued that the Logistics sector is less dependent on the local market than the four other infrastructure sectors and therefore, the criterion “Company strategy” (8), i.e. the question, whether the company intends to enter this market/region, was of more relevance.

Banks entering the market via Greenfield investment stated that “Investment incentives” (17) were neglected as FDI determinants. This is in contrast with the widely spread perception of incentives. Governments in general assume that investment incentives are an important element to attract foreign investors (see for example the paper from the Macroeconomic Analysis Team [2003]).

However several surveys and studies have stated in their results that investment incentives are not predominant criteria for foreign direct investors<sup>188</sup>. With the results of this research the same conclusion can be drawn, i.e. the company answers have revealed that while not every foreign direct investor reacted in the same way to incentives, they nevertheless did not have a major influence in the sectors.

<sup>186</sup> Numbers in “( )” refer to criteria shown in the tables presenting the most and least important single determinants. Numbers in “[ ]” relate to the determinants raised in the questionnaire and their results as shown in the figures of Chapter 5.3 and Attachments number 11 to number 16.

<sup>187</sup> See for example CBI [1994]: page 213 f.

<sup>188</sup> See: Eliasson [1994]: page 3 ff., Macroeconomic Analysis Team [2003]: page 4, WTO [1999]: page 277 ff.

For all sectors the criterion “Access to natural resources and / or production material” (15) was not of relevance for the market entry decision. This reflects the results of the thematic blocks. Nevertheless all sectors, except from the Logistics sector, also listed at least once the criterion “Cost pressure” (16) as the least important criterion for the market entry decision process. This result is interesting, as regularly in public statements<sup>189</sup> and in the literature<sup>190</sup>, it is said that companies quite often decide to go abroad because of the ability to reduce their costs and stay more competitive. This research however has demonstrated that most companies in the infrastructure sectors did not take this criterion into consideration. Further investigation is required as to why this explanation is used by companies when moving the company to another country.

The above described result queries the view that foreign investors were mainly attracted, especially at the beginning of the transformation period, by the fact that Poland's labour force and production costs were lower than in the foreign investor's home country<sup>191</sup>. It appears that the perception of the expected market growth in the five infrastructure sectors had been the key factor. However, this does not mean that foreign investors in other sectors had not been influenced by the cost factor. In addition, it cannot be concluded that this factor had totally been neglected in the five infrastructure sectors. These determinants still had an impact, however they were not the main driver for the market entry.

The above conclusion could also (partly) provide an explanation why some Central- and Eastern European countries such as Poland attracted more FDI especially in the infrastructure sector than other countries, even though the production and employment costs were comparably low. As the foreign direct investors were mainly focusing on market growth expectations and the size of the market, smaller countries or countries with low growth expectations proved less attractive for investors.

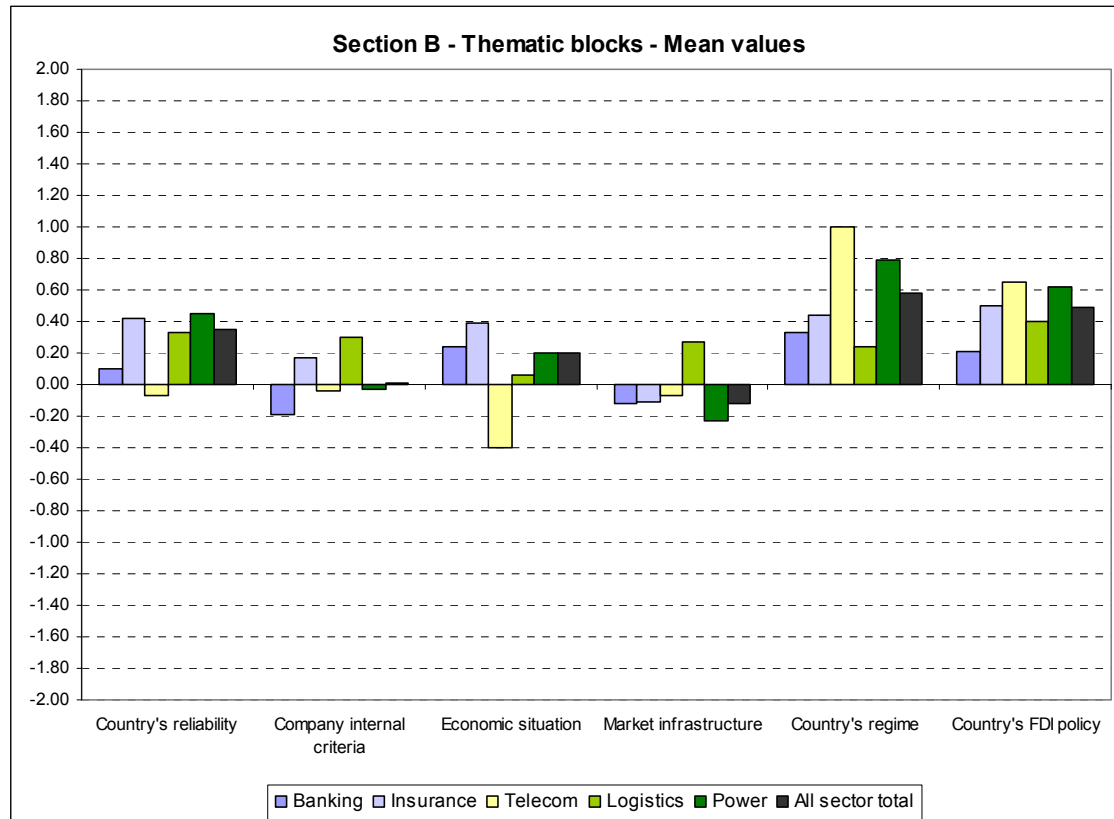
### 5.3.2 Market Entry Related Constraints (Section B of the General Part of the Questionnaire)

Figure 21 shows that the sector results for Section B were not as homogeneous as the results in Section A. They reflect the impact of the five infrastructure sectors on the importance of the differing thematic blocks and also individual questions. These results confirm the conclusions drawn in studies of Cluse [1999], Evan [2001] and Witkowska [1999], which stated that the influence of each determinant depends on the company's business activities

<sup>189</sup> The latest company using this argument in public statements is the mobile phone producer Nokia, who in January 2008 announced to abandon their factory in Bochum, Germany and relocate to Romania. Nokia argued that the labour costs in Germany are too high, and thus the move to lower cost-areas in Eastern Europe is necessary in order to stay competitive. For further information see all main daily newspapers such as the Financial Times. (<http://www.ft.com/cms/s/0/245b1c34-c357-11dc-b083-0000779fd2ac.html>)

<sup>190</sup> Gerstenberger et al (2002), for example, stated that foreign investors are attracted by the low labour costs in CEE. (Gerstenberger et al [2002]: page 17)

<sup>191</sup> See for example CBI [2000]: page 73 ff.

**Figure 21: Section B - Thematic Blocks - Mean Values**

Source: own presentation

The most important constraint for the market entry for all sectors was the thematic block “Country’s regime”. This thematic block included questions regarding the political stability and status of the legal as well as fiscal framework. The result illustrates that foreign investors considered a well-functioning political and legal system as crucial.

Another predominant thematic block for all five sectors was “Country’s FDI policy”. This block reflects that the foreign direct investors’ perception about restrictions on their investment possibilities and the foreign governments’ credibility also played an important role.

The results for the other four thematic blocks were not consistent which means that at least one sector in each thematic block stated the opposite result in comparison to the other sectors. It was therefore for these four thematic blocks not possible to determine an unambiguous trend. The result also reveals that dependency exists between the thematic blocks and the respective infrastructure sector.

The Telecommunications sector was the only sector that stated that the thematic block “Economic situation” had not been of importance. This demonstrates that inflation, GDP growth and budget deficit were not considered to be a threat for their business.

The Logistics sector, in comparison to the other sectors, regarded the thematic block “Market infrastructure” and specifically the question referring to the infrastructure level for transportation as a hindrance for the market entry. This confirms the findings in Section A

and shows that the market infrastructure conditions are essential for the Logistics sector. If they do not meet the sector's requirements they represent a constraint for the market entry. The importance of this thematic block with its respective criteria might be an explanation for the fact that foreign companies entered the Logistics sector quite late (see Figure 12 on page 60). This could be a reflection of the investors waiting until the market met their expectations.

The determinants that by all sectors were perceived to be constraints were "Bureaucratic hurdles" [1], "Political stability" [11], "Fiscal framework" [12], "Legal framework in sector" [15], "State interference" [19], "Ability of the authorities to keep their promises" [20] and "Riskiness of business" [21] (see Figure 22). This result mirrors the outcome of the thematic blocks and confirms the fact that the government's actions and regulations were considered to be crucial by the foreign investors. The investors' satisfaction with regard to these criteria had an impact on the timing and amount of foreign direct investments. This confirms both, Dunning and Narula's (1998) as well as the United Nation's (1998) statements that government actions have a strong impact on FDI flows.

The results for each single criterion are in comparison to Section A quite heterogeneous among the five infrastructure sectors. Only in approximately one out of three of the listed determinants did all sectors show the same answer trend. In these cases a particular trend in the answers could be seen, which means that the mean values for these specific criteria were for all sectors either positive or negative with no single exception.

In the OECD's Economic Survey of Poland in year 2000 and the United Nation's Common Country Assessment in the same year<sup>192</sup> it was stated that measures to prevent and fight corruption in Poland needed more focus. The Common Country Assessment furthermore described that corruption is a common phenomenon in CEE. It was stated that considerable progress had been made in Poland, but the issue was still of concern and it was considered that more time and efforts were needed to satisfactorily solve the problem. In comparison to these statements the answers of the questionnaires revealed that the criteria "Corruption" [2] and "Country's reputation and perception" [3], especially the latter, were not regarded as predominant constraints for the foreign direct investor's market entry. The only exception was the Insurance sector, where the criterion "Corruption" was listed as the main reason against market entry. This is an interesting result as the investors in the Insurance sector mainly entered the market quite late (see Figure 12 on page 60) and corruption was thought to be a major problem at the beginning of the transformation period. Corruption might therefore be related to the abuse of insurances and not corruption in the sector itself.

Except from the Insurance sector, the questions "Cultural and language barriers" [4] did not represent a constraint for the other sectors. It can be assumed that the received answers from the Insurance sector refer more to the cultural than the language difference. This could, for example, reflect the citizen's perceived necessity for insurances.

In Section B of the questionnaire, the Logistics sector reflected again that cost related criteria were of importance. Results in this sector showed for, example, that "Costs of staff training, establishment of management, etc." [16] and "Strong labour force" [18] were considered to be important constraints while they were not important for the other four infrastructure

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<sup>192</sup> See: OECD [2000b]: page 11 and United Nations [2000]: page 25.

sectors. This confirms earlier findings and conclusions that the Logistics sector is very sensitive to cost changes.

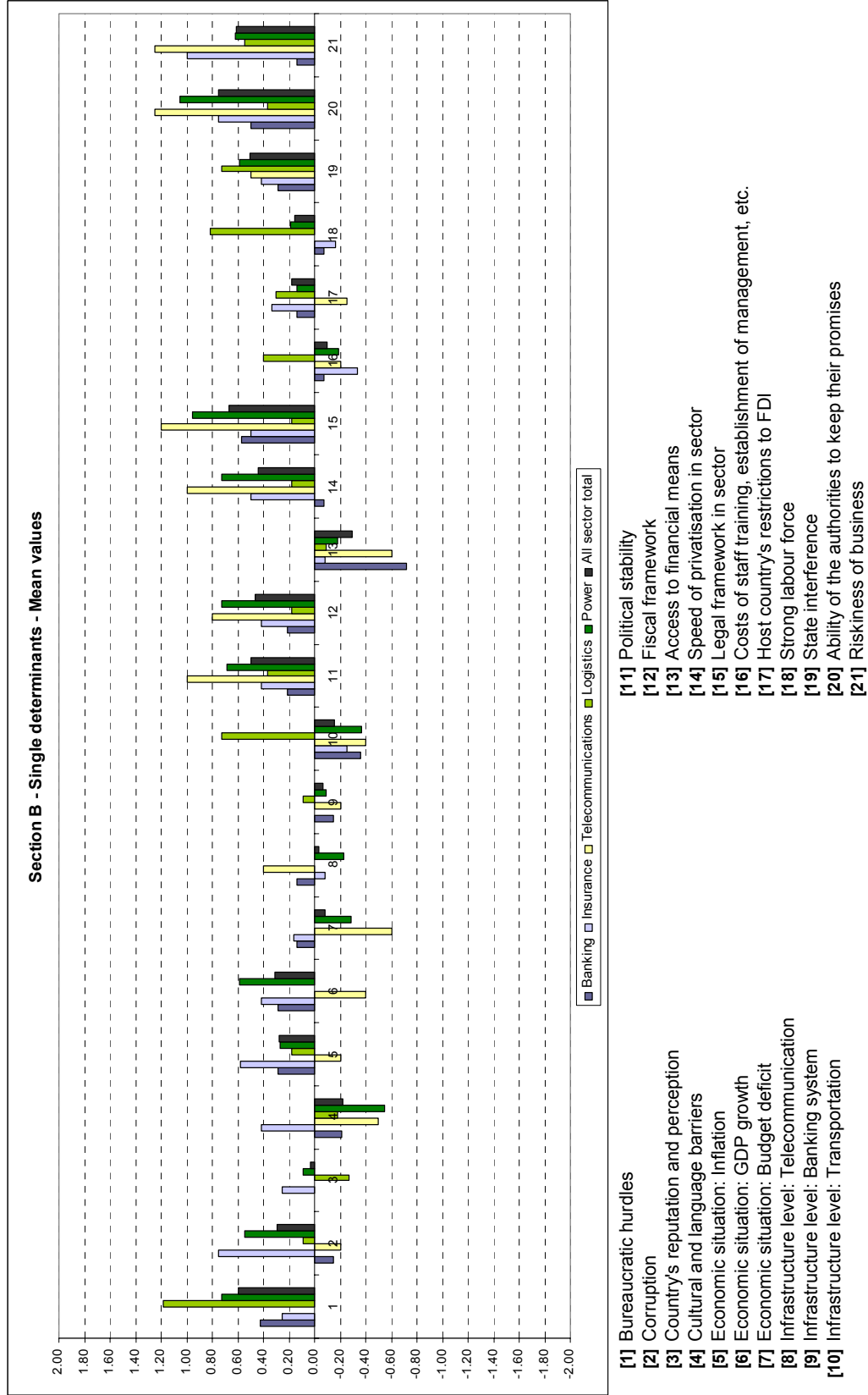
In each sector more than one constraint was considered to be of no importance. However, across all sectors, the least important market entry constraint had been the criterion "Access to financial means" [13]. This reflects that foreign investors in comparison to local investors were not dependent on funding received from the newly entered market. This represented a competitive advantage for them and therefore, a reason to enter the market as described by the OLI-Theorem.

Overall, it can be stated that the results in Section B were less homogenous among the sectors than in Section A and also that the sector's business activity had a strong impact on the importance of constraints, while market entry encouraging determinants as presented in Section A seem to have been less affected by the sector. The magnitude of the received answers in this section was not as high as in Section A, and the trend of the answers were less consistent among the sectors. This suggests that these determinants were less clear and stable among the companies and sectors. It can be assumed that additionally to the business sector itself individual characteristics such as the company's experience in entering new markets, the size of the company, and the chosen market entry form had an impact on the importance of the FDI constraints.

The results in Section B have also shown that even though the infrastructure sectors have a strong impact on the (perceived) importance of determinants, the general picture is still quite balanced and reflects that the country's regulations and government's actions are crucial constraints.

In conclusion when trying to attract FDI for a particular sector, the state administrations should focus on the determinants perceived to be constraints in that sector.

Figure 22: Section B - Single Determinants - Mean Values



Source: own presentation

### 5.3.2.1 *Analysis over Time*

Even though not all sectors are represented in every sub-period (see Attachment 13), it can be seen that the thematic blocks in each sub-period showed the same trend as the results of the general analysis as illustrated in Figure 21. In each sub-period and for each sector, the thematic blocks "Country's regime" and "Country's FDI policy" were of importance. The results for the other four thematic blocks were not consistent among the sectors, confirming earlier conclusions that they are strongly influenced by the sector.

When looking at the mean values over time for the sectors' single determinants (see Attachment 13) it can be seen that the results in each sub-period are quite similar to the mean values as presented in Figure 22.

In every sub-period, the determinants with the most consistent results among the sectors were "Bureaucratic hurdles" [1], "Political stability" [11], "Fiscal framework" [12], "Legal framework in sector" [15], "State interference" [19], "Ability of the authorities to keep their promises" [20] and "Riskiness of business" [21]. Regardless of the chosen infrastructure sectors these constraints were always considered to be of importance. Therefore, the analysis over time confirmed the investor's dependence on the country's regulations and government's actions.

The above result shows that the market entry date did not have a major impact on the importance and perception of these determinants, suggesting that the constraints were not mainly time dependant and therefore not transition specific. This again reflects that Schulz' (1999) statements about transition specific FDI determinants could not be verified by this research.

However slight time dependency could be seen for some criteria like, for example, for the criterion "Access to financial means" [13]. While in Figure 22 the mean value of this criterion had clearly illustrated that all sectors regarded this criterion to be of no importance, the mean value results over time were not always that unambiguous. This was especially true of companies that had entered the Polish infrastructure market between 1993 and 1995, which were companies in the Banking and Power sector. These companies stated that this criterion had been of importance to them, which could reflect the fact that in this particular period the banks struggled with bad loan issues.

As demonstrated earlier, these market difficulties seem to have had an impact on the relevance of criteria for the market entry as presented in Section A (see Table 13 on page 79), where in the period 1993-1995 in the Banking sector the thematic block "Progress in sector" in comparison to the other periods had been predominant. In addition, the FDI constraints seem to have been affected by this economic issue which shows that constraints and market entry determinants are interrelated.

A strong dependency of the results over time could not be seen, but as illustrated, some criteria appeared to be time dependent. It was therefore concluded that time dependency of the FDI constraints in the infrastructure sector might exist, however it is not predominant. Due to the absence of a clear link between time and the importance of constraints, it could be concluded that the determinants are not transition specific for the Polish infrastructure sector.

The criterion "Corruption" [2] mainly appeared to be important for investors in the Power and Insurance sectors. This again might be related to the perception of misuse within the

sector and not a statement about the state of corruption in the country itself, especially when taking into consideration that most foreign direct investors entered the Polish Insurance market in the late 1990s, and the mean value for the Power sector had been stable throughout the entire transformation process while studies showed that the level of corruption improved during that period. It can therefore be concluded that the criterion is not transformation specific.

The constraints are not really transition specific, but represent main critical issues for the foreign direct investors. However, it can be assumed that if a foreign direct investor intends to invest in a country in transition, the investor will analyse these constraints more carefully than in other cases. Only if the advantages of the investment exceed the constraints it is likely that the investor will pursue with the intention of investing.

When looking at the results for the criterion "Cultural and language barriers" [4] it became apparent that mainly the Insurance sector felt this criterion to be an issue. As explained earlier, it is assumed that the result is rather linked to the cultural aspect and thus perception of insurances than the language.

The answer magnitude for the mean values over time of the FDI constraints was not as high as in Section A, and the answers were less homogeneous. Thus, it was more difficult in this section to see a clear trend. This indicates that time and the sector had a stronger impact on the constraints than on the FDI encouraging determinants. Nevertheless the results in each sub-period and for each sector have demonstrated that the government's actions and policy are the main factors that could prevent FDI.

#### 5.3.2.2 *Analysis by Company Form*

The thematic block results for each company form (see Attachment 14) reflect the mean value results as illustrated in Figure 21. Again, the thematic blocks "Country's regime" and "Country's FDI policy" had been considered to be the main constraints for foreign direct investors, whereby Greenfield investments showed a less clear picture than the other two modes of market entry, especially for the Banking and Logistics sector.

The company form and also the business sector seemed to have had an impact on the perception of constraints.

The split of the received answers with regard to the company form did reflect the result of the mean values as presented in Figure 22. For all sectors the criteria "Bureaucratic hurdles" [1], "Political stability" [11], "Fiscal framework" [12], "Legal framework in sector" [15], "State interference" [19], "Ability of the authorities to keep their promises" [20] and "Riskiness of business" [21] appeared to be major constraints. Again it became apparent that regardless of the chosen mode of market entry consistent regulations and predictable behaviour and actions by governmental institutions are crucial for investors.

The criterion "Access to financial means" [13] was by all company forms and all sectors (except for Acquisitions in the Power sector) not considered being of importance. This criterion highlighted that the foreign direct investors possessed a competitive advantage in comparison to local investors as defined by the OLI-Theorem. This result also reveals that the time dependency of this criterion does not become apparent when analysing the results from the perspective of the chosen company form.



“Corruption” [2] was by all company forms and almost all sectors (mainly the Insurance and Power sectors) regarded as a constraint of importance, however it did generally not belong to the sectors' major constraints. Mainly the Insurance and Power sectors showed that this criterion had been of importance. As discussed earlier this result is quite interesting and it is assumed to reflect misuse within the sector.

Except from the Insurance sector, “Cultural and language barriers” [4] were not considered to be a FDI constraint. As argued in earlier chapters of Section B, it is assumed that the foreign direct investor in the Insurance sector feels that the country's approach to and perception of insurances is of high importance and could prevent the market entry.

The answer magnitude was less high than for answers in Section A and the results were not as identical and clear as for the split over time, but still the overall trend was visible.

The interaction of mode of market entry and business sector seems to be less clear than the relation of time and business sector. It was much more difficult to see a trend and draw general conclusions when analysing the results by company form.

### 5.3.2.3 Most and Least Important Thematic Blocks and Determinants

Table 15 illustrates, that the thematic blocks “Country's regime” and “Country's FDI policy” were considered as the main investment constraints over time and for the different company forms. The focus of these thematic blocks lay on the country's political and legal stability as well as the country's efforts to facilitate investments.

**Table 15: Section B - Most and Least Important Thematic Blocks**

<b>Most important</b>	<b>1989-1992</b>	<b>1993-1995</b>	<b>1996-1999</b>	<b>2000-2003</b>	<b>Acquisition</b>	<b>Greenfield</b>	<b>Joint Venture</b>
<b>Banking</b>	Country's regime	Country's regime; Economic situation	Country's FDI policy	---	Country's regime	--- (***)	Country's regime; Country's reliability
<b>Insurance</b>	---	---	Country's FDI policy	Country's reliability	Country's regime	Country's FDI policy	Country's regime
<b>Telecom</b>	Country's regime	---	---	---	Country's FDI policy	Country's regime	Country's regime
<b>Logistics</b>	Economic situation	---	Country's reliability	Country's FDI policy	Country's reliability	Country's reliability	Country's FDI policy
<b>Power</b>	Country's regime	Country's FDI policy	Country's reliability	Country's regime	Country's regime	Country's regime	Country's regime

<b>Least important</b>	<b>1989-1992</b>	<b>1993-1995</b>	<b>1996-1999</b>	<b>2000-2003</b>	<b>Acquisition</b>	<b>Greenfield</b>	<b>Joint Venture</b>
<b>Banking</b>	Company internal criteria	Company internal criteria	Market infrastructure	---	Company internal criteria	Company internal criteria	Market infrastructure
<b>Insurance</b>	---	---	Market infrastructure	Market infrastructure	Market infrastructure	Market infrastructure	Market infrastructure
<b>Telecom</b>	Economic situation	---	---	---	Economic situation	--- (**)	Company internal criteria
<b>Logistics</b>	--- (**)	---	Economic situation	--- (**)	Economic situation	Country's FDI policy	--- (**)
<b>Power</b>	Company internal criteria	Market infrastructure	Market infrastructure	--- (**)	Market infrastructure	Company internal criteria	Economic situation

(\*\*) no negative mean value

(\*\*\*) no positive mean value

Source: own presentation

The Logistics sector also considered the thematic block “Country's reliability” and within the block the determinant “Bureaucratic hurdles” as a major constraint. Heavy bureaucratic hurdles are considered to be very expensive, and as companies in this sector are very cost sensitive this constraint could prevent investments.

The country's development over time does not show a change in the perception of constraints, which reveals that the results in the early years were not a feature of the fact that Poland was at the stage of transformation. It can be assumed that the foreign investors always take the same range of constraints into consideration regardless which market they enter. This leads to the conclusion that transition related constraints are not main criteria.

This confirms earlier findings that time dependency and thus transition related results do exist, but they are not predominant.

As the FDI policy, country's regime and country's reliability were over the years perceived differently, the impact of these constraints was therefore different too. It is very likely that at the beginning of the transformation process these constraints had a stronger impact than in later years, meaning that due to non-satisfaction with these constraints in the early years, FDI was possibly postponed or cancelled.

However it might be assumed that additional constraints are taken into consideration when entering a difficult market. Even though these additional criteria are not predominant they will affect the investor's market entry decision and could be the reason why under *pari passu* conditions of the other constraints investments are made or not.

During the transformation process for all sectors except the Logistics sector, the least severe determinants against a market entry were "Market infrastructure" and "Company internal criteria".

It is understandable that company internal criteria should not be a reason why a company is not investing abroad. Market infrastructure, including questions referring to the infrastructure level in the telecommunications, banking and transportation sector, had not been regarded as a constraint because the Telecommunications, Banking and Insurance sectors did not need a fully existing market infrastructure as it is part of their business to set-up the market infrastructure. The Power sector was also not reliant on this thematic block because the base infrastructure was already in place. The only sector that was to a higher extent dependent on the market infrastructure was the Logistics sector. This result confirms earlier statements that a satisfactory market infrastructure is a pre-condition for the market entry.

It is interesting that the Logistics sector had stated that the thematic block "Economic situation" had been the most important block for those investors who immediately entered the Polish logistics market. However, those companies who invested during the second half of the 1990s stated that this thematic block had not been of importance to them. This reflects that the Logistics sector was very dependent on the country's economic situation and indeed applied transition specific determinants, as it can be seen that once the economy was improving the investors stopped taking economic situation related criteria into consideration.

Usually the thematic block "Economic situation" would not be considered to be a transformation specific thematic block as the economic performance in every country the foreign direct investors might want to enter is of relevance. However in the case of Poland it can be argued that the thematic block is transformation specific as the criterion's results reflects the progress in the country's transformation.

The Telecommunications sector, even though having entered the Polish market at an early stage of the transformation did not consider the "Economic situation" as a market entry constraint which shows that the Telecommunications sector in comparison to the Logistics sector was less affected by the progress in transition. It could be argued that the Telecommunications sector saw business and growth potential in Poland's underdevelopment in the sector's technological standard and therefore expected high demand.

From Table 15 it can be seen that the answers reflecting market entry related constraints are less homogenous than the results in Section A which could be interpreted in the following

way: the constraints were differently perceived and might not only be affected by the business sector, time and company form but also by the size of the investing company, the investor's field of activity and international experience.

Table 16 presents the most and least important single constraints.

**Table 16: Section B - Most and Least Important Single Constraints**

Most important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
Banking	(1)	(2)	(3)	---	(3); (6)	(1)	(1)
Insurance	---	---	(4)	(5)	(5)	(4)	(4)
Telecom	(4)	---	---	---	(3)	(4)	(3); (4); (9)
Logistics	(6); (7); (8)	---	(1)	(1)	(1)	(1)	(8)
Power	(9)	(3)	(8)	(10)	(3)	(3)	(6)

Least important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
Banking	(11)	(12)	(11)	---	(11); (12)	(11)	(11); (13)
Insurance	---	---	(7); (13)	(14)	(8)	(8)	(7); (11)
Telecom	(15)	---	---	---	(2); (15)	(7) (*); (8) (*); (11) (*); (12) (*); (15) (*); (18) (*)	(1); (5); (7); (8)
Logistics	(9) (*); (11) (*); (16) (*); (17) (*)	---	(2); (15)	(11); (12); (16)	(12)	(17)	(12)
Power	(12)	(13)	(11)	(12)	(12)	(7); (11); (12)	(15)

- (1) Bureaucratic hurdles
- (2) Economic situation: GDP growth
- (3) Ability of authorities to keep promises
- (4) Riskiness of business
- (5) Corruption
- (6) Political stability
- (7) Cost of staff training
- (8) Strong labour force
- (9) Legal framework in sector

- (10) Fiscal framework
- (11) Access to financial means
- (12) Cultural and language barriers
- (13) Infrastructure level: Transportation
- (14) Infrastructure level: Banking system
- (15) Economic situation: Budget deficit
- (16) Country's reputation
- (17) Speed of privatisation in sector
- (18) Infrastructure level: Telecommunication

(\*) mean value is equal to zero

Source: own presentation

Table 16 demonstrates that the majority of the received answers are quite diverse and appear to be less stable. The sector's activity seemed to have a strong impact on the perception of constraints.

One determinant that during the transformation process repeatedly appeared as a major constraint for foreign direct investors in the Polish infrastructure sector was "Bureaucratic hurdles" (1). This shows that this criterion played a crucial role for an investor when deciding whether the market entry was feasible. State administrations should therefore focus on improving and facilitating the bureaucratic procedures if they want to attract more FDI in the five infrastructure sectors.

Particularly in the Logistics sector the criterion "Bureaucratic hurdles" (1) had a major impact on foreign investors. As bureaucratic hurdles incur costs, this criterion had therefore been considered to be a major market entry constraint for the Logistics sector. This result reflects earlier findings where it could be seen that the sector is in comparison to the other infrastructure sectors very cost sensitive (see criterion [19] in Figure 20).

When analysing the results from the company form's perspective the criterion "Ability of authorities to keep promises" (3) was predominant. The criterion "Bureaucratic hurdles" (1) was also mentioned for several sectors; however the first criterion outnumbered the latter. The fact that the criterion "Ability of authorities to keep promises" (3) was a very important criterion reveals that the government's reliability and efforts had a strong impact on the likelihood of foreign investors to enter and eventually stay in the Polish market. During several talks to some contacted companies this criterion was mentioned when an explanation was given as to why the company had at some point decided to leave the country.

Therefore if, for example, the government has realised that in a particular sector the market growth expectations are perceived to be very high, and the government aims to attract investors in this sector, it should not only focus on measures to facilitate the investment conditions, but should also concentrate on showing consistent and predictable behaviour.

Another interesting fact is that only the Insurance sector considered "Corruption" (5) to be a major criterion. For all other sectors this criterion played a minor role. This again negates the perception that corruption was one of the main hindrances for foreign investors to enter the market.

Greenfield investors considered that the criteria "Riskiness of business" (4) and "Bureaucratic hurdles" (1) are the main constraints for the market entry. This result reflects that Greenfield investments are exposed to more risk than an Acquisition or Joint Venture as the company does not only have to be set-up, but the client and supplier network as well needs to be established. Heavy bureaucracy could prevent or slow down the foreign direct investor's investment activities which would be very expensive for the investors and thus could prevent the investment.

Foreign direct investors who entered the Polish market through an Acquisition stated that the criterion "Ability of authorities to keep promises" (3) had been the major concern. One could assume that this answer is, for example, linked to the prospect of privatisation, whereby foreign investors bought an initial amount of shares and hoped that later they would be allowed to buy further stakes in the company (follow-up investments). The answer could also reflect the investor's ability to withdraw from the investment at any point in time without restrictions.

For both, the analysis over time and by company form, it can be seen that the least important criteria were "Access to financial means" (11) and "Cultural and language barriers" (12). This invalidates the explanations which one could find often that due to different business approaches in the Eastern European countries foreign direct investors found it difficult to enter this market. They argued that they perceived the culture and language to be too different from their own country.<sup>193</sup> This statement is still often quoted when reading about why investors avoid certain markets, but it appears to not always reflect the rationale behind the company's actions. It seems that by using this argument companies disguise the true reasons why the market is not attractive to them.

The results for the criterion "Access to financial means" (11) reflect that the foreign investors are not dependent on finances received within the foreign country. They have their existing sources of funding which they will exploit. This indicates that the functioning of the banking system was not a major constraint to them and represents an advantage in comparison to local investors.

Overall, the analysis of the results in Section B has shown that the country's regulations and government's actions are perceived to be the main constraints for all sectors.

The results were not as unambiguous as in Section A; however trends are still clearly visible. This also illustrates that even though the reasons to enter a market are similar for the sectors,

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<sup>193</sup> This argument, for example, was encountered in several personal communications with banks who had not entered CEE.

the constraints differ. They can provide an explanation as to why in some sectors investments were made earlier than in other.

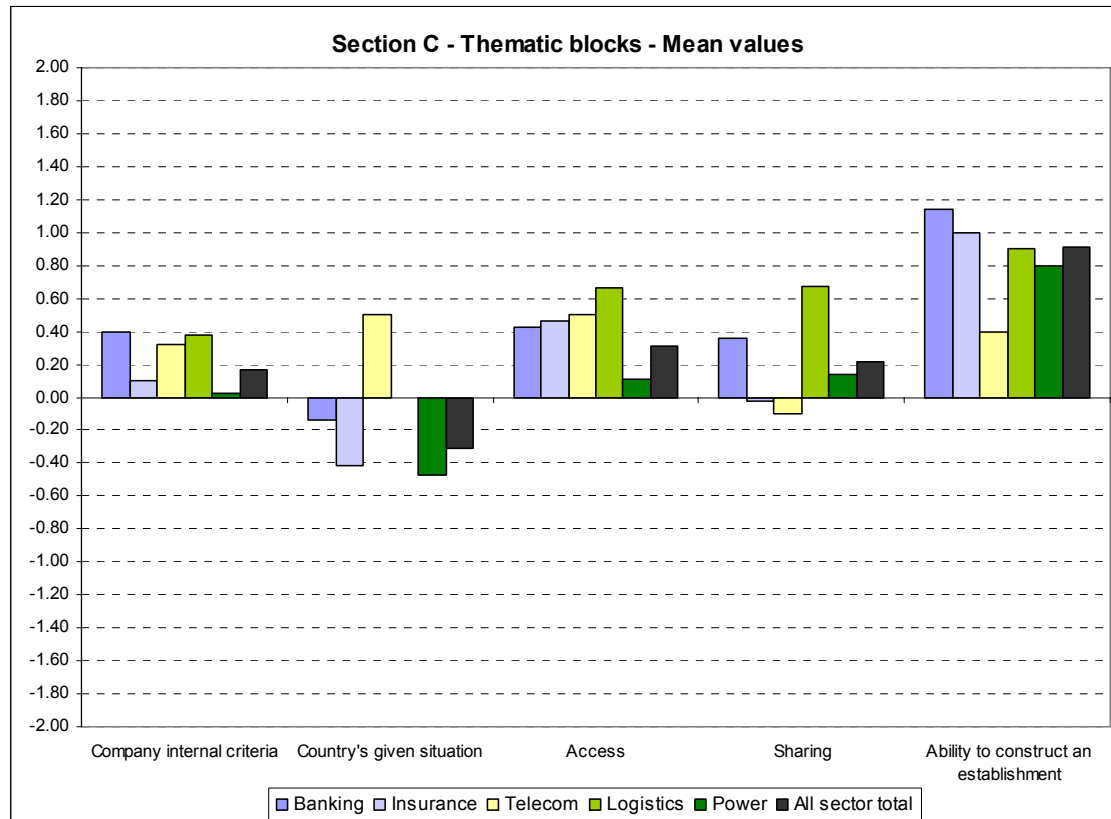
It could also be seen that the results between the sectors often differed which shows that sector specifics exist. It could also be demonstrated that the importance of constraints was influenced by time and the mode of market entry chosen by the foreign direct investor. This needs to be taken into consideration when thinking about how to attract FDI for the country.

### **5.3.3 Mode of Market Entry (Section C of the General Part of the Questionnaire)**

The results in Section C reflect which reasons were important for foreign investors when deciding about a particular company form.

For the analysis of the mode of market entry, it was expected that the general analysis and analysis over time would reveal inhomogeneous results as the different modes of market entry would regard different criteria as important, while the analysis of the mean values by company form would provide a clear picture which mode of market entry is linked to which specific reason. It was also assumed that only the latter analysis would reflect reasons behind each company form as presented by the mode of market entry theory.

Figure 23 shows that except from the thematic blocks "Country's given situation" and "Sharing", the results in each sector had the same trend. It appeared that the decision of companies about the adequate company form for the market entry was based on the same reasons.

**Figure 23: Section C - Thematic Blocks - Mean Values**

Source: own presentation

The above figure also reflects that the thematic block “Ability to construct an establishment” seemed to have been the predominant criterion among the five infrastructure sectors.

When looking at the company form theory, this thematic block strictly seen refers to Greenfield investments. Greenfield investments should therefore have been the predominant company form. However, the number of Greenfield investments in relation to the total number of received answers only amounts to approximately 35%, which shows that this thematic block had also been of great importance to Joint Ventures and Acquisitions. This criterion alone is therefore not an unambiguous criterion for a particular mode of market entry.

An explanation why foreign direct investors had focused on the thematic block “Ability to construct an establishment” might be that they interpreted this thematic block in a different way than expected. The thematic block might have been interpreted as the possibility to establish a company that would fit best into their business activities and thus this criterion had been of importance for all modes of market entry.

The thematic block “Country's given situation” with questions referring to market restrictions and the ability to choose the mode of market entry was by the majority of the sectors considered to be of no importance, while all other thematic blocks had been important for the foreign direct investors.

When looking at the results of the thematic blocks, it appeared that only the Telecommunications sector was suggesting different result in comparison to the other sectors. However, when analysing the individual answers as illustrated in Figure 24 it can be seen that not only the Telecommunications sector shows different results in some cases, but also that the Insurance and Power sector did not always follow the common trend.

