EU enlargement

European Distribution Centres on the move?

CAP GEMINI ERNST & YOUNG

Implications for European distribution structures resulting from the 2004 EU enlargement

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A Cap Gemini Ernst & Young (CGE&Y) production

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Implications for European distribution structures resulting from the 2004 EU enlargement

Utrecht, Netherlands, September 2003

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1 Introduction

Currently the European Union (EU) consists of 15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom). In July 2004 the EU will be enlarged with 10 new countries:

- Cyprus
- Czech Republic
- Estonia
- Hungary
- Latvia
- Lithuania
- Malta
- Poland
- Slovakia
- Slovenia

There are also several other countries that are applying to join the EU at a later date:

- Bulgaria
- Romania
- Turkey

Research institutions and accountancy firms have already published some reports on the general competitiveness of the different EU countries and on the general effects of EU enlargement. This report series will focus on EU country competitiveness and especially on the implications of EU enlargement on an industry level. Every report will focus on a different industry / type of investment. The following industries / types of investment will be covered:

- Distribution Centres (covering all industries)
- Chemicals Industry – Chemical Plants
- Automotive Industry – Automotive Plants
- Life Sciences (Pharmaceuticals, Biotech) Industry – Life Sciences Plants
- High Tech & Electronics Industry – High Tech & Electronic Plants
- Consumer Products Industry (Food/Non-Food) – Consumer Products Plants
- Research & Development Centres (covering all industries)

In every report, the most important location decision criteria for the corresponding type of investment will be compared with data of the current and future EU countries. For each type of investment, this report will also analyse historical investments over the last few years. Finally trends will be analysed and conclusions will be drawn.

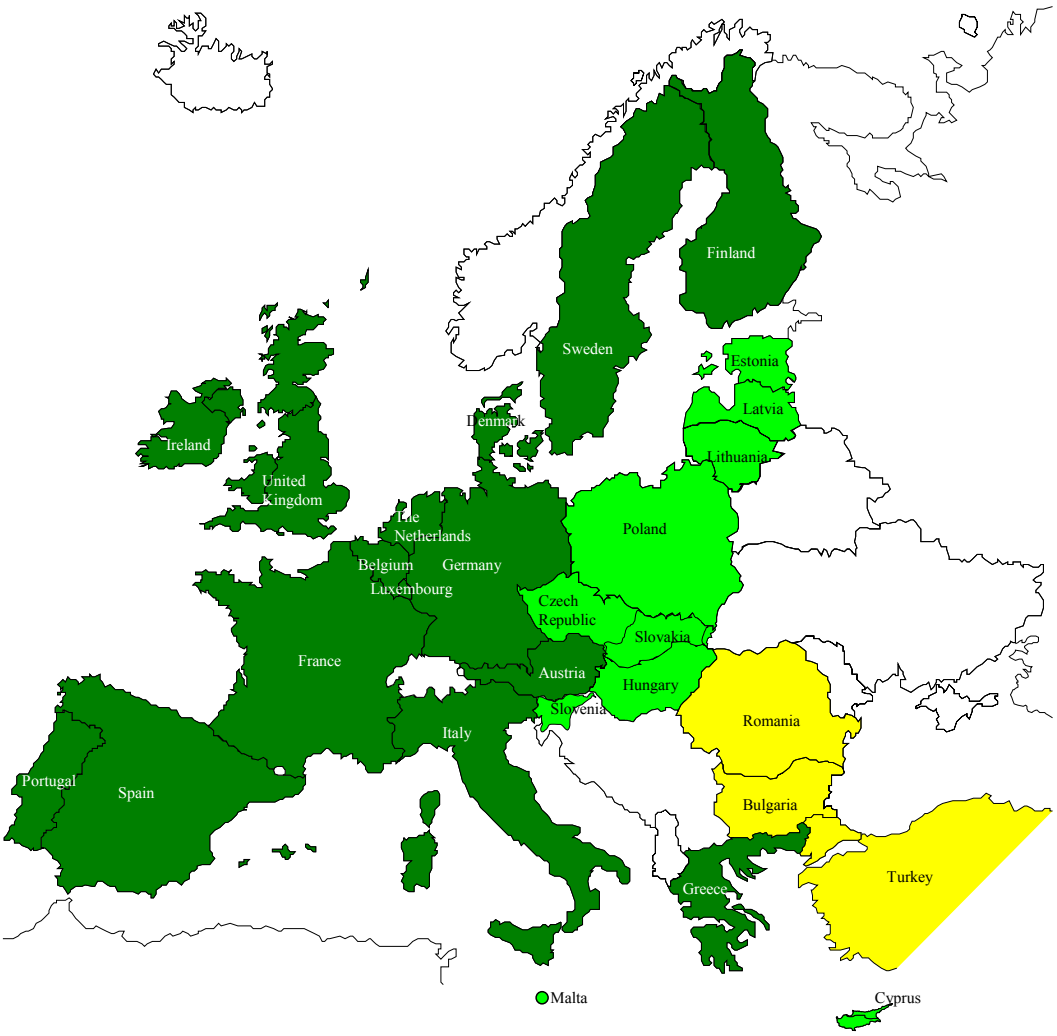

Figure 1: Overview of current EU-15, 2004 EU accession and possible future EU countries

This report is specifically focused on Distribution Centre investments and is intended to answer the following two questions:

1. How will the current and future EU countries compare to each other when attracting Distribution Centre investments?
2. What will the effect of EU enlargement be on (re)location decisions for Distribution Centre investments?

We hope that this report series will provide insight into current and future EU country competitiveness with regards to attracting new investments.

We have used several sources in analysing all country data. All of the sources are listed in appendix B.

2 European distribution structures and implications of EU enlargement

2.1 Current European distribution structures

Effective distribution structures are very dependent on industry and individual company characteristics. Therefore, a general European distribution structure does not exist. However in this chapter we will present an overall distribution structure framework that covers most company distribution structures encountered in practice.

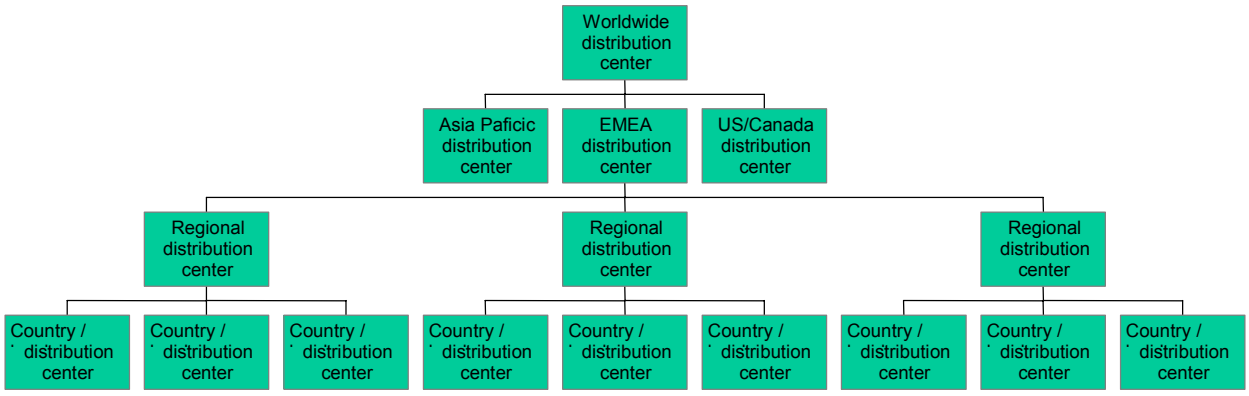

Figure 2: Distribution structure framework

In most distribution structures we normally see the following types of distribution centre functions:

- *Worldwide distribution centre*; this centre is often located close to the worldwide manufacturing plant and serves to distribute goods to the different worldwide geographic regions
- *EMEA distribution centre*; this centre serves as a central storage of goods for the European, Middle-East and Africa (EMEA) regions and takes care of replenishment of the different regional distribution centres
- *Regional distribution centre*; this centre serves as a main distribution centre for a specific region within EMEA, for example the UK/Ireland region or the Nordic regions.
- *Country / local distribution centre*; this centre serves for the final distribution to the customers.

It is important to note that the above distribution structure is a functional structure for global organisations. In practice there are physical distribution centres that for example would combine the functions of worldwide, EMEA, regional and local distribution centre.

An example of this would be a company that has a global manufacturing plant in France. Close to this manufacturing plant is a distribution centre that serves as a worldwide distribution centre (it distributes goods to the Asia Pacific and US/Canada distribution centres). This distribution centre also serves as EMEA distribution centre. Parallel it also serves the Southern European region and it takes care of final distribution to the customers in the Northern French area.

In addition for organisations that only operate in the European market, the function of the worldwide distribution centre would not make any sense. The extent to which all functional distribution centres are present differs significantly between different industries. In the fresh food industry for example, worldwide or EMEA distribution centres are unusual because the type of product (mostly perishables) dictates a local distribution structure. In the pharmaceuticals industry, EMEA distribution centres are common but regional or local distribution centres are not present, because the pharmaceutical products are often manufactured in one central plant and delivery times are not very critical (hospitals often have own inventories). However, in the high tech spare parts industry, all of the above distribution centre functions can be present because spare parts need to be delivered within a few hours (the availability of telecom spare parts for example is highly critical for the operation of telecom networks) and high tech spare parts are usually very expensive (which would require centralised distribution structures).

Since each distribution network contains some or all of the components of our distribution structure framework and since the implications of EU enlargement may differ tremendously for each of the different distribution centre functions, we will further differentiate our trends and conclusions in this report towards each of the distribution centre functions.

2.2 General supply chain trends

For the last 5 – 10 years we have seen some general supply chain trends that have had effect on most companies European supply chains:

- *Centralisation of European supply chain structures*; over the last 5 – 10 years many barriers for cross-border transactions between countries within the European Union (EU) have decreased. As a result companies have been able to centralise European supply chain structures thus leading to large cost savings.
- *Shortening product life cycles*; in many industries product innovation has become a large competitive factor. This has led companies to compete in a rat race to be the first to launch new products and technologies. As a result average product life cycles have decreased.
- *Outsourcing of warehousing and transport operations to logistics service providers*; many companies have acknowledged that warehousing and transportation is not part of their core business and as a result these operations are outsourced to logistics service providers. A recent CGE&Y study (CGE&Y 2002 3PL study) indicates that in Europe 94% of com-

panies have already outsourced part of their warehousing and transportation operations to logistics service providers.

- *Consolidation in the logistics service provider industry*; over the last few years a large industry consolidation has started within the logistics service provider industry. Within Europe there still is a lack of logistics service providers with pan-European coverage. As a necessity most companies have therefore outsourced their European warehousing and/or transport operations to multiple logistics service providers. The large logistics service providers recognised the need for pan-European logistics service providers and this resulted in the acquisition of numerous other companies to improve their European supply chain network.
- *Country or customer specific assembly or kitting operations taking place as close to the customer as possible*; many products need to be made country or customer specific (labelling, kitting, adding manuals in local languages etc.) before they can be delivered to the customer. Historically these country or customer specific activities were mostly done in the factory, and this led to high inventory levels (because each product had to be kept in stock in sufficient quantities for each country or customer). Due to the fact that in most industries the number of different products has increased and product life cycles have decreased, it was impossible to continue this approach as this would have led to very large inventory levels. Many companies have therefore chosen to move their country and customer specific kitting or assembly operations as close to the customer as possible. This has resulted in large decreases in central inventory levels as the number of article items on stock has decreased. A counter effect to these developments however has been that supply chain complexity has increased because some smaller manufacturing activities have to be planned and executed (mostly in the warehouses) before final delivery takes place.

3 Foreign Direct Investments in EDC's in Europe

3.1 Overall investment trends (1997-2002)

3.1.1 *Introduction*

The results of this market share analysis of foreign direct investments in Europe are based on the European Investment Monitor (EIM). This database, developed and maintained by Ernst & Young's *International Location Advisory Services,* monitors all announced foreign direct investments in Europe (published in public media). For each investment project, details on the investment location, country, origin country, sector, activity and type are available. The EIM contains data for the period 1997-2002. The analysis in this chapter is based on this whole period.

3.1.2 *Setting the scene: Foreign Direct Investment in Europe*

In the period 1997-2002, Ernst & Young has monitored 13,144 foreign investment projects in Europe. Since 1997, the number of foreign investment projects has been declining, with the exception of the year 2000.

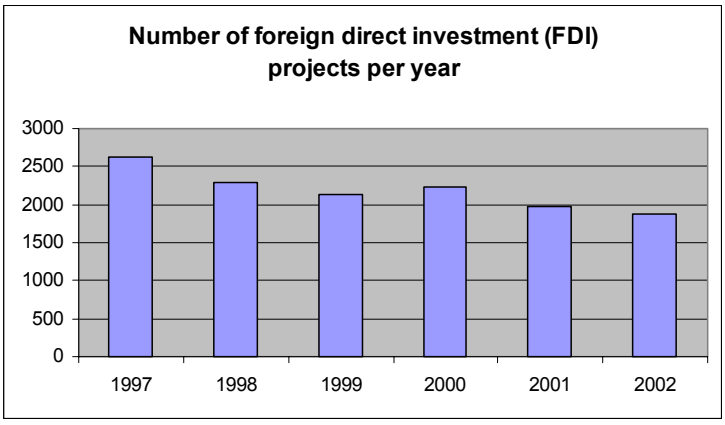

Figure 3: Number of foreign direct investment (FDI) projects per year

The UK is the most popular destination, although it has been losing market share year by year (31% in 1997, 20% in 2002).

