The macroeconomic determinants for M&A deals

between EURO15 and emerging markets

Abstract:

There is an increasing amount of cross-border investments. This paper investigates which macroeconomic determinants of emerging markets influence the allocation of M&A amount in deals where EURO15 countries are the acquirer and emerging markets the target. The total M&A amount involved in this research is $435 billion spread over 2550 deals. The data period is January 1995 – December 2007. An empirical research using is performed to determine significant macroeconomic factors. Based on this empirical evidence it can be concluded that the development of emerging markets, information costs to access an emerging market, political stability of an emerging market and the population of an emerging market are of significant influence on the allocation of M&A deals where EURO15 countries are the acquirer and emerging markets the target.

ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of Economics

Finance Department

Supervisor: Laurens Swinkels

Name: Djoey Veenendaal

Studentnumber: 266432

Table of contents

1. <u>Introduction</u>

The amount of cross border investments has grown over the past few years. According to data gathered from the database from the World Bank Indicators (WBI)[1] the absolute amount of global foreign investments has increased over the last years (figure 1.1). Not only the absolute value but also the relative value of international investments is growing: countries receive a higher percentage of investment inflows (figure 1.2). These investment flows are opportunities for emerging markets to attract financial inflows. The question is when an emerging market is actually attractive to invest in. So which macro economic factors or country characteristics of emerging markets are of significant importance to receive international investments? These are questions all emerging markets have to deal with when they want to attract foreign investments.

Figure 1.1. Global net foreign direct investment (US Dollar billion) in the period 1992-2007.
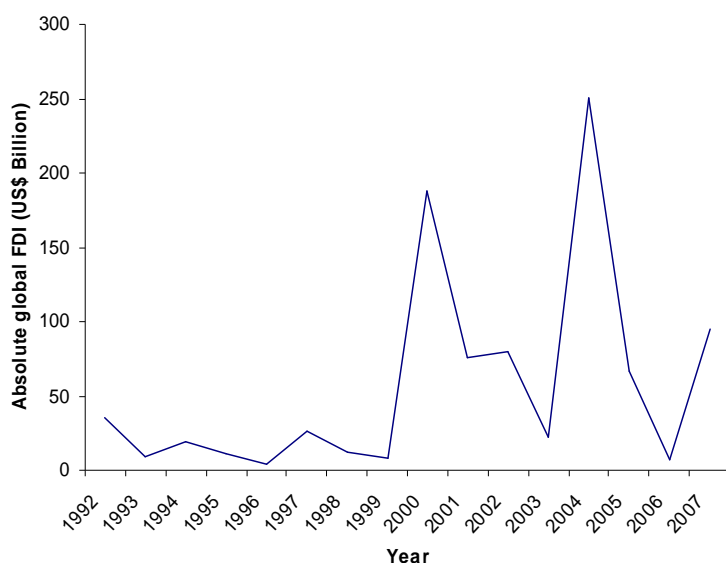
Source: World Bank Development Indicators, 2008

Much research has already been conducted to identify factors that determine the allocation of international investment flows. Colonial links, cultural proximity and legal systems are

---

[1] See World Bank Development Indicators, 2008

examples of factors that have been used in these researches (Buch & DeLong 2001, Guillèn & Tschoegl 1999).

This research however aims to identify macro-economic characteristics of emerging markets that significantly influence the allocation of mergers and acquisitions (M&A) amount in deals where the first 15 members of the European Union (EURO15) countries are the acquirer and emerging markets the target.

Most similar researches have focused on determinants for foreign direct investments and not on mergers and acquisitions in specifically[2]. Rossi and Volpin (2003) are one of the few researchers who performed a comparable research to determinants of cross-country mergers and acquisitions. Nonetheless, they solely concentrated on laws and regulations across countries. This thesis also takes these determinants into account, but in addition uses more determinants compared to the latter research. Also Buch and DeLong (2001) explored for cross-border M&A. However, their focus was confined to the banking industry. This research includes cross-border M&A in all industries

None of the previous researches into determinants of FDI centered on investment flows from one block of countries to another block of countries: the focus has been on FDI from one country to a block of countries (Guillen and Tschoegl 1999, Yamori 1997, Loree and Guisinger 1995) or on investment flows within a country (Coughlin et al. 2008).

Traits of novelty of this thesis compared to papers with similar backgrounds lies therefore in the following:

- A research to determinants of investment flows between two blocks of countries (EURO15 countries and emerging markets). A study about factors for cross-border investments between EURO15 countries and emerging markets has never been performed before;

- A research where cross-border mergers & acquisitions are used to measure cross-border investments instead of the commonly used FDI. Compared to the few previous studies that did the same this research uses more determinants and takes all industries into account instead of one.

---

[2] The difference between FDI and Cross-border M&A is explained in section 2.

Figure 1.2 Global foreign direct investment, net inflows (% of GDP) in the period 1992-2007.
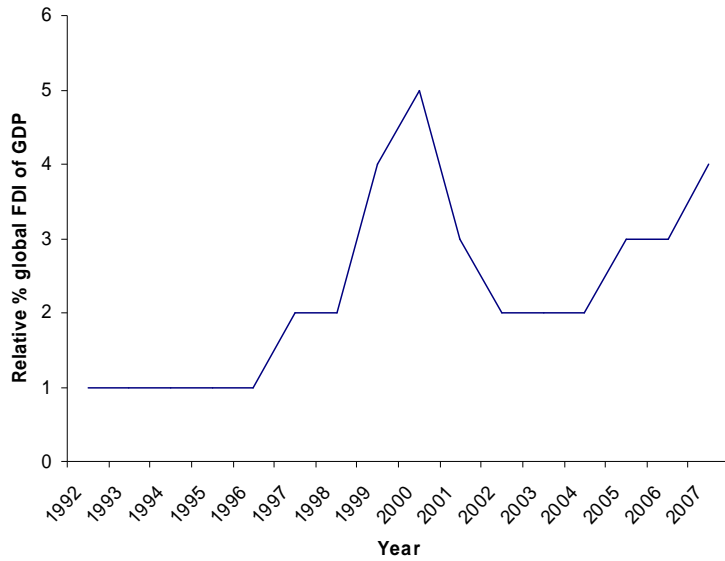
Source: World Bank Development Indicators

This brings us to the formulation of the research question:

"Which macroeconomic determinants of emerging markets influence the allocation of M&A amount in deals where EURO15 countries are the acquirer and emerging markets the target?"

To answer the main research question, the following sub-questions will need to be answered:

- What macroeconomic determinants are found in literature?
- What macroeconomic determinants are of influence on cross-border M&A activity from EURO15 to emerging markets?

A literature review and an empirical research are performed to answer these questions. This research is structured as follows: First, section 2 will give an overview of studies with a similar research background. Then section 3 will elaborate on the assumptions made, method and M&A data used. Furthermore, section 4 focuses on the data explanatory variables and their hypotheses. Section explains methodology used to perform the empirical research. The

results of the empirical research and hence the answer on accepting or rejecting hypotheses will be described in section 6. Finally, section 7 contains the conclusion of this thesis.

2. <u>Literature Review</u>

A short literature overview of macroeconomic determinants for Foreign Direct Investments ("FDI") is described in this section. Several studies have been conducted about determining factors that have a significant effect on the allocation of FDI. The components of FDI are equity capital, reinvested earnings and other capital (including, but not limited to M&A and intra-company loans). Cross-border mergers and acquisitions are thus a component of FDI (Calderon et al., 2004). Countries do not always collect data for each of the abovementioned components. As a result reported data on FDI are not fully comparable across countries. Particularly data on reinvested earnings, the collection of which depends on company surveys, often go unreported by many countries[3]. Because cross-border M&A deals are reported by several databases (e.g. Thomson One Banker) these figures can be compared. For this reason M&A deals are used in this research as a proxy to measure cross-border investments instead of FDI. Because of the strong focus in the field on FDI, this chapter also relies on researches that explain factors for FDI. There is little literature that centers on M&A specifically. Another reason to use M&A is because there is less empirical research concentrated on macroeconomic factors of cross-border investments and much more on industry specific factors (Herrero and Simon, 2003). Especially factors for the banking industry are highlighted in most of the literature.

An overview will be given of the most used macroeconomic factors to determine cross-border investments. These mostly used macroeconomic factors are: the development of a country, the information costs of a country, the political stability of a country, the economic stability of a country, the economic growth of a country and the population of a country. Each of these determinants will be described with results from several researches.

---

[3] Definition of UNCTAD (United Nations Conference on Trade and Development).

2.1 Development of a country

Reuber et al. (1972) performed a research about the difference of cross-border investments into developed and less developed countries. Their findings show that foreign investment flows into developed countries are relatively high compared to developing ones. Gross Domestic Product ("GDP") per capita is often used to measure the development of a country. Loree and Guisinger (1995) used GDP per capita as a factor to attract investments. They used GDP per capita figures from the World Bank database. The researchers conducted a into the location of new US direct investments abroad and determined the effect of several factors on the allocation of cross-border US investments. They concluded that GDP per capita is one of the major variables for equity investments from the US. According to them there is a positive relationship between the GDP per capita and the attractiveness off a country to invest in. Therefore the wealth of a country or the development of a country is a factor that determines cross-border investments. This finding is supported by the researches of Dunning (1981), Herrero and Simon (2003) and Galindo, Micco and Serra (2003). Dunning (1981) interpreted in his research an investment-development cycle. He concluded that "it suggests that a country's international investment position is related to its level of development as measured by its Gross National Product per capita". Herrero and Simon (2003) reviewed the theoretical literature that explains FDI and the empirical results of determinants of FDI. They concluded that the development of a country and their financial sector are key factors for the location of foreign investments. Galindo, Micco and Serra (2003) used the GDP per capita level of a country as a factor in their model to explain international investments. They also found a positive relationship. Consequently one can conclude that a high GDP per capita is a proxy for a developed country.

2.2 Information costs

There have been several studies that used proxies for information costs to explain factors of foreign investments. For example, Johanson and Vahlne (1977) conducted a research in the increasing foreign market commitments. According to them, foreign investments start with small investments in countries with a small 'psychic distance'. Investments grow gradually as the experience with the other country grows. 'Psychic distance' is defined as "The sum of factors preventing the flow of information from and to the market". Examples of these factors are among others differences in education, business practices, language and culture. Dunning

conducted several researches to determine factors that affect FDI flows. In his book, published in 1993, he indicates e.g. barriers to trade, physical distance and transportation costs as factors that determine the location of FDI. Therefore, according to Dunning, a negative relationship between information costs and the amount of cross-border investments can be drawn. Loree and Guisinger (1995) and Berger et al. (1999) conclude the same relationship in their studies. The former states: "FDI levels may be higher between home and host countries where similarity eases the cultural dimension of business relations". They used a composite index for each country to measure the cultural deviation from the US. Despite the fact that a negative relationship was found, they nonetheless expect that the relationship will diminish with time because of the globalization trend. The latter examined the consolidation of financial institutions in Europe. Besides finding motives and consequences of consolidation, they also found that consolidation across borders is limited by geographic and cultural distance. Cultural patterns and geographic restrictions inhibit consolidation across borders in Europe. Also differences in accounting systems and settlement methods have a negative effect on consolidation.

In addition, Buch and DeLong (2001) and Focarelli and Pozzolo (2001) found evidence that point to a negative relationship between cross-border investments and information costs. This is due to the outcome of Buchs and Delong's empirical research about factors of international bank mergers. They concluded that geographic and cultural distance tends to hold back merger activities. Focarelli and Pozzolo (2001) do not use geographic or cultural distance to measure the information costs of a cross-border investment. As an alternative they use the degree of trade openness of a country as a proxy. They measured this proxy by the ratio of export to GDP. Galindo, Micco and Serra (2003) corroborate the negative relationship in their research to explain cross-border banking activity. According to their research differences in legal origin, colonial links and language are factors that explain investments of banks in certain regions or countries. A more specific research by Guillén and Tschoegl (1999), about the expansion of Spanish retail banks into Latin America, states that the common language and the historical relationships played a significant role for Spanish retail banks to expand in Latin America and not in other parts of the world.

Nevertheless not all researchers conclude the same. According to Levitt (1983) the preferences and tastes of consumers in different countries are converging to a global norm. This implies a decreasing effect of cultural difference on cross-border investments. Sethi et al.

(2003) forecast that the low-wage advantage of developing countries will eventually favor them above their cultural difference to receive foreign investments.

2.3 Political stability

The political climate of a country is also used in different researches as a determinant for foreign investments. When a country becomes more politically stable, the uncertainty of potential investors reduces and this may increase the level of foreign investments in that country. Loree and Guisinger (1995) and Sethi et al. (2003) see political stability as a significant determinant of FDI. They measured political (in)stability with a country composite score. The higher a country scored, the lower the risk of an investment and hence a higher FDI. Political stability is a significant factor for cross-border investments not only for developing countries, but also for developed countries (Singh and Jun, 1995). Asiedu (2006) focused his research specifically on Africa. He found that countries with a stable political environment attracted more foreign investments. Galindo, Micco and Serra (2003) used indexes of corruption to proxy political stability. They found that differences in corruption have a negative effect on cross-border investment flows. Berger et al. (1999) also suggested that political factors have, next to the abovementioned information costs factors, an impact on cross-border investments.

2.4 Economic stability

Not only political stability but also economic stability is taken into consideration in the literature about factors that determine cross-border investments. According to The World Investment Report of UNCTAD (1997) Western Europe was the only region in the world that was attracting cross-border investments from the US in the 1970s and 1980s. Reasons were that Western Europe outperformed other regions in the world when it comes to economic stability, infrastructure quality and investment policies. Therefore one can state that the role of good investing conditions is of significant importance. According to UNCTAD (1997) an open economy, low wages, a stable currency and an educated and skilled work force are main proxies for economic stability and thus for attracting cross-border investments. Also Focarelli and Pozzolo (2001), Yamori (1998), Sethi et al (2003) and Rossi and Volpin (2004) see economic stability as a factor that determines the allocation of a cross-border investment. Focarelli and Pozzolo (2001) use inflation as a proxy for economic stability in their study.

Yamori (1998) uses the investment risk level of country as a proxy to determine cross-border investments from Japanese financial institutions. His empirical research concluded that a country with a high investment risk level receives fewer investments than a country with a low investment risk level.

Sethi et al. (2003) performed an empirical research about FDI flows from the United States to Europe and Asia. According to them most of the FDI from the United States still flows to Western European countries because of the high wealth, political and economic stability and close cultural proximity. To measure political and economic stability they used a composite variable developed by the Association for Investment Management and Research (1996). The composite variable indicates financial and political risks of countries. However they expect that Asian countries will become more popular because of their relatively low wages and because companies become more efficiency consious (Sethi et al, 2003).

Rossi and Volpin (2004) performed a study into determinants of M&A around the world. They focused on differences in laws and regulations across countries and found that the volume of M&A activity is significantly larger in countries with better accounting standards and stronger shareholder protection. This indicates that countries with better governance policies attract more M&A activity. In addition, the quality of governance policies are also indication of the economic stability of a country.

2.5 Economic growth

In existing literature the economic growth of a country is often used as a proxy to attract cross-border investments. There is no consensus about the effect of economic growth on the location of foreign investments. On the one hand Focarelli and Pozzolo (2001) and Yamori (1998) claim that (expected) economic growth is a driving force in locating FDI. The conclusion of Focarelli and Pozollo (2001) applies to patterns of international bank mergers in OECD countries. They found a positive relationship between economic growth of a country and the attractiveness to receive investments. On the other hand, Yamori (1998) concludes that there is a negative and significant relationship between economic growth and the level of received investments. Here the proxy used for economic growth is the change in Gross National Product of a country. His conclusion applies to cross-border investments from Japanese financial institutions.

2.6 Population

Buch and Delong (2001) investigated the motives for international bank mergers in the period 1978-2001. They found that population has, next to information costs and regulations, a positive significant influence on locating cross-border investments.

Focarelli and Pozzolo (2001) also use population as a factor in their research to explain patterns of cross-border bank mergers and shareholdings in OECD countries. They argue that countries with a smaller population tend to have a more open economy and hence receive more cross-border investments. However it must be noted that their empirical research does not deliver significant evidence for this hypothesis.

3. <u>Data</u>

This section will give an overview of the method and assumptions used to find the M&A data for the empirical research. The empirical part of this thesis covers mergers and acquisitions where the EURO15 countries are the acquiring nation and emerging markets the target nation. The time period concerns January 1995 until December 2007. This entails a total M&A amount of $435 billion in 2550 deals (see table 3.1.1.).

3.1 Data period
The chosen timeframe is from January 1995 until December 2007. This because of the availability of data and the total amount of cross-border M&A.

