EU MARKET SURVEY

FASTENERS AND BUILDER'S HARDWARE

Compiled for CBI by:

ECORYS - NEI.

in collaboration with

Consultimex

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New CBI publication with new format and contents partly replacing CBI “EU market survey Fasteners and Builder’s Hardware, 2002” and “Strategic marketing guide Fasteners and Builders’ Hardware, 2001”

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EU market survey

-- annual update --

REPORT SUMMARY

This EU market survey profiles the EU market for Fasteners and Builder's Hardware. The emphasis of the survey lies on those products, which are of importance to developing country producers. Consequently, this market survey covers the following two groups of fasteners:

- Nails, tacks, drawing pins, corrugated nails, staples and similar articles, of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper
- Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (incl. spring washers) and similar articles, of iron or steel

and the following two groups of builder's hardware:

- Padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal
- Base metal mountings, fittings and similar articles suitable for furniture, doors, staircases, windows, blinds, coachwork, saddlery, trunks, chests, caskets or the like; base metal hat-racks, hat-pegs, brackets and similar fixtures; castors with mountings of base metal; automatic door closers of base metal.

Special attention is paid to market developments in Germany, France, the UK, Spain, the Netherlands, and Belgium. Overall, these countries are the largest importers of fasteners and builder's hardware in the EU and also have large Do-It-Yourself (DIY) markets. These countries, therefore, are judged to present the best market opportunities for exporters from developing countries.

The market for fasteners and builder's hardware can be divided into two main segments: the professional market and the DIY market. The quality requirements of DIY consumers are usually modest as they purchase fasteners and builder's hardware for simple uses around the house. In contrast, professional customers are more interested in ISO certification or standards that are held by the company based on their own (branch-specific) professional standards. As the majority of developing countries do not have a fully developed infrastructure in the areas of standards and related matters such as technical regulations, conformity assessment, quality and metrology it is not always feasible for them to get officially accredited even when they do produce high quality products. For these reasons, developing country exporters are advised to initially target the DIY segment of the market. Consequently, the focus of the report is mainly on this segment.

Consumption
The poor performance of most European economies has had some impact on dampening demand for fasteners and builders hardware, although steady growth has nevertheless been achieved in DIY sales in most countries, at least sales through DIY superstores. Consequently, turnover by DIY superstores in the EU is now estimated to exceed € 100 billion, with Germany (€ 36 billion), the UK (€ 22 billion) and France (€ 17 billion) accounting for more than half of the overall market. It is estimated that fasteners and builders hardware constitute around 6 per cent of overall DIY sales, giving an indicative market size of € 6.8 billion of sales of fasteners and builder's hardware through DIY superstores. The overall market for fasteners and builder's hardware, professional and DIY, is estimated at around € 16 billion.

Production
Manufacturers of fasteners and builder's hardware in Western Europe are increasingly becoming niche product specialists whilst production of the more general standard products is shifting to central European and other developing country producers. Therefore, most European manufacturers are moving into higher value products, but are also reducing capacity and engaging in private label

sourcing to enhance margins. Nevertheless, production of fasteners and builder's hardware in the EU is estimated at around € 17 billion.

Imports
Compared to 2000, imports of fasteners and builder's hardware into EU countries remained fairly flat in 2001. In value terms, total imports by EU countries declined by less than half a percentage point to EUR 11.3 billion, whereas in volume terms a decline of 1.7 per cent was registered to 3.4 million tonnes. However, compared to two years ago, imports have increased by 17 per cent in value and 28 per cent in volume terms. Overall, the market feeling is that whilst 2001 saw lower importation as the market adjusted to high inventory, the upward trend is certainly going to continue. Moreover, imports from developing countries have shown above average growth rates, and developing countries are accounting for increasing shares of imports of fasteners and builder's hardware by EU countries.

Exports
Together the 15 EU member states exported € 12.1 billion worth of fasteners and builder's hardware in 2001, an increase of 1.5 percentage points compared to the previous year. Almost three quarters of these exports did not leave the EU but was traded between member states.25 percent was exported to non-EU countries, of which 10 percent was exported to developing countries

Trade Channels
Despite some remaining national differences, there is an irrevocable trend towards the emergence of pan-European and global operators in the DIY market. Manufacturers of fasteners and builder's hardware are advised to trade directly with the DIY superstores. The use of wholesalers/importers is only advised when targeting the professional market.

Prices
Prices of fasteners are under pressure. Generally speaking, the more standardised products increasingly supplied by developing countries are facing somewhat declining prices. Prices of builder's hardware appear more stable and have shown some increases during the recent past.

Market Access Requirements
Tariffs on imported fasteners and builder's hardware are generally low or even zero for a large number of developing countries. However, there are a number of standards that manufacturers should adhere to in order to compete on the European market.

Based on market developments described in part A, part B furthermore develops a set of export marketing guidelines. It is demonstrated how information is to be used to identify opportunities in the market, and how these have to be evaluated against the capabilities of the company. The information collected should then be combined into a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis on the basis of which a decision to export can then be taken. The last chapter discusses relevant marketing tools that can be used to increase the chances of success. Finally, the appendices contain a number of addresses that may be useful for companies developing their export strategy and researching their target market.

This report should be read in conjunction with other CBI publications. Additional information can be found on the CBI website.

INTRODUCTION

This CBI survey consists of two parts: EU Market Information and EU Market Access Requirements (Part A), and Export Marketing Guidelines (Part B).

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Chapters 1 to 8 of Part A profile the EU market for fasteners and builder's hardware. The emphasis of the survey lies on those products, which are of importance to developing country suppliers. The major national markets within the EU for those products are highlighted. Furthermore statistical market information on consumption, production and trade, and information on trade structure and opportunities for exporters is provided.

Chapter 9 subsequently describes the requirements, which have to be fulfilled in order to get market access for the product sector concerned. It is furthermore of vital importance that exporters comply with the requirements of the EU market in terms of product quality, packaging, labelling and social, health & safety and environmental standards.

After having read Part A, it is important for an exporter to analyse target markets, sales channels and potential customers in order to formulate export marketing and product strategies. Part B therefore aims to assist (potential) exporters from developing countries in their export-decision making process.

After having assessed the external (Chapter 10) and internal environment (Chapter 11), the (potential) exporter should be able to determine whether there are interesting export markets for his company. In fact, by matching external opportunities and internal capabilities, the exporter should be able to identify suitable target countries, market segments and target product(s) within these countries, and possible trade channels to export the selected products (Chapter 12).

Chapter 13 subsequently describes marketing tools, which can be of assistance in successfully achieving the identified export objectives.

The survey is interesting for both starting exporters as well as well as exporters already engaged in exporting (to the EU market). Part B is especially interesting for more experienced exporters starting to export to the EU and exporters looking for new EU markets, sales channels or customers. Starting exporters are advised to read this publication together with the CBI's Export planner, a guide that shows systematically how to set up export activities.

PART A: EU MARKET INFORMATION AND MARKET ACCESS REQUIREMENTS

1. PRODUCT CHARACTERISTICS

1.1. Product Groups

This section focuses on the product characteristics of fasteners and builder's hardware. The fasteners and builder's hardware discussed in this survey are further classified in section 1.2.

The **fasteners** this survey deals with can be defined 'as objects by which two or more elements can be joined together'. Their range of application can be categorised as follows:

- indirect connection, for which a nail or screw is used,
- detachable connection, with wood screw or bolt and nut,
- difficult detachable connection, which can only be loosened by damaging the construction, for example with blind rivets.

Fasteners can also be divided according to their use: those intended to be used for construction purposes (such as, for example, bolts and screws) and those meant for connections or assembly purposes without coming under stress or load (such as fasteners for lids or covers).

The kinds of fasteners generally in use are:

- screws,
- wire nails,
- bolts,
- nuts,
- anchors,
- blind rivets and pins,
- eyebolts, eye nuts, wing screws,
- washers, rings.

Fasteners are usually made of steel, stainless steel or iron, brass, copper, aluminium, kuprodur and titanium, according to the requirements in the particular field of application. In addition, the steel and iron fasteners are usually treated against corrosion: zinc-plated, hot-dip galvanised, nickel-plated, black or yellow passivated, phosphated.

Bolts and screws can be defined as follows:

- A bolt is an externally threaded fastener designed for insertion through holes in assembled parts, and is normally intended to be tightened or released by torquing a nut.
- A screw is an externally threaded fastener capable of being inserted into holes in assembled parts, of mating with a performed internal thread or forming its own thread, and of being tightened or released by torquing the head.

Builder's' hardware mainly concerns the hardware designed to keep unwanted visitors out of houses, utilities and industrial buildings, offices, shops and so on. These include for example:

- cylinder locks,
- various other types of locks,
- padlocks,
- bolts or bars,
- hinges,
- window latches, espagnolettes,
- door handles and –knobs,
- letterboxes.

Besides plain door safeguards such as profile cylinder locks, mortise and safety locks, armour bolt and gib locks or hinge-plate safeguards, there are effective security systems for all parts of a house such as roof windows, garage doors or roller shutters.

Some pictures of fasteners and builder's hardware are presented in the next section. Further pictures of fasteners and builder's hardware, including the relevant ISO, NEN and DIN norms can be found on the internet, for example at www.borstlap.com. Note that in Europe, including the United Kingdom, all measurements are exclusively according to the metric system.

1.2. Customs/Statistical Product Classification

On January 1, 1988 a unified coding system was introduced to harmonise the trading classification systems used worldwide and to allow for improved international comparability of foreign trade statistics. This system, the Harmonised System (HS), is based on a ten-digit product classification. These codes are also referred to as TARIC codes.

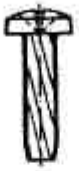
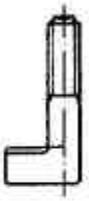
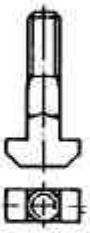
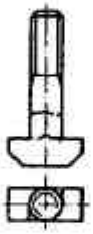
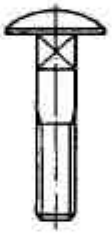
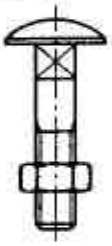
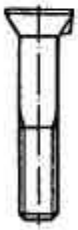
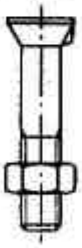
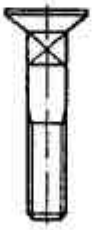
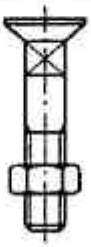
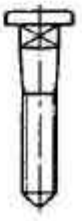
Table 1.1 below gives an overview of the broad categories of HS codes relevant for this survey. Please refer to Appendix 1 for an overview of the detailed HS codes of the products contained within each broad category. Four broad product groups have been selected on a four-digit HS code level, while one of the groups (screws, bolts, nuts etc) has been divided into two subcomponents, threaded and non-threaded articles. The HS codes are used to present the trade statistics in chapters 5 and 6, whereas the other chapters are based on a myriad of sources and generally refer to much broader product groups.

Table 1.1 Statistical nomenclature and HS code classification of fasteners and builder's hardware

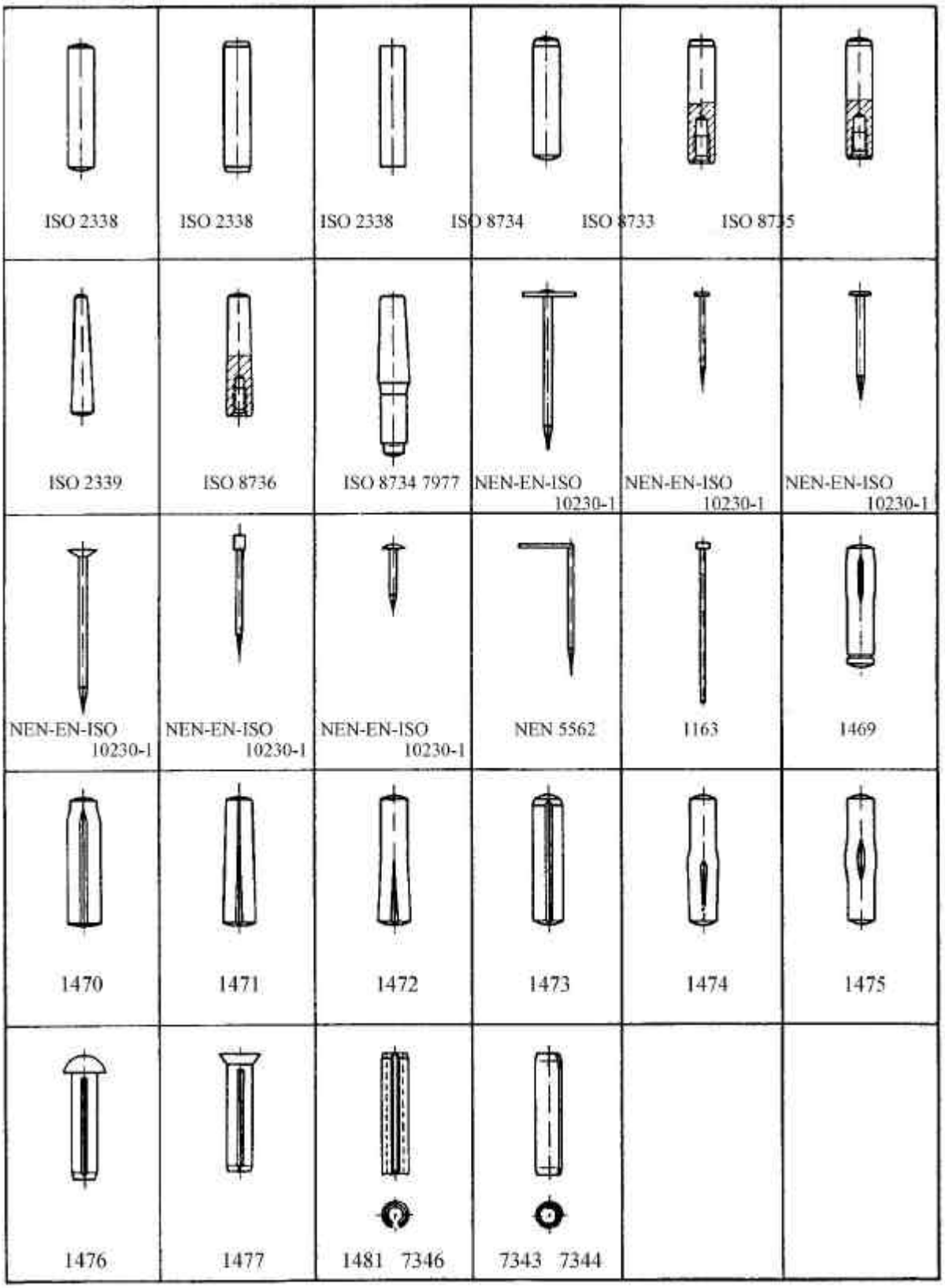
HS-code	Description
	FASTENERS
7317	Nails, tacks, drawing pins, corrugated nails, staples (other than those of heading No 8305) and similar articles, of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper
7318	Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (incl. spring washers) and similar articles, of iron or steel
7318 11 - 19	- Threaded articles:
7318 21 - 29	- Non-threaded articles:
	BUILDER'S HARDWARE
8301	Padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal
8302	Base metal mountings, fittings and similar articles suitable for furniture, doors, staircases, windows, blinds, coachwork, saddlery, trunks, chests, caskets or the like; base metal hat-racks, hat-pegs, brackets and similar fixtures; castors with mountings of base metal; automatic door closers of base metal

The pictures presented below give some examples of the fasteners and builder's hardware that are addressed in this survey. The selection of drawings is adopted from the German norm 'Beiblatt 1 zu DIN 918'. If known, the relevant NEN-ISO norms are stated besides the DIN norms.

Bolts and screws

 NEN-EN-ISO 7045	 NEN-EN-ISO 7046-1 NEN-EN-ISO 7046-2	 NEN-EN-ISO 7047	 404	 7513	 7513
 7513	 7513	 7516	 7516	 7516	 6378
 261 25 192	 186 7992	 188	 603 63 301	 603	 5906
 604	 604	 605 608	 605 608	 607	 607
 5903 21 547	 5903	 15 237	 25 193	 80 441	 787

Pins


ISO 2338
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NEN-EN-ISO 10230-1
NEN-EN-ISO 10230-1
NEN-EN-ISO 10230-1
NEN-EN-ISO 10230-1
NEN-EN-ISO 10230-1
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NEN 5562
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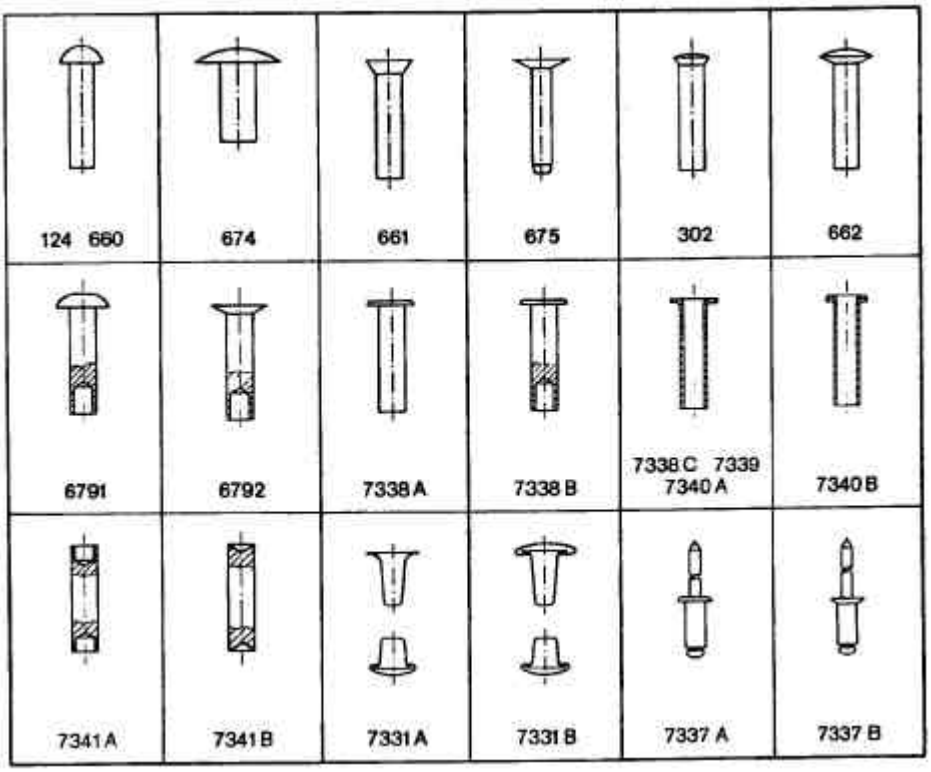
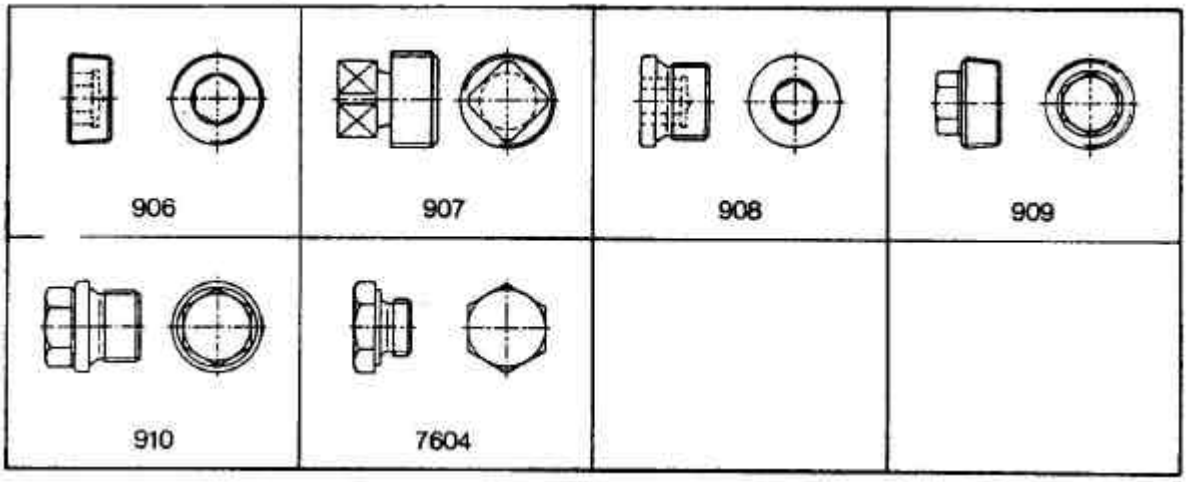
7343 7344

Rivets

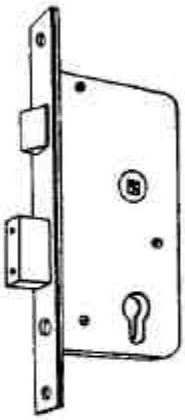


Hexagon screw plugs

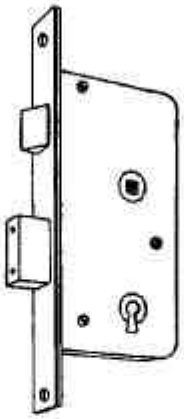


Common types of builder’s hardware

Cylinder mortice lock

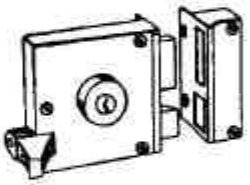


Lever motice lock

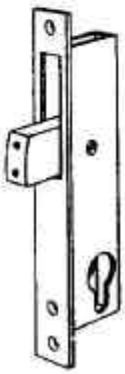


Narrow style lock

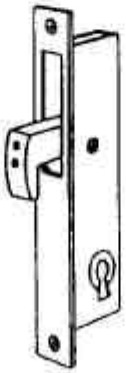
Rimlock



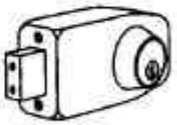
Swing bolt lock



Hook swing bolt lock



Auxiliary lock



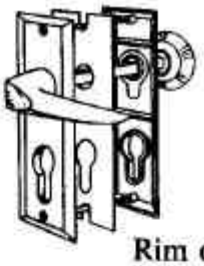
Box strike

Pot hole

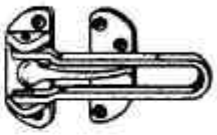
Standard strike

Rimlock staple

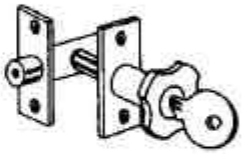
Burglar resistant door furniture



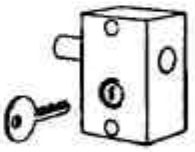
Rim door guard



Mortice bolt with cylinder



Window lock with cylinder for outwards opening windows



Window catch with lock

2. INTRODUCTION TO THE EU MARKET

The European Union (EU) is the current name for the former European Community. Since 1 January 1995 the EU has consisted of 15 member states. Ten new countries will join the European Union in 2004. Negotiations are in progress with a number of other candidate member states.

In 2002, the size of the EU population totalled 379.4 million; the average GDP per capita amounted to approximately € 21,023 in 2002.

OVERVIEW 15 EU COUNTRIES, 2002	
Population	379.4 million
Area	31,443,000 km^2
Density	83 people per km^2
Languages	11 (excl. dialects)
GDP/capita	€ 21,023
Currencies	€, UK£, DKr., SKr.
Exchange	€ 1 = US$ 0.99

POPULATION AND GDP OF SELECTED EU COUNTRIES, 2002			
Countries/category	**Population**	**Age 15-64**	**GDP (€ billion)**
Germany	83.3 million	68%	2,206
France	59.8 million	65%	1,556
UK	59.8 million	66%	1,485
Spain	40.1 million	68%	836
The Netherlands	16.0 million	68%	417
Belgium	10.3 million	66%	298

Source: The World Factbook 2002

Within Western Europe – covering 15 EU member countries, Iceland, Liechtenstein, Norway and Switzerland – more than 20 million enterprises are active. Small and medium-sized enterprises (SMEs) accounted for the lion's share. In 2000, the average turnover per enterprise of SMEs and large enterprises amounted to € 600,000 and € 255 million respectively.

EU Harmonisation
The most important aspect of the process of unification (of the former EC countries), which affects trade, is the harmonisation of rules in the EU countries. As the unification allows free movement of capital, goods, services and people, the internal borders have been removed. Goods produced or imported into one member state can be moved around between the other member states without restrictions. A precondition for this free movement is uniformity in the rules and regulations concerning locally produced or imported products. Although the European Union is already a fact, not all the regulations have yet been harmonised. Work is in progress in the fields of environmental pollution, health, safety, quality and education. For more information about harmonisation of the regulations visit Access Guide, CBI's database on non-tariff trade barriers at www.cbi.nl/accessguide.

Monetary unit: Euro
On 1 January 1999, the euro became the legal currency within eleven EU member states: Austria, Belgium, Finland, France, Germany, Italy, Ireland, Luxembourg, the Netherlands, Spain, and Portugal. Greece became the 12th member state to adopt the Euro on January 1, 2001. In 2002 circulation of euro coins and banknotes replaced national currency in these countries. Denmark, United Kingdom and Sweden have decided not to participate in the Euro.

The most recent Eurostat trade statistics quoted in this survey are from the year 2001. In this market survey, the € is the basic currency unit used to indicate value.

Trade figures quoted in this survey must be interpreted and used with extreme caution. The collection of data regarding trade flows has become more difficult since the establishment of the single market on 1 January 1993. Until that date, trade was registered by means of compulsory customs procedures at border crossings, but, since the removal of the intra-EU borders, this is no longer the case. Statistical bodies like Eurostat cannot now depend on the automatic generation of trade figures. In the case of intra-EU trade, statistical reporting is only compulsory for exporting and importing firms whose trade exceeds a certain annual value. The threshold varies considerably from country to

country, but it is typically about € 100,000. As a consequence, although figures for trade between the EU and the rest of the world are accurately represented, trade within the EU is generally underestimated.

Furthermore, the information used in this market survey is obtained from a variety of different sources. Therefore, extreme care must be taken in the qualitative use and interpretation of quantitative data, both in the summary and throughout the text, as well as in comparing different EU countries with regard to market approach, distribution structure, etc. Most chapters present information on all EU countries. However, special attention is given to Germany, France, the UK, Spain, the Netherlands, and Belgium. These countries are thought to present the best market opportunities based on consumption and import data as presented in the current report.

For more information on the EU market, please refer to the CBI's manual Exporting to the European Union.

3. CONSUMPTION

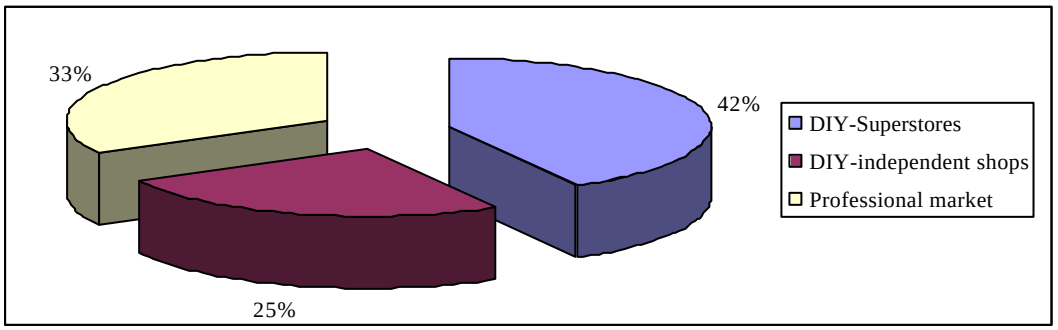
3.1. Market size

Information on consumption and production of fasteners and builder's hardware at the EU level is very scarce, incomplete and scattered across various sources. Especially the professional fasteners and builder's hardware branch is, traditionally, reluctant to disclose any statistical information on production, consumption, sales and so on. In addition, data from national statistical offices is relatively scarce as the most relevant product groups belong to the so-called 'classified' category for which no information is provided to the public.

To make matters worse, sales to the non-professional market segment is largely channelled through large DIY chains. Although information exists on their overall turnover, their product assortment is evidently much broader than fasteners and builder's hardware. Generally speaking, DIY chains cover the following product groups: Bathroom (baths, sanitary ware, accessories, shower controls, enclosures/screens/trays), Furniture (kitchen, bedroom, occasional), Decorating (paint, wall coverings, wood care, ceramic tiles), Window/Floor coverings (curtains, blinds, accessories, carpets, vinyls, laminated flooring), Building Materials (heating, plumbing, insulation, bricks, timber & board, door & windows, etc), Garden/Leisure (horticultural, chemicals, power/hand tools, furniture, barbecues, garden buildings, fencing, paving, pots/planters, etc), Hardware (Ironmongery, fixings, tools, house wares), and Lighting (Lamps, light fittings, security, electrical accessories). Nevertheless, in the absence of better sources an overview of the overall DIY market is provided. It is assumed that the overall developments in the DIY market reflect the general aspects of the fasteners and builder's hardware segment.

Based on the above reasoning, consumption and production figures of fasteners and builders' hardware in this survey are not always exact but based on different data sources as well as expert opinion. Accordingly, rough estimates indicate that EU consumption of fasteners and builder's hardware was approximately EUR 16 billion in 2002. Consumption of fasteners is estimated at approximately EUR 4.9 billion and consumption of builder's hardware at EUR 11.4 billion. Consumers in the Do-It-Yourself (DIY) branch account for the bulk of purchases of fasteners and builder's hardware, with an estimated consumption of EUR 6.8 billion. Consumption on DIY products at other retail outlets was estimated at EUR 4.1 billion, and consumption by businesses in the professional market at EUR 5.4 billion. The largest clients in the professional market include the building and construction sector, the automotive and coachwork sectors and, for builder's hardware in particular, the security sector.