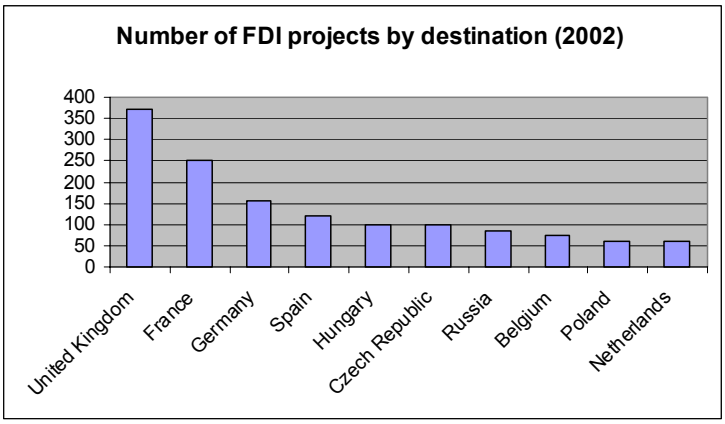

Figure 4: Number of FDI projects by destination (2002)

Figures 4 and 5 display the countries that have been attracting the most investment projects. The overall trend is a decrease in investments into the EU-15 whilst the market shares of non-EU-15 countries continue to increase.

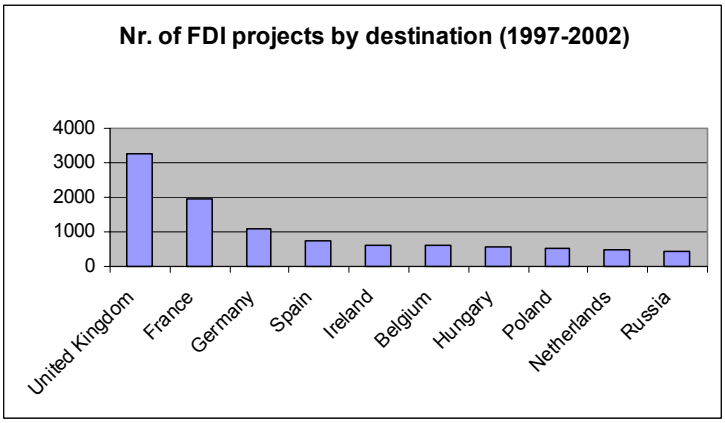

Figure 5: Number of FDI projects by destination (1997-2002)

CASE 1:
BEIERSDORF OPENS NEW LOGISTICS CENTRE IN VILNIUS, LITHUANIA
Company Name: Beiersdorf AG (Germany)
Year of investment: 2002
Type of investment: New Logistics Centre
Country of investment: Lithuania
City: Vilnius
Sector: Cosmetics and medicines
Employment: 100
Capital Investment:€ 20.7 million

Software (1,831 projects), electronics (1,127 projects) and chemicals (1,045 projects) are the top sectors, although pharmaceuticals and telecommunications were the only sectors to see their project numbers rise in 2002.

CASE 2:
MEDTRONIC OPENS LARGEST WORLDWIDE DISTRIBUTION CENTER IN THE NETHERLANDS
Medtronic, the world's leading medical technology company, recently opened its largest and most integrated distribution centre to date in Heerlen. This is the company's second operations facility in the Netherlands, with the first opening in 1969 in Kerkrade. Medtronic chose Heerlen for the site of the new 30,000 square metre distribution centre because of the Netherlands' central location in Europe, excellent infrastructure, and the presence of a highly qualified workforce in the region. The facility will register, store, and ship over 30,000 medical devices and products daily to patients throughout Europe, the Middle East, Africa, Asia, Canada and Latin America.

Located next to the distribution centre, another building houses Medtronic's Benelux and Nordic regional sales organisation, and the European Information Technology and Financial Shared Services Centre, established in 2001. The Financial Shared Services Centre serves the financial needs of Medtronic on a European level.

Additionally, Vitatron, a subsidiary of Medtronic and a leading independent manufacturer of pacemakers, recently opened its new worldwide headquarters in Arnhem. Vitatron chose to locate its headquarters in Arnhem because of its central location between the Randstad area in the Netherlands and the Ruhr area in Germany.

Vitatron also envisioned Arnhem's location as being extremely conducive to conducting business and central to meeting the needs of physicians. About 23 percent of Vitatron's workforce will be employed in the new facility.

The USA is the most important investor in Europe, although its market share has declined in the last couple of years in favour of intra-European and Japanese investments.

Origin country	Number of FDI projects (1997-2002)
USA	5,033
Germany	1,602
Japan	815
UK	738
France	588

Manufacturing is the single largest business activity for foreign investments with 44%. Marketing & sales offices has been the only business activity that saw an increase in project numbers in the analysed period. Logistics (EDC) has got a market share of 8%.

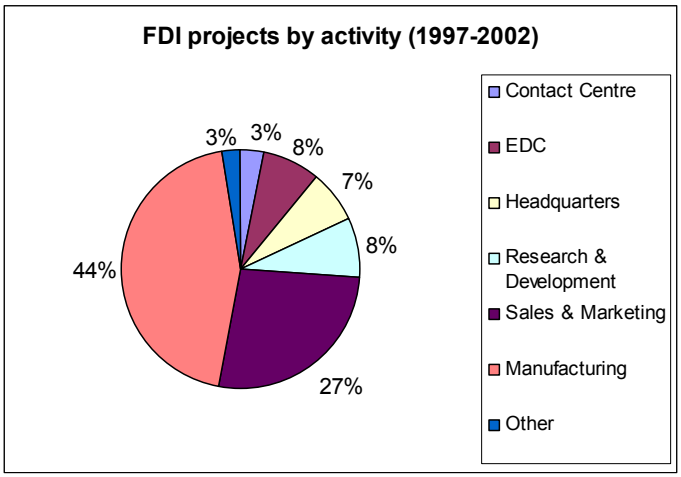

Figure 6: FDI investments by activity (1997-2002)

CASE 3:
MARCHON EYEWEAR OPENES NEW ELC IN AMSTERDAM, NETHERLANDS
Company Name: Marchon Eyewear (USA)
Year of investment: 2002
Type of investment: New European Logistics Centre
Country of investment: Netherlands
City: Amsterdam
Sector: Eyewear (Designer glasses and sunglasses)
Employment: 50

3.2 Foreign Direct Investment in EDCs (1997-2002)

In the period 1997-2002, Ernst & Young identified 1,031 foreign investment projects in European Distribution Centres (EDC) in Europe. By definition a distribution centre (DC) is considered an EDC if more than five countries are serviced from the DC. One physical DC is only counted once (a public warehouse which operates for five different customers is only counted once). The market share of logistics has declined from 9.2% in 1997 (243 projects) to 7.5% in 2002 (141 projects).

Year	1997	1998	1999	2000	2001	2002	TOTAL
Number of projects	243	186	183	141	137	141	1,031

CASE 4:
POLAND: VOS LOGISTICS TAKES OVER EUROAD
Vos Logistics of the Netherlands has purchased a 97.85 % stake in Euroad, one of the largest road transport firms in Poland. The new owner plans to enlarge the fleet of Euroad from 265 to 700 within eighteen months. Euroad exists since 1991.

France has been the most popular host country for distribution activities (216 projects, market share of 21%), with the UK, Belgium, Germany and the Netherlands completing the top five.

Host country	Number of projects (1997-2002)	% of projects (1997-2002)	Ranking (1997-2002)	Number of projects (2002)	% of projects (2002)	Ranking (2002)
France	216	21 %	1	27	19 %	1
United Kingdom	182	18 %	2	10	7 %	4
Belgium	91	9 %	3	11	8 %	3
Germany	80	8 %	4	9	6 %	5
Netherlands	70	7 %	5	4	3 %	7
Spain	66	6 %	6	11	8 %	3
Austria	46	4 %	7	11	8 %	3
Hungary	46	4 %	7	15	11 %	2
Poland	44	4 %	8	7	5 %	6
Russia	26	3 %	9	7	5 %	6
Other	164	16 %		29	21 %	
TOTAL	1031	100 %		141	100 %	

The table above also shows the results for 2002. In this year, Hungary comes after France as the second largest destination for distribution activities. Russia and Austria experienced a growth in their market shares as well, whilst the UK and the Netherlands saw their market share fall by more than 50%.

As for all investment projects, the USA is the main investor in logistics in Europe (26% of all projects). In the top five of most important origin countries the Netherlands replaces France in fifth position.

CASE 5:
NEW STATE-OF-THE-ART FACILITY FOR EXEL IN HUNGARY

Exel has moved to a new location in Hungary at the beginning of 2003, enhancing its capabilities and scope to enable a greater interface with customers, suppliers and agents. The new 1,250 square metre transit warehouse plus offices is located at Vecses and will support the solutions Exel provides to companies in the high-tech, engineering and technology industries. The facility is situated close to the airport providing quicker freight transit times and more effective storage capacities for customers. From the new facility, Exel will deliver integrated services including airfreight, warehousing, distribution, customs management and customer services.

Exel also operates in the automotive industry in Hungary where it provides comprehensive inbound to manufacturing logistics services for Opel Hungary Powertrain Ltd. (a subsidiary of Fiat-GM Powertrain) in their Szentgotthard engine manufacturing plant.

Besides the dedicated transport services companies, companies in the automotive, food, retail, chemicals, electronics and pharmaceuticals industries are the main investors in distribution activities. Top investors were DHL, Lidl, TNT, Coca-Cola, Toyota, Prologis, and Ikea.

4 Location decision criteria for European Distribution Centres

4.1 Introduction

In chapter 2 we distinguished between four different distribution centre functions: worldwide, EMEA, regional and country or local distribution centres. In this chapter we will explore the criteria for determining in which EU country a distribution centre should be based. These location decision criteria are relevant for the first three distribution centre functions. For country or local distribution centres these location decision criteria are not relevant since these distribution centre functions are normally based very close to the customers (and in that case the country to base the distribution centre function is also known).

In the case of worldwide or EMEA distribution centre functions, these location decision criteria can be quickly used to assess in which EU countries it is best to locate these distribution centre functions. In the case of regional distribution centre functions, the location decision criteria can be used to quickly assess the best country (to base a regional distribution centre function) among the different countries in the specific region.

We should note however that the situation that we assume in this report is a simplified one:

- We assume that only *distribution centre* functions are relevant. In practice large assembly activities might be needed within or close to the distribution centre. In determining the best location for the combined assembly / distribution centre facility it becomes relevant to also take into account the location decision criteria for assembly facilities. The same argument applies for head office functions that are often based close to the EMEA or worldwide distribution centre.
- We assume that company sales volume in each of the countries within the EU region shows the same pattern as GDP volumes in each of the different countries. This assumption will generally only be valid for large international organisations. If a company sells its goods primarily in Southern Europe it makes no sense to locate the distribution centre in Germany for example.

4.2 The most important location decision criteria

For typical distribution centre functions we assume the following location decision criteria to be relevant (see table below). The level of importance we have attached to each location decision criteria is based on CGE&Y experiences. Especially the existing transport infrastructure and the wages and benefits costs are relevant for locating distribution centre functions. Also important is the proximity to ports (most raw materials and volume goods are transported by sea), airports

(most expensive small volume goods are transported by air), rail hubs (chemicals and raw materials are mostly transported across Europe by rail), customers and suppliers / sources. Because distribution centres are relatively labour-intensive, labour availability (how easy is it to find new employees?) and labour flexibility (how flexible is the country in adapting employee numbers to changing markets?) are important. Most distribution centres need a lot of space therefore making real estate costs an important decision criterion. In addition incentives offered by central and local governments often play a key role in locating distribution centres. Multilingualism (the number of languages that is typically spoken in a specific country) is also important since a lot of distribution centres also contain customer service or call centre functions.

Location decision criteria	Explanation	Level of importance (1 = low, 5 = high)
Transport infrastructure	How good is the transport infrastructure (rail, road, air, inland water / sea, multi-modal) within each country?	5
Wages and benefits	What are the labour costs within each country?	5
Proximity to seaports	How well is the country aligned with major seaports?	4
General business environment	How easy is it to do business in each country?	4
Proximity to airports	How well is the country aligned with major airports?	3
Proximity to rail hubs	How well is the country aligned with major rail hubs?	3
Labour availability	How easy is it to find employees for a facility / operation?	3
Labour flexibility	How easy is it to adjust employee numbers to the volatile marketplace?	3
Proximity to customers	How close is the country situated to major European customer areas?	3
Proximity to suppliers / sources	How close is the country situated to major European industry supplier areas?	3
Real estate costs	What are the total costs of real estate?	3
Incentives	How many incentives does each country provide to companies in this industry?	3
Corporate taxes	How many corporate income taxes need to be paid in each country?	3
Multilingualism	How multi-lingual are the country's inhabitants?	2
Congestion risk	What is the congestion risk in each country?	2
Utility infrastructure	How good is the utility infrastructure (gas, water, electricity) within each country?	1

Each decision criteria might be measured with one or multiple data elements (indicators). For each of these indicators country scorings are normalised in the range 0 to 10 (0 is the value given to the country with the most negative scoring, 10 is the value given to the country with the most positive scoring). If multiple indicators have been used to calculate country scorings on specific decision criteria, then each of these indicators has been given the same weighting factor. The consolidated country scorings on the decision criteria are then again normalised in the range 0 to 10.