3.2 Countries

3.2.1 EURO15
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom were part of the European Union in 1995 and are the acquiring countries in cross-border M&A deals. They are referred to as "EURO15". Some of the countries that joined the European Union after 1995 were still indicated as "emerging markets" in 2007 (e.g. Czech Republic). The abovementioned fifteen countries are chosen because they are economically stronger than most of the countries that joined the European Union after 1995. The majority also has a similar currency (Euro) and form an economic block because of economic cooperation. In the chosen timeframe for the empirical research Portugal and Greece were a marked as emerging markets for a couple of years. During these years Portugal and Greece were considered emerging markets and resultantly not part of the EURO15.

3.2.2 Emerging markets
Emerging markets are the target countries in M&A deals in this empirical research. Emerging markets are defined as the country members of the MSCI Barra Emerging Markets Index in the period between 1 January 1995 – 31 December 2007. The MSCI Barra Emerging Markets

Index is defined as "*a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets*" (MSCI Barra, 2009)[4]. MSCI Barra is a leading provider of investment decision support tools to investment institutions worldwide. Since 2007 the MSCI Barra Emerging Markets Index includes the following countries: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Thailand and Turkey. However in the period from January 1995 until December 2007 the member countries of the Emerging Market Index did not continuously include all of the abovementioned countries. When collecting the M&A data the listed countries of the MSCI Barra Emerging Markets Index were corrected for fluctuations. Table 3.2.1 gives an overview of the listed countries in the MSCI Barra Emerging Markets Index in the period of January 1995 until December 2007. For all the countries mentioned in this table, M&A data were collected based on the period they were listed on the MSCI Barra Emerging Markets Index[5].

1 January is used as a start or end date in the data collection. Annual aggregated data of cross-border mergers & acquisitions is collected on this manner. Because all factors used in the empirical analyses to explain international investments are annual measures, only this data can be used.

---

[4] http://www.mscibarra.com/products/indices/licd/em.html

[5] Greece and Portugal are special countries due to the fact that they both are on the one hand a country member of the EURO15 and on the other hand considered to be an emerging market during a certain period of the sample time period. This means that Greece is considered an emerging market from 1 January 1995 until 1 January 2001. From 1 January 2001 until 31 December 2007 Greece is part of the EURO15 sample. Thus, found cross-border mergers & acquisitions data for Greece is partly taken into account in the EURO15 sample and partly in the emerging markets sample. The same holds for Portugal. Portugal is considered an emerging market in the timeframe from 1 January 1995 until 1 January 1997. As of 1 January 1997 until 31 December 2007 Portugal is part of the EURO15 sample.

Table 3.2.1 Country members of the MSCI Barra Emerging Markets Index in the period 1-Jan-1995 until 31-Dec-2008

The index member period gives the start and the end date of a country membership. The used period for data collection contains the start and the end date that a country is picked in the data sample for this research.

Country	Index member period		Used period for collecting data	
	Start	End	Start	End
Argentina	1-Jan-1988	29-May-2009	1-Jan-1995	1-Jan-2008
Brazil	1-Jan-1988	-	1-Jan-1995	1-Jan-2008
Chile	1-Jan-1988	-	1-Jan-1995	1-Jan-2008
China	3-Sep-1996	-	1-Jan-1997	1-Jan-2008
Colombia	2-Feb-1994	-	1-Jan-1995	1-Jan-2008
Czech Republic	3-Sep-1996	-	1-Jan-1997	1-Jan-2008
Egypt	1-Jun-2001	-	1-Jan-2002	1-Jan-2008
Greece	1-Jan-1988	31-May-2001	1-Jan-1995	1-Jan-2001
Hungary	3-Sep-1996	-	1-Jan-1997	1-Jan-2008
India	2-Feb-1994	-	1-Jan-1995	1-Jan-2008
Indonesia	1-Sep-1989	-	1-Jan-1995	1-Jan-2008
Israel	2-May-1995	-	1-Jan-1995	1-Jan-2008
Jordan	1-Jan-1988	25-Nov-2008	1-Jan-1995	1-Jan-2008
Korea	7-Jan-1992	-	1-Jan-1995	1-Jan-2008
Malaysia	1-Jan-1988	30-Nov-1998	1-Jan-1995	1-Jan-1998
	1-Jun-2000	-	1-Jan-2001	1-Jan-2008
Mexico	1-Jan-1988	-	1-Jan-1995	1-Jan-2008
Morocco	1-Jun-2001	-	1-Jan-2002	1-Jan-2008
Pakistan	2-Feb-1994	31-Dec-2008	1-Jan-1995	1-Jan-2008
Peru	2-Feb-1994	-	1-Jan-1995	1-Jan-2008
Philippines	1-Jan-1988	-	1-Jan-1995	1-Jan-2008
Poland	2-May-1995	-	1-Jan-1996	1-Jan-2008
Portugal	1-Jan-1988	30-Nov-1997	1-Jan-1995	1-Jan-1997
Russia	1-Dec-1997	-	1-Jan-1998	1-Jan-2008
South-Africa	2-May-1995	-	1-Jan-1996	1-Jan-2008
Sri Lanka	2-Feb-1994	31-May-2001	1-Jan-1995	1-Jan-2001
Taiwan	3-Sep-1996	-	1-Jan-1997	1-Jan-2008
Thailand	1-Jan-1988	-	1-Jan-1995	1-Jan-2008
Turkey	1-Sep-1989	-	1-Jan-1995	1-Jan-2008
Venezuela	2-Feb-1994	31-May-2006	1-Jan-1995	1-Jan-2006

Source: MSCI Barra Emerging Markets Index Methodology (May 2009)

3.3 Cross-border mergers & acquisition data

The database provided by Thomson One Banker is utilized to find all the cross-border mergers and acquisitions deals between EURO15 and emerging markets. To find these deals in the period 1 January 1995 until 31 December 2007, the EURO15 countries have been marked as acquiring nations and the emerging markets as target nations. The data employed is the actual time the merger or the acquisition was marked as "effective". By retrieving the data on a year-by-year basis, it was possible to include the fluctuation of listed countries in the MSCI Emerging Markets Index and it enabled to take the special position for Portugal and Greece into account. Cross-border mergers and acquisitions data have been searched for a year-by-year basis. By taking all above steps into account this sample contains $435 Billion of total transaction value in 2550 deals in the period 1-1-1995 until 31-12-2007.

Table 3.1.1. shows all transactions between EURO15 countries and emerging markets. This table reveals some interesting patterns:

1. The total number of deals and the total transaction value to countries located <u>near EURO15</u> countries is relatively high:

   - The highest number of deals to emerging markets is to Poland. This entails a total of 337 deals with a transaction value of $28,244 million. Neighbor country Germany hast the largest contribution with 67 deals. Poland is situated near EURO15 countries.

   - Also investments from neighboring countries to another European emerging market, Czech Republic, are relatively high. Austria invests the highest amount of their cross-border M&A flows to emerging markets in Czech Republic ($2,659 million).

   - Greece spends almost all their cross-border M&A investments to emerging markets in neighbor country Turkey. $5.331 million is invested into Turkey. This is more than 90% of the total M&A investments of Greece into all 28 emerging markets ($5,872 million).

   - Morocco receives their second highest investment from EURO15 countries from Spain ($2,098 million). Spain is also located near Morocco.

2. The total number of deals and the total transaction value to countries with a high population is relatively high

- China, India, Indonesia, Brazil and Russia are with respectively an average population of 1.3 billion, 1.0 billion, 209 million, 177 million and 145 million the highest populated emerging markets[6]. Compared to most other emerging markets China, India, Brazil and Russia are often a target of cross-border investments from EURO15 countries. The aggregated amount of $156,473 million transaction value and a total of 819 deals is relatively high compared to the transaction value ($434,844 million) and total number of deals (2519) to all 28 emerging markets.

3. The total number of deals and the total transaction value to countries with similar languages is relatively high

- Most deals from Spain in emerging markets are located in Latin America. Spanish is the native language of these countries[7]. Argentina leads with 84 deals ($34,811 million), Brazil in 77 deals ($36,595 million), Mexico in 53 deals ($15,455 million), Chile in 46 deals ($8,545 million), Colombia in 23 deals ($7,382 million), Peru in 12 deals ($2,937 million) and Venezuela in 10 deals ($2,069 million).

- Portugal invests almost all of their cross-border M&A investments to emerging markets in Brazil. The total M&A amount spent in Brazil is $9,309 million. This is more than 85% of the total M&A amount spent by Portugal to emerging markets (total = $10,912 million). The native language of Brazil is Portuguese.

- South Africa and India are the most selected target for cross-border M&A deals in emerging markets from the UK. The UK was 100 times in India and 110 times in South Africa the acquiring nation of M&A transactions. The total

---

[6] See table A.6. The average population is measured based on the population in the time period 1995 – 2007.

[7] Except Brazil. In Brazil Spanish is widely spoken.

M&A value invested in India was $17,156 million and in South Africa $16.195 million. English is an official language in both India and South Africa[8].

4. Other notable observations

- Luxembourg invested a total of $11,440 million in South Africa. This in only 3 deals. A relatively high amount compared to the number of deals. This can be attributed to the $11,078 million deal between DB Investments (Luxembourg) and De Beers Consolidated Mines (South Africa)[9].

---

[8] Source: Website www.nationsonline.org/oneworld (2010)

[9] The third biggest deal measured in US Dollars of the total overview of deals of table 3.1.1. The biggest deals are:

- Repsol SA (Spain) - YPF SA (Argentina). Deal value: $13,151 million

- Vodafone Group PLC (UK) – Hutchison Essar Ltd (India). Deal value: $12,748 million

- DB Investments (Luxembourg) – De Beers Consolidated Mines (South Africa). Deal value: $11,078 million

- Telefonica SA (Spain) - Telecommunicacoes de Sao Paulo (Brazil). Deal value: $10,213 million

Table 3.1.1. Overview of mergers and acquisitions between EURO15 and emerging markets

This table provides an overview of the number and the total value of mergers and acquisition between EURO15 countries and emerging markets. The columns give the acquiring country and the rows the target country of an investment. The first column per target nation provides the number of deals and the second column the total deal value. The accumulated total provides the total number of deals and the total transaction value per acquiring country and the total for EURO15. The period used is 1-1-1995 till 1-1-2008. All deals for which transaction values are known are present.

	Austria		Belgium		Denmark		Finland		France		Germany		Greece		Ireland		Italy		Luxembourg		Netherlands		Portugal		Spain		Sweden		UK		Total EURO15	
	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million	#deals	$ million
Argentina	2	84	5	215	0	0	0	0	28	3,550	2	57	1	11	1	26	12	841	1	5	5	1,008	1	18	84	34,811	1	58	32	1,775	175	42,459
Brazil	1	75	7	6,172	5	84	4	972	44	8,584	15	846	0	0	3	131	17	4,647	7	904	18	9,958	35	9,309	77	36,595	5	415	44	7,753	282	86,445
Chile	0	0	0	0	0	0	0	0	5	108	5	888	0	0	0	0	2	506	0	0	5	1,084	0	0	46	8,546	1	61	17	2,650	81	13,842
China	2	3	12	1,154	4	39	6	742	23	1,769	14	745	2	15	2	26	9	369	2	693	18	664	0	0	5	705	6	124	61	8,087	166	15,115
Colombia	0	0	0	0	0	0	1	3	4	1,069	0	0	0	0	0	0	0	0	2	488	4	222	0	0	23	7,382	2	65	6	5,190	42	14,419
Czech Republic	21	2,669	3	1,150	2	58	1	15	6	1,778	24	4,099	0	0	3	89	3	106	3	228	15	1,552	0	0	5	4,981	4	179	37	6,252	127	23,146
Egypt	0	0	0	0	0	0	0	0	6	1,484	0	0	1	23	0	0	3	1,600	0	0	1	287	0	0	0	0	0	0	2	737	13	4,131
Greece	0	0	0	0	0	0	0	0	2	267	2	445	0	0	0	0	6	467	0	0	2	14	1	431	0	0	0	0	4	552	17	2,176
Hungary	9	2,470	4	846	0	0	4	248	15	1,784	15	5,119	0	0	1	90	5	393	4	31	5	388	0	0	2	5	4	12	20	772	88	12,158
India	2	9	6	99	6	67	4	34	23	798	36	1,253	0	0	9	34	9	232	3	76	26	677	0	0	5	95	17	290	100	17,156	246	20,820
Indonesia	0	0	0	0	0	0	0	0	3	60	7	1,156	0	0	0	0	0	0	1	40	13	1,163	0	0	0	0	0	0	15	1,224	39	3,643
Israel	1	20	4	20	1	31	0	0	10	212	16	341	0	0	0	0	7	987	0	0	4	253	0	0	0	0	3	164	24	879	70	2,907
Jordan	0	0	0	0	0	0	0	0	2	610	0	0	0	0	0	0	1	10	0	0	0	0	0	0	2	60	0	0	0	0	5	680
Korea	0	0	5	423	2	57	0	0	16	4,178	16	2,817	0	0	1	214	0	0	1	30	13	6,249	0	0	3	23	5	82	26	5,090	94	19,163
Malaysia	0	0	3	241	7	151	1	15	3	354	5	234	0	0	0	0	0	0	0	0	5	264	0	0	0	0	2	455	12	157	43	1,737
Mexico	0	0	1	13	6	43	1	33	3	19	5	358	0	0	2	75	2	227	1	1,440	5	4,716	0	0	53	15,455	5	839	24	4,533	116	27,943
Morocco	0	0	0	0	0	0	0	0	11	2,407	0	0	0	0	0	0	0	0	0	0	0	0	1	7	2	2,098	0	0	2	22	17	4,534
Pakistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	234	0	0	0	0	2	728	6	1,222	10	2,184
Peru	0	0	0	0	0	0	0	0	3	48	0	0	0	0	0	0	0	0	0	0	3	91	0	0	12	2,937	1	34	9	1,468	29	4,579
Philippines	0	0	0	0	0	0	0	0	2	98	3	271	0	0	0	0	0	0	0	0	2	15	0	0	4	141	2	53	12	440	25	1,018
Poland	16	640	16	1,007	24	542	15	562	42	9,975	67	4,460	1	0	11	991	9	1,171	14	664	22	3,558	0	0	13	295	30	1,505	54	2,448	337	28,244
Portugal	0	0	0	0	0	0	0	0	4	489	1	117	0	0	1	9	0	0	0	0	0	0	0	0	3	45	0	0	5	12	14	672
Russia	5	1,205	4	2,130	1	2	11	757	5	2,587	18	11,657	2	460	1	21	5	6,252	3	367	7	3,191	0	0	4	302	8	596	51	4,566	125	34,083
South Africa	1	9	2	31	1	355	0	0	7	2,663	9	240	4	28	4	96	8	585	3	11,440	13	916	0	0	6	203	6	121	110	16,195	168	32,872
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	37	0	0	0	0	1	3	1	19	3	59
Thailand	1	4	8	728	2	8	4	100	12	502	6	236	0	0	0	0	0	0	0	0	7	1,713	0	0	2	37	1	6	22	1,042	65	4,376
Turkey	3	1,440	6	3,927	2	47	2	131	9	929	18	1,402	6	5,331	0	0	7	579	0	0	14	2,986	1	704	2	658	2	3,107	25	7,059	96	28,300
Venezuela	0	0	0	0	0	0	0	0	4	111	0	0	0	0	1	34	4	478	0	0	2	108	0	0	10	2,069	0	0	4	330	26	3,130
Total	65	8,670	86	18,156	63	1,494	55	3,612	232	46,423	284	36,731	15	5,872	35	2,045	106	19,440	45	16,406	232	41,348	43	10,912	364	117,444	108	8,887	728	97,620	**2,519**	**434,865**

Source: Thomson One Banker (2009)

4. **Data explanatory variables and hypotheses**

The former section provided an overview of M&A deals between EURO15 countries and emerging markets. But what are factors that determine the allocation of the cross-border M&A deals? The literature review already gave insight into some possible answers[10].

In this the assumed factors to answer this question are elucidated. Furthermore, hypotheses concerning these possible M&A allocation explanatory variables are formulated. To make the hypotheses measurable proxies are used. These proxies are also explained in this section. For every proxy a null hypothesis (H_0) and an alternative hypothesis (H_1) is formulated. The H_0 hypothesis is the assertion that the proxy has no influence on the allocation of EURO15 M&A activity in emerging markets. The alternative hypothesis is that the proxy influences these activities. Table 4.4 provides an overview of the proxies per cross-border investment determinant.