Figure 3.1 EU consumption of fasteners and builder's hardware by market segment, shares in percentages (2001)



Estimates derived from different sources

Owing to the lack of data about consumption of fasteners and builder's hardware, it is very difficult to analyse consumption at the national level or to compare among the EU member States. For the DIY market segment, however, more data are available. In Table 3.1 below, the DIY turnover, only

including large DIY chains and not the small and independent retail outlets, is presented for the EU and selected countries. The consumption of fasteners and builder's hardware is derived from an estimate of the share of fasteners and builder's hardware in total DIY turnover. According to this rough calculation, the EU consumption of fasteners and builder's hardware is estimated at EUR 6.8 billion in 2002. Germany is by far the largest market with EUR 2.5 billion of consumption, double the size of the second largest market, which is the UK with EUR 1.7 billion of consumption.

Table 3.1 DIY turnover, share and consumption of fasteners and builder's hardware in selected countries (2002)

Country	DIY turnover (EUR billion)*	Share of fasteners and builder's hardware in turnover**	Consumption of fasteners and builder's hardware in DIY branch (EUR billion)
EU	103.6	7%	6.8
Germany	35.8	7%	2.5
France	16.9	5%	0.8
UK	21.5	8%	1.7
Spain	3	4%	0.1
The Netherlands	4.1	7%	0.3
Belgium	3.1	6%	0.2
Others	19.2	6%	1.2

* Source: Data for Germany, France, the UK, and the Netherlands are taken from DIY in Europe (2003) reports, other figures estimated using per capita expenditure reported in Fediyma-World DIY Report 2001
** These percentages are indications estimated by the consultant.

3.1.1 The professional market segment

As further elaborated below, the main focus of this study is on the DIY market segment. Consumption data on the professional market segment is not available directly, but some features of the underlying market can nevertheless be pointed out to get a rough overview of the main developments. Important factors influencing the growth of the consumption of fasteners and builder's hardware in the professional sectors that should be mentioned here, include:

- the number of new houses being built and the number of renovation activities, which clearly affects construction and building sector activity;
- developments in the manufacturing sector of transportation equipment, such as the automotive sector, aerospace, shipbuilding, railway engineering, and more generally mechanical engineering, as these are important industrial users of fasteners;
- the increasing need for safety in an ever more insecure world increases the demand for complete locking systems in the security market.

Number of new houses built and the number of renovation activities

Birth rates within the EU are generally low, and to a greater or lesser extent population growth in Europe depends on the outcome of immigration policies. Nonetheless, the increasing proportion of people living out of wedlock and the concomitant reduction in the average number of inhabitants per house has a positive influence on the total demand for the number of housing units. The number of house owners in the EU is increasing (approximately 60 percent of the families own the house they are living in), but remains relatively low in Germany and the Netherlands (approximately 50 percent).

According to Euroconstruct, the organization for the European Construction Industry, economic growth in Europe was weaker than expected in 2002 and the overall construction industry declined by 0.2 percent. However, considerable differences exist between the different EU Member States. It is

forecast that the European construction industry will face stagnation in 2003 (+0.2%), while a slow recovery is expected in 2004 (+0.6%) and in 2005 (+1.8%).

In residential construction the decline is expected to slow down in 2004, whereas in 2005 a recovery of one percent is expected in this market segment. Nevertheless, residential construction shows the least favourable development among the construction sectors up to 2005.

Non-residential construction responded to the changing global macroeconomic situation very sharply, mainly due to the downward adjustment in industrial facilities. An overview of the level of construction activity in the various EU countries as well as their projected growth rates is presented in Table 3.2.

Table 3.2 EU construction growth in percentage change (excl. Greece and Luxembourg), 2002-2004

	Billion €	Annual Growth (%)		
	2002	2002	2003	2004
Belgium	23.6	-4.2	0.4	3.5
Denmark	18.2	-0.7	0.0	1.2
Germany	193.7	-5.9	-1.6	-0.8
Finland	19.2	-0.9	0.9	1.3
France	150.0	-0.8	-1.1	0.6
Ireland	21.0	-1.4	-3.2	-3.7
Italy	135.4	1.6	-0.3	-1.2
Netherlands	48.2	-2.2	-1.9	1.2
Austria	25.8	0.0	1.5	1.7
Portugal	22.7	-2.6	-5.7	-6.1
Spain	80.4	4.5	3.0	3.5
UK	132.9	8.4	4.9	1.9
Sweden	18.0	-1.2	0.3	3.4
Total	**908.4**	**-2.6**	**-3.1**	**5.0**

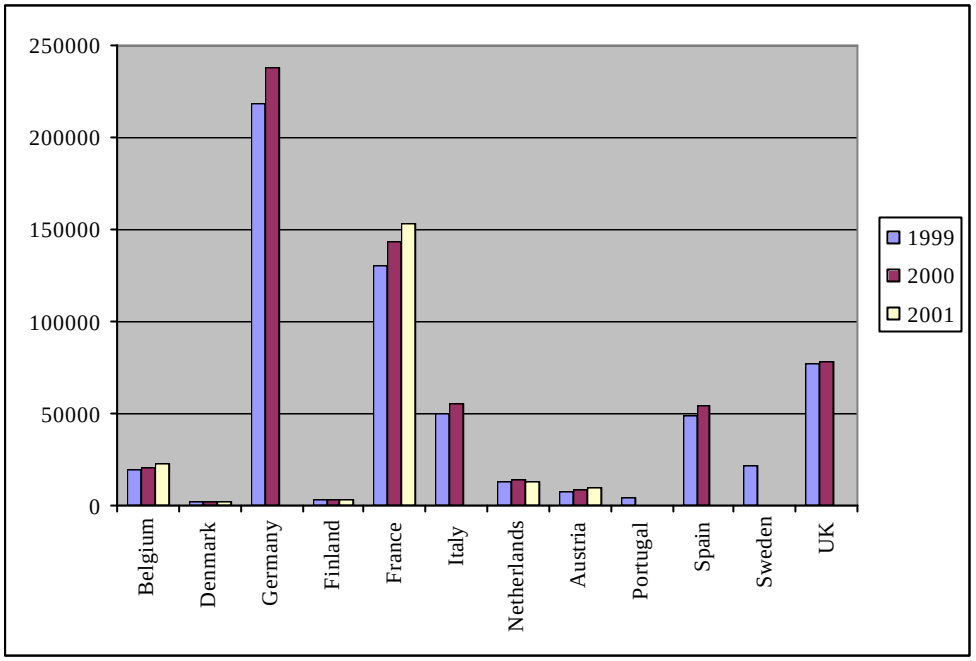
Source: Euroconstruct (2003)

Production of transportation equipment

Next to the building and construction industries, industrial demand for fasteners originates mainly from the manufacturing sectors related to transportation equipment, such as the automotive sector, aerospace, shipbuilding, railway engineering, and more generally mechanical engineering.

Figure 3.2 shows the absolute value of gross output of the manufacturing sectors of transportation equipment for the various EU countries. Although information for the last few years is missing for a number of countries, the information can nevertheless be used to get an overview of the relative size of industrial demand in the various countries. As can be seen, Germany and France have by far the largest manufacturing sectors related to transportation equipment, at a considerable distance followed by the UK, Spain, and Italy. Both the automotive sector and the aerospace industries have had to cope with depressed demand in the recent past, put the outlook for the near future has now turned positive again. For example, for the aerospace industry, Airbus is the main impetus in Europe and seemingly capturing markets from the major US producers. Consequently, Airbus forecasters are confident that in the long term civil air transport will continue to grow strongly, providing a tremendous business opportunity for manufacturers of engines and equipment, and thus indirectly for manufacturers of fasteners as well.

Figure 3.2 Production of transportation equipment, 1999 – 2001
EUR million



Source: OECD STAN database (2003)

3.1.2 The DIY market segment

In overall terms, the EU DIY market has experienced a period of steady underlying growth in the 1998-2001 period, due to buoyant markets and the increasing popularity of DIY among householders of these countries. However, conditions in Germany, in particular, have been more difficult due to slow economic growth, but the popularity of DIY activity has contributed to reducing the impact of the economic difficulties on its DIY market. As shown in Figure 3.3, annual per capita expenditure on DIY products is highest in Germany. More generally, spending is higher in the northern European countries compared to the southern European countries, where a kinder climate means that there is less need for external maintenance. At the same time, a higher proportion of people living in apartments in the latter group limits the scope for DIY spending. Consequently, countries like Italy, Portugal and Spain rank at the bottom of the list.

While underlying performance of the economy is obviously impacting on DIY sales, steady growth in DIY sales has been achieved in most countries, suggesting a relatively high degree of resilience to short-term economic difficulties. However, there has been a stagnant period for the DIY market in Germany, relative to other leading markets, with little indication of any significant upturn in demand within the next 2-3 years. In contrast, France, UK, Belgium and Netherlands experienced annual growth rates of around 4-7% in the 1998-2001 period. An overview of some country specific factors is given below.

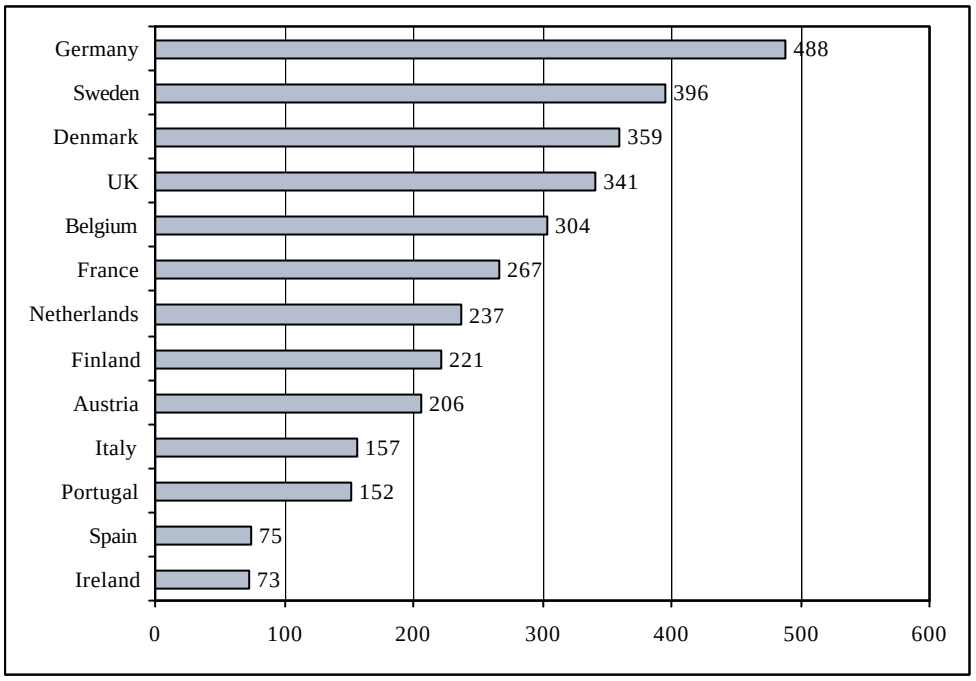
Germany

The German DIY market is the largest in Europe. However, 2002 was one of the worst ever years for the operators of DIY superstores in Germany. Combined sales of stores with a minimum shed area of 1 000 m2 went down by 0.6 per cent to 16.8 billion euro. Nevertheless, the superstores fared better than the overall market, which is estimated to have shrunk by 1.7 per cent to EUR 35.8 billion.

The standard of living in Germany is high compared to most other countries, both inside Europe and in other continents. In 2002, there were close to 40 million households in Germany. DIY store networks expanded rapidly following German unification as the leading players from the West rushed to secure a foothold in the new market of the East. However, in recent years growth in the number of DIY stores

has stagnated. Over 2002, the number of DIY stores decreased by 39 to 4093. The trend towards large formats continued, however, as the combined retail area increased despite this reduction in the number of stores.

Figure 3.3 Annual per capita spending on DIY products, 2001
EUR



Source: Fediyama-World DIY Report 2001

France

With nearly 1,400 DIY superstores (of more than 1,000m^2) across the country, the French DIY market has matured by the end of the 1990s, and their success has no doubt helped the development of a DIY culture in France. After the opening of the first Castorama 1969, the sector grew during the 1970s and 1980s as large multiple chains developed, and independent retailers, as a safeguard to their livelihoods, linked their operations to a growing number of co-operative groups and pursued their own development of large-surface outlets. DIY stores have been taking market share quite rapidly from traditional hardware stores, but the curbs on out-of-town retail development are likely to restrain this process in future. In fact, in 2002 the DIY market in France was characterised by ongoing concentration through a number of mergers and acquisitions, and competition is reportedly fierce. Estimates indicate that the French market grew by 4.2 per cent to a level of € 16.9 billion in 2002.

United Kingdom

Compared to some other EU markets, DIY retailing in the United Kingdom is particularly homogenous and is covered exclusively by domestic chains. The DIY sector is one of the two most concentrated sectors in the UK economy: the top five specialists account for 75 percent of sector sales. Intense competition, aggravated by the recession at the beginning of the 1990s, persisted as the economy improved towards the end of the decade. The market is now reasonably mature, with the main areas of competition being the quality of store environment and the sophistication and variety of the products on offer. The UK is one of the largest DIY markets in the EU because of its large population as well as above average per capita spending. DIY retailers were scarcely affected by the slump in transactions that came with the onset of recession in 1990. Hardware in particular showed strong growth rates in the second half of the 1990s, outstripping total consumer spending as well as

retail sales growth. Escalating house prices, a buoyant economy and the fashionableness of home improvement are offering good sales and profits for the UK's leading DIY retailers. British consumers spent approximately € 21.5 billion on DIY and garden products in 2002, which is 7.8 per cent more than the previous year.

B&Q remains the market leader by a considerable margin, with 319 stores and sales of just over three billion euro. Its opening programme is also larger than other retailers', suggesting that its market lead is likely to increase still further in the coming years.

Spain

The DIY concept is slowly catching on in Spain, but the market for DIY goods remains relatively small, equivalent to some EUR 75 per capita. Although there is no information on precise growth rates, the market for DIY products in Spain for 2002 is estimated at around € 3 billion. Sales of fasteners and builder's hardware take place for an important part in one of the approximate 4,750 hardware shops across the country. The customers of these shops are mainly private consumers, although small tradesmen and artisans also frequent these hardware stores, buying mainly hand and power tools, small hardware items like nails, screws, raw plugs and so on. The whole area of retailing and DIY is still underdeveloped in Spain and offers enormous potential in the medium to longer term for further development. Consequently, the market for DIY chains is demonstrating rapid growth. 2002 saw the entry of the British group Kingfisher onto the Spanish market under the name Brico Stock to join several other foreign companies already present. Market leader in Spain is still the French chain Leroy Merlin.

The Netherlands

Growth for the DIY market in the Netherlands was more restrained in 2002 than during previous years. In the year 2002 the DIY retail trade in the Netherlands recorded overall sales of € 4.1 billion, or 3.2 per cent more than in 2001.

Despite a relatively low home-ownership level, at around 50 percent, the DIY retail sector in the Netherlands developed strongly during the 1990s. According to official publications, more and more of the Dutch are undertaking DIY jobs in and around their homes - the high cost of hiring skilled craftsmen being one of the main reasons for this. Much of the growth has been generated by the specialist domestic DIY stores, although, until the arrival of entrants from neighbouring France and Germany, the stores were of more modest size than those of the market leaders in other major European markets. When comparing data internationally, note that apart from garden tools, Dutch DIY outlets do not generally carry plants and flowers, as these products are generally the preserve of the country's garden centre and flower shops.

Belgium

The year 2002 brought tremendous changes to the Belgian DIY market. One of the most significant events was the acquisition by the Netherlands Vendex KBB group (Praxis stores) of the GIB group's DIY business. In 2001, the French Bricorama stores had already become franchisees of the Netherlands Intergamma group, making this the largest group on the Belgian market. Hubo has become the major national DIY retail group in Belgium through acquisition of the DIY stores belonging to the French Bricomarché group.

The Belgian DIY market is well served by a variety of retail formats, some of which are controlled by foreign firms, which co-exist with a diverse collection of stores belonging to domestic retailers. Half of the DIY specialist outlets in Belgium are operated by independent family businesses, some of which have joined together to create buying groups. However, a slow but sure changeover from the independents to the chains is unmistakably taking place.

The normal problems of determining the DIY market size are compounded in Belgium by the distinctive nature of the three component regional markets - Flanders (Flemish-speaking) across the

northern half of the country, Brussels (bi-lingual) in the centre and of Wallonia (French-speaking) across the south. The overall market size for 2002 is estimated at around € 3.1 billion.

3.2. Market segmentation

As already indicated in the previous section, the EU market for fasteners and builder's hardware consists of two main segments. The largest segment is the DIY market, including both DIY super stores and the smaller (specialised) hardware shops 'around the corner'. The professional market segment is approximately half the size of the DIY market.

The professional market for fasteners consists of the following sub-segments:

- Aerospace
- Automotive Sector
- Building & Construction
- Domestic Appliances
- Mechanical Engineering
- Railway engineering
- Shipbuilding

In terms of overall size, the building & construction as well as the automotive sector are the largest segments.

The professional market for builder's hardware consists of two sub-segments:

- the building industry, and
- the specialised security products industry.

The professional market for fasteners and builder's hardware is generally very difficult to enter for exporters from developing countries and, consequently, their chances to succeed in these markets are very small. The most serious obstacle in tackling the professional market is the high level of quality requirements that also need to be confirmed, proven and labelled by official test- and certification institutes. The required labels and certificates are costly and rather complicated to obtain, especially given the distances that must be bridged between developing countries and the EU. No housing construction enterprise or their clients will ever use any building materials without officially issued certificates. Principals that are stipulated in their assignments state the unconditional use of certified materials only. Also, other professional markets like car- and coach manufacturers, will never use materials or components without proper certification, as they try to avoid liability lawsuits originating from failure of parts, which they buy from their providers, and the damages that these might bring about. Further information on quality requirements is contained in chapter 9.
In contrast, the DIY market provides interesting chances for exporters of fasteners and builder's hardware from developing countries. In fact, the DIY consumers in general take little notice, if at all, of any official quality label. In addition, the DIY market has been steadily growing over the last ten years and is expected to continue this trend for the coming years. The DIY market involves high volumes of fasteners and builder's hardware as DIY buyers form a major part of the population. Their purchases take place in a large number of outlets, which must all maintain adequate stock.

The DIY market segment can be described in different ways, for example, by type of activity and or by social characteristics of the consumer. Activities that can be distinguished are, for example:

- renovations and other drastic changes that one can make when moving to a previously inhabited house, either owned or rented,
- maintenance of the owned or rented house,
- beautifying and (re)decorating activities that people can undertake to the place where they live in.

Especially the latter is becoming a popular leisure activity in many EU countries. The extent to which consumers intend to renovate or maintain the places where they live in depends partly on the amount of free time they have and the cost of contracting these activities to professionals. This depends,

among other things, on the living standard in a country and the (labour) cost to hire a professional. DIY-ers can also be distinguished by its social characteristics, like age or sex:

- people between 25-35 years of age generally show an increased interest in DIY activities,
- the group between 35 and 55 spends most money on DIY activities,
- women are a high growth sub-segment in the DIY market that should not be overlooked.

The booming DIY market has resulted in an increased supply of fasteners and builder's hardware through large DIY retail chains in most EU countries. In the leading countries, some 50 - 60 percent of all sales of fasteners and builder's hardware through retail trade is accounted for by DIY superstores and multiples. These stores are characterised by their wide product range, accessible presentation and competitive prices. Approximately 15-20 percent of sales is channelled through independent DIY stores, while specialist hardware stores account for a further 20 percent of sales of fasteners and builder's hardware.

This survey contains ample data on consumers and retail-markets, in order to provide potential exporters with as much insight as possible into the target markets for which their products are meant. This will result in a better understanding of how the products should look and are expected to perform, as importers and wholesalers prefer to buy products that are already adapted to the market in which they will be sold.

Manufacturers from developing countries have good possibilities to compete with modern, standard model, low priced mass products vis-à-vis the highly sophisticated product ranges that companies in the EU countries produce. With simple DIY systems at low prices, small and medium-sized enterprises (SMEs) in developing countries have more chances to gain a share in the DIY market segment. When trying to compete with more complicated equipment that requires custom installation, like for instance innovative window fittings technology or complex house security systems, exporters of developing countries have no chances. The same holds for competition with door handle manufacturers that apply retrospectives or new material combinations in their latest designs, of course at high prices. Note that, due to a continuous flow of low-priced products from East Asian and Eastern European countries, competition has become fierce in some of the DIY market segments, increasingly putting prices under pressure.

In addition, manufacturers from developing countries who plan to export to the EU will do best by concentrating on a limited assortment of products. Consequently, a choice must be made on which products to concentrate, as, for example, the spectrum of mechanical security products is very broad - ranging from modular closing cylinder systems to lockable window fittings with integrated additional lock right up to the push-handle. This push-handle also doubles as a door opener or to mortise locks in designer casings. The integration of electronics and mechanics has steadily accelerated over the past few years and EU suppliers are now concentrating on electronic locking systems.

Products increasing in popularity in the EU these days, especially in the German market, include those that can easily be used by older persons, like easy-to-install safety locks. In addition, environmentally friendly solutions to DIY problems, like, for example, self-tapping wooden screws, are also likely to have good chances on the EU market.

3.3. Consumption patterns and trends

Important recent changes in the DIY branch are brought about by the up-rise of large DIY chains in the main DIY markets in the EU, in particular in Germany, UK and France. As a result these large DIY chains are increasing their market shares also in the smaller markets like Spain and Italy. These chains dominate some of the largest national markets for DIY, and increase their market share at the cost of the independent and professional hardware shops 'around the corner'. The 'one-stop-shop' formula of the DIY superstore is simple and effective: they provide everything that one needs for small or large jobs in or around the house, including fasteners and builder's hardware, paintings and coatings, tools, small machines and so on. The increasing scale of operations of these chains makes it

more feasible and attractive for them to buy from the manufacturers themselves, whereas products were previously channelled through wholesalers and importers. Consequently, the role of wholesalers and importers on the DIY market has diminished; instead they are increasingly turning their attention towards the professional market.

Furthermore, as many DIY consumers become more confident in what they do, they tend to buy these DIY products more frequent, even keeping a stock of assortments of, for example, all kinds of nails and screws.

The fasteners and builder's hardware market is growing much stronger than the economy as a whole. Some of the main trends in the field of demographic and socio-economic developments, fashion, the environment, price sensitivity and innovations are summarised below.

Demographic and socio-economic factors
The main demographic and socio-economic factors presently affecting the consumption of DIY products include the rise of the average age of the population in the EU, the increased participation of women in DIY and the increase in owner occupied dwellings. As indicated in the previous section, people aged between 35 and 55 spend most money on DIY activities. The ageing of the present EU population, with stagnating growth and the resulting shift in the distribution among age groups, therefore suggests an increased spending on DIY. But perhaps a stronger impulse to DIY activities and spending will come from the increased percentage of owner-occupied dwelling in some of the EU countries. This might potentially be influenced by rising living standards, the phenomenon of double income households and a reduction of average household size. The latter might increase the number of dwellings while many individuals interested in new single-family dwellings or improvements in their apartments cannot afford professional builders and, therefore, do the majority of the work themselves.

In addition, women are reported to play a major motivational role in DIY activity, although most work is actually performed by men. Recent studies have shown that women are an increasingly important segment of the buying public for DIY goods, and DIY retailers are being encouraged to adapt their product offers and the in-store environment to appeal to them.

A trend, which has been identified in the UK, but probably also holds for other EU countries, is that consumers are increasingly spending money on their homes not because they want to move, but because they have no intention of doing so. In fact, in the UK, 80 per cent of consumers have no plans to move house. A crucial factor here is the increase in house prices, which is leading to growing numbers of consumers undertaking DIY tasks simply because they want a new look for their home. Therefore, expenditure is less driven by needs assessment based on replacing and repairing, but is instead becoming fashion driven.

Fashion
A strong incentive for DIY spending is caused by the phenomenon of the popular trend of doing DIY jobs in one's leisure time. DIY is regarded as a form of relaxation, resulting in something that can proudly be presented to family and friends as an achievement of art. The trend is evident in countries like Germany, France, the UK, the Netherlands and Belgium, but to a lesser extent in Spain and Italy where DIY is not yet a very accepted or popular phenomenon.

In fact, DIY presenters on television become celebrities with programmes attracting big audiences. Constant variations on the theme are unveiled by the TV channels - home makeovers, garden makeovers and reality programmes about buying and selling houses. All this is serving to maintain interest and providing retailers with a foothold.

Environment
Environmental consciousness is a major issue in Europe. It is a trend seen for all products and services. Therefore, manufacturers of fasteners and hardware must not only judge their products based on traditional product aspects like price, quality, customer demand and standards, but also on the

environmental aspects of the products and the production process. Especially the surface treatment against corrosion of metal products with chemicals like zinc, nickel, copper, phosphate, cadmium and so on must be given a lot of attention. It is not only the final products, that find their way to both consumer and industry that can be considered as relatively environmentally sound, but also the raw materials used during production and the packaging material.

By taking the right precautions and producing environmentally sound products, manufacturers may create a competitive advantage in the European market place, when emphasising the environmental soundness of the product in their marketing and product information.

Price sensitivity
Consumer's sensitivity to prices differs between countries. Germany is an example of a country where price sensitivity is very high, since the low price is the main attractiveness for the German consumer. The pressure on producers and retailers to reduce their costs and margins is also high in these circumstances. However, in, for example, the UK the quality of the store environment and the sophistication and variety of the products is of more importance to the UK consumer, which reduces the price sensitivity.

Innovations
Most complex and high-tech innovations for fasteners and builder's hardware are in the sphere of electronic locking and security systems and installations, window fittings technology and the use of new material combinations on, for example, door handles. More simple innovations are inducing a new trend in the use of fasteners, like self-tapping wood and metal screws, which are coated with certain penetrating oils for easy turning and cutting in the wood or iron. The screws can be recognised by different colours that are put at the screw-point indicating the threading pitch or the kind of materials they can be used for. Currently among the most popular and best selling screws are chipboard screws, see box 3.1 for a description.

Below, the main trends in the DIY markets are described for each of the selected countries.

Germany
German shoppers in general tend to demand good product quality at extremely low prices. Most consumers will put up with very low levels of service and store ambience if the lowest possible prices are offered. Another feature of the German consumer market is that the retailer is widely considered responsible for running its business on environmentally friendly and ethically responsible principles. At the same time, retailers are expected to avoid products containing substances, with even the slightest chance of being health damaging, while safety standards are higher in Germany than in any other European country. Retail margins, therefore, are lower in Germany than they are in other Western European countries, increasing the pressure on prices and retailers themselves, which is not helped by high labour costs and the conservative nature of German consumers.

Demand for home improvement goods will continue to increase in real terms in the years ahead in Germany, at least until the year 2005. An important impulse for this growth of the German DIY market is the increasing proportion of owner-occupied dwellings. Notably, the proportion of owner-occupied dwellings in Germany is at present one of the lowest in Europe, at just over 40 percent. It is the objective of the government to increase this to 50 percent within the next 10 years. This means that some 390,000 rented dwellings must be transferred into the hands of owner-occupiers. This development will help to keep DIY spending at a high level. In addition, the number of new-build dwellings is set to rise in the years ahead.

The increasing experience and abilities of the DIY-er, the wider availability of product ranges of goods specifically designed for the home-improver, good service and the provision of high-quality advice in DIY stores will generate enhanced DIY sales.

Box 3.1 CHIPBOARD SCREWS ARE THE TREND

CHIPBOARD SCREWS - also called SPEEDSCREWS - are specially developed to prevent the problems arising with the application of the conventional woodscrews in chipboard and different types of wood. Compared to "normal" screws, chipboard screws have many technical improvements, which ensure easy, and with modern tools, fast assembly, thus saving on total assembly costs. These benefits are achieved by the following properties:

1. Adapted geometry of the thread.

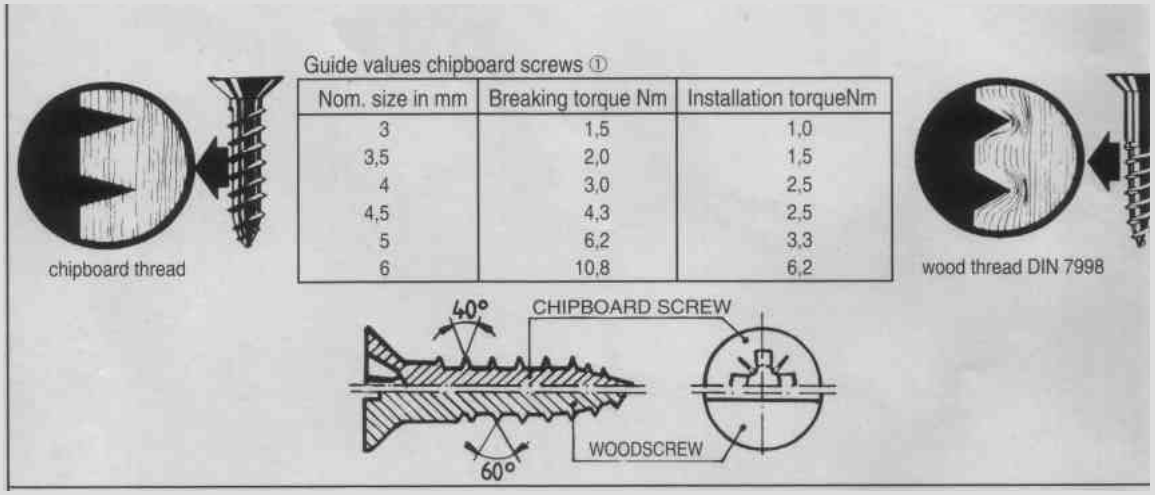
- The thread angle of the wood thread has been diminished from 60° to 40°.
- With the same major diameter the minor diameter is smaller and of equal thickness over the full screwlength (except the point).
- The normal length screws have thread, till just under the head.
- A sharp selfcentering point, through which easier start of drilling and less risk of wobbling.