Most of the inquired reasons seem to have had an impact on the company form chosen by the foreign direct investor (Figure 24). All sectors stated that the criteria "Access to companies already established in the market" [1], "Ability to construct an establishment according to specific requirements" [2], "Access to local resources" [4], "Ability to locally evaluate the market conditions" [6], "Common strategy of the company" [9], "Gaining proprietary control" [11] and "Immediate possession of market share" [12] had been of importance to them, whereby companies in the Logistics sector mainly felt influenced the "Access to local resources" [4], the Power sector by the "Ability to construct an establishment according to specific requirements" [2] and the Telecommunications sector by the "Common strategy of the company" [9].<sup>194</sup> As expected these criteria cover all company forms and do not reflect that one company form is predominant. However, it could be seen that the investors' main focus lay on the ability to quickly access the newly entered market and gain a market share.

The criterion "Acquisition of brand name" [14] had by all sectors been considered to be of no importance for the choice of company form. The non-importance of this criterion indicates that the option to acquire an existing brand name had not influenced the company form for the initial market entry. This is an interesting result as it had been assumed that especially in the Banking and Insurance sector this criterion might be of importance.

The Telecommunications sector considered the criterion "Least expensive form to enter the market" [15] to be even less important than the criterion "Acquisition of brand name" [14]. This reflects that the Telecommunications sector was prepared to make the necessary investments in order to build up the business and gain access to the market.

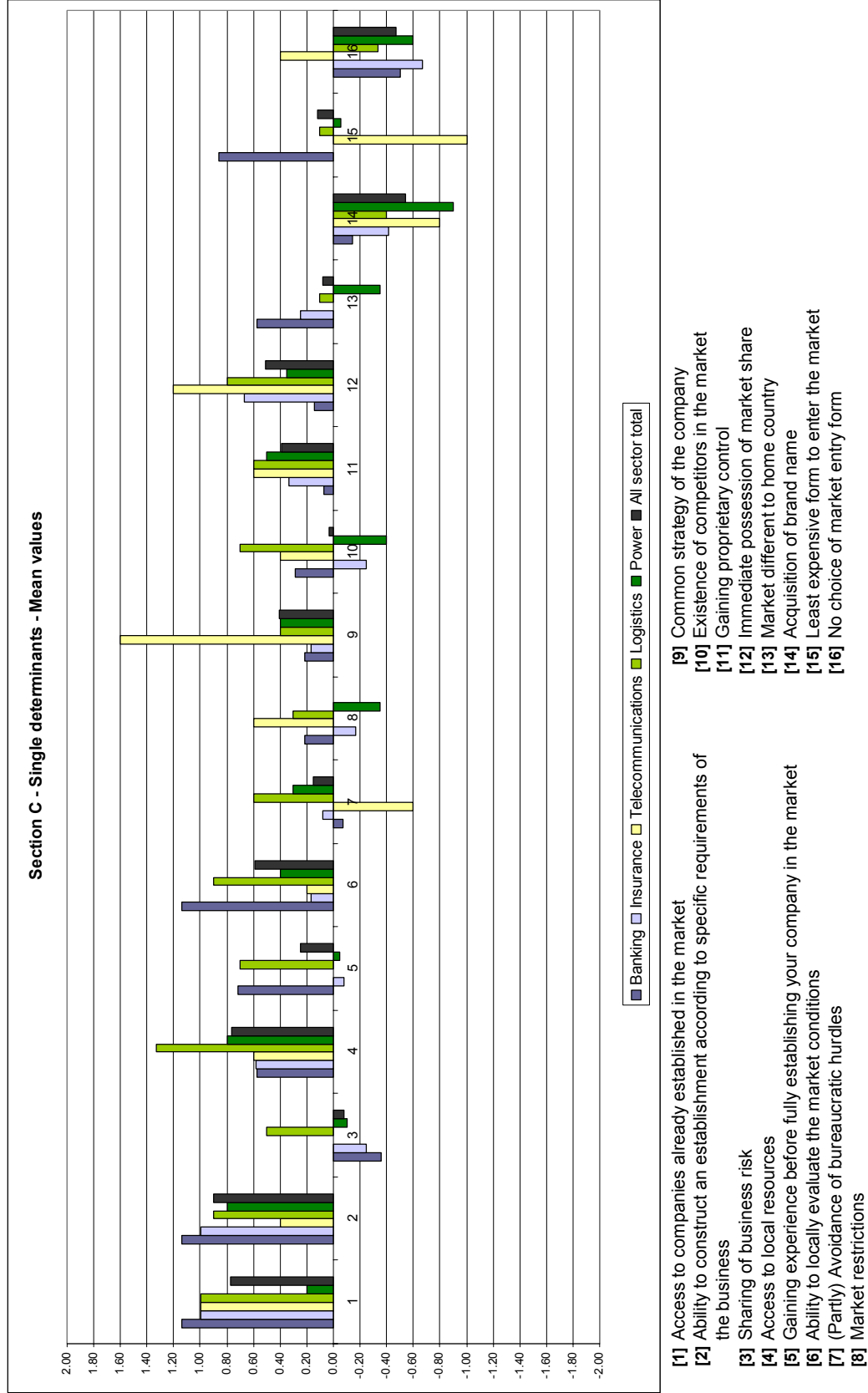
The individual questions did not show such a harmonic picture like the thematic blocks. For more than half of the questions, there was at least one sector that was not following the trend of the other sectors. It would therefore have been incorrect to draw a conclusion from the thematic blocks about the individual answers and vice versa. This also reflects that the reasons for the chosen company form are dependent on the foreign investor's business activities and thus, when it is intended to attract FDI into one specific sector the governments need to closely analyse the sector in question.

The magnitude of the answers is in Section C higher than in Section B but lower than in Section A. This illustrates that foreign direct investors are aware of the existence of a multitude of criteria and if the fact that the criteria's dominance will be affected by the chosen mode of market entry. The impact differs from one company form to another and thus investors have to carefully consider which company form would be the most appropriate for the market entry.

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<sup>194</sup> The Banking and Insurance sector stated that several criteria had been of high importance to them.

Figure 24: Section C - Single Determinants - Mean Values



Source: own presentation



### 5.3.3.1 *Analysis over Time*

The sectors' mean values over time of the thematic blocks (see Attachment 15) correspond with the results illustrated in Figure 23. Some small differences could be seen, but overall the trend in each sub-period reflected the trend of Figure 23. If there were differences, they were in each period and for each thematic block caused by another sector.

Over time, the earlier presented trend was also visible for each single determinant. Especially the results for the questions "Ability to construct an establishment according to specific requirements" [2], "Access to local resources" [4] and "Common strategy of the company" [9] showed consistency with the respective mean value results of Figure 24, i.e. all business sectors followed the trend.

In all periods, the determinants "Acquisition of brand name" [14] and "No choice of market entry form" [16] were considered to have no impact on the choice of the company form (see Attachment 15). This result confirms above findings.

As assumed at the beginning of chapter 5.3.3, the breakdown of the results over time did not enable an unambiguous split of company forms and related reasons. The results reflect that the business sector and the market entry date had an impact on the importance of criteria. However, the impact was not predominant as the overall result was still the same.

Despite some differences over time, no strong transition specific relation could be seen. It could be argued that the criterion "Market different to home country" had been affected by the transition as at the beginning of the transformation period this criterion was considered to be of importance (positive mean values) while over time the importance decreased (negative mean values). However, this criterion was at no point predominant.

The time dependency could also reflect market developments, for example less acquisition possibilities in the sector could result in other company forms and thus other criteria becoming more important. However, this argument can not be confirmed by the number of Acquisitions, Greenfield investments and Joint Ventures in the infrastructure sector in Poland.

Figure 25 presents the number of respectively chosen company forms in the infrastructure sector during the transformation periods.

The initial assumption had been that at the beginning of the transformation process Joint Ventures would be predominant and later depending on the business sector Acquisitions (due to the privatisation process) and Greenfield investments would become more important. However, Figure 25 reflects that except from the Banking sector this trend was not a visible.

Overall, it can be seen that among the three company forms, Acquisitions and Greenfield investments were predominant.

When looking at the total number of the chosen company forms for each sector, it became apparent that the Logistics sector quite clearly seems to have preferred Acquisitions, while the Banking and Power sector mainly neglected Joint Ventures for the initial market entry.

**Figure 25: Number of Company Forms in the Infrastructure Sector Between 1989 and 2003**

		Acquisition				Greenfield				Joint Venture						
		Banking	Insurance	Telecom	Logistics	Power	Banking	Insurance	Telecom	Logistics	Power	Banking	Insurance	Telecom	Logistics	Power
1989-1992	8	2	0	3	1	2	2	0	2	1	5	2	1	2	1	1
1993-1995	6	2	0	0	0	4	1	1	0	0	2	0	0	0	0	1
1996-1999	14	5	3	0	4	2	4	4	0	1	2	0	2	1	1	2
2000-2003	11	0	3	0	2	6	0	1	0	1	4	0	2	0	2	1
Total	39	9	6	3	7	14	7	6	2	3	13	2	5	3	4	5

		Acquisition				Greenfield				Joint Venture						
		Banking	Insurance	Telecom	Logistics	Power	Banking	Insurance	Telecom	Logistics	Power	Banking	Insurance	Telecom	Logistics	Power
1989-1992	8	2	0	3	1	2	2	0	2	1	5	2	1	2	1	1
1993-1995	6	2	0	0	0	4	1	1	0	0	2	0	0	0	0	1
1996-1999	14	5	3	0	4	2	4	4	0	1	2	0	2	1	1	2
2000-2003	11	0	3	0	2	6	0	1	0	1	4	0	2	0	2	1
Total	39	9	6	3	7	14	7	6	2	3	13	2	5	3	4	5

Source: own presentation<sup>195</sup>

<sup>195</sup> Please note: The total amount of company forms is 89 in comparison to 72 answered questionnaires. The difference stems from the fact that several companies replied that they had entered the market with several company forms.

### 5.3.3.2 Analysis by Company Form

The mean value results of the thematic blocks for each company form (see Attachment 16) reflect the overall trend (see Figure 23). Among the five sectors, the most harmonic results with regard to the choice of company form seemed to derive from Acquisitions.

Again, for all modes of market entry the most important thematic block was “Ability to construct an establishment”, while the least important thematic block was “Country's given situation”.

The results of the single determinants are across the three company forms very homogeneous (see Attachment 16). Especially the criteria “Access to companies already established in the market” [1], “Ability to construct an establishment according to specific requirements” [2], “Access to local resources” [4], “Ability to locally evaluate the market conditions” [6] and “Common strategy of the company” [9] reflected the mean value results as shown in Figure 24. The results for the determinants “Gaining proprietary control” [11], “Immediate possession of market share” [12] were less balanced; however the same trend was still visible.

Independently from the company form, all foreign direct investors stated that the criteria “Acquisition of brand name” [14] and “No choice of market entry form” [16] had not been of importance.

The split of the investors' answers by the company form did not as initially expected reveal a change with regard to the overall result. Small sector variations in the answer magnitude could be seen, but the trend itself was not affected. It can therefore be concluded that the criteria for the choice of a market entry mode do not differ, however they are affected in their importance by the business sector. This result is very interesting as it reveals that the criteria for the choice of the mode of market entry as presented in the theory had not been mirrored.

### 5.3.3.3 Most and Least Important Thematic Blocks and Determinants

Table 17 presents the most and least important thematic blocks for each sector.

**Table 17: Section C - Most and Least Important Thematic Blocks**

Most important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
<b>Banking</b>	Ability to construct an establishment	Company internal criteria	Ability to construct an establishment	---	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment; Country's given situation
<b>Insurance</b>	---	---	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment
<b>Telecom</b>	Ability to construct an establishment	---	---	---	Ability to construct an establishment; Access	Ability to construct an establishment	Ability to construct an establishment
<b>Logistics</b>	Ability to construct an establishment; Sharing	---	Access	Ability to construct an establishment	Ability to construct an establishment; Access	Ability to construct an establishment	Ability to construct an establishment
<b>Power</b>	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment	Ability to construct an establishment
Least important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
<b>Banking</b>	Access (*)	Country's given situation	Country's given situation	---	Country's given situation	Access	Access (*)
<b>Insurance</b>	---	---	Country's given situation	Country's given situation	Country's given situation	Sharing	Country's given situation
<b>Telecom</b>	--- (**)	---	---	---	--- (**)	--- (**)	Sharing
<b>Logistics</b>	--- (**)	---	Country's given situation	--- (**)	Country's given situation	Country's given situation	--- (**)
<b>Power</b>	Country's given situation	Country's given situation	Sharing	Country's given situation	Country's given situation	Country's given situation	Company internal criteria

(\*) mean value is equal to zero

(\*\*) no negative mean value

Source: own presentation

Table 17 shows that the results in Section C were very homogenous. At the same time the findings were very interesting because from a theory point of view they were not as initially expected.

It appeared that the thematic block "Ability to construct an establishment" had been predominant across the transformation process. When looking at the results for the chosen company forms, it also be seen that this criterion represented the major thematic block.

From the theory's point of view, it was anticipated that for Acquisitions the thematic block "Access" would be predominant, but only in the Telecommunications and Logistics sector, this criterion (next to the thematic block "Ability to construct an establishment") was at least once stated to be the most important thematic block.

The same applies to the Joint Venture, where in reflection of the FDI theory it was assumed that the thematic block "Sharing" would be the main driver for this company form, but this thematic block was not even once valued as the most important thematic block.

It might need further investigations why all company forms considered the thematic block "Ability to construct an establishment" as the main reason for the chosen company form. It could be assumed that the understanding of the thematic block "Ability to construct an establishment" is different from its theoretical meaning. Maybe the result above only reflects that foreign direct investors wanted to set-up companies that fit into their business.

Another possible explanation could be that it was not always easy for companies to differentiate between the company forms as they are not fully aware of the differences. This could affect the way the company form is defined by the investor and the criteria linked to the company form.

The least important thematic block over time as well as for the chosen company form was "Country's given situation". This reveals that the foreign direct investors did not feel limited in the choice of the company form by the country, i.e. Poland's transformation process had no clear impact on the company form.

In comparison to the thematic block results, the results of the single determinants were quite heterogeneous and reflect the sector's individuality and its impact on the importance of the criteria (see Table 18).

**Table 18: Section C - Most and Least Important Single Determinants**

Most important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
Banking	(1)	(2); (3); (4); (5)	(1)	---	(3); (9)	(5)	(1); (2); (3); (5); (8)
Insurance	---	---	(1)	(6)	(1); (9); (10)	(1); (9)	(7)
Telecom	(4)	---	---	---	(4)	(4); (9); (12)	(1); (4)
Logistics	(3); (7); (8)	---	(7)	(9)	(7)	(7)	(3); (9); (10); (12)
Power	(6)	(10)	(7); (9); (11)	(7)	(7)	(7)	(9)

Least important	1989-1992	1993-1995	1996-1999	2000-2003	Acquisition	Greenfield	Joint Venture
Banking	(12); (13)	(11)	(11)	---	(11)	(15)	(6); (12); (13)
Insurance	---	---	(12)	(14)	(11)	(12)	(11)
Telecom	(5)	---	---	---	(5); (13)	(10) (*); (11) (*); (13) (*); (15) (*)	(5)
Logistics	(5)	---	(13)	--- (**)	(13); (16)	(13)	(11)
Power	(13)	(11)	(2); (3); (13); (14); (15)	(11)	(11)	(13)	(6); (13)

- (1) Access to established companies
- (2) Gaining experience before fully establishing your company in the market
- (3) Ability to locally evaluate the market conditions
- (4) Common strategy of the company
- (5) Least expensive form to enter the market
- (6) Gaining proprietary control
- (7) Access to local resources
- (8) Market different to home country

- (9) Ability to construct an establishment according to specific requirements of the business
- (10) Immediate possession of market share
- (11) No choice of market entry form
- (12) Sharing
- (13) Acquisition of brand name
- (14) Existence of competitors in the market
- (15) Avoidance of bureaucratic hurdles
- (16) Market restrictions

(\*) mean value is equal to zero

(\*\*) no negative mean value

Source: own presentation

Within one business sector the results over time and by the company form were not always the same.

In the Banking sector the determinant “Access to established companies” (1) was predominant over time, while the analysis by company form illustrated that the “Ability to locally evaluate the market conditions” (3) and “Least expensive form to enter the market” (5) were most important. Again the results did not necessarily reflect the mode of market entry theory. Greenfield investments, for example, are considered to be the most expensive mode of market entry however the results of the questionnaire showed that this company form was regarded to be the least expensive.

The analysis by company form for the Insurance sector revealed that the result for Acquisitions and Greenfield investments in that sector were almost identical, i.e. these two company forms seem to have been influenced by the same reasons which were the “Access to established companies” (1) and “Ability to construct an establishment according to specific requirements of the business” (9). Further investigations are needed to analyse why Greenfield investors in the Insurance sector had stated that the criterion “Access to established companies” (1) had been considered to be most important as this result contradicts with the theory for Greenfield investments.

The choice of market entry form in the Telecommunications sector was mainly affected by the determinant “Common strategy in the sector” (4), while the Logistics and Power sector regarded the “Access to local resources” (7) as a predominant reason for the choice of the mode of market entry.

The most frequently mentioned criterion within the results for the analysis by company form was “Ability to construct an establishment according to specific requirements of the business” (9). The least important criteria were “Acquisition of brand name” (13) and “No choice of market entry form” (11).

The single determinants showed clearly that the importance of the criteria is influenced by the investor's business sector, the market entry date and the choice of mode of market entry.

Additionally, it seems that the investment project as well as the foreign direct investor's capabilities and experience also had an impact on the importance of criteria.

No clear distinction of criteria for the company forms could be made.

## 6 Conclusions

The aim of this research was to analyse criteria and modes of market entry for FDI into the infrastructure sector. For this purpose Poland was chosen as the base model and foreign direct investors in the Polish infrastructure sector were contacted. The analysis of the questionnaire responses received from the foreign direct investors has led to the following results and conclusions.

The foreign direct investors who have answered the questionnaire all come from different countries. Despite this fact the results reveal that their approach to FDI is quite similar, meaning that the answers provided were consistent. Therefore, it can be concluded that the investment criteria for the infrastructure sector are valid for all countries, i.e. the criteria are universal and not dependant on the country the foreign direct investor is coming from.

Additionally, due to the almost non-visible time dependency of FDI criteria from the results in the Polish infrastructure sector general conclusions regarding FDI into infrastructure can be drawn. However, it should be highlighted that the results of this research only refer to the infrastructure sector with its five chosen sub-sectors. It would not be appropriate to draw from these results all-embracing conclusions about FDI in Poland or FDI in general.

The gathering of data from the PAIIZ Statistics had revealed that it was difficult to follow the FDI flows in the chosen Polish infrastructure sectors. This was because no explanations for market developments (such as mergers) were given. To improve this, the so called New Statistics had been prepared for the five chosen infrastructure sectors. The data for the New Statistics was collected through a questionnaire that was sent to the foreign direct investors with the aim to provide a clearer and more consistent picture of the developments in the Polish infrastructure sector.

The New Statistics present a more detailed insight into FDI prior to 1996. They reflect the sectors' development throughout the transformation period and highlight changes in the respective markets. The New Statistics also demonstrate that the start of the transition process in Poland was also the start of sustainable FDI inflow into the five infrastructure sectors.

It can be seen that the number of foreign direct investors and the amount invested constantly increased over time which reflects that the investors had confidence in the Polish infrastructure market. New regulations as well as the stability and growth of the Polish economy seem to have encouraged foreign direct investors to enter and further invest in Polish infrastructure.

The pace of new market entrants differed among the infrastructure sectors. Nevertheless all sectors, except from the Insurance sector, managed to increase the FDI stock amount from 1996 to 2003 by at least ten times. The number of new market entrants by foreign direct investors also increased on a constant basis, and the New Statistics demonstrate that the majority of investors in the Banking, Telecommunications, and Power sectors entered faster than those in the Insurance and Logistics sectors. This leads to the conclusion that the former were less dependent on market conditions than the later.

It should be highlighted that due to the fact that the New Statistics cover a longer time frame than the PAIiZ Statistics and that the approach of data collection was more consistent and comprehensive, more credible conclusions could be drawn. These conclusions sometimes revealed opposite results to those following from the PAIiZ Statistics. For example, the results for the market entry of foreign direct investors in the period 1996 to 2003 had not shown that there is a difference between the five sectors with respect to the time of market entry and investment amount, and that some investors had actually been willing to enter the market much earlier. Only the analysis of the entire transformation period revealed the more detailed sector-specific results. This highlights the necessity and importance of consistent and unambiguous data collection in order to avoid misleading conclusions. It also shows that the analysis of data should be seen and interpreted in the light of its context. When the context is changed, in this case by extending the period to which the data is related, the results could be different.

The comparison of the overall FDI growth rate in Poland with the FDI growth rate in the five infrastructure sectors confirmed that the Polish infrastructure sectors were of high interest to foreign direct investors. When taking into consideration that the New Statistics exclude those foreign direct investors in the infrastructure sector that have not answered the questionnaire, the increase in the number of foreign direct investors and in the investment size is likely to be even higher. This reflects the attractiveness of the Polish infrastructure sectors for foreign direct investors.

Overall it can be seen that the New Statistics reflect the trends shown in the (Amended) PAIiZ Statistics. The New Statistics confirm that the number of foreign direct investors as well as the FDI amount constantly increased over time and provide a refined picture in comparison to the (Amended) PAIiZ Statistics.

In Section A of the questionnaire, enquiries about the foreign direct investors' reasons to enter a new market were made.

The answers received showed that the investors have a clear perception of the existing FDI criteria, and know exactly which are of importance to them. The answer magnitude across the five infrastructure sectors differed, but the answer trend of the thematic blocks and single determinants was homogeneous. From the single answers one can draw conclusions about the thematic blocks (and vice versa), however the sector specifics become most apparent when looking at the single determinants.

The analysis revealed that there are not only criteria that were predominant for all infrastructure sectors, but that there are criteria that were of importance for some sectors only and reflected the sectors' specifics.

For all five infrastructure sectors the criteria "Market growth" and "Company strategy" were most important, which was also reflected in the predominance of the thematic block "Market".

Especially the criterion "Market growth" could be used to explain why it is for some countries more difficult to attract FDI in the infrastructure sector. If the foreign direct investor in the infrastructure sector does not expect considerable growth in the market, the market is not attractive and thus not worth the effort to enter. Due to the required



investments and later experienced high growth rates in the Polish infrastructure sector this market was and is of high interest to foreign direct investors.

The importance of the criteria "Market growth" and "Company strategy" did not change materially over time which leads to the conclusion that the main drivers of FDI are generally not transition specific. The received answers analysed from the perspective of the mode of market entry confirm the criteria's' predominance among the FDI criteria.

All five infrastructure sectors showed some sector specific results, but the Logistics sector played a special role. The Logistics sector, for example, revealed that cost related criteria were of importance in contradiction to the other four sectors. This result confirms the sector's high cost sensitivity. It also reflects that the other infrastructure investments are not really driven by cost issues and highlights that the cost criterion which is often used in public to explain why companies go abroad is not valid for all infrastructure sectors.

Additionally, for all infrastructure sectors, except from the Logistics sector, "Investment incentives" were not regarded as a driver of FDI. Again, this result raised doubt about the perception that investment incentives are important if a country wants to attract FDI and negates the argument that investors in the infrastructure sectors go abroad because of cost issues.

The power sector also showed some peculiarities as this sector did not consider investment facilitating tools to be of high importance. This could reflect that this sector always faces strict bureaucratic hurdles and thus this determinant is not predominant when analysing the possibility to enter a new market.

The analysis over time and by company form disclosed that the criterion "Access to natural resources and / or production material" had been of no relevance for the infrastructure sector.

Overall, the results in Section A have shown that neither the point in time nor the mode of market entry have a major impact on the investors' decision to enter the infrastructure sector. It could also be seen that the majority of the determinants were stable and only marginally affected by Poland's transformation process. It can therefore be concluded that the criteria are not country-specific, but universal. However major market and/or sector issues, such as a banking crisis, have an impact on the perception and the importance of some FDI determinants.

The results also reflect that with the exception of the Logistics sector, cost is not a crucial factor for the infrastructure sectors, which does not mean that it is not important in other business sectors.

In Section B, reasons against a market entry were investigated. A range of reasons had been given to the foreign direct investors, and they could express which ones had been of relevance to them.

The results in this section were not as homogeneous as the results in Section A, nevertheless conclusions for the infrastructure sector in general and the five chosen sectors in particular could be drawn. The results for the constraints showed that, in comparison to Section A, it is difficult to draw conclusions about one sector from the results of another sector.

The most important result in this section was the fact that the government's actions, behaviour and rules are crucial factors for foreign direct investors. They represent for all infrastructure sectors the main investment constraints.

Additionally, in this section it became apparent that the investor's business sector has a strong impact on the importance and perception of FDI constraints. Especially the Logistics and Power sectors showed sector specifics in their results. The sector's influence did not necessarily have an impact on the overall results of the most predominant constraints; but these sector specific constraints could provide an explanation for the sector's different realisation of market entries and might be a reason why some countries are more successful in attracting FDI than other.

In general, the FDI constraints did not show a high dependency on time, however for some criteria this influence was detectable, e.g. "Economic situation" in the Logistics sector and "Costs of staff training, establishment of management, etc." in the Power sector. In some cases it could even be argued that these particular criteria were transition specific as the perception of these constraints changed over time in accordance with the transformation of the country. However these time dependent determinants did not belong to the group of predominant constraints.

The majority of the FDI criteria are not transition-specific and thus not country-specific. Therefore it can be concluded that they are universal and are applied for every infrastructure market the foreign company intends to enter.

The mode of market entry also had an impact on the importance of the FDI constraints; but no clear conclusion could be drawn as the trend of the results was less visible than for the results over time. However the company form's impact did not change the overall result, i.e. the predominant constraints stayed the same.

The analysis of Section B revealed that market difficulties, such as an economic crisis, have not only an impact on FDI encouraging but also on FDI preventing criteria, whereby the effect on FDI preventing criteria appears to be stronger than on FDI encouraging determinants. It could be seen that some sector specific results as shown in Section A were reflected by the results in Section B. The Banking sector, for example, showed that in the period 1993-1995 not only the market entry encouraging but also preventing criteria had adapted to the specific market situation of that sector.

Section B has also revealed that even though "Corruption" is often cited as a main constraint for foreign direct investors, this could not be confirmed by the results for the infrastructure sector. This constraint did not seem to be a major issue during the transformation period; nevertheless it was by all company forms taken into consideration. In the Insurance sector, where "Corruption" was considered to be among the most important constraints, this constraint was mainly chosen by Insurance companies entering the Polish market at the end of the transformation period when corruption had already drastically decreased. This led to the conclusion that corruption referred to the perception of the way business was done in the Infrastructure sector.

The results of section B allow the conclusion that a country can best compete with other countries in attracting FDI into one sector by reducing its constraints.

It had been explained that four main motives for FDI exist, and it had been assumed that resource-oriented FDI would be predominant for foreign direct investors wanting to invest in Poland. However when looking at the results of the questionnaire analysis it can be concluded that the main investment motive to enter the Polish infrastructure market was market-oriented FDI. Investors in this sector seemed to focus on the aspect of entering a new market, gaining market shares and market knowledge, and they appeared to be less driven by cost factors.

When considering that it is the infrastructure sector that has been analysed for this research, the result is logical. It highlights that investments in the infrastructure sector are generally not part of the foreign direct investor's production process, but they are part of the company's global strategy. In comparison to other business sectors such as manufacturing there is no real linkage between the investor's infrastructure investments in one country and another (i.e. no real "production chain") and thus cost-efficiency motives generally are neither applicable nor relevant.

The result has also shown that in contrast to the theory, market-oriented FDI can also take place between high-income and low-income countries. It can also be concluded, that for the infrastructure sector, market-oriented FDI is not really distinguishing between low-income and high-income countries, but focuses more on the market size and market growth potential.

Section C presented the results of the questions referring to the reasons for the choice of a particular mode of market entry. The aim of this section had been to inquire whether the company form is linked to some specific reasons.

The mode of market entry theory could mainly not be confirmed by the received answers from the foreign direct investors. The assumption, for example, that investors in highly technological sectors, such as the Telecommunications sector, would prefer Greenfield investments could not be validated.

A distinct possibility to categorise the mode of market entry with unambiguous criteria as explained by the theory was also not possible. In contrast, some results were even contradictory to the theory. The results showed, for example, that when foreign direct investors are asked about their reasons for a particular mode of market entry, they are most likely to answer that they wanted to have the "Ability to construct an establishment". According to the theory, however, this argument is a characteristic of Greenfield investments.

The importance of criteria is mainly influenced by the business sector and partly also by the market entry date and the chosen mode of market entry. It appears that the investor's experience and capabilities influenced the choice of company form as well.

The received answers also reflected that the increase or decrease of a particular mode of market entry over time was not visible.

In general, the results actually showed that if the foreign direct investor wants to enter the market, then an appropriate company form will be found.

Overall, the analysis of the three sections of the questionnaire has shown that it is difficult to draw conclusions when only looking at the results of thematic blocks or single determinants. There is the danger that the outcome from the thematic blocks and single determinants can contradict. This is due to the fact that the thematic blocks consist of several single determinants, and depending on the number and choice of determinants belonging to a thematic block its results will be influenced accordingly. It is therefore crucial to always gather as many details as possible and to analyse both, the thematic block and single determinants. Only this approach will provide a more accurate picture and avoid misleading conclusions. The same applies to the general analysis, analysis over time, and analysis by company form.

The above results lead to the conclusion that if possible then a sector analysis should be done on a level as sophisticated as possible in order to get a good understanding of the parameters that affect investments in that particular sector. Only this analysis will enable the countries to take the necessary steps which may enhance FDI.

Within the FDI determinants it is important to distinguish between those who will encourage FDI and those who will prevent FDI. The analysis of the mean values has shown that the results for the determinants that are crucial for the market entry (Section A of the questionnaire) are very homogeneous among the five infrastructure sectors while the results of constraints for a market entry (Section B of the questionnaire) are revealing sector related dependencies.

The analysis of the company answers reflect as well that FDI encouraging criteria are more stable than FDI preventing criteria. Most of the FDI criteria that are important for the market entry are unlikely to change quickly over time, while the constraints can be very volatile and thus be influenced.

The above statement highlights that if the infrastructure sector of a country is of potential interest to foreign direct investors it is very important for that country's state administration to reduce the perceived constraints as the decrease or even disappearance of these constraints will encourage the investors to enter the market.

Overall the results show that in Section A (see Table 19) there is no difference between the results of the thematic blocks and the individual determinants over time or for the chosen company form. It can be seen that the market, in particular the growth expectations of the market, have been predominant drivers of FDI, while the ability to have "Access to natural resources and / or production material" is not considered to be of importance for the foreign investors.

Section B shows that the results of the thematic blocks for the most and the least important criteria are the same regardless of the distinction over time or by company form. However, the results of the single determinants reflect the impact of time or the company form on the overall result and highlight the importance of an in-depth analysis.

Section C reveals that the main reason for a particular mode of market entry was the same for all sectors. The "Ability to construct an establishment according to business requirements" was and is of high importance for companies in the infrastructure sector. Even though the same reasons for the selection of a company form are applied by the investors in the infrastructure sector, the eventually chosen mode of market entry does not mirror this

uniformity, i.e. there is not one mode of market entry that had been predominant in all infrastructure sectors.

The below figure summarises the results presented above:

**Table 19: Summary of FDI determinants**

		Section A		Section B		Section C	
		Time period	Company form	Time period	Company form	Time period	Company form
Highest mean value	Thematic Block	Market	Market	Country's regime	Country's regime	Ability to construct an establishment	Ability to construct an establishment
	Determinants	Market growth expectations	Market growth expectations	Bureaucratic hurdles	Ability of authorities to keep promises	Access to local resources	Ability to construct an establishment
Lowest mean value	Thematic Block	Access to natural resources	Access to natural resources	Market infrastructure	Market infrastructure	Country's given situation	Country's given situation
	Determinants	Access to natural resources and / or production material	Access to natural resources and / or production material	Access to financial means	Access to financial means Cultural and language barriers	No choice of market entry Acquisition of brand name	Acquisition of brand name

Source: own presentation

The above table does not present business sector dependencies within the infrastructure sector. However as explained in this research, the detailed analysis will reveal them and their impact on the importance of FDI determinants.

In conclusion, the analysis has revealed that it is possible to refine the FDI definition by identifying sector specific FDI determinants. It could also be seen that the business sector plays a crucial role as to whether time or the mode of market entry will have an impact on the importance of criteria. The knowledge of the sector specifics enables the state administration to tailor the country's efforts to attract FDI into a particular business sector. This will increase the likelihood of FDI and is therefore worthwhile the effort.

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## 8 Attachments

### Attachment 1: Business Classifications

Direction des Relations Economiques Extérieures	United Nations	Gray	Cluse	Zolnowski
Agriculture	Primary sector (e.g. agriculture, mining)	Agriculture	Agriculture, mining	Agriculture, hunting and forestry
Industries (e.g. construction, telecommunications, power, metallurgy, minerals)	Secondary Sector (e.g. food, paper, chemicals, non-metallic mineral products, basic metals, machinery & equipment, automotive)	Manufacturing and industry (e.g. energy)	Manufacturing and industry	Fisheries and fish culture
Services (banking & financials, trade [commerce], transport, insurance)	Tertiary sector (e.g. electricity & water distribution, construction, wholesale trade, tourism, transport, storage, telecommunications, banking, insurance, real estate, public administration, health & social services)	Service (e.g. banking, insurance, telecommunications, transport and distribution)	Financial agency	Industry
	Unspecified	Consumer durables	Electricity, Gas, Water	Transport, storage and communication
		Supranational, passive investment	Transport and communication	Trade and repairs
			Trade	Hotels and restaurants
			Hotels and restaurants	Construction industry
			Construction	Servicing of real estates and companies
			Real Estate	Education
			Unspecified	Health protection and social care
				Other service activity, communal, social and individual

Source: Cluse [1999]: page 225, Direction des Relations Economiques Extérieures [1995]: page 102, Gray [1995]: page 93, United Nations [1998]: page 274, United Nations [1999]: page 435, Zolnowski [2002]: page 2.