4.1 Development of a country

From the literature review one can retrieve that the development of a country is a common factor used by other researchers to determine the allocation of international investment flows. All researches concluded that a country with high development attracts more cross-border investments than a country with relatively low development. When a country is more developed, it will have more potential customers due to their higher income or purchasing power. Countries with more potential customers are as a result more attractive to invest in. Therefore the assumption is made, that when an emerging market is more developed it is more attractive to be a target for M&A activity from EURO15 countries.

---

[10] As stated in the literature review, there are many different factors that influence the allocation of cross-border investments. The literature review gives insight to possible factors; however these are for the biggest part based on FDI and not for mergers and acquisitions in particular. However due to the fact that both cross-border mergers and acquisitions and FDI concern investments in another country, the assumption is made that these factors are also valid for cross-border M&A.

Table 4.1.1. Determinants, their proxies and the expected influence

This table provides an overview of the determinants that are tested for the influence on cross-border mergers and acquisitions allocation by the model in section 6. This table also provides the proxies to measure the determinants and the expected influence on the M&A amount emerging markets receive from EURO15 countries.

Determinant	Proxy	Expected influence
Development of a country		
	•GDP per capita	Positive
	•Enrollment in primary education	Positive
Information costs		
	•Culture deviation	Negative
	•Flight time	Negative
	•Language proximity	Positive
	•Regulations	Negative
	•Trade/GDP	Positive
	•Taxes on international trade	Negative
	•Imported goods and services/GDP	Positive
Political stability		
	•Corruption perception index	Positive
Economic stability		
	•Inflation	Negative
	•Exchange rate fluctuation	Negative
Economic growth		
	•GDP growth	Positive
Population		
	•Population	Positve

The most used indicator for economic performance and thus for the development of a country in other empirical researches is the GDP of a country. By comparing the GDP per capita of countries it is possible to establish differences in economic development of a country. For this reason, GDP per capita (US Dollar) is used as a proxy to measure the development of a country. This data is provided by the World Bank database. The emerging markets with the highest GDP per capita are Israel ($19,000), Greece ($16,000), Portugal ($14,000) and Korea ($13,000). The Asian emerging markets India ($384), Pakistan ($615), Indonesia ($1,000), Sri Lanka (1,100), Philippines ($1,100) and China ($1,200)[11] have the lowest GDP per capita. Also Egypt ($1,150) and Morocco (1,400) have a relatively low GDP per capita. An overview

---

[11] The GDP of China is with $1.6 billion the highest of all emerging markets. However their population is with approximately 1.3 billion also the highest.

of the GDP per capita data can be found in table A.2.1 of Appendix A. This results in the following hypotheses:

H$_0$: *"GDP per capita of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"GDP per capita of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

Not only data that measures economic development is used, but also data that measures the intrinsic development of the population in a country. By means of looking at the total number of enrolments in primary education of a population, it becomes feasible to determine whether the population of an emerging market is more educated than the population in other emerging markets. When this relative value is higher in a country the assumption can be made that the population is more educated and thus more developed. Almost all emerging markets have a child population of more than 90 % who are enrolled into primary educational institutions. Just Pakistan (62%), Morocco (83%), India (84%), Colombia (88%) and Hungary (88%) have an enrolment of lower than 90%. In the gathered data, the net total enrolment in primary education, is again provided for by the database of the World Bank (see appendix A, table A.2.2). Consequently the following hypothesis can be drawn:

H$_0$: *"The education level of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The education level of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

4.2 Information costs

When a firm wants to invest abroad it analyses which country might be attractive to invest in. When high costs are involved to gather information about a country, it becomes less attractive than a country that has lower costs to gain information about. When looking at accessibility

and proximity one is able to measure the costs to gather information or do business in an emerging market. As described in the literature review other researches already used several indicators to measure information costs. Geographical distance, cultural differences and trade openness are examples of indicators.

Through measuring the accessibility of an emerging market one is able to see which emerging markets are easier to gain access compared to other countries. Here the assumption is made that emerging markets with a higher accessibility will be a greater target of cross-border mergers and acquisitions activity, because of the lower costs involved for the acquirer to gain access to that emerging market.

The World Bank Development Indicators database provides four different proxies to measure the accessibility of a country. The first one is the relative value of trade in the total gross domestic product (GDP) of an emerging market (table A.3.1. of appendix A).

Brazil (23%), Argentina (31%) and India (31%) have the lowest relative value of trade compared to their GDP. The sum of the import and export is higher than the GDP in 5 emerging markets (Thailand, Jordan, Czech Republic, Hungary and Malaysia).

A higher percentage indicates a more open market and consequently a lower barrier to trade. Thus, the alternative hypothesis will be that an emerging market with a higher relative value of trade in GDP receives more cross-border investments than an emerging market with a lower relative value of trade in GDP:

H_0: *"The relative value of trade in GDP of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H_1: *"The relative value of trade in GDP of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

The second proxy is the percentage of imported goods and services of the GDP in a particular country (table A.3.2 of appendix A). When an emerging market imports relatively more goods and services it indicates that this emerging market is more internationally orientated and that a relatively higher percentage of international investments streams are flowing into this country. This is an indication that an emerging market is more accessible because of the higher relative value of imported goods and services. This indicator also shows that Malaysia (94%),

Hungary (65%), Czech Republic (64%), Jordan (76%) and Thailand (57%) are the most accessible. Brazil (11%), Argentina (14%) and India (16%) show lowest accessibility. This study tests whether an emerging market with a higher percentage of imported goods and services is more attractive to invest in because of their lower barrier to trade:

H$_0$: *"The imported goods and services of the GDP of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The imported goods and services of the GDP of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

The third proxy is the "ease of doing business index". This is an index developed by the World Bank, which measures the regulations, concerning doing business, in a country. The lower the score, the more friendly the regulations of that particular country (table A.3.3 of appendix A). The World Bank only provides an "Ease of doing business" for the year 2007. The ease of doing business climate is worst in Venezuela, Philippines, Morocco, Indonesia and Brazil. Thailand, Korea, Malaysia, Israel and South Africa score best in the ease of doing business index. Especially between Asian emerging markets a big difference can be noticed. The assumption can be made that an emerging market with more friendly regulations, thus a lower score in the index, is a more interesting target for cross-border mergers and acquisitions activity. More friendly regulations indicate a lower barrier to invest in that emerging market and hence a better accessibility of that emerging market:

H$_0$: *"The ease of doing business in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The ease of doing business in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

The last proxy to measure accessibility of an emerging market is the relative value of taxes on international trade compared to revenues (table A.3.4 of appendix A). The Philippines (20%), Russia (19%) and India (18%) show the highest relative value of taxes. With 0%, Greece and

Portugal have lowest relative tax percentage, followed by Israel, Turkey and Poland with 1%. When an emerging market asks a higher percentage of taxes on revenues, this emerging market is less interesting to invest in. A firm prefers an investment with a lower percentage of tax on revenues than a similar investment with a higher tax percentage on revenues. Hence, the H_1 hypothesis is that the higher the tax percentage on international trade the higher the costs to invest in that emerging market and the less attractive it is to receive cross-border investments:

H_0: *"The tax percentage on revenues in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H_1: *"The tax percentage on revenues in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

Several proxies can measure the proximity of two countries. It is assumed that when countries are closer to each other, the costs to gather information about that country are lower. Lower costs are more attractive for a firm and hence an incentive to invest in that country. In other researches, different proxies are used to measure the proximity between countries (see literature review). Examples are a common culture or language.

These two variables are also used in this thesis. In addition, this research employs the flight time between two countries as a proxy to measure proximity. When a firm in a EURO15 country intends to invest in an emerging market it will also consider whether executives can easily travel to these countries.

The website www.convertunits.com provides data about flight time between cities[12]. The capital city of every country is used to calculate the flight time between countries. The flight time to European emerging markets (Czech Republic, Greece, Hungary, Poland, Portugal, Russia and Turkey) is of course the lowest. But also the flight times to Egypt (1 hour from Greece and 3 hours from Italy), Israel (1 hour from Greece and 3 hours from Austria), Jordan (2 hours from Greece and 3 hours from Italy) and Morocco (1 hour from Spain and Portugal and 2 hours from France) are relatively low compared to other emerging markets (e.g. 17

---

[12] www.convertunits.com/distance/

hours from Finland to Chile and 16 hours from Sweden to Argentina). An overview of the capitals and the flight times is provided in table A.3.5 of appendix A. The hypotheses are:

H₀: *"The flight time to an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H₁: *"The flight time to an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

When EURO15 countries and emerging markets can communicate easily it is assumed that business relations between these countries are higher. From the website "nationsonline"[13] information has been retrieved about official languages and widely spoken languages of countries around the world. When a EURO15 country and an emerging market have a common official language the relation is classified as 1. Spanish is classified as 1 in 6 emerging markets: Spanish is an official language in Argentina, Chile, Colombia, Mexico, Peru and Venezuela. This is the highest score from all official EURO15 languages. Second place comes English, the official language of the UK and Ireland. English is an official language in 4 emerging markets (India, Pakistan, Philippines and South Africa).

When an emerging market has a similar widely spoken language as the official language of a EURO15 country, the classification is 0.5. English is widely spoken in 10 emerging markets. French and Dutch are an official language in Belgium. Therefore Belgian is widely spoken in 5 emerging markets (4 French and 1 Dutch). Consequently no language proximity is classified as 0 (see table A.3.6. of appendix A). Sweden and Denmark have no language proximity with emerging markets at all.

The higher the classification the more chance an emerging market has to become a target in M&A activity from EURO15 countries.

H₀: *"The language proximity between EURO15 countries and an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

---

[13] www.nationsonline.org

H$_1$: *"The language proximity between EURO15 countries and an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

Cultural proximity between countries can also play a major role in M&A allocation. Cultural proximity results in lower information costs. Hofstede (1983, 2001 and 2004) did several researches to develop a culture score in a country composite model. On his website[14] he developed a ranking of four dimensions of culture per country. In this ranking 100 is the highest and 0 the lowest possible score. These four culture dimensions are: Power Distance Index, Individualism, Masculinity and Uncertainty Avoidance Index. By calculating the difference in ranking per dimension for each country pair (e.g. Austria-Argentina or Belgium-Brazil) it is possible to compare the culture between these countries. The average difference of all 4 dimensions can be seen in table A.3.7 of appendix A. The cultural difference with Sweden is relatively high for all emerging markets. The cultural difference between Spain and the Latin American emerging markets is relatively low. This can be explained by their former colonial link. This also explains the small score in cultural difference between Portugal and Brazil. The hypotheses concerning the influence of culture proximity on investment flows are:

H$_0$: *"The cultural proximity between EURO15 countries and an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The cultural proximity between EURO15 countries and an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

4.3 Political stability

Political stability of a nation has been used as a factor to explain investment flows in other researches. Those researches stated that countries with greater political stability have lower risk of an investment. The lower the risk of an investment the more attractive the country is to be selected as a target for foreign investments (Loree and Guisinger, 1995 and Sethi et al., 2003). The downside risk increases a great deal when one invests in a political unstable

---

[14] www.geert-hofstede.com

country. The assumption is made that investors are risk averse. As a result the increasing of the downside risk overstates the increasing of the upside potential of an investment. It is thus assumed that the higher the political risk of a country, the lower the foreign investment inflows will be.

Corruption within a country is used as indicator for political stability. Expect is that countries with well established laws and regulation, and a government that acts to these laws and regulations, creates a stable business environment. A stable business environment is an incentive for firms to invest as corroborated by Velkova (2006). She investigated corruption in the integration of South East Europe into the EU. She concluded that countries with high corruption pointed to a higher possibility of an unstable political environment, with unfair competition and higher transaction costs.

The Corruption Perception Index ("CPI") of Transparency International is used as a proxy for corruption of a country in this research. Transparency International is the global civil society organization that leads the fight against corruption[15]. They have developed an index (CPI) to measure corruption. The index is based on expert assessments and opinion surveys. Countries are ranked between 0 and 10. 0 indicates that a country is highly corrupt and a 10 means that a country has no known corruption at all. Indonesia, Pakistan, Russia and Venezuela are with a ranking of 2 countries with the highest score in corruption of all emerging markets. Israel and Chile score a ranking of 7 and are the least corrupt emerging markets. The retrieved corruption data per emerging market can be found in table A.4.1 of appendix A.

Based on the preceding it is expect that an emerging market with a low CPI score indicates a highly corrupted country, therefore an unstable political environment and consequently less attractive to be selected as a target for cross-border investments, because of the higher downside investment risk. This results in the following hypotheses:

H_0: *"Corruption in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H_1: *"Corruption in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

---

[15] http://www.transparency.org/about_us

4.4 Economic stability

The economic stability of a country is also a commonly used factor to explain the location of international investments (see section 2.4). A country with a stable economy lowers the risk of an investment into that country and increases the likelihood of a return on the investment (assuming investors are risk averse). The inflation rate is an example of a used proxy for economic stability.

In this paper the inflation rate and the currency fluctuation are employed as proxies for economic stability. Both the inflation rate and the currency fluctuation indicates the performance of an economy. They do not only measure the general performance of an economy, but a stable inflation rate and a low currency fluctuation also indicate that a country possesses a solid economic policy.

The rise in consumer prices is the highest in Turkey (48%), Russia (38%) and Venezuela (33%). These high averages are mainly caused by the high inflation rate in the period 1995-2011. Russia had an inflation of 197% in 1995, Turkey had an average inflation of 73% in the period 1995-2001 and Venezuela had an inflation of 100% in 1996. Morocco shows with an average rise of 2% the lowest rise in consumer prices.

The fluctuation of the exchange rates compared to the US Dollar is the highest for the Russian Ruble[16], Indonesian Rupiah[17] and Argentine Peso[18]. Both the Chinese Yuan and the Jordanian Dinar established a fixed exchange rate with the US Dollar. Consequently both currencies show the lowest fluctuation compared to the US Dollar.

Appendix A, table A.5.1 and table A.5.2, give an overview of respectively the inflation rate and the exchange rate (US Dollar) of emerging markets. These figures are provided by the World Bank database. Ii is assumed that a stable inflation rate and a low fluctuation in exchange rates indicate a stable economic policy and therefore a low investment risk. As a result, the hypotheses are formulated as follows:

---

[16] Standard deviation of 2.1 with the exchange rate of 1995 as reference rate

[17] Standard deviation of 1.3 with the exchange rate of 1995 as reference rate

[18] Standard deviation of 1.0 with the exchange rate of 1995 as reference rate

H$_0$: *"The inflation rate in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The inflation rate in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_0$: *"The exchange rate fluctuation in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H$_1$: *"The exchange fluctuation rate in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

4.5 Economic growth

In the previous section it is described that research already found a relationship between the location of foreign investments and the economic growth of a country.

When a firm wants to invest abroad it is important to know the future economic growth of a country. Future economic growth is an indicator for future income and hence a positive incentive for international investment flows: the higher the economic growth of a country, the higher the probability that the market will grow and that the population of that country is able to buy more products or services from the firm. Because it is hard to obtain non-biased future market developments forecasts, since it is impossible to predict the future precisely, this research looks at the growth rate in the period of 1995 - 2008.

A commonly used proxy to measure economic growth is the growth rate of the GDP per capita. This indicator is used for economic growth. The assumption is made that the higher the relative GDP growth per capita is, the higher the economic growth of a country will be and the higher the economic growth, the higher the possibility to be a target of cross-border investments.

The database of the World Bank has provided the data for the GDP growth per capita of emerging markets in the period 1995-2008. Of all emerging markets China has the highest GDP growth (10%) followed by India (7%). All other emerging markets show an average annual GDP growth between 3% and 5%. An overview can be found in table A.6.. of appendix A. The hypotheses are:

H₀: *"The GDP growth in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H₁: *"The GDP growth in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

4.6 Population

Population is also used as determinant for the location of foreign investments in existing literature. However, there is no consensus about the influence of population on the investment decision.

Here the assumption is made that a country with a higher population will receive more cross-border investments because a country with a higher population has a bigger market to sell products or services. For a firm this indicates that there is a higher probability that it will sell more and therefore earn a higher income. After all, the firm is able to reach more potential customers.

As also mentioned in section 3.3 China, India, Indonesia, Brazil and Russia have an average population of respectively 1.268 billion, 1.031 billion, 209 million, 177 million and 145 million and are thus the highest populated emerging markets. Jordan and Israel have a population of respectively 5 million and 6 million and are the least populated emerging markets. The total population per emerging market as used in this empirical research in the period 1-1-1995 until 31-12-2007 can be found in appendix A, table A.7.1 (World Development Indicators, World Bank). The hypotheses are:

H₀: *"The population of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"*

H₁: *"The population of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"*

5. __Methodology__

All hypotheses mentioned in the previous section are tested on validity by performing a multiple Ordinary Least Squares (OLS) regression. With a regression technique it is possible to model the relationship between the dependent variable and the independent variables. While using an Ordinary Least Squares regression the sum of the squared errors[19] is minimized.