Expensive and time-consuming pre-drilling is often unnecessary. The sharper and deeper profile of the thread does not push aside the material, but cuts into it. Less risk of crumbling and splitting of small, crosscut sides e.g. with the installation of door and window furniture. Beside this a better grip (up to 35% higher pull-out values) and up to 40% lower installation torque.

2. Chipboard screws are made of casehardened steel and surface-hardened.
They are stronger and more wear resistant than woodscrews, increasing the cutting performance and preventing damage during installation. A toughened core avoids breaking of screw head at bending.

3. They are provided witch a special corrosion resistant lubricant causing a decrease of the installation torque.

Although chipboard screws are also available in the slotted condition, for industrial use screws with a POZIDRIV cross recess are preferred, which can be efficiently tightened with automatic setting tools.



France
The success of the various DIY chains in France towards the end of the 1990s has helped the development of a DIY culture in France. DIY is increasingly seen as a hobby - by both men and women. As a broad generalization, the French have caught the DIY bug, but not the gardening bug - at least, not to the extent that the British have. In recent years, retail sales of DIY products have more than kept pace with retail sales as a whole. A further deepening of this trend can still be expected over the near future.

United Kingdom
During the 1980s, DIY sales were stimulated by a lively housing market, while this decade saw the aggressive development of out-of-town sites by the leading chains. In spite of many homeowners suffering from 'negative equity' caused by the recession during the early 1990s, the DIY market maintained its steady growth. This was partly due to the increasing popularity of DIY as a leisure activity and partly because many people could not afford to move home so they set about improving their existing dwellings. More recently, the inexorable rise of home decoration programmes on television has given added momentum to the market, as consumers have become more confident in terms of the projects which they are prepared to undertake. As a result, fashion and styling have become increasingly important at the 'soft' end of the DIY market.

Spain
For a number of reasons, the Spanish DIY market has developed very slowly. Some of these are deep rooted in Spanish society itself, some related to the urban structure and some have an economic nature. Changes in traditional practices are starting to take place, spearheaded by the hypermarkets and the new breed DIY stores, even though the latter are still thinly dispersed across the country. The DIY ethic is slowly gaining ground in the major cities, where consumers have been exposed to the opportunities for 'one-stop' home improvement shopping.

In addition, the bulk of the population lives in and around the major cities while housing is characterised by large apartment blocks rather than detached homes with gardens. These blocks have severe limitations to the opportunities for making modifications or improvements. Consequently, DIY activity in Spain is still mainly of an unsophisticated nature and DIY jobs tend to cover simple home repairs, decorating and garden, or more typically balcony, maintenance. In fact, few Spaniards consider themselves competent to undertake DIY tasks. Moreover, specialist tradesmen have been available for jobs in the home at affordable rates. Spaniards, therefore, are less inclined to consider the possible financial advantages (and the satisfaction) of doing a job themselves when they can have it done just as cheaply by a professional.

Spanish social norms and the climate in much of the country are conducive to the traditional Spanish lifestyle of 'living outdoors'. The population in general spends more time with friends and their families outside their homes than entertaining them inside. The home does not occupy the same central position as a family showpiece as it does in more northern European countries, although this factor is changing slowly.

The Netherlands
DIY is becoming increasingly popular in the Netherlands, partly due to high cost of hiring skilled craftsman. Especially now that the prices of houses are increasing, many people , instead of buying a bigger house, adopt the house that they already have to their own wishes. DIY plays an important role in these activities.

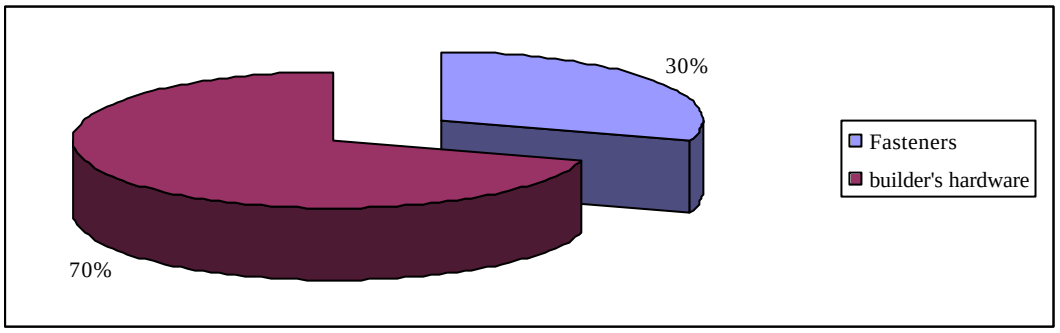
Belgium
In Belgium, as in the Netherlands, DIY is a fashion. People dedicate increasingly more time and money to it. As a result, between 1993 and 1997 spending on DIY accelerated by double the growth of overall consumption in that period, i.e. with over 20 percent.

4. PRODUCTION

As clarified in section 3.1 about consumption figures, also for production it is extremely difficult to find statistics. Due to the lack of data, the production of fasteners and builder's hardware is estimated on the basis of the consumption and import-export figures only for the EU as a whole. Chapter 6 discusses exports of fasteners and builder's hardware by EU countries, which indirectly identifies the main competitors as well.

For the EU as a whole production of fasteners and builder's hardware is estimated at approximately EUR 17 billion in 2001. It is estimated that this can be divided into EUR 5.1 billion (30 percent) worth of fasteners and EUR 11.9 billion (70 percent) worth of builder's hardware. In terms of volume (tonnes) the fasteners would contribute to 90 percent of the total and the builder's hardware to 10 percent. The relative shares of the fasteners and of builder's hardware for the DIY market and the professional market are expected to be similar to that of the overall market.

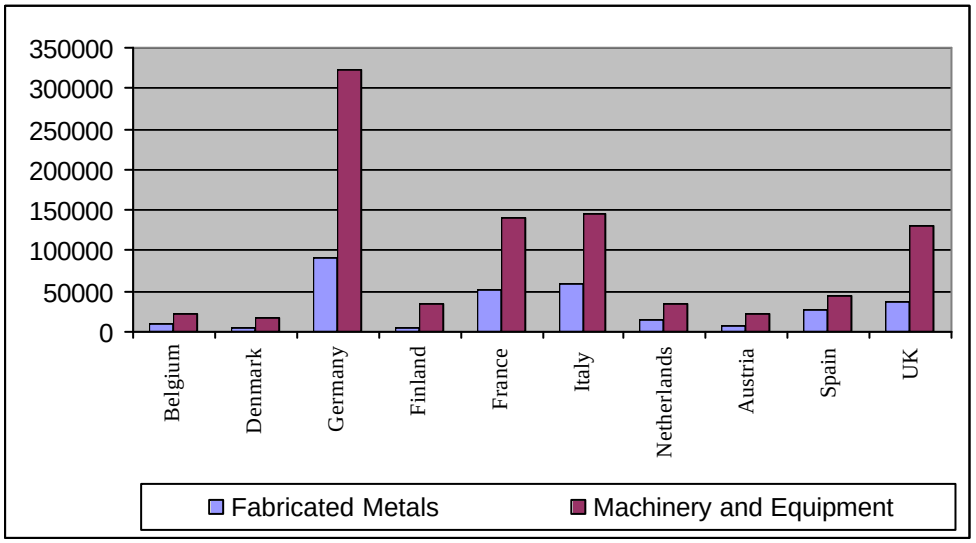
Figure 4.1 Production of fasteners and builder's hardware, value share as percentage 2001



Estimates derived from different sources

While precise data on the production of fasteners and builder's hardware is not available, Figure 4.2 presents an overview of the size of the fabricated metals and machinery and equipment industries in EU countries. The largest industries, measured in gross output and in current prices, are found in Germany, while in France, Italy, and the UK those industries are about half Germany's size.

Figure 4.2 Gross output of selected EU industries, 2000
EUR million



Due to weak demand in certain downstream metal product industries and the worldwide over-capacity in the metal industry, prices of metal products in general have come under pressure. Furthermore competition from the former Eastern European countries, where labour costs and energy costs are relatively low, has intensified. Price competition is especially fierce in mass markets with standard products. Rationalisation of production processes and the establishment of production capacity in low wage (developing and Eastern European) countries have enabled manufacturers to lower their production costs. To an increasing extent, technological know-how and high product quality constitutes the core of the EU manufacturing competitiveness. Although the industry is still highly fragmented, consisting of many small companies, the rationalisation process has also resulted in a higher concentration of supply in the fasteners and builder's hardware segment. As a result, in a worldwide perspective, the EU metal products industry has retained and will further strengthen its competitiveness. It is particularly through large R&D efforts directed towards the refinement and cost-effectiveness of existing functions in combination with the delivery of high quality and environmentally friendly products that the competitive advantage is sustained. In other words, Western Europe is becoming a niche product specialist whilst central European and other developing country producers focus on general standard products. Most European manufacturers are working towards moving into higher value products; others are selectively reducing capacity and electing to take the route of private label sourcing to enhance margins. The underlying feature is that industrial production in Europe is declining and the European industry has too much capacity.

Some important producers of fasteners in the selected European member states are:

- Germany: Ahorn Befestigungstechnik GmbH (Hungen), Bever GmbH (Kirchhunden), Bierbach Befestigungstechnik GmbH & Co.KG (Unna), Reisser Schraubentechnik GmbH (Ingelfingen-Criesbach), Schmidt GmbH Schraubenfabrik (Halver), Schraubenwerke Meusel GmbH & Co.KG (Langenhage);
- Spain: Hopama S.A. (Valencia), Damesa Mikalor (Perpetua de Mogoda);
- UK: Ausmark Fasteners Ltd. (Colinbrook, Slough Berkshire), Non-Standard Socket Screw Ltd (Hockley Birmingham).

In general, fasteners are products that are seldom marketed under the trade name of a manufacturer. Besides some very special kinds of fastener, which are in such cases often patented, the consumer does not know the brand names and buys fasteners as nameless products. Most fastener manufacturers specialise in producing only a small sector of the huge assortment that the market has to offer. Some manufacturers, for example, concentrate on very big fasteners for huge construction objects or on very small ones for use in electronic devices. For the DIY market Deltafix, Heco and Fischer are some names that are known in the circles of DIY and hardware distributors.

Alternatively, there are companies which offer more or less complete assortments to the DIY retail market, such as Schneider + Klein (Dyckerhoff Group) from Germany, but they are based on the kinds and sizes that are most common and frequently used by DIY consumers.

Some important producers of builder's hardware in the selected member states of the EU are:

- Germany: BMH & Müller GmbH & Co (Heiligenhaus), BKS GmbH (Velbert), DOM Sicherheitstechnik GmbH & Co, KG (Brühl), Carl Fuhr GmbH (Heiligenhaus), Jado Design Armatur und Beschlag AG. (Rödermark);
- UK: Imperial Locks Guardian Lock & Eng.Co.Ltd (Willenhall West Midlands);
- Spain: Azbe B. Zubia S.A. (Aretxabaleta), MCM Metalurgica Cerrajera de Mondragon, S.A. (Vitoria Alava), TESA Talleres de Escoriaza, S.A, (Irun Guipuzcoa), Lince La Industrial Cerrajera, S.A., (Elorrio), Union Cerrajera Arrasate S.L.(Mondragon), Bronces Mestre S.A. (Torrent), Spania Brass S.A. (Torrent);
- Belgium: Louage & Wisselinck AG (Ardooie).

These companies manufacture between them a complete assortment of locks, door fittings, accessories, hinges and any kind of other builder's hardware in iron, steel, aluminium, brass and the like. Brand names play a more important role for builder's hardware than for fasteners.

The 7 main producers of builder's hardware in the Netherlands are organised in the VHS (Vereniging fabrieken van Hang - en Sluitwerk) and include: Ami B.V., Ankerslot B.V., Bosch EHS B.V., Heycop Systemen B.V., Chub Lips Nederland B.V., Nemef B.V., and Stenman Holland B.V.

Production figures of fasteners and builder's hardware, with the exception of a few minor sub-sections, are not made available by CBS (since 1996) or the branch organisation as data of most product groups are considered classified information and therefore not made accessible to the public.

5. IMPORTS

In this chapter the figures on imports of fasteners and builder's hardware in the EU are presented. The statistics describe total imports, imports from non-EU countries (extra-EU) and imports from developing countries, both in volume and value. Developing countries, as defined by the OECD, are listed in Appendix 4. Further data on imports for the EU and the selected markets within the EU are contained in Appendix 2, including a detailed breakdown by product group and country of origin.

The statistics presented in this chapter are official trade figures provided by Eurostat. After unification of the European Union in 1992, customs authorities stopped recording the intra-EU trade. Since then, import and export figures have been based on reports given by the companies themselves. In the case of intra-EU trade, statistical reporting is only compulsory for EU exporting and importing firms, whose trade exceeds EUR 100,000. Companies, whose trade does not exceed this threshold value, are not obliged to report and are therefore excluded from the statistics provided by Eurostat. Imports from non-EU sources, however, are still registered by customs authorities. For these reasons, all statistics must be interpreted with extreme caution. They are not complete, and are intended to give an indication of trends in the respective product groups and of the relative importance of European sub-markets.

5.1. Total imports

Compared to 2000, imports of fasteners and builder's hardware into EU countries remained flat in 2001. In value terms, total imports by EU countries declined by less than half a percentage point to EUR 11.3 billion, whereas in volume terms a decline of 1.7 per cent was registered to 3.4 million tonnes. However, compared to two years ago, imports have increased by 17 per cent in value and 28 per cent in volume terms. Overall, the market feeling is that whilst 2001 saw lower importation as companies adjusted to high inventory, the upward trend is certainly going to continue.

Table 5.1 EU imports of fasteners and builder's hardware by EU country, 1999-2001
EUR Million / 1,000 Tonnes

	1999		2000		2001	
	value €	**volume**	**value €**	**volume**	**value €**	**volume**
EU total	**9,672,129**	**2,748,263**	**11,334,353**	**3,506,342**	**11,288,154**	**3,446,127**
Germany	2,242,475	711,840	2,707,650	804,314	2,612,267	739,112
United Kingdom	1,371,667	386,379	1,608,811	451,492	1,595,672	434,844
France	1,315,745	366,874	1,544,569	418,996	1,549,171	429,370
Spain	827,256	220,935	1,015,955	211,467	967,625	205,116
Belgium	761,661	180,007	864,029	201,401	957,949	209,215
Austria	602,174	127,558	650,686	145,143	710,774	148,365
Italy	579,976	177,267	694,664	223,364	703,889	207,001
Netherlands	600,382	203,448	676,090	283,279	678,245	283,556
Sweden	482,465	107,050	583,638	150,348	528,002	120,392
Denmark	267,474	76,858	299,677	83,661	305,745	90,828
Portugal	194,043	64,200	212,507	59,223	205,040	54,589
Finland	149,486	40,283	181,165	46,584	176,496	43,536
Ireland	128,573	30,528	149,928	33,859	143,235	31,866
Greece	116,599	40,763	110,820	381,746	116,105	124,436
Luxembourg	32,158	14,273	34,148	11,465	37,953	12,225

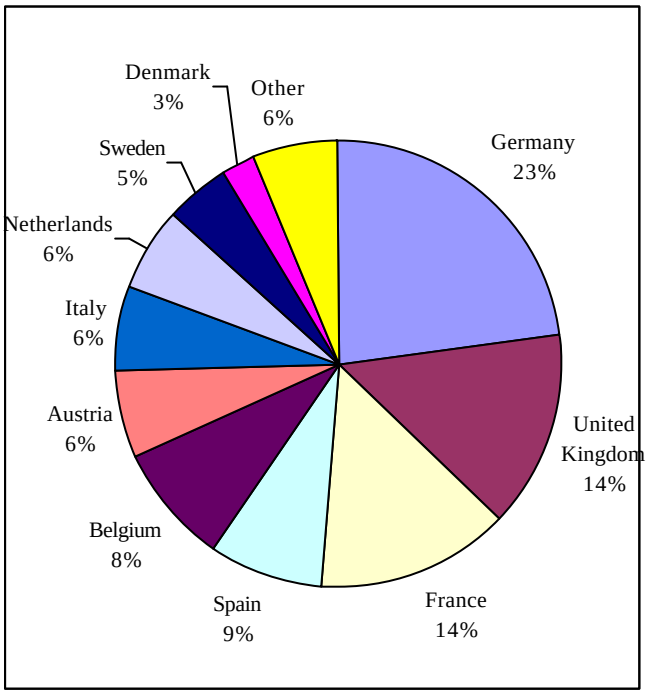
Source: Eurostat (2003)

In Table 5.1, the size of imports from all EU-countries is shown for the years 1999 to 2001. As can be seen, Germany is by far the largest importer of fasteners and builder's hardware, importing for a value of € 2.6 billion in 2001. The United Kingdom is the second largest importer of fasteners and builder's

hardware (€ 1.6 billion) closely followed by France (€ 1.5 billion). The relative importance of the individual countries has remained fairly stable. In fact, with the exception of shifts within the group of countries Austria, Italy and the Netherlands, the ranking has remained the same during these last three years, reflecting the relative stability of the fasteners and builder's hardware market.

Figure 5.1 displays the importance of the individual countries graphically. Germany, the UK, and France together account for more than half of total imports. Spain and Belgium account for 9 and 8 per cent respectively, while Austria, the Netherlands, and Italy each take up 6 per cent. All other EU countries account for 5 per cent or less of total imports.

Figure 5.1 EU imports of fasteners and builder's hardware by major EU country, 2001
In percent of total value



Source: Eurostat (2003)

As mentioned before, the total value of EU imports of fasteners and builder's hardware remained fairly flat between 2000 and 2001. However, a number of countries registered significant increases. Belgium, for example, saw its imports rise by 11 per cent, and similar increases were observed for Austria and Luxembourg. In contrast, Sweden experienced a substantial decline in its imports of 10 per cent, while several countries, including Germany and Spain, saw a modest decline of around 5 percentage points.

Between 1999 and 2000 all countries experienced a sharp rise in the value of their imports of fasteners and builder's hardware. The general decline in 2001 only partly offset this growth, and the level of imports for 2001 remains substantially above the level observed in 1999. In fact, the largest four importing countries, Germany, the UK, France, and Spain, each imported between 16 and 18 per cent more in 2001 than they did in 1999. Belgium's imports even grew by a total of 26 per cent, while the Netherlands, one of the less performing countries, still recorded growth of 13 per cent. Greece was the only country that saw its imports of fasteners and builder's hardware shrink by a marginal 0.4 per cent.

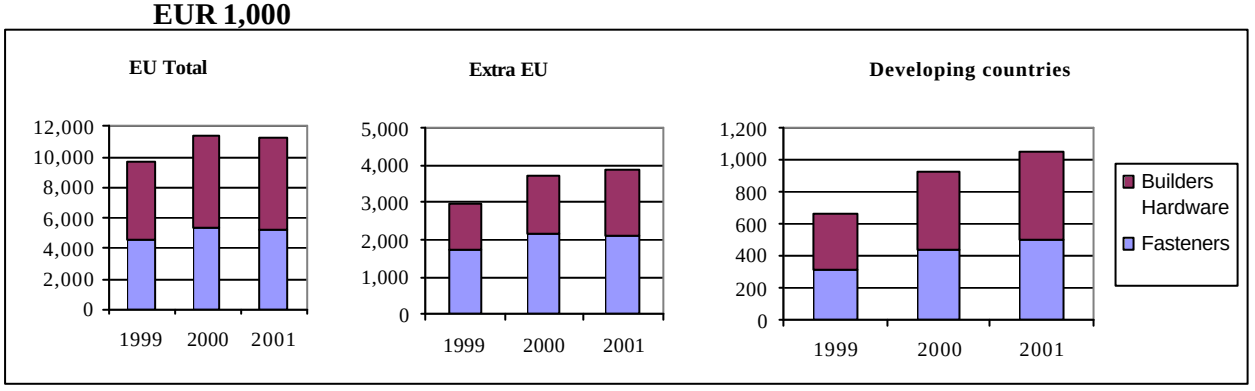
A similar picture emerges when looking at the imported volume of fasteners and builder's hardware. Most countries registered a modest decline over 2001, although of the larger importers notably France and Belgium showed a small increase. Nevertheless, on account of robust growth between 1999 and 2000, the volume of imports in 2001 was generally higher than in 1999. For all EU countries taken together, the increase amounted to 25 per cent. Of the large countries, Germany and Spain stand out –

Germany's imports increased only by 4 per cent in volume terms, while Spain's imported volume actually declined by 7 per cent. The UK, France, Belgium and the Netherlands all witnessed an increase in the volume of imported fasteners and builder's hardware, ranging from plus 13 to plus 39 per cent.

In 2001, EU imports of fasteners amounted to € 5.2 billion, i.e. 46 percent of EU imports of fasteners and builder's hardware, and EU imports of builder's hardware amounted to € 6.1 billion, i.e. 54 percent of EU imports of fasteners and builder's hardware. Compared with 2000, changes have been marginal. For most countries, the share of fasteners is somewhere between 42 and 50 percent of total EU imports of fasteners and builder's hardware. German imports consist for € 1.199 billion of fasteners (46 percent), and for € 1.412 billion of builder's hardware (54 percent). For the United Kingdom, the distribution is € 664 million (42 percent) of fasteners and € 931 million of builder's hardware (58 percent). Deviations from this distribution are Greece, which has a relatively small share of fasteners, and France and Luxembourg, which in value terms import more builder's hardware than fasteners.

Figure 5.2 the value of imports is broken down into fasteners as one group and builder's hardware as another. Moreover, whereas the left panel shows total imports, the middle panel shows imports from outside the EU (including developing countries), and the right panel shows imports sourced from developing countries only. Whereas total imports declined between 2000 and 2001, imports sourced from outside the EU countries in fact increased by about 3.5 per cent, while imports sourced from developing countries grew by 13.7 per cent. As a share of the total, extra-EU imports have increased from 30.6 per cent in 1999 to 34.2 per cent in 2001. Over the same period, the share of imports from developing countries increased from 6.9 to 9.3 per cent. The increased importance of extra-EU and developing country imports holds for both builder's hardware and fasteners. The role of developing countries is further discussed in section 5.3.

Figure 5.2 European imports of fasteners and builder's hardware: total of the EU, imports from outside the EU, and imports from developing countries, 1999 – 2001
EUR 1,000



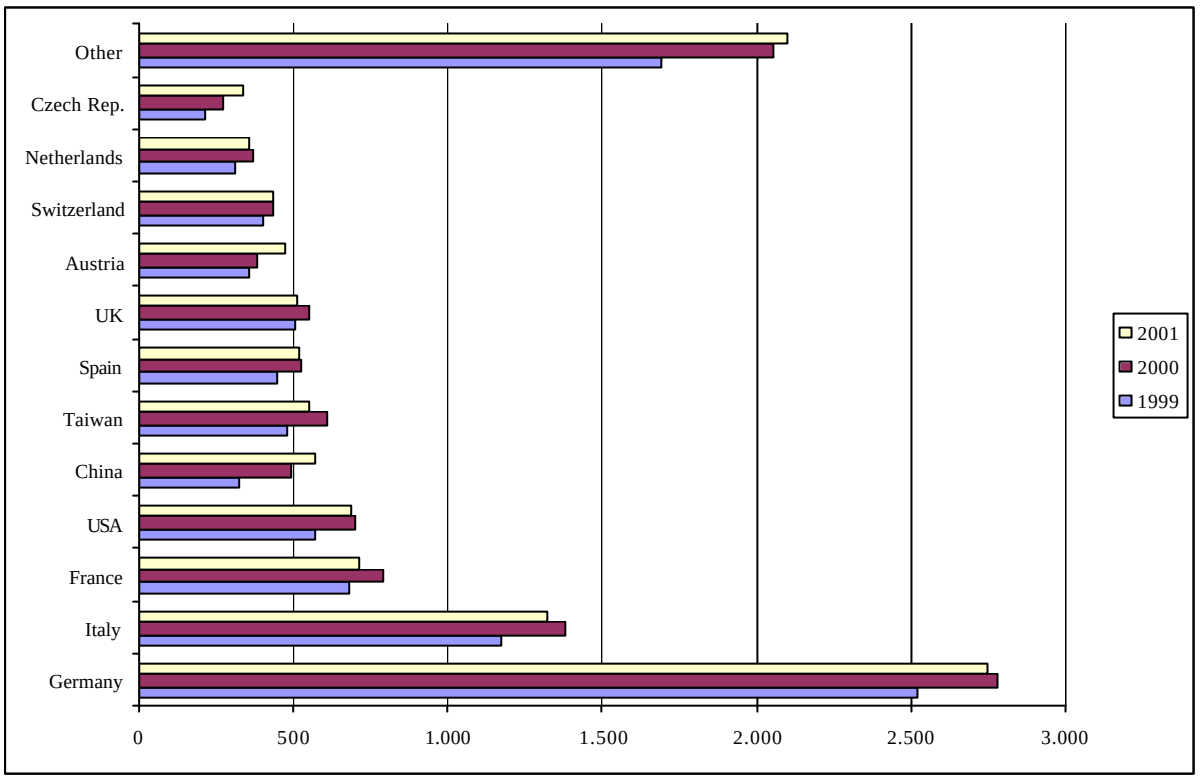
Source: Eurostat (2003)

As shown in Figure 5.3, by far the largest source of EU imports of fasteners and builder's hardware is Germany, accounting for € 2.8 billion of total EU imports in 2001. The second largest source of imports is Italy, with € 1.3 billion in 2001, followed by France with € 717 million. Of the largest ten sources of EU imports of fasteners and builder's hardware, four are from outside the EU: the USA (€ 689 million, 4th place), China (€ 569 million, 5th place), Taiwan (€ 551 million, 6th place) and Switzerland (€ 436 million, 10th place). It is interesting to observe that most EU countries declined in importance during 2001 and saw a reduction in the value of their exports of fasteners and builder's hardware. In contrast, most notably China saw a rapid expansion of exports.

In terms of volume, Germany (723 million tonnes) and Italy (456 million tonnes) are also the main sources of EU imports of fasteners and builder's hardware in 2001. However, China (315 million tonnes) and Taiwan (271 million tonnes) are relatively more important sources of imports of fasteners

and builder's hardware when measured in volume terms compared to value terms, ranking second and third respectively. Similarly, in volume terms the USA (71 million tonnes) and Switzerland (49 million tonnes) rank 13th and 14th place respectively as most important suppliers of imports by EU countries.

Figure 5.3 Main suppliers of EU imports of fasteners and builder's hardware, 1999 – 2001, EUR 1,000



The category "Other" contains countries like Belgium, Sweden (>200K), Japan, Poland, Denmark, Portugal, India (>100K), Slovenia, Hungary, Liechtenstein, Malaysia, Canada, Ireland, Norway, Singapore, Finland, Hong Kong, Turkey. All other countries accounted for less than € 40,000 worth of imports.
Source: Eurostat (2003)

5.2. Imports by product group

Table 5.1 gives a breakdown of EU imports of fasteners and builder's hardware by product group. The table shows that € 5.2 billion of fasteners and € 6.1 billion of builder's hardware were imported into the EU in 2001. The table presents total EU imports for each product group, and also breaks down imports by source, i.e. extra-EU or developing country.

It is readily seen that both sub-groups performed very similarly. Imports of fastener's declined by about 2 per cent between 2000 and 2001, but the 2001 level is still up by 17 per cent compared to 1999. Imports of builder's hardware registered a small increase of 1 per cent between 2000 and 2001, but have grown by 16 per cent compared to 1999. Below the developments of the different categories within fasteners and builder's hardware are discussed.