## Attachment 2: PAIIZ Business Classifications

The activities as regarded to belong to each of the chosen sectors are listed below:

Sector	Labels applied for business activities	Example
<b>Banking</b>	<ul style="list-style-type: none"> <li>- banking;</li> <li>- banking, capital investment;</li> <li>- banking, electronics;</li> <li>- banking, insurance;</li> <li>- banking, life insurance;</li> <li>- banking, other credit granting;</li> <li>- banking, financial leasing;</li> <li>- banking, electrical machinery and apparatus;</li> <li>- banking, life insurance, pension funding, non-life insurance, real estate;</li> <li>- financial intermediation;</li> <li>- financial intermediation, manufacture of electrical machinery and apparatus;</li> <li>- financial leasing;</li> <li>- automotive, financial intermediation;</li> <li>- capital investment;</li> <li>- other credit granting;</li> <li>- investment banking, financial leasing;</li> <li>- security broking and fund management;</li> <li>- manufacture of parts and accessories for motor vehicles and their engines, banking, financial leasing, life insurance, pension funding, non-life insurance</li> </ul>	<ul style="list-style-type: none"> <li>- Commerzbank AG;</li> <li>- Citibank;</li> <li>- General Electric Corporation;</li> <li>- ING Group;</li> <li>- Nordea Group;</li> <li>- HVB;</li> <li>- Credit Agricole;</li> <li>- General Electric Corporation;</li> <li>- ING Group;</li> <li>- Erste Bank der Österreichischen Sparkassen AG;</li> <li>- General Electric Corporation;</li> <li>- Cetelem S.A.;</li> <li>- Volkswagen AG;</li> <li>- Bank Austria;</li> <li>- Danske Bank A.S.;</li> <li>- Raiffeisen Zentralbank Österreich AG;</li> <li>- Erste Bank;</li> <li>- Volkswagen AG</li> </ul>
<b>Insurance</b>	<ul style="list-style-type: none"> <li>- insurance;</li> <li>- banking;</li> <li>- banking, insurance;</li> <li>- banking, life insurance, pension funding, non-life insurance, real estate;</li> <li>- automotive, banking, insurance;</li> <li>- life insurance;</li> <li>- life insurance, pension funding;</li> <li>- life insurance, pension funding, non-life insurance;</li> <li>- life insurance, pension funding, non-life insurance, security broking and fund management;</li> <li>- life pension, insurance;</li> <li>- non-life insurance;</li> <li>- pension funding;</li> <li>- financial services;</li> <li>- manufacture of parts and accessories for motor vehicles and their engines, banking, financial leasing, life insurance, pension funding, non-life insurance</li> </ul>	<ul style="list-style-type: none"> <li>- AGF;</li> <li>- ING Group;</li> <li>- Dresdner Bank;</li> <li>- ING Group;</li> <li>- Fiat;</li> <li>- Nationwide Global Holdings Inc.;</li> <li>- Sampo;</li> <li>- Allianz AG;</li> <li>- AVIVA Plc.;</li> <li>- Inter Versicherungen;</li> <li>- Gerling Konzern Allgemeine Versicherungs AG;</li> <li>- R+V Allgemeine Versicherungs-AG;</li> <li>- CGNU Group;</li> <li>- Volkswagen AG</li> </ul>
<b>Telecom</b>	<ul style="list-style-type: none"> <li>- Telecommunication;</li> <li>- Telecommunication equipment for the military;</li> <li>- telecommunications equipment production and development;</li> <li>- telecommunication equipment;</li> <li>- telecommunications, publishing and printing;</li> <li>- electrical machinery and apparatus;</li> <li>- publishing, telecommunication;</li> <li>- paging services;</li> <li>- paging network;</li> <li>- electronics;</li> <li>- electronics, medical engineering;</li> <li>- transport, storage and communication</li> </ul>	<ul style="list-style-type: none"> <li>- Twentsche Kabel Holding);</li> <li>- Ericsson;</li> <li>- AT&amp;T Network Systems International BV;</li> <li>- Alcatel;</li> <li>- Telia AB;</li> <li>- Motorola Inc.;</li> <li>- US West;</li> <li>- Bel Pagette;</li> <li>- Matrix;</li> <li>- Lucent Technologies Network Systems Netherlands BV;</li> <li>- Siemens;</li> <li>- France Telecom</li> </ul>

Sector	Labels applied for business activities	Example
<b>Logistics</b>	<ul style="list-style-type: none"> <li>- transport;</li> <li>- transport services;</li> <li>- transport and storage;</li> <li>- transport, storage and communication);</li> <li>- transport and reloading services;</li> <li>- transportation equipment;</li> <li>- transportation services, storage, distribution;</li> <li>- other transport equipment;</li> <li>- activities of other transport agencies;</li> <li>- postal services;</li> <li>- courier activities other than national post activities;</li> <li>- courier;</li> <li>- forwarding services</li> <li>- logistics;</li> <li>- logistic activity;</li> <li>- storage and communication;</li> <li>- freight transport by road;</li> <li>- motor transport;</li> <li>- aircraft industry;</li> <li>- air freight;</li> <li>- scheduled air transport;</li> <li>- buses assembly;</li> <li>- carriages production;</li> <li>- railway carriages production;</li> <li>- manufacture of transport equipment;</li> <li>- sea transport;</li> <li>- automotive</li> </ul>	<ul style="list-style-type: none"> <li>- SairGroup;</li> <li>- Intertransports Centre S.P.A.;</li> <li>- Therab BV;</li> <li>- GATX Rail Overseas Holding Corporation;</li> <li>- Hermann Scheers;</li> <li>- Environmental Tectonics Corporation;</li> <li>- Therab BV;</li> <li>- Alstom;</li> <li>- Spedition Trade Trans Holding GmbH;</li> <li>- DHL Worldwide Network;</li> <li>- General Logistics Systems International Holding B.V.;</li> <li>- DHL Worldwide Network;</li> <li>- DHL Worldwide Network;</li> <li>- Schrader;</li> <li>- Schrader;</li> <li>- Kuehne &amp; Nagel Beteiligungs AG;</li> <li>- Therab BV;</li> <li>- Bilspedition AB;</li> <li>- Pratt &amp; Whitney;</li> <li>- DHL Worldwide Express;</li> <li>- EADS;</li> <li>- Volvo Bus Corporation;</li> <li>- Adtranz;</li> <li>- Adtranz;</li> <li>- Coltec Aerospace Canada Ltd.;</li> <li>- International Container Terminal Services;</li> <li>- Carrus</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>- technical gas output;</li> <li>- technical gas production;</li> <li>- distribution of oil products;</li> <li>- distribution of oil products, technical gas output;</li> <li>- distribution of oil products, retail trade;</li> <li>- distribution of water;</li> <li>- distribution of fuels;</li> <li>- distribution of petroleum products;</li> <li>- distribution of petroleum products, retail trade;</li> <li>- natural gas distribution;</li> <li>- gas supply;</li> <li>- gas production, distribution of oil products;</li> <li>- gas pipeline linking Russia with Western Europe;</li> <li>- construction;</li> <li>- coal bed methane exploration, distribution of oil products;</li> <li>- manufacture of oil products;</li> <li>- manufacture of chemicals and chemical products;</li> <li>- chemicals and chemical products;</li> <li>- retail trade;</li> <li>- retail trade, power, gas and water supply;</li> <li>- community, social and personal services;</li> <li>- collection, purification and distribution of water;</li> <li>- municipal services;</li> <li>- power, gas and water supply;</li> <li>- power supply systems, turbines, electric engines;</li> <li>- power industry;</li> <li>- energy;</li> <li>- heating systems;</li> <li>- heat and power supply;</li> <li>- transportation equipment, machinery;</li> <li>- machinery, electronics;</li> <li>- production and distribution of electricity;</li> <li>- production and distribution of electricity / energy;</li> <li>- production and distribution of electricity, steam and hot water supply/;</li> <li>- production and distribution of electricity, steam and hot water supply, energy manufacturing and distribution</li> </ul>	<ul style="list-style-type: none"> <li>- AGA AB;</li> <li>- BOC Group;</li> <li>- Statoil;</li> <li>- Shell;</li> <li>- BP Amoco Plc;</li> <li>- Saur International;</li> <li>- Esso AG;</li> <li>- Elf Lubrifiants;</li> <li>- Neste Oil;</li> <li>- Pam-Gas B.V.;</li> <li>- RMG Regel + Messtechnik GmbH;</li> <li>- British Petroleum;</li> <li>- RAO Gazprom;</li> <li>- RAO Gazprom;</li> <li>- Amoco;</li> <li>- Elf Lubrifiants;</li> <li>- Prodair Corporation;</li> <li>- Praxair Inc.;</li> <li>- Statoil;</li> <li>- Shell;</li> <li>- International Water;</li> <li>- International Water;</li> <li>- Gelsenwasser AG;</li> <li>- Linde AG;</li> <li>- ABB Ltd.;</li> <li>- Westinghouse Electric Corporation;</li> <li>- A Ahlstrom Corporation;</li> <li>- Scheidt;</li> <li>- Enron International;</li> <li>- Alstom;</li> <li>- ABB Ltd.</li> <li>- EnBW;</li> <li>- Electabel S.A.;</li> <li>- ABB Ltd;</li> <li>- Vattenfall AB</li> </ul>

Source: PAliIZ [2003c]: page 9 ff., various Excel document from the PAliIZ

### Attachment 3: Overview of Regulations and Events

The following tables aim to provide an overview of general and sector specific laws, regulations, and agreements that came into force in the period 1989-2003. The tables do not claim to be exhaustive, but present the main changes and regulations. They also intend to show that the pace of changes differed from one sector to another.

#### D General Overview<sup>203</sup>

Date	Event / Law
19.09.1989	Trade and Economic Co-operation agreement between Poland and the European Community
28.12.1989	New Customs Law <sup>204</sup>
	Law on the Creation of Enterprises and their Economic Activity <sup>205</sup>
01.01.1990	Balcerowicz Plan ("Shock Therapy") <sup>206</sup>
24.02.1990	Act on Counteracting Monopolistic Practices and Protection of Consumer Interests <sup>207</sup>
13.04.1990	Establishment of the Anti-Monopoly Office (AMO)
June 1990	Lifting of the Coordinating Committee on Multilateral Export Controls (CoCoM) <sup>208</sup>
13.07.1990	Law on the Privatisation of State-Owned Enterprises <sup>209</sup>
28.07.1990	Amendment of the Civil Code <sup>210</sup>
September 1990	Establishment of the Ministry of Privatisation <sup>211</sup>
29.09.1990	Law on Land Management <sup>212</sup>

<sup>203</sup> Sources of information: Balcerowicz et al [1997]: page 134 ff., Blanchard et al [1994a]: page 52 ff., Blanchard et al [1994b]: page 166 ff. and 296 ff., Carstensen and Toubal [2003]: page 3, CBI [1991]: page 17 ff., CBI [1994]: page 20 ff., CBI [2000]: page 9 ff., Dobosiewicz [1992]: page 42 ff., Economist Intelligence Unit [2003]: page 3 ff., Lingelsheim-Seibicke [2000]: page 11, Foreign Trade Research Institute [1992]: page 11/4-11/6a, Gray [1995]: page 88 f., Heiliger et al [1992]: page 155 f., Jeffries [1993]: page 303 ff., KPMG [2003]: page 9 ff., Major [1993]: page 19 ff., Ministry of the Treasury [2002]: page 4 ff., Paliwoda [1995]: page 7 ff., Sachs [1993]: page 57 ff., Schütz, Ernst & Young Gruppe [1995]: page 13 ff., Winiecki et al [1997]: page 27 ff., Zoubir and Lhabitant [2003]: page 153 f., Website 11, Website 12, Website 13, Website 14, Website 15, Website 16, Website 17.

<sup>204</sup> The Law was amended on 09.01.1997 and on 01.01.1999.

<sup>205</sup> The Law, which further increased the business opportunities for foreigners, was the amendment of the original Law from 23.12.1983. Further amendments were made on 19.11.1999.

<sup>206</sup> The name "Shock Therapy" referred to the strict fiscal and monetary changes and policies introduced by Leszek Balcerowicz, the Minister of Finance at that time.

<sup>207</sup> The Law was further amended in June 1991, April 1997, and May 1999.

<sup>208</sup> The CoCoM was established during the Cold War, i.e. in 1947, and its task was to control and prevent exports of technologies to CEEC.

<sup>209</sup> The Law was further amended on 18.02.2000.

<sup>210</sup> The original version stems from 23.04.1964.

<sup>211</sup> The ministry was also known as the Ministry of Ownership, Transformations or Ministry of Property Transformation. The ministry's establishment is based on the Law on the Privatisation of State-Owned Enterprises.

<sup>212</sup> The Law was the amendment of the Land Use and Management Act / Law on Land Management and Expropriation of Real Property from 1985. Further Law amendments followed in 1992.

Date	Event / Law
08.11.1990	Law on Property Acquisition by Foreigners <sup>213</sup>
1990	Amendment of the Bankruptcy and Agreement Law from 1934
15.01.1991	Establishment of Accounting Regulations by the Minister of Finance
12.01.1991	Tax Law <sup>214</sup>
14.03.1991	Western governments (Paris Club <sup>215</sup> ) grant first debt forgiveness (USD33 billion)
14.06.1991	Joint Venture Act <sup>216</sup>
26.11.1991	Membership of the Council of Europe
16.12.1991	Association agreement with the EU, also known as Europe Agreement (EA)
15.02.1992	Act of Corporate Income Tax <sup>217</sup>
01.03.1992	Interim Agreement with the EU <sup>218</sup>
21.12.1992	Establishment of the Central European Free Trade Area (CEFTA) <sup>219</sup>
1992	Establishment of the Polish Agency for Foreign Investment (PAIZ) <sup>220</sup>
05.02.1993	Law on Changes in the Ownership of certain State-Owned Enterprises of special importance to the national economy
16.04.1993	Law on Unfair Competition
30.04.1993	Law on National Investment Funds and their privatisation <sup>221</sup>
May 1993	Mass Privatisation Programme (MPP)
05.07.1993	Introduction of the value-added tax (VAT)
1994	Second debt remission (about 50 % of foreign debts) through the Paris Club (April 1994) and the London Club (March 1994) <sup>222</sup>
04.02.1994	Copyright and Related Rights Law

<sup>213</sup> The Law was the first amendment of the Law on Property Acquisition by Foreigners passed in 1920 and was further amended in May 1996.

<sup>214</sup> Amendments followed on 16.12.1993 (where the Polish government introduced tax benefits for investors) and on 31.07.1997.

<sup>215</sup> The Paris Club is a group of Western government creditors.

<sup>216</sup> The Act comprised the Law on Companies with Foreign Participation. Foreign investors were now allowed to conduct activities on their own through a limited liability or joint-stock company. Permission were only required for special sectors such as the defence industry. The Law was further amended on 04.05.1996.

<sup>217</sup> On 20 November 1999 the Law was further amended.

<sup>218</sup> Thus agreement specified trade-related measures of the EA.

<sup>219</sup> The Czech Republic, Hungary, Bulgaria, Romania and Slovenia were the original members of the CEFTA. The aim was to increase the regional trade.

<sup>220</sup> The Foreign Investment Agency (FIA), until then responsible for issuing permissions, was transformed into the PAIZ, an information office. The office's aim was to encourage foreign investors to enter the Polish market and/or to increase their investments in the Polish market.

<sup>221</sup> As a result of the Law, the Mass Privatisation Programme (PPP – Program Powszechnej Prywatyzacji) was launched.

<sup>222</sup> The members of the London Club are banks.

Date	Event / Law
05.04.1994	Application for EU membership
10.06.1994	Law on Public Procurement
29.09.1994	Law on Accounting
20.10.1994	Law on Special Economic Zones (SEZ) <sup>223</sup>
01.07.1995	WTO <sup>224</sup> membership and signatory to Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement
April 1996	Labour Code
30.08.1996	Law on Commercialisation and Privatisation of State-Owned Enterprises <sup>225</sup>
22.11.1996	OECD membership
02.04.1997	Adoption of the New Polish Constitution
20.08.1997	Law on National Court Register <sup>226</sup>
November 1998	Start of substantive negotiations for EU accession <sup>227</sup>
22.01.1999	Information Protection Act
12.03.1999	NATO membership
19.11.1999	Law on Economic Activity <sup>228</sup>
1999	Revision of Corporate Tax Code <sup>229</sup>
30.06.2000	Industrial Property Law
15.12.2000	Act on Competition and Consumer Protection
2000	New Intellectual Property Legislation
22.03.2002	Law on Financial Support for Investment <sup>230</sup>
28.02.2003	Bankruptcy and Compensation Law
01.05.2004	EU membership

<sup>223</sup> The Law introduced tax exemptions and accelerated amortisation options for foreign investors in these zones, and thus aimed to attract more FDI.

<sup>224</sup> WTO – World Trade Organisation.

<sup>225</sup> This Law replaced the Law on the Privatisation of State-Owned Enterprises from 1990.

<sup>226</sup> The Register of Business Entities was now registering branch offices.

<sup>227</sup> The negotiations were successfully completed by 13.12.2002.

<sup>228</sup> Permits were not required anymore, and foreign investors were now also allowed to open branch offices.

<sup>229</sup> The Corporate tax rate was gradually reduced to 22% in year 2004.

<sup>230</sup> Among others, the Law defined grants that were/are eligible for foreign investors.

## II) Sector Specific Regulations and Events

### 1) Banking sector<sup>231</sup>

Date	Event/Law
31.01.1989	Banking Law <sup>232</sup> Act on the Narodowy Bank Polski (NBP) - the National Bank of Poland <sup>233</sup>
15.02.1989	Foreign Exchange Law <sup>234</sup>
01.01.1990	Introduction of currency convertibility <sup>235</sup>
January 1990	Permission for banks to freely set deposit and interest rates
22.03.1991	Law on the Public Trading of Securities and Trust Fund <sup>236</sup>
12.04.1991	Act on Establishing the Warsaw Stock Exchange (WSE)
16.04.1991	Warsaw Stock Exchange was re-opened
1991	Selection of three banks for early privatisation <sup>237</sup>
Late 1991	Announcement of a state-bank privatisation programme
1992	Establishment of the first open-end investment fund <sup>238</sup>
1992	Start of an active interbank market
1992	NBP regulates money supply <sup>239</sup>
03.02.1993	Law on the Financial Restructuring of Enterprises and Banks <sup>240</sup>

<sup>231</sup> The sources of information are: Balcerowicz et al [1997]: page 144 ff., Balcerowicz and Bratkowski [2001]: page 12 ff., Blanchard et al [1994a]: page 67 ff., CBI [1991]: page 34 and 87, CBI [1994]: page 25, 53 ff. and 119 ff., CBI [2000]: page 11 ff., 33 ff., and 183 ff., Chuse [1999]: page 259 ff., Dobosiewicz [1997]: page 42 ff., EBRD [1996]: page 18 ff., Lingelshem-Sebicki [2000]: page 166, Dziemianowicz and Mackiewicz [2000]: page 8 ff., EBRD [1997]: page 165 ff., Economist Intelligence Unit [2003]: page 41 f., Franzke [2000]: page 17, Gray [1995]: page 115, Jeffries [1993]: page 431 ff., Modrzejewski and Modrzejewski [2002]: page 91 ff., NBP [1999]: page 43 ff., NBP [2001]: page 1 ff., NBP [2003]: page 45 ff., Paliz [2003a]: page 4 ff., Schitag, Ernst & Young Gruppe [1995]: S. 20 ff., Schulnick [2001]: page 16, United Nations [2002]: page 68 ff., Weller [1999]: page 9 f., Zoubir and Lhabitant [2003]: page 137 f. and 143 f., Website 18, Website 19, Website 20, Website 21, Website 22, Website 23.

<sup>232</sup> Amendments followed in September 1991, in February 1992, on the 24.08.1997, and on 23.08.2001.

<sup>233</sup> The NBP's main tasks were to award licences to newly established private banks, carry out banking supervision through its General Inspectorate of Banking Supervision (GINB), creation of provision for foreign banks to establish representative offices and joint ventures. Further amendments were made on 29.08.1997.

<sup>234</sup> Further amendments were made on the 22.09.1991, the 02.12.1994, in May 1995 (The zloty was allowed to fluctuate within a band), on the 18.12.1998, and in June 2002.

<sup>235</sup> The currency convertibility introduction was a (direct) result of the Foreign Exchange Law.

<sup>236</sup> The Law allowed the establishment of open-end investment funds. In 1993 the Law was further amended.

<sup>237</sup> The three banks were: BRE S.A., a specialist institution, Wielkopolski Bank Kredytowy (WBK) S.A. in Poznań and Bank Śląski in Katowice, two of the nine regional banks which had the lowest bad debt ratios. WBK was privatised in April 1993.

<sup>238</sup> This fund was authorised by the Securities Commission. Further three investment funds were established in 1995.

<sup>239</sup> Since 1992 the NBP had been engaged in open market operations, buying and selling treasury securities in the open market to regulate the money supply.



Date	Event/Law
05.04.1993	National Clearing House (KIR S.A. <sup>241</sup> ) started its operations
Second half of 1993	Stricter enforcement of bad loan regulations
24.06.1994	Act on Cooperative Bank and BGZ Restructuring <sup>242</sup>
14.12.1994	Law on the Banking Deposit Guarantee Fund
Late 1995	Opening of the Warsaw Grain and Feed Commodity Exchange, the first commodity futures exchange
14.06.1996	Act on the Amalgamation and Consolidation of Certain Joint-Stock Banks
21.08.1997	Law on Public Trading in Securities
28.08.1997	Law on Investment Funds
29.08.1997	Act on Mortgage Bonds and Mortgage Banks
16.10.1997	Establishment of an Independent Central Bank
26.11.1998	Public Finance Act
18.12.1998	Foreign Currency Law <sup>243</sup>
08.01.1999	Block Exemption Regulation <sup>244</sup>
Until 2000	Elimination of several constraints (such as the purchase of treasury bills) for foreign investors
2000	Creation of the Electric Energy Exchange
17.11.2000	WSE set up WARSET <sup>245</sup>
08.08.2002	WSE signed cross-membership and cross-access agreement with Euronext <sup>246</sup>
June 2002	Poland joined the Egmont Group <sup>247</sup>

<sup>240</sup> The Law's aim was to solve the banks' capital problems that had arisen from the vast amount of non-performing loans and to encourage the sector's restructuring. It placed several obligations on banks (e.g. the requirement of a financial audit, the submission of a loan restructuring strategy to the Ministry of Finance). Banks where the State held more than 50% became eligible for recapitalisation (issuance of state bonds).

<sup>241</sup> KIR S.A. - Krajowa Izba Rozliczeniowa S.A.

<sup>242</sup> BGZ = Bank Gospodarki Ziwnosciowej. The BGZ was the central organisational and financial entity of the cooperative banks. The act was amended in January 2001 by the "Act on the Operations of Cooperative Bank, their Affiliation, and Affiliating Banks".

<sup>243</sup> The Law defined the distinction between direct and portfolio investment, i.e. the definition of FDI was set up. The Law was amended on the 12.01.1999 and on 01.10.2002. The first amendment led to the announcement of the unrestricted conversion of currency, while the latter harmonised the Polish Law with European Treaty, the EU legal standards.

<sup>244</sup> The regulation was issued by the Ministry of Finance and targeted to support the Law on Foreign Exchange.

<sup>245</sup> WARSET (Warsaw Stock Exchange Trading System) is a modern system of stock trading.

<sup>246</sup> Euronext is the pan-European stock exchange with the headquarters being based in Amsterdam.

<sup>247</sup> The Egmont Group is an organisation that fights illegal financial transactions (e.g. money-laundering).

2) Insurance sector<sup>248</sup>

Date	Event/Law
28.07.1990	Act on Insurance Activity <sup>249</sup>
1990	Establishment of the Insurance Guarantee Fund (UG) <sup>250</sup> Establishment of the Insured Persons Protection Fund <sup>251</sup> Establishment of the Polish Chamber of Insurance (PIU) <sup>252</sup>
July 1991	Split of PZU into two companies, a life insurance company and a general insurance company in order to comply with the new law of 1990
1995	Requirement of license allocation for insurance agents selling life insurance policies
October 1995	Obligatory membership of insurers in the Polish Chamber of Insurance <sup>253</sup> Appointment of the Polish Insurance Ombudsman <sup>254</sup>
1996	Establishment of PUNU, the State Insurance Supervisory Authority <sup>255</sup>
28.08.1997	Law on Organisation and Operation of Pension Funds
May 1998	Establishment of the Superintendency of Pension Funds (UNFE) <sup>256</sup>
01.01.1999	Fully opened insurance market Introduction of a modern pension system and creation of pension fund market <sup>257</sup> Allowance for foreign insurers to operate through general agencies <sup>258</sup>

<sup>248</sup> Sources of information: CBI [2000]: page 89, EBRD [1997]: page 165 ff., Economist Intelligence Unit [2003]: page 33 ff., Foreign Trade Research Institute [1992]: page IV/1 ff., Modrzejewski and Modrzejewski [2002]: page 91 ff., Odrzyński [2006]: page 2 ff., Pelc [2001]: page 3 ff., Pelc [2006]: page 2 ff., Schutag, Ernst & Young Gruppe [1995]: S 32 f., Stroinski and Stroinski [1993]: page 1533 ff., Website 24, Website 25, Website 26, Website 27, Website 28, Website 29, Website 30, Website 31, Website 32, Website 33.

<sup>249</sup> The Insurance Law aimed to restructure the existing insurance sector (e.g. through privatisation). The Law also intended to encourage foreign investors to form Joint Ventures with Polish insurance companies. According to the law, insurance activities in Poland could be undertaken by foreign companies however they required permits issued by the Finance Minister. One of the law's main amendments followed on the 8<sup>th</sup> June 1995.

<sup>250</sup> UFG - Urząd Funduszu Gwarancyjnego.

<sup>251</sup> The fund was responsible for the settlement of claims in the event of bankruptcy of an insurance company. In 2003, the fund's tasks were renewed and enlarged.

<sup>252</sup> The Insured Persons Protection Fund was liquidated in 1995.

<sup>253</sup> Insurers could freely decide about their membership in the Polish Chamber of Insurance.

<sup>254</sup> Polish Chamber of Insurance - Polska Izba Ubezpieczeń (PIU).

<sup>255</sup> An explanation of the Ombudsman's role can be found in Dichtl et al. (1993b): page 1567.

<sup>256</sup> The changes in the insurance sector were direct results of the amendment of the Insurance Law in June 1995.

<sup>257</sup> The PUNU (Państwowy Urząd Nadzoru Ubezpieczeń) was taking over the tasks previously managed by the Ministry of Finance. The PUNU was representing the insurance sector's security system.

<sup>258</sup> UNFE - Urząd Nadzoru nad Funduszami Emerytalnymi.

The Superintendency was set up as a result of the Law on Organisation and Operation of Pension Funds.

Date	Event/Law
01.04.2002	Establishment of the Insurance and Pension Funds Supervisory Commission (KNUiFE) <sup>259</sup>
22.05.2003	Act on Insurance Activity Act on Mandatory Insurance, Insurance Guarantee Fund and Insurance Supervision Act on Compulsory Insurance, Insurance Guarantee Fund and Polish Motor Insurers' Bureau Act on Insurance and Pension Funds Supervision and on Insurance Ombudsman Act on Insurance Mediation

<sup>257</sup> Private pension funds were launched as a result of the reform of the social security system which introduced a modern pension system. These funds were managed by newly established pension societies, so called PTEs (Powszechnie Towarzystwo Emerytalne - General Pension Company). In 1999, the Polish authorities granted 21 PTE licenses, whereby these licences were mostly granted to the leading insurance companies on the Polish market or newly established Joint Ventures (insurance companies with banks).

<sup>258</sup> Prior to this date, joint stock companies or mutual insurance corporations were the only two forms of insurance institutions legally permitted to operate in Poland.

<sup>259</sup> KNUiFE - Komisja Nadzoru Ubezpieczeń i Funduszy Emerytalnych.

The Commission represents the integrated Polish insurance and pension funds supervisory authority, and was replacing the PUNU as well as the UNFE. Among other tasks, the Commission inspects the activities of the Pension Funds.

3) Telecommunications sector<sup>260</sup>

Date	Event/Law
23.11.1990	Communications Act <sup>261</sup>
1991	Launch of governmental rule that telephone equipment sold to the public system must be 50% Polish <sup>262</sup>
December 1991	Establishment of Telekomunikacja Polska S.A. (TP) S.A. <sup>263</sup>
1992	Opening of the local call market
03.04.1993	Testing and Certificate Law <sup>264</sup>
November 1998	Start of the privatisation of TP S.A.
1998	Signing of the Information Technology Agreement (ITA)
1999	Reduction of customs duty on imported telecommunications and IT products
01.01.2000	Products listed in ITA agreement are exempt from tariff payments (zero-rated) <sup>265</sup>
28.04.2000	New Law on Compliance Evaluation, Accreditation and Amendment of Selected Laws <sup>266</sup>
12.05.2000	New Telecommunications Law <sup>267</sup>
07.01.2001	Full liberalisation of the domestic long-distance (DLD) market
2001	Business licenses are replaced by authorizations from the Telecommunication Regulatory Office
2002	Full liberalisation of local calls and inter-zone telecommunication market
2002	Introduction of the „pre-selection“ system for the DLD market
01.04.2002	Replacement of the Telecommunications Regulations Office by the Telecommunications and Mail Regulation Office <sup>268</sup>

<sup>260</sup> Sources of information: CBI [2000]: page 11 ff. and 153 ff., Christiansen and Bertrand [2002]: page 8 ff., Economist Intelligence Unit [2003]: page 22 ff., Gray [1995]: page 47 ff. and 89 ff., PAIZ [2001b]: page 8 ff., Walker and Renegli [2005]: page 1 ff., Zoubir and Lhabitant [2003]: page 141, Website 34, Website 35.

<sup>261</sup> The Law was in effect until the end of year 2000 and set the legal basis for the de-monopolisation of the telecommunication sector. The act aimed to encourage private participation and was further amended in 1995.

<sup>262</sup> This rule paved the way for privatisation in the telecommunication equipment sector. Foreign investors had to enter the market by acquiring shares in existing state-owned companies.

<sup>263</sup> TP S.A. was the successor of the former state-owned enterprise Polska Poczta, Telegraf i Telefon, which was transformed into a joint-stock company.

<sup>264</sup> The Law was supervised and executed by the Polish Testing and Certification Centre (Polskie Centrum Badań i Certyfikacji - PCBC).

<sup>265</sup> Customs duties on telecommunication products had been zero-rated in trade with the EU, EFTA, and CEFTA member countries.

<sup>266</sup> The Law took effect on 1<sup>st</sup> January 2001 and replaced the Testing and Certificate Law from 1993. Furthermore, the Law established the Polish Accreditation Centre which replaced the PCBC.

<sup>267</sup> The Law replaced the previous Telecommunication Law from 1990. Among other rules, the Law abolished regulations that prevented the market entry of competitors. The local and long-distance markets were fully opened. The Ministry of Post and Telecommunications, the State Radio Communications Agency (Państwowa Agencja Radiofonii - PAR) and the State Inspectorate for Posts and Telecommunications (Państwowa Inspekcja Telekomunikacji i Poczty - PITP) were replaced by the Telecommunication Regulatory Office (Urząd Regulacji Telekomunikacji - URT), which was established through the Law.

<sup>268</sup> Telecommunications and Mail Regulation Office - Urząd Regulacji Telekomunikacji i Poczty (URTiP)

Date	Event/Law
01.01.2003	Full liberalisation of international long-distance (ILD) market Introduction of the "pre-selection" system for the ILD market Opening of international telecommunication services market
May 2003	Revision of the Telecommunications Law to meet EU accession requirements
16.07.2004	New Telecommunications Law <sup>269</sup>

<sup>269</sup> The law fully adopted the EU regulatory framework. Furthermore it required the launch of cost-oriented tariffs.

4) Logistics sector<sup>270</sup>

Date	Event/Law
1989	Amendments to the Carriage Law of 1984
1989-1991	Lift of restrictions on second-hand lorries from Western Europe
May 1990	The Polish Ministry of Transport received a loan from the World Bank in order to upgrade its rolling stock and improve signalling and telecommunications equipment.
June 1990	Ministry of Transport announced a major investment program to upgrade the road network.
November 1990	Polish government announced that the country's transport infrastructure would be one of three top priorities for investment over the next years.
23.11.1990	Telecommunications Law <sup>271</sup>
28.09.1993	Government announced a scheme to build 2600 km of motorways by 2010
1994	Set up of the Polish transport policy in the "Action programme to transform transport into a system in line with market economy requirements and the new conditions for economic co-operation in Europe"
27.10.1994	Act on Toll Motorways <sup>272</sup>
27.06.1997	Law on Railway Transport <sup>273</sup>
01.07.1997	Road Traffic Law <sup>274</sup>
1997	Removal of protectionist regulations concerning mail delivery
November 1999	Partially privatisation of the national airline LOT
08.09.2000	Law on Commercialisation, Restructuring and Privatisation of PKP, the Polish State Railways <sup>275</sup>
19.11.2000	Law on Maritime Safety
06.09.2001	Law on Road Transport
18.09.2001	Maritime Code
24.09.2001	Act on working time and rest periods for drivers
2001	Adoption of the programme of adjustment of Poland's road network to European Union standards

<sup>270</sup> Sources of information: Burniewicz [1996]: page 20 ff., CBI [1991]: page 155, Economist Intelligence Unit [2003]: page 22 ff., European Commission Transport [2004]: page 1 f., NEA Transport Research and Training et al [2004]: page 7 ff., PAŁIZ [2001c]: page 11 ff., Rudolf and Ellis [2003]: page 3 ff., Wronka [2006]: page 4 ff., Website 36, Website 37, Website 38, Website 39.

<sup>271</sup> The law was also governing postal services.

<sup>272</sup> The act was further amended in 2000.

<sup>273</sup> The law was replaced on 28.03.2003 by the new Law on Railway Transport.

<sup>274</sup> The law defined safety requirements for vehicles.

<sup>275</sup> The law was further amended in 2001, 2002, 2003, and 2004.

Date	Event/Law
03.07.2002	Aviation Law
January 2002	Set up of a national infrastructure development plan <sup>276</sup>
28.03.2003	Law on Railway Transport
12.06.2003	Postal Law
01.07.2003	Transformation of the Main Railway Inspectorate into the Railway Transport Office <sup>277</sup>
26.10.2003	LOT joins the Star Alliance network of airlines

<sup>276</sup> The plan was based on the trans-European network objectives, and aimed to build and upgrade motorways, expressways, and other main roads from 2002 until 2005.

<sup>277</sup> Railway Transport Office - Urząd Transportu Kolejowego (UTK).

The office's main tasks were the issuance of licences and safety certificates and the authorisation of railway equipment.

5) Power sector<sup>278</sup>

Year	Law / Event
01.01.1990	Increase in energy prices <sup>279</sup>
1992	Licensing for oil and gas exploration was opened to foreign companies
18.10.1995	CENTREL was connected to the Union for the Coordination of Power Generation and Transmission (UCPTE) <sup>280</sup>
10.04.1997	Energy Law <sup>281</sup>
May 1997	Establishment of the Energy Regulatory Authority <sup>282</sup>
July 1998	Government announced privatisation strategy for the power sector
1999	Start of active privatization
Late 1999	Start of power stations sales
December 1999	Government publishes document titled "Polish Electricity Market Operational Principles in 2000 and Beyond"

<sup>278</sup> Sources of information: CBI [2000]: page 11 ff. and 83 ff., Central Statistical Office [2000]: page 3 ff., Economist Intelligence Unit [2003]: page 25, Foreign Trade Research Institute [1992]: page II/4 – II/6, Lapinski [2003]: page 15 ff., Maurizot and Kieltyka [2003]: page 26, PAIZ (2000): page 11 ff., Zoubir and Lhabitant [2003]: page 139f., Website 40, Website 41, Website 42, Website 43, Website 44, Website 45, Website 46.

<sup>279</sup> It was intended to raise the price levels to those in Western Europe.

<sup>280</sup> CENTREL (Central European Electricity Network) was founded on 11.10.1992 and was a Central European (Poland, Hungary, The Czech Republic and the Slovak Republic) group of transmission system operator companies. The UCPTE (Union for the Coordination of Production and Transmission of Electricity) was the Western Europe's power interconnection system.

<sup>281</sup> The law established the legal framework for the liberalisation and privatisation of the energy sector. Rules with respect to license requirements, the rights and duties of producers, distributors, and users of energy were launched. The law also facilitated the market entry for foreign investors.

<sup>282</sup> Energy Regulatory Authority - Urząd Regulacji Energetyki (URE).

The authority was set-up as the result of the Energy Law. The authority was independent and was among others responsible for the issuance of licenses.



Year	Law / Event
June 2000	Warsaw Electric Energy Exchange began operation <sup>283</sup>
2000	Approval of governmental program for development of renewable energy
29.11.2000	Law on Atomic Energy <sup>284</sup>
2001	Elimination of custom duties on fuel imports
18.07.2001	Water Law
April 2001	Power Sector Programme <sup>285</sup>
02.04.2002	Government publishes "Energy Policy Guidelines for Poland until 2010"

<sup>283</sup> Electric Energy Exchange- Towarowa Gielda Energii S.A. (TGE S.A.). The Warsaw Electric Energy Exchange was established in December 1999.

<sup>284</sup> The law replaced the Atomic Energy Act from 1986.

<sup>285</sup> The programme was updated in January 2003. It set out the tasks to be accomplished by the end of 2002 in order to create an operational Polish electricity market.