However before analysing the results of the OLS regression, the regression model has to be validated in order to produce reliable outcomes:

- Before running the regression, correlations among the independent variables have to be corrected for (multicollinearity) to prevent that an independent variable lowers the explanatory power of another variable. In particular the following can occur when not corrected for multicollinearity:
    - Individual independent variables give no significant influence on the dependent variable in the regression outcome. If two independent variables are almost perfectly related to one another, together they contain only enough information to estimate one parameter, not two. Hence inappropriate conclusions might be drawn (Brooks 2007);
    - The regression becomes very sensitive to small changes in the specification so that adding or removing an explanatory variable leads to large changes in the coefficient values or significances of other variables.
- OLS assumes that all observations have the same error variance (homoskedasticity). It assumes that all observations are equally reliable or contain an equal amount of information. OLS assigns an equal weight to all observations (Levy and Post 2005). Hence one has to be aware that all variables included in the regression are equally measured. If not heteroskedasticity occurs and the assumption of homoskedasticity is not met.

---

[19] The deviation from all individual data points to the regression line is as low as possible.

The higher the sample size n of the regression the more reliable the evidence is for rejecting H_0. When looking at investments from EURO15 countries individually, there is an n of 28^{20} per country but by looking at the total sum of all individual EURO15 countries there is an n of 418^{21}.

H_0 is rejected when the outcome of the p-value in the output of the regression falls below the significance level α^{22}. For α I use 10%, 5% and 1%[23]. The p-value gives the change that H_0 is true. Hence with a p-value above 10% the outcome of the regression implies that the used determinant for international M&A flow has no significant influence on the allocation of these investments.

In the next sections the input for the independent variable and the dependent variables of the regression model is provided for.

5.1 Dependent variables

The regression formula is based on the following formula (1):

$$(1)\ Y_{i,j} = \alpha + X_{ij}\beta_a + \varepsilon_{i,j}$$

Several tests are performed. All tests are performed with different dependent variables Y. The dependent variables used as Y are explained in this section.

The first two dependent variables that are employed are *LN AVERAGE M&A AMOUNT* and *LN AVERAGE M&A DEALS*. By calculating the average M&A amount (or deals) it is taken into account that some emerging markets were not listed on the MSCI Barra Emerging

---

[20] n is *27* for M&A flows from Portugal and Greece to emerging markets. Portugal and Greece are in a part of the data period considered as both emerging market and EURO15 country. Investments within the country are not taken into account as this research is aimed at cross-border investments.

[21] Sum of n of 15 individual EURO15 countries.

[22] This does not necessarily means H_0 is true because H_0 is not rejected, it does not prove that H_0 is true. The chance however that H_0 is true is 10% or lower.

[23] (1-α) displays the confidence level. The higher the confidence level the more confident one is about rejecting H_0.

Markets Index for the whole data period[24]. In addition the special status of Portugal and Greece[25] is included in the calculation of the average M&A amount and the average M&A deals.

- <u>LN AVERAGE M&A AMOUNT$_{i,j}$</u>: The average yearly amount (in US Dollar) of merger and acquisitions deals between each country pair. Hence *AVERAGE M&A AMOUNT* indicates the yearly average amount (US Dollar) of M&A deals between country *i* (acquiring EURO15 country) and country *j* (target emerging market) in the period 1995 until 2007.
- <u>LN AVERAGE M&A DEALS$_{ij}$</u>[26]: The average yearly number of merger and acquisitions deals between each country pair. Hence *AVERAGE M&A DEALS* indicates the yearly average number of M&A deals between country *i* (acquiring EURO15 country) and country *j* (target emerging market) in the period 1995 until 2007.

As mentioned in section 3.3. it is noticed that emerging markets with a high population like China, India, Brazil and Russia receive more cross-border investments than less populated emerging markets. These emerging markets are much bigger and therefore have a bigger chance to receive cross-border investments. A test is performed whether the regression outcomes of the first two used dependent variables still hold after correcting the dependent variable for population. By correcting for population it is possible to compare all emerging markets as if they have the same size. It is expected that population will not any influence and that the outcomes of other independent variables will show stronger or different outcomes than the first two regression outcomes.

---

[24] E.g. Egypt was only 5 years listed on the MSCI Barra Emerging Markets Index. The yearly average is therefore calculated by dividing the total received M&A amount subtracted from the Thomson database (see table 3.1.1) with 5.

[25] Portugal is treated as an emerging market in the period from 1-1-1995 until 1-1-1998. From 1-1-1998 until 1-1-2008 Portugal is treated as EURO15 country.

Greece is treated as an emerging market in the period from 1-1-1995 until 1-1-2001. From 1-1-2001 until 1-1-2008 Greece is treated as EURO15 country.

[26] See appendix A, table A.1 for an overview of the yearly average M&A amount and the average M&A deals between EURO15 countries and emerging markets.

- LN AVERAGE M&A AMOUNT / POPULATION$_{i,j}$ The average yearly amount (in US Dollar) of merger and acquisitions deals between each country pair corrected for the population of an emerging market. Hence *AVERAGE M&A AMOUNT / POPULATION* indicates the yearly average amount (US Dollar) of M&A deals between country i (acquiring EURO15 country) and country j (target emerging market) relative to the population of country j (target emerging market) in the period 1995 – 2008.

A regression is also performed with a dependent variable that is corrected for GDP. This is done because of the same reason as the correction for population. However GDP indicates the economic size of an emerging market instead of the population size.

- LN AVERAGE M&A AMOUNT / GDP$_{i,j}$ The average yearly amount (in US Dollar) of merger and acquisitions deals between each country pair corrected for the GDP per Capita of an emerging market. Hence *AVERAGE M&A AMOUNT / POPULATION* indicates the yearly average amount (US Dollar) of M&A deals between country i (acquiring EURO15 country) and country j (target emerging market) relative to the GDP per Capita of country j (target emerging market) in the period 1995 – 2008.

5.2 Independent variables

The X_{ij} in equation (1) is a vector of characteristics of the target emerging market j in a merger or acquisitions deal. These characteristics are proxies to explain cross border M&A (see section 4). Logged data for all variables that are absolute. This to prevent for heteroskedasticity as unlogged data can grow exponentially and have an increasing variability. This results in the following X_{ij}'s:

- LN_GDP $_j$ = Average GDP per Capita in the sample period;
- EDUCATION $_j$ = Average relative value of enrolment into primary education in the sample period;
- TRADE $_j$ = Average relative value of trade compared to the GDP in the sample period;
- IMPORT $_j$ = Average relative value of imported goods and services compared to the GDP in the sample period;

- <u>LN_REGULATIONS</u> $_j$ = Ranking in the ease of doing business index[27]. The lower a country is ranked the easier it is to do business in this country;

- <u>TAXES</u> $_j$ = Average relative value of taxes on international trade compared to the revenues in the sample period;

- <u>LN_FLIGHT TIME</u> $_{ij}$ = Flight time between the capitals of the countries;

- <u>LN_CULTURE</u> $_{ij}$ = Average deviation in the culture dimension score in the model of Hofstede;

- <u>LANGUAGE</u> $_{ij}$ = Language proximity between countries;

- <u>LN_CORRUPTION</u> $_j$ = Average score in the Corruption Perception Index in the sample period;

- <u>INFLATION</u> $_j$ = Average inflation in the sample period;

- <u>LN EXCHANGE RATE</u> $_j$ = Average fluctuation of the exchange rate compared to the US Dollar in the sample period[28];

- <u>GDP GROWTH</u> $_j$ = Average GDP growth in the sample period;

- <u>LN_POPULATION</u> $_j$ = Average population (in millions) in the sample period;

The underlying data for these proxies can be found in appendix A.

---

[27] Ranking in the ease of doing business index of the World Bank in 2007

[28] Measured as the standard deviation of the exchange rate of the local currency compared to the US Dollar in the period 1995 until 2007.

6. <u>Results</u>

6.1 Correlation Matrix

To prevent multicollinearity, a correlation test between the independent variables is performed before running the regression. An overview of the correlations is given in the correlation matrix 6.1.1. Variables that are significantly correlated are indicated with (*) or (**)[29].The variables TRADE and IMPORT are highly correlated (0.98). TRADE is defined as the average relative value of trade compared to the GDP in the sample period and IMPORT is defined as the average relative value of imported goods and services compared to the GDP in the sample period. The high correlation can be explained as following: when a country imports a lot of goods and services compared to its GDP it automatically has a high average value of trade compared to the GDP. Import and export are the main components of trade. To ensure that the explanatory power of the TRADE variable is not biased IMPORT is exluded from the regression model.

All other significantly correlated variables cannot be explained with plausible explanations. These are not excluded from the regression model.

---

[29] To test whether correlation is significant, it is calculated with the formula $t = r\sqrt{\frac{n-2}{1-r^2}}$. Where n is the total emerging markets (28). R is the correlation. When t exceeds the critical value of the t distribution the correlation between the independent variables is significant.

Table 6.1.1. Correlation matrix

This table provides the correlation of proxies for M&A allocation between EURO15 countries and Emerging Markets.

	EDUCATION	GDPGROWTH	IMPORT	INFLATION	LANGUAGE	LN_CORRUPTION	LN_CULTURE	LN_EXCHANGERATE	LN_FLIGHTTIME	LN_GDP	LN_POPULATION	LN_REGULATIONS	TAXES	TRADE
EDUCATION	1.00													
GDPGROWTH	-0.04	1.00												
IMPORT	0.20	0.02	1.00											
INFLATION	-0.09	-0.25	-0.30	1.00										
LANGUAGE	-0.37	-0.02	-0.32	-0.01	1.00									
LN_CORRUPTION	0.34	-0.14	0,40 (*)	-0.39 (*)	-0.21	1.00								
LN_CULTURE	-0.02	-0.20	0.00	0.14	-0.28	-0.02	1.00							
LN_EXCHANGERATE	0.21	-0.12	-0.27	0.33	0.04	-0.28	-0.01	1.00						
LN_FLIGHTTIME	0.04	0.23	-0.20	-0.01	0,61 (**)	-0.22	-0.37	0.01	1.00					
LN_GDP	0,47 (*)	-0.45	0.16	0.05	-0.31	0,66 (**)	0,38 (*)	0.06	-0.31	1.00				
LN_POPULATION	-0.21	0,42 (*)	-0.54 (**)	0.22	0.22	-0,71 (**)	-0.12	0.10	0,44 (*)	-0.59	1.00			
LN_REGULATIONS	-0.18	0.00	-0,38 (*)	0.27	0.04	-0,60 (**)	-0.03	0,41 (*)	-0.20	-0,47 (*)	0.26	1.00		
TAXES	-0.32	0.14	0.02	0.05	0.32	-0,51 (**)	-0.34	0.07	0.22	-0,62 (**)	0.24	0,39 (*)	1.00	
TRADE	0.21	0.06	0,98 (**)	-0.25	-0.30	0.36	0.01	-0.30	-0.15	0.17	-0.45 (*)	-0,42 (*)	0.01	1.00

(**) Significant at 99% confidence level

(*) Significant at 95% confidence level

6.2. Regression results

This section presents the results of the regression analysis. The expected sign of a variable, the average sign in the regression outcome, the average coefficient and most importantly the significance of an outcome is carefully scrutinized. The sign of a coefficient shows whether the relationship between the dependent and the independent variable is positive or negative. The coefficient shows the impact of the independent variable on the dependent variable. Based on these outcomes the hypotheses formulated in section 3 are accepted or rejected.

As described in section 5 four regressions are run, where each of the regressions have a different dependent variable. The results from the regression with the dependent variable LN AVERAGE M&A AMOUNT are considered the most important (table 6.2.1) because it accurately describes the cross-border M&A transaction values. The results of the regression with the dependent variable LN AVERAGE M&A DEALS are used to confirm the results of the first regression. These are considered less important than the former results, because average M&A deals can give a biased result of the average cross-border investments flows. An emerging market might be a target of a lot of deals while having low transaction values.
The results of the regression with the dependent variables LN AVERAGE M&A AMOUNT / POPULATION (table 6.2.3) and LN AVERAGE M&A AMOUNT / GDP (table 6.2.4) are employed to see whether the results of the first regression results also hold after the correction of the average M&A amount for population and GDP.

The regression results in the tables 6.2.1 until 6.2.4 must be read as follows: the first column indicates all possible proxies for cross-border investments[30]. The second column contains the expected signs. The column "EURO15 total of all individual countries" includes the regression results of the sum of all individual 15 EURO15 countries. This results in a sample n of 418[31]. The next column shows the regression results when EURO15 is considered as one country instead of 15 individual countries. The data sample n for this regression is 28. All

---

[30] For description see section 5.2

[31] 15 EURO15 countries to 28 emerging markets.

following columns give the regression outcomes for each EURO15 country individual. Per EURO15 country a sample n of 28[32] is used.

Section 5 describes that the higher the used sample in a regression the more reliable the regression outcomes are. For that reason the results of the column "EURO15 total of all individual countries" display the most reliable results.

The R^2 of the regressions results is different for each performed regression. The R^2 for the regression with dependent variable LN AVERAGE M&A AMOUNT for the "EURO15 total of all individual countries" is 0.30. This indicates that 30% of the allocation of M&A activity in emerging markets of EURO15 countries is explained with the independent variables.

6.2.1 Development of a country

To measure the development of a country two proxies are used: GDP per capita and the enrolment in primary education. The expected sign for GDP per capita ("GDP") is positive. It is thus expected is that the higher the GDP per capita of an emerging market the bigger the chance it receives more cross-border investments. The average M&A amount spent by all EURO15 countries is significantly influenced (with a 99% confidence level) by the GDP per capita of an emerging market. With a 7.1%[33] increase of the GDP per capita of an emerging market the average M&A amount spent by EURO15 countries increases with 10%. For 13 of the 15 EURO15 countries, GDP per capita of an emerging market shows a positive influence on investment flows from EURO15 countries to emerging markets. For Germany and Ireland this influence is also significant (both with a confidence level of 95%). The M&A activity in emerging markets from Germany and Ireland increases with 10% when the GDP per capita of an emerging market increases respectively with 12%[34] and 13%[35]. Also after correcting the average M&A amount for population and GDP, most results show a positive (significant)

---

[32] n is *27* for M&A flows from Portugal and Greece to emerging markets. Portugal and Greece are in a part of the data period considered as both emerging market and EURO15 country. Investments within the country are not taken into account as this research is aimed at cross-border investments.

[33] 1.10^0.72 = 1.071. The coefficient 0.72 can be found in table 6.2.1.

[34] 1.10^1.16 = 1.117. The coefficient 1.16 can be found in table 6.2.1.

[35] 1.10^1.25 = 1.127. The coefficient 1.25 can be found in table 6.2.1.

influence of GDP per capita on cross-border investments. Therefore the H_0 hypothesis is rejected and the H_1 hypothesis is accepted.

"GDP per capita of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

The enrolment in primary education ("EDUCATION") shows no significant results in table 6.2.1. However, most results in this table show an expected positive link between the enrolment in primary education in emerging markets and the average M&A amount it receives. E.g. Denmark invests 0.01%[36] more M&A amount to an emerging market if the enrolment rate of that emerging market rises with 1%. Nevertheless this outcome is not significant The outcomes for the other EURO15 countries are also not significant. Additionally the sign of the influence of enrolment in primary education in an emerging market is not consistent in the other tables. After correcting the average M&A amount to emerging markets with population most results show a negative sign. Yet, after correcting for GDP, most results show a positive sign. The inconsistency of the sign and almost no significant regression results in the acceptance of H_0:

"The education level of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

---

[36] Exp.(0.22)/100 = 0.01 The coefficient 0.22 can be found in table 6.2.1.