The resulting (normalised) country scorings on each of the decision criteria then result in a total ranking (taking into account the weighting factors as listed above).

4.3 Transport infrastructure

To assess transport infrastructure in the different (future) EU countries we considered a combination of the following indicators:

- ***Density of motorway network*** (total kilometres of road network per country divided by the country's geographic area in square kilometres)
- ***Density of inland waterway network*** (total kilometres of inland waterway network in use divided by the country's geographic area in square kilometres)
- ***The level of multi-modal usage*** (this is a ranking based on the use of four modalities: rail, road, pipeline and water; if usage across these modalities is spread alike then the level of multi-modality is high, if almost all transport is done by road then the level of multi-modality is low)

As shown in figure 7, the Netherlands and Belgium have the highest transport infrastructure maturity followed at a distance by Hungary, Austria and Romania.

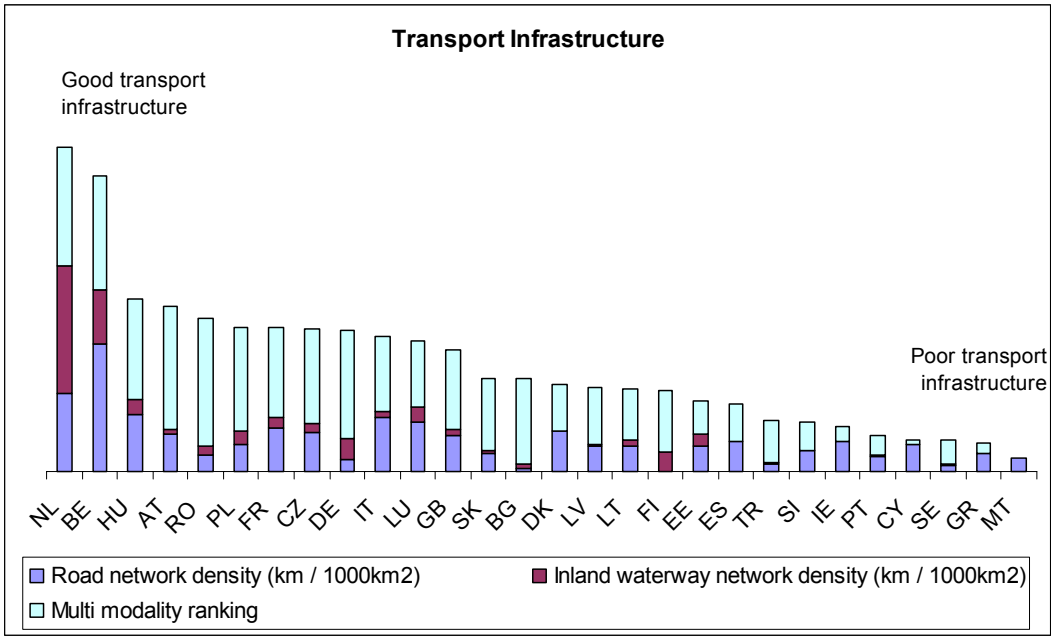

Figure 7: Transport infrastructure maturity per country

4.4 Wages and Benefits

Cost associated with wages and benefits are important decision criteria for most industries. Larger distribution centres typically employ more than 50 employees and this employee number increases easily if call centre, customer service or head office functions are also located at the distribution centre.

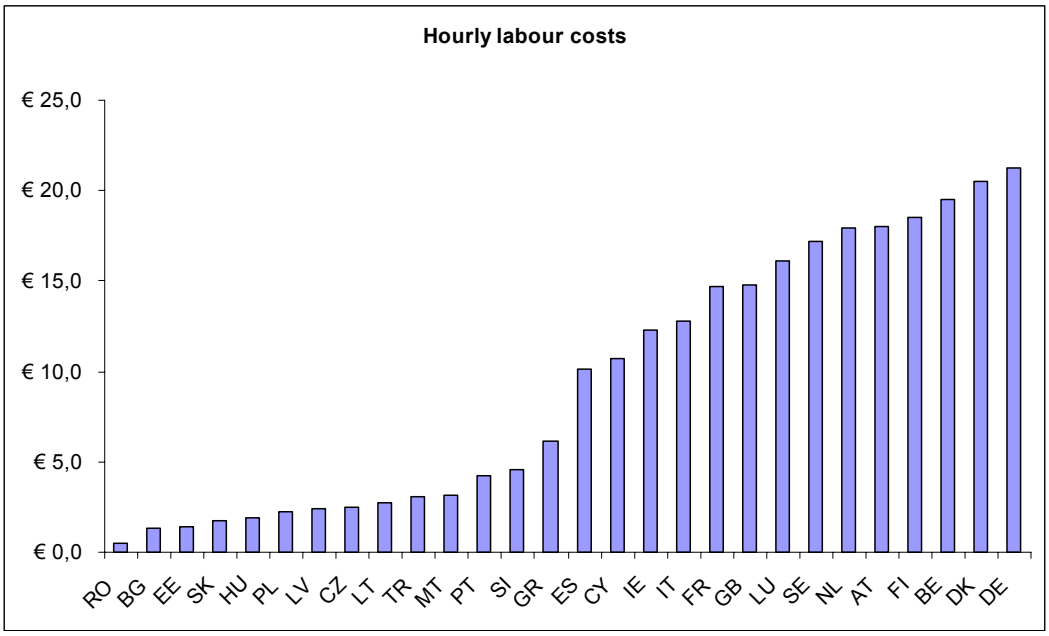

Figure 8: Hourly labour costs per country

Clearly there is a large difference between the wages and benefits in the current EU-15 countries and the 2004 EU accession countries. Two of the three possible future EU entrants (Romania and Bulgaria) have the lowest wages and benefits. In most 2004 EU accession countries wages and benefits have already risen since the intention and decision to join the EU.

4.5 Proximity to seaports

To assess each country's proximity to seaports we took the following into consideration:

- ***The average geographic area covered per main seaport*** (expressed in thousands of square kilometres per main seaport); this indicator identifies the density of seaports in a country
- ***The average gross weight of goods handled per main seaport*** (expressed in millions of tonnes per main seaport); this indicator identifies the infrastructure for handling large volumes of goods at seaports

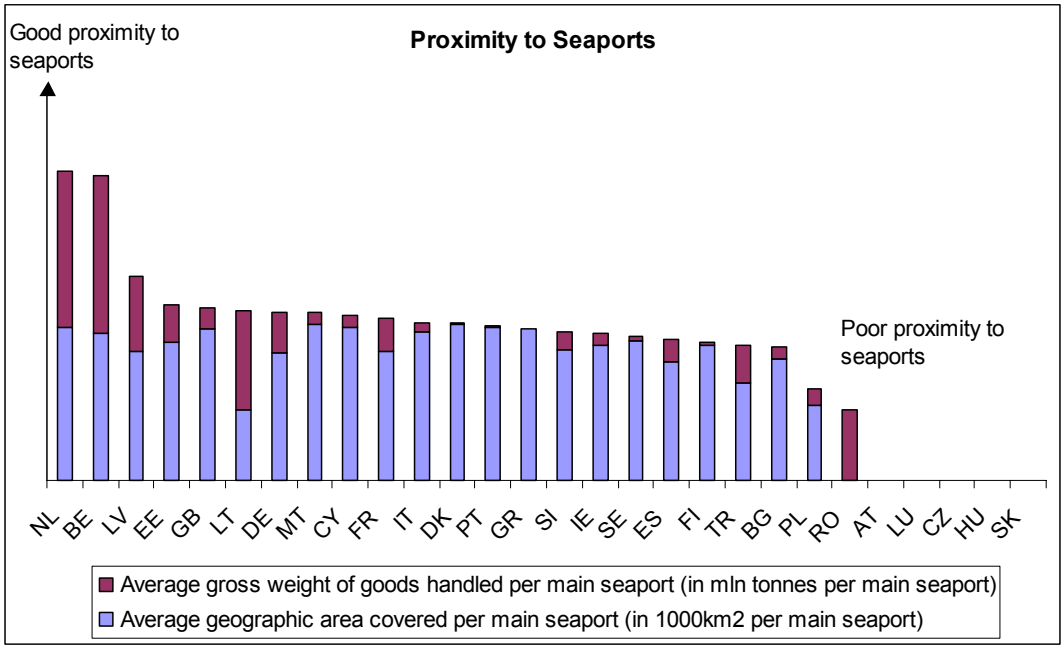

Figure 9: Proximity to seaports in each country

Clearly the Netherlands (with the Rotterdam harbour) and Belgium (with the Antwerp harbour) score best on their proximity to main seaports. Germany scores high on the average gross weight handled at seaports (especially the Hamburg and Bremen harbours) but scores low on the number of harbours in relation to the German geographic area. A lot of the new 2004 accession countries score high on their proximity to main seaports (like Latvia, Estonia and Lithuania). At the bottom of the list Romania that handled a significant amount of freight at its two main seaports, however it scores lowest on the number of seaports in relation to the Romanian geographic area.

4.6 General business environment

No matter how well a country scores on logistics related decision criteria, it is equally important to look at the general business environment in a specific country (how easy is it to do business in a specific country?). We have used the general business environment ranking from the EIU to compare the different countries.

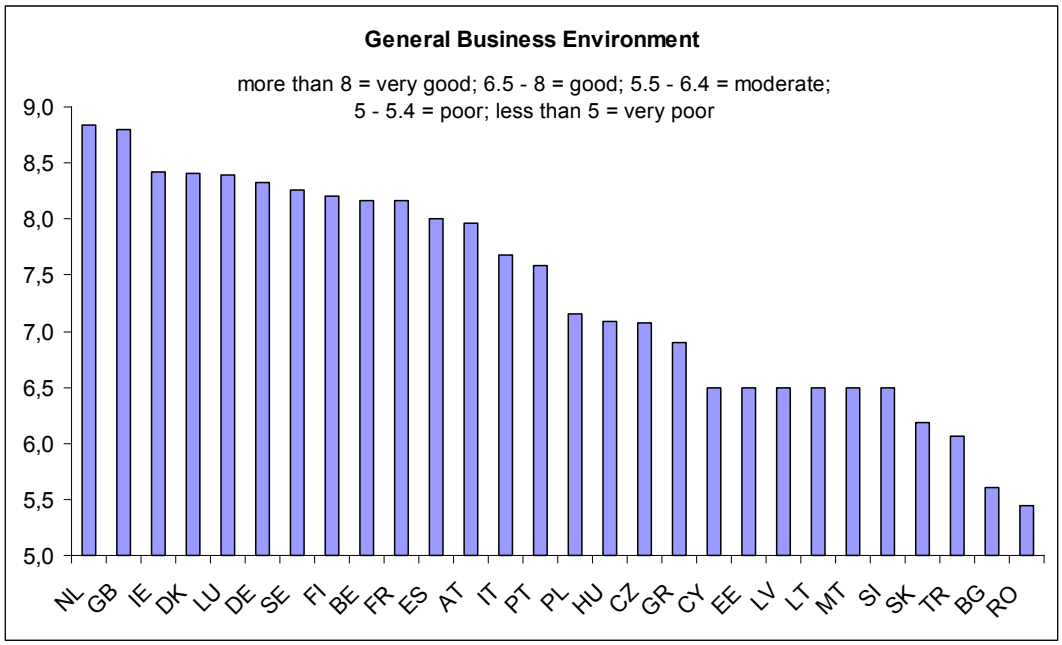

Figure 10: EIU general business environment ranking

The Netherlands and the United Kingdom score best on the general business environment ranking, closely followed by the other EU-15 countries. Poland, Hungary and Czech Republic score best among the new 2004 EU accession countries. The possible future EU countries (Turkey, Bulgaria and Romania) are the laggards in the list.