Table 5.2 EU imports of fasteners and builder's hardware by product group, 1999-2001
EUR million / 1,000 tonnes

		1999		2000		2001	
		Value €	Volume	Value €	Volume	Value €	Volume
FASTENERS							
	Total	**4.439**	**1.860**	**5.307**	**2.201**	**5.201**	**2.139**
	Extra EU	1.736	861	2.158	985	2.141	971
	Developing countries	315	276	438	348	496	362
Nails, tacks, drawing pins, corrugated nails, staples and similar articles, or iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper							
	Total	**319**	**278**	**350**	**302**	**326**	**282**
	Extra EU	137	161	150	173	144	165
	Developing countries	19	22	22	21	21	17
Threaded screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (incl. spring washers) and similar articles, of iron or steel							
	Total	**3.326**	**1.424**	**3.973**	**1.715**	**3.883**	**1.677**
	Extra EU	1.306	648	1.644	749	1.629	745
	Developing countries	267	234	371	299	428	321
Non-threaded screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (incl. spring washers) and similar articles, of iron or steel							
	Total	**794**	**158**	**984**	**184**	**992**	**179**
	Extra EU	292	52	365	63	368	61
	Developing countries	29	19	45	28	46	24
BUILDERS HARDWARE							
	Total	**5.233**	**888**	**6.028**	**1.305**	**6.087**	**1.307**
	Extra EU	1.227	246	1.578	307	1.723	330
	Developing countries	354	103	487	137	557	149
Padlocks and locks, of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal							
	Total	**1.525**	**130**	**1.734**	**149**	**1.751**	**151**
	Extra EU	421	50	530	58	598	64
	Developing countries	118	23	151	29	156	27
Base metal mountings, fittings, etc							
	Total	**3.709**	**758**	**4.294**	**1.156**	**4.336**	**1.156**
	Extra EU	807	196	1.048	249	1.125	267
	Developing countries	236	80	336	109	401	122

Source: Eurostat (2003)

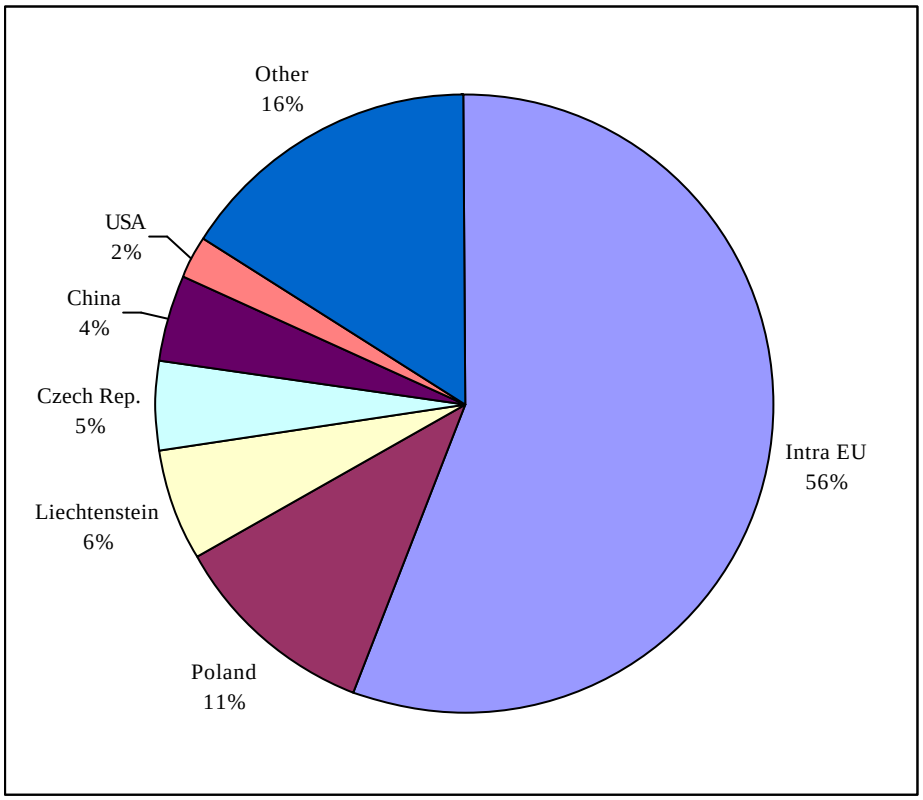
Fasteners

Nails, tacks, drawing pins, etc.

In 2001, € 326 million of *nails, tacks, drawing pins, etc.* were imported into the EU. EU imports increased slightly from 1999 to 2001 in value (from € 319 million to € 326 million) and in volume (from 278 thousand tonnes to 282 thousand tonnes). EU imports of *nails, tacks, drawing pins, etc.* made up 3 percent of total EU imports of fasteners and builder's hardware. In 2001, 44 percent of EU imports of *nails, tacks, drawing pins, etc.* were imported from countries outside the EU, including 7 percent (€ 21 million) from developing countries.

As shown in Figure 5.4, more than half of EU imports of this product group were imported from other EU countries. The major sources outside the EU of these imports were Poland (€ 35 million, 11 percent), Liechtenstein (€ 19 million, 6 percent), and Czech Republic (€ 16 million, 5 percent). EU imports from developing countries of this product group are lower than that for most other product groups. The share of developing countries amounted to 6.5 percent. In 2001, the major sources from developing countries were China (€ 14 million), South Korea (€ 2.9 million) and Turkey (€ 1.5 million). Other developing countries that play a minor role in EU imports of this product group include South Africa, Columbia, India and Slovenia.

Figure 5.4 Sources of EU imports of nails, tacks, drawing pins, etc. in 2001
In percent of total value

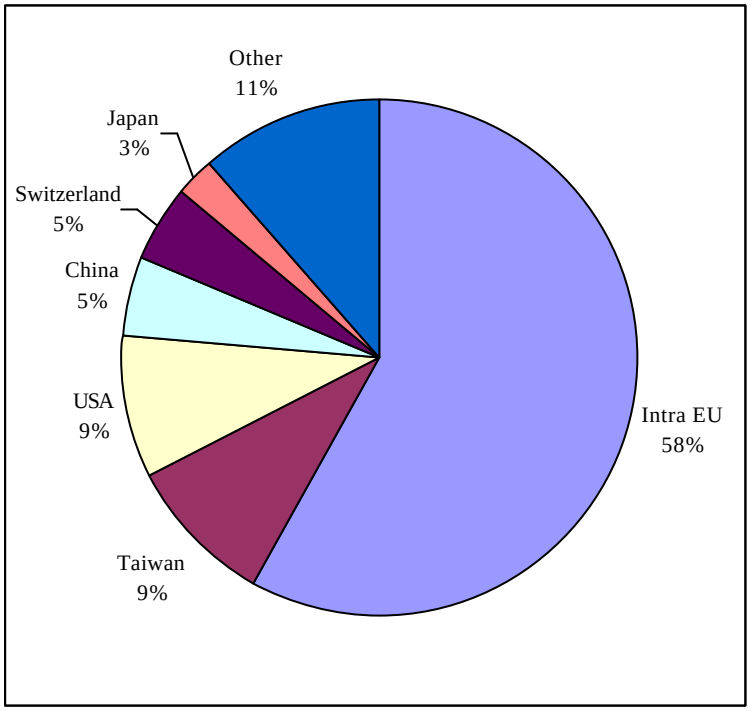


Source: Eurostat (2003)

Threaded screws, bolts etc.
In 2001, € 3,873 million of *threaded screws, bolts etc.* were imported into the EU. EU imports increased from 1999 to 2001 in value (from € 3,303 million to 3,873 million) as well as in volume (from 1,412 thousand tonnes to 1,664 thousand tonnes). EU imports of *threaded screws, bolts etc*. made up 34 percent of total EU imports of fasteners and builder's hardware. In 2001, 42 percent of EU imports of *threaded screws, bolts etc.* were imported from extra-EU countries, including 11 percent (€ 427 million) from developing countries.

Intra-EU imports amounted to 58 percent of the total imports of this product group in 2001. The major extra-EU source countries were Taiwan (€ 364 million), USA (€ 345 million) and China (€ 200 million). The share of developing countries in the supplying imports of threaded screws is 11 percent. EU imports from developing countries increased by 60% during the period 1999 – 2001. In 2001, the major sources of EU imports from developing countries were China (€ 200 million), Malaysia (€ 49 million), Thailand (€ 28 million) and India (€ 26 million). Other developing countries that play a role in EU imports of this product group include Indonesia, Turkey and the Philippines. The most important countries of origin for threaded screws, bolts, etc. are depicted in Figure 5.5.

Figure 5.5 Sources of EU imports of threaded screws, bolts etc. in 2001
In percent of total value



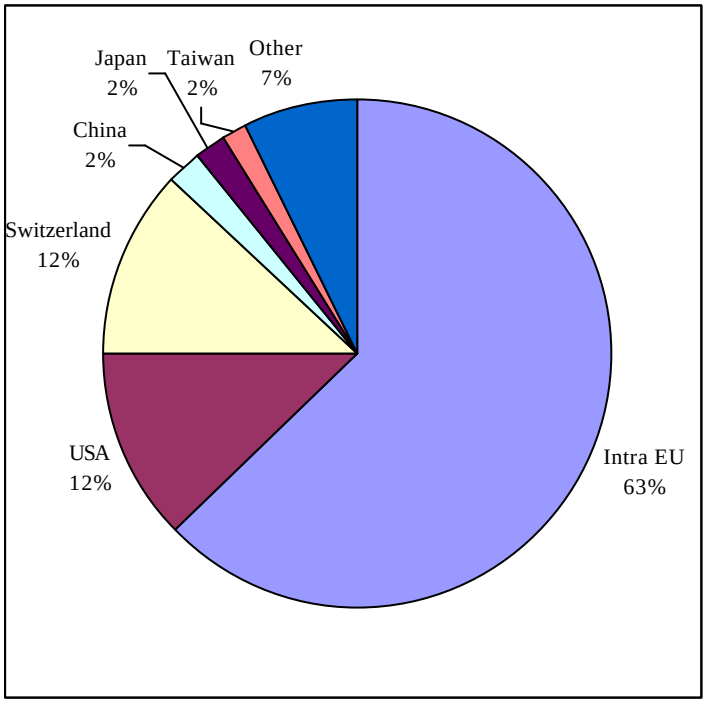
Source: Eurostat (2003)

Non-threaded screws, bolts etc.
In 2001, € 991 million of *non-threaded screws, bolts etc.* were imported into the EU. EU imports increased between 1999 and 2001, both in value (from € 794 million to € 991 million) and volume (from 158 thousand tonnes to 179 thousand tonnes). EU imports of *non-threaded screws, bolts etc*. made up 9 percent of total EU imports of fasteners and builder's hardware. In 2001, intra-EU imports of this product group accounted for 63 percent of total EU imports of *non-threaded screws, bolts etc.*, as shown in Figure 5.6 37 percent of EU imports of *non-threaded screws, bolts etc.* were imported from extra EU countries, including 5 percent (€ 46 million) from developing countries.

The major sources of extra EU-imports of this product group in 2001 were USA (€ 121 million), Switzerland (€ 118 million) and China (€ 22 million). In 2001, the major sources of EU imports from developing countries were China (€ 22 million), Slovenia (€ 8 million), India (€ 4.5 million) and Turkey (€ 4.3 million). Other developing countries accounting for some EU imports of this product group include South Africa, Thailand, Croatia, Malaysia, South Korea and Brazil.

Between 1999 and 2001, total EU imports of non-threaded screws, bolts, etc. displayed the highest growth rate of all categories, growing by 25 per cent.

Figure 5.6 Sources of EU imports of non-threaded screws, bolts etc. in 2001
In percent of total value



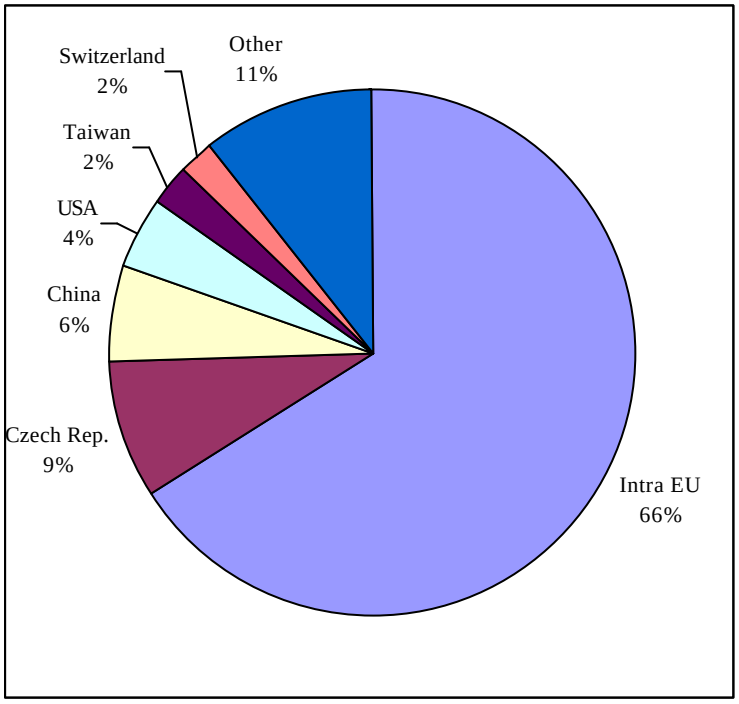
Source: Eurostat (2003)

Builder's hardware

Padlocks and locks of base metal etc.
In 2001, € 1,750 million of *padlocks and locks of base metal etc.* were imported into the EU. EU imports increased from 1999 to 2001 in value (from € 1,523 million to € 1,750 million) and in volume (from 130 thousand tonnes to 151 thousand tonnes). EU imports of *padlocks and locks of base metal etc.* made up about 16 percent of total EU imports of fasteners and builder's hardware. In 2001, 34 percent of EU imports of *padlocks and locks of base metal etc.* were imported from extra EU countries, including 9 percent (€ 156 million) from developing countries.

A large part of EU imports of builder's hardware, including this product group, is imported from other EU countries. For *padlocks and locks of base metal etc.* this is 66 percent, as shown in Figure 5.7. The major sources of the extra-EU imports were the Czech Republic (€ 150 million), China (€ 103 million) and the USA (€ 77 million). In 2001, the major sources of EU imports from developing countries were, apart from China, South Korea (€ 15 million), Albania (€ 7 million) and Malaysia (€ 4 million). Other developing countries that played a role in EU imports of this product group include Turkey, Bosnia-Herzegovina, Slovenia and Morocco.

Figure 5.7 Sources of EU imports of padlocks and locks of base metal etc. in 2001
In percent of total value



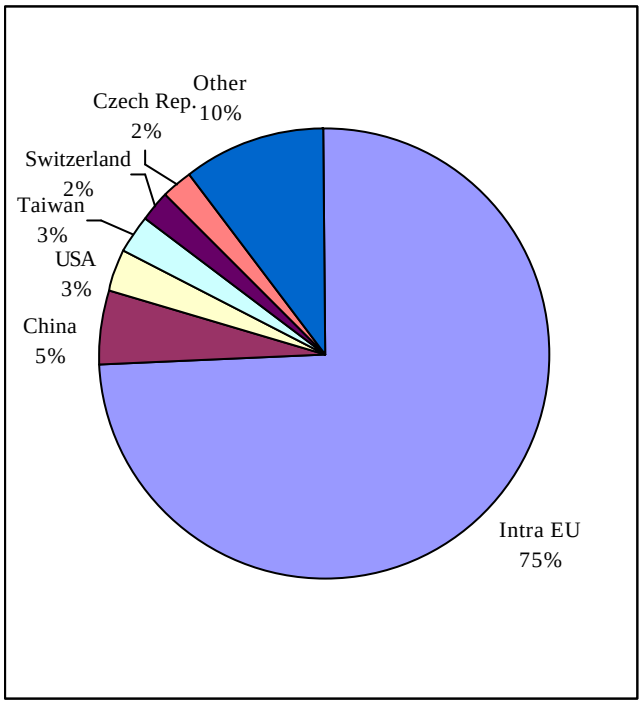
Source: Eurostat (2003)

Base metal mountings, fittings etc.
In 2001 € 4,331 million of *base metal mountings, fittings etc.* were imported into the EU. Between 1999 and 2001, EU imports increased in value (from € 3,707 million to € 4,331million) and in volume (from 758 thousand tonnes to 906 thousand tonnes). EU imports of *base metal mountings, fittings etc.* made up 38 percent of total EU imports of fasteners and builder's hardware. In 2001, 25 percent of EU imports of *base metal mountings, fittings etc.* was imported from extra EU countries, including 9 percent (€ 401 million) from developing countries.

As shown in Figure 5.8, in 2001 the lion's share (75 percent) of EU imports of this product group was imported from other EU countries. The major sources outside the EU of these imports were China (€ 229 million), the USA (€ 138 million) and Taiwan (€ 123 million). EU imports of this product group from developing countries is the second largest among the fasteners and builder's hardware (a 9.2 percent share) and has also demonstrated a high growth rate over the period 1999 to 2001. Whereas total imports of base metal mountings, fittings, etc. increased by only 17 per cent, imports from developing countries rose by 70 per cent.

In 2001, the major sources of EU imports from developing countries were, apart from China, India (€ 68 million), Slovenia (€ 45 million), Turkey (€ 10 million) and Thailand (€ 8 million). Other developing countries that play a role in EU imports of this product group include South Africa and Mexico.

Figure 5.8 Shares of sources of EU imports of base metal mountings, fittings etc., in 2001, in percent of total value



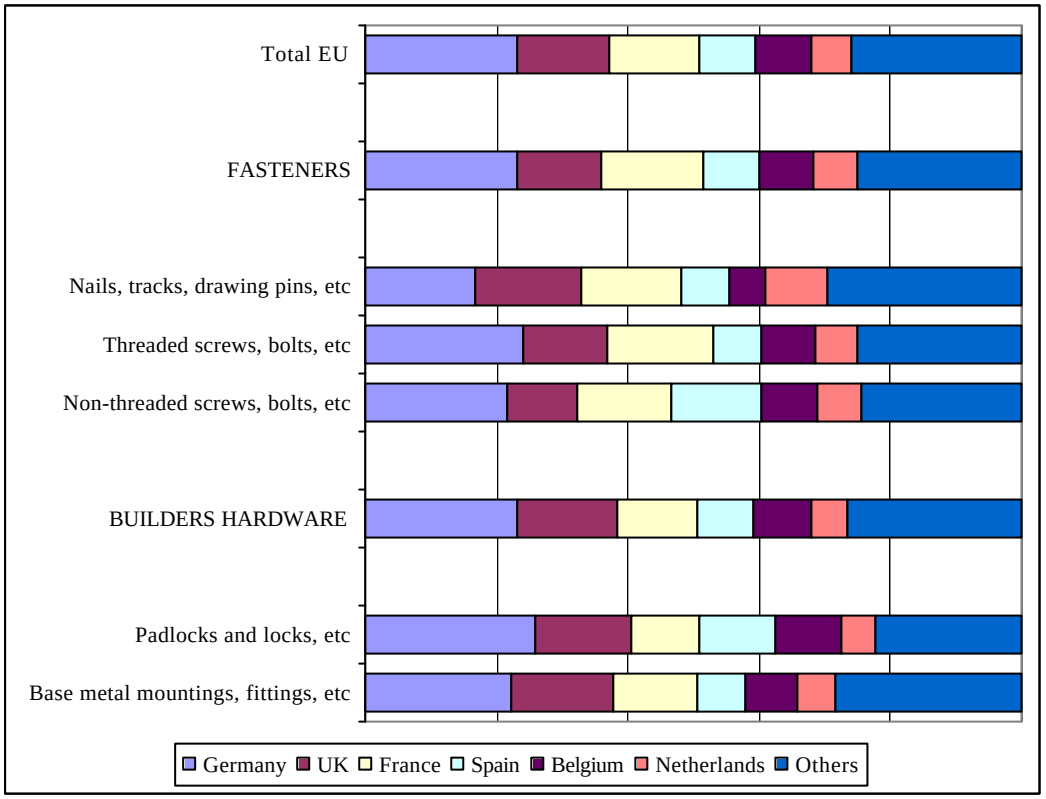
Source: Eurostat (2003)

Figure 5.9 shows the value shares of imports of the EU countries in 2001 for each product group. Note that the largest three importers of fasteners and builder's hardware, i.e. Germany, the United Kingdom and France, together import more than 50 percent of total EU imports of fasteners and builder's hardware. In each of the product groups these three countries together import around 50 percent of the total. Germany is the largest importer for each of the product groups, accounting for over 17 per cent of total imports in each case.

After Germany (€ 1,199 million, 23 percent), France is the second largest EU importer of fasteners (€ 812 million, 16 percent), followed by the United Kingdom (€ 664 million, 13 percent). The United Kingdom imports more *nails, tacks, drawing pins etc.* (€ 52 million) than France (€ 50 million), but France imports more *threaded screws, bolts etc*. (€ 618 million versus € 507 million) and *non-threaded screws, bolts etc.* (€ 144 million versus € 105 million) than the United Kingdom. Spain and Belgium both account for respectively 9 and 8 percent of total EU imports of fasteners (€ 445 million and € 431 million respectively).

After Germany (€ 1,413 million, 23 percent), the United Kingdom is the second largest importer of builder's hardware (€ 931 million, 15 percent). The third largest importer is France (€ 737 million, 12 percent), followed by Belgium (€ 527 million, 10 percent).

Figure 5.9 Shares of major EU importers of fasteners and builder's hardware by product group, 2001, in percent of total value



Source: Eurostat (2003)

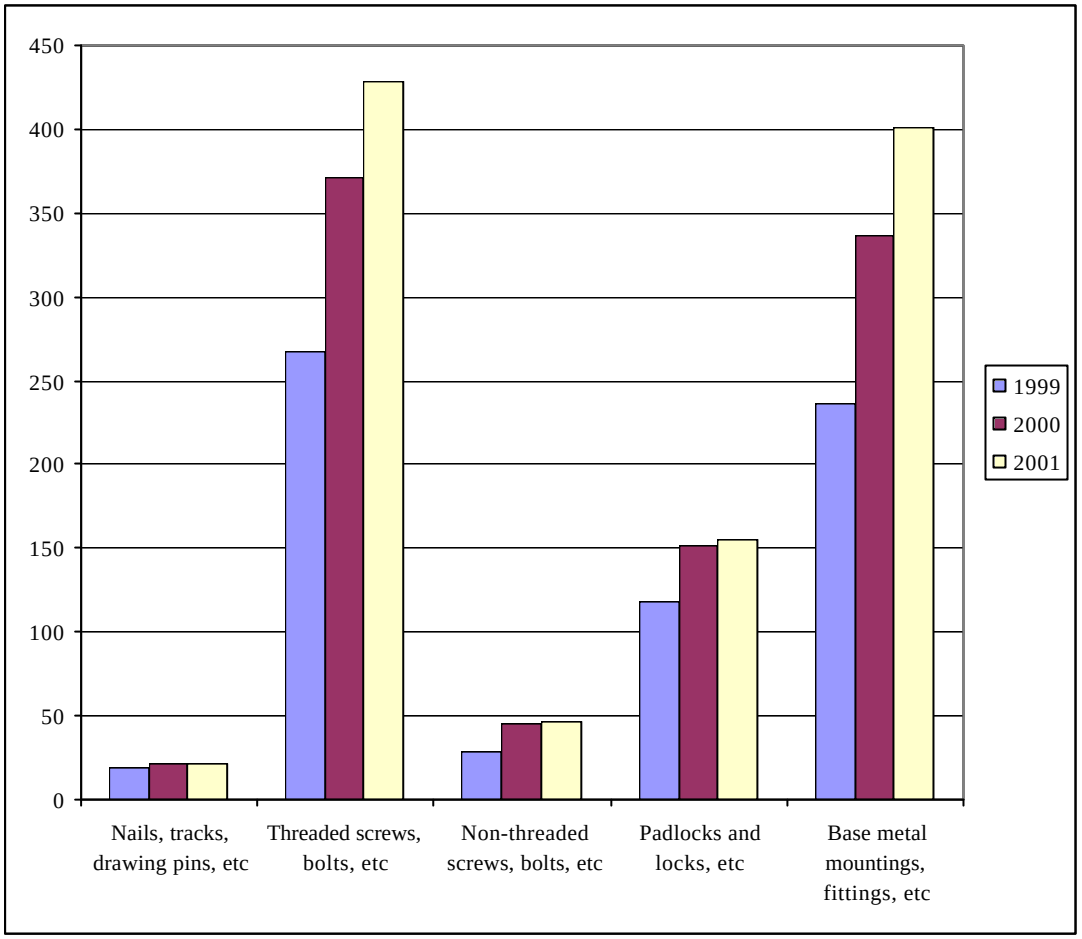
5.3. The role of developing countries

The value of imports of *fasteners* from developing countries increased from € 315 million in 1999 to € 496 million in 2001. Imports of *builder's hardware* from developing countries also increased: from € 354 million in 1999 to € 557 million in 2001. In volume terms, total imports of *fasteners and builder's hardware* substantially increased from 378 thousand tonnes to 511 thousand tonnes. Overall, imports from developing countries of all fasteners and builder's hardware discussed in this report increased by almost 38 per cent in 2000 and by another 19 per cent in 2001. This is a remarkable fact, especially when considering that overall imports by EU countries remained fairly flat in 2001. Consequently, the share of developing countries in supplying EU imports increased from 6.9 percent in 1999 to 9.3 percent in 2001.

Figure 5.10 shows the value of EU imports from developing countries per product group for the years 1999 to 2001. With € 428 million, EU imports of *threaded screws, bolts etc.* formed the largest product group supplied by developing countries, closely followed by *Base metal mountings, fittings etc.* (€ 401 million). *Padlocks and locks of base metal* were also imported in significant amounts from developing countries (€ 156 million in 2001). Minor amounts were imported from developing countries of the product groups *non-threaded screws, bolts etc* and *nails, tacks, drawing pins etc.* (in 2001, € 46 million and € 21million respectively).

Furthermore, it can be observed that EU imports from developing countries of all product groups increased (or at least remained stable) during the period 1999 to 2001. The rate of growth varies significantly across the product groups. While EU imports from developing countries of *nails, tacks, drawing pins etc.* showed a relatively small increase of 12 percent between 1999 and 2001, imports of *threaded* and *non-threaded screws, bolts etc* both increased with 60 percent. Imports of *Base metal mountings, fittings, etc* even increased by 70 percent.

Figure 5.10 EU imports from developing countries per product group, 1999 – 2001
EUR million

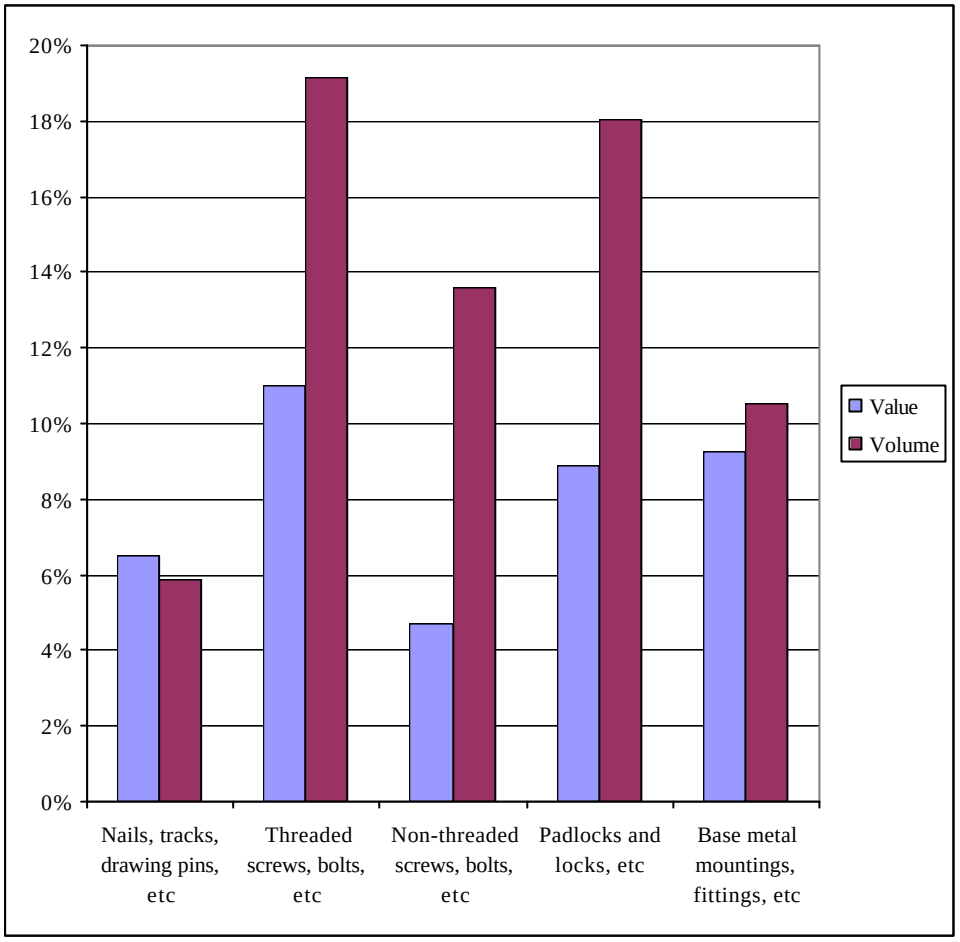


Source: Eurostat (2003)

In Figure 5.11, the relative shares of EU imports from developing countries are presented for each product group. Note that in all but one case, the value share is far lower than the volume share, reflecting the low-price segment in which developing country exporters are generally operating.

Furthermore, it can be observed that developing countries account for varying shares of total EU imports. In volume terms, developing countries show least market penetration for *nails, tacks, drawing pins etc*. with a share of 6 percent, while highest market penetration can be observed for *threaded screws, bolts etc.* with a share 19 per cent. In value terms, the most significant group is *threaded screws, bolts etc.* with a share of 11 per cent, while *non-threaded screws, bolts etc* constitutes the least significant group with less than 5 per cent.

Figure 5.11 Shares of developing countries in EU imports, 2001 in value and volume terms



Source: Eurostat (2003)

The main source of EU imports from developing countries is China, which accounts for € 569 million, or 54 percent, of all *fasteners* and *builder's hardware* imports in 2001. In 1999, this percentage was 48 percent. Table 5.3 shows the major developing country suppliers.

Table 5.3 Top ten of developing countries supplying fasteners and builder's hardware to the EU in 2001, EUR million / 1000 tonnes

	Value	Volume
China	569	315
India	102	45
Slovenia	68	24
Malaysia	57	48
Turkey	40	19
South Korea	40	13
Thailand	39	23
Indonesia	27	11
Philippines	20	5
South Africa	14	6

Source: Eurostat (2003)

Table 5.4 shows the most important EU importing countries and the most important supplying developing countries for each of the product groups. Germany can be seen to be the largest European

importing country in every product group. France and the UK are ranked second an third (with the exception of product group *padlocks and locks etc.*, where France ranks fourth. One of the three countries the Netherlands, Belgium or Spain tends to be the fourth important importer.