## Attachment 4: Sector List of Selected and Excluded Foreign Direct Investors

### 1) Banking

Original PAI/IZ Statistics	Non-amended PAI/IZ Statistics	Excluded
ABN-AMRO Bank / ABN-AMRO Bank NV	ABN-AMRO Bank / ABN-AMRO Bank NV	Alliance Capital Management Corporation of Delaware
Alliance Capital Management Corporation of Delaware	Allied Irish Bank PLC	Amvescap Plc
Allied Irish Bank PLC	American International Group Inc. / AIG	AVIVA Plc
American International Group Inc. / AIG	Banco Comercial Portugues / Banco Comercial Portuges S.A.	Banca Intesa / Banca Commerciale Italiana
Amvescap Plc	Banco Espirito Santo	Bank of America
AVIVA Plc	Banco Santander Central Hispano	Bank of New York
Banca Commerciale Italiana	Bank of Tokyo - Mitsubishi N.V.	Cassa di Risparmio di Padova
Banco Comercial Portugues / Banco Comercial Portuges S.A.	Bankgesellschaft Berlin AG / Berliner Bank AG	CGU International Insurance Plc (CGNU Group)
Banco Espirito Santo	Banque CIAL / CIC Banque CIAL	Chase EU Holding Ltd
Banco Santander Central Hispano	Banque Populaire / Banque Francaise de Credit Cooperatif / Caisse Centrale de Credit Cooperatif	Credit National / Credit Foncier de France (Foncier Participations)
Bank Austria	BNP Paribas / Banque Nationale de Paris	Credit Suisse Private Equity
Bank of America	Calyon / Credit Lyonnais / Credit Lyonnais Global Banking	Deutsche Investitions- und Entwicklung GmbH (KfW Bankengruppe)
Bank of New York	Centro Internationale Handelsbank AG / Raiffeisen Zentralbank	European Bank for Reconstruction and Development / EBRD
Bank of Tokyo - Mitsubishi N.V.	Cetelem S.A.	European Renaissance Capital L.P.
Bankgesellschaft Berlin AG	Cibank / Citigroup	FCE Bank Plc / Ford Credit Bank Plc
Banque CIAL	Commerzbank AG	Fiat
Banque Francaise de Credit Cooperatif	Credit Agricole	Fortrade Financing / Fortrade Financing SPA
Banque Nationale de Paris	Credit Suisse Asset Management Nederland Holding / Credit Suisse First Boston	Innova Capital
Bayerische Hypo- und Vereinsbank AG	Danske Bank / Den Danske	Istituto Mobiliare Italiano (IMI)
Bayerische Hypotheken und Wechsel Bank	Deutsche Bank AG	J.P. Morgan
Bayerische Vereinsbank AG	DG Bank / Deutsche Zentral Genossenschaftsbank AG (DG Bank) / Deutsche Zentral Genossenschaftsbank AG	K. A. International Partnership L. P.
Berliner Bank AG	Dresdner Bank	Kulczyk Investment BV
BNP Paribas	Erste Bank / Erste Bank Der Oesterreichischen Sparkassen AG / GiroCredit Bank AG	LG Group
CAIB InvestmentBank Austria AG	Fortis Bank S.A. / Fortis Bank NV	Morrison Knudsen Corporation
Caisse Centrale de Credit Cooperatif	General Electric (GE) / General Electric Corporation (GE) / GE Capital Services / GE Capital / GE Money	Pioneer International Corporation
Cassa di Risparmio di Padova	HVB / Bank Austria / Creditanstalt / Creditanstalt Bankverein / Bayerische Hypotheken und Wechsel Bank / Bayerische Vereinsbank AG / Bayerische Hypo- und Vereinsbank AG / CAIB InvestmentBank Austria AG / Investmenbank Austria AG	Poland Growth Fund Ltd. / Poland Growth Fund L.P.
Centro Internationale Handelsbank AG	ING Group / ING Group N.V.	Polisko-Kanadyjski Bank Sw. Stanislaw
Cetelem S.A.	Intermarket Bank AG	Selective American Financial Enterprises
CGU International Insurance Plc (CGNU Group)	Kredietbank N.V. / KBC Holding / KBC Bank / KBC Bank N.V.	Union Group a.s.
Chase EU Holding Ltd	Nordea Bank Sweden AB (Nordea Group) / Nordbanken AB / Unibank A/S	
Cibank / Citigroup	Oesterreichische Investitionskredit AG / Investkredit	
Commerzbank AG	Oris Europe Limited / Oris Corporation	
Credit Agricole	Provident Financial Plc	
Credit Foncier de France (Foncier Participations)	Rabobank / Rabobank International Holding BV	
Credit Lyonnais / Credit Lyonnais Global Banking	Raiffeisen Zentralbank Oesterreich AG / Raiffeisen Zentralbank AG / Raiffeisen Zentralbank of Austria	
Credit National	Skandinaviska Enskilda Banken (SEB)	
Credit Suisse Asset Management Nederland Holding	Societe Generale / Societe Generale (S.A.)	
Credit Suisse First Boston	Svenska Handelsbanken AB	
Credit Suisse Private Equity	UniCredit Italiano / UniCredit Italiano SpA	
Creditanstalt Bankverein	Volkswagen AG	
Den Danske	Westdeutsche Landesbank (WestLB)	
Deutsche Bank AG		
Deutsche Investitions- und Entwicklung GmbH		
DG Bank / Deutsche Zentral Genossenschaftsbank AG (DG Bank)		
Dresdner Bank		
Erste Bank		
Erste Bank Der Oesterreichischen Sparkassen AG		
European Bank for Reconstruction and Development / EBRD		
European Renaissance Capital L.P.		
FCE Bank Plc		
Fiat		
Fortis Bank S.A. / Fortis Bank NV		
Fortrade Financing / Fortrade Financing SPA		
General Electric (GE) / General Electric Corporation (GE) / GE Capital Services		
GiroCredit Bank AG		
HVB		
ING Group / ING Group N.V.		
Innova Capital		
Intermarket Bank AG		
Investmenbank Austria AG		
Istituto Mobiliare Italiano		
J.P. Morgan		
K. A. International Partnership L. P.		
KBC Holding / KBC Bank / KBC Bank N.V.		
Kredietbank N.V.		
Kulczyk Investment BV		
LG Group		
Morrison Knudsen Corporation		
Nordbanken AB		
Nordea Bank Sweden AB (Nordea Group)		
Oesterreichische Investitionskredit AG		
Oris Europe Limited / Oris Corporation		
Pioneer International Corporation		
Poland Growth Fund Ltd. / Poland Growth Fund L.P.		
Polisko-Kanadyjski Bank Sw. Stanislaw		
Provident Financial Plc		
Rabobank / Rabobank International Holding BV		
Raiffeisen Zentralbank Oesterreich AG / Raiffeisen Zentralbank AG		
Selective American Financial Enterprises		
Skandinaviska Enskilda Banken (SEB)		
Societe Generale / Societe Generale (S.A.)		
Svenska Handelsbanken AB		
Unibank A/S		
UniCredit Italiano / UniCredit Italiano SpA		
Union Group a.s.		
Volkswagen AG		
Westdeutsche Landesbank (WestLB)		

## 2) Insurance

Original PAI/IZ statistics	Non-amended PAI/IZ Statistics	Excluded
AGF	AGF / Allianz AG / Dresdner Bank	Cigna / Cigna Global Holdings Inc
Allianz AG	Alte Leipziger / Alte Leipziger Europa AG	Daewoo
Alte Leipziger / Alte Leipziger Europa AG	American International Group Inc. / AIG	Fiat
American International Group Inc. / AIG	AVIVA Plc. / CGU International Insurance Plc / CGU International Insurance Plc (CGNU Group) / Commercial Union / Norwich Union	
Assurances Mutuelles de France A.M.	Azur Assurances / Azur Vie S.A. / Assurances Mutuelles de France A.M.	
AVIVA Plc.	Cardif / Cardif S.A. / Cardif Assurance Risques Divers /BNP Paribas	
Azur Assurances	Credit Suisse / Winterthur / Winterthur Insurance / Winterthur Life Insurance Company	
Azur Vie S.A.	ERGO International Aktiengesellschaft	
BNP Paribas	Eureko B.V.	
Cardif / Cardif S.A.	General Electric (GE) / General Electric Corporation (GE)	
Cardif Assurance Risques Divers	Generali Holding Vienna AG	
CGU International Insurance Plc / CGU International Insurance Plc (CGNU Group)	Gerling Konzern Allgemeine Versicherungs AG	
Cigna / Cigna Global Holdings Inc	Helvetia Patria Gruppe / Helvetia Patria	
Commercial Union	HUK Coburg	
Daewoo	ING Group / ING Group N.V. / Nationale Nederlanden	
Dresdner Bank	Inter Group / Inter Krankenversicherung AG / Inter Lebensversicherung AG / Inter Versicherungen / Interversicherungen	
ERGO International Aktiengesellschaft	KBC Holding / KBC Bank / KBC Bank N.V.	
Eureko B.V.	Nationwide Global Holdings Inc	
Fiat	Nordea Bank Sweden AB (Nordea Group) / Tryg-Balica A/S / Tryg-Balica A/S (Nordea Group)	
Generali Holding Vienna AG	Prudential Insurance Co. of America	
Gerling Konzern Allgemeine Versicherungs AG	R+V Versicherung / R+V Allgemeine Versicherungs- AG	
Helvetia Patria Gruppe	Royal & Sun Alliance / Royal & Sun Alliance Insurance plc / Trygg-Hansa	
HUK Coburg	Sampo / Industrial Insurance Company Ltd. / Sampo Industrial Insurance Company Ltd	
ING Group / ING Group N.V.	Scandia Leben Holding GmbH / Repono Holding A.B. / Repono Holding BV / Skandinaviska Enskilda Banken (SEB)	
Inter Group	Suomi Mutual Life Assurance Company	
Inter Krankenversicherung AG	TALANX AG / HDI International Holding AG	
Inter Lebensversicherung AG	Toro	
Inter Versicherungen / Interversicherungen	Tryg i Danmark	
KBC Holding / KBC Bank / KBC Bank N.V.	Volkswagen AG	
Nationale Nederlanden	Wiener Städtische Allgemeine Versicherung AG	
Nationwide Global Holdings Inc	Wuestenrot AG	
Nordea Bank Sweden AB (Nordea Group)	Zurich Group	
Norwich Union		
Prudential Insurance Co. of America		
R+V Versicherung / R+V Allgemeine Versicherungs- AG		
Repono Holding A.B. / Repono Holding BV		
Royal & Sun Alliance / Royal & Sun Alliance Insurance plc		
Sampo		
Scandia Leben Holding GmbH		
Suomi Mutual Life Assurance Company		
TALANX AG		
Toro		
Tryg-Balica A/S		
Trygg-Hansa		
Volkswagen AG		
Wiener Städtische Allgemeine Versicherung AG		
Winterthur / Winterthur Insurance / Winterthur Life Insurance Company		
Wuestenrot AG		
Zurich Group		

## 3) Telecommunications

Original PAI/IZ statistics	Non-amended PAI/IZ Statistics	Excluded
AirTouch International	Alcatel	Amertech / SBC Teleholdings
Alcatel	C & C Partners Communications BV / Twentsche Kabel Holding / TKH	Bel Pagette
Amertech	DeTeMobil / T-Mobile	Dankner Investments Ltd.
AT&T Network Systems International BV	Ericsson	E.M. Warburg, Pincus & Co.
Bates Telecom Ltd	France Telecom	EMERITA B.V. / Poland Telecom Operators N.V.
Bel Pagette	GN Great Nordic	Hicks Muse Tate & Furst, Emerging Markets Partnership and Argus Capital Partners
C & C Partners Communications BV	Lucent Technologies Network Systems Netherlands B.V. / AT&T Network Systems International BV	Matrix
Dankner Investments Ltd.	MediaOne / US West / Comcast	Telediffusion de France (TDF) / Telediffusion de France International (TDF)
DeTeMobil	Motorola Inc.	
E.M. Warburg, Pincus & Co.	National Grid Plc / Bates Telecom Ltd / Energis Plc	
EMERITA B.V.	Northern Telecom / Nortel	
Energis Plc	PenneCom / PENNECOM / D&E Communications	
Ericsson	Siemens / Siemens AG	
France Telecom	TDC Mobile International A/S / Tele Danmark / Tele Danmark Internationale AS	
GN Great Nordic	Telect Holdings	
Hicks Muse Tate & Furst, Emerging Markets Partnership and Argus Capital Partners	Telia AB / TeliaSonera	
Lucent Technologies Network Systems Netherlands B.V.	Vivendi / Vivendi Universal	
Matrix	Vodafone Americas Asia Inc. / AirTouch International	
MediaOne		
Motorola Inc.		
National Grid Plc		
Northern Telecom		
PenneCom / PENNECOM		
Poland Telecom Operators N.V.		
Siemens / Siemens AG		
TDC Mobile International A/S		
Tele Danmark / Tele Danmark Internationale AS		
Telect Holdings		
Telediffusion de France (TDF) / Telediffusion de France International (TDF)		
Telia AB		
Twentsche Kabel Holding		
US West		
Vivendi / Vivendi Universal		
Vodafone Americas Asia Inc.		

#### 4) Logistics

Original PAIIZ statistics	Non-amended PAIIZ Statistics	Excluded
Adtranz	Alstom	Autoliv AB
Alstom	B. V. Holding Maatschappij Damen	Berger Group
Autoliv AB	Bidspeidition AB / Bidspeidition AB / BTL Aktieborag / BTL AB / Schenker	Berhard Fischer GmbH
B. V. Holding Maatschappij Damen	Bombardier Transportation / Adtranz	Centrum Beheer B.V.
Baltic Logistic System International AB	Carrus / Volvo AB / Volvo Bus Corporation	Clement
Berger Group	Deutsche Post World Net / DHL Worldwide Express / DHL Worldwide Network	Europa Distribution Center
Berhard Fischer GmbH	EDAS CASA/AVIA System Group / EADS CASA	Europort Grain Terminal / Straight Crossing / Strait Crossing Group Ltd
BFGoodrich	Environmental Tectonics Corporation / ETC	Horst Mosolf Group / Mitsui O.S.K. Lines
Bidspeidition AB	Faure & Machet / Faure & Machet (FM) / Faure & Machet (FM) Logistic S.A.	M. Kutsch GmbH / M. Kutsch Projektgesellschaft GmbH / Kirchhoff Automotive
Bombardier Transportation	GATX Rail Overseas Holding Corporation	Masiwa
BTL Aktieborag	General Electric (GE) / General Electric Corporation (GE)	Mitsubishi Corp.
Carrus	General Logistics Systems International Holding B.V. / General Logistics Systems International Holding B.V. (GLS)	Mostva
Centrum Beheer B.V.	Goodrich Aerospace Canada / BFGoodrich / Coltec Aerospace Canada Ltd / Coltec Aerospace Canada	National Express Group / National Express Group Plc
Clement	Greenbrier / Greenbrier Inc. / Greenbrier Europe B.V.	Neoplan Stuttgart Gottlob Auwärter GmbH / Krzysztof Olszewski
Coltec Aerospace Canada Ltd / Coltec Aerospace Canada	Hays / Hays Logistics	Radson NV
Deutsche Post World Net	Herman Scheers / Fast Group	RCI Rocon
DHL Worldwide Express / DHL Worldwide Network	International Container Terminal Services / ICTSI	SAirGroup
EDAS CASA/AVIA System Group	Intertransports Centre S.P.A.	Spedimpex
Environmental Tectonics Corporation	Kuehne & Nagel (AG&Co.) KG Bremen / Kuehne & Nagel Beteiligungs AG	Tadovia BV
Europa Distribution Center	La Poste Group	Ulstein Holding ASA
Europort Grain Terminal	Maersk	WABCO / WABCO Europoe B.V.
Faure & Machet / Faure & Machet (FM) / Faure & Machet (FM) Logistics	MAN Nutzfahrzeuge AG	Was Wietmarscher
GATX Rail Overseas Holding Corporation	Odra Industries ASA	
General Electric (GE) / General Electric Corporation (GE)	Posten AB / Baltic Logistic System International AB	
General Logistics Systems International Holding B.V.	Pratt & Whitney / Pratt & Whitney Canada	
Goodrich Aerospace Canada	Siemens / Siemens AG	
Greenbrier / Greenbrier Inc. / Greenbrier Europe B.V.	Snecma Moteurs	
Hays	Spedition Trade Trans Holding GmbH	
Herman Scheers	Therab BV / Therab BV - Raben Holding	
Horst Mosolf Group	TNT Post Group / TNT Skypak Holdings BV / Schrader	
International Container Terminal Services	United Parcel Service Inc. (UPS)	
Intertransports Centre S.P.A.	Wincanton European Transport Services B.V.	
Kirchhoff Automotive		
Krzysztof Olszewski		
Kuehne & Nagel (AG&Co.) KG Bremen / Kuehne & Nagel Beteiligungs AG		
La Poste Group		
M. Kutsch GmbH / M. Kutsch Projektgesellschaft GmbH		
Maersk		
MAN Nutzfahrzeuge AG		
Masiwa		
Mitsubishi Corp.		
Mitsui O.S.K. Lines		
Mostva		
National Express Group / National Express Group Plc		
Neoplan / Neoplan Stuttgart Gottlob Auwärter GmbH		
Odra Industries ASA		
Posten AB		
Pratt & Whitney / Pratt & Whitney Canada		
Radson NV		
RCI Rocon		
SAirGroup		
Schenker		
Schrader		
Siemens / Siemens AG		
Snecma Moteurs		
Spedimpex		
Spedition Trade Trans Holding GmbH		
Straight Crossing		
Tadovia BV		
Therab BV / Therab BV - Raben Holding		
TNT Post Group / TNT Skypak Holdings BV		
Ulstein Holding ASA		
United Parcel Service Inc. (UPS)		
Volvo AB / Volvo Bus Corporation		
WABCO / WABCO Europoe B.V.		
Was Wietmarscher		
Wincanton European Transport Services B.V.		

## 5) Power

Original PAIIZ statistics	Non-amended PAIIZ Statistics	Excluded
A. Ahlstrom Corporation	A. Ahlstrom Corporation / Foster Wheeler Energy / Foster Wheeler Energy (former A. Ahlstrom Corporation) / Foster Wheeler Europa B.V. /	AxEast AB
ABB Ltd / ABB	ABB Ltd / ABB / ABB Assea Brown Boveri / Asea Brown	Dyckerhoff / Dyckerhoff Zement International GmbH
AES Horizons Ltd	AES Horizons Ltd / Applied Energy Services (AES)	E. Hawle and Co. / E. Hawle Armaturenwerke GmbH
AGA AB	AGIP Petroli SPA / Eni	Fahrer Group / Fahrur Group, Failure Analysis Associates
AGIP Petroli SPA	Air Liquide	Logstor Ror A/S
Air Liquide	Air Products and Chemicals Inc. / Prodair Corporation	Necoles Investments BV
Air Products and Chemicals Inc.	Alstom	Pan-Isomt
Alstom	British Oxygen Corporation (BOC Group) / BOC Group / Praxair Inc. / Liquid Carbonic	RMG Regel + Messtechnik GmbH
Amoco	British Petroleum / BP Amoco Plc / BP International / BP International B.V. / Amoco / Aral	Westdeutsche Landesbank (WestLB)
Aral	Conoco Central Europe Inc / DuPont Chemical and Energy Operations Inc.	
AxEast AB	Dalkia Termka S.A. / Dalkia International / Vivendi / Vivendi Universal	
BP Amoco Plc	Deguss Huls AG / Degussa-Huls AG / Degussa AG	
BP International / BP International B.V.	Electrabel S.A. / Tractabel S.A. / Tractebel S.A.	
British Oxygen Corporation (BOC Group) / BOC Group	Electricite de France Internationale / Electricite de France Internationale (EDF)	
British Petroleum	Elsam A/S	
Conoco Central Europe Inc	EnBW Energie Baden-Württemberg AG / Energie Baden-Württemberg AG (EnBW) / EnBW Energie Baden-Württemberg AG	
Dalkia Termka S.A.	Enron International	
DEA Mineraloel	Eso AG / Esso Deutschland GmbH / Exxon Corporation	
Deguss Huls AG	Fortum Oil and Gas Oy / Fortum Oy / IVO / Neste Oil	
DuPont Chemical and Energy Operations Inc.	Gazprom / OAO Gazprom / RAO Gazprom	
Dyckerhoff / Dyckerhoff Zement International GmbH	Gelsenwasser AG	
E. Hawle and Co. / E. Hawle Armaturenwerke GmbH	General Electric (GE) / General Electric Corporation (GE)	
Electrabel S.A.	Hedeseiskabet / DDH	
Electricite de France Internationale / Electricite de France Internationale	International Water / International Water United Utilities Holding BV	
Elf Lubrifiants	Linde AG / AGA AB	
Elsam A/S	LM Glasfiber	
Energie Baden-Württemberg AG (EnBW) / EnBW Energie Baden-Württemberg AG	Mitteldeutsche Energieversorgung AG (MEAG) / enviaM	
Enron International	MVV Energie AG	
Eso AG / Esso Deutschland GmbH	P&T Technology AG	
Exxon Corporation	Pam-Gas / Pam-Gas B.V. / SHV Gas	
Fahrer Group / Fahrur Group, Failure Analysis Associates, Applied Energy	PSEG Global	
Fortum Oil and Gas Oy / Fortum Oy	Rolls-Royce Power Ventures Ltd	
Foster Wheeler Energy (former A. Ahlstrom Corporation) / Foster Wheeler Europa B.V.	Ruhrgas AG / E.ON Ruhrgas	
Gazprom / OAO Gazprom / RAO Gazprom	RWE Plus AG / RWE Solutions Frankfurt	
Gelsenwasser AG	Saur International	
General Electric (GE) / General Electric Corporation (GE)	Scheidt / Scheidt International GmbH	
Hedeseiskabet	Shell / Shell Overseas Holding / Shell Overseas Holding Ltd. / Shell Petroleum NV / Texaco Inc. / DEA Mineraloel	
International Water / International Water United Utilities Holding BV	Siemens / Siemens AG	
IVO	Societe Nationale D'Electricite et de Thermique (SNET)	
Linde AG	Stadwerke Leipzig GmbH	
Liquid Carbonic	Statol / Preem Petroleum AB / OK Petroleum / OK-Petroleum	
LM Glasfiber	Swepol Link AB	
Logstor Ror A/S	Sydskraft / Sydskraft AB / E.ON Sverige	
Mitteldeutsche Energieversorgung AG (MEAG)	TotalFinaElf S.A. / Elf Lubrifiants	
MVV Energie AG	Vattenfall / Vattenfall AB	
Necoles Investments BV	Westinghouse Electric Corporation	
Neste Oil		
OK Petroleum / OK-Petroleum		
P&T Technology AG		
Pam-Gas / Pam-Gas B.V.		
Pan-Isomt		
Praxair Inc.		
Preem Petroleum AB		
Prodair Corporation		
PSEG Global		
RMG Regel + Messtechnik GmbH		
Rolls-Royce Power Ventures Ltd		
Ruhrgas AG		
RWE Plus AG		
RWE Solutions Frankfurt		
Saur International		
Scheidt / Scheidt International GmbH		
Shell		
Shell Overseas Holding / Shell Overseas Holding Ltd.		
Shell Petroleum NV		
Siemens / Siemens AG		
Societe Nationale D'Electricite et de Thermique (SNET)		
Stadwerke Leipzig GmbH		
Statol		
Swepol Link AB		
Sydskraft / Sydskraft AB		
Texaco Inc.		
TotalFinaElf S.A.		
Tractabel S.A.		
Vattenfall / Vattenfall AB		
Vivendi / Vivendi Universal		
Westdeutsche Landesbank (WestLB)		
Westinghouse Electric Corporation		

Source: various PAIIZ statistics, own presentation

## **Attachment 5: Exemplary Questionnaire**

### **Questionnaire**

Dear Sir or Madam,

Many thanks for your willingness to answer the following questionnaire.

This questionnaire represents an essential part of my PhD research about "Foreign direct investment into infrastructure in Poland". The questionnaire will create the basis for further analysis of key investment factors and modes in Poland as well as their change over time.

My ability to continue with my studies depends highly on the amount of returned questionnaires, and therefore I very much appreciate your effort to support me by filling out the questionnaire.

I herewith confirm that your answers will be treated **strictly confidentially**, and won't be shown to someone else. I assure you that from my results it will not be possible to draw back conclusions about your given answers.

If you have more data about your entry into the Polish market which is available, I would be grateful if I could get access to it.

In case you have any questions regarding the questionnaire or my research, don't hesitate to contact me via phone, e-mail or mail. My contact details are:

Julia Kowalle  
9 Swedenborg Gardens  
London E1 8HP  
United Kingdom  
phone: 0044 7810 656279  
e-mail: [kowallej@gmx.de](mailto:kowallej@gmx.de)

If you are interested in the result of the analysis of the questionnaire or in the PhD paper, I would be more than happy to provide you with a copy.

---

### **1) Introduction**

The questionnaire consists of two parts, a general and a company specific.

The general part aims to determine criteria which had been pull and push factors with regard to the decision of the Polish market entry as well as to whether there had been a predominant company form for foreign investors in the Polish market.

The specific part is focusing on your company's investments in Poland.

The questions in the first part of this questionnaire mainly require an evaluation as an answer, i.e. the answers are predefined by a scale from "1" to "5", whereby:

Scale	Description
1	Very important
2	Little important
3	Neither important nor unimportant (e.g. had not been considered)
4	Little unimportant
5	Very unimportant

## 2) General part

### a) Criteria for market entry

The first table aims to explore which determinants had been considered by your company during the decision making process with regard to the company's establishment in Poland.

Please indicate by marking the appropriate cell how important each single determinant had been for your company when **first** entering the Polish [xxx] market.

Reasons	1	2	3	4	5
Country's geographical situation					
Market size					
Market growth expectations					
Access to natural resources and / or production material					
Poland's worldwide political and economical integration (e.g. expected memberships in NATO, EU)					
Progress in:					
- Economic stabilisation					
- Political stabilisation					
- Institutional stabilisation					
- New regulations (in the [xxx] sector)					
- Other					
Progress in market infrastructure conditions:					
- Banking system					
- Telecommunication					
- Transportation					
Progress in the [xxx] sector with reference to:					
- Privatisation					
- Opening of the market					
- Private sector developments					
Competitors are in the market or intend to enter the market					
Current clients are in the market or intend to enter the market					
Company strategy (e.g. international presence)					
Cost pressure (e.g. lower labour costs)					
Possession of competitive advantage (e.g. technology, know-how)					
Distance (e.g. avoidance of custom duty, local presence)					
Investment incentives					
Country's openness to foreigners					
Progress in facilitation of investment approval procedures for foreign investors					
Availability of human capital (e.g. skilled workers)					

The above list is not exhaustive and if you feel that important factors have been missed out, please add them here:

- 
- 
-

## b) Market entry related constraints

The following table lists different factors which might have represented criteria against the decision of your company to move into the Polish [xxx] market.

Please tick the appropriate box.

Reasons	1	2	3	4	5
Bureaucratic hurdles					
Corruption					
Country's reputation and perception					
Cultural and language barriers					
Economic situation:					
- Inflation					
- GDP growth					
- Budget deficit					
- Other					
Infrastructure level:					
- Telecommunication					
- Banking system					
- Transportation					
- Other					
Progress of transformation					
Political stability					
Fiscal framework					
Access to financial means					
Speed of privatisation (in the [xxx] sector)					
Legal framework (in the [xxx] sector)					
Costs for staff training, establishment of management, etc.					
Host country's restrictions to FDI (e.g. acquisition of property)					
Strong labour force					
State interference (e.g. support of state owned companies)					
Ability of the authorities to keep their promises (e.g. on reforms, political decisions)					
Riskiness of business					

If you think that very fundamental criteria have not been named, please add them in below empty lines:

- 
- 
-



### c) Mode of market entry

It will be of interest for my work to analyse whether the market entry form has changed over time, and therefore this section is going to have a closer look at the type of enterprise chosen by your company. Again, please tick the appropriate box.

	Representative office	Greenfield	Joint venture	Acquisition through privatisation	Other (specify)
Which company form had been chosen for the <b>initial</b> market entry?					
Which company forms had been chosen for <b>later</b> investments (if several, please tick all boxes)?					
Which company form was <b>predominant</b> for your company within the investments made in Poland?					

How significant were the following reasons when deciding about the market form for your initial market entry:

Reasons for chosen company form of FIRST market entry	1	2	3	4	5
Access to companies already established in the market					
Ability to construct an establishment according to specific requirements of the business					
Sharing of business risk					
Access to local resources (e.g. customers, employees, suppliers)					
Gaining experience before fully establishing your company in the market					
Ability to locally evaluate the market conditions					
(Partly) Avoidance of bureaucratic hurdles					
Market restrictions					
Common strategy within the company (i.e. same type of enterprise for all market entries)					
Existence of competitors in market					
Gaining proprietary control (e.g. over production and distribution)					
Immediate possession of market share					
Market different to home country (e.g. cultural and/or economic differences)					
Acquisition of brand name					
Least expensive form to enter the market					
No choice of market entry form (e.g. foreigners were not allowed to enter in a different way)					

If you think that an essential reason has not been listed in above table, please add it below:

-  
-  
-

### 3) Specific part

I obtained some data about your company's investments in Poland between 1989 and 2004 from different sources (PAIZ, United Nations, statistical offices, etc.). As these information are not always coherent, I have prepared below list with the investment information I have so far:

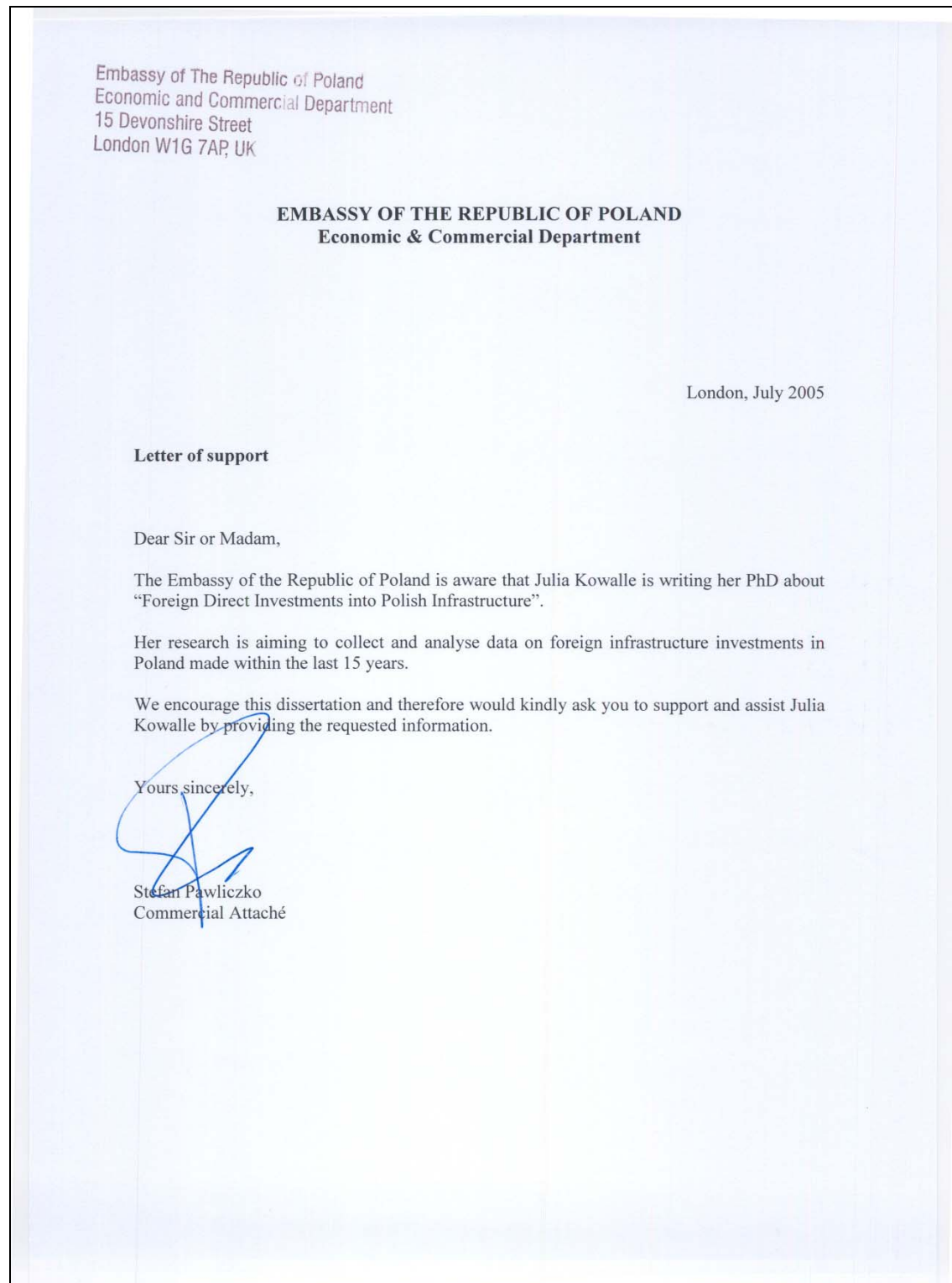
[Table with findings]

With reference to above information I have the following questions:

	Answer
Is it correct that your company entered the Polish [xxx] market in 1999?	
In case information in the table are missing or incorrect, could you please add or correct them?	

**Many thanks for having filled in the questionnaire!**

Source: own presentation

**Attachment 6: Letter of support from the Polish Embassy**

Source: own presentation

## **Attachment 7: Thematic Blocks and their Respective Questions**

### **a) Criteria for market entry**

<b>Thematic block</b>	<b>Questions belonging to the thematic block</b>
Market	Country's geographical situation
	Market size
	Market growth expectations
Access to natural resources	Access to natural resources and / or production material
Country's economic and political situation	Poland's worldwide political and economical integration (e.g. expected memberships in NATO, EU)
	Progress in:
	- Economic stabilisation
	- Political stabilisation
	- Institutional stabilisation
	- New regulations (in the [xxx] sector)
	- Other <sup>286</sup>
Market infrastructure	Progress in market infrastructure conditions:
	- Banking system
	- Telecommunication
Progress in sector	- Transportation
	Progress in the [xxx] sector with reference to:
	- Privatisation
Company internal criteria	- Opening of the market
	- Private sector developments
	Competitors are in the market or intend to enter the market
	Current clients are in the market or intend to enter the market
	Company strategy (e.g. international presence)
	Cost pressure (e.g. lower labour costs)
	Possession of competitive advantage (e.g. technology, know-how)
Country's efforts to attract FDI	Distance (e.g. avoidance of custom duty, local presence)
	Investment incentives
	Country's openness to foreigners
	Progress in facilitation of investment approval procedures for foreign investors
	Availability of human capital (e.g. skilled workers)

<sup>286</sup> Highlighted questions have not been used for the analysis because these questions were either by the majority of companies not answered or the foreign direct investors stated that the understanding of them was not clear to them. In order to avoid the danger of drawing wrong conclusions from these questions, it was decided to leave them out of further analysis.

## b) Market entry related constraints

Thematic block	Questions belonging to the thematic block
Country's reliability	Bureaucratic hurdles
	Corruption
	Country's reputation and perception
Company internal criteria	Cultural and language barriers
	Access to financial means
	Costs for staff training, establishment of management, etc.
	Strong labour force
Economic situation	Riskiness of business
	Economic situation:
	- Inflation
	- GDP growth
Market infrastructure	- Budget deficit
	- Other
	Infrastructure level:
	- Telecommunication
Country's regime	- Banking system
	- Transportation
	- Other
Country's FDI policy	Political stability
	Fiscal framework
	Legal framework (in the [xxx] sector)
	Speed of privatisation (in the [xxx] sector)
	Host country's restrictions to FDI (e.g. acquisition of property)
	State interference (e.g. support of state owned companies)
	Ability of the authorities to keep their promises (e.g. on reforms, political decisions)
	Progress of transformation

c) Mode of market entry

Thematic block	Questions belonging to the thematic block
Company internal criteria	Gaining proprietary control (e.g. over production and distribution)
	Common strategy within the company (i.e. same type of enterprise for all market entries)
	Existence of competitors in market
	Market different to home country (e.g. cultural and/or economic differences)
	Least expensive form to enter the market
Country's given situation	Market restrictions
	No choice of market entry form (e.g. foreigners were not allowed to enter in a different way)
Access	Access to companies already established in the market
	Access to local resources (e.g. customers, employees, suppliers)
	Immediate possession of market share
	Acquisition of brand name
Sharing	Sharing of business risk
	Gaining experience before fully establishing your company in the market
	Ability to locally evaluate the market conditions
	(Partly) Avoidance of bureaucratic hurdles
Ability to construct an establishment	Ability to construct an establishment according to specific requirements of the business

Source: own presentation

**Attachment 8: Companies who have answered the questionnaire**<sup>287</sup>

Banking	Insurance	Telecommunications	Logistics	Power
<ul style="list-style-type: none"> <li>• Bank Austria (PBK Bank, Bank Austria Creditanstalt Poland, Creditanstalt Bankverein) / Bank Austria Creditanstalt / Bayerische Vereinsbank AG / HVB (Bayerische Hypo und Vereinsbank)</li> <li>• Berliner Bank AG / Bankgesellschaft Berlin AG</li> <li>• BNP Paribas (Banque Nationale de Paris)</li> <li>• Commerzbank</li> <li>• Credit Lyonnais Global Banking / Calyon</li> <li>• Deutsche Bank AG</li> <li>• Dresdner Bank</li> <li>• Fortis Bank</li> <li>• GE Money</li> <li>• ING Group</li> <li>• Kredietbank NV / KBC Holding</li> <li>• Nordea / Nordbanken AB</li> <li>• Skandinaviska Enskilda Banken (SEB)</li> <li>• Svenska Handelsbanken AB</li> <li>• UniCredito Italiano SpA</li> <li>• Volkswagen</li> </ul>	<ul style="list-style-type: none"> <li>• AGF / Allianz AG / Dresdner Bank</li> <li>• AIG</li> <li>• Cardif / Cardif Assurance</li> <li>• Risques Divers (BNP Paribas)</li> <li>• ERGO International</li> <li>• Aktiengesellschaft / Alte Leipziger</li> <li>• General Electric Corporation (GE)</li> <li>• ING / Nationale Nederlanden</li> <li>• KBC Holding</li> <li>• R+V Versicherung</li> <li>• TALANX AG (HDI International Holding AG)</li> <li>• Tryg i Danmark / Trygg-Baltica / Nordea Group</li> <li>• Volkswagen</li> <li>• Wiener Städtische</li> <li>• Allgemeine Versicherung AG</li> <li>• Wüstenrot AG</li> </ul>	<ul style="list-style-type: none"> <li>• Ericsson</li> <li>• France Telecom</li> <li>• Motorola Inc.</li> <li>• Siemens AG</li> <li>• Vivendi</li> </ul>	<ul style="list-style-type: none"> <li>• Alstom</li> <li>• DHL / Deutsche Post World Net / DHL Worldwide Network</li> <li>• GATX Rail Overseas Holding Corporation</li> <li>• International Container Terminal Services</li> <li>• General Electric Corporation (GE)</li> <li>• General Logistics Systems International Holding B.V. (GLS)</li> <li>• Kühne &amp; Nagel (AG&amp;Co.) KG Bremen</li> <li>• La Poste Group</li> <li>• MAN Nutzfahrzeuge AG</li> <li>• Pratt &amp; Whitney</li> <li>• Siemens AG</li> <li>• Smerca Motors</li> <li>• Therab BV / Raben Group</li> </ul>	<ul style="list-style-type: none"> <li>• AES Horizons Ltd / Failurer Group / Failurer Group, Failure Analysis Associates, Applied Energy Services</li> <li>• Air Liquide</li> <li>• Alstom</li> <li>• British Oxygen Corporation (BOC Group)</li> <li>• Praxair Inc. / Liquid Carbonic</li> <li>• Elsam A/S</li> <li>• Energie Baden-Württemberg AG (EnBW)</li> <li>• Enron International</li> <li>• EnviaM / Mitteldeutsche Energieversorgung AG (MEAG)</li> <li>• Fortum / Neste / IVO</li> <li>• Gelsenwasser AG</li> <li>• General Electric Corporation (GE)</li> <li>• International Water</li> <li>• LM Glasfiber</li> <li>• MVV Energie AG</li> <li>• Pam-Gas B.V. / SHV Gas</li> <li>• PSEG</li> <li>• Ruhrgas AG / E.ON Ruhrgas AG</li> <li>• RWE Plus AG / RWE Solutions Frankfurt</li> <li>• Shell / Texaco Inc. / Shell Petroleum NV / DEA Mineraloel</li> <li>• Siemens AG</li> <li>• Société Nationale D'Electricité et de Thermique (SNET)</li> <li>• Stadtwerke Leipzig GmbH</li> <li>• Sydkraft</li> <li>• TotalFinalElf / Elf Lubrifiants</li> <li>• Vattenfall</li> </ul>

Source: own presentation

<sup>287</sup> The company names behind each bullet point belong to one company/group and reflect mergers and/or acquisitions.