Table 6.2.1. Regression output EURO-15 – Emerging Markets
This table provides the influence of proxies on cross border M&A flows from EURO15 countries to Emerging Markets. Cross border M&A is defined as the average amount (US Dollar) of M&A flows in the period 1-1-1995 till 31-12-2007

Determinant	Expected sign	EURO 15 total of all Individual countries	EURO 15 as one country	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom
Development of a country																		
•EDUCATION	+	**0.79**	1.45	1.80	1.23	0.22	1.51	2.08	-0.70	0.91	1.06	-2.63	-0.41	2.48	-1.04	1.70	-5.60	-0.89
•GDP	+	**0.72 *****	0.70	0.14	1.02	-0.04	0.18	0.99	1.16 **	-0.17	1.25 **	0.87	0.32	1.11	0.26	0.31	0.74	0.86
Information costs																		
•CULTURE	-	**-0.21 ****	0.21	0.12	0.03	1.42	-0.12	0.02	0.84 **	-0.23	-0.04	-1.04	-0.01	-0.16	0.10	-0.68	0.13	-0.02
•FLIGHT TIME	-	**-0.78 *****	-1.09 **	-1.20 ***	-1.21	0.09	-0.93 *	-1.39 **	-0.84 **	-0.36 *	-0.55	0.01	-0.39	-0.18	-0.18	-1.41	-0.58	-0.48
•LANGUAGE	+	**2.67 *****	1.97 **	4.58 **	0.51	0.00	0.75	5.35 **	8.00 ***	0.08	1.86	4.88	-2.11	0.87	4.22 *	5.62 ***	0.00	0.92
•REGULATIONS	-	**0.22**	0.05	0.15	-0.18	0.00	0.52	-0.36	1.36	-0.62	0.85	1.62	0.44	-0.39	0.89	0.24	-0.09	-0.48
•TAXES	-	**0.27**	0.25	2.68	5.98	-6.75	-1.36	3.61	6.84	5.41 *	-4.29	-2.54	-3.68	-0.33	-6.37	0.76	7.55	-2.27
•TRADE	+	**0.25**	-0.03	0.88	2.35	0.50	1.10	-0.72	2.71 ***	-0.29	0.42	-0.83	0.32	0.19	0.05	0.11	0.37	-1.23
Political stability																		
•CORRUPTION	+	**1.53 ****	2.64 *	1.57	1.96	1.53	2.54	0.36	6.80 ***	1.15	-0.50	3.75	2.59	-0.67	2.18	2.00	3.28	0.66
Economic stability																		
•EXCHANGE RATE	-	**-0.01**	0.24	-0.25	0.23	-0.41	0.31	0.46	0.55	0.48 **	-0.51	-0.18	0.53	-0.51	0.22	0.02	-0.32	-0.05
•INFLATION	-	**3.20 *****	2.36	6.92 **	5.25	-0.75	2.57	0.92	2.92	4.95 *	1.76	8.88 *	-2.62	5.16	2.02	-1.38	5.10	2.17
Economic growth																		
•GDP GROWTH	+	**5.47**	-0.72	-44.98 **	9.40	7.13	1.34	42.66	-33.25	7.12	35.69	56.86	-23.84	-2.96	-26.02	-8.19	-8.90	23.19
Population																		
•POPULATION	+	**3.43 *****	4.85 ***	2.68 **	6.15 **	2.02	4.16 **	1.97	8.41 ***	0.92	0.45	2.13	5.24 *	4.11 *	1.75	4.73 **	5.10 **	4.02 **

(***) Significant at 99% confidence level
(**) Significant at 95% confidence level
(*) Significant at 90% confidence level

Table 6.2.2. Regression output EURO-15 – Emerging Markets
This table provides the influence of proxies on cross border M&A flows from EURO15 countries to Emerging Markets. Cross border M&A is defined as the average of M&A deals where EURO15 countries are the acquirer and emerging markets the target in the period 1-1-1995 till 31-12-2007

Determinant	Expected sign	EURO 15 total of all Individual countries	EURO 15 as one country	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom
Development of a country																		
•EDUCATION	+	-0.60	4.09	-3.41	-0.36	-1.81	1.03	0.15	1.47	-2.84	-0.86	-0.85	-0.99	0.25	-4.03	0.03	-0.31	2.47
•GDP	+	-0.06	0.72	0.13	-0.46	-0.41	-0.21	0.90 **	-0.32	-0.29	-1.08 **	0.69 *	-0.52	0.34	0.02	0.20	0.01	0.56 *
Information costs																		
•CULTURE	-	-0.01	-0.07	-0.36	0.03	1.55	-0.50	0.71 **	0.02	0.06	-0.02	0.59 *	0.13	0.04	0.02	0.23	0.63	0.06
•FLIGHT TIME	-	-0.10	-1.13 ***	-0.24	0.02	0.44	-0.20	-0.63 **	-0.61 ***	0.41 *	0.40	0.09	-0.03	-0.29	0.44	0.17	-0.51 *	-0.73 ***
•LANGUAGE	+	0.58 ***	1.76 ***	-1.11	-1.00 *	0.00	1.85	1.79	-0.87	0.23	-0.42	-1.66	-0.69	0.96	2.03	1.31 **	0.00	0.98 *
•REGULATIONS	-	0.31 **	-0.05	0.62	0.38	0.48	0.87	0.38	-0.24	0.03	-0.05	0.58	0.44	0.49	0.15	1.09 **	0.67	-0.21
•TAXES	-	-2.13 *	-0.31	-3.66	-4.19	-5.70	2.63	3.45	-0.41	-2.99	-10.39 **	2.60	0.31	-1.90	-1.34	-0.10	-3.99	1.88
•TRADE	+	0.00	0.42	0.96	-0.32	0.25	-0.96	-0.62	-0.62	0.54	-0.48	0.12	0.06	0.37	1.02	-0.14	0.14	-0.11
Political stability																		
•CORRUPTION	+	0.07	1.49	-1.56	0.09	-0.79	1.14	-0.68	0.26	0.25	-0.90	-1.65	1.80	0.45	0.06	1.48	0.12	1.94 *
Economic stability																		
•EXCHANGE RATE	-	0.00	0.19	0.13	0.27	0.12	0.15	-0.25	-0.21	-0.24	0.10	0.05	-0.27	-0.19	0.12	0.04	0.16	0.09
•INFLATION	-	-0.29	1.63	-1.98	-1.30	-4.42 **	-0.91	0.26	2.03	2.27	0.96	-0.87	2.54	1.56	-0.32	-3.86	-1.57	0.59
Economic growth																		
•GDP GROWTH	+	3.22	12.77	-2.32	1.00	-7.88	5.31	22.68	12.01	-9.16	-16.26	9.33	-2.94	18.34	12.83	-39.21 ***	13.02	5.14
Population																		
•POPULATION	+	-0.13	3.91 ***	-1.30	-0.76	-1.06	-1.25	1.00	-0.02	-0.77	-2.63	-0.52	-1.03	1.17	-0.01	1.57 ***	0.51	3.83 ***

(***) Significant at 99% confidence level
(**) Significant at 95% confidence level
(*) Significant at 90% confidence level

Table 6.2.3. Regression output EURO-15 – Emerging Markets
This table provides the influence of proxies on cross border M&A flows from EURO15 countries to Emerging Markets. Cross border M&A is defined as the average amount (US Dollar) of M&A deals / Population where EURO15 countries are the acquirer and emerging markets the target in the period 1-1-1995 till 31-12-2007

Determinant	Expected sign	EURO 15 total of all Individual countries	EURO 15 as one country	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom
Development of a country																		
•EDUCATION	+	-3.39 **	1.94	-6.98	-4.08	-5.75	-0.90	-4.45	-4.41	-4.71	-0.61	-3.36	-3.23	1.62	-7.45	-1.31	-4.53	-0.98
•GDP	+	0.17	0.76	0.23	-0.08	-0.67	0.39	0.82	0.39	-0.65	-0.64	1.17	-0.55	0.89	0.29	-0.26	0.01	0.95
Information costs																		
•CULTURE	-	-0.18 **	0.22	-0.33	0.30	1.61	-0.69	0.12	0.53 **	0.33	-0.73	0.36	0.15	-0.11	0.09	-0.39	-0.33	-0.06
•FLIGHT TIME	-	-0.13	-1.07 **	-0.33	-0.37	0.98 *	-0.25	-1.31 ***	-0.68 **	0.60	-0.25	0.24	0.18	-0.24	0.70	-0.30	0.47	-0.36
•LANGUAGE	+	1.31 ***	2.08 **	0.91	-0.60	0.00	0.82	4.62 **	-0.94	0.75	1.53	-2.63	-2.13	0.94	0.87	3.41 ***	1.18	0.77
•REGULATIONS	+	0.21	-0.04	0.78	0.67	0.63	1.02	-0.86	0.56	-0.36	0.13	0.77	0.11	-0.19	0.95	0.60	0.60	-0.55
•TAXES	-	-5.81 ***	0.02	-7.05	-8.50	-15.28 **	1.47	4.15	0.73	2.94	-18.09 **	2.17	-6.05	-0.91	-7.31	-11.64	-6.88	-2.33
•TRADE	+	0.25	0.01	2.06	2.03 *	0.26	-0.20	-1.14	0.83	0.97	0.65	0.07	0.31	0.21	1.49	-1.24	1.10	-1.15
Political stability																		
•CORRUPTION	+	-0.67	2.23	-2.41	-0.42	-1.76	0.30	-1.37	1.94	1.27	-4.14	-1.86	1.76	-0.18	1.73	-1.07	-0.89	0.22
Economic stability																		
•EXCHANGE RATE	-	-0.10	0.11	-0.19	0.38	-0.13	0.19	0.42	0.02	-0.67	-0.37	0.01	-0.24	-0.65	0.43	0.01	-0.36	-0.19
•INFLATION	-	1.09	2.41	2.09	1.48	-5.36	-1.46	-0.75	2.07	9.80 *	2.17	0.60	2.25	3.97	1.45	-4.51	3.81	2.10
Economic growth																		
•GDP GROWTH	+	-25.77 ***	-13.73	-77.85 *	-44.90	-37.66	-18.75	18.37	-32.00	-68.92 **	-49.50	-16.83	-39.05	-28.50	2.02	-60.93	-38.23	9.89
Population																		
•POPULATION	+	-1.89 ***	1.32	-3.35	-0.47	-4.92 **	-1.87	-2.53	-0.12	-0.95	-5.78 ***	-2.22	-1.39	0.25	1.04	-1.79	1.39	0.51

(***) Significant at 99% confidence level
(**) Significant at 95% confidence level
(*) Significant at 90% confidence level

Table 6.2.4. Regression output EURO-15 – Emerging Markets
This table provides the influence of proxies on cross border M&A flows from EURO15 countries to Emerging Markets. Cross border M&A is defined as the average amount (US Dollar) of M&A deals / GDP where EURO15 countries are the acquirer and emerging markets the target in the period 1-1-1995 till 31-12-2007

Determinant	Expected sign	EURO 15 total of all Individual countries	EURO 15 as one country	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom
Development of a country																		
•EDUCATION	+	6.36	-6.69	12.88	8.89	12.98	-0.24	7.63	13.76	-9.55	4.41	11.55	0.06	6.23	14.79	-0.77	-2.47	-0.98
•GDP	+	1.86 ***	0.18	-0.05	3.72 **	1.82	-0.47	1.09	-1.33	0.65	5.77 *	1.05	2.15	1.75	0.46	0.28	0.53	-0.05
Information costs																		
•CULTURE	-	-0.35	0.11	0.68	-0.76	-1.53	1.74	-0.39	-0.73	0.95	-3.77	-0.51	-0.08	0.17	-1.83	1.69	-0.06	
•FLIGHT TIME	-	-2.01	-0.10	-2.55 ***	-1.98	-2.10	-1.06	-2.42	-1.95	-0.25	-1.99			-2.64	-4.38 **	-0.66	-0.36	
•LANGUAGE	+	6.20 ***	-0.69	11.25 **	5.63	1.00	0.00	9.19	3.95	4.92	23.56	0.24	2.01	7.03	12.71 ***	0.00	0.77	
•REGULATIONS	-	-0.17	2.69	-1.23	-3.19	-1.36	-1.82	-0.02	3.15	2.00	3.54		-0.24	0.93	-1.17	-0.55	-4.08	
•TAXES	-	7.67	15.66	13.34	31.86	8.72	-20.80	-0.55	17.08	18.18	11.01	-24.08	-5.13	-3.53	17.37	31.86	-2.33	
•TRADE	+	1.01	0.57	-0.66	4.60	2.26	6.32 *	0.61	7.84 **	-3.08	1.56	-2.07	1.32	0.08	-0.60	5.91	-0.60	-1.15
Political stability																		
•CORRUPTION	+	3.28 *	9.85	5.25	1.87	4.98	1.91	2.17	17.27 **	1.34	2.05	11.55	-0.05	2.04	6.30	5.31	0.22	
Economic stability																		
•EXCHANGE RATE	-	-0.40	0.84	-0.63	-0.94	-2.02	0.31	0.44	1.19	1.91	-1.42	-1.37	1.67	-1.62	-0.31	0.73	-1.34	-0.19
•INFLATION	-	6.18 **	-21.42 **	12.68 *	12.66	7.61	7.61	4.19	2.27	-1.75	2.28	25.44 *	-12.53	8.77	-1.85	2.82	9.25	2.10
Economic growth																		
•GDP GROWTH	+	20.58	-63.35	-15.09	83.69	28.57	-29.71	80.17	-99.74	58.22	145.87	179.34 *	-44.49	13.95	-84.81	54.78	-27.18	9.89
Population																		
•POPULATION	+	8.32 ***	7.25	8.70 **	13.54 **	11.87 **	12.00 **	0.85	21.90 ***	4.84	7.37	4.39	13.68 *	3.57	2.73	11.07	8.67	0.51

(***) Significant at 99% confidence level
(**) Significant at 95% confidence level
(*) Significant at 90% confidence level

6.2.2 Information costs

To make information costs measurable four proxies to measure the accessibility of an emerging market and three proxies concerning proximity between an emerging market and a EURO15 country are used.

Because the variable "IMPORT" (imported goods and services of the GDP) showed a great correlation with the variable "TRADE" (relative value of trade in GDP) the variable "IMPORT" is excluded from the model.

The proxy relative value of trade ("TRADE") shows no significant results for almost all regression outcomes. Only Germany's result is significant (99% confidence level) in table 6.2.1. A 1% increase in the value of trade compared to the GDP of an emerging market increases the average M&A amount from Germany with 0.15%[37]. Most of the regression results give a positive sign to this variable. This indicates a positive relation between the relative value of trade in GDP and the cross-border investments in an emerging market. However due to the low significance of the results H_0 cannot be rejected:

"The relative value of trade in GDP of an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

The sign of the relation between the ease of doing business in an emerging market ("REGULATIONS") and average M&A amount to that emerging market is inconsistent[38]. Moreover the relation is not significant for all EURO15 countries. The regression results in the other 3 tables show some significant results, however not with the expected negative sign. The signs are also inconsistent in these results. Therefore H_0 cannot be rejected.

---

[37] Exp.(2.71)/100 = 0.15 The coefficient 2.71can be found in table 6.2.1.

[38] E.g. France rises its M&A amount to emerging markets with 0.4% (1.10^0.36 = 1.004) if the ranking of an emerging market in the ease of doing business index lowers with 1%. However Germany decreases its M&A amount to emerging markets with 1.4% (1.10^1.36 = 1.014) if the ranking of an emerging market in the ease of doing business index lowers with 1%.

"The ease of doing business in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

Furthermore, the sign of the relation between the tax percentage on revenues ("TAXES") in emerging markets and average M&A amount to that emerging market is inconsistent as well. The results in table 6.2.1 give no expected significant results, while the results in table 6.2.2 and table 6.2.3 de show expected significant results. One of these results is between the total M&A deals of all EURO15 countries and TAXES in emerging markets. This relation has a coefficient of -2.13 (see table 6.2.2). This means that when an emerging market lowers its tax percentage on revenues with 1%, the average M&A deals with EURO15 countries as the acquiring nation increases with 0.08%[39].

The significant results of table 6.2.3 underwrite the validity of performing a regression where the average M&A amount is corrected for population. By using the average M&A amount flows to emerging markets where all emerging markets are assumed to have the same size, the results for TAXES are different than before the correction. Now significant results[40] for the relation between the tax percentage on revenues in emerging markets and the amount of cross-border investments to that country can be observed.

Nonetheless the results in the first table are of greatest importance. Based on this assumption, H_0 cannot be rejected.

"The tax percentage on revenues in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

However, for the other three information costs proxies H_0 can be rejected. The interesting patterns observed in section 3.3 concerning investments to emerging markets located near EURO15 countries, are statistically confirmed by the regression results of the proxy flight time. Almost all results in table 6.2.1 show the expected sign and 6 of the results give a significant relation. For the total of all EURO15 countries the flight time to emerging markets is of influence on the investment allocation with a 99% confidence level. When the flight time

---

[39] Exp.(2.13)/100 = 0.08 The coefficient 2.13 can be found in table 6.2.2.

[40] With expected signs.

to an emerging market is 10% lower than to another emerging market the average M&A amount from EURO15 countries is 8%[41] higher.

The pattern observed about Austria investing the highest amount of their cross-border M&A flows to emerging markets in neighbour country Czech Republic is confirmed by the significant result for the proxy flight time. Also the observation of Greece investing almost all of their cross-border M&A amounts in Turkey is confirmed by the significant result.