For each product group, China is the largest source of EU imports from developing countries. For most product groups, South Korea, South Africa, Malaysia, Turkey and India also appear as one of the largest developing country suppliers.

Table 5.4 Main EU importers and supplying developing countries of fasteners and builder's hardware by product group, 2001

Product group	EU importing country	Sources of imports, main developing countries
Nails, tracks, drawing pins, etc	Germany, United Kingdom, France, Netherlands	China, South Korea, Turkey, South Africa, Colombia, India, Slovenia, Malaysia
Threaded screws, bolts, etc	Germany, France, United Kingdom, Belgium	China, Malaysia, Thailand, India, Indonesia, Turkey, Philippines, South Korea
Non-threaded screws, bolts, etc	Germany, France, Spain, United Kingdom	China, Slovenia, India, Turkey, South Africa, Thailand, Croatia, Malaysia
Padlocks and locks, etc	Germany, United Kingdom, Spain, France	China, South Korea, Albania, Malaysia, Turkey, Bosnia-Herz., Slovenia, Morocco
Base metal mountings, fittings, etc	Germany, United Kingdom, France, Belgium	China, India, Slovenia, Turkey, Thailand, South Africa, Mexico, South Korea

Source: Eurostat (2003)

6. EXPORTS

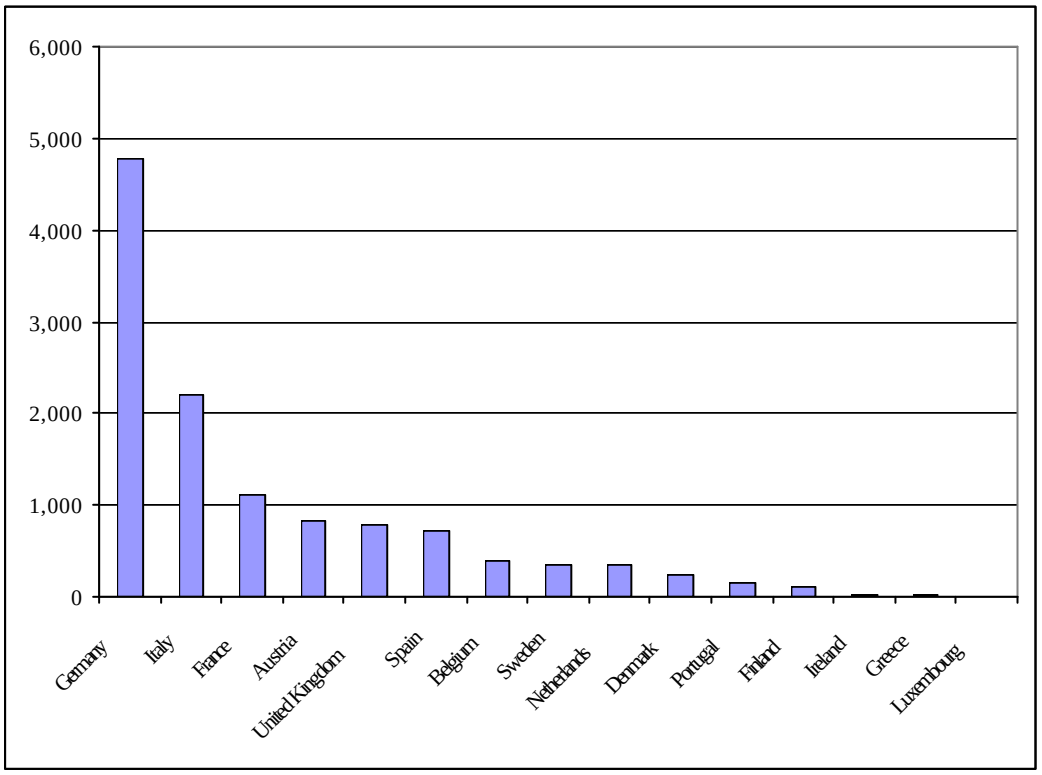
Together the 15 EU member states exported 2.5 million tonnes of *fasteners* and *builder's hardware* in 2001. This was worth a total of € 12.1 billion. Compared to 1999, exports rose by 14 percent in value. Over the same period, the volume increased by 4 percent.

Almost three quarter of the value of EU exports of *fasteners and builder's hardware* did not leave the EU but was traded between member states. Another 10 percent was exported to developing countries, while the remaining 25 percent was exported to other non-EU countries. In terms of volume, two third was traded between member states, while only 8 percent of the EU export went to developing countries.

In 2001, Germany was the leading exporter of *fasteners and builder's hardware* in the EU, accounting for almost 40 percent of the value (€ 4.7 billion) of EU exports and 30 percent of its volume (i.e. 755 thousand tonnes). Italy (€ 2.2 billion), France (€ 1.1 billion), Austria (€ 0.84 billion) and The United Kingdom (€ 0.78 billion) are the other main exporters. The Netherlands exported 158 thousand tonnes with a value of € 342 million in 2001.

With the exception of the United Kingdom and Luxembourg, the value of exports of fasteners and builder's hardware increased between 1999 and 2001, while the volume of the exports decreased for more countries.

Figure 6.1 EU Exports of fasteners and builder's hardware per country, 2001
EUR million



Source: Eurostat (2003)

Total EU exports consisted for 36 percent (€ 4.4 billion) of fasteners, and for 64 percent (€ 7.7 billion) of builder's hardware. In volume terms, the export of *fasteners* was larger (52 percent) than the volume of exports of *builder's hardware* (48 percent).

The largest EU exports in 2001 were those of *base metal mountings, fittings etc.* (€ 5.8 billion). Second largest were EU exports of *threaded screws, bolts etc.* (€ 3.3 billion), followed by *padlocks and locks of base metal etc.* (€ 1.8 billion), *non-threaded screws, nuts etc.* (€ 779 million) and *nails, tacks, drawing pins etc.* (€ 266 million).

Germany
Germany was the largest exporter of *fasteners and builder's hardware* in 2001. Germany exported € 4.77 billion (40 percent of total EU exports of fasteners and builder's hardware). The majority, i.e. 56 percent, was exported to other EU countries, 44 percent was exported to non-EU countries, of which 22 percent to developing countries. In 2001, the most important product groups for Germany were *base metal mountings, fittings etc.* of which Germany exported € 2.4 billion, *threaded screws, bolts etc.* of which € 1.3 billion was exported, and *padlocks and locks made of base metal etc.* of which € 732 million was exported.

Italy
Italy is the second largest EU exporter of *fasteners and builder's hardware,* exporting € 2.2 billion worth (18 percent of EU exports of fasteners and builder's hardware) in 2001. The largest share of this, i.e. 65 percent, was directed to other EU countries. Of the 35 percent of exports towards non-EU countries, 41 percent were directed to developing countries.

The most important product group for Italy was *base metal mountings, fittings etc.* of which Italy exported € 1.2 billion. Furthermore, Italy exported € 646 million of *threaded screws, bolts etc.* and € 277 million of *padlocks and locks made of base metal etc.*

France
With € 1.1 billion of exports of *fasteners and builder's hardware*, France was the third largest exporter in 2001 (9 percent of EU exports of fasteners and builder's hardware). Exports increased by 7 percent since 1999. French exports of *fasteners and builder's hardware* were directed for 74 percent to EU countries and for 13 percent to developing countries.

The main export product group of France was *threaded screws, bolts etc.* of which France exported € 391 million. Furthermore, France exported € 317 million of *base metal mountings, fittings etc*. and for € 289 million *padlocks and locks made of base metal etc*.

Austria
Austria was the EU's fourth largest exporter of *fasteners and builder's hardware.* It exported € 836 million worth (7 percent of EU exports of fasteners and builder's hardware), of which 55 percent was exported to other EU countries. Exports to developing countries amounted to 7 percent of Austrian exports.

In 2001, the main export product group of Austria was *base metal mountings, fittings etc.* of which Austria exported € 614 million. Furthermore, Austria exported € 114 million of *threaded screws, bolts etc*.

United Kingdom
The United Kingdom was the fifth largest exporter of the EU countries, exporting € 778 million worth of *fasteners and builder's hardware* (6 percent of EU exports of fasteners and builder's hardware). The majority, i.e. 71 percent, was exported to other EU countries and 7 percent to developing countries.

The main export product group of the United Kingdom was *base metal mountings, fittings etc.* of which the UK exported € 329 million. Furthermore, the UK exported € 236 million of *threaded screws, bolts etc.* and € 89 million of *padlocks and locks made of base metal etc.*

The Netherlands
The Netherlands was the ninth largest exporter of *fasteners and builder's hardware* in 2001, with a total export value of € 341 million (3 percent of EU exports of fasteners and builder's hardware). These exports were directed for 80 percent towards other EU countries, and for 6 percent to developing countries.

The main export product group of The Netherlands in 2001 was that of *threaded screws, bolts etc.* of which the Netherlands exported € 152 million. Furthermore € 119 million of *base metal mountings, fittings etc.* was exported from the Netherlands.

Recipients of EU exports
The largest destination countries of EU exports in 2001 were Germany (€ 1.5 billion), France (€ 1.3 billion) and the United Kingdom (€ 0.9 billion). The largest recipient of EU exports outside the EU, which is the only non-EU country in the top-10 recipient countries, is the USA (€ 0.7 billion), ranking in fifth place. Other main non-EU recipients are Czech Republic (€ 386 million) and Poland (€ 375 million) ranking 11th and 12th. The largest destination countries of EU exports among developing countries in 2001 were Mexico (€ 133 million), China (€ 117 million), Brazil (€ 98 million), South Africa (€ 94 million) and Turkey (€ 93 million).

7. TRADE STRUCTURE

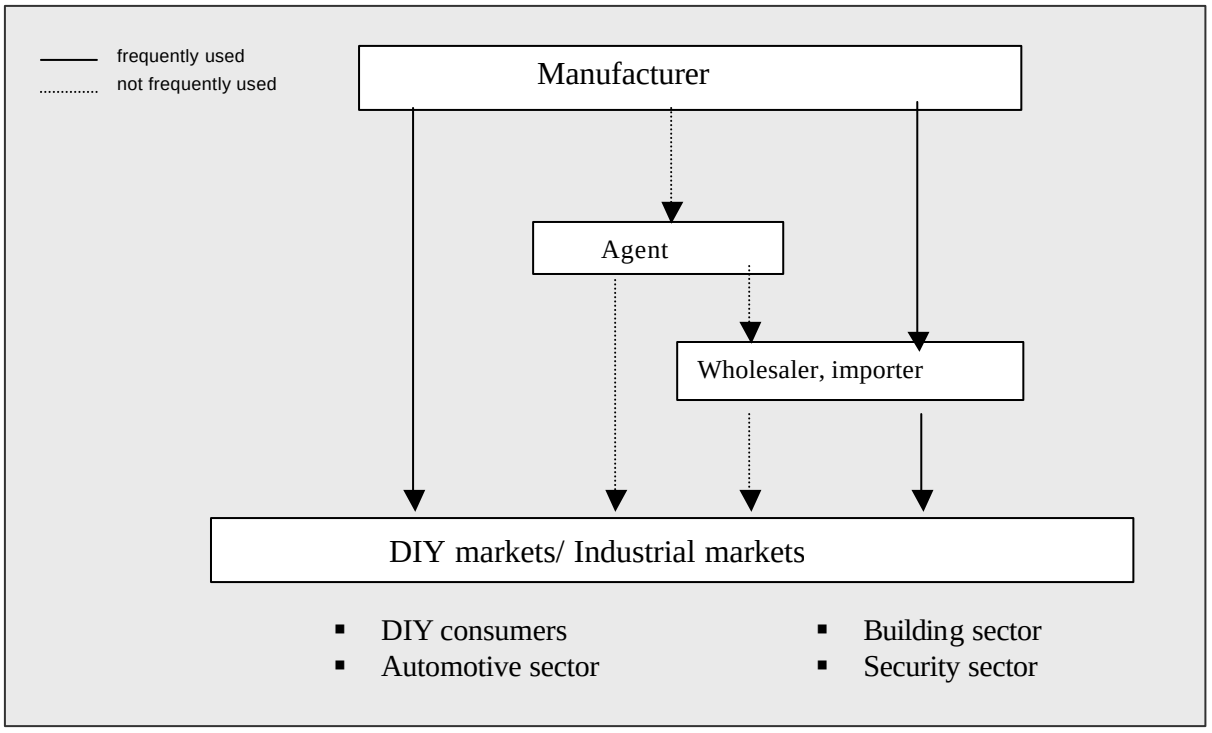
7.1. EU trade channels

Although wholesale trade has always had a dominant position in the Netherlands, the importance of this distribution channel for fasteners and builder's hardware is reducing. Traditionally large retailers like DIY chains bought exclusively from wholesaler or importer. This changed dramatically with the increasing scale of the DIY chains. These large chains, some of them with over 300 stores in the Netherlands and abroad, tend to import large quantities of fasteners and builder's hardware themselves, thereby gaining the margin that is otherwise made by the wholesaler or importer. These developments have also taken place in most other Northern European countries, but less so in the Southern European countries.

Figure 7.1 gives a schematic overview of the trade structure of the fasteners and builder's hardware sector in the EU. The figure illustrates two main trade channels that are used by manufacturers of fasteners and builder's hardware: the wholesaler and importer or, alternatively, the direct delivery to the DIY end-user. The agent is of diminishing importance as a distribution channel for fasteners and builder's hardware, perhaps handling 10-15 percent of the trade, while the wholesaler and the importer together have a share of around 55 percent. The remaining 30-35 percent is imported directly by the DIY chains. Note that industrial end-users do not import directly from the foreign company but in all cases use agents, wholesalers or importers as a distribution channel.

Note that industrial end-users do not generally import directly from the foreign company but instead use agents, wholesalers or importers as a distribution channel. As mentioned in chapter 3, particularly the manufacturing industries of transportation equipment are big users of fasteners in the professional market segment. In individual cases it is possible that e.g. a car manufacturer in Germany may directly order all its fasteners from a manufacturer in South America. In that case, however, the German company will carefully select the supplier, and may even provide the latter with all required equipment and may also provide training. For outsiders, it is difficult if not impossible to target such a market directly.

Figure 7.1 Typical distribution structure for fasteners and builder's hardware in the EU markets



Direct delivery to DIY chains
In this case, the manufacturer offers his products directly to the end-user market. This is the main practice in the DIY market. Over the last ten years these large DIY retailers developed sufficient scale to start importing themselves and to buy directly from the manufacturer or exporter. The large DIY chains will buy products from wholesalers or importers only in case the volumes are too small for them to import directly or if they want to try out a new product. But once a product is selling well and reaches a certain sales-level they will take care of the buying and importing themselves. This trend is emphasised by the increasing use of the Internet; increasingly smaller DIY chains can now import themselves from producers.

Indirectly through importers and wholesalers
Traditionally all fasteners and builder's hardware was imported by wholesalers and importers. Contrary to the large chains in the DIY sector, this is still the case for the professional market for fasteners and builder's hardware. The professional end-user industries include the automotive and coachwork sector, the building and construction sector, and the security sector and they are supplied by wholesalers with assortments of products that the relevant industries are specialised in. These professional sectors apply high product-standards and require specific certification, see section 3.2. The value added provided by the wholesaler or importer in the transaction chain is elaborate quality control and accreditation. Wholesalers and importers present their product assortment in catalogues and offer them on relevant trade fairs.

Note that it can be very costly to apply for any form of quality certification. Generally, the manufacturer will have to provide samples of your products that will be subjected to elaborate testing, which may take at least 3 months. Then a mission of around 3 people will visit your company for further inspections. Of course the manufacturer has to pay for the salary of these people, plus their flight tickets, accommodation, and expenses. If at any stage deficiencies are identified, no licence will be issued. If a license is granted, inspectors will return once a year at unexpected dates to check for continued compliance.

In order to protect their interest in the DIY sector, wholesalers have also created their own franchising chains. The retail outlets in these chains have unified names, logos and promotional materials and they organise special 'sales' with low prices for selected products. However, these chains have not developed into large numbers.

In conclusion, the selected target market that an exporter aims at is an important factor that determines the trade channel to be used. The professional market requires the indirect distribution channel through wholesalers and importers, while the DIY market can best be entered directly through the main DIY chains. The professional markets require higher standards and trade marks are more important, while design and research play a more important role, for example, for the use of new materials and the development of safer locks. The selling of these products often requires more investment, while selling and service requires more local presence and more product knowledge. In contrast, the DIY market requires lower levels of knowledge, and allows larger quantities to be sold while lower product standards apply for use of fasteners and builder's hardware by DIY consumers.

As mentioned above, within the DIY segment of the market for fasteners and builder's hardware, the importance of the direct and indirect distribution channel differs between the EU countries. In the northern European countries, like the UK, Belgium, the Netherlands, and Germany, the large DIY chains do their own buying, while the smaller stores buy their fasteners and builder's hardware from wholesalers and importers. On the other hand, in the southern European countries like Spain and Italy more than 80 percent of fasteners and builder's hardware is distributed through wholesalers, who are very fragmented and have only two or three branches in general. France takes a middle position, where sales are more evenly spread between DIY chains and number of wholesalers and importers.

Despite some remaining national differences, there is an irrevocable trend towards the emergence of pan-European and global operators in the DIY market. The leading example of this is UK DIY and

electrical retailer group Kingfisher plc, with its Castorama involvement in France and links with German company, Hornbach. Kingfisher is looking beyond Europe, however, and has operations in many other countries including, for example, China and Taiwan. There are many other European companies with international interests, including for example French groups Leroy Merlin and Mr. Bricolage, and in Germany OBI, Praktiker, Bauhaus and Hornbach.

However, the overall view is that the European DIY retailing market remains very fragmented, with no company commanding more than an estimated 8% share of the market. This structure is in marked contrast to other building products distribution markets, such as Builders Merchants and Electrical Wholesalers, where the leading EU countries are dominated by major Pan-European operations. In Table 7.1 below, the 30 largest DIY trade groups and chains of the EU are listed with net DIY sales, the number of DIY stores, and combined retail area over the year 2001.

7.2. Distribution channels for developing country exporters

For exporters of fasteners and builder's hardware in developing countries, the most important trade channel for the northern European countries like the UK, Germany, the Netherlands, and Belgium is direct distribution through the buying centres of the DIY chains. In contrast, the indirect channel through wholesalers and importers is relatively more important in the southern European countries like Spain and Italy. France occupies a middle ground and can be tackled through both channels. Note, however, that even in the southern European countries the DIY chains are gaining market share, and that these channels therefore may offer the best growth prospects.

A chain of DIY stores consists of a certain number of stores which are all branches of one company and who have the same name, logo, decorations, systems and house style. Sometimes these branches are extended with shops that join the chain under franchise. These stores also use the name, logo, and so on of the mother-company. Franchising has many advantages, for example the mother-company takes care of the advertising, promotion materials and buying and logistics of the DIY products. The chains are very interesting for (potential) exporters because all stores belonging to the chain are obliged to sell the country-wise centrally advertised and promoted products.

In case a DIY chain buys fasteners and builder's hardware through a wholesaler or importer, they must be able to provide the name(s) and address(es) of the wholesaler(s) or importer(s) through which they buy. In general, both the DIY chain and the wholesaler or importer might try to conclude an exclusivity contract with potential exporters. It is advised to be careful with this and, preferably, to start a relation with a gentleman's agreement for a limited time period. After about a year, this gentleman's agreement can then be changed into an exclusivity contract once the wholesaler or importer has shown commitment and demonstrated that he actively promotes the products offered and has ordered satisfying volumes of products.

Activities of the retail chains in promoting your products may, for example, include the presentation of pictures of the products in their catalogues, brochures, leaflets, advertisements directed at the consumers as well as prominently presenting the products in their assortment and to put them on display in their stores. Wholesalers and importers should also include the products offered by the exporter in their catalogue and offer them on relevant trade fairs before considering them for an exclusivity agreement.

A trade fair is a good way to make contact with companies from all over the world who can be interested in new suppliers. Please refer to Part B of this report for further information and appendix 3.4 for details on trade fairs and trade fair organisers.

Table 7.1 The 30 biggest DIY companies in Europe in 2001

DIY trading group	DIY chains (if different from trading group)	Net sales in € million	Retail area in 1.000 m²	Number of DIY stores
Castorama/Kingfisher Europe	Castorama, B&Q, Nomi	8 468	3 391	530
OBI Europe		3 834	2 762	456
Praktiker Europe	Praktiker, Extra, Top-Bau	2 676	1 957	387
Leroy Merlin Europe	AKI, Bricocenter, Bricoman, Leroy-Merlin, OBI	2 580	1 258	227
Vendex Europa	Brico, Briko Dépot, Formido, Praxis	2 052	843	301
Homebase (GB, IRL)		1 990	1 068	300
Bauhaus Europe		1 897	1 131	173
Focus Wickes (GB)	Focus, Wickes	1 802	1 080	428
Intergamma Europa	Gamma, Karwei (incl. Bricorama B, NL)	1 509	626	266
Bricomarché Europe		1 448	766	503
Hornbach Europe		1 440	902	
Hagebau Europe		1 389	1 252	372
Toom (D)		1 331	1 199	245
Mr. Bricolage Europe		1 176	777	377
Wilkinson (GB)		1 140	270	198
Kesko Europe		1 085		162
Norgros (N)		949	220	
Marktkauf (D)	Dixi, Marktkauf	918	921	143
Domaxel Europe	Club Partenaire, Dom Pro, Weldom	880	584	502
Baumax Europe		714	612	
Globus Europe		665	377	
Max Bahr (D)		661	439	
Interpares (S)		625		
Ditas/Dendek	Byggekram, Råd & Dåd, Dendek	608	267	197
Järnia (S)		565		
ZEUS Europe		559	400	229
Hellweg Europe		528	523	
Interpares-Mobau Europe		485	400	227
BayWa Europe		483	405	236
Groupe Tabur Europe	B 3, Bricogite, Catena, Super Catena	481	259	259

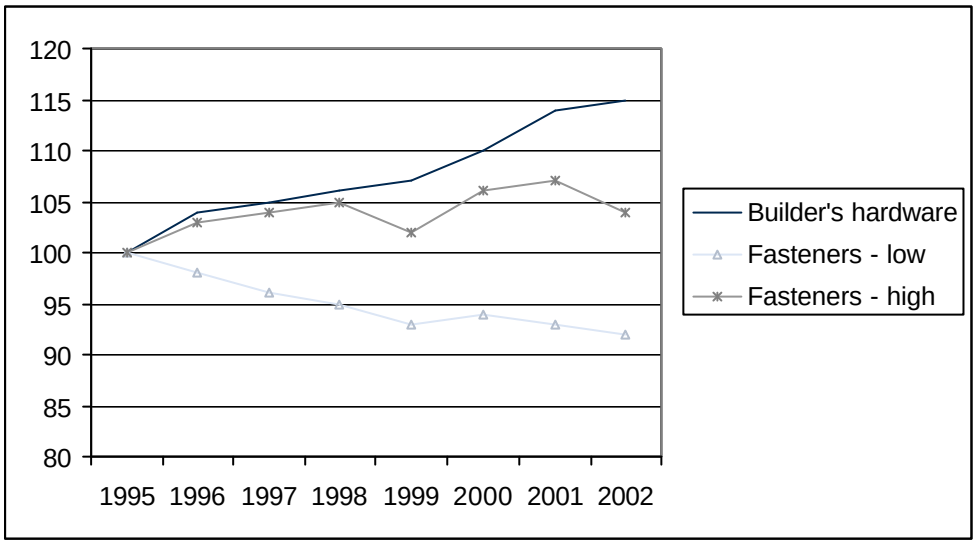
Source: European DIY-Retailers, Dähne Verlag

8. PRICES

8.1. Price Developments

It is difficult to give an accurate picture on price developments. Whereas a general trend can be observed with respect to builder's hardware, price developments for fasteners depend very much on the precise product. Figure 8.1 shows price indices for builder's hardware and fasteners. As can be observed, whereas builder's hardware has gradually increased in price, prices of some fasteners have in fact fallen or increased only moderately. The two indices fasteners – low and high - portray a range of price developments that covers a broad array of fasteners consumed in the EU. Generally speaking, the more standardised the product, the lower price increase.

Figure 8.1 Price Developments



Source: Eurostat (2003)

8.2. Sources of price information

To get up-to-date price information one has to turn to the actual importers of the different products. Appendix 3.2 presents some sources of price information, including some Internet mail order sites. These sites are a good source for obtaining an idea of recent retail prices of fasteners and builder's hardware. Very good sites are, for example, www.diy.com and www.screwfix.com, which give pictures of the products, full descriptions, and the retail prices. For example, the following quotes can be obtained (converted from UKP to €):

	Pack Size	Price (excl. VAT) in €
3.2*8 Rivet Standard Dome Head Aluminium/Steel	1000 5000	8.41 33.43
3.2*10 Rivet Standard Dome Head Aluminium/Steel	1000 5000	8.60 34.10
4.0*8 Rivet Standard Dome Head Aluminium/Steel	500 5000	4.39 34.81
50 X 2.65 Galvanised Round Wire Nails	1 kg 5 kg	2.17 10.54
65 X 3.35 Galvanised Round Wire Nails	1 kg 5 kg	2.04 9.91
Extra Large Head Clout 30 x 3mm Galvanised	1 kg 5 kg	2.56 11.51

9. EU MARKET ACCESS REQUIREMENTS

9.1. Non tariff trade barriers

This section summarises non-tariff barriers that exist for fasteners and builder's hardware in doing business with EU member states. Non-tariff barriers include legislation, standards for fasteners and builder's hardware, trade related environmental concerns and specific EU standards on packaging, marking and labelling.

9.1.1 Quality and grading standards

Quality

Standardisation of fasteners and builder's hardware of all sorts, and elements of fasteners such as threads and driving features, is one of the great achievements of technical co-operation between countries and industries. The International Organisation for Standardisation (ISO) developed the ISO 9000 series for quality management and assurance of the production process. The ISO 9000 standards represent an international consensus on the essential features of a quality system. Producers who have obtained an ISO 9000 series certificate possess an important asset. It is a major selling point when doing business in the competitive EU market. Quality, health, safety and environmental management programmes are usually strongly interwoven with the overall ISO management plan. Importers in the EU highly appreciate this production quality guarantee. ISO published the new, thoroughly reviewed version of the ISO 9000 quality standards on December 15, 2000. All companies certified according to the 'old' ISO 9000:1994 series should have adjusted their quality management to the new requirements before December 15, 2003.

These latest revisions are based on eight quality management principles, which reflect best management practices:

- Customer focused organisation
- Leadership
- Involvement of people
- Process approach
- System approach to management
- Continual improvement
- Factual approach to decision making

The revision of the ISO quality management standards includes a significant change to the structure of ISO 9001 and ISO 9004, which are repositioned in three main sections:

- Management responsibility
- Resource management
- Product realization

Moreover, a standardised screw-thread system has paved many trade barriers and ensures that everything fits and fastens properly. The ISO standards refer to terminology, general reference standards, technical drawings for screw threads and threaded parts, variations and tolerances, general requirements and mechanical properties. Please refer to ISO's Internet site www.iso.ch for up-to-date information and standards handbooks and to CBI's publication "Exporting to the European Union" for an overview of all ISO 9000 standards.

Note that, regarding the applied standards, a distinction should be made between the markets for private and professional customers of fasteners and builder's hardware. For private customers the price often is the most important aspect of the buying decision. The quality requirements of DIY consumers are usually modest as they purchase fasteners and builder's hardware for simple uses around the house. In contrast, professional customers are more than private consumers interested in ISO certification or standards that are held by the company based on its own professional standards, which

may differ for example for production of cars, air-planes or house building. Moreover, these businesses will be held responsible by their clients for the end-result, or any failure thereof.

The majority of developing countries, however, do not have a fully developed infrastructure in the areas of standards and related matters such as technical regulations, conformity assessment, quality and metrology. Consequently, for companies from developing countries, the process of ISO certification will need to be implemented by certified foreign experts and is going to be long and costly. This is not feasible for many companies from developing countries, even when high quality products are indeed produced. Such companies, therefore, would be better off directing their marketing and sales activities towards the private consumer market, which do not require ISO certification. The private consumer makes up about two thirds of the market for fasteners and builder's hardware, mostly through the DIY chains.

Standards

Technical standards for fasteners and builder's hardware in the past were developed nationally: the Netherlands had NEN norms, Germany DIN norms and the UK had BSI norms. Presently, Europe aims to harmonise the various national regulations. In fact, the national standards are gradually being replaced by the European Norms (EN). Please refer to www.cenorm.be for more information on national and European norms. Note that these norms for fasteners and builder's hardware are not compulsory but nevertheless essential to adhere to since these norms refer, for example, to screw threads, sizes of bolts and nuts, names, material codes and their respective characteristics, such as strength, temperature sensitivity. Concerning builder's hardware, standards exist for instance on measurements, on techniques, installation instructions and on safety requirements. Note that in Europe, including the United Kingdom, all measurements are exclusively according to the metric system. There is no market for products based on imperial measurements in the EU. Figure 9.1 lists the most common type of head styles for fasteners. Table 9.1 furthermore presents some of the main standards for fasteners, specifying mechanical properties, sizes and profiles of screw threads, fasteners of carbon steel and alloy steel and corrosion-resistant stainless steel for bolts, screws, studs and nuts.