4.7 Proximity to airports

To assess each country's proximity to airports we took the following into consideration:

- ***The average geographic area covered per main commercial airport*** (expressed in thousands of square kilometres per main commercial airport); this indicator identifies the density of airports in a country
- ***The average tonnes of freight and mail handled per main commercial airport*** (expressed in thousands of tonnes per main commercial airport); this indicator identifies the infrastructure for handling large volumes of goods at airports

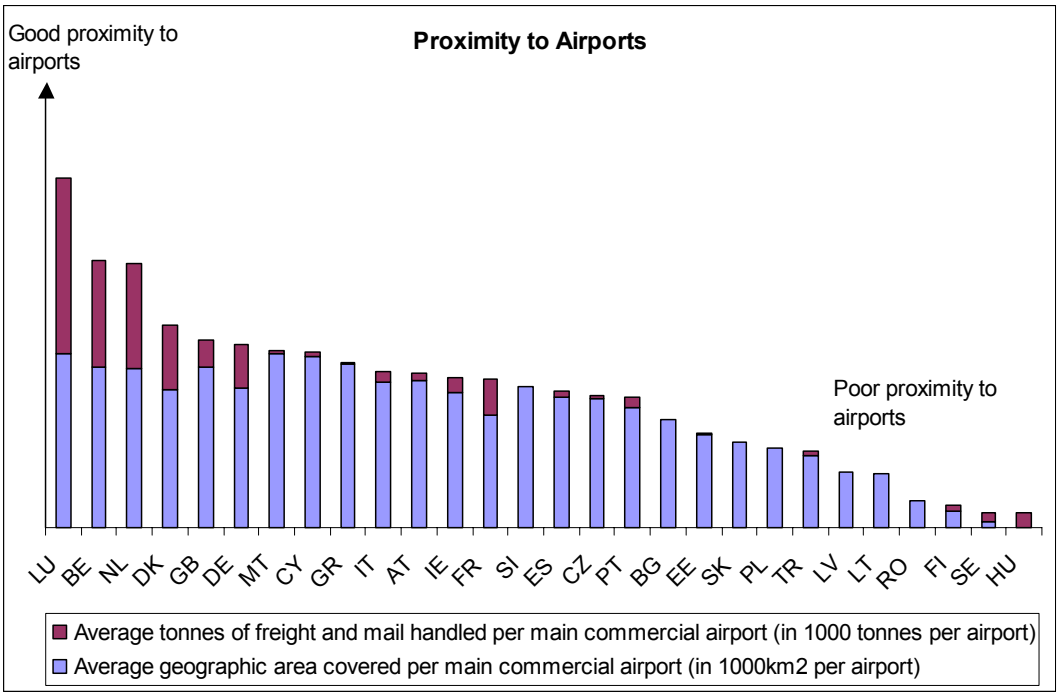

Figure 11: Proximity to airports per country

Luxembourg scores best on its proximity to main commercial airports. An example is the European hub of Federal Express that is based in Luxembourg. Also Belgium (Brussels airport) and Netherlands (Amsterdam Schiphol airport) score well on this indicator. Most 2004 EU accession countries and the three other possible future EU countries score low on their proximity to main commercial airports.

4.8 Proximity to rail hubs

To assess each country's proximity to rail hubs we looked at:

- ***The density of the rail network*** (expressed in the number of rail network kilometres per 1,000 square kilometres of geographic country area)

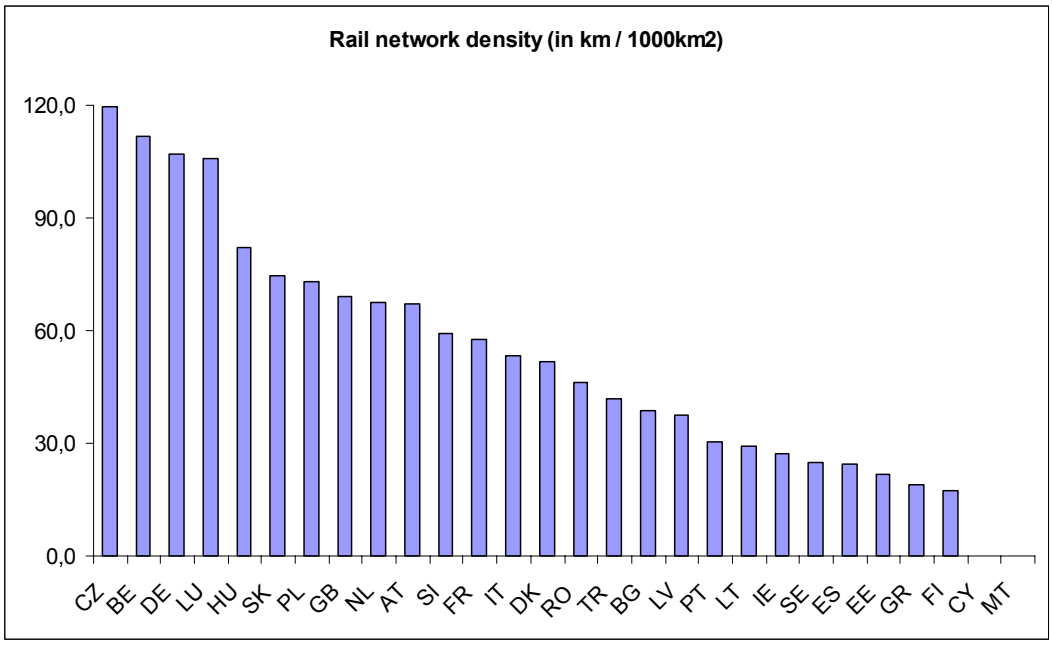

Figure 12: Rail network density per country

The Czech Republic, Belgium, Germany and Luxembourg score best on their rail network density. Many 2004 EU accession countries (Czech Republic, Hungary, Slovakia, Poland and Slovenia) have a very good rail network in place.

4.9 Labour availability

The unemployment rate (as a percentage of the total active population) has been used as an indicator for labour availability. A high unemployment indicates a good labour availability.

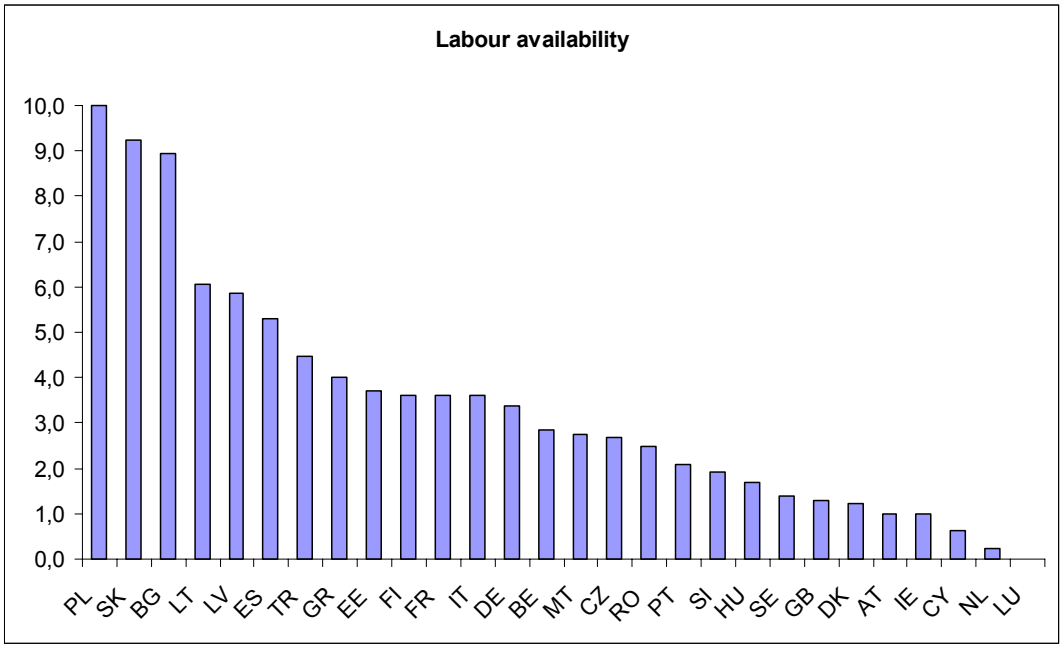

Figure 13: Labour availability per country

The new Eastern European countries have the highest unemployment rates in the new European Union (especially Poland, Slovakia and Bulgaria). Western European countries such as the Netherlands and Luxembourg have the lowest unemployment rates.

4.10 Labour flexibility

The Employment Protection Legislation (EPL) ranking from the OECD has been used as an indicator for labour flexibility. A low EPL indicates that it is fairly easy to make people redundant if necessary. A high EPL indicates that there is extensive legislation in a specific country that makes it very difficult or expensive to make people redundant. As such, the EPL is a good indicator of the flexibility of the labour market in a specific country.

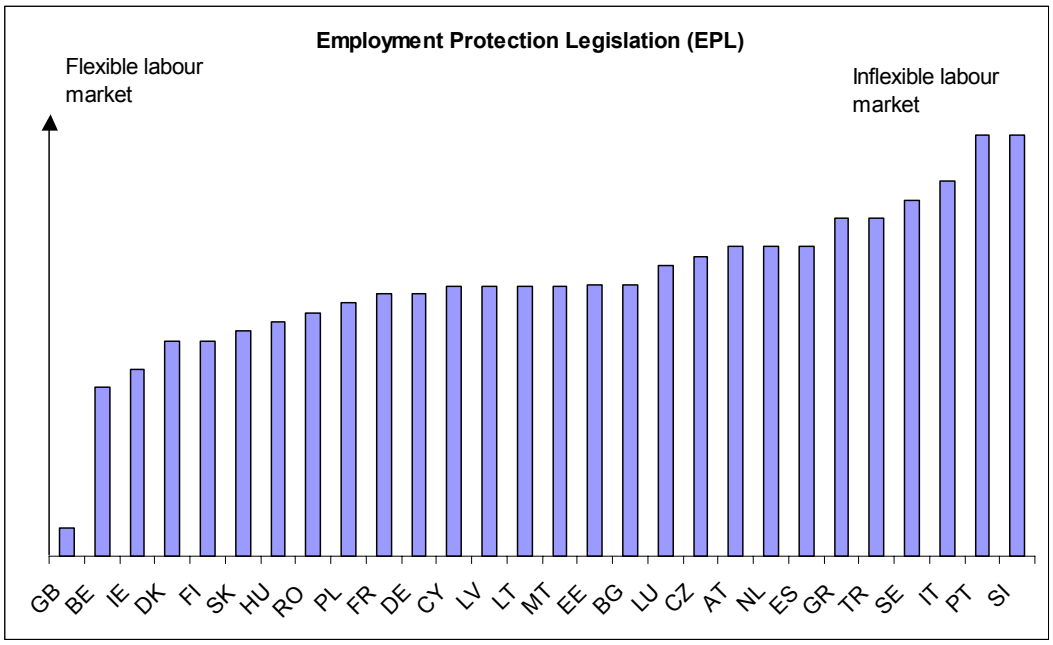

Figure 14: Labour market flexibility per country

The United Kingdom clearly has the most flexible labour market in the European Union while Slovenia and Portugal have the least flexible labour market. Most new EU accession countries have EPL's which are comparable to the EU average EPL.

4.11 Proximity to customers

In determining a distribution structure it is always necessary to achieve a balance between customer service levels and costs. To achieve high customer service levels it is necessary to be as close to the customers as possible. Proximity to customers is therefore an important criterion to determine the location of distribution centres. To assess each country's proximity to customers we took the following into consideration:

- ***Gross Domestic Product (GDP)*** (expressed in millions of US dollars); GDP is considered a good indicator of the total market in a specific country
- ***GDP per capita*** (expressed in US dollars per capita); GDP per capita is considered a good indicator of the purchasing power of the country's inhabitants

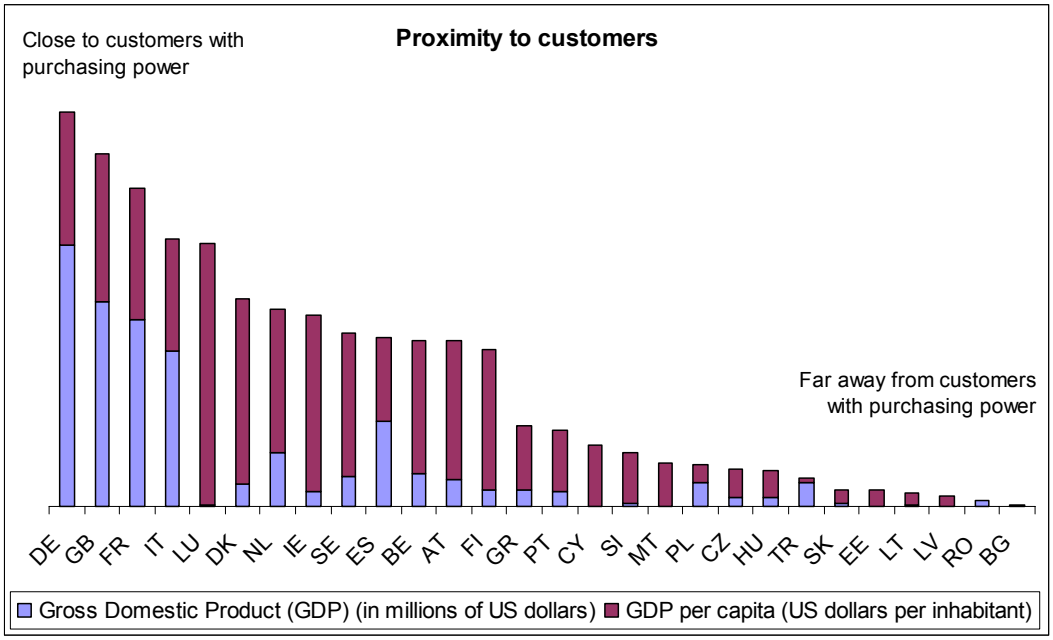

Figure 15: Proximity to customers with purchasing power

Germany, the United Kingdom and France are the countries where most customers with the largest purchasing power are found. It will come as no surprise that all new EU accession and possible future EU countries lag far behind the current EU-15 countries.

4.12 Proximity to suppliers / sources

While it is important that distribution centres are situated close to the most important customer regions, it is also important that they are close to the suppliers or sources of the products that need to be distributed (to avoid unnecessary high transport or in-transit inventory costs). We have used the Gross Domestic Product (GDP) of each country as a general indicator of where factories or other sources are located.