## Attachment 9: Market Entry - New Statistics versus Amended PAIiIZ statistics

### 1) Banking – New Statistics

New Statistics - Banking														
1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	Banque Nationale de Paris (BNP)	BNP Paribas	BNP Paribas	BNP Paribas	BNP Paribas	BNP Paribas
	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank	Dresdner Bank
	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)	Skandinaviska Enskilda Banken (SEB)
	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein	Creditanstalt Bankverein
	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Investmentbank Austria AG	Bank Austria Creditanstalt	Bank Austria Creditanstalt	Bank Austria Creditanstalt (HVB Group)	Bank Austria Creditanstalt (HVB Group)	Bank Austria Creditanstalt (HVB Group)	Bank Austria Creditanstalt (HVB Group)
	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money	GE Money
	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank	Bayerische Hypotheken und Wechsel Bank
	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group	ING Group
	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG	Commerzbank AG
	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG	Deutsche Bank AG
	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG	Bayerische Vereinsbank AG
	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais
	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	Kreditbank N.V.	KBC Holding (former Kredietbank N.V.)	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding
	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG
	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB
	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG
	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.
	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Fortis Bank S.A.	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group
	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano
	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Calyon (former Credit Lyonnais)	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Credit Lyonnais	Calyon (former Credit Lyonnais)
	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding	KBC Holding
	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG	Berliner Bank AG
	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB	Svenska Handelsbanken AB
	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG	Volkswagen AG
	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.	Fortis Bank S.A.
	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group	Nordea Group
	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano	UniCredit Italiano

#### Additional information

- (1) Banque Nationale de Paris and Paribas merged in 1999, and in the course of year 2000 the BNP Paribas Group was created.
- (2) Bayerische Hypotheken und Wechsel Bank and Bayerische Vereinsbank merged in 1998 to form HVB (Bayerische Hypo- und Vereinsbank). Bank Austria (including Investmentbank Austria) incorporated Creditanstalt Bankverein in 1997 and the company was renamed into Bank Austria Creditanstalt.
- (3) Calyon was created in 2003 after the acquisition of Credit Lyonnais by the Credit Agricole Group.
- (4) In 1998 Kreditbank N.V. merged with ABB Insurance and CERA Bank in order to establish KBC Holding.
- (5) Nordea was formed in 2000 through the merger of Finland's Merita Bank and Sweden's Nordbanken.



[illegible]

### **Additional information**

- (1) Banque Nationale de Paris and Paribas merged in 1999, and in the course of year 2000 the BNP Paribas Group was created.
  - (2) Bayerische Hypotheken und Wechsel Bank and Bayerische Vereinsbank merged in 1998 to form HVB (Bayerische Hypo- und Vereinsbank).
  - (3) Bank Austria (including Investmentbank Austria) incorporated Creditanstalt Bankverein in 1997 and the company was renamed into Bank Austria Creditanstalt.
- In 2000 Bank Austria Creditanstalt was integrated into the HVB Group. The Polish investments are managed by Bank Austria Creditanstalt.
- (4) Calyon was created in 2003 after the acquisition of Credit Lyonnais by the Credit Agricole Group.
  - (5) In 1998 Kredietbank N.V. merged with ABB Insurance and CERA Bank in order to establish KBC Holding.
  - (6) Berliner Bank AG and Bankgesellschaft Berlin AG belong to the same Group and thus their Polish business activities are connected. The remaining stems from internal restructuring and changes of the legal company form. Berliner Bank / Bankgesellschaft Berlin left the Polish market in 2005.
  - (7) Nordea was formed in 2000 through the merger of Finland's Merita Bank and Sweden's Nordbanken.

[illegible]

### **Additional information**

- 1) Since 1999 AGF is part of Allianz, and since 2001 Dresdner Bank belongs to Allianz.
- 2) R+V Versicherung left the Polish market in 2003 by selling its Polish investments to UNQA.
- 3) Cardif Assurances Risques Divers is part of Cardif and Cardif itself belongs to the BNP Paribas Group. The BNP Paribas Group however is active in the Polish insurance market through Cardif.
- 4) In 2000, Ergo bought all participations of Alte Leipziger in Poland and ever since Alte Leipziger is no longer active in the Polish market.
- 5) Tryg-Baltica was formed in 1995 as a result of a merger of two Danish insurance companies, Tryg Forsikring and Baltica Forsikring. In 2000 Tryg-Baltica became part of the Nordic merger to form a new life business activities were sold to Tryg i Danmark, while the life insurance activities remained with Norddea. Tryg i Danmark's Polish investments were sold to HDI (Talanx Group) in 2004.

[illegible]

- (1) Since 1999 AGF is part of Allianz, and since 2001 Dresdner Bank belongs to Allianz.
- (2) ING is the result of the merger of Nationale Nederlanden and NMB Postbank Group in 1991.
- (3) R+V Versicherung left the Polish market in 2003 by selling its Polish investments to UNIQA.
- (4) Cardif Assurances Risques Divers is part of Cardif and Cardif itself belongs to the BNP Paribas Group. The BNP Paribas Group however is active in the Polish insurance market through Cardif.
- (5) In 2000, Ergo bought all participations of Alte Leipziger in Poland and ever since Alte Leipziger is no longer active in the Polish market.
- (6) Tryg-Baltica was formed in 1995 as a result of a merger of two Danish insurance companies, Tryg Forsikring and Baltica Forsikring. In 2000 Tryg-Baltica became part of the Nordic merger to form Nordea. In the summer of 2002 Tryg-Baltica's non-life business activities were sold to Tryg i Danmark, while the life insurance activities remained with Nordea.
- Tryg i Danmark's Polish investments were sold to HDI (Talanx Group) in 2004.

## 3) Telecommunications – New Statistics and Amended PAIIZ Statistics

New Statistics - Telecommunications														
1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
		France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom
		Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG	Siemens AG
			Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.
										Vivendi	Vivendi Universal	Vivendi Universal	Vivendi Universal	Vivendi Universal

Additional information

- (1) Vivendi (the media and telecommunications division) merged with Canal+ and Seagram (Universal Music and Universal Studios) in December 2000. The newly established company was called Vivendi Universal.

Amended PAIIZ Statistics - Telecommunications														
1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
							Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
							France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom	France Telecom
							Siemens	Siemens	Siemens	Siemens	Siemens	Siemens	Siemens	Siemens
											Motorola Inc.	Motorola Inc.	Motorola Inc.	Motorola Inc.
									Vivendi	Vivendi	Vivendi	Vivendi	Vivendi	Vivendi
														Universal
														Universal

Additional information

- (1) Vivendi (the media and telecommunications division) merged with Canal+ and Seagram (Universal Music and Universal Studios) in December 2000. The newly established company was called Vivendi Universal.

## 4) Logistics – New Statistics

1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Pratt & Whitney	Pratt & Whitney	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Express	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Network	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Network	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Network	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Network	Pratt & Whitney Therab BV (Raben Group) DHL Worldwide Network	Pratt & Whitney Therab BV (Raben Group)	Pratt & Whitney Therab BV (Raben Group)
								Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG	Alstom Deutsche Post World Net General Electric Corporation (GE) Kuehne & Nagel Siemens AG
									MAN Nutzfahrzeuge AG	MAN Nutzfahrzeuge AG	MAN Nutzfahrzeuge AG	MAN Nutzfahrzeuge AG	MAN Nutzfahrzeuge AG	MAN Nutzfahrzeuge AG
											General Logistics Systems International Holding B.V. (GLS)	General Logistics Systems International Holding B.V. (GLS)	General Logistics Systems International Holding B.V. (GLS)	General Logistics Systems International Holding B.V. (GLS)
												GATX Rail Overseas Holding Corporation	GATX Rail Overseas Holding Corporation	GATX Rail Overseas Holding Corporation
													La Poste Group	La Poste Group
													Siemna Motors	Siemna Motors
														International Container Terminal Services

**Additional Information/explanation**

(1) Since 2002 DHL Worldwide Express belongs to Deutsche Post World Net.

#### 4) Logistics – Amended PAIiZ Statistics

[illegible]

**Additional Information/explanation**

**Additional information/Explanation**  
(1) Since 2002 DHL Worldwide Express belongs to Deutsche Post World Net.

[illegible]

Additional Information/explanation

- Acquisition information**
- (1) Due to the merger of Neste and IVO in 1998 the company name changed from Neste Oil to Fortum Oy.  
(2) In 2000 Texaco Inc. had been bought by Shell.  
(3) Merger of TotalFina and ElfLubrificants in 2000.  
(4) In 1996 Praxair incorporated Liquid Carbonic. In 2003 BOC Group acquired Praxair Polska.  
(5) In 2002 DEA Mineralöl was acquired by Shell.  
(6) In 2005 Sydskraft AB changed its company name to E.ON Sverige.  
(7) In 2002, Mitteldtische Energieversorung AG (MEAG) and envia Energie Services Brandenburg AG merged to form envia Energieversorung AG.  
(8) In 2004 due to company restructuring Ruhrgas AG's name was changed into E.ON Ruhrgas AG.

Source: own presentation

[illegible]

Additional Information/explanation

- ACQUISITION INFORMATION**
- (1) Neste and IVO merged in 1998 and established Fortum Oy.
- (2) Merger of TotalFina and Elf Lubrifiants in year 2000.
- (3) In 2000 Texaco Inc. had been bought by Shell.
- (4) In 1996 Praxair incorporated Liquid Carbonic. In 2003 BOC Group acquired Praxair Polska.
- (5) In 2002 DEA Mineraloil was acquired by Shell.
- (6) ENBW: In 2003, the company name was mentioned twice in the statistics, but the investment amounts differ.



**Attachment 10: New Statistics in Detail****1) Banking**

Company name		Total investment (million USD)	Investment 1989
			1990
(1)	Banque Nationale de Paris (BNP)		establishment of a representative office
	Dresdner Bank		establishment of a representative office in Warsaw
	Skandinaviska Enskilda Banken (SEB)		establishment of a representative office in Warsaw
			1991
(1)	Banque Nationale de Paris (BNP)		representative office
	Dresdner Bank		representative office
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein		establishment of Creditanstalt S.A. in Warsaw
(2)	Investmentbank Austria AG		CAIB Securities S.A. (Warsaw)
			1992
(2)	Banque Nationale de Paris (BNP)		representative office
	Dresdner Bank		representative office
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein		Creditanstalt S.A. (Warsaw)
(2)	Investmentbank Austria AG		CAIB Securities S.A. (Warsaw)
	GE (General Electric) Money		representative office, start of co-operation with Polish companies
			1993
(2)	Banque Nationale de Paris (BNP)		representative office
	Dresdner Bank		representative office
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein		Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw)
(2)	Investmentbank Austria AG		CAIB Securities S.A. (Warsaw)
	GE Money		representative office
	Bayenische Hypotheken und Wechsel Bank		establishment of Hypo-Bank Polska S.A. (Warsaw)
	ING Group	141.00	acquisition of stake in Bank Śląski S.A. (Katowice)
			1994
(2)	Banque Nationale de Paris (BNP)		representative office, government's approval of the BNP-Dresdner Bank Joint Venture
	Dresdner Bank		representative office, government's approval of the BNP-Dresdner Bank Joint Venture
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein		Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw)
(2)	Investmentbank Austria AG		CAIB Securities S.A. (Warsaw)
	GE Money		representative office
	Bayenische Hypotheken und Wechsel Bank		Hypo-Bank Polska S.A. (Warsaw)
	ING Group	≈ 141.00	25.9% stake in Bank Śląski S.A. (Katowice)
	Commerzbank AG	8.16	December 1994: Commerzbank AG (4.6% stake) became the strategic partner of Bank Rozwoju Eksportu (BRE) S.A. in Warsaw
			1995
(2)	Banque Nationale de Paris (BNP)		BNP-Dresdner Bank (Polska) S.A. (Joint Venture with Dresdner Bank)
	Dresdner Bank		BNP-Dresdner Bank (Polska) S.A. (Joint Venture with Banque Nationale de Paris)
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein		Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw)
(2)	Investmentbank Austria AG		CAIB Securities S.A. (Warsaw)
	GE Money		acquisition of Solidarność Chase D.T. Bank (Gdańsk)
	Bayenische Hypotheken und Wechsel Bank		Hypo-Bank Polska S.A. (Warsaw)
	ING Group	≈ 141.00	Bank Śląski S.A. (Katowice)
	Commerzbank AG	53.24	21% stake in BRE S.A.
	Deutsche Bank AG	56.50	creation of Deutsche Bank Polska S.A. in Warsaw
			1996
(2)	Banque Nationale de Paris (BNP)	15.00	BNP-Dresdner Bank (Polska) S.A.
	Dresdner Bank	15.00	BNP-Dresdner Bank (Polska) S.A.
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Creditanstalt Bankverein	13.00	Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw), IB Financial Advisers Sp. z o.o. (Warsaw)
(2)	Investmentbank Austria AG	4.90	CAIB Securities S.A. (Warsaw)
(3)	GE Money	7.10	co-owner of GE Capital Bank S.A. in Gdańsk (former Solidarność Chase D.T. Bank)
(2)	Bayenische Hypotheken und Wechsel Bank	32.00	Hypo-Bank Polska S.A. (Warsaw), 10% stake in Wielkopolski Bank Rolniczy (WBR) S.A. (Kalisz)
(4)	ING Group	350.00	54.15% stake in Bank Śląski S.A. (Katowice), ING Bank Warsaw, 10% stake in Bank Przemysłowo-Handlowy (BPH) (Kraków), ING Barings Securities Sp. z o.o. (Warsaw), ING/BSK Asset Management (Warsaw)
	Commerzbank AG	78.49	22.58% stake in BRE S.A.
	Deutsche Bank AG	56.50	Deutsche Bank Polska S.A. (Warsaw)
(2)	Bayenische Vereinsbank AG	47.00	100% stake in MEGABANK, Vereinsbank Polska S.A.
	Credit Lyonnais	7.90	18% stake in International Bank in Poland (Międzynarodowy Bank w Polsce)
	Kredietbank N.V.		5% stake in Kredyt Bank PBI S.A.
			1997
(2)	Banque Nationale de Paris (BNP)	32.00	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Dresdner Bank	32.00	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Bank Austria Creditanstalt	55.10	Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw), IB Financial Advisers Sp. z o.o. (Warsaw)
(3)	GE Money	19.10	GE Capital Bank S.A. (Gdańsk)
	Bayenische Hypotheken und Wechsel Bank	32.00	Hypo-Bank Polska S.A. (Warsaw), 10% stake in WBR S.A. (Kalisz)
	ING Group	350.00	54.15% stake in Bank Śląski S.A. (Katowice), ING Bank Warsaw, 10% stake in BPH (Kraków), ING Barings Securities Sp. z o.o. (Warsaw), ING/BSK Asset Management (Warsaw)
	Commerzbank AG	205.36	48.7% stake in BRE S.A.
	Deutsche Bank AG	56.50	Deutsche Bank Polska S.A. (Warsaw)
	Bayenische Vereinsbank AG	88.20	Vereinsbank Polska S.A. (Warsaw)
	Credit Lyonnais	7.90	18% stake in Crédit Lyonnais Bank Polska S.A. (Warsaw) (former Międzynarodowy Bank w Polsce)
	Kredietbank N.V.	9.60	Kredyt Bank PBI S.A.
(5)	Berliner Bank AG	9.19	Berliner Bank Polska S.A. in Warsaw
	Svenska Handelsbanken AB	0.00	representative office
(6)	Volkswagen AG	2.06	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)

## Banking continued

Company name		Total investment (million USD)	Investment 1998
	Banque Nationale de Paris (BNP)	39.30	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Dresdner Bank	50.80	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Skandinaviska Enskilda Banken (SEB)		representative office
(2)	Bank Austria Creditanstalt	150.30	Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw), IB Financial Advisers Sp. z o.o. (Warsaw), 19% stake in Powszechny Bank Kredytowy (PBK) S.A.
(3)	GE Money	43.80	GE Capital Bank S.A. (Gdańsk), 99% stake in Polsko-Amerykański Bank Hipoteczny S.A.
(2)	Bayerische Hypo- und Vereinsbank AG (HVB)	724.00	Hypo-Bank Polska S.A. (Warsaw), 10% stake in WBR S.A. (Kalisz), Vereinsbank Polska S.A. (Warsaw), investment of USD 604m in shares in BPH S.A. (Kraków)
	ING Group	420.00	54.15% stake in Bank Śląski S.A. (Katowice), ING Bank Warsaw, 12% stake in Bank Przemysłowo-Handlowy (Kraków), ING Barings Securities Sp. z o.o. (Warsaw), ING/BSK Asset Management (Warsaw)
	Commerzbank AG	253.15	48.7% stake in BRE S.A.
	Deutsche Bank AG	86.00	Deutsche Bank Polska S.A. (Warsaw)
	Credit Lyonnais	7.90	18% stake in Crédit Lyonnais Bank Polska S.A. (Warsaw)
(7)	KBC Holding (former Kredietbank N.V.)	15.80	Kredyt Bank PBI S.A.
	Berliner Bank AG	12.68	Berliner Bank Polska S.A. (Warsaw)
	Svenska Handelsbanken AB	0.00	representative office
(6)	Volkswagen AG	9.84	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.		Pierwszy Polsko-Amerykański (PPA) Bank w Krakowie S.A. (Kraków)
1999			
(8)	BNP Paribas	39.30	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Dresdner Bank	50.80	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Skandinaviska Enskilda Banken (SEB)		4.5% stake in Bank Ochrony Środowiska (BOS) S.A.
(2)	Bank Austria Creditanstalt	150.30	Creditanstalt S.A. (Warsaw), IB Austria Securities (Warsaw), IB Financial Advisers Sp. z o.o. (Warsaw), 19% stake in PBK S.A.
(3)	GE Money	43.80	GE Capital Bank S.A. (Gdańsk), 99% stake in GE Housing Bank S.A. (former Polsko-Amerykański Bank Hipoteczny S.A.)
(2)	Bayerische Hypo- und Vereinsbank AG (HVB)	1,000.00	WBR S.A. (Kalisz), BPH S.A. (Kraków)
	ING Group	470.00	54% stake in Bank Śląski S.A. (Katowice), ING Bank Warsaw, 14% stake in Bank Przemysłowo Handlowy (Kraków), ING Baring Securities S.A. (Warsaw), 50% stake in ING/BSK Asset Management S.A. (Warsaw), ING/BSK Towarzystwo Funduszy Inwestycyjnych S.A. (Katowice), ING Lease (Polska) (Warsaw)
	Commerzbank AG	229.13	48.8% stake in BRE S.A.
	Deutsche Bank AG	146.60	Deutsche Bank Polska S.A. (Warsaw)
	Credit Lyonnais	7.90	18% stake in Crédit Lyonnais Bank Polska S.A. (Warsaw)
	KBC Holding	137.10	49% stake in Kredyt Bank PBI S.A., KBC representative office (Warsaw)
	Berliner Bank AG	40.50	Berliner Bank Polska S.A. (Warsaw), increase of capital and change of name into: Bankgesellschaft Berlin (Polska) S.A.
	Svenska Handelsbanken AB	0.00	representative office
(6)	Volkswagen AG	21.94	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.	3.40	PPA Bank S.A. (Kraków)
(9)	Nordbanken AB	39.50	36.1 % stake in Bank Komunalny S.A. (Gdynia)
	UniCredito Italiano	1,042.00	acquisition of 52.09% stake in Pekao S.A. (Warsaw)
2000			
	BNP Paribas	39.30	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Dresdner Bank	50.80	BNP-Dresdner Bank (Polska) S.A. (Warsaw)
	Skandinaviska Enskilda Banken (SEB)	28.60	33% stake BOS S.A.
(2)	Bank Austria Creditanstalt (HVB Group)	1,403.25	IB Austria Securities (Warsaw), IB Financial Advisers Sp. z o.o. (Warsaw), 57.1% stake in PBK S.A. (Warsaw), BPH S.A. (Kraków)
(3)	GE Money	335.20	GE Capital Bank S.A. (Gdańsk), 99% stake in GE Housing Bank S.A.
	ING Group	550.00	54% stake in Bank Śląski S.A. (Katowice), ING Bank Warsaw, 14% stake in Bank Przemysłowo Handlowy (Kraków), ING Baring Securities S.A. (Warsaw), 50% stake in ING/BSK Asset Management S.A. (Warsaw), ING/BSK Towarzystwo Funduszy Inwestycyjnych S.A. (Katowice), ING Lease (Polska) (Warsaw)
	Commerzbank AG	208.34	50% stake in BRE S.A.
(10)	Deutsche Bank AG	177.50	Deutsche Bank Polska S.A. (Warsaw), 2.9% stake in BIG Bank Gdańsk S.A., Bank Współpracy Regionalnej (BWR) S.A. (Kraków)
	Credit Lyonnais	7.90	18% stake in Crédit Lyonnais Bank Polska S.A. (Warsaw)
	KBC Holding	120.80	Kredyt Bank PBI S.A., KBC representative office (Warsaw)
	Berliner Bank AG	40.50	Bankgesellschaft Berlin (Polska) S.A.
	Svenska Handelsbanken AB	0.00	representative office
(6)	Volkswagen AG	23.65	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.	176.00	Fortis Bank Polska S.A. (Warsaw), Fortis Securities Polska (Warsaw)
(9)	Nordea Group	41.00	36.1 % stake in Bank Komunalny S.A. (Gdynia)
	UniCredito Italiano	1,108.50	52.09% stake in Pekao S.A. (Warsaw)
2001			
(8)	BNP Paribas	61.20	BNP Paribas Bank Polska S.A. (Warsaw)
(11)	Dresdner Bank	31.20	Bank Powierniczo-Gwarancyjny S.A.
	Skandinaviska Enskilda Banken (SEB)	44.60	47% stake in BOS S.A., subsidiary of SEB Finans' GmbH (leasing)
(2)	Bank Austria Creditanstalt (HVB Group)	1,358.00	CAIB Securities S.A. (Warsaw), CAIB Financial Advisers Sp. z o.o. (Warsaw), 72% stake in BPH-PBK S.A., CAIB Investment Management S.A. (Warsaw), CAIB TFI S.A. (Warsaw), CAIB Fund Management S.A. (Warsaw)
(3)	GE Money	335.20	GE Capital Bank S.A. (Gdańsk), 99% stake in GE Housing Bank S.A.
	ING Group	677.00	ING Bank Śląski S.A. (Katowice), ING Baring Securities S.A. (Warsaw), 50% stake in ING/BSK Asset Management S.A. (Warsaw), ING/BSK Towarzystwo Funduszy Inwestycyjnych S.A. (Katowice), ING Lease (Polska) (Warsaw)
	Commerzbank AG	208.39	50% stake in BRE S.A.
	Deutsche Bank AG	203.00	Deutsche Bank Polska S.A. (Warsaw), Deutsche Bank 24 S.A. (Kraków) (former BWR S.A.), DIL Polska Real Estate Leasing Sp. z o.o. (Warsaw), DL Polska Baumanagement Sp. z o.o., DWS Polska TFI S.A. (Warsaw), Deutsche Asset Management S.A. (Warsaw), DB Securities S.A.
	Credit Lyonnais	7.90	18% stake in Crédit Lyonnais Bank Polska S.A. (Warsaw)
	KBC Holding	704.00	56% stake in Kredyt Bank PBI S.A., KBC representative office (Warsaw)
	Berliner Bank AG	40.50	Bankgesellschaft Berlin (Polska) S.A.
(12)	Svenska Handelsbanken AB	48.80	Bank Svenska Handelsbanken Polska S.A. (Warsaw)
(6)	Volkswagen AG	34.51	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.	178.50	99.1% stake in Fortis Bank Polska S.A. (Warsaw), Fortis Securities Polska (Warsaw)
(9)	Nordea Group	164.20	Nordea Bank Polska S.A. (Gdynia) (former Bank Komunalny S.A.), BK Leasing S.A. (Gdynia), Inwestycje Kapitałowe S.A. (Gdynia), BNP-Unibank S.A. (Gdańsk)
	UniCredito Italiano	1,108.50	52.09% stake in Pekao S.A. (Warsaw)

## Banking continued

Company name		Total investment (million USD)	Investment 2002
(8)	BNP Paribas	61.20	BNP Paribas Bank Polska S.A. (Warsaw)
	Dresdner Bank	31.20	Bank Powierniczo-Gwarancyjny S.A.
	Skandinaviska Enskilda Banken (SEB)	44.60	47% stake in BOS S.A. (Warsaw), subsidiary of SEB Finans' GmbH (leasing), SEB Towarzystwo Funduszy Inwestycyjnych S.A.
(2)	Bank Austria Creditanstalt (HVB Group)	1,336.00	CAIB Securities S.A. (Warsaw), CAIB Financial Advisers Sp. z o.o. (Warsaw), 72% stake in BPH-PBK S.A., CAIB Investment Management S.A. (Warsaw), CAIB TFI S.A. (Warsaw), CAIB Fund Management S.A. (Warsaw)
(3)	GE Money	360.00	GE Capital Bank S.A. (Gdańsk), 99% stake in GE Housing Bank S.A.
	ING Group	677.00	ING Bank Śląski S.A. (Katowice), ING Baring Securities S.A. (Warsaw), 50% stake in ING/BSK Asset Management S.A. (Warsaw), ING/BSK Towarzystwo Funduszy Inwestycyjnych S.A. (Katowice), ING Lease (Polska) (Warsaw)
	Commerzbank AG	208.39	50% stake in BRE S.A.
	Deutsche Bank AG	136.60	Deutsche Bank Polska S.A. (Warsaw), Deutsche Bank 24 S.A. (Kraków), DIL Polska Real Estate Leasing Sp. z o.o. (Warsaw), DIL Polska Baumanagement Sp. z o.o., DWS Polska TFI S.A. (Warsaw), Deutsche Asset Management S.A. (Warsaw), DB Securities S.A., DBG Eastern Europe (Polska) Sp. z o.o.
	Credit Lyonnais	48.00	Credit Lyonnais Bank Polska S.A. (Warsaw)
	KBC Holding	1,146.00	76% stake in Kredyt Bank S.A., KBC representative office (Warsaw)
	Berliner Bank AG	40.50	Bankgesellschaft Berlin (Polska) S.A.
(12)	Svenska Handelsbanken AB	52.10	Bank Svenska Handelsbanken Polska S.A. (Warsaw)
(6)	Volkswagen AG	42.97	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.	178.50	99.1% stake in Fortis Bank Polska S.A. (Warsaw), Fortis Securities Polska (Warsaw)
(9)	Nordea Group	279.00	Nordea Bank Polska S.A. (Gdynia), 99.5% stake in LG Petro Bank S.A.
	UniCredito Italiano SpA	1,200.00	53.2% stake in Bank Pekao S.A. (Warsaw)
			2003
(8)	BNP Paribas	61.20	BNP Paribas Bank Polska S.A. (Warsaw)
	Dresdner Bank	31.20	Bank Powierniczo-Gwarancyjny S.A.
	Skandinaviska Enskilda Banken (SEB)	44.60	47% stake in BOS S.A. (Warsaw), subsidiary of SEB Finans' GmbH (leasing), SEB Towarzystwo Funduszy Inwestycyjnych S.A.
(2)	Bank Austria Creditanstalt (HVB Group)	1,336.00	CAIB Securities S.A. (Warsaw), CAIB Financial Advisers Sp. z o.o. (Warsaw), 72% stake in BPH-PBK S.A., CAIB Investment Management S.A. (Warsaw), CAIB TFI S.A. (Warsaw), CAIB Fund Management S.A. (Warsaw)
(3)	GE Money	98.80	GE Capital Bank S.A. (Gdańsk), 99% stake in GE Housing Bank S.A.
	ING Group	990.00	ING Bank Śląski S.A. (Katowice), ING Baring Securities S.A. (Warsaw), 50% stake in ING/BSK Asset Management S.A. (Warsaw), ING/BSK Towarzystwo Funduszy Inwestycyjnych S.A. (Katowice), ING Lease (Polska) (Warsaw)
	Commerzbank AG	306.28	72.16% stake in BRE S.A.
	Deutsche Bank AG	319.90	Deutsche Bank Polska S.A. (Warsaw), Deutsche Bank 24 S.A. (Kraków), DIL Polska Real Estate Leasing Sp. z o.o. (Warsaw), DIL Polska Baumanagement Sp. z o.o., DWS Polska TFI S.A. (Warsaw), Deutsche Asset Management S.A. (Warsaw), DB Securities S.A., DBG Eastern Europe (Polska) Sp. z o.o.
(13)	Calyon (former Credit Lyonnais)	48.00	Calyon Bank Polska S.A. (Warsaw)
	KBC Holding	1,290.00	81% stake in Kredyt Bank S.A., KBC representative office (Warsaw)
	Berliner Bank AG	40.50	Bankgesellschaft Berlin (Polska) S.A.
(12)	Svenska Handelsbanken AB	81.00	Bank Svenska Handelsbanken Polska S.A. (Warsaw)
(6)	Volkswagen AG	47.58	Volkswagen Leasing Polska Sp. z o.o. (Warsaw), Volkswagen Bank Polska S.A. (Warsaw)
	Fortis Bank S.A.	178.50	99.1% stake in Fortis Bank Polska S.A. (Warsaw), Fortis Securities Polska (Warsaw), Fortis Lease Polska (Warsaw)
(9)	Nordea Group	279.00	Nordea Bank Polska S.A. (Gdynia), Nordea Finance Polska S.A.
	UniCredito Italiano SpA	1,200.00	53.2% stake in Bank Pekao S.A. (Warsaw)

**Additional information**

- (1) SEB was part of a foundation called Scandinavian Banking Partners, i.e. one member bank from each Scandinavian country. The representative office was part of this foundation.
- (2) Bayerische Hypotheken und Wechsel Bank and Bayerische Vereinsbank merged in 1998 to form HVB (Bayerische Hypo- und Vereinsbank). Bank Austria (including Investmentbank Austria) incorporated Creditanstalt Bankverein in 1997 and the company was renamed into Bank Austria Creditanstalt. In 2000 Bank Austria Creditanstalt was integrated into the HVB Group. The Polish investments are managed by Bank Austria Creditanstalt.
- (3) Due to the lack of other information the investment amounts for GE Money were taken from the PAIIZ statistics. However, the PAIIZ information reflect GE's overall Polish investments, and thus the investment amount for the banking sector is overstated.
- (4) Due to the lack of other information ING's investment amounts were taken from the PAIIZ statistics. The PAIIZ presented ING's overall Polish investments, and thus the investment amount for the banking sector is overstated. ING Bank NY (Warsaw) merged in 2001 with Bank Śląski S.A. and formed ING Bank Śląski S.A.
- (5) Berliner Bank AG and Bankgesellschaft Berlin AG belong to the same Group and thus their Polish business is identical. The renaming of the Polish investment in 1999 stems from internal restructuring and changes of the legal company form.
- (6) Volkswagen provided the equity figures of the respective company as "total amount invested" figures.
- (7) In 1998 Kredietbank N.V. merged with ABB insurance and CERA Bank in order to establish KBC Holding.
- (8) Banque Nationale de Paris and Paribas merged in 1999, and in the course of the year 2000 the BNP Paribas Group was created. In 2001 BNP Paribas acquired Dresdner Bank's stake in BNP-Dresdner Bank (Polska) S.A. The Polish company was then renamed into BNP Paribas Bank Polska. Due to the lack of other information the investment amounts for the years 2001-2003 were taken from the PAIIZ statistics. The PAIIZ statistics however reflected BNP Paribas' overall investments and are thus overstated.
- (9) Nordea was formed in 2000 through the merger of Finland's Merita Bank and Sweden's Nordbanken. In 2003 Nordea Bank Polska S.A. and LG Petro Bank S.A. merged. Due to the lack of other information the investment amounts were taken from the PAIIZ statistics.
- (10) Failure in taking over BIG Bank Gdańsk S.A. resulted in Deutsche Bank's withdrawal from this investment.
- (11) In 2001, Dresdner Bank sold its shares (50%) in BNP-Dresdner Bank (Polska) S.A. to BNP Paribas. Bank Powierniczo-Gwarancyjny S.A. was later renamed into Dresdner Bank Polska S.A.
- (12) Due to the lack of other information Svenska Handelsbanken's investment amounts were taken from the PAIIZ statistics. The PAIIZ information however reflect Svenska Handelsbanken's overall Polish investments, and thus the investment amounts shown for the banking sector is overstated.
- (13) Calyon was created in 2003 after the acquisition of Credit Lyonnais by the Credit Agricole Group. The Credit Agricole Group have also made investments in Poland (e.g. they own the local Polish retail bank Lukas and the leasing company EFL (Europejski Fundusz Leasingowy).