Figure 9.1 Common Head Styles for Fasteners

Table 9.1 Selected European standards for fasteners

Standard	Name	Description
NEN-ISO 68-1:1999	ISO general purpose screw threads; Basic profile; Part 1: Metric screw threads	Specifies the basic profile for ISO general-purpose metric screw threads (M).
ISO 68-2:1998	ISO general purpose screw threads; Basic profile; Part 2: Inch screw threads	Specifies the basic profile for ISO inch screw threads.
NEN-ISO 262:1999	ISO general purpose metric screw threads; Selected sizes for screws, bolts and nuts	Specifies selected sizes for screws, bolts and nuts in the diameter range from 1 mm to 64 mm of ISO general-purpose metric screw threads (M) having basic profile according to ISO 68-1.
NEN-EN 493:1993	Fasteners; Surface discontinuities; Nuts	This European Standard establishes limits for various types of surface discontinuities on nuts with - thread diameters from 5 up to and including 39 mm; - product grade A and B - all property classes according to EN 20898-2 and ISO 898-6, ISO 2320 unless otherwise specified in product standards or by the purchaser. In case of the permissible limits for surface discontinuities indicated in clause 3, properties according to EN 20898-2, ISO 898-6 and ISO 2320 as appropriate must be satisfied. In addition, the dimensional requirements of the appropriate product standard must be satisfied
NEN-EN-ISO 898-1:1999	Mechanical properties of fasteners made of carbon steel and alloy steel; Part 1: Bolts, screws and studs	Specifies the mechanical properties of bolts, screws and studs made of carbon steel and alloy steel when tested at an ambient temperature range of 15 °C to 25 °C. Products conforming to the requirements of this standard are evaluated only at the ambient temperature range and may not retain the specified mechanical and physical properties at higher and lower temperatures
NEN-ISO 898-2:1994	Mechanical properties of fasteners; Part 2: Nuts with specified proof load values; Coarse thread	This standard specifies the mechanical properties of nuts with specified proof load values when tested at room temperature (see ISO 1). Properties will vary at higher and lower temperature. It applies to nuts - with nominal thread diameters up to and including 39 mm; - of triangular ISO thread and with diameters and pitches according to ISO 68 and ISO 262 (coarse thread); - with diameter/pitch combinations according to ISO 261 (coarse thread); - with thread tolerances 6H according to ISO 965-1 and ISO 695-2; - with specific mechanical requirements; - with widths across flats as specified in ISO 272 or equivalent; - with nominal heights greater than or equal to 0,5 - made of carbon steel or low alloy steel. It does not apply to nuts requiring special properties such as - locking abilities (see ISO 2320) - weld ability; - corrosion resistance (see ISO 3506) - ability to withstand temperatures above +300°C or below -50°C.
NEN-EN-ISO 898-5:1998	Mechanical properties of fasteners made of carbon steel and alloy steel; Part 5: Set screws and similar threaded fasteners not under tensile stresses	Specifies the mechanical properties of setscrews and similar fasteners not under tensile stresses with nominal thread diameters from 1,6 up to and including 39 mm, which are made of carbon steel or alloy steel. The mechanical and physical properties apply when tested at an ambient temperature of 15 °C to 25 °C and will vary at higher or lower temperatures.
NEN-EN-ISO 898-6:1995	Mechanical properties of fasteners; Part 6: Nuts	This part of ISO 898 specifies the mechanical properties of nuts with specified proof load values: - with nominal

	with specified proof load values; Fine pitch thread	thread diameters, from 8 mm up and including 39 mm; - of triangular ISO thread and with diameters and pitchers according to ISO 68 and ISO 262 (fine pitch thread); - with thread tolerances 6H according to ISO 965-1 and 965-2; with specific mechanical requirements; - with widths across flats as specified in ISO 272 or equivalent; - with nominal heights greater than or equal to 0,5 - made of carbon or alloy steel
NEN-ISO 898-7:1995	Mechanical properties of fasteners; Part 7: Torsional test and minimum torques for bolts and screws with nominal diameters 1 mm to 10 mm	Applies to bolts and screws of property classes 8.8 to 12.9 in accordance with ISO 898-1 with thread less than M3 for which no breaking and proof loads are indicated in ISO 898-1; as well as to short bolts and screws with nominal diameters 3 mm to 10 mm which cannot be subjected to a tensile test. The minimum breaking torques are not valid for hexagon socket set screws.
NEN-EN-ISO 2320:1997	Prevailing torque type steel hexagon nuts; Mechanical and performance requirements	Specifies the requirements for nuts with thread sizes from M3 up to and including M39, with specific strength, with dimensions as specified in product standards, within the following temperature ranges: -50 to +300 C for all-metal non-plated nuts, -50 to +230 C for all-metal plated nuts, -50 to +120 C for non-metallic insert nuts. It does not apply to nuts requiring special properties, which may require special materials or coatings.
NEN-EN-ISO 3506-1:1997	Mechanical properties of corrosion-resistant stainless-steel fasteners; Part 1: Bolts, screws and studs	Specifies the mechanical properties of bolts, screws and studs made from austenitic, martensitic and ferritic grades of corrosion-resistant stainless steels when tested at an ambient temperature range of 15 °C to 25 °C. Properties will vary at higher or lower temperature. It applies to bolts, screws and studs - with nominal diameters up to and including 39 mm, - of triangular ISO metric threads with diameters and pitches according to ISO 68, ISO 261 and ISO 262, - of any shape. The aim of the standard is a classification into property classes of corrosion resistant stainless steel fasteners. Some materials can be used at temperatures down to -200 °C, some can be used at temperatures up to +800 °C in air. Information on the influence of temperature on mechanical properties is found in Annex F.
NEN-EN-ISO 3506-2:1997	Mechanical properties of corrosion-resistant stainless-steel fasteners; Part 2: Nuts	Specifies the mechanical properties of nuts made from austenitic, martensitic and ferritic grades of corrosion-resistant stainless steels when tested at an ambient temperature range of 15 °C to 25 °C. Properties will vary at higher and lower temperature. It applies to nuts: - with nominal thread diameters up to and including 39 mm; - of triangular ISO metric threads with diameters and pitches according to ISO 68 and ISO 262; - of any shape provided; - with width across flats as specified in ISO 272; - with nominal heights greater then or equal to 0,5 d.
NEN-EN-ISO 3506-3:1997	Mechanical properties of corrosion-resistant stainless-steel fasteners; Part 3: Set screws and similar fasteners not under tensile stress	Specifies the mechanical properties of setscrews and similar fasteners not under tensile stress made of austenitic stainless steel when tested over an ambient temperature range of 15 °C to 25 °C. Properties will vary at higher or lower temperatures.
NEN-EN-ISO 3506-4:2003	Mechanical properties of corrosion-resistant stainless-steel fasteners; Part 4: Tapping screws	Specifies the mechanical properties of tapping screws made from austenitic, martensitic and ferritic grades of corrosion-resistant stainless steels when tested at an ambient temperature range of 15 °C to 25 °C. Properties will vary at higher or lower temperatures. It applies to tapping screws with nominal thread diameters from ST2,2

		up to and including ST8 according to ISO 1478.
NEN-EN-ISO 042:1999	Fasteners; Electroplated coatings	Specifies dimensional requirements for electroplated fasteners of steel or copper alloy. It specifies coating thickness and gives recommendations for hydrogen embrittlement relief for fasteners with high tensile strength or hardness and surface-hardened fasteners. It primarily concerns the electroplating or threaded fasteners, but it may also be applied to other threaded parts. For the applicability to screws that cut or form their own mating threads, see clause 8. The specifications given in this standard may also be applied to non-threaded parts such as washers and pins.

The most important European norms on builder's hardware are presented in Table 9.2, specifying test methods, requirements for strength, security, durability, performance and corrosion resistance of door springs, door fittings, locks, hinges, window- and door bolts and hardware for windows and doors.

Table 9.2 Selected European standards for builder's hardware

Standard	Name	Description
NEN-EN 1154:1996/A1: 2003	Building hardware; Controlled door closing devices; Requirements and test methods	Specifies requirements for controlled door closing devices for swing doors, such devices being mounted on or in the frame, on or in the door, or in the floor. The scope is limited to manually operated door closing devices were the energy for closing is generated by the user upon opening the door, such that when the door is released, it returns to a closed position, in a controlled manner. Devices such as spring hinges, which do not exert a checking control during door closing, are outside the scope of this standard. Door closing devices (door closers) manufactured in accordance with this standard are recommended for use wherever there is a requirement for reliable closing control of a door. Door closers for use on fire/smoke doors need additional attributes in order to contribute actively to meeting the essential safety requirements in case of fire, either independently or as part of a complete door assembly. These additional requirements for door closers for use on a fire/smoke door assembly are specified in normative annex A. Door closers incorporating electrically powered hold-open mechanisms, for use on fire/smoke door assemblies, are covered by prEN 1155.
NEN-EN 1906:2002	Building hardware; Lever handles and knob furniture; Requirements and test methods	Specifies test methods and requirements for spindle and fastening elements, operating torques, permissible free play and safety, free angular movement and misalignment, durability, static strength and corrosion resistance for sprung and unsprung lever handles and knobs for doors on back plates or roses. This standard is applicable only to lever handles and knobs that operate a latch or a lock.
NEN-EN 12209:2001	Building hardware; Locks and latches; Mechanically operated locks, latches and locking plates; Requirements and test methods	Specifies requirements and test methods for strength, security, durability and function of mechanically operated locks and latches and their locking plates for use in doors, window doors and entrance doors in buildings.

NEN-EN 12209-1:1995	Building hardware; Locks and latches; Part 1: Mechanically operated locks and latches; Requirements and test methods	Specifies requirements and test methods for strength, security, durability and function of mechanically operated lock and latch cases for use in door, window doors and entrance doors in buildings.
NEN-EN 12209-2:1995	Building hardware; Locks and latches; Part 2: Striking plates for mechanically operated locks an latches; Requirements and test methods	Specifies requirements and test methods for strength, security, durability and function of striking plates and keeps for use in doors, window doors and entrance doors in buildings.
NEN-EN 12209-3:1998	Building hardware; Locks and latches; Part 3: Electromechanically operated locks and striking plates; Requirements and test methods	Specifies requirements and test methods for strength, security, durability and function of electrical and electronic components of all type of electromechanically operated locks and striking plates used on doors, window doors and entrance doors in buildings.
NEN-EN 1303:1998	Building hardware; Cylinders for locks; Requirements and test methods	Applies to cylinders for such locks as are normally used in buildings and are designed to be used with cylinders. Specifies performance and other requirements for the strength, security, durability, performance and corrosion resistance of cylinders and their original keys. It establishes two categories of use based on performance tests and five grades of security based on design requirements and on performance tests that simulate attack. This Standard includes tests of satisfactory operation at temperatures between -20°C and +80°C. It specifies test methods to be used on cylinders and their protective measures.
NEN-EN 1935:2002	Building hardware; Single-axis hinges; Requirements and test methods	Specifies requirements for single-axis hinges of lift-off or fixed pin type for use on access windows and doors. It includes tests for static loads, shear strength and allowable wear during endurance cycling for the following: a) mounted on the edge of the door leaf of window sash and opening in one direction only; b) whose axis of rotation is within 30 mm of an edge of the movable element for door leaf masses of up to 160 kg; c) whose axis of rotation is within 30 mm of the edge window sashes with a mass of up to 60 kg.
NEN-EN 12051:1999	Building hardware; Door and window bolts; Requirements and test methods	Specifies performance, security and safety requirements (including test methods) for single point bolts and their associated keeps used to secure, or increase the security of doors or windows in buildings; where operation is by lever, knob, slide, pull, etc. or removable implement (but not a multiple differ key) from the protected side of the leaf only. Spring engaging bolts, and bolts with locking facility are included if they are, by definition, bolts. The following types are therefore included: - barrel bolts, tower bolts, - foot bolts, drop bolts, square spring bolts, garage door bolts, - flush bolts (slide, knob, lever or automatic action), - padlock bolts, - locking bolts of the type where movement of the shoot is by hand, and action of the lock merely prevents withdrawal, - privacy bolts, - mortice bolts (operated by removable operating device, or fixed knob, lever, etc).
NEN-EN	Building hardware; Padlocks and	Specifies performance requirements and describes

12320:2001	padlock fittings; Requirements and test methods	test methods for strength, security and function of padlocks and padlock fittings used in building applications, but excluding cables and chains.
NEN-EN 13126-1:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 1: Requirements common to all types of fittings	Specifies performance requirements for the strength and durability of fittings for the operation of movable leaves of windows and door height windows including test methods and requirements common to all fittings.
NEN-EN 13126-2:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 2: Casement fastener handles	Gives requirements and test methods for casement fastener handles. This standard applies to all face fixed casement fitted to windows made from any material.
NEN-EN 13126-3:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 3: Manoeuvring fittings for espagnolette bolts/sliding button	Gives requirements and test methods for manoeuvring fittings for espagnolette bolts/sliding buttons. It applies to operating handles or knobs with spindles, claw operating levers and sliding buttons.
NEN-EN 13126-4:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 4: Espagnolette bolts and window bolts	Specifies requirements and test methods for espagnolette bolts and window bolts. This standard is applicable to the following types of espagnolette bolts: Side bolts that operate transversely to the principal sliding rods; End bolts that operate in the same direction as the principal sliding rods; Fittings with both side bolts and end bolts.
NEN-EN 13126-5:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 5: Devices that restrict the opening of windows	Gives requirements and test methods for devices that restrict the opening of windows.
NEN-EN 13126-6:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 6: Variable geometry friction stay hinges	Gives requirements and test methods for variable geometry friction stay hinges for projecting top hung and projecting side hung windows.
NEN-EN 13126-7:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 7: Finger catches	Gives requirements and test methods for finger catches for windows and door height windows.
NEN-EN 13126-8:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 8: Tilt and turn mechanisms and turn and tilt mechanisms	Gives requirements and test methods for tilt and turn/turn and tilt mechanisms for windows and door height windows that open in either of alternative mode i.e. tilting about a horizontal axis or turning about a vertical axis.
NEN-EN 13126-9:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 9: Pivot hinges	Gives requirements and test methods for pivot hinges for windows and door height windows. It includes all pivot hinges i.e. self locking, manual locking, non-locking and pivot hinges with or without friction
NEN-EN 13126-10:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 10: Arm balancing systems	Gives requirements and test methods for arm balancing systems for windows and door height windows.
NEN-EN 13126-11:1998	Building hardware; Hardware for windows and door height windows; Requirements and test	Gives requirements and test methods for top hung projecting reversible hardware for windows and door height windows. The hardware may include an

	methods; Part 11: Top hung projecting reversible hardware	integrated restrictor and/or reverse catch.
NEN-EN 13126-12:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 12: Side hung projecting reversible hardware	Gives requirements and test methods for side hung projecting reversible hardware for windows and door height windows. The test shall apply to hardware, which may include and integrated restrictor and/or reverse catch.
NEN-EN 13126-13:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 13: Sash balances	Gives requirements and test methods for sash balances for windows and door height windows.
NEN-EN 13126-14:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 14: Sash fasteners	Gives requirements and test methods for sash fasteners for windows and door height windows.
NEN-EN 13126-15:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 15: Rollers	Gives requirements and test methods for rollers for windows and door height windows. This standard is applicable to rollers irrespective of whether they are adjustable or not and of the method or type fixing or if they are used independently, or in multiples or combinations.
NEN-EN 13126-16:1998	Building hardware; Hardware for windows and door height windows; Requirements and test methods; Part 16: Hardware for lift and slide systems	Gives requirements and test methods for hardware for lift and slide systems for horizontally sliding windows and door height windows.
NEN-EN 13126-17:1998	Building hardware; Fittings for windows and door height windows; Requirements and test methods; Part 17: Hardware for a tilt and slide system	Gives requirements and test methods for hardware for tilt and slide systems for horizontally sliding windows and door height windows.

There are no grading standards for builder's hardware. Fasteners can be made from different materials, which to some extent constitute different grading standards. Most common fasteners are made from stainless steel, copper or copper alloys, aluminium or aluminium alloys, or plastics. The materials can further be classified regarding their susceptibility to atmospheric (chemical) corrosion, contact (galvanic) corrosion, intercrystalline corrosion, pitting corrosion, crevice corrosion, and stress (transcrystalline) corrosion. Resistance to acids is another property particularly relevant for fasteners made from plastics.

9.1.2 Trade related environmental issues

The concept of sustainable development, adopted by nearly all the countries in the world participating in the 1992 Rio de Janeiro Conference, represents the philosophy that economic development should automatically take into account the issue of the environment, recognising the fact that polluting activities now will have great (negative) impacts on the way future generations can live. In this respect all parties, including the general public but also manufacturers of fasteners and builder's hardware, are asked to accept their social responsibility and minimise the environmental impact of their activities. In recent years, issues such as (environmental) Life Cycle Assessment (LCA) of products, Cleaner Production (CP) and Ecodesign have all become important tools for companies to improve on the environmental performance of their products and production processes. These tools enable companies to analyse at what production stage the environmental impacts are the largest and how they could improve on these points. This can lead to both internal (improved efficiency) and external (perceived image) advantages. Results of applying the above tools can be company-internal improvements in environmental performance. However, in order to be able to use the environmentally sound approach of a company towards its products and production processes, 'green' marketing tools such as ecolabels

(for products) and environmental management standards (for the whole organisation) have been created both by governments and private parties.

Manufacturers can comply voluntarily with ISO 14001 environmental standards, which are based on the ISO 9000 series of standards for quality management. Like the ISO 9001 and ISO 9002, the ISO 14001 may also become a *de facto* requirement for being able to compete in many regions of the global marketplace.

The hallmarks for environmentally sound products are normally referred to as Eco-labels. Such hallmarks indicate that the product, including its full production process, has a reduced impact on the environment compared to similar products. Eco-labels have been developed at various levels. Examples are the EU Ecolabel, applicable throughout Europe, and national labels such as The Netherlands Milieukeur, the German Blue Angel and the Scandinavian White Swan. Participation in such an eco-label scheme is on a voluntary basis. There are currently no eco-labels in the trade that apply for fasteners and builder's hardware. However, work is currently being carried out by the EU Ecolabelling Board (EUEB) and the Commission to assess in detail the level of priority of possible new product groups and to determine the best order and timing for their development. DIY products are on the list of priority product groups for which an ecolabel is to be developed. For more detailed information on European eco-label and the progress on the development of the criteria for fasteners and builder's hardware, please refer to http://europa.eu.int/comm/environment/ecolabel/.

Several EU directives have been issued on eliminating hazardous waste. While the first directives that were issued in this area were mainly referring to packaging (see section 9.1.3 below), other directives, such as the *End of Life Vehicle Directive* (ELV Directive, 2000/53/EC) and the *Waste Electrical and Electronic Equipment Directive (*2002/95/EC and 2002/96/EC) actually have implications for surface coating for fasteners (and to a lesser extent also builder's hardware) used in the relevant industries. These directives address pollution resulting from vehicles and electronic equipment that have reached the end of their useful life. For example, directive 2002/95/EC specifically requires the substitution of various heavy metals (lead, mecury, cadmium, and hexavalent chromium) and brominated flame retardants (polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)) in new electrical and electronic equipment put on the market from 1 July 2006.The legislation sets forth requirements for 15 Member States to set legislation to encourage re-use, recycling and other forms of recovery of products and their components that have reached the end of their service lives and ban certain hazardous substances. It is important to note that the ELV Directive does not set common EU-wide standards and systems but leaves considerable scope for the individual member states on deciding how the directives should be implemented in their territory. While implementation in Member States is currently in progress, it becomes clear that regulatory options chosen by Member States to implement the ELV Directive vary a great deal from country to country. Some countries have taken a 'laid-back' approach while others have even chosen to go beyond the requirements of the ELV Directive in terms of targets or deadlines (e.g., Germany, The Netherlands and Spain).

9.1.3 Packaging, marking and labelling[1]

Packaging

The overall trend in Europe is towards facilitating re-use and recycling of packaging through incentives. In order to harmonise the different forms of legislation, the EU has issued a directive for packaging and packaging materials (Directive 94/62/EC) in which minimum standards are regulated. With effect from 30 June 2001, maximum concentrations of lead, cadmium, mercury and hexavalent chromium allowed in packaging is 100 ppm.

[1] * In this section the term 'container' refers to the individual packages, which are used for bulk shipment known as 'shipping container' or 'transit container' and not the large steel/aluminium cells, which are used for containerised transport.

It used to be that the packaging of fasteners and builder's hardware for the end consumer in the DIY sector was arranged by the buying centres of the large retail chains, who would repack the products in smaller volumes for DIY use in boxes of their own design, with their own brand name and logo aimed at the end consumer. However, these days the manufacturer is expected to prearrange all these things, packing the products in such a way that they can be transferred to the retail shelves with a minimum of handling. A sensible marketing strategy thus requires taking the obligations of the EU trade partners (or parties further down the value chain) into consideration as far as possible. This means that packaging materials should be limited and re-useable or recyclable. Otherwise the importing party will be confronted with additional costs, prompting him to look elsewhere for suppliers.

For more information on packaging, please refer to CBI's database on European non-tariff trade barriers "Access Guide" at http://www.cbi.nl/accessguide.

Apart from the safety aspects and the protection against damage, the focus of packaging is definitely on environmentally friendly transport- as well as sales promotion packaging. This means, among other things, that it should be considered whether returnable systems can be used as much as possible. In general, the buyer indicates the packaging requirements for semi-finished and finished products. Apart from the marketing aspect of packaging, without proper packaging the quality and reliability, which were built into the product during the manufacture, will be wasted. This goes not only for physical damage caused by falling or bumping but also for influences from the open air, for example with sea freight, that might cause corrosion. The transport package must be designed, therefore, to provide protection against the hazards of transport as well as enable the product to be stored for long periods and allow the goods to be delivered in perfect condition.

Correct packaging is the principal way of ensuring safe delivery of the product(s), after (often) long distance transport via the distributing point and the retail store to the ultimate consumer at an economical cost. The initial most important packaging has to be taken care of by the exporter and has to include three levels: the primary, secondary and the shipping package.

The *primary* package is the product's immediate 'container'*, like boxes with a standard number of products in the case of fasteners and boxes containing one, two or more separately wrapped builder's' hardware products.

The *secondary* package refers to material that protects the primary package and which is discarded, when the product is about to be used or when the product is going to be presented in the retail-outlets. The cardboard boxes, containing a number of the primary boxes, offer additional protection and opportunities for promotion.

The *shipping* package refers to packaging necessary for storage, identification or transportation.

Whatever the journey, four main groups of hazard need to be addressed:
- loading and unloading;
- movement while in vehicle;
- warehousing;
- climate.

Some recommendations for packaging of builder's hardware are:

Standard steel bolts, screws and nuts
- products of 20 cm length or shorter should be packed in cases with an average weight of 25 kg;
- reduce carton void;
- nuts should be packaged separate, with emphasis on minimising container void;
- ample flexibility has to be inherent to permit future accommodation for changes in customer buying habits;

- intermediate lengths of any product should be packed according to requirements for products next in length.

Bulk packing standard steel bolts, screws and nuts
- bolts and screws (except high strength structural bolts) in sizes 2 1/2 cm diameter and smaller with;
- lengths of 20 cm or shorter are packed in 1/4 keg. The 1/4 keg has approximate 8,768 cm^3;
- bolts and screws (except high strength structured bolts) in sizes over 2 1/2 cm diameter or longer than 20 cm are packed in a 20B bulk container or equivalent. The 20B bulk container has approximately 11,473 cm^3 of volume;
- nuts are packed in a 1/4 keg;
- bulk nut quantities do not match packaged container nut quantities;
- all high strength structural bolts are packed in kegs;
- average container weight (excl. structural bolts) is about 32 kg;
- intermediate lengths of any product should be packed according to requirements for products next in length.

There are a number of different types of export transport packaging for fasteners:
- bulk containers of various materials;
- wooden crates and boxes;
- plywood and particle board boxes;
- wire bound boxes;
- corrugated and solid fibreboard boxes;
- fibre drums and kegs;
- expanded or rigid plastic containers;
- plastic and textile (burlap) bags;
- bales with different wrapping materials;
- different materials for prevention of corrosion during transport.

Builder's hardware must in principle be wrapped more individually, like locks per piece in cardboard boxes, or certain hardware per 6 or a dozen in boxes. Boxes ought not only to be functional and protective against damage to the contents, which per piece have to be wrapped in (oil) paper, but also have promotional and technical features on them. There is of course a difference between packaging for wholesalers or distributors, and for consumers.

Marking

CE mark

CE marking is a declaration by the manufacturer that a product meets all the appropriate provisions of the relevant legislation implementing certain European Directives. CE marking gives companies easier access into the European market to sell their products without adaptation or rechecking.

The CE marking is mandatory and must be affixed before any product subject to it is placed on the market and put into service, save where specific directives require otherwise. Where products are subject to several directives, which all provide for the affixing of the CE marking, the marking indicates that the products are presumed to conform to the provisions of all these directives. A product may not be CE marked, unless it is covered by a directive providing for its affixing.

The CE conformity marking consists exclusively of the letters "CE" in the specified form, followed by:
- the name or identifying mark of the producer,
- the last two digits of the year in which the marking was affixed, and
- where appropriate, the number of the EC certificate of conformity, and,

where appropriate, indications to identify the characteristics of the product on the basis of the technical specifications.

The technical specifications for EU directives on fasteners and builder's hardware are in the process of being developed by the CEN, in co-operation with the normalisation organisations at national levels. The standards include technical specifications for the products in terms of strength of material to safeguard safety. The implications for the production process are not laid down in these specifications. In general quality improvements of the product will require conformity with some form of ISO and EN standards. Though it is expected that the CE mark will be obligatory soon, manufacturers get a period of 12 months to comply with the terms and conditions after official publication. Regarding the CE mark, it is important to stress that:

- The CE Mark is a tool to cross borders, NOT a sign of product quality!
- The CE Mark is a certificate of conformity,
- The CE Mark is a manufacturers declaration of conformity.

So far, there are two EU directives that may affect fasteners and builder's hardware: the Machinery Directive and the Construction Products Directive. The Machinery Directive refers to products with moving parts, and therefore excludes fasteners, such as nuts and bolts. However, if eye nuts or eye bolts form part of lifting equipment, then CE marking is necessary. Products, which are covered by the Construction Products Directive, are those, which are "produced for incorporation in a permanent manner in works". In this case "works" include buildings, roads, bridges and other civil engineering and building works. Further information on CE marking can be found at http://europa.eu.int/comm/enterprise/newapproach/legislation/guide/legislation.htm

Labelling

On the packaging the following information should be provided:

- The material of which the fastener or builder's hardware is made;
- Technical product descriptions, including sizes and measures;
- Number of products in the package;
- Origin of the products.

In addition eventual standards that the product adheres to, like the Eco-label, the CE mark or EN norms, may be indicated on the label.

9.2. Tariffs and quotas

In general, all goods, including fasteners and builder's hardware, entering the EU are subject to import duties. However, in order to support the export from developing countries, the EU operates the Generalised System of Preferences (GSP). Under the GSP scheme of the EU (Regulation 2820/98/EC), imports from a number of developing countries are admitted at a reduced tariff and imports from a group of least-developed countries at a zero tariff. The EU Commission has established a new scheme of preferential rights for the period from 1 January 2002 to 31 December 2004. This new scheme has formally been published under Council Regulation (EC) No. 2501/2001. An overview of the GSP can be found at http://europa.eu.int/comm/trade/issues/global/gsp/index_en.htm. There are no quota applicable to fasteners and builder's hardware.

The integrated tariff of the community TARIC with all third country and preferential duty rates actually applicable can be found at the following address:
http://europa.eu.int/comm/taxation_customs/databases/taric_en.htm.
Table 9.3 lists the general tariff rates applicable as of November 2003. However, rates are continuously adjusted, and you are advised to check the website for any changes. The EU market for fasteners and builder's hardware is not protected by quantitative restrictions for imports. Please, refer for more extensive information with respect to trade policy and agreements within the European Union to the CBI publication "Export Planner" (2000).

Table 9.3 Tariffs for sanitary ware and ceramic tiles applied in the European Union*

HS	Code Product description	General tariff	Reduced Rate	VAT
7317	Nails, tacks, drawing pins, corrugated nails, staples etc	0.5%	0%	Standard rate
7318	Screws, bolts, nuts, coach screws, screw hooks, etc. of iron or steel	3.7%	0%	Standard rate
8301	Padlocks and locks of base metal; etc.	2.7%	0%	Standard rate
8302	Base metal mountings, fittings etc	0%	0%	Standard rate

*As of November 2003
Source: European Commission

The origin of the products must be clearly established according to 'EU GSP Origin Rules' prior to determining its tariff treatment through the GSP. In general, products are classified under GSP legislation according to their composition, and, as such, assigned greater or lesser percentage reductions of the 'most-favoured-nation' tariff rate that would be assessed on a product exported to the EU from the developed world (e.g. the US, Japan, Canada).

The Value Added Tax (VAT) rates in the EU are not yet harmonised. Basically there are four VAT rates: the parking rate, the standard rate, the reduced rate and the super reduced rate. In the future, the rates and the product groups will be harmonised throughout the EU. An overview of the VAT rates prevailing in the EU Member States is given in Table 9.4.