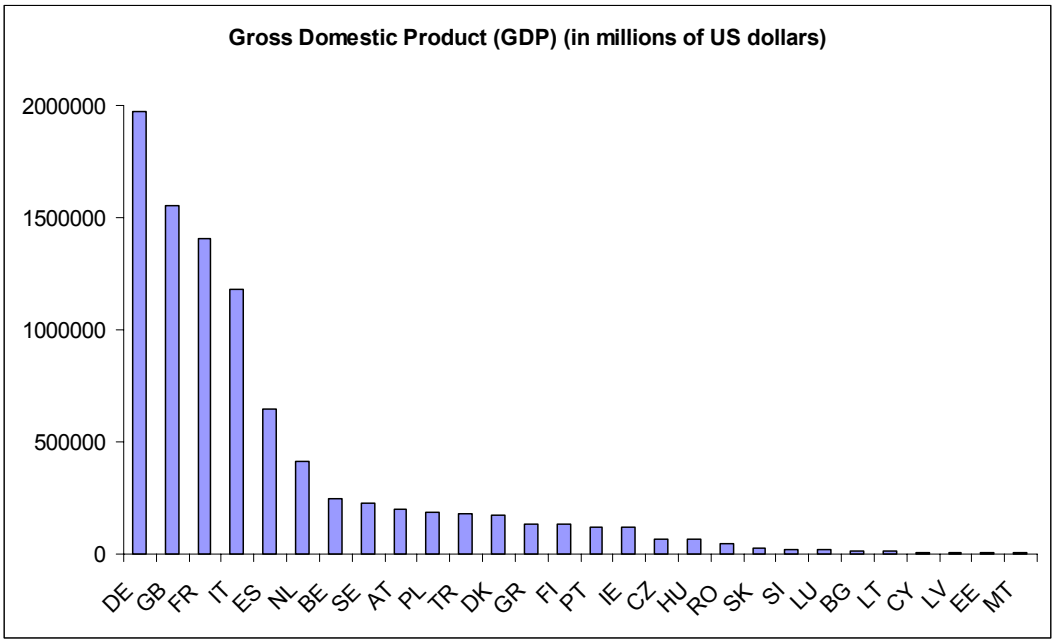

Figure 16: GDP per country

Again Germany, the United Kingdom and France are the most important economies in the European Union.

4.13 Real estate costs

Distribution centres generally span several acres of land. Costs associated with real estate are therefore an important part of the fixed costs of a distribution centre operation. It is however difficult to compare real estate costs between different countries while there are not only large differences between countries but obviously also large differences within the same country. A good indicator for the differences between the different countries is the annual office occupancy costs indicator (mostly focused on the countries capital city). While this indicator primarily focuses on real estate costs for offices, the relative differences are largely the same for the real estate costs for other types of facilities.

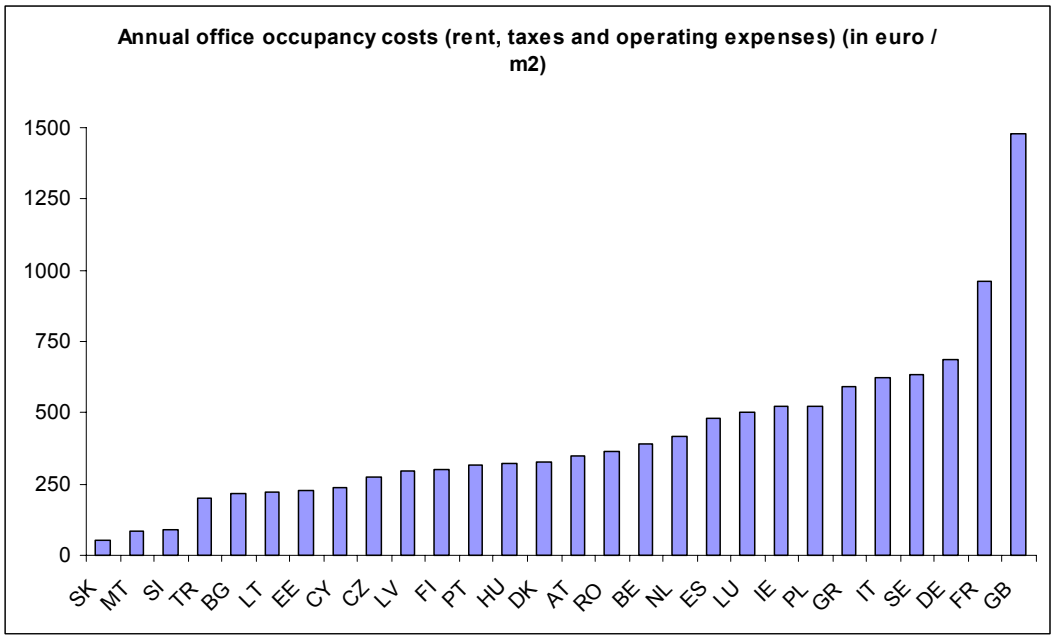

Figure 17: Annual office occupancy costs (rent, taxes and operating expenses)

The United Kingdom is by far the most expensive country for real estate, followed by France and Germany. The new 2004 EU accession countries are generally the least expensive countries regarding real estate costs.

4.14 Incentives

Foreign investment agencies in the different countries generally use incentives to lure companies to their territory. There are different types of incentives.

Fiscal incentives

The most commonly used inducements are fiscal FDI incentives. This particularly applies to non-developing countries, which have limited funds available for financial incentives. Where fiscal measures are used to attract FDI into countries they usually take the form of rules-based approaches, since changes in taxation in most cases require legislative action. A representative list of individual fiscal incentives that are currently being offered by some jurisdictions is included in the table below.

Category	Incentive	Description
Reduced direct corporate taxation		General measures aimed at easing the corporate tax burden.
	Reduced rates of corporate income tax	Whereas a general lowering of corporate tax rates relates to the enabling environment for investment, some jurisdictions have targeted such measures at incomes from specific sources or at income earned by non-resident investors alone.
	Tax holidays	Under a tax holiday, qualifying "newly-established firms" are not required to pay corporate income tax for a specified time period. A variant is to provide that a firm does not pay tax until it has recovered its up-front capital costs.
	Special tax-privileged zones	The creation of "ring-fenced" areas with low rates of corporate taxation amount to fiscal FDI incentives in the cases where foreign-owned enterprises enjoy privileged access to operate in such zones.
Incentives for capital formation		Policies of tying lower taxation to corporate investment are used by many jurisdictions as a way of conjointly attracting foreign enterprises and providing them with incentives to invest.
	Special investment allowances	Under such allowances, firms are provided with faster or more generous write-offs for qualifying capital costs. They may take the form of accelerated depreciation or enhanced deductions.
	Investment tax credits	Such tax credits are earned as a percentage of qualifying expenditures and offset against taxes otherwise payable.
	Reinvested profits	Some jurisdictions offer deductions or tax credits against profits that are rein-vested in the host economy.
Reduced impediments to cross-border operation		Companies are attracted to locations where the fiscal system imposes minimal costs on the cross-border transfer of funds, goods and services and manpower.
	Withholding tax	Some countries offer foreign-owned enterprises reduced rates of withholding tax on remittances to their home countries.
	Taxation of foreign trade	Reduced import taxes and customs duties (and in some cases export taxes) are sometimes used as FDI incentives, for instance where export-processing zones are not accessible to domestic enterprises.
	Taxation of employees	Lower personal income tax or social security reductions for expatriate executives and employees are used to make locations more attractive to foreigners.

Other tax reductions	The selective lowering of any tax rate affecting the enterprise sector may be used to attract foreign enterprises. Currently, some jurisdictions use lower sales taxes and VAT reductions as an incentive; others offer foreign-owned enterprises property tax reductions. An interesting special case relates to a practice in some non-developing countries of offering foreign-owned enterprises the option of choosing a lump sum payment in lieu of taxes, with the purpose of providing them with incentives to boost their economic activity in the host economy.

Financial incentives

Policies of offering financial FDI incentives are often formally motivated by one of three considerations:

- ***A host area may be perceived as being disadvantaged relative to comparable sites elsewhere*** (e.g. because of the stage of development in that area). In this case authorities often argue in favour of targeted efforts at assisting investors, which is construed as a policy of levelling the playing field. Such so-called "site equalisation outlays" are in many cases largely generic or available to all companies that wish to invest in a given area, in which case they can not be considered as FDI incentives. However, the specific investment packages negotiated between authorities and, in particular, large foreign investors have often included special elements that are only available to the corresponding investor.
- ***The costs that enterprises incur when relocating, or establishing new subsidiaries at a distance from previous sites, may hold them back from choosing the most suitable locations***. According to this reasoning, it is advisable for the would-be host authorities to offer a subsidy toward meeting the relocation costs.
- ***The supposed externalities of foreign corporate presence are reaped through a policy of targeted incentives***. Since political constraints generally compel host authorities not to be perceived as handing out gifts to foreign-owned enterprises, such subsidies tend to be tied to specific activities by investors that it seems opportune for authorities to encourage.

In the table below examples are given of each of these financial incentives.

Incentive	**Description**
DISADVANTAGED AREA	
Infrastructure subsidies	One of the preferred ways of increasing the attractiveness of a site (or an area more generally) is by providing physical infrastructure (roads, railways, harbours) or communication tailored to meet the needs of the investors.
Job training subsidies	In many cases, and particularly when investment is sought in activities that are new to the host economy, investors are faced with a shortcoming of qualified labour that authorities offer to alleviate through public or publicly supported education programmes.
RELOCATION SUBSIDIES	
Relocation and expatriation support	Authorities may offer grants to help meet enterprises' additional capital spending and concrete relocation costs. In some cases, host country authorities also contribute toward individual members of staff's removal costs, as well as family-related expenses of expatriate members of staff.
Administrative assistance	Authorities may resort to implicit subsidisation, whereby for example investment promotion agencies (IPAs) take upon themselves, as part of their competitive client service approach, to perform a range of tasks that would otherwise have fallen on the investing enterprises. Examples include preferential treatment by regulatory authorities whereby

	administrative impediments such as the speed of obtaining permissions, are eased.
Temporary wage subsidies	The start-up phase can be further supported through the temporary coverage of part of the new corporate unit's wage bill.
TARGETED INCENTIVES	
Credits to investors	Authorities may choose to grant soft loans or interest subsidies to foreign enterprises for the specific purpose of an investment project. Alternatively, they may ease investors financing costs by issuing loan guarantees.
Real estate	There are many cases of national or local authorities selling land or buildings to foreign investors at below market values. In cases where the real estate was not previously used, such practices are being seen by many as a virtually cost-free way of promoting investment (whereby the opportunity costs are being ignored).
Cost participation	In addition to helping investors cover their start-up costs, authorities sometimes go in for the "longer haul". In return for an opportunity to affect investors' business dispositions, they may contribute toward marketing and developing costs and even, in some cases, ordinary operating costs. Cost participation may be direct, or it may be given indirectly via the suppliers of goods and services to the investor.

Regulatory incentives

Regulatory incentives are policies of attracting foreign-owned enterprises by means of offering them derogations from national or sub-national rules and regulation. While authorities may in principle choose to derogate from any regulatory practice, the onus has in practice been on easing the environmental, social and labour market related requirements placed on investors. Such incentives are almost exclusively granted in connection with targeted strategies, or they are specially negotiated as part of the "improvised" strategies for luring large individual investment projects. It should, however, be noted that the evidence of such practices is sparse, anecdotal, and largely confined to specific sectors in non-developing countries.

It is difficult to obtain exact figures regarding the incentives that the different (future) EU countries are using to lure foreign enterprises since this is also a highly political subject. To assess the level of business incentives offered by each country we have looked at:

- ***Broadness of the array of business incentives offered by the different countries***; this generally indicates how well the country is equipped to offer business incentives
- ***Level of state aid*** (expressed in percentage of GDP); this generally indicates well to what level the country normally supports enterprises

The Czech Republic, the Netherlands, Finland and Belgium offer the highest business incentives to foreign enterprises, closely followed by Denmark, Luxembourg, Ireland, Austria, Italy and Germany. Within the 2004 EU accession and possible future EU countries the Czech Republic and Hungary clearly are the leaders in offering business incentives.

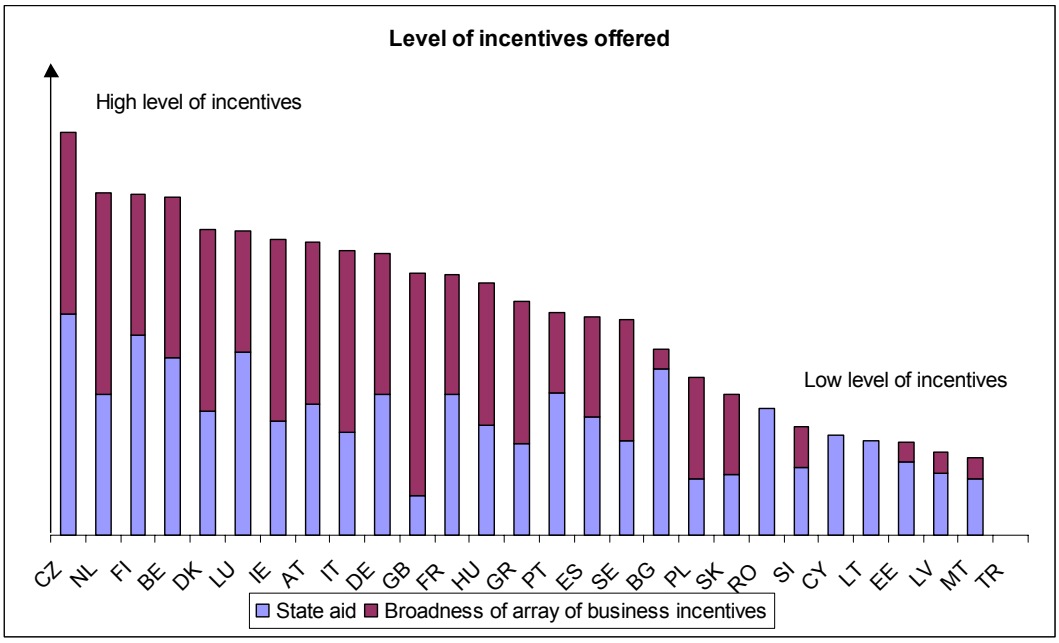

Figure 18: Ranking of the array of business incentives used by the different countries

4.15 Corporate taxes

Corporate tax levels generally are also an important criterion for determining the location of a distribution centre (especially if the European Distribution Centre is located closely to the companies European headquarters).