The other three regression result tables show similar results. As a result H_0 is rejected and H_1 is accepted:

"The flight time to an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

For the proxy that measures language proximity ("LANGUAGE") similar results as for the proxy flight time apply. Almost all regression results in table 6.2.1 show the expected sign from which 7 are significant. This also confirms the interesting patterns explained in section 3.3. Language proximity is of significant importance (confidence level of 99%) for Spanish cross-border investments to emerging markets. The average M&A amount from Spain to an emerging market increases with 6%[42] if an emerging market scores 1% higher in the language proximity table A.3.6. However, changes in the language proximity table are not usual. Compared to the regression results for LANGUAGE of the other EURO15 a coefficient of 5.62 is high. The coefficient for the significant result for investments from Greece is even higher with 8.0. This can be explained by through the relatively high M&A amount invested in Turkey (>90%). Turkey is the only emerging market where Greek is widely spoken. The observed pattern that Portugal invests almost their entire cross-border M&A amount in Brazil is confirmed by the significant result for LANGUAGE in the regression for Portugal. The native language of Brazil is Portuguese.

Because of the similar results in the other three tables H_0 is rejected and H_1 is accepted:

---

[41] 1.10^0.78 = 1.077. The coefficient -0.78 can be found in table 6.2.1.

[42] 1.01^5.62 = 1.058. The coefficient 5.62 can be found in table 6.2.1.

"The language proximity between EURO15 countries and an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

Cultural proximity ("CULTURE") between EURO15 countries and emerging markets is also of significant influence on the allocation of M&A amount in emerging markets. The results in table 6.2.1 show the expected sign for the culture variable for the total of EURO15 countries. The relationship also shows a significant influence (95% confidence level). The outcome indicates that if the cultural proximity between an emerging market and EURO15 countries increases with the 10%, the average M&A amount from EURO15 countries to this emerging market increases with 2%[43]. The conclusion of significant influence of CULTURE is also based on the significant result for the total of EURO15 countries in table 6.2.3. Outcomes for individual EURO15 countries however illustrate inconsistent (significant) results[44]. But based on the more reliable outcome of the total of EURO15 countries, these outcomes are assumed more valuable. H_0 is rejected and H_1 accepted:

"The cultural proximity between EURO15 countries and an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

6.2.3 Political stability

The proxy average score in the Corruption Perception Index ("LN_CORRUPTION") is used to measure the political stability of a country. In table 6.2.1 the results of the relationship between the score of an emerging market in this index and the average M&A amount it receives are positive. The level of corruption in an emerging market significantly influences (95% confidence level) the M&A allocation from the total of all EURO15 countries. The results for M&A amounts spent by Germany are the most significant of all EURO15 countries. Germany increases its average M&A amount to an emerging market with 7%[45] if an emerging market moves up 1% in the Corruption Perception Index. When correcting the

---

[43] 1.10^0.21 = 1.020. The coefficient -0.21 can be found in table 6.2.1.

[44] In section 4.2. the relative high cultural proximity is observed between Spain and Latin American emerging markets. The regression result in table 6.2.1. confirms that for Spain cultural proximity is of influence on the M&A amount spent in an emerging market. However this relationship is not significant.

[45] 1.01^6.80 = 1.070. The coefficient -6.80 can be found in table 6.2.1.

M&A amount for population (see table 6.2.3) the influence of corruption in an emerging market show inconsistent results. Nonetheless the other tables give similar (significant) results.

Therefore H_0 is rejected. This indicates that an emerging market with a high score in the corruption perception index, which indicates a relatively low level of corruption, receives significantly more cross-border investments from EURO15 countries. H_1 is accepted:

"Corruption in an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

6.2.4 Economic stability

Two proxies measure the economic stability of an emerging market: the average inflation rate of consumer prices ("INFLATION") and the currency fluctuation ("EXCHANGERATE").

Drawing conclusions about the influence of the inflation rate is difficult. On the one hand, two out of four regression outcomes show significant results for the influence of inflation rate for investments from the total of all EURO15 countries. On the other hand, all of these significant results do not show the expected positive sign. This indicates that when the inflation rate of an emerging market increase, it significantly receives a amount of M&A from EURO15 countries. For example Greece has a significant sign of +4.95. This implies that when the average inflation rate of an emerging market rises with 1%, Greece spends 1%[46] more M&A amount in that emerging market. Comparing all inflation rate outcomes the sign of the coefficient is not consistent.

The positive significant results are opposite to the assumed relationship. Assumed is that the higher the inflation the lower the amount of M&A flows to emerging markets, because a low inflation shows solid economic policy and would therefore be an attractive destination for investments. An possible argument for the significant regression results is that high inflation rates indicate growing consumer prices. Hence investing in a country with growing consumer prices can be interesting, because prices of goods will rise and consequently companies make a higher profit. However based on the inconsistent signs and unexpected significant outcomes H_0 is accepted:

---

[46] Exp.(4.95)/100 = 1.4 The coefficient 4.95 can be found in table 6.2.1.

"The inflation rate in an emerging market has <u>no</u> influence the allocation of M&A activity in emerging markets of EURO15 countries"

The currency rate fluctuation ("EXCHANGERATE") possesses almost no significant results. The signs of the relationship between the currency rate fluctuation of an emerging market and the cross-border investments it receives are not consistent. For the Netherlands the M&A amount to an emerging market rises with 0.05%[47] if the exchange rate fluctuation decreases with 1%. This in contrast to Luxembourg where an increase of the exchange rate fluctuation of 1% results in a 0.05%[48] rise of M&A amount to an emerging market. Therefore on can conclude that the exchange rate fluctuation of an emerging market has no significant influence on investments from EURO15. Resultantly H_0 is accepted:

"The exchange rate fluctuation in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

6.2.5 Economic Growth

As a proxy for economic growth of emerging markets the average GDP growth ("GDPGROWTH") is used. As can be seen in the regression outcomes, GDP growth shows almost no significant influence on cross-border investments in emerging markets by EURO15 countries. In addition the sign of the regression results are not consistent. The result for Denmark implies that if the GDP growth of an emerging market rises with 1% the M&A amount from Denmark to that emerging market rises with 13%[49]. However for the Netherlands a GDP growth of an emerging market of 1% lowers the M&A amount from the Netherlands to that emerging market with 0.19%[50]. Therefore H_0 is accepted:

---

[47] $1.01\hat{\ }0.51 = 1.005$. The coefficient -0.51 can be found in table 6.2.1

[48] $1.01\hat{\ }0.53 = 1.005$. The coefficient 0.53 can be found in table 6.2.1

[49] Exp.(7.13)/100 = 12.5 The coefficient 7.13 can be found in table 6.2.1.

[50] Exp.(2.96)/100 = 0.19 The coefficient -2.96 can be found in table 6.2.1.

"The GDP growth in an emerging market has <u>no</u> influence on the allocation of M&A activity in emerging markets of EURO15 countries"

6.2.6 Population

The average population in the data period ("LN_POPULATION") measures the population of emerging markets. The population of an emerging market is of significant influence in determining their M&A amount allocation for almost all EURO15 countries. E.g. Germany increases its M&A amount to an emerging market with 8.7%[51] if the population of an emerging market grows with 1%. For Belgium the M&A amount rises with 6.5[52]% and for all EURO15 countries together the M&A amount rises with 3.5%[53]. Almost all regression outcomes are significant. The significant results in table 6.2.2 and table 6.2.4 show the similar influence of population on the cross-border investments allocations[54]. Therefore it is concluded that an emerging market with a higher population is significantly more attractive to be a target for cross-border mergers and acquisitions activity where EURO15 countries are the acquirer. H_0 is rejected and H_1 accepted:

"The population of an emerging market influences the allocation of M&A activity in emerging markets of EURO15 countries"

---

[51] 1.01^8.41 = 1.087. The coefficient 8.41 can be found in table 6.2.1

[52] 1.01^6.15 = 1.065. The coefficient 6.15 can be found in table 6.2.1

[53] 1.01^3.43 = 1.035. The coefficient 3.43 can be found in table 6.2.1

[54] The results in table 6.2.3. give opposite results for the independent variable POPULATION. The influence of population on the average M&A amount allocation is in this table adjusted. The results for POPULATION in this table are therefore meaningless.

7. __Conclusion__

This paper aimed at answering the following question:

"Which macroeconomic determinants of emerging markets influence the allocation of M&A amount in deals where EURO15 countries are the acquirer and emerging markets the target?"

Based on existing literature about determinants for cross-border investments it is assumed that the following macroeconomic determinants influence the allocation of international investments:

- Development of a country;
- Information costs;
- Political stability;
- Economic stability;
- Economic growth;
- Population.

A regression analysis was performed through using proxies to make these determinants measurable. The regression model was as follows:

$Y_{i,j} = \alpha + X_{ij}\beta_a + \varepsilon_{i,j}$

In table 7.1 a short overview of the results is provided. Based on this table the major question of this research can be answered. The development of emerging markets, information costs to access an emerging market (especially proximity between countries), political stability of an emerging market and the population of an emerging market are of significant influence on the allocation of M&A amount where EURO15 countries are the acquirer and emerging markets the target.

Table 7.1. Short overview of empirical research results

Determinant	Proxy	Expected influence	Significant	Sign
Development of a country				
	•GDP per capita	Positive	Yes	Positive
	•Enrollment in primary education	Positive	No	Positive
Information costs				
	•Culture deviation	Negative	Yes	Negative
	•Flight time	Negative	Yes	Negative
	•Language proximity	Positive	Yes	Positive
	•Regulations	Negative	No	Negative
	•Trade/GDP	Positive	No	Positive
	•Taxes on international trade	Negative	No	Positive
Political stability				
	•Corruption perception index	Positive	Yes	Positive
Economic stability				
	•Inflation	Negative	No	Positive
	•Exchange rate fluctuation	Negative	No	Positive
Economic growth				
	•GDP growth	Positive	No	Positive
Population				
	•Population	Positve	Yes	Positive

It is important to mention that the results of the model can be improved. Currently the model has an average explanatory power of 30%. This is relatively low. If other variables are included the explanatory power can be increased. The results can also be improved by using a higher sample size *n*. The current sample size is based on average amounts of the independent variables in the data period, because not all independent variables for all emerging markets, were available for each individual year of the data period. The sample size will increase if one uses data for every year.

As a suggestion for relevant and interesting further research is the same research, performed vice versa, switching the roles of the EURO15, becoming the target nation, and emerging markets, becoming the acquiring nation. This can be very fascinating as emerging markets are growing in power and financial news outlets announce a lot of (speculation) of mergers or acquisitions where emerging markets are the acquiring nation. Think for example about the (hostile) takeover speculations of Dutch Draka by the Chinese Xinmao[55].

---

[55] Source: Financieel Dagblad 20-12-2010

References

Asiedu, E., 2006, 'Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability', *The World Economy*, 29 (issue 1), pp. 63-77

Berger A.N., R.S. Demsetz and P.E. Strahan, 1999, 'The Consolidation of the Financial Services Industry: Causes, Consequences and implications for the Future, *Journal of Banking and Finance*, 23, pp. 135-194

Brooks, C., 2007, *Introductory econometrics for finance*, Cambridge University Press, Cambridge

Buch, C.M. and G.L. DeLong, 2004, 'Cross-Border Bank Mergers: What Lures the Rare Animal?' *Journal of Banking and Finance*, 28, pp. 2077-2102

Calderon, C., N. Loayza, and L. Serven, 2004, 'Greenfield Foreign Direct Investment and Mergers and Acquisitions: Feedback and Macroeconomic effects', *World Bank Policy Research Paper,* 3192, January 2004

Coughlin, C.C., J.V. Terza and V. Arromdee, 1991, 'State Characteristics and the Location of Foreign Direct Investment within the United States', *The Review of Economics and Statistics*, 73, pp. 675-683

Dunning, J.H., 1981, 'Explaining the international direct investment position of countries: towards a dynamic or developmental approach', *Weltwirtschaftlich Archiv,* 119, pp. 30-64

Dunning, J.H., 1993, *Multinational Enterprises and the Global Economy,* Addison-Wesley Publishing Company: Reading, MA

Focarelli, D and A.F. Pozzolo, 2001, 'The Patterns of Cross-Border Bank Mergers and Shareholdings in OECD countries', *Journal of Banking and Finance* , 25, pp. 2305-2337

Galindo, A, Micco, A and Serra, C, 2003, 'Better the Devil that You Know: Evidence on Entry Costs Faced by Foreign Banks', *Inter-American Development Bank Working Pape,r* #477

Guillén, M. and A. Tschoegl, 1999, 'At Last the Internationalisation of Retail Banking? The Case of the Spanish Banks in Latin America', *Wharton Financial Institutions Center*, Working Paper, 99-41

Herrero, A.G. and D.N. Simón, 2003, 'Determinants and Impact of Financial Sector FDI to Emerging Economies: A Home Country's Perspective', *Banco de Espana Working Paper,* 0308

Hofstede, G., 1983, 'The cultural relativity of organizational practice and theories', *Journal of international Business Studies,* 14, pp. 75-89

Johanson, J. and Vahlne, J.E., 1977, 'The Internationalization process of the firm – a model of knowledge development and increasing market commitments', *Journal of International Business Studies,* 8, pp 23-32

Levitt, T., 1983, 'The globalization of markets', *Harvard Business Review,* 61, pp. 92-102

Levy, H. and T. Post, 2005, *Investments*, South-Western College Publishing, Harlow

Loree, D. and Guisinger, S., 1995, 'Policy and non-policy determinants of US foreign direct investment', *Journal of International Business Studies,* 26, pp. 281-299

Reuber, G.L., Crookel, H., Emerson, M. and Hamonno, G., 1973, *Private Foreign Investment in Development,* Clarendon Press: Oxford

Rossi, S. And Volpin, P.F., 2004, 'Cross-country determinants of mergers and acquisitions', *Journal of Financial Economics*, 74 (2004), pp. 277-304

Sethi, D., Guisinger, SE, Phelan, SE, Berg, DM, 'Trends in foreign direct investment flows: a theoretical and empirical analysis', *Journal of International Business Studies*, 2003, 34, pp. 315-326

UNCTAD, 1997, *World Investment Report 1997*, United Nations, New York

Velkova, E., 2006, 'Integration of South-East Europe in the EU: Corruption, Foreign Direct Investment and Development'. *Harvard European Law Working Paper Forum*, Working Paper, 03-2006.

Yamori, N, 1998, 'A note on the Location Choice of Multinational Banks: the Case of Japanese Financial Institutions', *Journal of Banking and Finance,* 22, pp. 109-20

Appendix A   Data per variable

A.1. Overview of average M&A amount and deals

Table A.1.1. Overview of mergers and acquisitions between EURO15 and emerging markets

This table provides an overview of the yearly average number and the yearly average value of mergers and acquisition between EURO15 countries and emerging markets. The columns give the acquiring country and the rows the target country of an investment. The first column per target nation provides the yearly average number of deals and the second column the yearly average deal value. The cumulated total provides the yearly average number of deals and the yearly average transaction value per acquiring country and the total for EURO15. The period used is 1-1-1995 till 1-1-2006. All deals for which transaction values are known are present.