## 2) Insurance

	Company name	Total investment (million USD)	Investment 1989
			1990
(1)	AGF		license granted
	American International Group (AIG)		Amplico Life S.A., was the first life insurance company on the Polish market with foreign capital; it was established as a joint-stock company by two financial institutions: AIG - 55% of shares and Bank Pekao S.A. - 45% of shares.
	AGF		1991
	American International Group (AIG)		55% stake in Amplico Life S.A.
	AGF		1992
	American International Group (AIG)		55% stake in Amplico Life S.A.
	AGF		1993
	American International Group (AIG)		55% stake in Amplico Life S.A.
	AGF		1994
	American International Group (AIG)		55% stake in Amplico Life S.A.
	ING Group		Nationale-Nederlanden Polska
	AGF		1995
	American International Group (AIG)		90% stake in AGF Ubezpieczenia na Życie S.A.
	ING Group		55% stake in Amplico Life S.A.
	ING Group		sale of life insurance through exclusive agents and through branch offices of ING Bank Śląski S.A. (Katowice)
	AGF	9.10	1996
	American International Group (AIG)	4.60	90% stake in AGF Ubezpieczenia na Życie S.A., AGF Ubezpieczenia S.A. (Warsaw)
(2)	ING Group	350.00	55% stake in Amplico Life S.A.
	Allianz AG		Towarzystwo Nationale-Nederlanden Ubezpieczenia na Życie
(3)	Alte Leipziger	5.00	14 November 1996. Towarzystwo Ubezpieczeń (TU) Allianz BGZ Polska S.A. was established (Joint Venture with Bank BGZ)
	Alte Leipziger		Towarzystwo Ubezpieczeniowe Hestia Insurance S.A. (Sopot)
(1)	AGF	9.10	1997
	American International Group (AIG)	4.60	90% stake in AGF Ubezpieczenia na Życie S.A., AGF Ubezpieczenia S.A. (Warsaw)
(2)	ING Group	350.00	100% stake in Amplico Life S.A., AIG Powszechne Towarzystwo Emerytalne
	Allianz AG		TU Allianz BGZ Polska S.A., license for Towarzystwo Ubezpieczeń (TU) Allianz BGZ Polska Życie S.A., establishment of a branch in Warsaw
(3)	Alte Leipziger	5.00	Towarzystwo Ubezpieczeniowe Hestia Insurance S.A. (Sopot)
	R+V Versicherung	7.70	purchase of majority stake of Korporacja Ubezpieczeniowa (KU) Filar S.A.
(1)	AGF	9.10	1998
(4)	American International Group (AIG)	12.60	90% stake in AGF Ubezpieczenia na Życie S.A., AGF Ubezpieczenia S.A. (Warsaw)
(2)	ING Group	420.00	Amplico Life S.A., AIG Powszechne Towarzystwo Emerytalne
(1)	Allianz AG	21.22	Towarzystwo Nationale-Nederlanden Ubezpieczenia na Życie
(3)	Alte Leipziger	5.00	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw)
	R+V Versicherung	7.70	Towarzystwo Ubezpieczeniowe Hestia Insurance S.A. (Sopot)
(5)	Cardif	2.87	KU Filar S.A.
(6)	Dresdner Bank	50.80	Cardif Polska S.A. (Warsaw) - life insurance
(1)	General Electric Corporation (GE)		STU Hestia Insurance S.A. (Sopot)
(7)	Volkswagen AG	0.07	representative office in Warsaw
	Wiener Städtische Allgemeine Versicherung AG		Volkswagen Ubezpieczenia Sp. z o.o. (Warsaw)
			62% stake in Bankowe Towarzystwo Ubezpieczeń i Reasekuracji (BTUR) Heros S.A.
(4)	American International Group (AIG)	12.60	1999
(2)	ING Group	470.00	Amplico Life S.A., AIG Powszechne Towarzystwo Emerytalne
	Allianz AG	81.86	Nationale-Nederlanden Polska S.A. (Warsaw), 80% stake in PTE Nationale-Nederlanden Polska S.A. (Warsaw)
(3)	Alte Leipziger Europa AG	9.30	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw), license for the establishment of Public Pension Fund for TU Allianz Polska (March 1999), start of pension fund activities (May 1999), TU Allianz Polska purchased 100% of the shares of AGF Polska (June 1999)
	R+V Versicherung	7.70	53.93% stake in Towarzystwo Ubezpieczeniowe Hestia Insurance S.A. (Sopot), 55.31% stake in S.T.U. na Życie Alte Leipziger HESTIA S.A. (Hestia Leben) (Sopot)
	Cardif	19.23	KU Filar S.A.
(1)	Dresdner Bank	50.80	Cardif Polska S.A. (Warsaw), PTE Pocztynion (Warsaw) - pension fund
	General Electric Corporation (GE)		STU Hestia Insurance S.A. (Sopot)
	Volkswagen AG	0.09	representative office in Warsaw
	Wiener Städtische Allgemeine Versicherung AG		Volkswagen Ubezpieczenia Sp. z o.o. (Warsaw)
(8)	KBC Holding	137.10	71% stake in BTUR Heros S.A.
	Wüstenrot AG	6.60	purchase of 23% stake in Agropolisa S.A. (Warsaw)
			Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A.
(4)	American International Group (AIG)	118.50	2000
(2)	ING Group	550.00	Amplico Life S.A., AIG Powszechne Towarzystwo Emerytalne
	Allianz AG	95.98	Nationale-Nederlanden Polska S.A. (Warsaw), 80% stake in PTE Nationale-Nederlanden Polska S.A. (Warsaw)
	R+V Versicherung	7.70	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw)
	Cardif	19.23	KU Filar S.A.
(1)	Dresdner Bank	50.80	Cardif Polska S.A. (Warsaw), PTE Pocztynion (Warsaw)
	General Electric Corporation (GE)		STU Hestia Insurance S.A. (Sopot)
	Volkswagen AG	0.91	representative office in Warsaw
	Wiener Städtische Allgemeine Versicherung AG		Volkswagen Ubezpieczenia Sp. z o.o. (Warsaw)
(8)	KBC Holding	120.80	71% stake in BTUR Heros S.A., establishment of Towarzystwo Ubezpieczeń (TU) na Życie Vienna Life S.A. (100%)
	Wüstenrot AG	6.60	49.9% stake in Agropolisa S.A. (Warsaw), acquisition of 40% stake in TUR Warta S.A.
(3)	ERGO International		Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A.
	Tryg-Baltica (Nordea Group)		STU na Życie ERGO Hestia S.A., STU ERGO Hestia S.A.
(9)			Energo Assekuracja (non-life), set up of life insurance company Energo Życie, acquisition of Heros Life S.A. (95% stake)

## Insurance continued

	company name	amount invested (million USD)	comments
			2001
(4)	American International Group (AIG)	118.50	Amplico Life S.A., AIG Powszechnie Towarzystwo Emerytalne
(2)	ING Group	677.00	Nationale-Nederlanden Polska S.A. (Warsaw), 80% stake in PTE Nationale-Nederlanden Polska S.A. (Warsaw)
	Allianz AG	115.98	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw)
	R+V Versicherung	7.70	KU Filar S.A.
	Cardif	25.95	Cardif Polska S.A. (Warsaw), PTE Pocztynion (Warsaw), non-life branch of CARD (Warsaw)
	General Electric Corporation (GE)		representative office in Warsaw
	Volkswagen AG	0.68	Volkswagen Ubezpieczenia Sp. z o.o. (Warsaw)
	Wiener Städtische Allgemeine Versicherung AG		71.13% stake in BTUIR Heros S.A., 100% stake in TU na Życie Vienna Life S.A., acquisition of 50% stake in Towarzystwo Ubezpieczeń (TU) na Życie Compensa S.A. and Towarzystwo Ubezpieczeniowe (TU) Compensa S.A.
(8)	KBC Holding	704.00	49.9% stake in Agropolisa S.A. (Warsaw), 40% stake in TUIR Warta S.A.
	Wüstenrot AG	6.60	Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A.
	ERGO International		PTE ERGO Hestia, TU PBK (renamed to Moje Towarzystwo Ubezpieczeniowe, MTU S.A.)
(9)	Tryg-Baltica (Nordea Group)	24.40	Energio Assekuracja, Nordea Polska Towarzystwo Ubezpieczeń na Życie (Warsaw) (former Heros Life S.A.)
			2002
(4)	American International Group (AIG)	118.50	Amplico Life S.A., AIG Powszechnie Towarzystwo Emerytalne
(2)	ING Group	677.00	Nationale-Nederlanden Polska S.A. (Warsaw), 80% stake in PTE Nationale-Nederlanden Polska S.A. (Warsaw)
	Allianz AG	119.21	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw)
(10)	R+V Versicherung	27.90	88.7% stake in KU Filar S.A.
	Cardif	25.95	Cardif Polska S.A. (Warsaw), PTE Pocztynion (Warsaw), CARD (Warsaw)
	General Electric Corporation (GE)		representative office in Warsaw
	Volkswagen AG	1.86	Volkswagen Serwis Ubezpieczeniowy Sp. z o.o. (Warsaw)
(11)	Wiener Städtische Allgemeine Versicherung AG		98.8% stake in BTUIR Heros S.A., 75% stake in TU na Życie Compensa S.A., 50% stake in TU Compensa S.A.
(8)	KBC Holding	1,146.00	49.9% stake in Agropolisa S.A. (Warsaw), 40% stake in TUIR Warta S.A.
	Wüstenrot AG	8.80	Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A.
	ERGO International		PTE ERGO Hestia, MTU S.A.
(9)	Tryg-Baltica (Nordea Group)	24.40	98.2% stake in Nordea Polska Towarzystwo Ubezpieczeń na Życie S.A. (Warsaw)
(9)	Tryg i Danmark		Nordea Polska Towarzystwo Ubezpieczeniowe S.A. (Radom) (former Energio Assekuracja)
	TALANX AG	12.20	91.7% stake in Samopomoc S.A., 51% stake in TU Samopomoc Życie S.A.
			2003
(4)	American International Group (AIG)	78.50	Amplico Life S.A., AIG Powszechnie Towarzystwo Emerytalne
(2)	ING Group	990.00	Nationale-Nederlanden Polska S.A. (Warsaw), 80% stake in PTE Nationale-Nederlanden Polska S.A. (Warsaw)
	Allianz AG	119.21	TU Allianz Polska S.A., TU Allianz Życie Polska S.A. (Warsaw)
	Cardif	25.95	Cardif Polska S.A. (Warsaw), PTE Pocztynion (Warsaw), CARD (Warsaw)
	General Electric Corporation (GE)		representative office in Warsaw
	Volkswagen AG	2.18	Volkswagen Serwis Ubezpieczeniowy Sp. z o.o. (Warsaw)
	Wiener Städtische Allgemeine Versicherung AG		62% stake in TU Compensa Życie S.A., 50% stake in TU Compensa S.A.
(8)	KBC Holding	1,290.00	Agropolisa S.A. (Warsaw), 51.03% stake in TUIR Warta S.A.
(12)	Wüstenrot AG	8.80	Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A.
(3)	ERGO International	167.80	PTE ERGO Hestia, MTU S.A.
(9)	Tryg-Baltica (Nordea Group)	24.40	98.2% stake in Nordea Polska Towarzystwo Ubezpieczeń na Życie S.A. (Warsaw)
(9)	Tryg i Danmark		Tryg Polska Towarzystwo Ubezpieczeniowe S.A. (Radom)
	TALANX AG	12.20	91.7% stake in Samopomoc S.A., 51% stake in TU Samopomoc Życie S.A.

## Additional information

- (1) Allianz purchased all BOZ shares in 1998.  
Since 1999 AGF is part of Allianz, and since 2001 Dresdner Bank belongs to Allianz. It was not possible to get information from AGF and Dresdner Bank. (However AGF's Polish market entry date was confirmed.) and that is the reason why the investment amounts for AGF and Dresdner Bank were used from the PAIIZ statistics. The investment amounts as stated for Dresdner Bank also reflect the investments into the banking sector, i.e. they are overstating the investments made in the insurance sector.
- (2) No specific investment amounts were provided by ING. Due to the lack of other information the investment amounts were taken from the PAIIZ statistics, but they reflected ING's overall Polish investments, i.e. including investments in the banking sector and thus the investment amount for the insurance sector is overstated.  
ING is the result of the merger of Nationale-Nederlanden and NMB Postbank Group in 1991. The initial name was Internationale Nederlanden Group (ING), however due to the fact that the abbreviation ING became very popular the name was amended into ING Group.
- (3) In 2000, Ergo bought all participations of Alte Leipziger in Poland and ever since Alte Leipziger is no longer active in the Polish market.  
Alte Leipziger's and Ergo's respective investment amounts were taken from the PAIIZ statistics.
- (4) No specific investment amounts were provided by AIG. Therefore the investment amounts were taken from the PAIIZ statistics. The PAIIZ information however reflected AIG's overall Polish investments, i.e. including investments in other areas and thus the investment amount is overstated.
- (5) Cardif Assurances Risques Divers is part of Cardif and Cardif itself belongs to the BNP Paribas Group. The BNP Paribas Group is active in the Polish insurance market through Cardif.
- (6) The information stems from General Electric's fact sheet about their investments in Poland.
- (7) Volkswagen provided the figures for the equity of the respective company.
- (8) No specific investment amounts were provided by KBC. Due to the lack of other information the investment amounts were taken from the PAIIZ statistics. The PAIIZ information however reflected KBC's overall Polish investments, i.e. including investments in the banking sector and thus the investment amount for the insurance sector is overstated.
- (9) Tryg-Baltica was formed in 1995 as a result of a merger of two Danish insurance companies Tryg Forsikring and Baltica Forsikring. In 2000 Tryg-Baltica became part of the Nordic merger to form Nordea. In the summer of 2002 Tryg-Baltica's non-life business activities were sold to Tryg i Danmark, while the life insurance activities remained with Nordea.  
Tryg's Polish investments were sold to HDI (Talanx Group) in 2004.
- (10) R+V Versicherung left the Polish market in 2003 by selling its investment in Korporacja Ubezpieczeniowa Filar S.A. to UNIQA.
- (11) In 2002 Compensa life merged with Vienna life, and in 2003 Compensa non-life merged with Heros.
- (12) Wüstenrot Życie Towarzystwo Ubezpieczeniowe S.A. is in liquidation since February 20, 2004.

## 3) Telecommunications

Company name		Total investment (million USD)	Investment
(1)	Ericsson		1989 technical representation office in Warsaw
	Ericsson		1990 technical representation office in Warsaw
	Ericsson		1991 technical representation office in Warsaw
	France Telecom		PTK-Centertel in Warsaw (Joint Venture with Ameritech, Telekomunikacja Polska S.A.)
(2)	Siemens AG		Siemens Sp. z o.o.
	Ericsson		1992 establishment of Schrack Ericsson
	France Telecom		PTK-Centertel (Warsaw)
	Siemens AG		Siemens Sp. z o.o.
(3)	Motorola Inc.		office in Warsaw
	Ericsson		1993 Schrack Ericsson
	France Telecom		PTK-Centertel (Warsaw)
	Siemens AG	36.00	ZWUT Warszawa, 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(4)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw)
	Ericsson		1994 Schrack Ericsson, Ericsson Unimor (joint-venture with PTK Centertel)
	France Telecom		PTK-Centertel (Warsaw)
	Siemens AG	36.00	ZWUT Warszawa, 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(5)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw)
	Ericsson		1995 Ericsson Sp. z o.o. (former Schrack Ericsson), Ericsson Unimor Sp. z o.o. (Gdańsk) - telecommunications equipment for the military
	France Telecom		PTK-Centertel (Warsaw)
	Siemens AG	36.00	ZWUT Warszawa, 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(6)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw)
	Ericsson	2.00	Ericsson Sp. z o.o. (Warsaw), Ericsson Unimor Sp. z o.o. (Gdańsk)
	France Telecom	62.00	PTK-Centertel (Warsaw)
	Siemens AG	67.50	ZWUT Warszawa, 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(7)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw)
	Ericsson	2.00	Ericsson Sp. z o.o. (Warsaw), Ericsson Unimor Sp. z o.o. (Gdańsk)
	France Telecom	232.00	PTK-Centertel (Warsaw)
	Siemens AG	100.00	ZWUT Warszawa, 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(8)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw)
	Ericsson	2.00	Ericsson Sp. z o.o. (Warsaw), Ericsson Unimor Sp. z o.o. (Gdańsk)
	France Telecom	232.00	PTK-Centertel (Warsaw)
	Siemens AG	103.00	95% stake in ZWUT S.A. (Warsaw), 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(9)	Motorola Inc.		Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków)
	Ericsson	2.00	Ericsson Sp. z o.o. (Warsaw), Ericsson Unimor Sp. z o.o. (Gdańsk)
	France Telecom	63.10	PTK-Centertel (Warsaw)
	Siemens AG	150.00	95% stake in ZWUT S.A. (Warsaw), 99% stake in ELWRO S.A. (Wrocław), Siemens Sp. z o.o.
(10)	Motorola Inc.		Communications, Siemens Sp. z o.o. Siemens Business Services, Fujitsu Siemens Computers Sp. z o.o.
	Vivendi	1,204.20	Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków)
	Ericsson	2.00	49% stake in Elektrim Telekomunikacja S.A., 50% of shares in Carcom Warszawa Sp. z o.o.
	France Telecom	3,199.40	2000 Ericsson Sp. z o.o. (Warsaw)
(11)	Siemens AG	150.00	PTK-Centertel (Warsaw), Telekomunikacja Polska (TP) S.A. – purchase of 35% stake in TP S.A. for USD 4.3bn together with Kulczyk Holding (France Telecom held 25% and Kulczyk Holding 10%)
	Motorola Inc.	2.00	95% stake in ZWUT S.A., Siemens Sp. z o.o. Communications, Siemens Sp. z o.o., Siemens Business Services, Fujitsu Siemens Computers Sp. z o.o.
	Vivendi Universal	1,204.20	Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków)
	Ericsson	2.00	49% stake in Elektrim Telekomunikacja S.A., 50% of shares in Carcom Warszawa Sp. z o.o.
(12)	France Telecom	3,199.40	2001 Ericsson Sp. z o.o. (Warsaw), Com-Net Ericsson Sp. z o.o.
	Siemens AG	98.50	PTK-Centertel (Warsaw), 47.5% stake in TP S.A. - the consortium (France Telecom and Kulczyk Holding) exercised their right to buy a further 12.5% in TP S.A. from the Treasury (for USD 825 m)
	Motorola Inc.	2.00	Siemens Sp. z o.o. Communications, Siemens Sp. z o.o., Siemens Business Services, Fujitsu Siemens Computers Sp. z o.o.
	Vivendi Universal	1,816.46	Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków)
(13)	Ericsson	2.00	Elektrim Telekomunikacja S.A., 50% of shares in Carcom Warszawa Sp. z o.o., 15% stake in Elektrim S.A. (Warsaw)
	France Telecom	3,199.40	2002 Ericsson Sp. z o.o. (Warsaw), 8.2 % stake in RWT Telefony Polskie S.A.
	Siemens AG	103.90	34% stake in PTK Centertel Sp. z o.o. (Warsaw), 33.9% stake in TP S.A. (Warsaw)
	Motorola Inc.	2.00	Siemens Sp. z o.o. Communications, Siemens Sp. z o.o., Siemens Business Services, Fujitsu Siemens Computers Sp. z o.o.
(14)	Vivendi Universal	1,816.46	Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków)
			49% stake in Elektrim Telekomunikacja S.A. (Warsaw), 50% stake in Carcom Warszawa Sp. z o.o. (Warsaw), 15% stake in Elektrim S.A. (Warsaw)

## Telecommunications continued

Company name		Total investment (million USD)	Investment 2003
(3)	Ericsson	2.00	Ericsson Sp. z o.o. (Warsaw), 19.23 % stake in RYWT Telefony Polskie S.A.
	France Telecom	4,020.30	34% stake in PTK Centertel Sp. z o.o. (Warsaw), 33.9% stake in TP S.A. (Warsaw), Equant Poland (Warsaw), France Telecom Polska (Warsaw), Sofrecom Warszawa (Warsaw)
	Siemens AG	124.00	Siemens Sp. z o.o. Communications, Siemens Sp. z o.o., Siemens Business Services, Fujitsu Siemens Computers Sp. z o.o.
	Motorola Inc.	12.00	Motorola Polska Sp. z o.o. (Warsaw), Motorola Polska Electronics Sp. z o.o. (Kraków), Motorola Polska Software Center in Kraków
	Vivendi Universal	1,816.46	49% stake in Elektrim Telekomunikacja S.A. (Warsaw), 50% stake in Carcom Warsaw Sp. z o.o. (Warsaw), 15% stake in Elektrim S.A. (Warsaw)
<b>Additional information</b>			
(1) Ericsson had a technical representation office for many years before the establishment of Schreck Ericsson in 1992.			
(2) Further information received from Motorola: The office in Warsaw was a representation of Motorola Germany GmbH and was later transformed into the Polish legal form Sp. z o.o.			
(3) No specific investment amounts were provided by Siemens. Due to the lack of other information the investment amounts were taken from the PAIiZ statistics. The PAIiZ information however reflected Siemens' overall Polish investments, i.e. including investments in other areas and thus the investment amount is overstating the investments made in the telecommunications sector.			
(4) Vivendi (the media and telecommunications division) merged with Canal+ and Seagram (Universal Music and Universal Studios) in December 2000. The newly established company was called Vivendi Universal.			



## 4) Logistics

	Company name	Total investment (million USD)	Investment
			1989
(1)	Pratt & Whitney		representative office
			1990
	Pratt & Whitney		representative office
			1991
	Pratt & Whitney		representative office
	Therab BV (Raben Group)		establishment of first Raben company in Poland
			1992
	Pratt & Whitney		July 1992: inauguration of Pratt & Whitney Kalisz (joint venture with WSK PZL-Kalisz)
	Therab BV (Raben Group)		Raben company
			1993
	Pratt & Whitney		Pratt & Whitney Kalisz
	Therab BV (Raben Group)		Raben company
			1994
	Pratt & Whitney		Pratt & Whitney Kalisz
	Therab BV (Raben Group)		Raben company
			1995
	Pratt & Whitney		Pratt & Whitney Kalisz
	Therab BV (Raben Group)		Raben company
			1996
	Pratt & Whitney	21.00	100% of shares in Pratt & Whitney Kalisz Sp. z o.o. - production of aircraft engine components
	Therab BV (Raben Group)	15.10	Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Logistic Sp. z o.o., Raben Truck Service Sp. z o.o. (Gądk)
	DHL Worldwide Express	2.00	DHL International (Poland) Ltd.
			1997
	Pratt & Whitney	21.00	Pratt & Whitney Kalisz Sp. z o.o.
	Therab BV (Raben Group)	30.00	Euro Truck Service Sp. z o.o., Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Silesia Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o.
	DHL Worldwide Network	20.00	DHL International (Poland) Ltd.
	Alstom	1.45	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net		60% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE Interlogix
	Kuehne & Nagel		logistics terminal in Poznań
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
			1998
	Pratt & Whitney	21.00	Pratt & Whitney Kalisz Sp. z o.o.
	Therab BV (Raben Group)	38.70	Euro Truck Service Sp. z o.o., Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Silesia Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o.
	DHL Worldwide Network	20.00	DHL International (Poland) Ltd.
	Alstom	20.35	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net		60% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE Interlogix
	Kuehne & Nagel		logistics terminal in Poznań
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
	MAN Nutzfahrzeuge AG	16.50	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań)
			1999
	Pratt & Whitney	24.80	Pratt & Whitney Kalisz Sp. z o.o.
	Therab BV (Raben Group)	40.00	Raben Holding (Poznań), Euro Truck Service Sp. z o.o., Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Silesia Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o.
	DHL Worldwide Network	20.00	DHL International (Poland) Ltd.
	Alstom	20.35	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net		60% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE Interlogix, Central European Engine Services
	Kuehne & Nagel		logistics terminal in Poznań
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
	MAN Nutzfahrzeuge AG	16.50	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań)
			2000
	Pratt & Whitney	27.30	Pratt & Whitney Kalisz Sp. z o.o., Aerotech Kalisz Sp. z o.o.
	Therab BV (Raben Group)	40.00	Raben Holding (Poznań), Euro Truck Service Sp. z o.o., Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Silesia Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o.
	DHL Worldwide Network	20.00	DHL International (Poland) Ltd.
	Alstom	20.35	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net		60% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE TIP, GE Engineering Design Center EDC, GE Interlogix, Central European Engine Services, aircraft engine test cell in Rembertów
	Kuehne & Nagel	9.00	Kuehne & Nagel Sp. z o.o. (Gądk near Poznań)
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
	MAN Nutzfahrzeuge AG	16.50	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań)
(2)	General Logistics Systems International Holding B.V. (GLS)	4.90	25.1% stake in Szybka Paczka Sp. z o.o.
			2001
	Pratt & Whitney	27.30	Pratt & Whitney Kalisz Sp. z o.o., Aerotech Kalisz Sp. z o.o.
	Therab BV (Raben Group)	51.40	Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Spedycja Sp. z o.o., Raben Wielkopolska Sp. z o.o., Agencja Celna Raben 1 Sp. z o.o., Euro Truck Service Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Silesia Sp. z o.o., Raben Łódź Sp. z o.o., Raben Projekty (Gądk), Szybka Paczka Sp. z o.o.
	DHL Worldwide Network	20.00	DHL International (Poland) Ltd.
	Alstom	53.29	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net		60% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE TIP, GE Engineering Design Center EDC, GE Interlogix, Central European Engine Services, aircraft engine test cell in Rembertów
	Kuehne & Nagel	9.00	Kuehne & Nagel Sp. z o.o. (Gądk near Poznań)
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
(2)	MAN Nutzfahrzeuge AG	16.50	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań), Star Trucks Sp. z o.o. (Starachowice)
	General Logistics Systems International Holding B.V. (GLS)	4.90	25.1% stake in Szybka Paczka Sp. z o.o.
	GATX Rail Overseas Holding Corporation	87.50	100% of shares in Dyrekcja Eksploatacji Cystern (DEC) Sp. z o.o. (Warsaw)

4



## Logistics continued

Company name		Total investment (million USD)	Investment 2002
(3)	Pratt & Whitney	120.00	Pratt & Whitney Kalisz Sp. z o.o., Aerotech Kalisz Sp. z o.o., 85% stake in WSK Rzeszów S.A. (Rzeszów)
	Therab BV (Raben Group)	77.70	Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Wielkopolska Sp. z o.o., Agencja Celna Raben 1 Sp. z o.o., Szybka Paczka Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o., Raben Projekty (Gądko)
	Alstom	50.22	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net	57.50	100% stake in Servisco Sp. z o.o. (Warsaw)
	General Electric Corporation (GE)		GE Engineering Design Center EDC, GE Interlogix, Central European Engine Services, aircraft engine test cell in Rembertów
	Kuehne & Nagel	9.00	Kuehne & Nagel Sp. z o.o. (Gądko)
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
	MAN Nutzfahrzeuge AG	45.00	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań), Star Trucks Sp. z o.o. (Starachowice), Man Star Truck Sp. z o.o.
	General Logistics Systems International Holding B.V. (GLS)	8.50	25.1% stake in Szybka Paczka Sp. z o.o.
	GATX Rail Overseas Holding Corporation	87.50	100% of shares in DEC Sp. z o.o. (Warsaw)
(4)	La Poste Group	0.75	50% stake in Masterlink Express Sp. z o.o. (Warsaw)
	Snecma Moteurs	5.40	Snecma Polska Sp. z o.o. (Sędziszów Małopolski)
			2003
(5)	Pratt & Whitney	20.00	Pratt & Whitney Kalisz Sp. z o.o., Aerotech Kalisz Sp. z o.o., 85% stake in WSK Rzeszów S.A. (Rzeszów)
	Therab BV (Raben Group)	105.20	Raben Logistics Sp. z o.o., Raben Transport Sp. z o.o., Raben Wielkopolska Sp. z o.o., Agencja Celna Raben 1 Sp. z o.o., Szybka Paczka Sp. z o.o., Raben Mazovia Sp. z o.o., Raben Łódź Sp. z o.o., Raben Projekty (Gądko)
	Alstom	50.22	Alstom Konstal S.A. (Chorzów)
	Deutsche Post World Net	57.50	100% stake in Servisco Sp. z o.o. (Warsaw), DHL International (Poland) Ltd.
	General Electric Corporation (GE)	360.00	GE Engineering Design Center EDC, GE Interlogix, Central European Engine Services, aircraft engine test cell in Rembertów
	Kuehne & Nagel	9.70	Kuehne & Nagel Sp. z o.o. (Gądko)
	Siemens AG		Siemens Sp. z o.o. Transportation Systems
	MAN Nutzfahrzeuge AG	45.00	MAN Pojazdy Użytkowe Polska Sp. z o.o. (Sady near Poznań), Star Trucks Sp. z o.o. (Starachowice), Man Star Truck Sp. z o.o.
	General Logistics Systems International Holding B.V. (GLS)	17.40	25.1% stake in Szybka Paczka Sp. z o.o. (Gądko)
	GATX Rail Overseas Holding Corporation	87.50	100% of shares in DEC Sp. z o.o. (Warsaw)
(4)	La Poste Group	12.70	50% stake in Masterlink Express Sp. z o.o. (Warsaw)
	Snecma Moteurs	5.40	Snecma Polska Sp. z o.o. (Sędziszów Małopolski)
	International Container Terminal Services	40.00	Bałtycki Kontenerowy Terminal (BTC) Sp. z o.o.
<b>Additional Information</b>			
(1) Pratt & Whitney Canada had a presence in Poland since the early 1970s.			
(2) No specific investment amounts were provided by GLS. Due to the lack of other information the investment amounts were taken from the PAIiZ statistics.			
(3) Since 2002 DHL Worldwide Express belongs to Deutsche Post World Net, and since then both companies do not act separately anymore on the Polish market.			
(4) Since 2005 Snecma Moteurs belongs to the Safran Group. Before 2002 they had a representative office in Poland, but investment in their own company only started in 2002.			
(5) No specific investment amounts were given. The amount used in 2003 stems from the PAIiZ statistics. The amounts for previous years could not be used as these statistics did not contain the investments in the logistics sector (e.g. GE Engineering Design Center EDC).			

## 5) Power

Company name	Total investment (million USD)	Investment 1989
		1990
Elsam A/S		Elsamprojekt Polska Sp. z o.o.
		1991
Elsam A/S		Elsamprojekt Polska Sp. z o.o.
Neste Oil	25.00	gas station network
Pam-Gas B.V.		establishment of Gaspol S.A. (Warsaw)
Siemens AG		
		1992
Elsam A/S		Elsamprojekt Polska Sp. z o.o.
Neste Oil	25.00	gas station network
Pam-Gas B.V.		Gaspol S.A. (Warsaw)
Siemens AG		
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants		
Shell		establishment of Shell Gas Polska (Łódź) and Shell Polska (Warsaw)
Texaco Inc.		Texaco Polska Sp. z o.o. (Warsaw)
TotalFina		TotalFina Polska Sp. z o.o.
Vattenfall AB	0.10	shared office with IVO
		1993
Elsam A/S		Elsamprojekt Polska Sp. z o.o.
Neste Oil	25.00	gas station network
Pam-Gas B.V.		Gaspol S.A. (Warsaw)
Siemens AG		
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants		
Shell		Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.		Texaco Polska Sp. z o.o. (Warsaw)
TotalFina		TotalFina Polska Sp. z o.o.
Vattenfall AB	0.10	representative office
British Oxygen Corporation (BOC Group)	>9.60	purchase of 70% stake in Polgaz plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław
Liquid Carbonic	>1.40	establishment of Liquid Carbonic Polska Sp. z o.o. through purchase of 70% share in Polgaz Warsaw, Gliwice
		1994
Elsam A/S		Elsamprojekt Polska Sp. z o.o.
Neste Oil	25.00	gas station network
Pam-Gas B.V.		Gaspol S.A. (Warsaw)
Siemens AG		
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants		
Shell		Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.		Texaco Polska Sp. z o.o. (Warsaw)
TotalFina		TotalFina Polska Sp. z o.o.
Vattenfall AB	0.10	representative office
British Oxygen Corporation (BOC Group)	>9.60	70% stake in Polgaz plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław
Liquid Carbonic	>1.40	Liquid Carbonic Polska Sp. z o.o.
MVV Energie AG		consultancy activity
		1995
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Neste Oil	25.00	gas station network
Pam-Gas B.V.		Gaspol S.A. (Warsaw)
Siemens AG		
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants		
Shell		Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.		Texaco Polska Sp. z o.o. (Warsaw)
TotalFina		TotalFina Polska Sp. z o.o.
Vattenfall AB	< 5.00	small heating business
British Oxygen Corporation (BOC Group)	>9.60	70% stake in Polgaz plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław
Liquid Carbonic	>1.40	Liquid Carbonic Polska Sp. z o.o.
MVV Energie AG		consultancy activity
Air Liquide		
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), EPSAG Sp. z o.o.
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
		1996
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Neste Oil	20.00	Neste Oil Poland Ltd. (14 petrol stations)
Pam-Gas B.V.	18.00	50% stake in Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew
Siemens AG		
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants		
Shell	81.20	Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.		Texaco Polska Sp. z o.o. (Warsaw)
TotalFina		TotalFina Polska Sp. z o.o.
Vattenfall AB	< 10.00	small heating business
British Oxygen Corporation (BOC Group)	30.00	70% stake in Polgaz plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław, oxygene plant in Pila
Praxair Inc.	20.00	Liquid Carbonic Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG		consultancy activity
Air Liquide		
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), EPSAG Sp. z o.o., 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz)
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
Alstom	26.01	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów)
DEA Mineralöl	2.50	gas stations in Gliwice and Nowa Sól

## Power continued

Company name	Total investment (million USD)	Investment 1997
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Neste Oil	20.00	Neste Oil Poland Ltd.
Pam-Gas B.V.	108.00	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
Siemens AG		Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A.
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants	3.00	Elf Lubrifiants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
Shell	150.00	Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.	30.00	Texaco Polska Sp. z o.o. (Warsaw)
TotaFina		TotaFina Polska Sp. z o.o.
Vattenfall AB	< 10.00	small heating business
British Oxygen Corporation (BOC Group)	150.00	BOC Gazy Sp. z o.o. (Warsaw, Gliwice, Poznań, Siewierz and Wrocław), oxygene plant in Pila
Praxair Inc.	20.00	Liquid Carbonic Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG		consultancy activity
Air Liquide	18.00	construction of plant in Kraków
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), EPSAG Sp. z o.o., 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz)
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
Alstom	26.01	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów)
DEA Mineralöl	2.50	DEA Mineralöl-Polska Sp. z o.o. (Poznań)
1998		
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
(3) Fortum Oy (former Neste Oil)	20.00	Fortum Polska Sp. z o.o.
Pam-Gas B.V.	108.00	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2) Siemens AG	103.00	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A.
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants	5.00	Elf Lubrifiants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
Shell	150.00	Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.	68.60	Texaco Polska Sp. z o.o. (Warsaw), Texaco Produkty Sp. z o.o. (Warsaw)
TotaFina		TotaFina Polska Sp. z o.o.
Vattenfall AB	< 10.00	small heating business
British Oxygen Corporation (BOC Group)	180.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant
Praxair Inc.	20.00	Liquid Carbonic Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG		consultancy activity
Air Liquide	18.00	Air Liquide Sp. z o.o. (Kraków)
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), EPSAG Sp. z o.o., 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz)
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
Alstom	26.01	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów)
DEA Mineralöl	2.50	DEA Mineralöl-Polska Sp. z o.o. (Poznań)
Enron International	44.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna) - combined heat plant
1999		
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Fortum Oy	23.00	Fortum Polska Sp. z o.o.
Pam-Gas B.V.	108.00	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2) Siemens AG	150.00	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A.
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Elf Lubrifiants	5.00	Elf Lubrifiants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
Shell	185.00	Shell Gas Polska (Łódź), Shell Polska (Warsaw)
Texaco Inc.	68.60	Texaco Polska Sp. z o.o. (Warsaw), Texaco Produkty Sp. z o.o. (Warsaw)
TotaFina		TotaFina Polska Sp. z o.o.
Vattenfall AB	438.80	55% stake in Elektrociepłownie Warszawskie (EW) S.A.
British Oxygen Corporation (BOC Group)	180.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant
Praxair Inc.	40.00	Praxair Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG		first acquisition
Air Liquide	45.00	Air Liquide Sp. z o.o. (Kraków), Alkat Sp. z o.o., Alpol Sp. z o.o.
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), EPSAG Sp. z o.o., 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz)
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
Alstom	26.01	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów)
DEA Mineralöl	2.50	DEA Mineralöl-Polska Sp. z o.o. (Poznań)
Enron International	88.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna)
Energie Baden-Württemberg AG (EnBW)	0.00	setting up 100% Trading & Sales Co. EnBW Polska
International Water	8.80	22% of shares in Bielska Spółka Komunalna Aqua S.A. (Bielsk)
General Electric (GE)		GE Power Controls (greenfield investment in Kłodzko)

## Power continued

Company name	Total investment (million USD)	Investment 2000
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Fortum Oy	23.00	Fortum Polska Sp. z o.o. (includes petrol stations and power and heat plants)
Pam-Gas B.V.	108.00	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2) Siemens AG	150.00	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A.
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
(4) Shell	423.00	Shell Gas Polska (Łódź), Shell Polska (Warsaw), Shell Produkty Polska Sp. z o.o., Shell Marketing Polska Sp. z o.o.
(5) TotalFinaElf S.A.	1.30	Total Fina Elf Polska Sp. z o.o. (Warsaw), Elf Lubrificants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
Vattenfall AB	438.80	55% stake in EW S.A.
British Oxygen Corporation (BOC Group)	130.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant
Praxair Inc.	50.00	Praxair Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG	2.77	MVV Polska Sp. z o.o. (Warsaw), MVV EPS Polska Sp. z o.o., EC Skarżysko-Kamienna
Air Liquide	55.00	Air Liquide Sp. z o.o., Alkat Sp. z o.o., Alpol Sp. z o.o.
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz)
Société Nationale D'Electricité et de Thermique (SNET)		engineering branches in Katowice
Alstom	46.44	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów), ALSTOM Power Sp. z o.o. (Elbląg), ALSTOM Power Generators Sp. z o.o. (Wrocław), ALSTOM Power FlowSystems Sp. z o.o.
DEA Mineralöl	2.50	DEA Mineralöl-Polska Sp. z o.o. (Poznań)
Enron International	132.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna)
Energie Baden-Württemberg AG (EnBW)	30.00	16% stake in Kogeneracja S.A. (Wrocław)
International Water	8.80	22% of shares in Bielska Spółka Komunalna Aqua S.A. (Bielsk)
General Electric (GE)		GE Power Controls (Kłodzko)
Sydkraft AB	1.73	
Mitteldeutsche Energieversorgung AG (MEAG)	7.80	acquisition of 52.2% stake in Elektrociepłownia Będzin
2001		
Elsam A/S	0.50	Elsamprojekt Polska Sp. z o.o.
Fortum Oy	23.00	Fortum Polska Sp. z o.o.
Pam-Gas B.V.	78.80	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2) Siemens AG	98.50	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A., Siemens Sp. z o.o. (Power Generation, Transmission and Distribution), Westinghouse Modelpol Sp. z o.o.
AES Horizons Ltd	>20.00	Żarnowiecka Elektrownia Gazowa
Shell	205.00	Shell Gas Polska (Łódź), Shell Polska (Warsaw), Shell Produkty Polska Sp. z o.o., Shell Marketing Polska Sp. z o.o.
TotalFinaElf S.A.	5.40	Total Fina Elf Polska Sp. z o.o. (Warsaw), Elf Lubrificants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
Vattenfall AB	444.00	55% stake in EW S.A., 33% stake in Górnośląskiego Zakładu Elektroenergetycznego (GZE)
British Oxygen Corporation (BOC Group)	130.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant
Praxair Inc.	50.00	Praxair Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
MVV Energie AG	3.31	MVV Polska Sp. z o.o. (Warsaw), MVV EPS Polska Sp. z o.o., EC Skarżysko-Kamienna
Air Liquide	55.00	Air Liquide Sp. z o.o., Alkat Sp. z o.o., Alpol Sp. z o.o.
RWE Group		Elbud Gdańsk Holding S.A. (Gdańsk), 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz), establishment of subsidiary WFG Polska, majority stake in KB Gaz Technologia i Energia Sp. z o.o. (Szczecin)
Société Nationale D'Electricité et de Thermique (SNET)	44.60	acquisition of 45% stake in Elektrociepłownia Białystok S.A. (Białystok)
Alstom	62.59	ALSTOM T&D Protection and Control S.A. (Świebodzice), ALSTOM T&D Transformer Sp. z o.o. (Mikołów), ALSTOM Power Sp. z o.o. (Elbląg), ALSTOM Power Generators Sp. z o.o. (Wrocław), ALSTOM Power FlowSystems Sp. z o.o.
DEA Mineralöl	2.50	DEA Mineralöl-Polska Sp. z o.o. (Poznań)
Enron International	132.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna)
Energie Baden-Württemberg AG (EnBW)	60.00	16.6% stake in Elektrownia Rybnik S.A. (Rybnik)
International Water	8.80	22% of shares in Bielska Spółka Komunalna Aqua S.A. (Bielsk)
General Electric (GE)		GE Power Controls (Kłodzko)
Sydkraft AB	1.30	70% stake in Sydkraft Złotów Sp. z o.o. (Złotów), 31% in local district heating company in Koszalin
Mitteldeutsche Energieversorgung AG (MEAG)	10.00	69.56% stake in Elektrociepłownia Będzin
Ruhrgas AG		75% of the shares in therminvest Sp. z o.o. (Gdańsk)
Stadtwerke Leipzig GmbH	3.10	June: 100% acquisition of ENEKO Sp. z o.o. (Jelenia Góra) August: 85% stake in Zakład Energetyki Ciepłej (ZEC) Tczew Sp. z o.o.