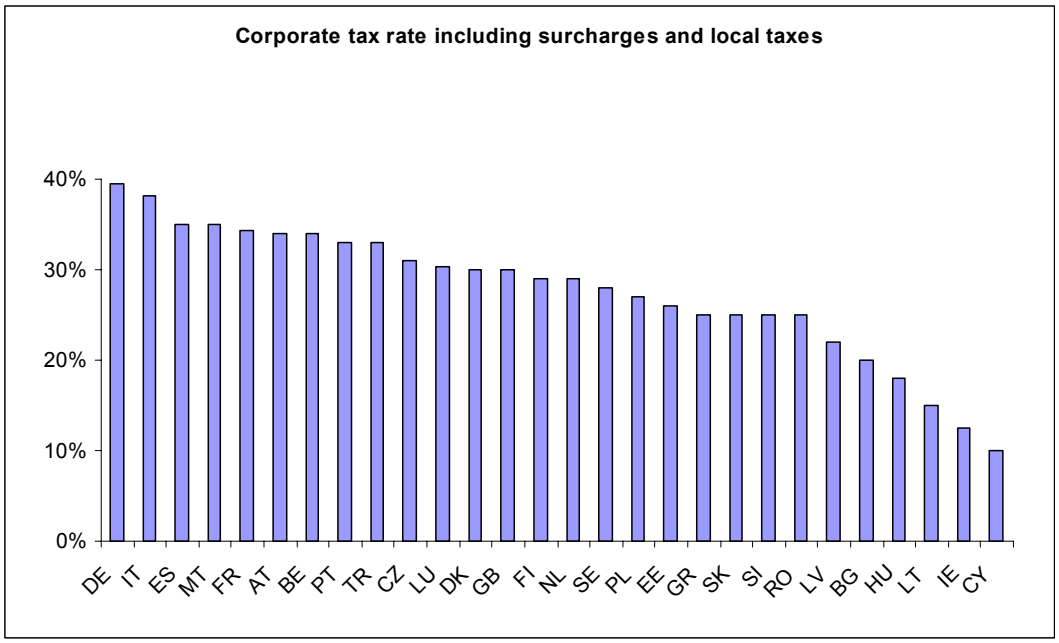

Figure 19: Corporate tax rate including surcharges and local taxes

Germany and Italy have the highest corporate tax levels in the (future) European Union while Cyprus and Ireland have the lowest corporate tax levels. We should note however that the effective tax levels are also determined by potential tax incentives offered by the host country.

4.16 Multilingualism

Multilingualism is an important criterion for distribution centres that also have customer service functions. Based on Euridyce data together with our own estimates for the 2004 EU accession and possible future EU countries we have made a ranking on the percentage of the population that have knowledge of a foreign language.

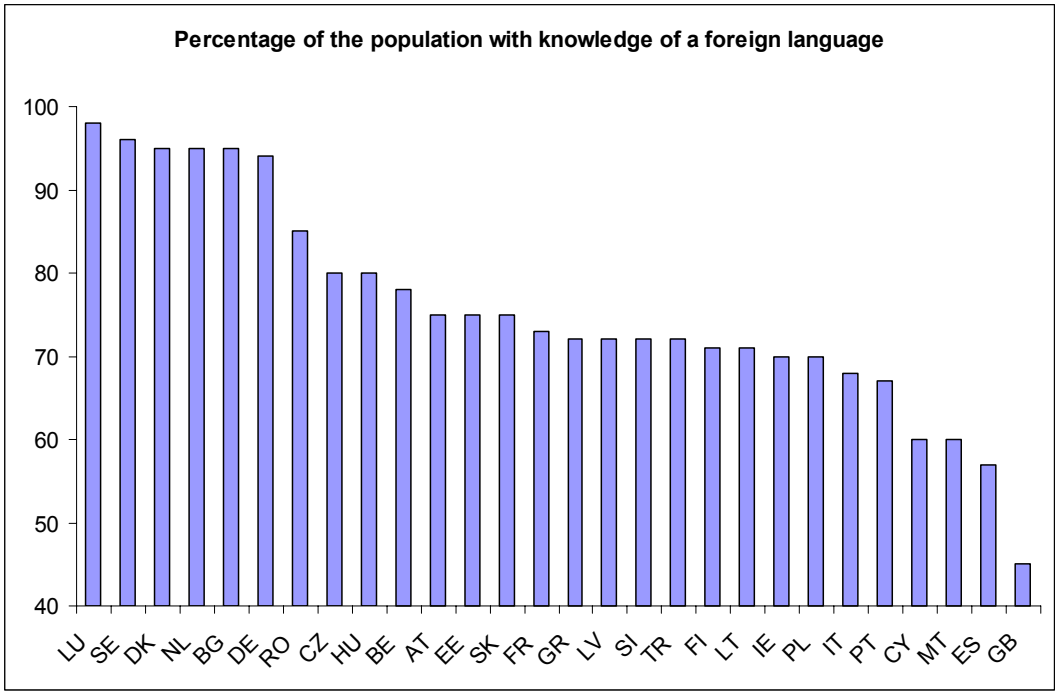

Figure 20: Multilingualism in the different countries

Luxemburg, Sweden, Denmark, Netherlands and Bulgaria are the most multilingual countries. The United Kingdom is the least multilingual country.

4.17 Congestion risk

Due to the fact that European road networks are increasingly experiencing traffic jams, it is important to assess the congestion risk when determining the location of a new distribution centre. To assess the congestion risk (traffic jam probability) for each country we have calculated the average number of cars per kilometre of paved highway (traffic density). A high traffic density increases the congestion risk.

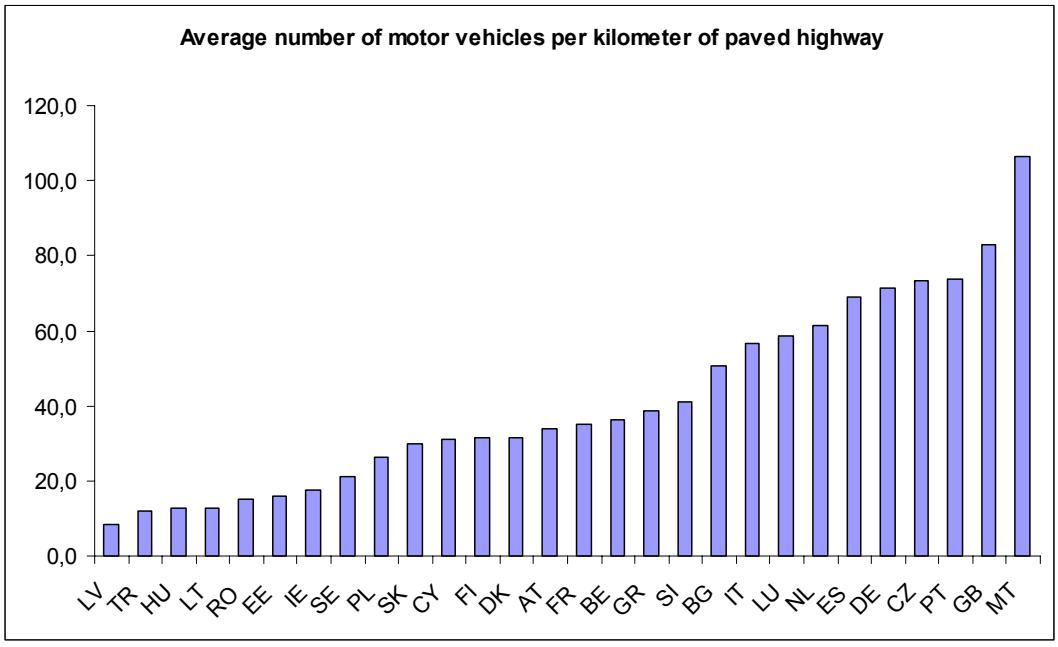

Figure 21: Average number of motor vehicles per kilometer of paved highway

Malta and the United Kingdom have the highest traffic density, closely followed by Portugal, Czech Republic, Germany and Spain. The lowest traffic density is experienced in Latvia, Turkey and Hungary.

4.18 Utility infrastructure

To assess the utility infrastructure in the different (future) EU countries the following indicators were used:

- ***Energy consumption per capita*** (in kWh per capita); a large energy consumption per capita indicates that there is a good energy infrastructure in place
- ***Fresh water usage per capita*** (in m^3 per capita); a large fresh water usage per capita indicates that there is a good infrastructure in place for fresh water transport
- ***Gas consumption per capita*** (in Mtoe per capita); a large gas consumption per capita indicates there is a good gas infrastructure in place
- ***Number of fixed telephone lines per capita***; this indicates the quality of the fixed telephony network
- ***Number of mobile telephones per capita***; this indicates the quality of the mobile telephony network

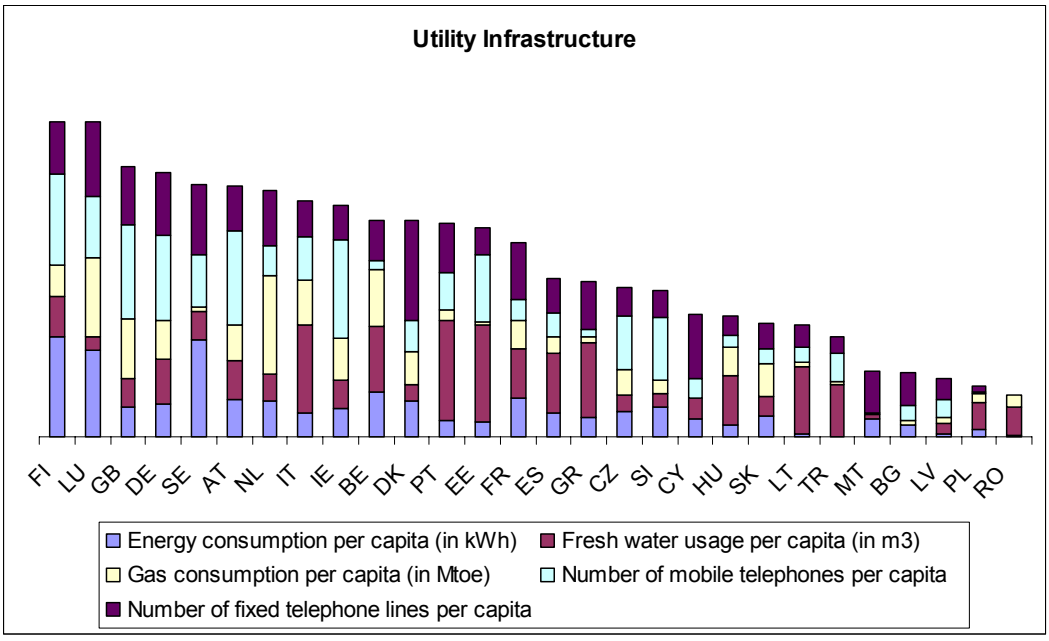

Figure 22: quality of the utility infrastructure per country

Finland and Luxembourg have the best utility infrastructure in place while Romania, Poland, Latvia, Bulgaria and Malta have the poorest utility infrastructure. Of the new 2004 EU accession countries Estonia, Czech Republic and Slovenia have the best utility infrastructure in place.

5 Top countries to locate new Distribution Centres

5.1 Introduction

Based on the location decision criteria for distribution centres that we discussed in chapter 4, we analysed which countries are the best locations for investing in distribution centres. Belgium, Germany and the Netherlands turn out to be the best places to locate distribution centres. These leaders are followed by countries such as Bulgaria, Czech Republic, Denmark, France, Hungary, Ireland, Luxembourg, Poland and the United Kingdom.

Best-in-class*	Second best*	Middle*	Last-in-line*
Belgium	Bulgaria	Estonia	Austria
Germany	Czech Republic	Finland	Cyprus
Netherlands	Denmark	Italy	Greece
	France	Latvia	Malta
	Hungary	Lithuania	Portugal
	Ireland	Slovakia	Romania
	Luxembourg	Spain	Slovenia
	Poland		Sweden
	United Kingdom		Turkey

* Countries are listed in alphabetic order

In the following paragraphs we will discuss the best locations for each distribution centre function that as distinguished in chapter 2.