Source: Thomson One Banker (2006)

A.2. Development of a country

Table A.2.1. GDP per capita
This table provides the GDP per capita of emerging markets measured in thousands $. The data period is 1995 until 2007.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	7	8	8	8	8	8	7	3	3	4	5	5	7	6
Brazil	5	5	5	5	3	4	3	3	3	4	5	6	7	4
Chile	5	5	6	5	5	5	4	4	5	6	7	9	10	6
China	1	1	1	1	1	1	1	1	1	1	2	2	2	1
Colombia	3	3	3	3	2	2	2	2	2	3	3	4	5	3
Czech Republic	5	6	6	6	6	6	6	7	9	11	12	14	17	9
Egypt	1	1	1	1	1	2	1	1	1	1	1	1	2	1
Greece	12	13	13	13	12	12	12	13	18	21	22	24	28	16
Hungary	4	4	4	5	5	5	5	7	8	10	11	11	14	7
India	0	0	0	0	0	0	0	0	1	1	1	1	1	0
Indonesia	1	1	1	0	1	1	1	1	1	1	1	2	2	1
Israel	17	18	18	18	18	20	19	17	18	18	19	20	23	19
Jordan	2	2	2	2	2	2	2	2	2	2	2	3	3	2
Korea	11	12	11	7	10	11	10	11	13	14	16	18	20	13
Malaysia	4	5	5	3	3	4	4	4	4	5	5	6	7	5
Mexico	3	4	4	4	5	6	6	6	7	7	8	9	10	6
Morocco	1	1	1	1	1	1	1	1	2	2	2	2	2	1
Pakistan	0	1	0	0	0	1	1	0	1	1	1	1	1	1
Peru	2	2	2	2	2	2	2	2	2	3	3	3	4	2
Philippines	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Poland	4	4	4	4	4	4	5	5	6	7	8	9	11	6
Portugal	11	12	11	12	12	11	11	12	15	17	18	18	21	14
Russia	3	3	3	2	1	2	2	2	3	4	5	7	9	4
South Africa	4	4	4	3	3	3	3	2	4	5	5	5	6	4
Sri Lanka	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Thailand	3	3	3	2	2	2	2	2	2	3	3	3	4	3
Turkey	4	4	4	4	4	4	3	3	4	6	7	7	9	5
Venezuela	3	3	4	4	4	5	5	4	3	4	5	7	8	5

Source: World Bank Development Indicators, World Bank (2009)

Table A.2.2. School enrolment in primary education
This table provides the relative value of school enrolment in primary education of children in the period 1995 until 2007 (%). The dots in the table means that there is no information available in the World Bank Development Indicators database.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	..	..	..	100	99	..	..	..	99	99	99	..	..	99
Brazil	..	..	..	..	91	92	94	92	90	95	94	..	..	93
Chile	..	..	..	..	..	..	..	..	..	..	..	..	..	90*
China	..	..	..	..	..	..	..	..	..	..	..	..	..	100*
Colombia	..	..	..	87	89	90	89	90	..	86	90	88	87	88
Czech Republic	..	..	..	..	97	..	..	..	..	..	93	..	..	95
Egypt	..	..	..	..	94	93	94	94	95	96	94	94	96	94
Greece	..	..	..	91	92	93	94	96	98	99	100	99	..	96
Hungary	..	..	..	88	88	88	88	89	89	89	89	88	..	88
India	..	..	..	..	..	79	79	78	83	89	88	89	..	84
Indonesia	..	..	..	..	..	93	94	94	94	94	95	95	..	94
Israel	..	..	..	..	98	98	98	98	98	98	97	97	..	98
Jordan	..	..	..	..	91	92	..	93	94	93	91	90	..	92
Korea	..	..	..	94	97	97	97	97	97	97	98	98	..	97
Malaysia	..	..	..	..	98	97	96	95	96	99	100	..	..	97
Mexico	..	..	..	..	97	97	97	97	98	98	98	98	..	98
Morocco	..	..	..	..	70	76	81	85	87	87	87	88	89	83
Pakistan	..	..	..	..	..	..	57	..	58	64	67	66	..	62
Peru	..	..	..	97	98	98	98	98	97	97	96	96	..	97
Philippines	..	..	..	95	92	..	92	92	93	93	93	91	..	93
Poland	..	..	..	97	96	97	98	98	98	98	97	96	..	97
Portugal	..	..	..	..	..	..	..	..	..	98	98	98	..	98
Russian	..	..	..	..	..	..	..	..	..	..	..	..	..	92*
South Africa	..	..	..	93	94	92	91	90	90	88	86	..	..	91
Sri Lanka	..	..	..	..	..	..	99	..	100	97	..	..	..	99
Thailand	..	..	..	..	..	..	..	..	..	..	..	94	94	94
Turkey	..	..	..	..	..	..	..	92	89	90	90	91	..	90
Venezuela	..	..	..	..	86	88	90	93	91	92	91	91	92	90

Source: World Bank Development Indicators, World Bank (2009)
* Source: Unicef: Child Info

A.3. Information costs

Table A.3.1. Relative value of trade
This table provides the relative value of trade compared to the GDP of an emerging market. The data period is 1995 until 2007. The dots in the table means that there is no information available.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	20	21	23	23	21	22	22	40	39	43	44	44	45	31
Brazil	16	15	16	16	20	22	26	27	27	29	27	26	26	23
Chile	56	56	56	56	57	61	65	66	69	72	74	77	80	65
China	44	38	39	36	38	44	43	48	57	65	69	72	74	51
Colombia	35	36	36	36	36	36	37	37	39	39	38	40	38	37
Czech Republic	106	104	109	110	112	130	133	123	126	140	141	150	154	126
Egypt	50	47	44	42	38	39	40	41	46	58	63	62	65	49
Greece	44	44	48	49	55	63	60	54	53	56	55	56	58	53
Hungary	89	96	109	125	131	148	143	128	125	130	134	155	159	129
India	23	22	23	24	25	27	26	30	31	38	43	47	46	31
Indonesia	54	52	56	96	63	71	70	59	54	60	64	57	55	62
Israel	65	64	64	63	71	75	69	74	75	83	86	86	88	74
Jordan	125	131	121	109	104	110	109	114	116	135	147	151	157	125
Korea	59	59	65	79	71	78	73	69	74	84	82	85	90	74
Malaysia	192	182	186	209	218	220	203	199	194	210	212	211	200	203
Mexico	58	62	61	64	63	64	57	55	52	55	56	57	58	59
Morocco	61	56	61	53	56	61	61	62	60	64	70	74	81	63
Pakistan	36	38	37	34	32	28	30	31	33	30	35	38	35	34
Peru	31	31	33	32	32	34	33	33	36	39	44	48	51	37
Philippines	81	90	108	111	103	109	101	101	105	106	99	95	85	100
Poland	44	46	51	57	54	61	58	61	69	77	75	81	84	63
Portugal	64	63	65	67	66	70	68	64	63	65	66	71	73	67
Russian	55	48	47	56	69	68	61	60	59	57	57	55	52	57
South Africa	45	48	48	50	48	53	56	62	54	54	56	63	66	54
Sri Lanka	82	79	80	78	79	89	81	76	75	79	74	71	69	78
Thailand	90	85	95	102	104	125	125	122	125	137	148	143	139	118
Turkey	31	36	39	42	39	43	51	49	47	50	47	50	49	44
Venezuela	49	58	51	44	42	48	42	49	51	55	60	57	56	51

Source: World Bank Development Indicators, World Bank (2009)

Table A.3.2. Relative value of imports of goods and services
This table provides the relative value of imports of goods and services compared to the GDP of emerging markets. The data period is 1995 until 2007. The dots in the table means that there is no information available.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	10	11	13	13	12	12	10	13	14	18	19	19	20	14
Brazil	9	8	9	9	11	12	13	13	12	13	12	12	12	11
Chile	27	29	29	30	27	30	32	32	32	32	33	31	33	31
China	21	18	17	16	18	21	20	23	27	31	32	32	32	24
Colombia	21	21	21	21	18	19	21	21	22	21	21	22	21	21
Czech Republic	55	55	57	55	57	66	68	62	64	70	69	73	75	64
Egypt	28	26	25	26	23	23	22	23	24	30	33	32	35	27
Greece	27	27	29	30	33	38	36	33	33	34	33	34	35	32
Hungary	45	48	54	63	67	76	72	65	65	66	68	78	79	65
India	12	12	12	13	14	14	14	15	16	20	23	25	24	16
Indonesia	28	26	28	43	27	30	31	26	23	28	30	26	25	29
Israel	37	36	34	33	37	38	36	38	38	42	43	43	45	38
Jordan	73	78	71	64	61	68	67	67	68	82	94	94	99	76
Korea	30	31	33	33	32	38	36	34	36	40	40	42	45	36
Malaysia	98	90	92	94	96	101	93	91	87	95	95	94	90	94
Mexico	28	30	30	33	32	33	30	29	27	28	29	29	30	30
Morocco	34	30	32	28	30	33	32	32	31	34	38	40	45	34
Pakistan	19	21	21	18	17	15	16	15	16	15	20	23	21	18
Peru	18	18	19	19	17	18	18	17	18	18	19	20	22	19
Philippines	44	49	59	59	51	53	52	51	56	55	52	48	42	52
Poland	21	24	27	31	30	34	31	32	36	39	37	41	44	33
Portugal	35	35	37	38	38	41	39	36	35	36	37	39	40	37
Russian	26	22	23	25	26	24	24	24	24	22	21	21	22	23
South Africa	22	23	23	25	23	25	26	29	26	27	28	33	35	27
Sri Lanka	46	44	44	42	43	50	44	41	41	44	41	41	40	43
Thailand	49	46	47	43	46	58	59	58	59	66	75	70	66	57
Turkey	17	20	22	20	19	23	23	24	24	26	25	28	27	23
Venezuela	22	21	22	23	19	18	19	18	17	19	20	21	25	20

Source: World Bank Development Indicators, World Bank (2009)

Table A.3.3. Ease of doing business index
This table provides an overview of the ease of doing business in an emerging market in 2007. Where 1 = the most friendly regulations.

Emerging Markets	2007
Argentina	102
Brazil	126
Chile	36
China	90
Colombia	66
Czech Republic	65
Egypt	125
Greece	106
Hungary	50
India	120
Indonesia	127
Israel	30
Jordan	94
Korea	22
Malaysia	25
Mexico	42
Morocco	129
Pakistan	74
Peru	53
Philippines	136
Poland	72
Portugal	43
Russian	112
South Africa	35
Sri Lanka	103
Thailand	19
Turkey	60
Venezuela	175

Source: World Bank Development Indicators, World Bank (2009)

Table A.3.4. Relative value of taxes on international trade
This table provides the relative value of taxes on international trade compared to the revenues. The data period is 1995 until 2078. The dots in the table means that there is no information available

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	..	..	..	..	..	..	..	14	16	16	..	..	..	15
Brazil	..	..	3	3	..	..	..	..	..	..	..	..	..	3
Chile	..	..	..	..	..	6	5	4	3	2	2	2	1	3
China	7	7	6	6	9	10	9	-4	-8	-12	-16	5	..	2
Colombia	..	..	..	..	..	..	6	6	4	4	4	9	6	6
Czech Republic	4	4	3	2	2	2	1	1	1	0	0	0	0	2
Egypt	10	12	12	..	..	..	..	8	8	7	6	5	5	8
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	..	8	5	3	3	3	2	2	2	0	0	0	0	2
India	24	25	22	21	21	19	16	15	15	15	14	15	15	18
Indonesia	4	3	3	4	3	..	3	3	3	3	..	..	..	3
Israel	..	..	..	..	..	1	1	1	1	1	1	1	1	1
Jordan	22	22	20	20	18	17	15	13	10	11	11	10	9	15
Korea	7	6	6	4	4	4	4	4	4	4	3	3	3	4
Malaysia	12	12	11	8	9	7	5	5	6	..	..	..	..	8
Mexico	4	4	4	4	4	4	..	..	..	..	..	..	..	4
Morocco	..	..	..	..	..	..	..	11	9	9	8	8	7	9
Pakistan	24	24	22	17	14	11	11	7	9	11	14	13	10	14
Peru	10	9	8	9	9	8	8	7	6	6	6	4	2	7
Philippines	29	26	21	17	18	19	17	17	17	17	18	20	20	20
Poland	..	..	..	..	..	..	2	2	1	1	0	0	0	1
Portugal	..	..	0	0	0	0	0	0	..	..	0	0	0	0
Russian	..	..	..	..	..	..	..	9	12	19	24	29	23	19
South Africa	..	..	..	..	..	3	3	3	2	3	4	4	4	3
Sri Lanka	17	17	16	15	14	11	11	12	14	15	14	15	14	14
Thailand	..	..	..	..	..	..	..	..	10	8	7	6	6	7
Turkey	..	..	..	..	..	..	..	..	..	..	..	1	1	1
Venezuela	9	7	7	11	9	7	7	5	4	5	5	..	..	7

Source: World Bank Development Indicators, World Bank (2009)

Table A.3.5. Flight time
This table provides flight time between the capitals of the EURO15 and emerging markets. On the horizontal axis are the emerging markets and their capital cities and on the vertical axes the EURO15 countries and their capital cities. The flight time is in hours.

		Austria Vienna	Belgium Brussels	Denmark Copenhagen	Finland Helsinki	France Paris	Germany Berlin	Greece Athens	Ireland Dublin	Italy Rome	Luxembourg Luxembourg	Netherlands Amsterdam	Portugal Lisbon	Spain Madrid	Sweden Stockholm	UK London
Argentina	Buenos Aires	15	14	15	16	14	15	15	14	14	14	14	12	12	16	14
Brazil	Brasilia	12	11	12	13	11	12	12	11	11	11	11	9	10	13	11
Chile	Santiago	16	15	16	17	14	16	16	14	15	15	15	13	13	16	14
China	Beijing	9	10	9	8	10	9	9	10	10	10	10	12	11	8	10
Colombia	Bogota	12	11	12	13	11	12	13	10	12	11	11	9	10	12	11
Czech Republic	Prague	1	1	1	2	1	1	2	2	1	1	1	3	2	1	1
Egypt	Cairo	3	4	4	4	4	4	1	5	3	4	4	5	4	4	4
Greece	Athens	2	3	3	3	3	2		4	1	2	3	4	3	3	3
Hungary	Budapest	1	2	1	2	2	1	1	2	1	1	1	3	2	2	2
India	New Delhi	7	8	7	7	8	7	6	9	7	8	8	10	9	7	8
Indonesia	Jakarta	13	14	13	13	14	13	12	15	13	14	14	16	15	13	14
Israel	Jerusalem	3	4	4	4	4	4	2	5	3	4	4	5	4	4	4
Jordan	Amman	3	4	4	4	4	4	2	5	3	4	4	5	5	4	5
Korea	Seoul	10	11	10	8	11	10	11	11	11	11	11	13	12	9	11
Malaysia	Kuala Lumpur	12	14	12	11	13	12	11	14	12	13	13	14	14	12	13
Mexico	Mexico City	13	12	12	12	11	12	14	11	13	12	11	11	11	12	11
Morocco	Rabat	3	3	4	5	2	3	3	3	2	3	3	1	1	4	3
Pakistan	Islamabad	6	7	7	6	7	6	5	8	6	7	7	9	8	7	8
Peru	Lima	14	13	14	15	13	14	15	13	14	13	13	11	12	14	13
Philippines	Manila	12	13	12	11	13	12	12	14	13	13	13	15	15	12	13
Poland	Warsaw	1	1	1	1	1	1	2	3	2	1	1	3	3	1	2
Portugal	Lisbon	3	2	3	4	2	3	4	2	2	2	2		1	4	2
Russia	Moscow	2	3	2	1	3	2	3	4	3	3	3	5	4	2	3
South-Africa	Pretoria	10	11	11	12	11	11	9	12	10	11	11	10	10	12	11
Sri Lanka	Kotte	9	10	10	9	11	10	8	11	9	10	10	12	11	10	11
Thailand	Bangkok	11	12	11	10	12	11	11	12	11	11	11	13	13	10	12
Turkey	Ankara	2	3	3	3	3	3	1	4	2	3	3	4	4	3	4
Venezuela	Caracas	11	10	10	11	9	10	12	9	10	10	10	8	8	11	9

Source: Website www.convertunits.com (2009)

Table A.3.6. Language
This table provides an overview of proximity of languages between EURO15 countries and emerging markets. 1 indicates that both countries have the same official language, 0.5 indicates that the official language of the EURO15 country is widely spoken in an emerging market and a 0 indicates no language proximity.

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom	EURO15
Argentina	1	0.5	0	0	0.5	1	0	0.5	0.5	1	0	0	1	0	0.5	1
Brazil	0	0.5	0	0	0.5	0	0	0.5	0	0.5	0	1	0.5	0	0.5	1
Chile	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colombia	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Czech Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0.5	0	0	0.5	0	0	0.5	0	1	0	0	0	0	0.5	0.5
Greece	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Hungary	0.5	0	0	0	0	0.5	0	0	0	1	0	0	0	0	0	0.5
India	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Indonesia	0	0.5	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0.5	0.5
Israel	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Jordan	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Korea	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Malaysia	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Morocco	0	0.5	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0.5
Pakistan	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Peru	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Philippines	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Poland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Russia	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0
South-Africa	0	1*	0	0	0	0	0	1	0	0	1*	0	0	0	1	1
Sri Lanka	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Thailand	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5
Turkey	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5
Venezuela	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

* Assuming Afrikaans = Dutch

Source: Website www.nationsonline.org/oneworld (2010)

Table A.3.7. Culture
This table provides an overview of the differentiation of culture in an EURO15 country and culture in an emerging market. The lower the score the smaller culture difference between those countries.