## Power continued

Company name		Total investment (million USD)	Investment 2002
	Elsam A/S	31.20	Elsamprojekt Polska Sp. z o.o.
	Fortum Oy	20.00	Fortum Polska Sp. z o.o.
	Pam-Gas B.V.	78.80	Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2)	Siemens AG	103.90	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A., Siemens Sp. z o.o., Westinghouse Modelpol Sp. z o.o., Siemens Industrial Turbomachinery Sp. z o.o.
	AES Horizons Ltd	>20.00	Zarnowiecka Elektrownia Gazowa
(6)	Shell	204.20	Shell Gas Polska (Łódź), Shell Polska (Warsaw), Shell Produkty Polska Sp. z o.o., Shell Marketing Polska Sp. z o.o., DEA Mineralöl-Polska Sp. z o.o. (Poznań)
	TotalFinaElf S.A.	5.40	Total Fina Elf Polska Sp. z o.o. (Warsaw), Elf Lubrificants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
	Vattenfall AB	533.00	55% stake in EW S.A., 33% stake in GZE
	British Oxygen Corporation (BOC Group)	170.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant
	Praxair Inc.	50.00	Praxair Polska Sp. z o.o. (plants in Warsaw, Gliwice, Poznań, Siewierz and Wrocław)
	MVV Energie AG	18.83	MVV Polska Sp. z o.o. (Warsaw), MVV EPS Polska Sp. z o.o., EC Skarżysko-Kamienna, Szczecińska Energetyka Ciepła Sp. z o.o. (Szczecin)
	Air Liquide	55.00	Air Liquide Sp. z o.o., Alkat Sp. z o.o., Alpol Sp. z o.o.
	RWE Group	390.20	Ebud Gdańsk Holding S.A. (Gdańsk), 30% stake in Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz), KB Gaz Technologia i Energia (Szczecin), 85% stake in Stoen S.A. (Warsaw), shares in Bałtyk Gaz, KRI
	Société Nationale D'Electricité et de Thermique (SNET)	49.00	58.3% stake in Elektrociepłownia Białystok S.A. (Białystok)
	Alstom	79.76	ALSTOM T&D S.A. (Świebodzice), ALSTOM Power Sp. z o.o. (Warsaw) with branches in Elbląg and Wrocław, ALSTOM Power FlowSystems Sp. z o.o.
	Enron International	132.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna)
	Energie Baden-Württemberg AG (EnBW)	30.00	33% stake in Miejskie Przedsiębiorstwo Energetyki Cieplnej (MPEC) Wrocław S.A. (Wrocław)
	International Water	8.80	22% of shares in Bielska Spółka Komunalna Aqua S.A. (Bielsk)
(7)	General Electric (GE)	360.00	GE Power Controls Polska (Kłodzko, Łódź, Bielsko-Biala)
	Sydkraft AB	31.70	70% stake in Sydkraft Złotów Sp. z o.o. (Złotów), 31% stake in local district heating company in Koszalin, 100% stake in Energetyka Ciepła Sp. z o.o. (Czeladź), 75% stake in Sydkraft Term Sp. z o.o., 23.2% stake in Ostrowski Zakład Ciepłowniczy, 51% stake in Skupska Energetyka Ciepła
(8)	enviaM (former Mitteldeutsche Energieversorgung AG)	10.00	69.56% stake in Elektrociepłownia Będzin
	Ruhrgas AG	15.80	75% stake in therminvest Sp. z o.o. (Gdańsk), acquisition of 24.95 % stake in Szczecińska Energetyka Ciepła (SEC) Sp. z o.o. (Szczecin)
	Stadtwerke Leipzig GmbH	3.10	ENEKO Sp. z o.o. (Jelenia Góra), ZEC Tczew Sp. z o.o.
	Gelsenwasser AG	6.60	46% stake in Przedsiębiorstwo Wodociągów i Kanalizacji (PWK) in Głogów
	LM Glasfiber	0.50	LM Glasfiber Sp. z o.o. (Goleniów)
	PSEG Global	24.00	35% stake in Elektroćnia Skawina (Skawina)
			2003
	Elsam A/S	31.20	Elsamprojekt Polska Sp. z o.o.
	Fortum Oy	20.00	Fortum Polska Sp. z o.o.
(9)	Pam-Gas B.V.	78.80	80% stake in Gaspol S.A. (Warsaw), 7 bottled gas plants: Stępków, Nowy Targ, Lubartów, Łomża, Rypin, Barlinek, Pleszew, 10 depots
(2)	Siemens AG	124.00	Siemens Fabryka Izolatorów Polska Sp. z o.o. (Jedlina), Energoserwis S.A., Siemens Sp. z o.o., Siemens Industrial Turbomachinery Sp. z o.o., Włbren Turbomachinery Service Sp. z o.o.
	AES Horizons Ltd	>20.00	Zarnowiecka Elektrownia Gazowa
	Shell	204.20	Shell Gas Polska (Łódź), Shell Polska (Warsaw), Shell Produkty Polska Sp. z o.o., Shell Marketing Polska Sp. z o.o., DEA Mineralöl-Polska Sp. z o.o. (Poznań)
	TOTAL (former TotalFinaElf S.A.)	5.40	Total Fina Elf Polska Sp. z o.o. (Warsaw), Elf Lubrificants NDM Sp. z o.o. (Nowy Dwór Mazowiecki)
	Vattenfall AB	643.00	69.2% stake in EW S.A., 75% stake in GZE
(1)	British Oxygen Corporation (BOC Group)	220.00	BOC Gazy Sp. z o.o. (Warsaw, Poznań, Siewierz and Wrocław), oxygene plant in Pila, shares in Częstochowa steel plant, Praxair Polska Sp. z o.o. (Warsaw)
	MVV Energie AG	19.28	MVV Polska Sp. z o.o. (Warsaw), MVV EPS Polska Sp. z o.o., MVV Skarżysko-Kamienna, Szczecińska Energetyka Ciepła Sp. z o.o. (Szczecin), Komunalne Przedsiębiorstwo Energetyki Cieplnej Sp. z o.o. (Bydgoszcz)
	Air Liquide	82.00	Air Liquide Sp. z o.o., Alkat Sp. z o.o., Alpol Sp. z o.o.
(10)	RWE Group	402.20	57.6% stake in Ebud Gdańsk Holding S.A. (Gdańsk), Przedsiębiorstwo Usług Elektroenergetycznych Wrocław S.A. (Wrocław), Przedsiębiorstwo Usług Elektroenergetycznych Bydgoszcz S.A. (Bydgoszcz), 85% stake in Stoen S.A. (Warsaw)
	Société Nationale D'Electricité et de Thermique (SNET)	18.20	58.3% stake in Elektrociepłownia Białystok S.A. (Białystok)
	Alstom	82.57	ALSTOM T&D S.A. (Świebodzice), ALSTOM Power Sp. z o.o. (Warsaw) with branches in Elbląg and Wrocław, ALSTOM Power FlowSystems Sp. z o.o.
	Enron International	132.00	Elektrociepłownia Nowa Sarzyna Sp. z o.o. (Nowa Sarzyna)
	Energie Baden-Württemberg AG (EnBW)	85.00	25% stake in Elektroćnia Rybnik S.A. (Rybnik), 33.1% stake in MPEC Wrocław S.A. (Wrocław)
	International Water	12.50	33.2% of shares in Bielska Spółka Komunalna Aqua S.A. (Bielsk)
(7)	General Electric (GE)	360.00	GE Power Controls (Kłodzko, Łódź, Bielsko-Biala), GE Oil & Gas (Warsaw), EST Energy Sp. z o.o. (Otwock), GE Wind Energy (Warsaw), GE Power systems (Warsaw)
(11)	Sydkraft AB (later E.ON Sverige)	31.70	70% stake in Sydkraft Złotów Sp. z o.o. (Złotów), 31% stake in local district heating company in Koszalin, 100% stake in Energetyka Ciepła Sp. z o.o. (Czeladź), 75% stake in Sydkraft Term Sp. z o.o., 23.2% stake in Ostrowski Zakład Ciepłowniczy, 51% stake in Skupska Energetyka Ciepła
	enviaM	10.00	69.56% stake in Elektrociepłownia Będzin
(12)	Ruhrgas AG (later E.ON Ruhrgas AG)	15.80	75% stake in therminvest Sp. z o.o. (Gdańsk), 24.95% stake in SEC Sp. z o.o. (Szczecin)
	Stadtwerke Leipzig GmbH	>3.10	ENEKO Sp. z o.o. (Jelenia Góra), ZEC Tczew Sp. z o.o., majority stake in Gdańskie Przedsiębiorstwo Energetyki Ciepłej (GPEC) Sp. z o.o., 40% stake in Zakład Energetyki Ciepłej "STARPEC" Sp. z o.o. (Starogard Gdańsk)
	Gelsenwasser AG	6.60	46% stake in PWK (Głogów)
	LM Glasfiber	1.00	LM Glasfiber Sp. z o.o. (Goleniów)
(13)	PSEG Global	24.80	35% stake in Elektroćnia Skawina (Skawina)

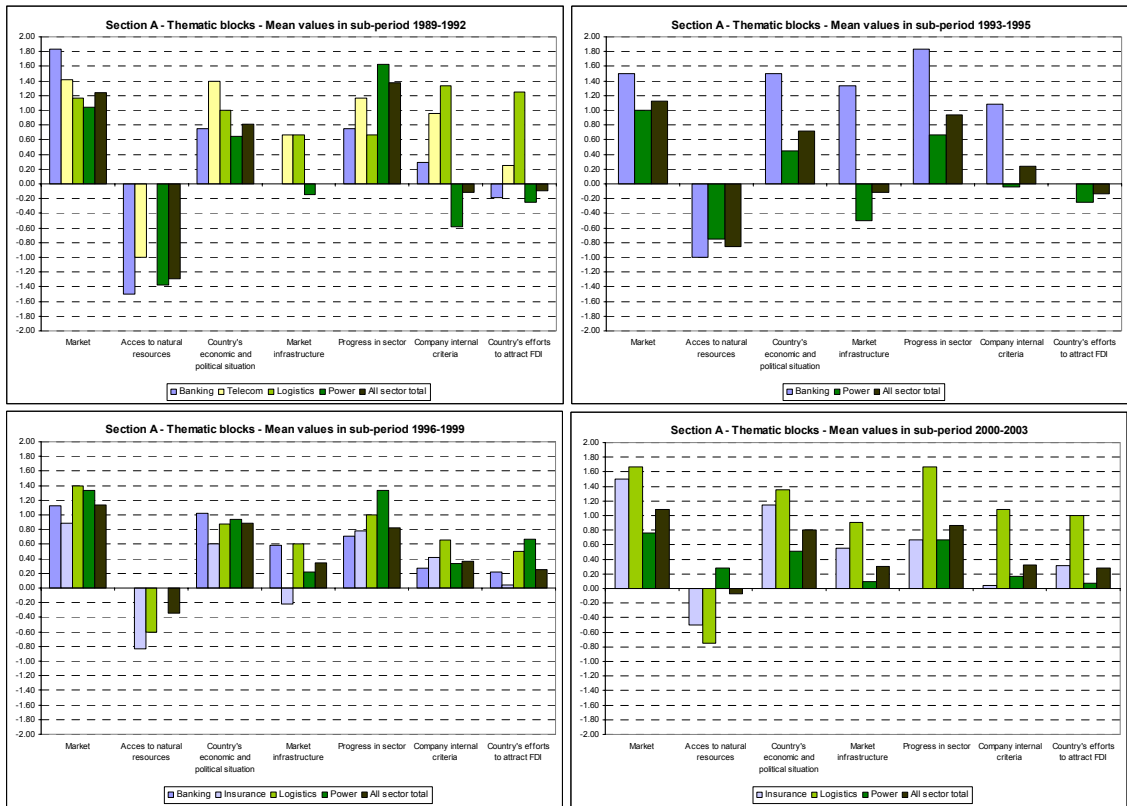
## Power continued

### Additional Information/explanation

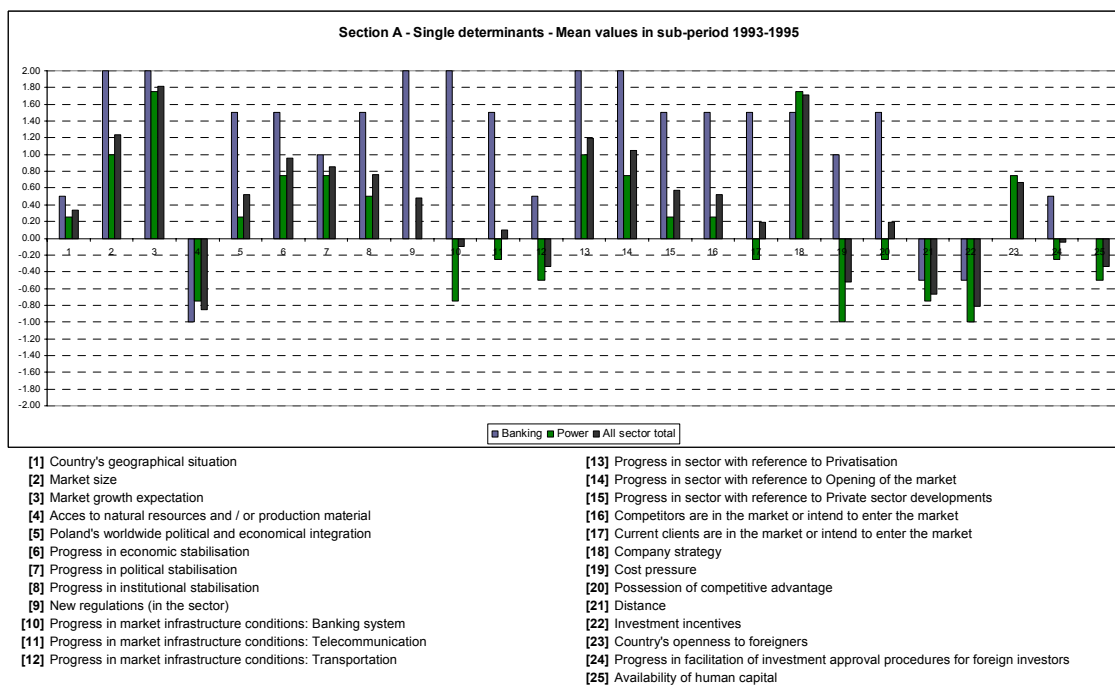
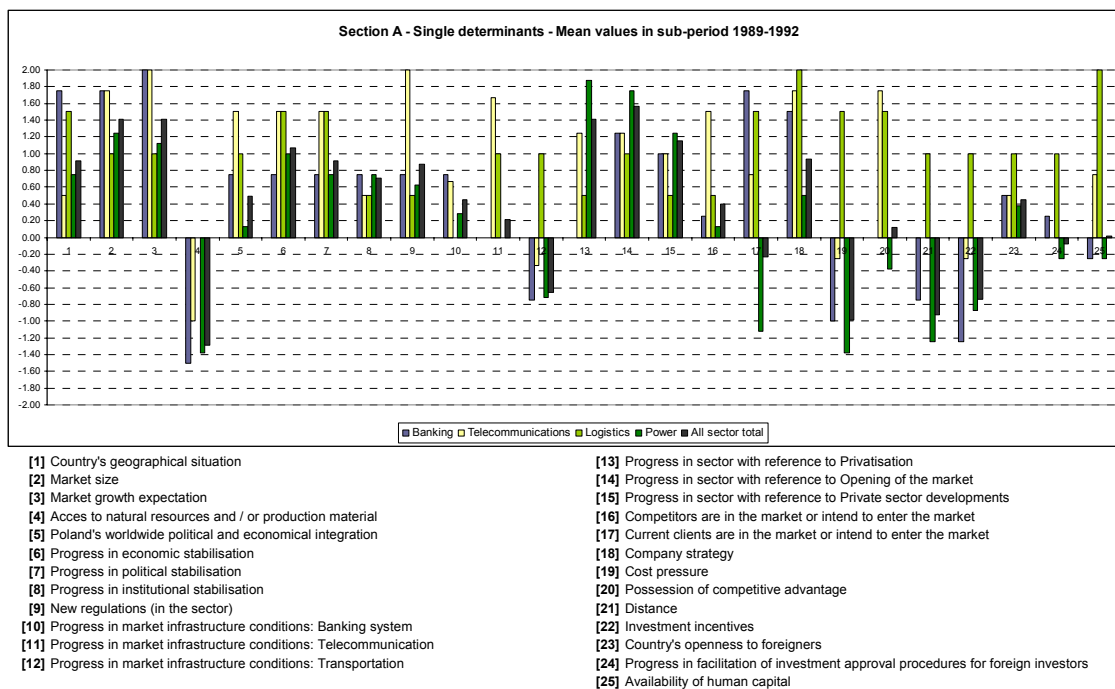
- (1) In 1996 Praxair incorporated Liquid Carbonic. In 2003 BOC Group acquired Praxair Polska.
- (2) No specific investment amounts were provided by Siemens. Due to the lack of other information the investment amounts were taken from the PAIIZ statistics. The PAIIZ information however reflected Siemens' overall Polish investments, i.e. including investments in other areas and thus the investment amount is overstated.
- (3) Due the merger of Neste and IVO in 1998 the company name changed to Fortum Oy.  
In 2005 when Neste Oil was demerged from Fortum, the company name was changed to Neste Polska.
- (4) In 2000 Texaco Inc. has been bought by Shell.
- (5) Merger of TotalFina and Elf Lubrificants in 2000.
- (6) In 2002 DEA Mineralöl was acquired by Shell.
- (7) No specific investment amounts were provided by General Electric. The investment amounts were therefore taken from the PAIIZ statistics, but they reflected General Electric's' overall Polish investments, i.e. including investments in other areas and thus the investment amount is overstated.
- (8) In August 2002, Mitteldeutsche Energieversorgung AG (MEAG) and envia Energie Sachsen Brandenburg AG merged. As the result, envia Mitteldeutsche Energie AG (enviaM) was founded.
- (9) SHV, through Pam Gas controls 80% of the shares in Gaspol S.A.
- (10) The investments listed for the RWE Group are not exhaustive.
- (11) In 2005 Sydkraft AB changed its company name to E.ON Sverige, and Energetyka Ciepna (Czeladz) was liquidated.
- (12) In 2004 due to company restructurings Ruhrgas AG's name was changed into E.ON Ruhrgas AG.
- (13) In 2006 PSEG Global sold its Polish investments.

**Attachment 11:      Section A - Mean Values over Time**

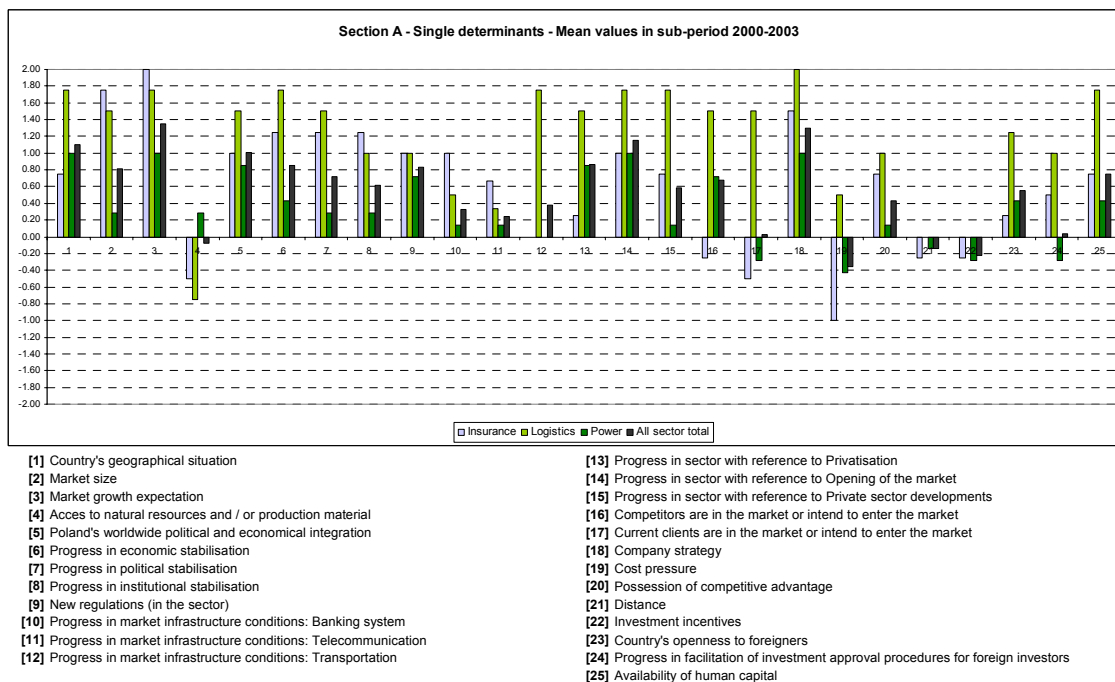
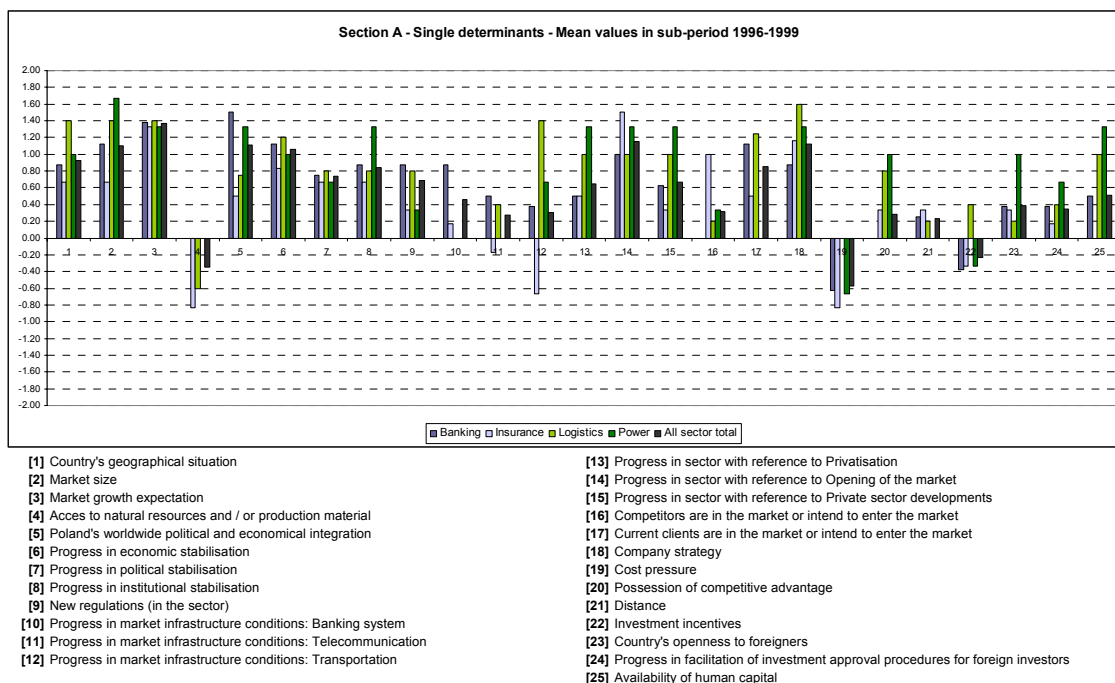
**Section A – Thematic Blocks – Mean Values over Time**



## Section A – Single Determinants – Mean Values over Time

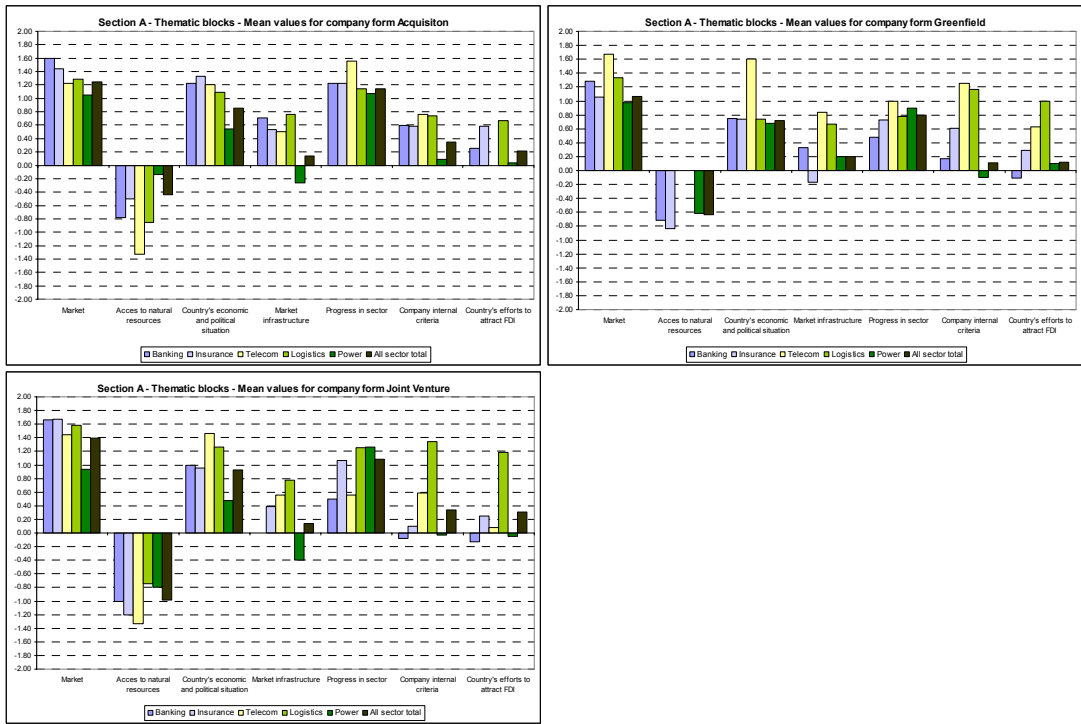




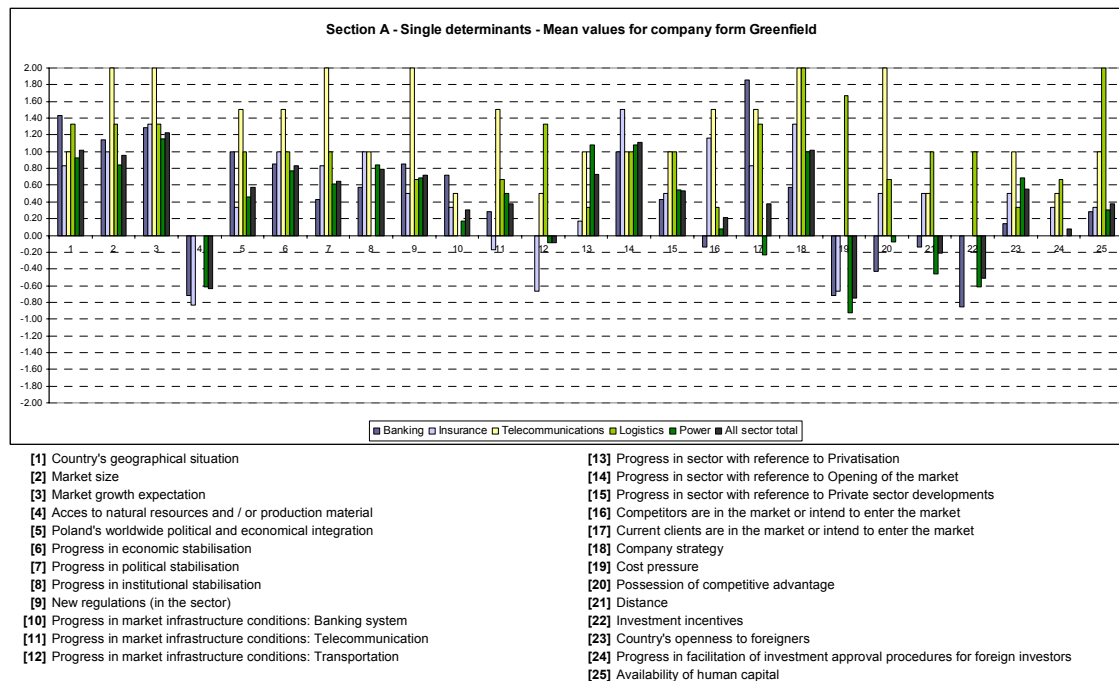
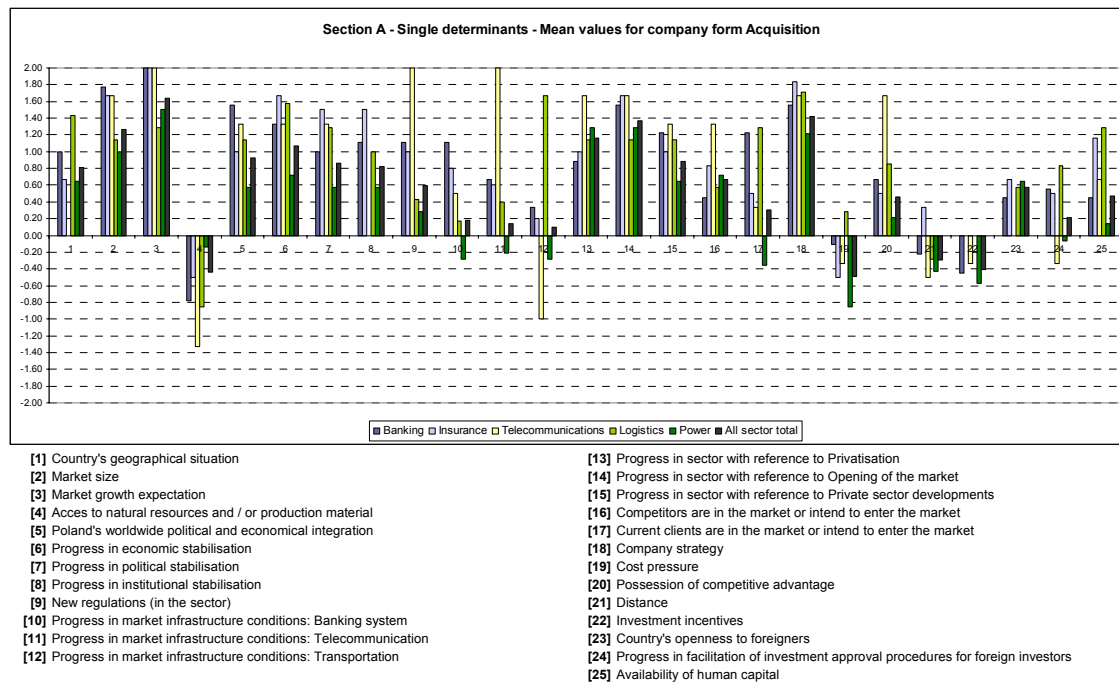


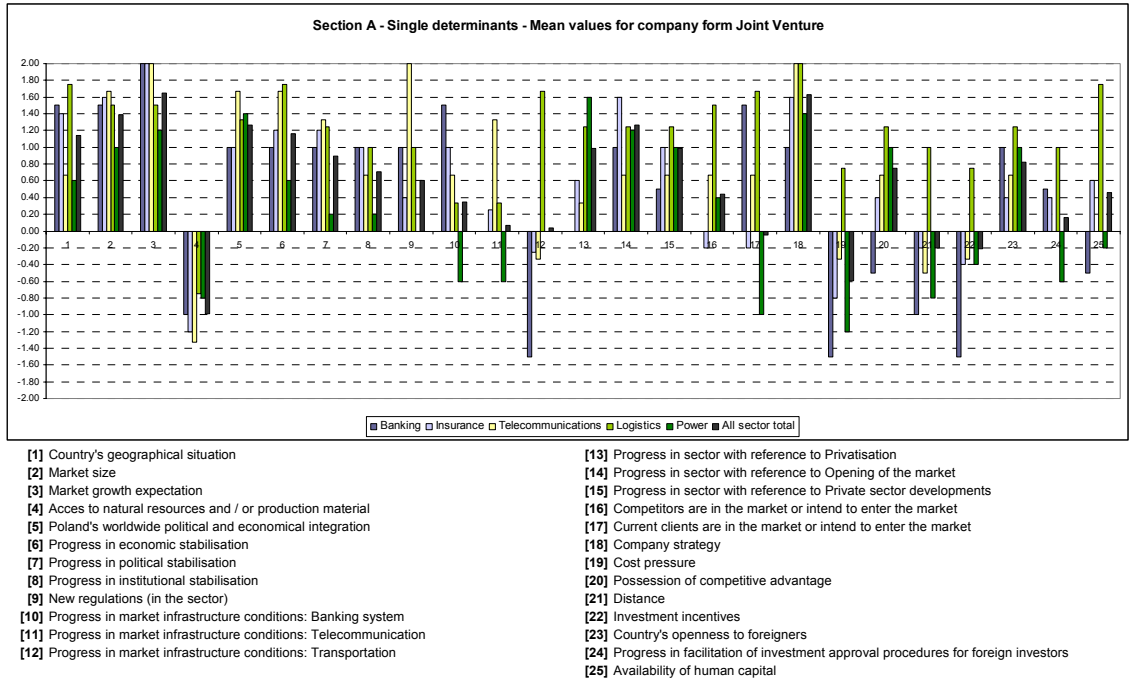
**Attachment 12:      Section A - Mean Values by Company Form**

**Section A – Thematic Blocks – Mean Values by Company Form**



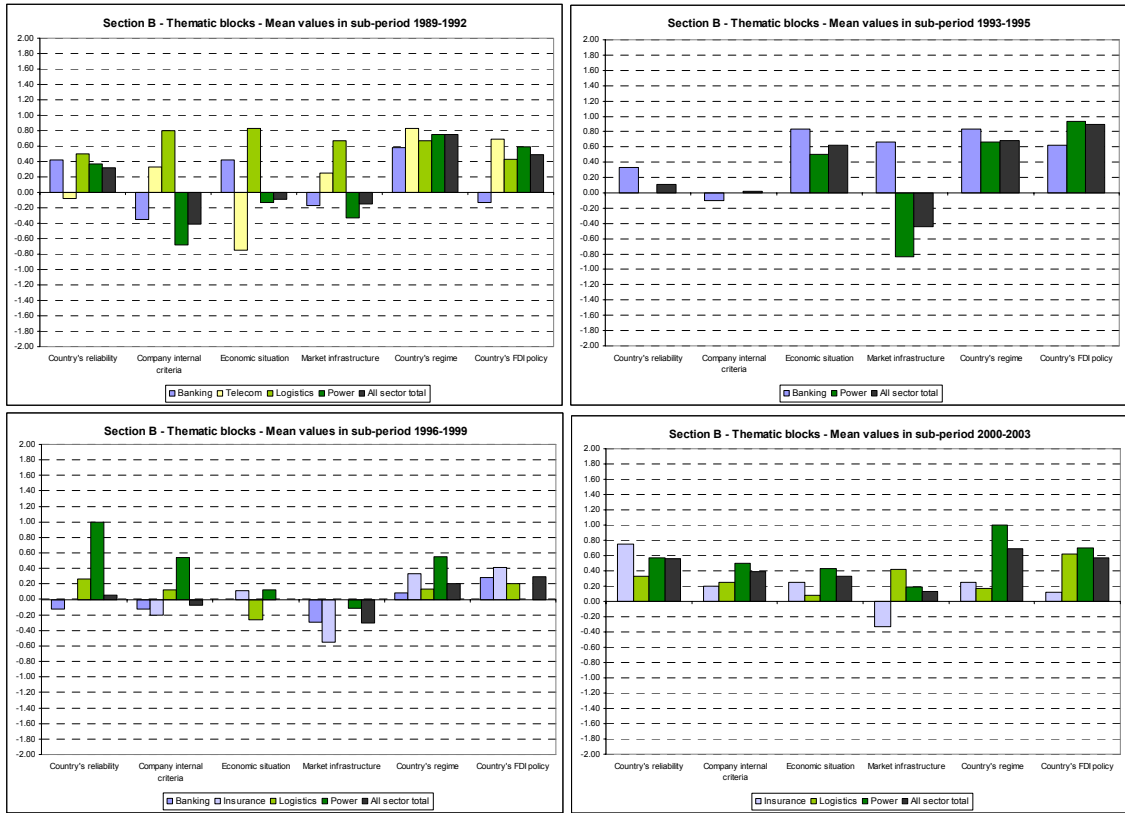
## Section A – Single Determinants – Mean Values by Company Form



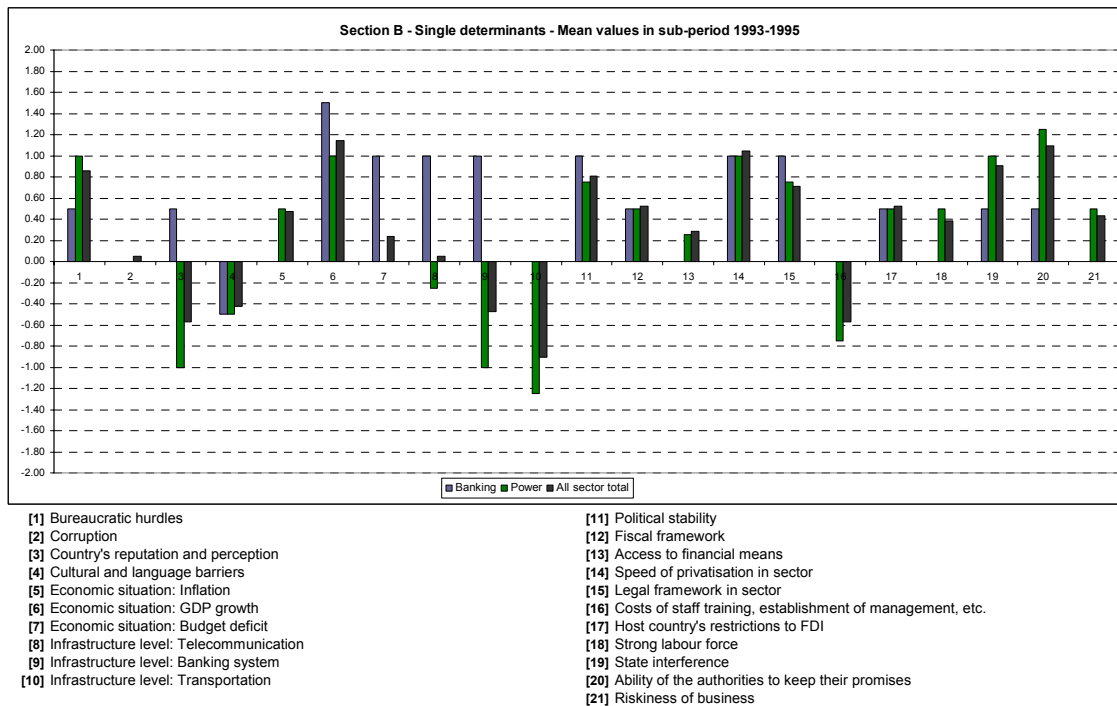
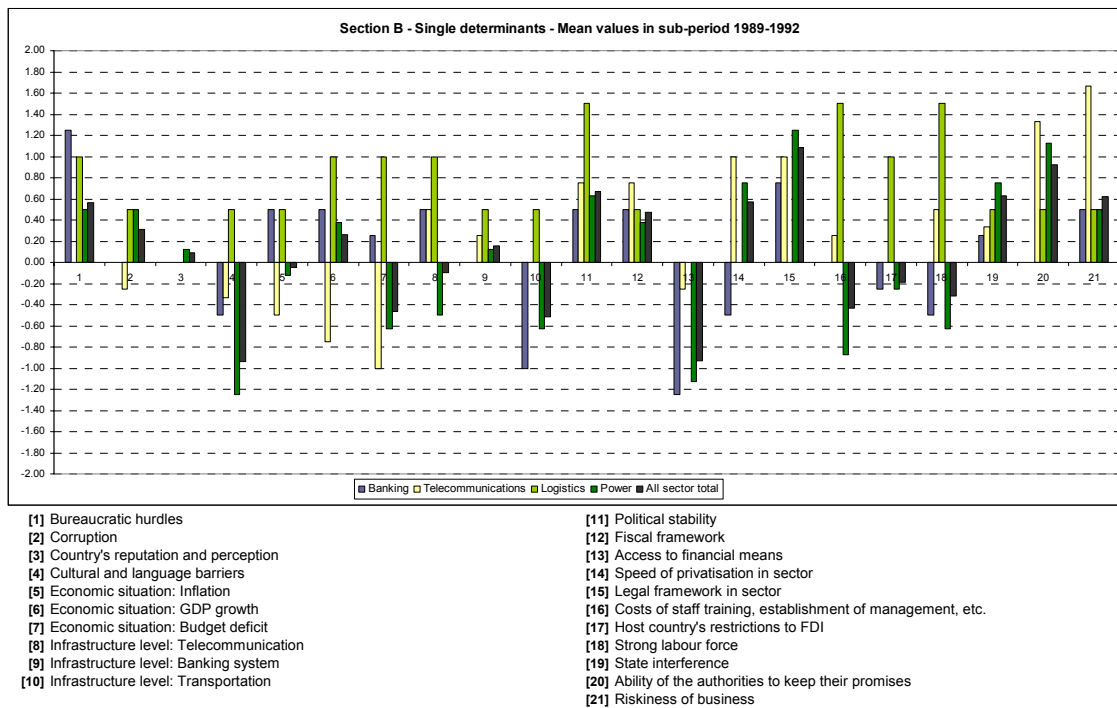