5.2 Worldwide and European distribution centre functions

According to our analysis in chapter 4, the following countries are the best places to locate worldwide or European distribution centre functions:

- ***Belgium***; Belgium scores particularly well on its proximity to seaports (Antwerp) and airports (Brussels), its transport infrastructure and its incentives.
- ***Germany***; Germany scores well on its proximity to customers and to suppliers, its proximity to rail hubs and its utility infrastructure.
- ***The Netherlands***; the Netherlands score particularly well on its proximity to seaports (Rotterdam) and airports (Amsterdam Schiphol), its transport infrastructure, its utility infrastructure, its incentives, its multilingualism and the general business environment.

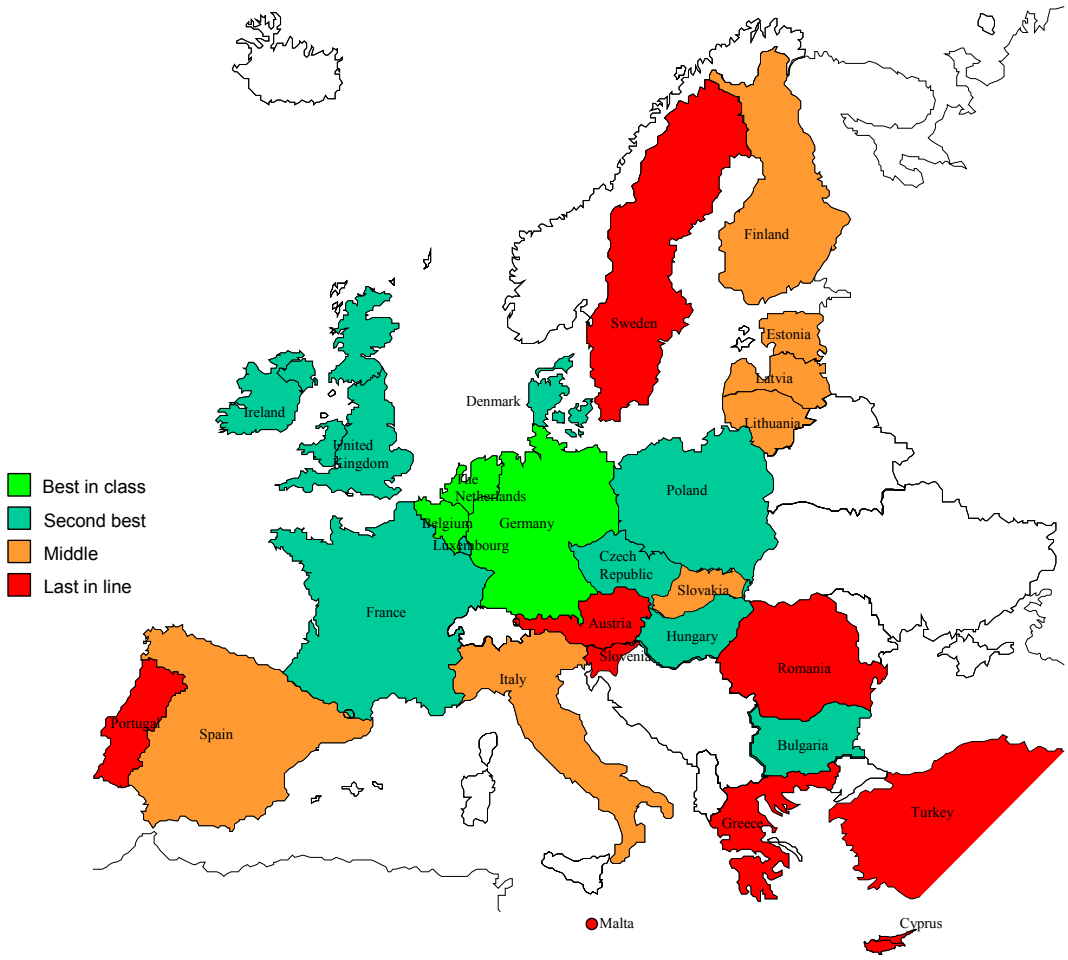

Figure 23: The preferred EDC location roadmap of Europe

5.3 Regional distribution centre functions

Most distribution networks consist of one central European distribution centre and several satellite warehouses or regional distribution centres in each of the different European regions. In the paragraph below we will look at each of these regions to determine which country is the most suitable location to invest in a regional distribution centre for that specific region.

5.3.1 *UK/Ireland*

Most companies typically locate an additional regional distribution centre in the UK / Ireland region because this region is not easily reached from continental Europe. Especially when one or

two day lead-times to customers are needed it is necessary to locate additional distribution centres in this region. The UK and Ireland share similar overall scores on distribution centres attractiveness. However, since the UK is more easily reached from continental Europe many companies will favour the UK as the country of choice for their regional distribution centre for the UK/Ireland region. We do not expect that there will be large changes in distribution centre attractiveness within this region because of the EU enlargement.

Notable differences between the UK and Ireland regarding distribution centre attractiveness:

- The UK scores better on labour market flexibility than Ireland
- The UK scores better on proximity to customers and suppliers than Ireland
- The UK has a better transport infrastructure than Ireland
- Ireland scores better on real estate costs than the UK
- Ireland scores better on wages and benefits costs than the UK
- Ireland scores better on tax rates than the UK

5.3.2 *Northern Europe*

Northern Europe is also an area that usually cannot be covered by a central European distribution centre. Traditionally Finland is the country where most distribution centre investments have gone. Part of Finland's attractiveness is that it can be easily used for export to Russia.

In terms of attractiveness in locating Northern Europe regional distribution centres the following ranking applies:

1. Denmark
2. Lithuania
3. Latvia
4. Finland
5. Estonia
6. Sweden

Based on this ranking we expect that Lithuania and Latvia will be the preferred locations for Northern Europe regional distribution centres. Latvia is also an excellent starting point for export to the Russian market. Finland however will keep an important position since (1) Sweden and Norway are not easy to reach from Estonia, Latvia and Lithuania and (2) Finland has a better ranking than Sweden regarding distribution centre attractiveness. Although Denmark has a good ranking it will hardly be used as Northern Europe regional distribution centre since the other Northern European countries are hard to reach from Denmark.

Some notable differences between the different countries in Northern Europe:

- Labour availability is much better in Latvia and Lithuania than in Denmark and Sweden
- The "new" EU-countries score lower on proximity to customers and suppliers / sources
- Estonia and Denmark have the best proximity to airports
- The "new" EU-countries have a better proximity to seaports
- Denmark has the best transport infrastructure in the Northern Europe region
- Estonia, Latvia and Lithuania have much lower wages and benefits than Finland, Sweden and Denmark
- Denmark and Finland offer the highest incentives to attract new investments

5.3.3 *Southern Europe*

The most important metropolitan areas in Portugal and Spain can be reached from a central European distribution centre (mostly located in the Benelux) within two to three days. However, when distribution to rural areas in Portugal or Spain is needed or when distribution lead-times need to be very short, then a satellite or regional distribution centre in Southern Europe is needed.

In terms of attractiveness in locating Southern Europe regional distribution centres the following ranking applies:

1. France
2. Italy
3. Spain
4. Portugal

In France especially the Lyon and Nord Pas de Calais areas are important locations for attracting distribution centres. In addition, a large number of European distribution centres are located in Lyon. We do not expect that there will be huge changes in distribution centre attractiveness within this region due to the EU enlargement.

Some notable differences between the different countries in Southern Europe:

- Labour availability in Spain is much larger than in Portugal
- France and Spain have a much larger labour flexibility than Portugal and Italy
- France and Italy score better on proximity to customers and suppliers / sources
- France and Italy have a better transport infrastructure than Spain and Portugal
- Portugal scores best on real estate and wages and benefits costs, followed by Spain, Italy and France

5.3.4 *Eastern Europe*

The Eastern Europe region will experience the largest implications of EU enlargement. Most of the 10 new EU countries are situated in this region in addition to some of the other possible future EU countries (Bulgaria and Romania). Since most of the current European distribution centres are located in the Benelux region or France, many companies will establish an additional satellite warehouse or regional distribution centre in Eastern Europe because these regions cannot be reached within a reasonable timeframe from the EDC's in the Benelux and France.

In terms of attractiveness in locating Eastern Europe regional distribution centres the following ranking applies:

1. Germany
2. Poland
3. Hungary
4. Czech Republic
5. Bulgaria
6. Slovakia
7. Romania
8. Austria
9. Slovenia

Germany and Poland will be the locations-of-choice for Eastern Europe regional distribution centres. Should Bulgaria enter the EU then this country will become an important location to establish distribution centres for the Bulgarian market and the other non-EU markets in its vicinity.

Some notable differences between the different countries in Eastern Europe:

- Poland, Slovakia and Bulgaria have the highest labour availability in the region
- Labour flexibility is high in Slovakia, Hungary and Romania but low in Slovenia and Austria
- Germany scores best regarding proximity to customers and suppliers / sources
- Germany, Slovenia and Bulgaria score best on proximity to seaports
- Germany, Hungary and the Czech Republic score good at proximity to rail hubs
- Hungary, Germany and Austria have the best transport infrastructure in the region
- All new and future EU countries score well on real estate and wages and benefits costs
- Hungary and Bulgaria have the lowest corporate taxes in the region
- Czech Republic, Austria, Germany and Hungary score very well on incentives
- Bulgaria and Romania score very well on multilingualism

5.3.5 *Eastern Mediterranean*

Malta, Cyprus and Greece are countries that are located in the outer regions of the European Union. Possible new entrant Turkey is located even further in the outer regions of Europe. These countries cannot be efficiently reached from any central European distribution centre but also regional distribution centres in Southern Europe or Eastern Europe will have problems in supplying the Maltese, Cypriote, Greece or Turkish markets. All these countries score low in our EU distribution centre attractiveness rating (except for Greece). Should Bulgaria enter the EU in the future then this might be a good starting point for regional distribution into Malta, Cyprus, Greece and Turkey.

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Some notable differences and similarities between these four countries:

- Turkey and Greece have the highest labour availability
- All of the countries score low on proximity to customers and suppliers
- Turkey scores very low on proximity to airports
- All of the countries score low on the quality of the transport infrastructure
- All countries have low real estate and wages and benefits costs
- Greece has by far the highest score in terms of incentives offered

6 Implications of EU enlargement 2004

We expect that EU enlargement will have significant implications for (the positioning of) distribution centres within the European Union region. In the following paragraphs we will describe each of these expected implications.

6.1 Worldwide distribution centre functions (and global plants) will be increasingly moving to the European Union

With the addition of the 10 new countries the European Union (EU) will become a larger market and will grow from a GDP of 8.60 to 9.01 trillion US dollars. However, the total EU GDP will still lag the total North American GDP (11.17 trillion US dollars). Even if Turkey, Romania and Bulgaria were to join the EU the GDP will still lag the total North American GDP.

EU GDP growth will increase since the 10 new countries are experiencing high growth levels (between 1,0 and 6,1 %). Turkey, Romania and Bulgaria even experience higher growth levels (between 3,9 and 7,8 %). In the short term this will increase the EU GDP growth only slightly but in the long term the EU has added some new high-growth regions which are still far behind GDP per capita levels in Western Europe. We expect that these 10 new countries will experience the same benefits that Portugal and Ireland have enjoyed after their EU accession.

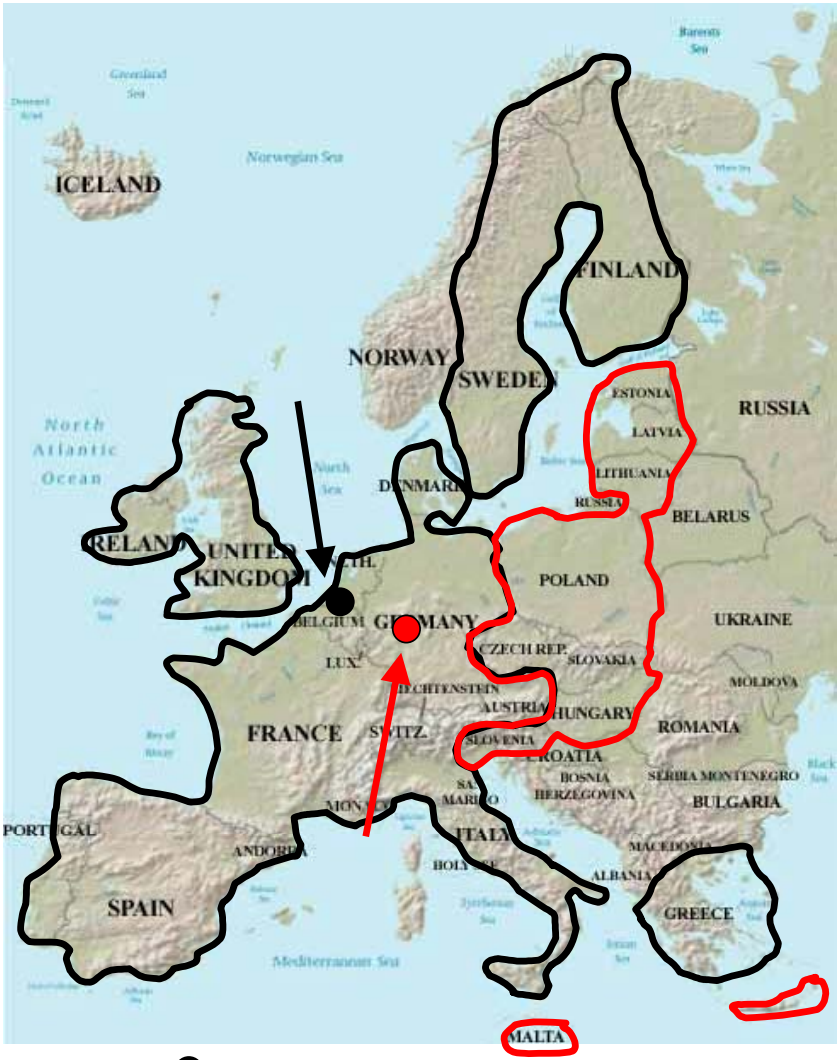
Country / region	2002 GDP (in $US million)	2002 real GDP growth (%)
USA	10.445.600	2,30 %
Japan	3.996.200	0,30 %
China	1.237.100	8,00 %
Canada	729.300	3,40 %
EU-15	8.603.200	0,99 %
EU-25	9.008.600	1,05 %
Possible future EU	9.253.800	1,21 %

While reading the GDP growth figures above it is good to keep in mind that the US economy had its largest downturn in 2001 while Europe had the largest downturn in 2002. We expect that the EU will have a better chance of meeting the US growth figures after the accession of the new 10 countries.