Emerging Markets	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom	Average EURO15
Argentina	6	13	27	14	8	1	7	9	9	4	13	3	0	25	3	5
Brazil	4	14	25	13	9	0	8	8	10	3	12	2	1	24	2	3
Chile	4	22	17	5	17	8	16	0	18	5	4	6	9	16	6	5
China	5	23	16	4	18	9	17	1	19	6	3	7	10	15	7	6
Colombia	2	16	23	11	11	2	10	6	12	1	10	0	3	22	0	1
Czech Republic	8	11	29	16	6	3	5	11	6	7	15	5	3	28	5	7
Egypt**	6	13	27	14	8	1	7	9	8	5	13	3	1	26	3	5
Greece	12	6	33	21	1	8	0	16	2	11	20	10	7	32	10	11
Hungary	20	2	41	29	7	16	8	24	6	19	28	18	15	40	18	19
India	1	18	22	9	13	4	12	4	13	1	8	2	5	21	2	0
Indonesia	7	26	14	1	21	12	20	4	21	9	0	10	13	13	10	8
Israel	5	23	16	4	18	10	17	2	19	6	3	8	10	15	8	6
Jordan**	6	13	27	14	8	1	7	9	8	5	13	3	1	26	3	5
Korea	3	22	18	5	17	8	16	0	17	5	4	6	9	17	6	4
Malaysia	0	18	21	9	13	4	12	4	14	1	8	2	5	20	2	1
Mexico	12	7	33	20	2	7	1	15	2	11	19	9	7	32	9	11
Morocco	6	13	27	14	8	1	7	9	9	4	13	3	0	25	3	5
Pakistan	7	25	15	2	20	11	19	3	21	8	1	9	12	13	9	7
Peru	2	20	20	7	15	6	14	2	16	3	6	4	7	18	4	2
Philippines	5	14	26	13	9	0	8	8	9	4	12	2	1	25	2	4
Poland	18	1	39	26	4	13	5	21	4	16	25	15	12	37	15	17
Portugal	3	16	24	11	11	2	10	6	12	1	10	0	3	22	0	2
Russian	12	6	33	21	1	8	0	16	2	11	20	10	7	32	10	11
South Africa	3	16	24	11	11	2	10	6	11	2	10	0	3	23	0	2
Sri Lanka*	1	18	22	9	13	4	12	4	13	1	8	2	5	21	2	0
Thailand	8	27	13	0	22	13	21	5	22	10	1	11	14	12	11	9
Turkey	5	14	26	13	9	0	8	8	10	3	12	2	1	24	2	4
Venezuela	7	12	28	15	7	2	6	10	7	6	14	4	2	27	4	6

* No data available. Assuming same as India

** No individual data available. Used data is for "Arab world"

Source: Cultural dimensions of Hofstede. Website www.geert-hofstede.com (2010)

A.4. Political stability

Table A.4.1. Corruption

This table provides the score on the Corruption Perception Index per emerging market in the period 1995 till 2008[56]. The score ranges from 0 to 10. A 10 means that a country does not have any corruption at all and a 0 means a highly corrupted country. The dots in the table means that there is no information available.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	5.24	3.41	2.81	3	3	3.5	3.5	2.8	2.5	2.5	2.8	2.9	2.9	3
Brazil	2.7	2.96	3.56	4	4.1	3.9	4	4	3.9	3.9	3.7	3.3	3.5	4
Chile	7.94	6.8	6.05	6.8	6.9	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7	7
China	2.16	2.43	2.88	3.5	3.4	3.1	3.5	3.5	3.4	3.4	3.2	3.3	3.5	3
Colombia	3.44	2.73	2.23	2.2	2.9	3.2	3.8	3.6	3.7	3.8	4	3.9	3.8	3
Czech Republic	..	5.37	5.2	4.8	4.6	4.3	3.9	3.7	3.9	4.2	4.3	4.8	5.2	5
Egypt	..	..	..	2.9	3.3	3.1	3.6	3.4	3.3	3.2	3.4	3.3	2.9	3
Greece	4.04	5.01	5.35	4.9	4.9	4.9	4.2	4.2	4.3	4.3	4.3	4.4	4.6	5
Hungary	4.12	4.86	5.18	5	5.2	5.2	5.3	4.9	4.8	4.8	5	5.2	5.3	5
India	2.78	2.63	2.75	2.9	2.9	2.8	2.7	2.7	2.8	2.8	2.9	3.3	3.5	3
Indonesia	1.94	2.65	2.72	2	1.7	1.7	1.9	1.9	1.9	2	2.2	2.4	2.3	2
Israel	..	7.71	7.97	7.1	6.8	6.6	7.6	7.3	7	6.4	6.3	5.9	6.1	7
Jordan	..	..	..	4.7	4.4	4.6	4.9	4.5	4.6	5.3	5.7	5.3	4.7	5
Korea	4.29	5.02	4.29	4.2	3.8	4	4.2	4.5	4.3	4.5	5	5.1	5.1	4
Malaysia	5.28	5.32	5.01	5.3	5.1	4.8	5	4.9	5.2	5	5.1	5	5.1	5
Mexico	3.18	3.3	2.66	3.3	3.4	3.3	3.7	3.6	3.6	3.6	3.5	3.3	3.5	3
Morocco	..	..	..	3.7	4.1	4.7	..	3.7	3.3	3.2	3.2	3.2	3.5	4
Pakistan	2.25	1	2.53	2.7	2.2	..	2.3	2.6	2.5	2.1	2.1	2.2	2.4	2
Peru	..	..	..	4.5	4.5	4.4	4.1	4	3.7	3.5	3.5	3.3	3.5	4
Philippines	2.77	2.69	3.05	3.3	3.6	2.8	2.9	2.6	2.5	2.6	2.5	2.5	2.5	3
Poland	..	5.57	5.08	4.6	4.2	4.1	4.1	4	3.6	3.5	3.4	3.7	4.2	4
Portugal	5.56	6.53	6.97	6.5	6.7	6.4	6.3	6.3	6.6	6.3	6.5	6.6	6.5	6
Russian	..	2.58	2.27	2.4	2.4	2.1	2.3	2.7	2.7	2.8	2.4	2.5	2.3	2
South Africa	5.62	5.68	4.95	5.2	5	5	4.8	4.8	4.4	4.6	4.5	4.6	5.1	5
Sri Lanka	..	..	..	..	..	..	..	3.7	3.4	3.5	3.2	3.1	3.2	3
Thailand	2.79	3.33	3.06	3	3.2	3.2	3.2	3.2	3.3	3.6	3.8	3.6	3.3	3
Turkey	4.1	3.54	3.21	3.4	3.6	3.8	3.6	3.2	3.1	3.2	3.5	3.8	4.1	4
Venezuela	2.66	2.5	2.77	2.3	2.6	2.7	2.8	2.5	2.4	2.3	2.3	2.3	2	2

Source: Corruption Perception Index, Transparency International(2009)

---

[56] Belgium and Luxembourg are measured together in 1995

A.5. Economic stability

Table A.5.1. Inflation
This table provides the relative fluctuation of the annual consumer prices. The data period is 1995 until 2007.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	3	0	1	1	-1	-1	-1	26	13	4	10	11	9	6
Brazil	66	16	7	3	5	7	7	8	15	7	7	4	4	12
Chile	8	7	6	5	3	4	4	2	3	1	3	3	4	4
China	17	8	3	-1	-1	0	0	-1	1	4	2	1	5	3
Colombia	21	20	18	19	11	9	8	6	7	6	5	4	5	11
Czech Republic	9	9	9	11	2	4	5	2	0	3	2	3	3	5
Egypt	16	7	5	4	3	3	2	3	5	11	5	8	9	6
Greece	9	8	6	5	3	3	3	4	4	3	4	3	3	4
Hungary	28	24	18	14	10	10	9	5	5	7	4	4	8	11
India	10	9	7	13	5	4	4	4	4	4	4	6	6	6
Indonesia	9	8	6	58	20	4	12	12	7	6	10	13	6	13
Israel	10	11	9	5	5	1	1	6	1	0	1	2	1	4
Jordan	2	7	3	3	1	1	2	2	2	3	3	6	5	3
Korea	4	5	4	8	1	2	4	3	4	4	3	2	3	4
Malaysia	3	3	3	5	3	2	1	2	1	2	3	4	2	3
Mexico	35	34	21	16	17	9	6	5	5	5	4	4	4	13
Morocco	6	3	1	3	1	2	1	3	1	1	1	3	2	2
Pakistan	12	10	11	6	4	4	3	3	3	7	9	8	8	7
Peru	11	12	9	7	3	4	2	0	2	4	2	2	2	5
Philippines	7	8	6	9	6	4	7	3	3	6	8	6	3	6
Poland	28	20	15	12	7	10	5	2	1	4	2	1	2	8
Portugal	4	3	2	3	2	3	4	4	3	2	2	3	3	3
Russian	197	48	15	28	86	21	21	16	14	11	13	10	9	38
South Africa	9	7	9	7	5	5	6	9	6	1	3	5	7	6
Sri Lanka	8	16	10	9	5	6	14	10	6	8	12	10	16	10
Thailand	6	6	6	8	0	2	2	1	2	3	5	5	2	4
Turkey	88	80	86	85	65	55	54	45	25	11	10	11	9	48
Venezuela	60	100	50	36	24	16	13	22	31	22	16	14	19	33

Source: World Bank Development Indicators, World Bank (2009)

Table A.5.2. Official exchange rate
This table provides the official annual exchange rate of a country compared to the US Dollar. It also provides the exchange rate fluctuation in the data period. Fluctuation is measured by the standard deviation of the official annual exchange rate of a country compared to the US Dollar in the data period is 1995 until 2007. The dots in the table means that there is no information available.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Std. Dev.
Argentina	1	1	1	1	1	1	1	3	3	3	3	3	3	1.0
Brazil	1	1	1	1	2	2	2	3	3	3	2	2	2	0.8
Chile	397	412	419	460	509	540	635	689	691	610	560	530	522	0.3
China	8	8	8	8	8	8	8	8	8	8	8	8	8	0.0
Colombia	913	1,037	1,141	1,426	1,756	2,088	2,300	2,504	2,878	2,629	2,321	2,361	2,078	0.7
Czech Republic	27	27	32	32	35	39	38	33	28	26	24	23	20	0.2
Egypt	3	3	3	3	3	3	4	4	6	6	6	6	..	0.5
Greece					1	1	1	1	1	1	1	1	1	0.0
Hungary	126	153	187	214	237	282	286	258	224	203	200	210	184	0.4
India	32	35	36	41	43	45	47	49	47	45	44	45	41	0.2
Indonesia	2,249	2,342	2,909	10,014	7,855	8,422	10,261	9,311	8,577	8,939	9,705	9,159	9,141	1.3
Israel	3	3	3	4	4	4	4	5	5	4	4	4	4	0.2
Jordan	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0
Korea	771	804	951	1,401	1,189	1,131	1,291	1,251	1,192	1,145	1,024	955	929	0.2
Malaysia	3	3	3	4	4	4	4	4	4	4	4	4	3	0.2
Mexico	6	8	8	9	10	9	9	10	11	11	11	11	11	0.3
Morocco	9	9	10	10	10	11	11	11	10	9	9	9	8	0.1
Pakistan	32	36	41	45	50	54	62	60	58	58	60	60	61	0.3
Peru	2	2	3	3	3	3	4	4	3	3	3	3	3	0.3
Philippines	26	26	29	41	39	44	51	52	54	56	55	51	46	0.4
Poland	2	3	3	3	4	4	4	4	4	4	3	3	3	0.3
Portugal					1	1	1	1	1	1	1	1	1	0.0
Russia	5	5	6	10	25	28	29	31	31	29	28	27	26	2.1
South Africa	4	4	5	6	6	7	9	11	8	6	6	7	7	0.5
Sri Lanka	51	55	59	64	71	77	89	96	97	101	100	104	111	0.4
Thailand	25	25	31	41	38	40	44	43	41	40	40	38	35	0.3
Turkey	..	..	..	..	..	1	1	2	2	1	1	1	1	0.5
Venezuela	..	..	..	..	1	1	1	1	2	2	2	2	2	0.5

Source: World Bank Development Indicators, World Bank (2009)

A.6. Economic growth

Table A.6.1. Relative GDP growth
This table provides the annual relative GDP growth per emerging market (%). The data period is 1995 until 2007.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	-3	6	8	4	-3	-1	-4	-11	9	9	9	8	9	3
Brazil	4	2	3	0	0	4	1	3	1	6	3	4	5	3
Chile	11	7	7	3	-1	4	3	2	4	6	6	4	5	5
China	11	10	9	8	8	8	8	9	10	10	10	12	13	10
Colombia	5	2	3	1	-4	3	2	2	5	5	6	7	8	3
Czech Republic	6	4	-1	-1	1	4	2	2	4	4	6	7	7	3
Egypt	5	5	5	4	6	5	4	2	3	4	4	7	7	5
Greece	2	2	4	3	3	4	4	4	5	5	4	4	4	4
Hungary	1	1	5	5	4	5	4	4	4	5	4	4	1	4
India	8	8	4	6	7	4	5	4	8	8	9	10	9	7
Indonesia	8	8	5	-13	1	5	4	4	5	5	6	6	6	4
Israel	7	5	3	4	3	9	0	-1	2	5	5	5	5	4
Jordan	5	5	1	3	4	4	2	3	5	7	8	6	6	5
Korea	6	2	3	3	3	4	5	6	4	9	7	6	6	5
Malaysia	10	10	7	-7	6	9	1	5	6	7	5	6	6	5
Mexico	-6	5	7	5	4	7	0	1	1	4	3	5	3	3
Morocco	-7	12	-2	8	1	2	8	3	6	5	3	8	3	4
Pakistan	9	3	7	-1	1	3	0	5	4	5	7	8	9	5
Peru	5	6	5	-1	3	6	2	4	5	6	5	5	7	4
Philippines	7	6	7	5	5	4	1	1	4	5	4	6	7	5
Poland	-4	-4	1	-5	6	10	5	5	7	7	6	7	8	4
Portugal	4	4	4	5	4	4	2	1	-1	2	1	1	2	3
Russian	3	4	3	1	2	4	3	4	3	5	5	5	5	4
South Africa	6	4	6	5	4	6	-2	4	6	5	6	8	7	5
Sri Lanka	9	6	-1	-11	4	5	2	5	7	6	5	5	5	4
Thailand	8	7	8	2	-3	7	-6	6	5	9	8	7	5	5
Turkey	4	0	6	0	-6	4	3	-9	-8	18	10	10	8	3
Venezuela	9	7	5	-7	9	8	4	7	3	5	4	5	5	5

Source: World Bank Development Indicators, World Bank (2009)

A.7. Population

Table A.7.1. Population
This table provides the total population per emerging market (millions). The data period is 1995 until 2007.

Emerging Markets	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
Argentina	35	35	36	36	37	37	37	38	38	38	39	39	40	37
Brazil	162	164	167	169	172	174	177	179	182	184	187	189	192	177
Chile	14	15	15	15	15	15	16	16	16	16	16	16	17	16
China	1,205	1,218	1,230	1,242	1,254	1,263	1,272	1,280	1,288	1,296	1,304	1,311	1,318	1,268
Colombia	36	37	38	39	39	40	40	41	42	42	43	43	44	40
Czech Republic	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Egypt	61	62	63	64	65	67	68	69	70	72	73	74	75	68
Greece	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Hungary	10	10	10	10	10	10	10	10	10	10	10	10	10	10
India	932	949	965	982	999	1,016	1,032	1,049	1,064	1,080	1,095	1,110	1,125	1,031
Indonesia	193	195	198	201	204	206	209	212	215	218	221	223	226	209
Israel	6	6	6	6	6	6	6	7	7	7	7	7	7	6
Jordan	4	4	4	5	5	5	5	5	5	5	5	6	6	5
Korea	45	46	46	46	47	47	47	48	48	48	48	48	48	47
Malaysia	21	21	22	22	23	23	24	24	25	25	26	26	27	24
Mexico	91	93	94	95	97	98	99	100	101	102	103	104	105	99
Morocco	26	27	27	28	28	28	29	29	30	30	30	30	31	29
Pakistan	122	125	128	132	135	138	141	145	148	152	156	159	162	142
Peru	24	24	25	25	25	26	26	26	27	27	27	28	28	26
Philippines	69	70	72	73	75	76	78	79	81	83	85	86	88	78
Poland	39	39	39	39	39	38	38	38	38	38	38	38	38	38
Portugal	10	10	10	10	10	10	10	10	10	11	11	11	11	10
Russian	148	148	147	147	146	146	146	145	145	144	143	143	142	145
South Africa	39	40	41	42	43	44	45	45	46	46	47	47	48	44
Sri Lanka	18	18	18	18	19	19	19	19	19	19	20	20	20	19
Thailand	58	58	59	59	60	61	61	62	62	63	63	63	64	61
Turkey	62	63	64	65	66	67	69	70	71	71	72	73	74	68
Venezuela	22	23	23	23	24	24	25	25	26	26	27	27	27	25

Source: World Bank Development Indicators, World Bank (2009)