Table 9.4 VAT rates applied in the Member States of the EU*

	Standard Rate
Austria	20
Belgium	21
Denmark	25
Finland	22
France	19.6
Germany	16
Greece	18
Ireland	21
Italy	20
Luxembourg	15
Netherlands	19
Portugal	17
Spain	16
Sweden	25
United-Kingdom	17.5

*as of November 2003
Source: European Commission

It is important to note that the overseas exporter is not involved in paying VAT. The EU importer is responsible for the declaration to the local authorities that he has purchased goods from overseas at a zero VAT rate. As soon as he sells the goods locally, he must charge his customer the appropriate VAT on his invoice and declare this to the local authorities and make the appropriate payment to them. In Table 9.4 an overview of current VAT rates in EU countries is presented. As a rule, reduced rates, i.e. 6 percent, apply to items that can be considered essential, such as foodstuffs, utilities services and so on. For fasteners and builder's hardware in the Netherlands a tariff of 19 percent applies. Most countries operate a zero rate for certain limited categories of supply. In addition some goods and

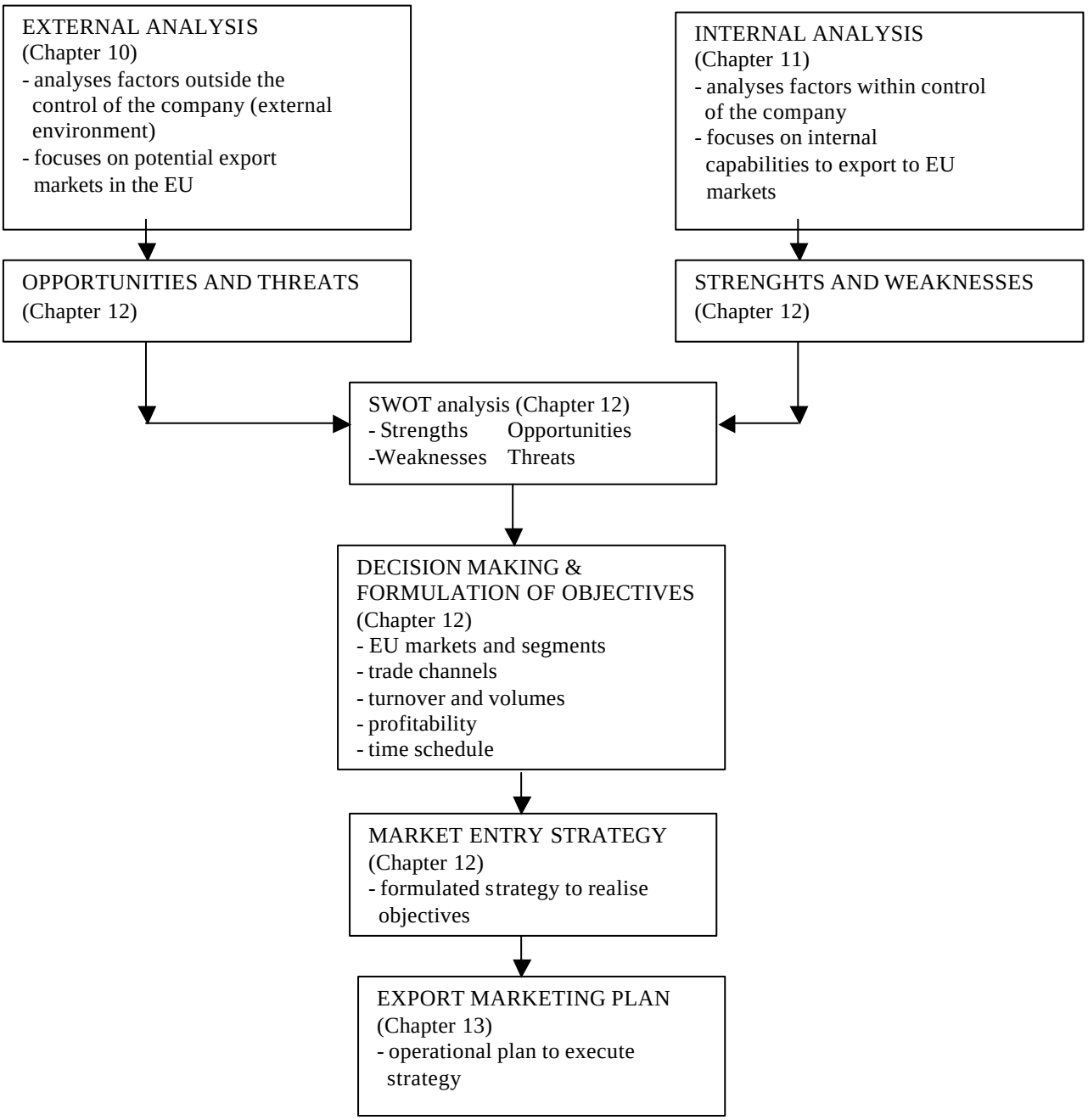
services are also exempt from VAT. In the EU, these are items covered by Articles 13 - 16 of the Sixth Directive, e.g. financial services, medical care, education, supplies of land and postal services. These do not include fasteners and builder's hardware.

PART B: EXPORT MARKETING GUIDELINES: ANALYSIS STRATEGY

Which actions should you undertake to successfully export to the EU market? Should you get involved in exporting at all? These questions are what this part B is all about: to assist you to decide whether or not to export to the EU and to provide a roadmap of how to go about exporting.

Chapters 10, 11, and 12 aim at assisting potential exporters in the decision-making process whether or not to export. Chapter 10 describes how to analyse the external environment (market audit), resulting in opportunities and threats in the market, while chapter 11 describes how to analyse the internal environment (company audit), resulting in strengths and weaknesses of the exporter's firm. Chapter 12 then explains how a SWOT-matrix can be applied in order to analyse the identified strengths and weaknesses, opportunities and threats, resulting from the external and internal analysis. By matching opportunities in the market with the strengths of the company, the exporter will be able to identify suitable export products, target countries, market segments, and possible trade channels. All the above issues, together with the marketing tools provided in Chapter 13, should enable the exporter to formulate a Market Entry Strategy (MES) and to prepare an operational Export Marketing Plan (EMP) for the introduction of fasteners and builder's hardware on EU markets. It should be noted that the information provided in part A of this survey forms an essential element in the analysis described in this part B. Therefore, where relevant, reference will be made to the concerning sections in part A. For general information on export marketing and how to conduct market research, please refer to CBI's '*Export Planner*' and CBI's new manual on market research.

Schematically, the analysis described in this part requires the following strategic steps:



10. EXTERNAL ANALYSIS: MARKET AUDIT

Before actually exporting fasteners or builder's hardware to the EU, a selection has to be made of suitable export products, target countries, market segments, and possible trade channels. The external analysis assists the potential exporter in making this selection and identifying market opportunities. In order to prepare an external analysis, extensive market research is necessary. Please check CBI's 'Your guide to market research' for general information on this subject.

To obtain relevant information about fasteners and builder's hardware in EU markets the following factors should be explored:

- **Country information**
  General data about EU countries like population, gross national product (GNP), main economic activities, distribution facilities, etc. This information is abundantly and freely available. Please check with embassies and consulates of EU countries in your country.
- **Market developments in EU countries for fasteners and builder's hardware**
  Please check part A of this survey. Additional market studies are available from CBI and ITC. Please check their websites www.cbi.nl and www.intracen.org.
- **Tariff and non-tariff barriers at EU and national level**
  This information is covered in chapter 9 in part A of this survey. Further, a lot of information can be found on the website of the EU and on CBI's AccessGuide (www.cbi.nl/accessguide).
- **Trading conditions**
  General information on trade with EU countries is widely available. Some sector specific information can be obtained in part A of this survey. More general information can also be found in the CBI manual "Export Planner".

10.1. Market developments and opportunities

As a first step towards the identification of the most suitable export market, the potential exporter needs to investigate the importance of different EU markets for fasteners and builder's hardware and understand the developments in these markets. The market developments described in part A of this report provide a good starting point for such an investigation.

As explained in chapter 3, there are two main market segments for fasteners and builder's hardware, the professional market segment and the DIY segment. The professional market mainly refers to manufacturing industries of transportation equipment and the construction and building sectors. Targeting the professional segment requires the observance of large number of quality standards as described in chapter 9. Quality aspects must furthermore be accredited, which may take up quite a bit of time. For these reasons, the main attention of chapter 3 has been on the DIY segment of the market, which is judged to present better opportunities for exporters from developing countries.

The extent to which people engage in DIY activities differs somewhat in the EU countries, as has been explained in chapter 3. Combined with the size of the population, this is the most important factor determining the overall market size. Furthermore, the emergence of large DIY chains can be observed in all countries, although generally this trend is more advanced in the northern European countries compared to the southern European countries. On the one hand, this may make a larger share of the market easily accessible in the northern European countries through the DIY chains. On the other hand, market restructuring in the southern European countries may provide more market entry opportunities.

General economic conditions were identified as one of the most important determinants of overall growth in the consumption of fasteners and builder's hardware, which explains the recent slowdown in import growth. However, as the economic outlook for most EU countries has improved for the near and especially the mid-term future, demand for fasteners and builder's hardware can be expected to pick up as well. Moreover, chapter 5 clearly reveals a shift of production to developing countries,

indicating that developing country manufacturers are already using their lower costs to out-compete EU manufacturers. Particularly China has been identified as an increasingly important supplier to EU markets, with the value of Chinese exports to the EU increasing by 75 per cent during the last two years.

Based on the market developments as described in this survey, the following opportunities and threats can be mentioned:

Opportunities	Threats
Growing market for DIY products	Dominant position of China as a supplier to EU markets
Shift of production to developing countries	Slow recovery of EU economies

Additional information on market developments and opportunities can be obtained from the following sources, which can be categorised as desk research and field research:

Desk research
Desk research is secondary information gathering; others have already assembled the information. The following sources are available to conduct additional desk research for fasteners and builder's hardware:

- *Internet*
  This is an important source of information. A lot of information is freely obtainable, although for more detailed and specific information fees may have to be paid. For Internet sites relevant to fasteners and builder's hardware, please check the websites mentioned in the specific sections of this report and particularly Appendix 3.
- *Market studies*
  Although market studies specifically focussed on fasteners and builder's hardware are rare, some agencies provide market reports on the DIY sector.
- *Trade magazines*
  Trade magazines are valuable sources for current information, trends and developments in the fasteners and builder's hardware sector. Please check appendix 3.5 for contact details of trade magazines.
- *Trade fair catalogues*
  Trade fair catalogues of major EU trade fairs provide a wealth of information about competitors, importers and products. These trade fair catalogues are often freely obtainable from the Internet of the trade fair organizers. Please check appendix 3.4 of this survey for contact details of trade fairs in the EU.

Field research
After desk research, field research can be planned in the form of an orientation visit to Europe in order to further assess market opportunities and threats. Through your field research you can look for information specifically tailored to your requirements. Field research is, however, more expensive than desk research, as travelling to EU countries is involved.

Your field research could include:

- A visit to an important trade fair;
- Visits to potential buyers (importers, wholesalers, DIY chains) after making an appointment in advance;
- Checking products and prices at retail outlets in main shopping centres and DIY stores;
- Visits to branch organisations;
- Possibly also visits to embassies and consulates.

Another important issue to investigate before exporting to the EU are the EU Market Access Requirements. These are described in chapter 9 of this survey and include both tariff and non-tariff

barriers. However, the non-tariff barriers largely relate to quality standards that are not mandatory for the DIY market.

10.2. Competitive analysis

The fasteners and builders hardware sector is a global business with competitors in all regions. As can be observed from the market developments in chapter 5 in part A of this market survey, developing country suppliers play an increasingly important role in the production of fasteners and builders' hardware. Although EU suppliers still dominate the market, increasingly imports are sourced from developing countries like China and India.

The bulk of the products in this sector are highly standardised and thus leave very little scope for product differentiation. Moreover, although wholesalers/importers and DIY chains are always looking for new and better lines of merchandise, they generally tend to stay with their established suppliers, even more so in the professional market for fasteners and builder's hardware. Consequently, exporters must prove that the services provided by their company and the quality of their products are absolutely reliable and that their prices are attractive before buyers will consider them as new suppliers.

It is therefore important for an exporter to assess the critical success factors of major competing exporters from different countries. Important questions to be answered for this assessment are:

- Who are the main competitors in your market segment? What are their strengths and weaknesses compared to your company?
- To what degree is the sector in the target market supported by the government in the different countries, including your own?
- How many suppliers are currently active in the market?

For the assessment of strengths and weaknesses of all exporters to the EU, it is important to know that EU buyers assess the suitability of new suppliers by using the following criteria:

- Price competitiveness;
- Quality aspects;
- Reliability of the supplier;
- Production capacity.

These criteria could thus be used when analysing the competitiveness of the exporter with respect to major competitors. This competitive analysis can be made at two levels:

- Country level
  Competitive strengths and weaknesses of the exporter's country can be assessed compared to other supplying countries of fasteners and builders' hardware to the EU market, especially other developing countries. Here, factors such as a favourable exchange rate, low labour costs, government support by means of low interest loans, export subsidies and tax exemption, and established shipping routes to EU ports are important.

- Company level
  The strengths and weaknesses of the exporters' company vis-à-vis companies from competing (developing) countries should also be assessed. Here, the above-mentioned factors of price and quality aspects, the reliability of the supplier, the production capacity, but also technological advancement, productivity level, originality in design, and more generally the appearance of a professional approach to exporting are important criteria.

The following criteria should be used to analyse competitiveness:

- Price competitiveness
  As most developing countries have the best chances to enter the EU fasteners and builder's hardware market by targeting the bottom end (lowest prices) of the market, price is the most important competitive tool. However, the following factors are also important, particularly to maintain long-term business relationships.

- Consistent quality
  Being able to deliver a consistent quality is extremely important. Never ship poorer quality goods than those demanded and agreed upon, this may end your relationship with your customer and significantly reduce the outlook for future contract. Together with reliability of supply, quality consistency is an integral element of displaying a professional approach to exporting.

- Reliability of supply
  To be a reliable supplier who always honours his agreements is a very valuable asset for any trade partner in the EU. For fasteners and builder's hardware, speed of delivery is less important as long as it can be properly planned for. Exporters who want to change agreed trading terms disrupt the value chain, thus causing unnecessary costs to other chain members. Closely related to reliability is proper communication. At all times potential customers should be able to contact you and receive prompt replies to their queries. Please refer to section 13.2 of this survey for more details.

- Production capacity
  Most of the market for fasteners and builder's hardware is dominated by a few very large players that want to place large orders with as few suppliers as possible. Where your own production capacity is too limited, forming clusters with other manufacturers is an alternative to expanding your production capacity.

The major problems faced by EU importers from developing countries are
- Bad communication;
- Late delivery;
- Product quality not meeting specifications.

Exporters who are able to offer fasteners and builder's hardware a competitive price and who can successfully apply competitive tools as described above are in a good position to outrank competitors. This should be combined with a good understanding of the above-mentioned problems importers are confronted with. Avoiding these problems is essential in order to be able to outrank competitors. Evidently, being able to communicate promptly and effectively is of utmost important, please refer to chapter 13 for further details.

10.3. Sales channel assessment

Having assessed the prospective markets and market segments, including an evaluation of the exporter's competitiveness, it is now important to understand the trade structure and supply channels in the EU market for fasteners and builder's hardware. Based on the distribution structure as described in chapter 7, the exporter should evaluate which sales channels are the most appropriate for his products and his company. The following questions should be answered:
- Which market segment do I want to target?
- Which countries or regions to I wish to export to?

As can be seen from the trade structure in chapter 7, the distribution channel for fasteners and builder's hardware is fairly straightforward. Most products for the professional market pass through wholesalers/importers, while most products for the DIY market in the northern European countries are traded directly through the DIY chains. Only in the southern European countries is the non-professional market also partly supplied by wholesalers and importers. However, one may expect the importance of the DIY chains in these southern countries to increase in the future and therefore to represent the more promising trade channel.

Due to the low importance of brand names, licensing and contract manufacturing are not common in this sector. Similarly, business-to-business (B2B) e-commerce is not yet very common, although some B2B e-market places for fasteners and builder's hardware are emerging. (for example alibaba: http://fastener.directory.alibaba.com) Exporting through an agent is only worthwhile when targeting

the professional market and exporting on a very large scale. Agents represent large fixed costs, as they need to be paid even when no sales occur.

Based on these observations, the choice for the prospective exporter is a fairly simple one:
- New and inexperienced exporters should target the DIY market and directly sell to DIY chains.
- Experienced exporters wishing to target the high quality, professional market segment should trade with wholesalers/importers.

Of course other strategies may also lead to success, but these will require even more profound market knowledge and a bigger dose of luck.

10.4. Logistics

The logistical requirements form a crucial element in the export strategy. Important questions that need to be answered in this context are:
- How frequent do you need to deliver?
- What quantity needs to be supplied per delivery?
- Which formalities are involved in transporting the goods to the EU?

Speed of delivery is only a minor concern in the market for fasteners and builder's hardware. Speed is not so much required to catch the latest market trends (since these hardly exist in this market) but evidently does affect the amount of working capital that is tied up. The quicker the goods reach their destination, the quicker the manufacturer may receive his money. If the transaction is financed using supplier's credit, speed evidently decreases interest costs. The size and frequency of shipping will depend on a number of factors, including your own production capacity, the type of product, the size of the contract, and of course buyer preferences.

Although speed itself is not so important, timeliness is of utmost importance. EU trade partners usually work with tight arrival schedules in order to deliver the products to their customers on an agreed date and time. It is therefore important to plan production and logistics well in advance to ensure that you cause no disruptions to the supply chain. In some countries the large DIY chains are increasingly facing legal restrictions in further expanding their stores. As a consequence, they are expanding their retail area at the expense of storage space and therefore need more frequent delivery from distribution centres.

Most fasteners and builder's hardware are relatively heavy and are transported by ship. Given the weight of these products, it is best to negotiate with a local logistics company to organize transportation. The logistics company can combine the shipment of fasteners and builder's hardware with other products in order to arrive at the ideal volume/weight ratio and thus lower the price of transportation.

Delivery terms also play an important role in the logistics system of an exporter. When FOB (Free on Board) terms are agreed, the exporters' responsibility is to deliver the goods at the agreed time at the port of loading in his/her country and to have the required export documents available before shipping. The exporter is not involved in securing shipping space and negotiates shipping terms with freight forwarders. On the other hand, when CIF (Cost, Insurance, Freight) terms are agreed, the exporter also has to take care of securing shipping space at the agreed time of delivery the goods in the port of loading. Please check for details on delivery terms and export formalities section 13.4 of this survey. A more elaborate overview is also provide in the CBI manual "Export Planner".

10.5. Price structure

Prices of fasteners and builder's hardware in the EU are set by the market and are free and competitive. This section describes the different elements that make up the price structure. This structure can be used to either derive a maximum cost price or derive a minimum consumer price. For

example, using indicative consumer prices in the EU market, you can work backwards and subtract all relevant taxes and margins to arrive at a maximum cost price. If you are able to produce at or preferably below this cost price, you can consider exporting. Alternatively, using your own estimated cost price, you can add all relevant margins and taxes to arrive at a consumer price for your product if it would be sold in an EU market. Only if this price appears competitive and acceptable to consumers it is worthwhile to start exporting. The cost elements that make up the end-user price can be illustrated as follows:

Cost price, including local transport to port (i.e. FOB)
+ International transportation and insurance costs (i.e. CIF)
+ Other costs (storage, banking, etc)
+ Import duties

= Landed-cost price
+ Margin Importer and Wholesaler
+ Margin Retail Trader

= Consumer price (excl. VAT)
+ Value Added Tax (VAT)

= Consumer price (incl. VAT)

International transportation and insurance costs depend on the exact location of the manufacturer and need to be determined by each exporter individually. Similarly, other costs, such as storage and banking, may also be different from exporter to exporter. Import duties were discussed in chapter 9 and vary by country of origin.

Once goods are cleared for the EU market, margins are added to the product price as they pass through the different trade channels. The box below gives an overview of the ranges of the margins that each intermediary adds to the price. Of the three intermediaries listed below, only the agent acts on behalf of the exporter. The agent is reimbursed by the exporter for his services. The other intermediaries buy goods from the exporter on their own account and at their own risk, the exporter does not compensate them. Their costs include, for example, insurance, transport, stock and staff. These intermediaries need their margins to compensate for these costs.

Intermediary	**Mark up**
Agent	5 - 7.5%
Wholesaler/ Importer	10 – 20 %
DIY chain (margin including retail margin)	40 – 50 %

Particularly in the DIY market, competition is very stiff and margins are under pressure. Also note that the margins for the different intermediaries in the trade structure depend on various factors, such as:
- Size of the order;
- Length of the trade channel;
- Quality of the product;
- Availability of the product;
- Added value;
- Degree of competition in the market.

The last margin to arrive at the final consumer price is VAT. The different VAT rates applicable in the various EU countries are listed in chapter 9.

Based on this information, a rough guide to estimate the consumer price of an imported product in the Netherlands is to multiply the CIF price by a factor of 2. Similarly, the (consumer) prices quoted in

European DIY chains or other stores can be divided by a factor two to arrive at a rough indication of the CIF price.

An example of the calculation of the CIF price for the exporter of door handles can be made as follows for 10 pairs of door handles:

Consumer price, this is the retailer's selling price	EUR 45.40 (excluding VAT)
Minus:	
Margin Retail Trader, i.e. 33 percent of EUR 45.40	EUR 15.00
Margin Importer, i.e. 15 percent of EUR (45.40-15.00)	EUR 4.56
	EUR 19.56
Maximum CIF price (port Rotterdam, the Netherlands)	EUR 25.84

This is the maximum CIF price (port Rotterdam, the Netherlands) of 10 pairs of door handles, sable model, aluminium.

10.6. Example: Product Profiles

Product profiles give a complete overview of relevant information for one certain product on an EU market. It is impossible to present profiles of selected fasteners or builders hardware other than as a group of importance and/or interest to SME producers/exporters from the majority of developing countries.

To illustrate the situation regarding the products this EU Market Survey is dealing with: the biggest worldwide known wholesaler in fasteners is the company Borstlap in Tilburg, the Netherlands, with branches in various countries, in Europe as well as overseas. This company has in stock an assortment of 50,000 different bolts, nuts and screws. Their catalogues are 10 cm thick and consist of thousands of pages.

<table>
<tr><td colspan="3">Product profile</td></tr>
<tr><td colspan="3">Product name: Fasteners</td></tr>
<tr><td>1. Market requirements:

<u>European quality standards:</u>
various norms, certificates, etc.
(see chapter 9)

<u>Minimum labeling:</u>
-identification (name and address) of the exporter and/or packer
-nature of the product (if not visible from the outside)
-name of the variety
-origin of the product
-size (stating max. and min. weight)

<u>Packaging:</u>
-in consultation with buyer and according environmental regulations regarding recycling, etc.
-CE marking

<u>Import regulation:</u>
Most fasteners can be imported duty free from most countries.

<u>Relevant import documents:</u>
-AWB or Bill of Lading
-Commercial invoice
-EUR1 form for ACP countries
-Form A for the other countries</td><td>2. Market structure:
The main professional users of fasteners are the automotive, aerospace, shipbuilding, railway engineering, and mechanical engineering sectors, and the construction and building sectors. Non-professional users are found in the DIY market.

<u>Average prices:</u>
Screws (200 pcs) EUR 1 – 45
Bolts (100 pcs) EUR 3.50 – 20
Nuts (100 pcs) EUR 1 – 5
Nails (p.kg.) EUR 1 – 17

<u>Market trends :</u>
Stainless steel, crosshead screws, self-tapping screws, chipboard screws</td><td>3. Main suppliers:
Local EU producers for the technically more advanced products, Eastern European and Asian suppliers for the more standard products</td></tr>
<tr><td colspan="3">4. How to improve quality:
<u>General:</u>
By “Quality Thinking” throughout the organisation and obtaining ISO certification. Note, however, that quality must be accredited to qualify for the professional market.
<u>Packaging:</u>
More than adequate packaging to avoid damage during transport. Study the EU use of the relevant products, keep informed on the developments and the increase in quality demands in the EU.</td></tr>
</table>

Product profile		
Product name: Builder's hardware		
1. Market requirements: European quality standards: various norms, certificates, etc. (see chapter 9(Minimum labeling: -identification (name and address) of the exporter and/or packer -nature of the product (if not visible from the outside) -name of the variety -origin of the product -size (stating max. and min. weight) Packaging: -in consultation with buyer and according environmental regulations regarding recycling, etc. -CE marking Import regulation: Most imports of builder's hardware can enter the EU market without import tariffs. Relevant import documents: -AWB or Bill of Lading -Commercial invoice -EUR1 form for ACP countries -Form A for the other countries	**2. Market structure:** The main users of builder's hardware are the construction and building sectors, the security market, and private non-professional DIYers. Average prices: Locks (ppc) EUR 10 – 45 Hinges (p4pcs) EUR 4 – 25 Market trends : Stainless steel, security locks	**3. Main suppliers:** Local EU producers and producers from developing countries, particularly China, India, and South Korea
4. How to improve quality: General: By "Quality Thinking" throughout the organisation and obtaining ISO certification. Note, however, that quality must be accredited to qualify for the professional market. Packaging: More than adequate packaging to avoid damage during transport. Study the EU use of the relevant products, keep informed on the developments and the increase in quality demands in the EU.		

11. INTERNAL ANALYSIS: COMPANY ASSESSMENT

After performing the external analysis described in the previous chapters, the exporter should have a clear insight into the opportunities and threats of exporting his products to selected EU markets. The next step is to prepare an internal analysis. The internal analysis or company audit is a review of the company's strengths and weaknesses in terms of all company resources such as export marketing capabilities, finance, personnel, internal organisation, management, infrastructure, etc. The internal analysis:

- Assesses the capabilities of the exporter's company in different fields (production, logistics, marketing and sales, finance and human resources) to:
    - Compete effectively with international competitors in supplying EU markets
    - Take advantage of the opportunities that are identified in EU markets
    - Deal with threats that are identified in EU markets
    - Comply with product, packaging and shipping requirements by the EU, national governments and trade partners
- Assesses the investments you should make in relation to the above-mentioned subjects

11.1. Product standards, quality, USP and production capacity

As already mentioned in chapters 9 and 10 (sections 10.1 and 10.2), product standards are important factors when selling fasteners and builder's hardware on EU markets. Additional product requirements may also be prescribed by the respective EU buyers. Based on these requirements, the exporter can determine to which extent he has to adapt his products, packaging and processing and the amount of investments required to export to EU countries. Without ensuring quality and consistency, there is no likelihood of entry or acceptance on EU markets. Note that quality does not only mean product quality. Management quality is just as important. For European companies looking for new long-term suppliers, delivery reliability and the ability to learn and adapt are important quality criteria. Furthermore, as discussed in chapter 10, keeping to the agreed quality is indispensable for building up a long-term business relationship.

Questions regarding quality that an exporter needs to answer are:

- What management quality standards does your company fulfil (ISO)?
- What is the general level of your product quality compared to other products in the identified markets? Does your product have any official quality standards?

Check your current quality standards with the voluntary and compulsory standards described in chapter 9. Also refer to chapters 8, 9, and 10 for information on the importance of the various quality standards, including environmental labels, for your specific product-market combination.

Unique Selling Proposition (USP)

In order to successfully market himself, every business owner needs to focus on what's special and different about his or her business. The best way to do this is to try to express this uniqueness in a single statement – the Unique Selling Proposition (USP). The USP is the one thing that makes your product different from any other. It's the one reason that a company will buy your product even though it may seem no different from many others just like it. It may be that your product has a lower price or more convenient packaging, last longer, have a better track record, etc.

Trade partners for fasteners and builder's hardware in EU countries generally have a wide choice of suppliers from all parts of the world. In order to stand out from the crowd, the exporter should therefore try to draw attention to his company and get noticed by the trade partner.
A USP usually does not refer to one single subject, but to a mix of different factors that distinguish the exporter from his competitors. A USP in the fasteners and builder's hardware market could include the following:

- Low prices while all relevant standards are adhered to

- Guarantees given by the exporter on quality aspects and consistency
- Outstanding service, for example
    - Replying within 24 hours to any question or request
    - Open communication
    - On-time delivery
    - Honouring agreements to the letter, even when they have financial implications

Production capacity
Selling a product internationally (as well as domestically) requires the capacity to produce or manufacture the product. Trade partners in the EU require a continuous flow of products that meet their needs throughout the year. Exporters should therefore assess in advance the volumes they could sell to trade partners in the EU before entering a contract. The fasteners and builder's hardware market is not a fast moving market. Sales are fairly stable and can be planned for. There is, therefore, little need to reserve spare capacity for extra last minute orders, or to over commit yourself in the hope that some orders will be cancelled. Note that any expansion of output must not come at the expense of quality.

Questions regarding production capacity that need to be answered are:
- What quantities do you produce?
- How is the present capacity being used? Is there still capacity left for extra orders?
- Will new export activity hurt your domestic sales?
- What will be the cost of setting up additional production capacity and is that possible at all?
- Are there fluctuations in the annual workload for staff or management? When? Why?

11.2. Logistics

Logistics deal with all matters to ensure a smooth flow of products from production to the final customer in the country of destination. Ensuring adequate logistics thus means having the right goods at the right time, in the right volumes at the right place, and all that with a minimum of costs. The market for fasteners and builder's hardware is not very dynamic and orders can generally be placed in good time. However, this does not diminish the need to deliver according to schedule. Particularly the large DIY chains have large distribution networks themselves that are very finely tuned. Delivery of the goods from the manufacturer to the DIY chain is only one step of the overall distribution exercise. As mentioned before, a reduction of the amount of on-site storage space to increase retail area increases the importance of a reliable and well-functioning distribution network.