Due to the fact that the EU market is expanding and because it will add some high growth markets we expect that international companies will be keen to invest in the new Europe. We expect that worldwide distribution centre functions (and global plants) will increasingly be moving to the European Union.

6.2 European distribution centre functions will move eastwards from the Netherlands / Belgium towards Germany

Since the European Union will be largely expanding towards the East, the geographical centre of gravity within the new EU will move eastwards. Traditionally the Benelux region has enjoyed a position as the centre of the EU which attracted a lot of European Distribution Centres (EDC's) to this region. However, since the geographical centre of gravity is moving eastwards towards Germany, we expect that Germany will become an important location for European Distribution Centres (EDC's).



Geographical centre of gravity in the current EU
Geographical centre of gravity after EU enlargement

6.3 The importance of Austria as being an operating base for Eastern Europe will diminish

Traditionally Austria has profited from its position on the eastern borders of the EU as it was utilised by many companies as the main operating base for their export operations to the countries in Eastern Europe. However once the 10 new countries join the EU in 2004, Austria will be just another country in the middle of the EU and will therefore lose part of its investment attractiveness.

6.4 Establishment of regional distribution centre functions in Eastern Europe

Most European Distribution Centres (EDC's) are still located in the Benelux region or France. In most situations these EDC's cannot be used directly for final distribution to end customers in the Eastern European countries because these countries cannot be reached from the EDC within three working days. We therefore expect that many companies will establish regional distribution centres in Eastern Europe. Favourite countries for locating such a regional distribution centre include Germany, Czech Republic and Hungary. Hungary is also often preferred because it can be reached from Germany over the river Danube (which is especially attractive for bulk goods).

6.5 Establishment of a large bi-directional East-West flow within the European Union

Currently a significant amount of manufacturing activities have already been moved from Western Europe towards the low-cost regions in Eastern Europe. We expect that this trend will continue over the next few years. This will result in the establishment of a large bi-directional East-West flow within the European Union because raw materials are imported into the western part of the European Union, manufacturing will take place primarily in the eastern part of the European Union and consumption will take place primarily in the western part of the European Union.

This large bi-directional East-West flow within the EU region will lead to extra infrastructure investments in road, rail and inland waterway networks.

6.6 Increasing use of inland waterway transport between Western and Eastern Europe

As we have seen, transportation between Western and Eastern Europe will increase. We expect that a large part of this transportation will take the form of inland waterway transport, especially over the Danube River. Germany and Hungary are two countries that will benefit from this increased since bulk transports between the two countries will increasingly utilise the river Danube. This also explains the strong position that Hungary has in winning distribution centre investments (see chapter 3).

6.7 Increasing use of multi-modal transport infrastructures along the borders of Germany

Germany, Czech Republic, Poland, Slovenia and Hungary have strong rail networks while road networks in the Eastern European countries are less well developed. Transport in Eastern European countries will therefore favour rail transport while transport in Western European countries favours road transport. A rise in multi-modal transport infrastructures is therefore expected on the borders between Eastern and Western Europe particularly on the borders of Germany (with Germany having both well developed road and rail transport infrastructures). Currently however the well developed rail networks within Germany are primarily from northern Germany to southern Germany and vice-versa. Additional infrastructure investments will be needed to establish an efficient rail network from western Germany towards eastern Germany and vice-versa.

6.8 Establishment of rail routes from Asia Pacific through Russia into the Eastern part of the European Union

The Russian market will become a close neighbour of the new European Union (although Russia was also a close neighbour to Finland in the northern part of the EU). Countries like Latvia and Finland will be used as a starting point for export to the Russian market but Russia will also be used as a passage for imported products from Asia Pacific to the European Union as an alternative to sea transport from Asia Pacific to ports in Western Europe. This alternative import route might even grow in importance because of the continuing economic growth in China, a close neighbour to Russia. We expect that Russia will develop its transport routes (especially the rail network) from Asia Pacific to the European Union to benefit from its closer alignment with the EU market.

6.9 Changes in Northern European regional distribution centre locations

Estonia, Latvia and Lithuania will join the European Union in the Northern European region. Since these countries are located close to the existing EU countries Sweden and Finland and since these new countries can also be used as an operating base for exporting to the Russian market we expect that regional distribution centres in Northern Europe will increasingly be moved to especially Latvia.

6.10 Improved accessibility of the Russian market

Because European Union countries are neighbouring Russia it will become easier for European Union countries to do business with Russia. Especially Latvia promises to be an excellent location to locate a regional distribution centre that both serves (part of) the Northern European market as well as the Russian export market.

6.11 Movement from a one EDC-structure to a two-tiered distribution structure

Over the last 10 years many companies have consolidated their distribution operations into one central European Distribution Centre (EDC) covering all European Union countries. This was made possible by the fact that most EU countries could be delivered within two to three working days from one central EDC location. The new European Union however covers a much larger geographic region making it impossible to deliver within two to three working days to all EU countries. We therefore expect that many companies will be moving back to a two-tiered European distribution structure consisting of a central European Distribution Centre (EDC) together with regional distribution centres in Northern Europe, UK/Ireland, Southern Europe, Eastern Europe and Italy/Greece.

6.12 Good position of the sea ports in Northern Germany

We already described our expectation that regional distribution centres in Northern Europe will be increasingly moving to Latvia. Due to the closer alignment of Russia to the new EU and the expansion of the northern European market with three new countries we expect that transport from central Europe to northern Europe will increase. While road transport from the central European countries to northern Europe (especially Latvia and Finland) is possible, we also expect that sea container transport from Germany to Latvia and Finland will increase strongly. This will benefit the positions of the Northern German ports of Hamburg and Bremen.

6.13 The introduction of the German and Austrian LKW-Maut will negatively impact the currently strong position of the Benelux region for locating distribution centres

In 2003 and 2004, Germany and Austria will introduce the LKW-Maut, a new road toll on heavy goods vehicles. We expect that this new toll system effectively favours German and Austrian transportation companies and will negatively impact Benelux transportation companies' competitive position for transporting goods to Eastern Europe (the EU is currently researching whether the German government is allowed to compensate German transport companies for the introduction of the LKW-Maut). Given the current strong position of the Benelux countries in attracting distribution centre investments, this will boost the expected trend that EDC locations will move eastwards within the European Union region.

Country	Date of introduction	Tariff structure
Germany	***Original start date:*** August 31, 2003 ***Currently planned start date:*** November 2, 2003	Distance-related HGV road toll levied on all trucks weighing in excess of 12 tonnes on Germany's autobahns. The charge will require all foreign and domestic vehicles on these highways to pay a toll of Euro 0.15 per kilometre.
Austria	***Planned start date:*** 10/01/2003 or 01/01/2004	Distance-related HGV road toll levied on all trucks weighing in excess of 3,5 tonnes on Austria's autobahns. The charge will require all foreign and domestic vehicles on these highways to pay a toll of Euro 0.22 per kilometre.

6.14 The new Dutch rail investment project "Betuwelijn" will have mixed consequences for the position of the Netherlands in European supply chains

Given the moving position of EDC locations towards Germany we expect that the new Dutch rail investment project "Betuwelijn" will effectively improve the strong position of the port of Rotterdam but will also boost the movement of EDC locations towards Germany. It will improve the efficient and fast shipping of goods from the Rotterdam harbour to the central European mainland (and thus will improve the competitive position of the Rotterdam harbour). It will however also facilitate the movement of EDC locations from the Netherlands towards Germany. Since shipped containers will be moved directly onto rail carriers in the Rotterdam area and since rail transport is a very rigid form of transport (only suitable for transport from fixed location A to fixed location B), it will be less likely that value added activities are done in the Netherlands. With many goods now transported by road (which is a much more flexible form of transport) from the Rotterdam port towards central Europe, many distribution centres and value added operations facilities have been located in the Netherlands. This will decrease however as road transport is replaced partly by rail transport.

6.15 Strengthening of Bulgaria and Hungary as countries for DC investments

Turkey, Romania and Bulgaria are scheduled for possible future EU enlargements. We also expect that these future EU enlargements will have important implications for European distribution structures particularly in Eastern Europe. Especially Bulgaria and Hungary will receive additional investments in distribution centres because of this future expansion.

6.16 Future outlook

In chapter 4 we used different location decision criteria to measure each country's performance in attracting new distribution centre investments. These country performance figures are based on the latest country figures we could find. However some of these country performance figures might change within the next five years after the EU enlargement because for example, living standards and salary costs might increase in the accession countries. We expect that there will be changes in the following location decision criteria:

- ***Incentives***; the incentives offered in all (current and future) EU countries will converge because the EU is currently trying to remove all incentive structures which harm competition between the different EU countries.
- ***Wages and benefits costs***; the salary related costs in the EU accession countries will in the long run increase towards average EU levels.
- ***Transport infrastructure***; we expect that the transport infrastructure in the EU accession countries will improve dramatically in the next 5 – 10 years because of large EU infrastructure improvement projects underway. In addition further investments in transport infrastructure will automatically take place when more and more businesses invest in these countries.
- ***Labour flexibility***; we expect that labour flexibility in the EU accession countries will increase. Several EU accession countries have a communist history where labour flexibility traditionally is very low. Because these accession countries have to adhere to EU standards and policies in the future, we expect that labour flexibility in these countries will increase dramatically.
- ***Real estate costs***; as investment popularity of the EU accession countries increases, real estate costs will also increase.
- ***Ease of doing business***; most EU accession countries still lag behind on the current EU countries in terms of the ease of doing-business. However as the EU accession countries adhere to EU standards and policies, and as they will learn more and more from the way Western Europe does business, these countries will improve their business climate.

If we take these future effects into account then the following differences arise in the attractiveness ranking regarding investments in distribution centres:

- Poland, Hungary and Czech Republic will drop in the ranking. Czech Republic and Hungary will lose points because the incentive levels will drop and all three countries will lose points because the real estate and wages and benefits costs will rise.
- Lithuania, Slovakia, Latvia, Estonia, Slovenia and Malta will rise in the ranking, mostly because of increasing quality of the transport infrastructure and an improved general business environment.

7 The services of CGE&Y

The Cap Gemini Ernst & Young Group is one of the world's largest providers of Consulting, Technology and Outsourcing services. The company helps businesses implement growth strategies and leverage technology. The organisation employs approximately 52,700 people worldwide and reported 2002 global revenues of more than 7,04 billion euros.

The Group offers its local and international clients, in more than 30 countries, services in:

- Consulting Services (management and technology consulting);
- Technology Services (systems transformation);
- Outsourcing Services (systems management and business process outsourcing);
- Local professional services (Sogeti).

Within Consulting Services CGE&Y identifies the following disciplines:

- Transformation Consulting
- Supply Chain Management
- Customer Relationship Management
- Finance & Employee Transformation

CGE&Y services particularly focused on the opportunities arising from the EU enlargement are:

- Factory and distribution network optimisation
- Feasibility studies for Greenfield and/or expansion investments
- Due diligence services
- Post-merger integration
- Sales and marketing studies

A Country codes

Country Code	Country Name
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GB	United Kingdom
GR	Greece
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
TR	Turkey

B References and data sources

This appendix includes all references and data sources that were used during the country analysis for this study. Detailed figures are available upon request.

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Accidents at work in the EU in 1996
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Annual report Electricity
Baltenergy.com
Blue Plan
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Carleton
CEEC Conclusions
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Chose
CIA World Factbook
CIESIN and YCELP
Community Innovation Survey
EIA
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EIU country forecast
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ERRA
Analysis
Eurobarometer
EuroGas
Eurostat
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EVCA
FDI online - The European Business Incentives Report - Innovation and Investment in Europe
FIBV
Global corruption report 2003
Great Circle Distances Between Capital Cities
Highlights on health in Czech Republic
Human Development Indicators
Human Development Report
IMD World competitiveness yearbook
KMPG
LABORSTA
Latvia government
Latvian Development agency
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National Accounts of Luxembourg - ESA95
National Statistical Office Malta
Nationmaster.com
OECD - Nicoletti et al.
PriceWaterhouseCoopers
Science and engineering indicators 2002
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UN Development Program
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UN, office on drugs and crime, centre for international crime prevention
UNECE
UNECE, EPR
UNECO
US National Telecoms and Information Administration
Wilhelm Riesner
William M. Mercer Companies
World Bank