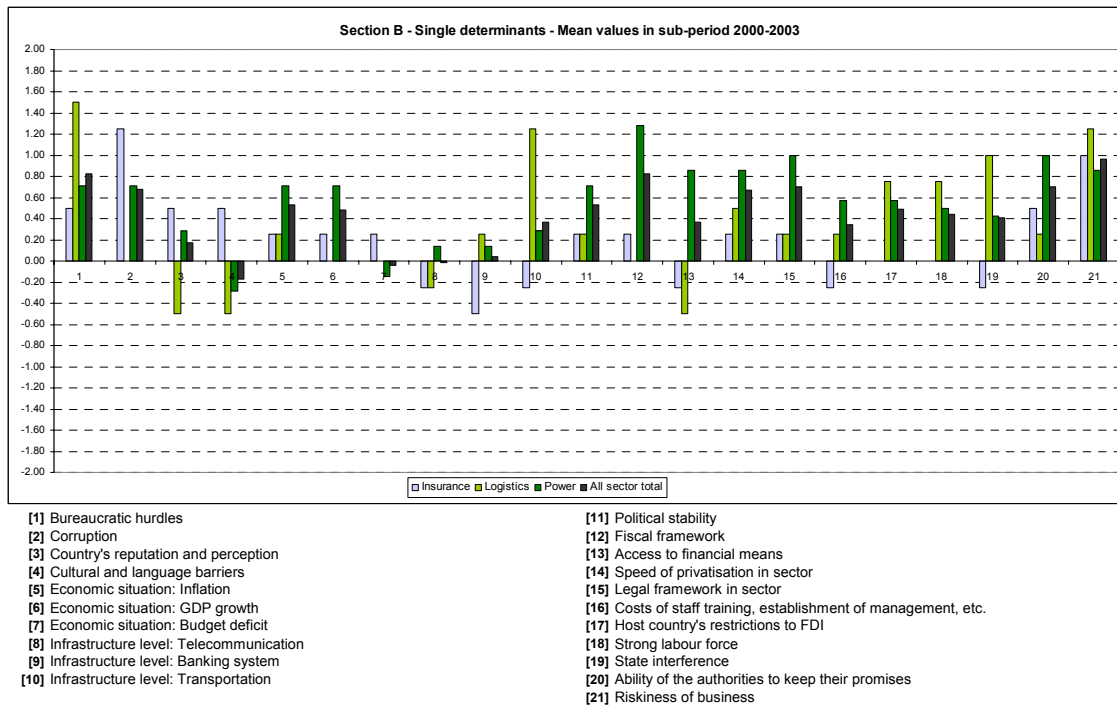
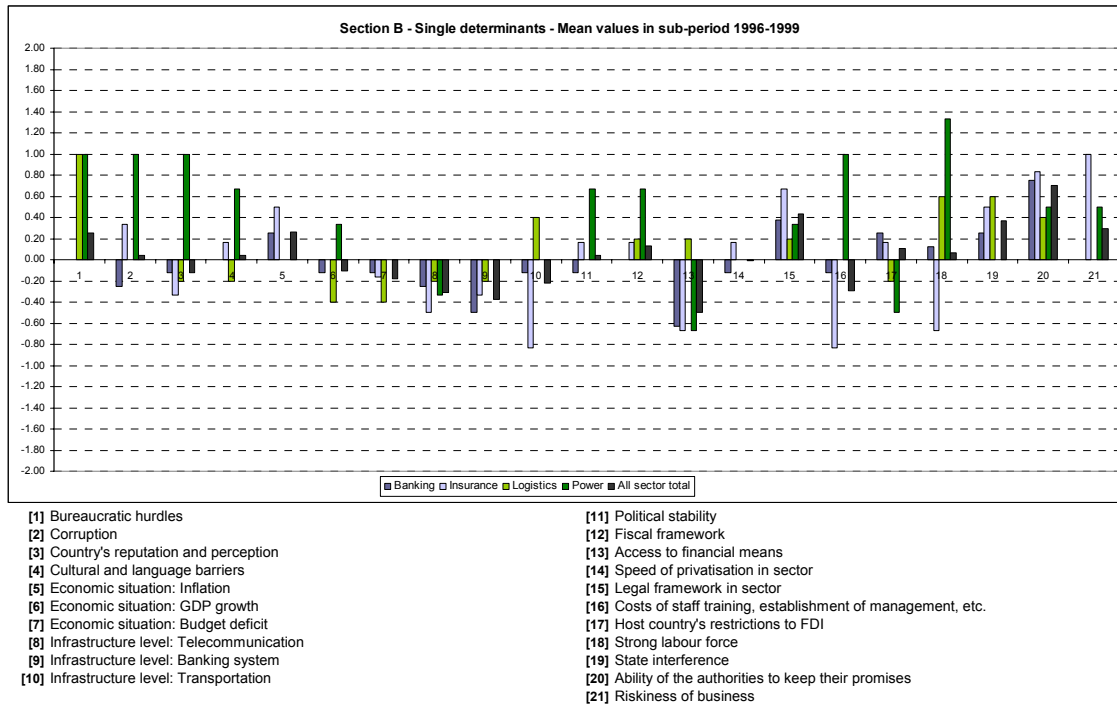
**Attachment 13:      Section B - Mean Values over Time**

**Section B – Thematic Blocks – Mean Values over Time**



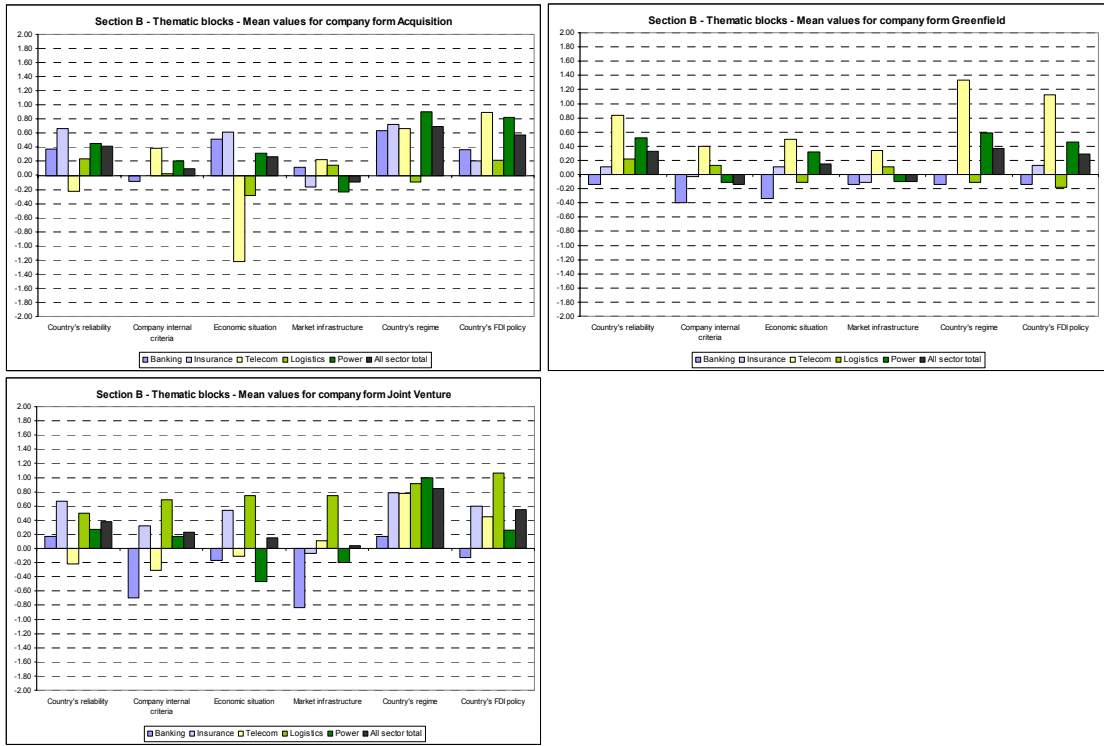
## Section B – Single Determinants – Mean Values over Time





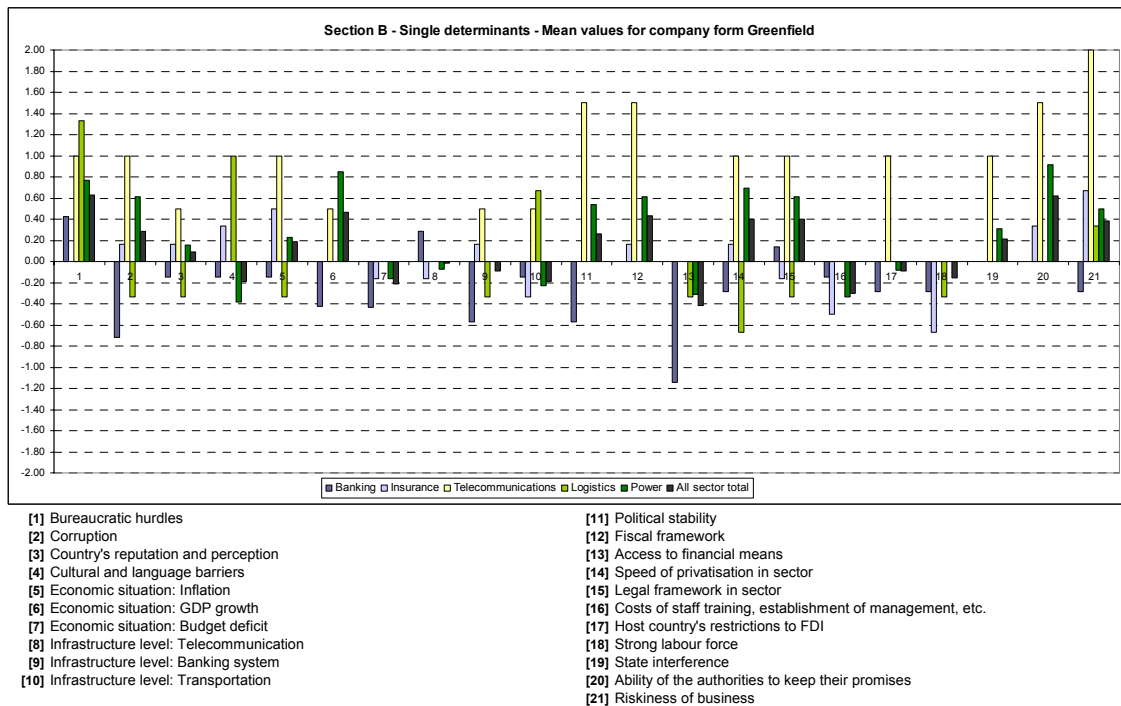
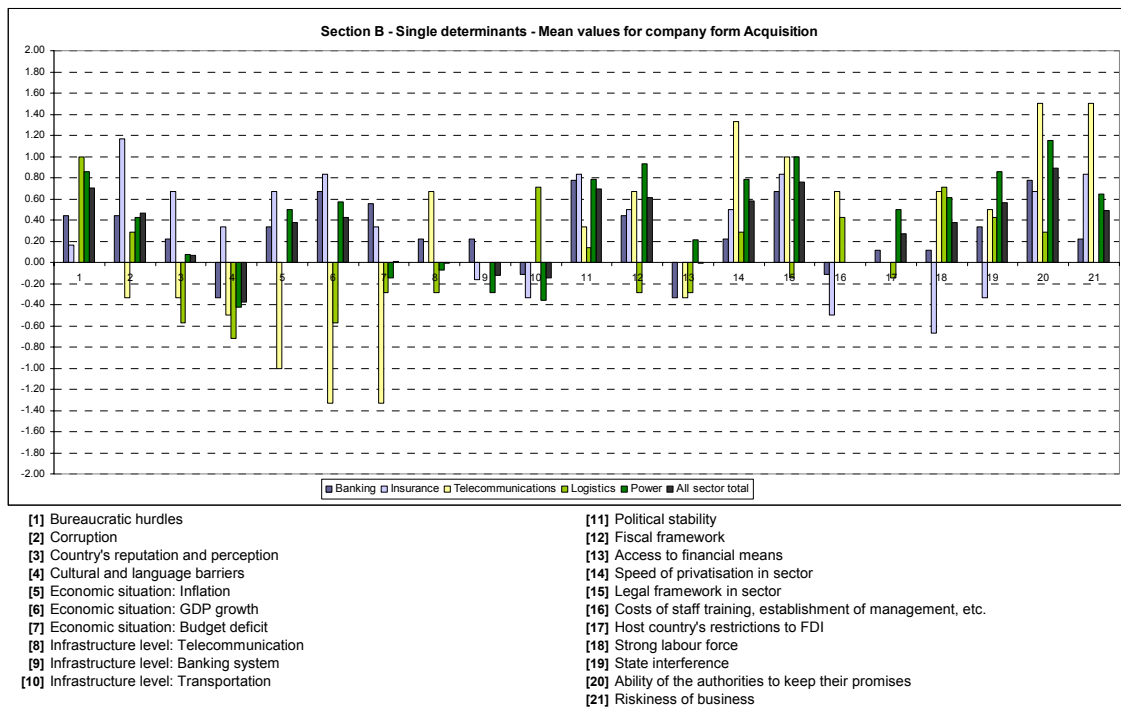
**Attachment 14:      Section B - Mean Values by Company Form**

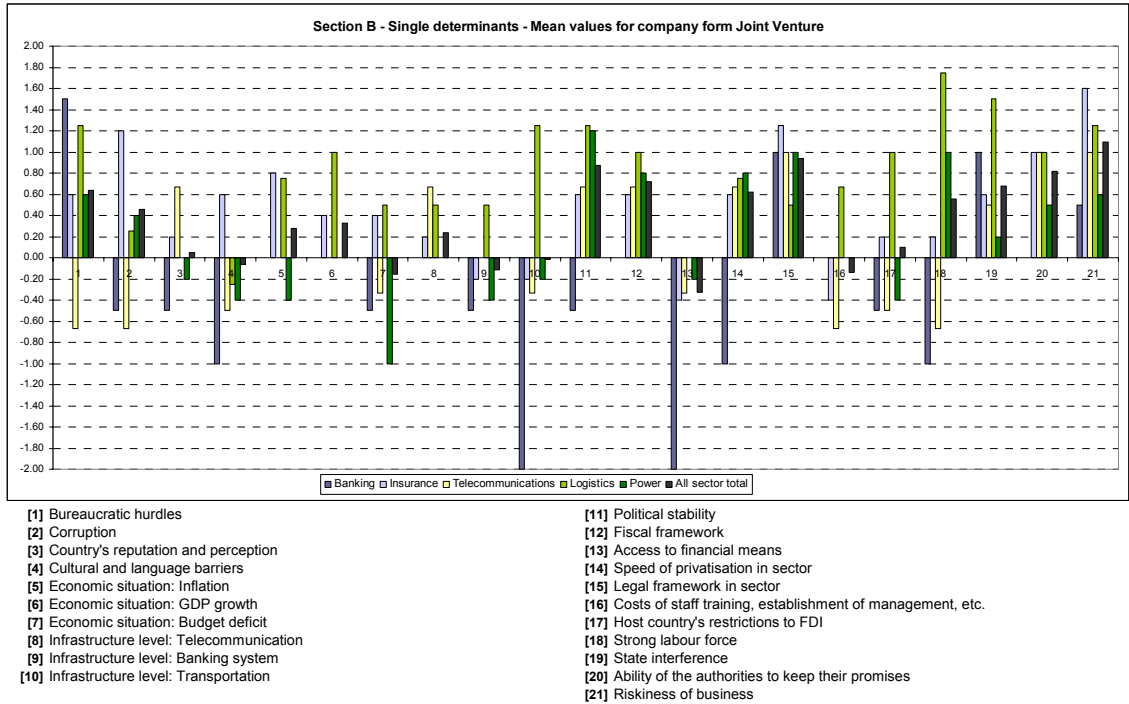
**Section B – Thematic Blocks - – Mean Values by Company Form**





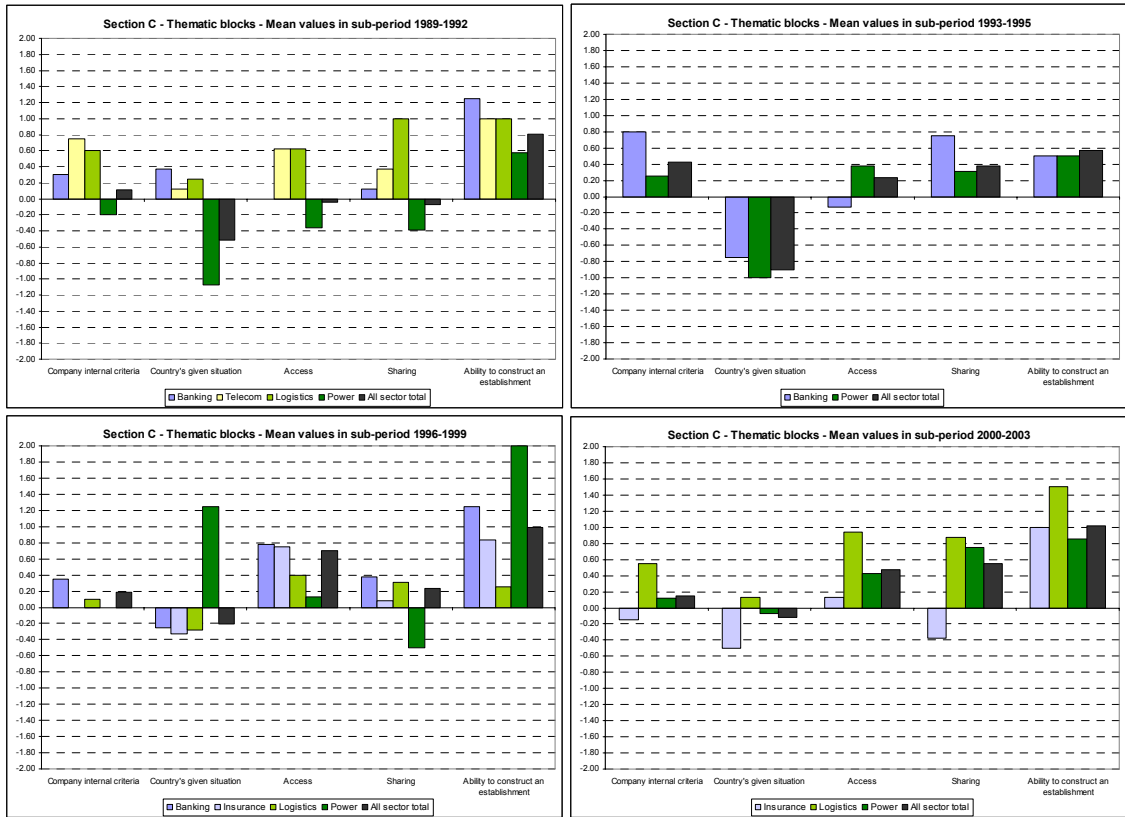
## Section B – Single Determinants – Mean Values by Company Form



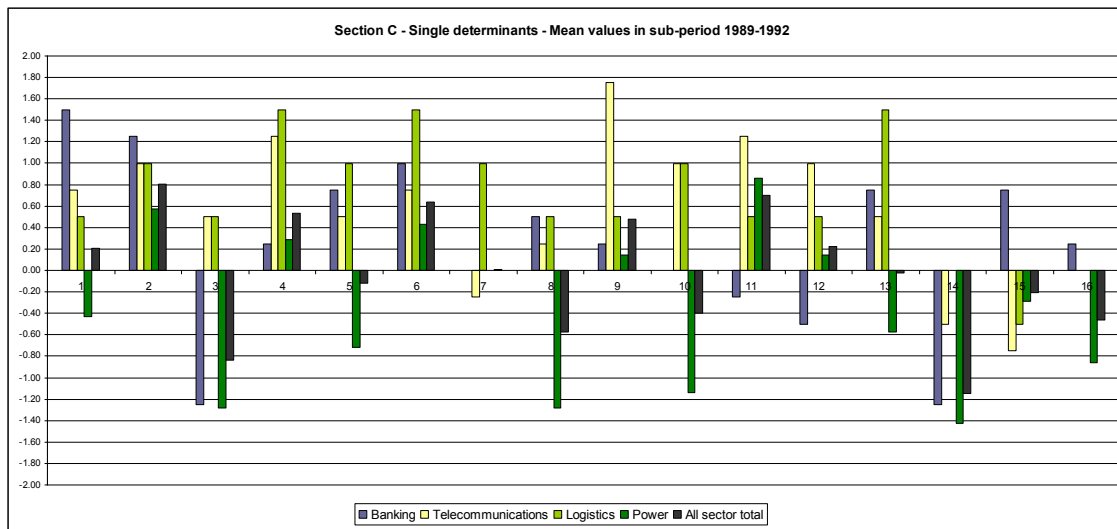


**Attachment 15:      Section C - Mean Values over Time**

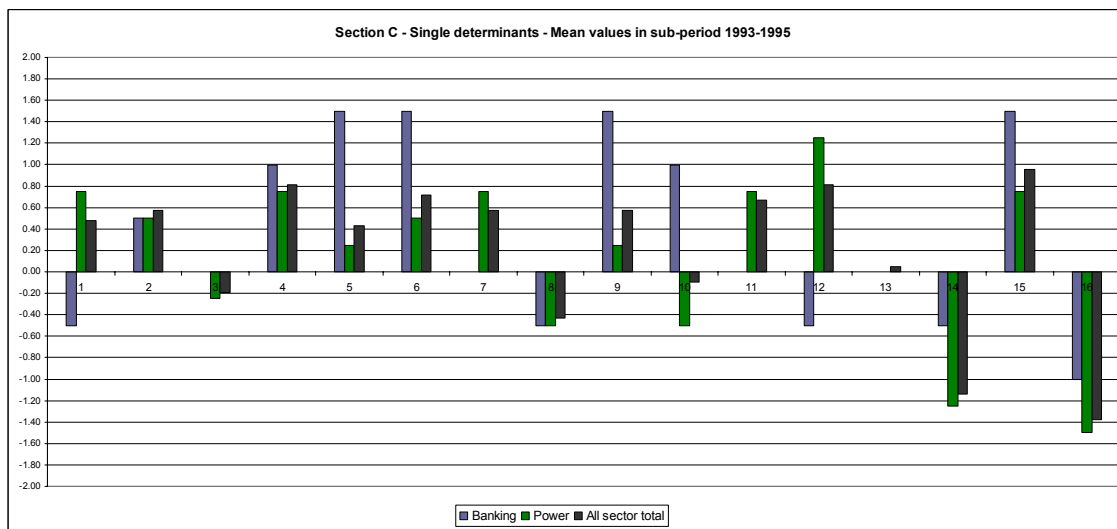
**Section C – Thematic Blocks – Mean Values over Time**



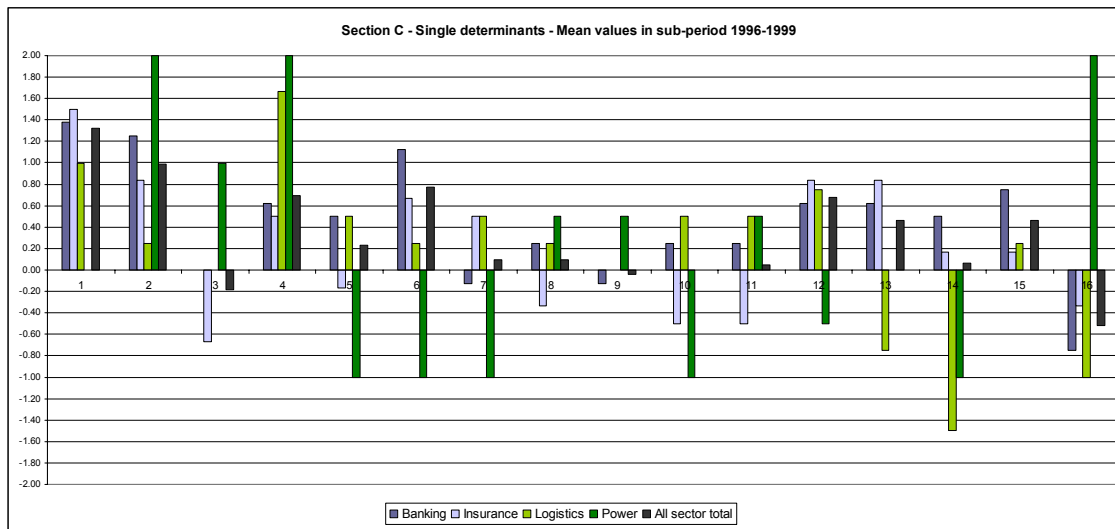
## Section C – Single Determinants - Mean Values over Time



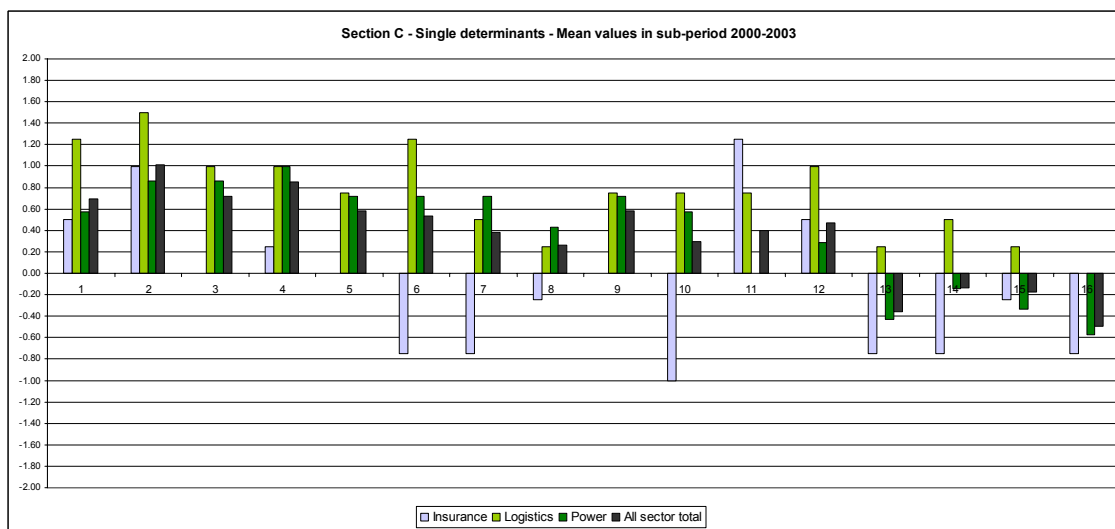
- [1] Access to companies already established in the market
- [2] Ability to construct an establishment according to specific requirements of the business
- [3] Sharing of business risk
- [4] Access to local resources
- [5] Gaining experience before fully establishing your company in the market
- [6] Ability to locally evaluate the market conditions
- [7] (Partly) Avoidance of bureaucratic hurdles
- [8] Market restrictions
- [9] Common strategy of the company
- [10] Existence of competitors in the market
- [11] Gaining proprietary control
- [12] Immediate possession of market share
- [13] Market different to home country
- [14] Acquisition of brand name
- [15] Least expensive form to enter the market
- [16] No choice of market entry form



- [1] Access to companies already established in the market
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- [13] Market different to home country
- [14] Acquisition of brand name
- [15] Least expensive form to enter the market
- [16] No choice of market entry form



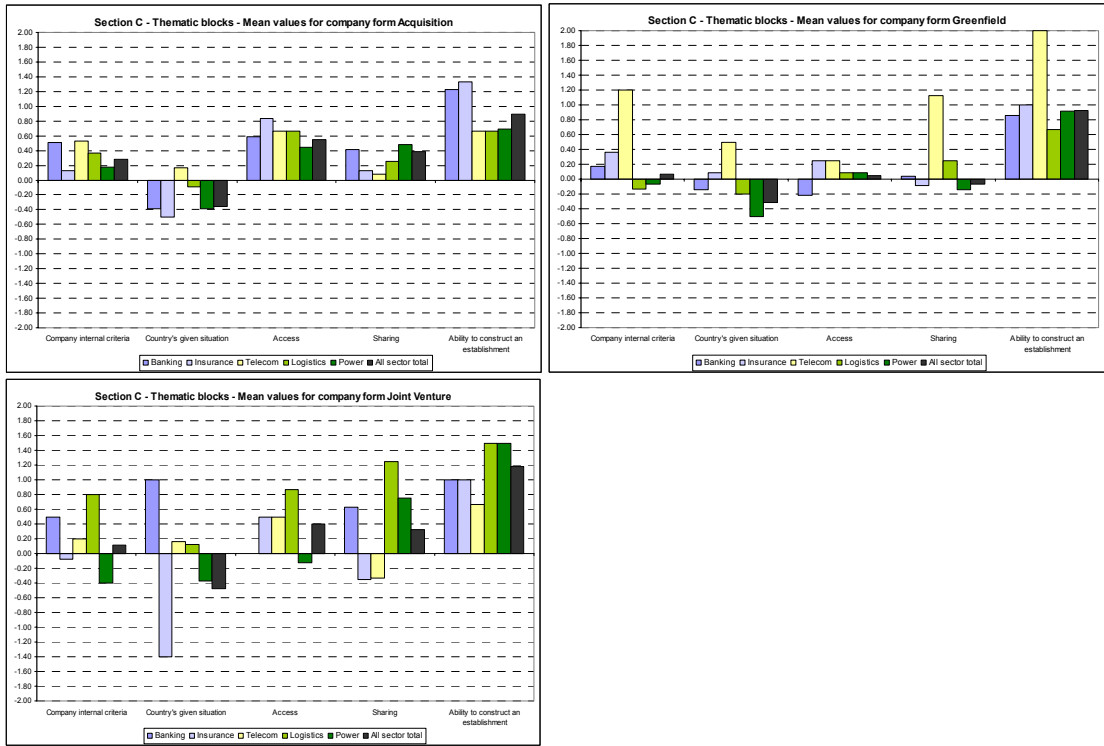
- |  |   |
|--|---|
| [1] Access to companies already established in the market                                    | [9] Common strategy of the company            |
| [2] Ability to construct an establishment according to specific requirements of the business | [10] Existence of competitors in the market   |
| [3] Sharing of business risk   | [11] Gaining proprietary control              |
| [4] Access to local resources  | [12] Immediate possession of market share     |
| [5] Gaining experience before fully establishing your company in the market                  | [13] Market different to home country         |
| [6] Ability to locally evaluate the market conditions  | [14] Acquisition of brand name                |
| [7] (Partly) Avoidance of bureaucratic hurdles   | [15] Least expensive form to enter the market |
| [8] Market restrictions  | [16] No choice of market entry form           |



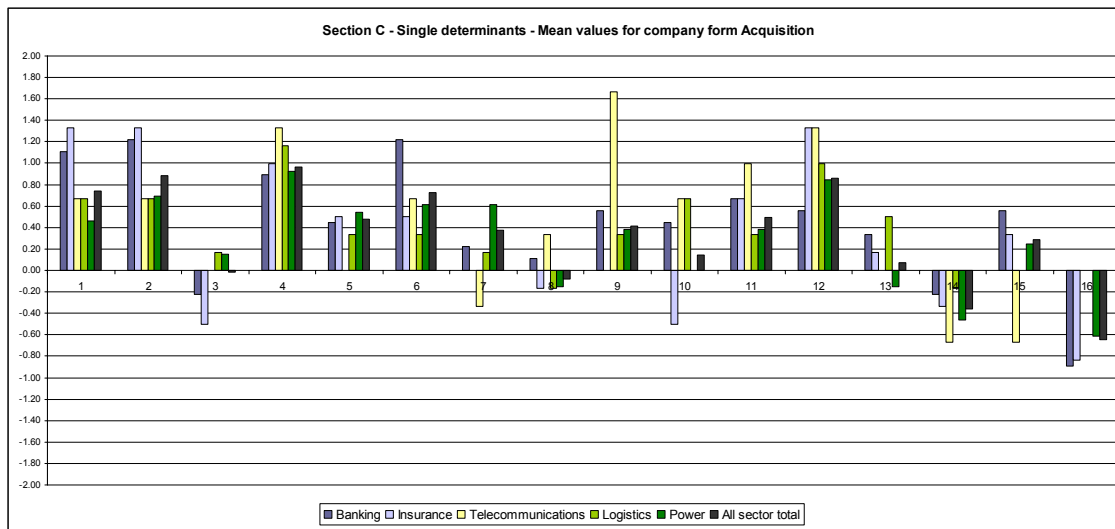
- |  |   |
|--|---|
| [1] Access to companies already established in the market                                    | [9] Common strategy of the company            |
| [2] Ability to construct an establishment according to specific requirements of the business | [10] Existence of competitors in the market   |
| [3] Sharing of business risk   | [11] Gaining proprietary control              |
| [4] Access to local resources  | [12] Immediate possession of market share     |
| [5] Gaining experience before fully establishing your company in the market                  | [13] Market different to home country         |
| [6] Ability to locally evaluate the market conditions  | [14] Acquisition of brand name                |
| [7] (Partly) Avoidance of bureaucratic hurdles   | [15] Least expensive form to enter the market |
| [8] Market restrictions  | [16] No choice of market entry form           |

**Attachment 16:      Section C - Mean Values by Company Form**

**Section C – Thematic Blocks – Mean Values by Company Form**

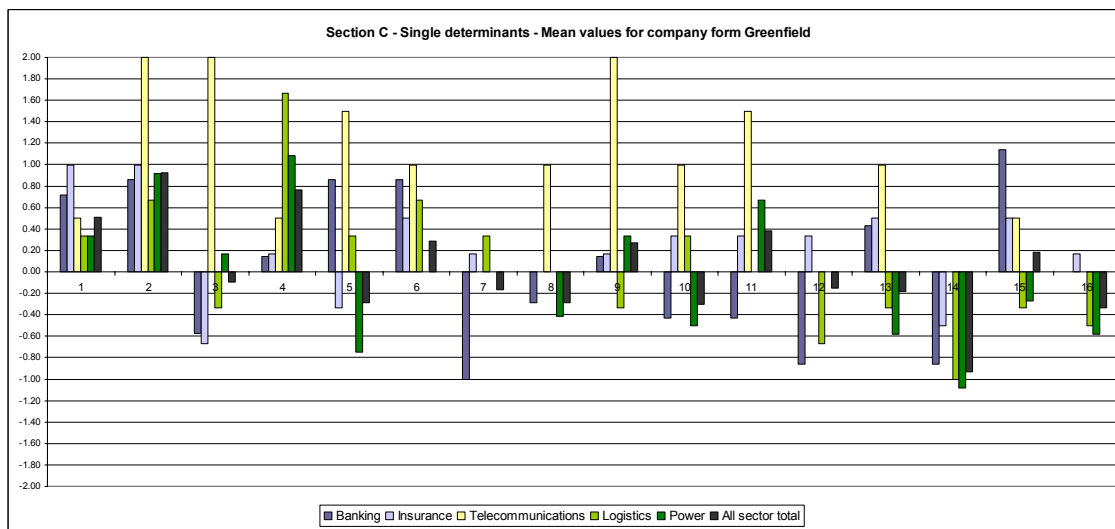


## Section C – Single determinants - Mean Values by Company Form



- [1] Access to companies already established in the market
- [2] Ability to construct an establishment according to specific requirements of the business
- [3] Sharing of business risk
- [4] Access to local resources
- [5] Gaining experience before fully establishing your company in the market
- [6] Ability to locally evaluate the market conditions
- [7] (Partly) Avoidance of bureaucratic hurdles
- [8] Market restrictions

- [9] Common strategy of the company
- [10] Existence of competitors in the market
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- [6] Ability to locally evaluate the market conditions
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- [8] Market restrictions

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