Based on the requirements of EU trade partners, the exporter should make an assessment of the following subjects:
- Planning of production
  EU trade partners usually work with tight arrival schedules in order to deliver the products to their customers on an agreed date and time. It is therefore important to plan production well in advance to ensure that the products are available in time for shipment.
- Purchasing of raw material and packing material
  As part of the planning of production, EU trade partners might have special requirements for raw material, ingredients and packing material. For example, a certain type of export carton might be required. It is important that the exporter ensures that this type is available from his supplier.
- Handling of export orders
  The handling of export orders requires a good internal logistic process; from ordering raw material and packing material, to production planning, inspection and obtaining of export documentation. Packaging may have to be adapted to the requirements of each specific order.
- Export documentation (certificates, packing lists, invoices, insurance certificates, etc.)
  Depending on the requirements of the EU trade partner, some export documentation like inspection and insurance certificates must be obtained from external organisations. Especially when government agencies are involved, sufficient time should be reserved to obtain the necessary documents.

- Availability of containers and shipping space
  Any developing country manufacturer entering the export market must ensure that the shipping facilities at his disposal can guarantee delivery within contractual time requirements. This tends to pose few problems for countries with access to ports with well-established shipping channels to the EU. However, it can be a problem for many exporters in Africa, who for example, in addition to needing to move goods overland to a port, must deal with shipping services that are often unreliable and infrequent. A reliable shipping agent is essential for these exporters. In order to meet the required shipping date, an exporter should assure himself that containers and shipping space are available on the required shipping date.
- Agreements with transport providers to the port of shipment, shipping and customs agents
- Pre-shipment inspection (when required)
  Please see the above-mentioned remarks under 'export documentation'.
- Communication with trade partners in the EU
  It is of utmost importance that exporters communicate immediately to their EU trade partners when certain requirements cannot be met. This will give the trade partner the opportunity to make alternative arrangements. Open and accurate information from the exporter is an important tool to be a reliable trade partner for his EU counterpart.

11.3. Marketing and sales

When a company decides to start exporting, it will be necessary to set up a commercial department to handle all related activities. "Marketing and sales" form the commercial department responsible for all export activities to EU countries. Whether to employ different persons for marketing and sales depends entirely on the size of the company and the possibilities to invest in the commercial department. In order to assess marketing and sales functions as part of the internal analysis, the responsibilities of both functions are given below:

Marketing

- Familiar with all non-tariff and tariff barriers relevant to the export of the company's fasteners and builder's hardware to EU countries;
- In cooperation with production and finance departments, adjustment of products and packaging to EU and trade partner's requirements;
- Preparation of promotion (or sales support) material like brochures and product samples;
- Installation of communication tools like websites and e-mail;
- Organisation of participating in EU trade fairs;
- Carry out market research;
- Preparation of MES and EMP;
- In cooperation with sales and finance departments, the preparation of annual budgets.

Sales

- Selection of potential trade partners in the EU;
- Contacts with trade partners;
- Familiar with all export documentation to ship products to EU markets;
- Familiar with sales contracts, payment and delivery terms;
- Negotiation with trade partners in the EU;
- Responsible for the margins made on exports to EU destinations;
- Negotiations with logistic service suppliers (transporters, shipping agents, custom agents, and inspection bodies).

Although it appears from the above-mentioned description that different employees should occupy both functions, a combination of both functions in one position is also possible. Much depends on the complexity of the work, the number of export destinations and the selected EU trade partners.

It is also an advantage to have a company representative in the target market that can gather information, monitor progress, and follow up leads. This representative can for instance also be a

relative, a friend, or a supplier. Such a person should be proficient in the language of the target market. Ideally, he or she should also have a profound knowledge of, and practical experience with fasteners and builder's hardware. He/she should in addition be knowledgeable about the technical implications of provisions in trade contracts, and should be able to negotiate confirmed contracts swiftly on behalf of the exporter and should have access to rapid communication facilities.

Important questions related to marketing and sales, which a potential exporter needs to answer, are the following:

- Does the company have people specifically assigned to marketing and sales activities?
- Which persons do you know in the target markets?
- What promotion material is available?

Please refer to section 10.3 on sales channel assessment, where the different modes of market entry are described, together with the functions of different trade partners in the EU.

11.4. Financing

One of the most important subjects to assess in the internal analysis is the financial capability to start exporting to EU countries. The company should not only have access to sufficient funds to invest in adaptation of products, packaging and possibly production equipment, but also the company's credit facilities should be large enough to cover extended payment terms. Moreover, the company should have sufficient financial funds to withstand commercial risks (quality problems, non-payment, late delivery, etc.) that are often inherent to starting to export to new destinations. For the internal analysis, the following financial aspects should be assessed:

Investments

The exporter should evaluate his capabilities regarding financial availability for making the necessary investments when engaging in exporting. Additional investments may be required in:

- Product development (adjustment of products to EU and trade partner's standards);
- Packaging:
    - Adjustment of content
    - Adjustment of packing material
    - Packing for long-distance shipments
    - Labelling requirements (barcodes, information)
- Human resources (qualified export staff);
- Production equipment;
- Certification (ISO);
- Promotion (participation in EU trade fairs, travel to EU countries, brochures, etc.).

Payment terms

The exporter should also evaluate his capabilities regarding financial availability with respect to payment terms. The following factors should be assessed:

- Credit terms, for example payment 30 or 60 days after receipt of goods;
- Local interest rates;
- Bank charges, for example confirmation of Letter of Credit, handling of documents;
- Non-payment risks, for example with 'open account' payment.

Commercial risks

The exporter should also make an assessment of the following factors related to commercial risk:

- Claims, for example in case of late delivery and quality problems;
- Consignment shipping, for example selling price is below cost price;
- Insurance premiums, for example credit insurance.

Miscellaneous costs
Finally, an assessment should be made of the following additional costs when engaging in exporting:
- Export documentation;
- Certificates of origin;
- Stationary for export purposes;
- Communication expenses.

Further reference is made to section 13.4, handling the contract, where the different payment and delivery terms are discussed.

11.5. Capabilities

Apart from the subjects mentioned-above, the following capabilities of the firm should be assessed as part of the internal analysis:

Languages
When dealing with European trade partners, foreign language skills are essential. English is most widely used in EU countries as the official business language, so with most European trade partners it will be possible to communicate in English. However, in some countries such as France, Italy, Spain, Portugal and Greece, English is far less widely spoken. Exporters who target these countries are advised to communicate in the local language. Not only will this prevent miscommunication, but it also shows respect and commitment to local trade partners. This can be an important USP and competitive tool compared to competitors who are less conversant in local languages.

Business culture
Business culture can differ tremendously from one EU country to the other. You should familiarize yourself with the prevailing business culture in your targeted EU country. This culture refers to items like dress codes, making appointments, invitation to lunches or dinners, the use of business cards, addressing of your counterpart and business conversations. Please check section 13.2 of this survey for further information on this topic.

Commitment to export
Exporting is more complex than simply increasing production. Among other things, orders need to be taken and processed, and custom's and shipping documentation need to be prepared. Companies abroad need to be visited and relationships maintained. It may also be necessary to set up a company website. All these factors require a significant amount of dedicated staff and organisation. In short, the need to give a professional appearance requires commitment.

Export experiences
If the company previously already engaged in exporting, these experiences should be evaluated. These past export experiences should be analysed and used to improve current skills to export. Especially if the company has previously tried and failed to penetrate an export market, this should be analysed in order to determine where things went wrong so as to avoid the mistakes from the past.

12. DECISION MAKING

12.1. SWOT and situation analysis

Based on the outcome of the external and internal analyses in chapter 10 and 11, the exporter can use the results to prepare a SWOT analysis in order to define his position in the market, as well as to find ways to improve his competitiveness. In this SWOT analysis he identifies Strengths and Weaknesses of his company compared to competitors and Opportunities and Threats that he identified in selected EU markets.

An example of a SWOT analysis of an exporter in the high quality/high price segment is given below:

STRENGTHS	**WEAKNESSES**
• Relatively low labour costs • Consistent and high product quality • Frequent shipping departures to EU ports	• High cost of capital • Weak language capabilities • Raw material needs to be imported
OPPORTUNITIES	**THREATS**
• Slow but steady growth in EU DIY markets	• Economic downturn in many EU countries limiting short term growth prospects • Cheap imports from China

Please note that the above matrix is just an example and every potential exporter should adapt the matrix to his own situation. Based on the SWOT analysis, the exporter should evaluate the consequences of improving his weaknesses and whether the threats pose manageable obstacles to start exporting to the EU.

When the company's strengths and the opportunities that are seen in the market outweigh the company's weaknesses and the threats that are perceived in the market, the company can consider to go ahead with exporting to EU markets and commence preparations.

12.2. Strategic options & objectives

Based on the SWOT analysis, the exporter thus should be able to decide whether or not to export. If the potential exporter decides to indeed export to the EU, he should formulate his strategy to enter the EU market. This marketing strategy is designed around the information collected in the internal and external analysis. The market entry strategy (MES) deals with the following subjects:

- *Identification of selected EU markets*
  From the SWOT analysis, the exporter should also be able to identify suitable target markets. It is advisable to select only one or two EU markets. In this way, the exporter can focus his efforts and concentrate his (often limited) resources. After gaining experience and after establishment of regular exports a solid base is formed to further roll out to other EU countries.
  Selection of too many markets leads to diffusion of resources and often failed efforts to establish a durable position.
- *Market segments*
  As described in Part A of this report, there are two main market segments for fasteners and builder's hardware. The main differentiating factor is their requirement for accredited quality aspects. Accreditation is a lengthy and time-consuming process, and all but the already experienced exporters should therefore target the DIY market segment.
- *Type of distribution channel and trade partner to appoint*
  The DIY market is best served through the DIY chains, which will place orders directly with exporters in developing countries. However, as long as you are not tied down in an exclusivity contract, you may also consider wholesalers if these show an interest in your product.
- *Product and packaging*

Based on the requirements of selected markets and market segment, the exporter should determine which product range to offer and whether his products needs to be modified to meet market demand. Packaging and labelling need to be suitable for shipping to EU markets. Note that when retailers receive the merchandise they will want to transfer them to the shelves in the retail outlet with as little time and effort and as possible.

- *Pricing*
  Pricing fasteners and builder's hardware for export to EU destinations requires thorough attention. On one hand, the products should be priced in accordance with (very competitive) pricing levels of the market segment chosen, on the other hand the selling price should leave the exporter a healthy margin to allow him to invest in building a durable export position.
  It is very important to include all additional costs with respect to the export transaction in the cost price, such as:
    - Additional production and packaging costs
    - Interest to cover extended payment periods
    - Cost of export documents and inspection
- *Promotion*
  The exporter should determine which promotional tools he will use to make his export proposition known to potential trade partners in the EU. When he intends to participate in EU trade fairs, the investments should be calculated beforehand. Trade fair participation is a very effective tool, but also a rather expensive one.

Objectives

After the exporter has formulated his market entry strategy, he should clearly set the objectives he wants to realise during the next 3 – 5 years. Exporting to the EU requires a long-term vision and investments to establish a durable position on EU markets.
By formulating clear objectives, the exporter provides himself benchmarks in order to determine annually whether his objectives have been met or rather have been falling below expectations. In the latter case, the exporter should adjust his strategy and determine whether to continue his export efforts.
Objectives should be clearly formulated for:

- *Annual turnover and volumes per market/per trade partner*
  It is important to set realistic targets for volume and turnover per market and per trade partner. Although the setting of these targets is a difficult exercise when the exporter does not have experience in the selected markets, they provide a basis for export budgets and for the level of investments needed to realise these objectives.
  In this way, the company can determine the viability of exports to the EU and can compare the actual results per period compared to the budgeted results.
  It is extremely difficult to set objectives for annual turnover. A good way to solve this problem is to work with different scenarios:
    - an optimistic scenario, where you estimate turnover in the most favourable market conditions
    - a pessimistic scenario, where you estimate turnover in poor market conditions

  The optimistic and pessimistic scenarios give the lower and upper bounds of your turnover objectives. A realistic objective will fall somewhere within this range.
  By using this approach, it is possible to calculate profitability in both scenarios. When profitability is marginal even in the optimistic scenario, the exporter should think twice before entering EU markets.
- *Profitability*
  Building up a sustainable export position in the EU market requires a long-term approach. In order to build up a durable position, profitability is essential. As with volumes and turnover, actual profits realised should be compared to budgeted profits.

Formulating an export marketing strategy based upon sound information used in the external and internal analysis and a proper assessment of this information increases the chances that the best option

will be selected, resources will be utilised effectively, and efforts will consequently be carried through to completion.

For assistance in the formulation of the Market Entry Strategy, please refer to CBI's Export Planner. For general information on conducting market research please refer to the CBI's manual on market research. In addition, the tools provided in the next chapter will be helpful to draw up the MES as well as the Export Marketing Plan.

13. MARKETING TOOLS

13.1. Matching products and the product range

For most of the fasteners covered in this survey, due to the high level of standardisation there is little direct need to supply a full range of products from point of view of the final consumer. However, for the wholesaler/retailer there may be gains from dealing with fewer suppliers. From that perspective, it may be worthwhile to consider expanding the product range. For example, if you are already supplying 6, 8, and 12 mm chipboard screws, you should be in a good position to also win a contract to supply the 16 mm screws. On the other hand, it is impossible to supply all possible types of screws, and you should carefully assess the net contribution to your profits that you can expect by expanding the product range. Using the current example, it may be the case that there already exists one highly specialised producer of 16mm chipboard screws against which you cannot compete. In that case, if you still want to expand your product range, the best opportunities to exploit your already well established relationship with your trading partner might lie in supplying a completely different type of screw.

For builder's hardware covered in this survey there is some scope to offer a complete product range, particularly for those products that are not only functional but also have a design element, for example door locks and handles. For these products, it is advisable to offer different types within the same style. However, for most items it is difficult to define a full product range, and this may best be done in cooperation with the trading partner.

13.2. Building up a relationship with a suitable trading partner

Among the many potential customers, you must identify those who match your own company profile and product range and are therefore most suitable for building up a relationship. At the end of the identification phase, the supplier should have selected the names and addresses of suitable trading partners. Sources of information to contact in the producer's country are:

- The country of destination's Chamber of Commerce for Foreign Trade, and/or
- The Economic Affairs departments of the country of destination's official representative (Embassy or Consulate).

Sources of information to contact in the country of destination are:

- Business Support Organisations (former Import Promotion Organisations);
- Trade Associations (see appendix 3.3);
- Country's public and private trade promotion bodies;
- Country's diplomatic and consulate representatives;
- Chambers of Commerce; and,
- Trade fair organisers, through printed catalogues or websites (see appendix 3.4);
- Trade directories, like http://www.kompass.com or http://www.europages.com;
- Consulting trade press (see appendix 3.5).

It has to be noted that many sources of information only answer written inquiries. Also, a detailed inquiry improves the chances of precise identification.

Evaluate the received names and addresses, using the following criteria:

- Is the information complete?
  - Full address, including email;
  - Telephone and fax number;
  - Name of the person to contact.,
- In which countries is the trading partner active?
- What is the range of products the trading partner deals in?
- In which market segment is the trading partner active?
- Which other companies are supplying the potential trading partner?

- Is there enough sound information about the reliability of this partner?
- What is the financial status of the trading partner? (Check your potential buyers' financial status credibility if possible, for instance credit rating reports by Dunn and Bradstreet (http://www.dnb.com)).

Using these criteria, draw up a priority list of the contact addresses you have received. To some extent, the European DIY market is still segmented into national markets subject to national trends in fashion and other developments. Some of the large DIY chains may therefore still operate on a national level and will have national headquarters where autonomous purchasing decisions are taken. The purchasing departments of these national headquarters are a good point of initial contact. In some cases, you can simply visit the website of the large DIY chain, which will have instructions on how interested suppliers should get in touch. These may vary from a few simple questions about the company and the product range to slightly more detailed information on current customers and sales volumes (exports) in different geographical regions in the world. Even where this facility is not provided on the website, a formal letter with the key information about the company and the supplied product range is sufficient to express an interest in becoming a supplier. Please refer to section 13.5 for some further information.

A profound knowledge of the prevailing business culture in the country of the trading partner is one of the main keys to a durable relationship. In spite of all modern communication tools, the personal relationship with a trading partner often decides whether the cooperation is long-term or not. The first meeting with a trading partner in the EU is the most crucial one, since the first impression a trading partner gets during this encounter is usually decisive for future cooperation. Although there are some cultural differences in dealing with trade partners from different EU countries, the following aspects are important in all EU countries in order to build up a good relationship.

- Open and prompt communication. When asked questions or in case of enquiries, an answer within 24 hours is very much appreciated
- Timely information in case of problems. For example, when shipments will be delayed, please inform your trade partner in time. He will be able to take the necessary measures on his side. Even when you only expect problems, advise your trade partner

Giving a professional appearance and being reliable are the key issues to build up a durable relationship.

13.3. Drawing up an offer

After establishing contacts with potential trade partners in the EU, the exporter might be requested to make an offer. The preparation of an offer should be done with caution. An offer without escape clauses and accepted by an EU trading partner is a legally binding document requiring the exporter to deliver on the specified terms, even when the trading conditions are unfavourable to him.

Before making an offer, the exporter should verify the following items:

- Reputation of trade partner

  Important to check whether the trade partner requesting an offer is well established and has a good reputation. Sources to check are:
  - Branch organisations in the EU (see appendix 3.4)
  - Trade registers in the country of the trade partner, for example the Chamber of Commerce
  - Commercial organisations, which can supply company profiles like Dun & Bradstreet, Cofaz and Graydon. The provided information is usually quite extensive, but reports from these organisations can be quite expensive.

- Rules, regulations and quality standards

  It is important to verify whether the exporter can comply with EU and national regulations on products and packaging and the specifications requested by the trade partner.

When making an offer, the following elements should be included:

- Date of quotation and a reference number. This number can at a later stage be used on contracts, payment and shipping documents as an easy reference to the consignment in question.
- Full names and addresses of both parties;
- Product and product specifications;
- Packaging specifications;
- Quantity in units;
- Price per unit, currency (ideally in Euros) and total amount;
- Delivery terms (Incoterms 2000);
- Delivery period;
- Payment terms;
- Validity of the quotation;
- Waiver. This is a very important element of the quotation. The waiver gives the exporter an escape clause not to honour the quotation, even when accepted by the EU trade partner. A waiver in the offer is quite customary and can be worded as follows:
    - This quote is subject to our confirmation;
    - This offer is without any obligations;
    - This offer is subject to confirmation by means of a sales contract.

  An offer made without waiver and accepted by the buyer obliges the exporter to deliver the goods according to the quotation.
- Referral to the general sales conditions of the exporter. General sales conditions apply to all offers and contracts and stipulates items like:
    - Retention of title of the goods (in case of non-payment);
    - Product liability;
    - Force majeur (when an exporter cannot supply due to circumstances beyond his control like strikes, fires, political unrest, perils of the sea);
    - Resolution of disputes;
    - Delayed payment, late/non delivery;
    - Inspection procedures;
    - Exclusion of Value Added Taxes (VAT) in price quotations;
    - Please remember that the general sales conditions of an exporter might conflict with the general purchasing conditions of an importer.

Another aspects to consider are exclusive rights. A European trade partner may demand exclusive rights to market the exporter's products in a given country and prohibit the exporter to supply other companies in the region. In return for such an exclusive right the exporter may demand from the trading partner that he will carry the full product range of the exporter.

Note that your offered price should be realistic. Although some contract negotiations will take place, major price adjustments during negotiations will undermine your credibility: either you were trying to rip off your trading partner when quoting the high price, or lowering your price will lead to significant concessions with respect to quality and reliability. However, you may offer price discounts depending on the size of the order, with larger orders qualifying for larger discount.

In section 10.5 an overview of the price structure was given. Using the indicated margins and end-user prices that you can collect from the market you should be able to work out a competitive "CIF Europe" price. This price should cover all your costs and ideally leave a profit margin; otherwise there is not much point in exporting. Calculating your cost price is therefore of crucial importance.

When calculating your own cost price, make sure that you consider all your cost components:

- Raw materials;
- Packaging materials;
- Labour costs;
- Overhead expenses;
- Other cost components (e.g. financing expenses).

You must have an overview of all these cost components at all times. Other factors to be considered are:

- An increase in production will tend to lower the purchasing costs of various components such as raw materials and packaging materials, thus increasing the overall profit level, including local sales.
- Increasing utilization of the existing production capacity will induce a fall in the fixed general costs (per unit).

The extent of the profit margin that you can add to your cost price depends on prevailing market prices. As indicated before, the price structure presented in section 10.5 should provide appropriate guidance.

13.4. Handling the contract

Payment terms

Payment terms form an important negotiation tool for the exporter. By granting credit terms to his trade partner in the EU and by accepting less secure forms of payment, he can stimulate trade partners to accept his offer.

The different payment methods and the risks attached to them are extensively described in CBI's Export Planner. Note, however, that in the fasteners and builder's hardware market, payment by irrevocable letter of credit is most widely used. Other forms of payments may be adopted when the business relationship has been thoroughly established. Credit is generally expected for at least 30 days, but this may be subject to negotiation.

Exporters who want to supply EU markets will invariably be faced with longer payment terms compared to their home markets. Usually, trade partners will wait with payment until they have inspected the goods upon arrival in their warehouse against the (approved) samples they received. Depending on the shipping period, the exporter can easily face a period of 8-12 weeks after production of the goods before he receives payment of the invoice. The interest he looses should be calculated into his cost price. This is especially important for countries with high interest rates.

Once the offer has been accepted by the buyer and reconfirmed by the exporter, a sales contract will be prepared. Reference is made to the sales contracts of the International Chamber of Commerce (ICC). The ICC sales contracts contain all the necessary elements and can be used as a good basis. However, in practice, an offer signed by both parties automatically converses into a sales contract.

Delivery terms

Delivery terms should be based on the INCOTERMS 2000 issued by the International Chamber of Commerce (ICC). For full details on the INCOTERMS, please check CBI's Export Planner or request a copy of the INCOTERMS 2000 from the ICC. Delivery terms in the fasteners and builder's hardware sector are usually CIF Europe.

13.5. Sales promotion

To promote the exports of his products to markets in the EU, an exporter of fasteners and builder's hardware can apply the following tools:

- Participation in trade fairs in the EU.
  This is by far the most important promotion tool, as the exporter has the opportunity to present his products to importers, agents, manufacturers and retailers from all EU countries. One of the most important trade fairs in the EU is Practical World (formerly known as International Hardware Fair/DIY'TEC). Please check contact details in appendix 3.5 of this survey. Further reference is made to CBI's 'Your show master'.
- Company brochures and product samples

A company brochure should be factual, in order to inform potential trade partners on relevant information of the company. Lengthy stories about the founding family and historic reviews should be omitted, as these are of little interest to trade partners in the EU. Instead information should be given about production capacities, applied technology, processing equipment, organisation, markets (both domestic and export), turnover and personnel. This way, a potential trade partner will be able to form an image of your company.
Be careful not to exaggerate and to 'walk your talk' (deliver what you promise).

- Visits to potential trade partners in the EU
  As personal contacts always work best in any sector, the exporter should invest time and money to visit EU trade partners. It is advisable to allow additional weeks after a trade fair to follow up on contacts and to make appointments with the most promising trade partners.
- Company stationary
  In order to build the right image for your company, please make sure that the layout, colours and texts of your letterheads, invoices, business cards and envelopes is consistent and that good quality paper is used. Company stationary is an important ambassador for your company as they are sent/given to EU trade partners.
- E-promotion
  This applies to the use of e-mail and website. A website forms an easy reference for any EU partner to obtain information about your company. In designing a website for your company, the same rules as for company brochures apply: factual and to-the-point information is all a trade partner wants to see. Time is at a premium for trade partners and nobody wants to spend any time in reading information not relevant to their business. Therefore, the information should be structured very clearly.
- Samples
  Samples are another tool to promote fasteners and builder's hardware. These may be sent to accompany an offer, and should therefore in all aspects reflect the actual products that you are going to export.

An additional service that could be offered is to provide installation manuals for the supplied products, where necessary, e.g. door locks and handles. When such a manual is provided, make sure that it is written clearly and concisely and easily understandable by consumers in the target country. Often, manuals are poorly translated from the language of the manufacturer and result in almost unintelligible humbug. It is worth taking the extra effort of having the manual checked in the target country – your trade partner may be able to assist.

For further details on above-mentioned subjects, please check CBI's 'Your image builder'.

APPENDIX 1 DETAILED HS CODES

HS-code	Description
	FASTENERS
7317 00	**Nails, tacks, drawing pins, corrugated nails, staples (other than those of heading No 8305) and similar articles, of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper**
	- - Cold pressed from wire:
7317 00 20	- - - Nails in strips or coils
7317 00 40	- - - Nails of steel containing by weight 0.5 % or more of carbon, hardened
	- - - Other:
7317 00 61	- - - - Plated or coated with zinc
7317 00 69	- - - - Other
7317 00 90	- - Other
7318	**Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (incl. spring washers) and similar articles, of iron or steel**
	- Threaded articles:
7318 11 00	- - Coach screws
7318 12	- - Other wood screws:
7318 12 10	- - - Of stainless steel
7318 12 90	- - - Other
7318 13 00	- - Screw hooks and screw rings
7318 14	- - Self tapping screws:
7318 14 10	- - - Of stainless steel
	- - - Other:
7318 14 91	- - - - Spaced-thread screws
7318 14 99	- - - - Other
7318 15	- - Other screws and bolts, whether or not with their nuts or washers
7318 15 10	- - - Screws, turned from bars, rods, profiles, or wire, of solid section, of a shank thickness not exceeding 6 mm
	- - - Other:
7318 15 20	- - - - For fixing railway track construction material
	- - - - Other:
	- - - - - Without heads:
7318 15 30	- - - - - - Of stainless steel
	- - - - - - Other, with a tensile strength:
7318 15 41	- - - - - - - Of less than 800 MPa
7318 15 49	- - - - - - - Of 800 MPa or more
	- - - - - With heads:
	- - - - - - Slotted and cross-recessed screws:
7318 15 51	- - - - - - - Of stainless steel
7318 15 59	- - - - - - - Other
	- - - - - - Hexagon socket head screws:
7318 15 61	- - - - - - - Of stainless steel
7318 15 69	- - - - - - - Other
	- - - - - - Hexagon bolts:
7318 15 70	- - - - - - - Of stainless steel
	- - - - - - - Other, with a tensile strength:
7318 15 81	- - - - - - - - Of less than 800 Mpa
7318 15 89	- - - - - - - - Of 800 Mpa or more
7318 15 90	- - - - - - Other
7318 16	- - Nuts:
7318 16 10	- - - Turned from bars, rods, profiles, or wire, of solid section, of a hole

	diameter not exceeding 6 mm
	- - - Other:
7618 16 30	- - - - Of stainless steel
	- - - - Other:
7318 16 50	- - - - - Self-locking nuts
	- - - - - Other, with an inside diameter:
7318 16 91	- - - - - - Not exceeding 12 mm
7318 16 99	- - - - - - Exceeding 12mm
7318 19 00	- - Other
	- Non-threaded articles:
7318 21 00	- - Spring washers and other lock washers
7318 22 00	- - Other washers
7318 23 00	- - Rivets
7318 24 00	- - Cotters and cotter-pins
7318 29 00	- - Other
	BUILDER'S HARDWARE
8301	**Padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal**
8301 10 00	- Padlocks
8301 20 00	- Locks of a kind used for motor vehicles
8301 30 00	- Locks of a kind used for furniture
8301 40	- Other locks:
	- - Locks of a kind used for doors of buildings:
8301 40 11	- - - Cylinder
8301 40 19	- - - Other
8301 40 90	- - Other locks
8301 50 00	- Clasps and frames with clasps, incorporating locks
8301 60 00	- Parts
8301 70 00	- Keys presented separately
8302	**Base metal mountings, fittings and similar articles suitable for furniture, doors, staircases, windows, blinds, coachwork, saddlery, trunks, chests, caskets or the like; base metal hat-racks, hat-pegs, brackets and similar fixtures; castors with mountings of base metal; automatic door closers of base metal**
8302 10	- Hinges:
8302 10 10	- - For use in civil aircraft
8302 10 90	- - Other
8302 20	- Castors:
8302 20 10	- - For use in civil aircraft
8302 20 90	- - Other
8302 30 00	- Other mountings, fittings and similar articles suitable for motor vehicles
	- Other mountings, fittings and similar articles:
8302 41 00	- - Suitable for buildings
8302 42	- - Other, suitable for furniture:
8302 42 10	- - - For use in civil aircraft
8302 42 90	- - - Other
8302 49	- - Other:
8302 49 10	- - - For use in civil aircraft
8302 49 90	- - - Other
8302 50 00	- Hat-racks, hat-pegs, brackets and similar fixtures
8302 60 00	- Automatic door closers
8302 60 10	- - For use in civil aircraft
8302 60 90	- - Other

APPENDIX 2 DETAILED IMPORT/EXPORT STATISTICS

Table A2.1 Imports of fasteners and builders hardware by detailed product group, 1999-2001 EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
TOTAL	**9.672.129**	**2.748.263**	**11.334.353**	**3.506.342**	**11.288.154**	**3.446.127**
A. FASTENERS	**4.438.770**	**1.860.016**	**5.306.680**	**2.201.460**	**5.201.391**	**2.138.637**
1. Nails, tacks, drawing pins, corrugated nails, staples (other than those of heading No 8305) and similar articles, of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper	**318.646**	**278.390**	**349.833**	**302.104**	**326.269**	**281.809**
2. Screw, bolts, nuts, coach, screws, srew hooks, rivets, cotters, cotterpins, washers (including spring washers) and similar articles, of iron or steel	**4.120.124**	**1.581.626**	**4.956.847**	**1.899.356**	**4.875.122**	**1.856.828**
a. Threaded articles	3.325.824	1.423.922	3.973.185	1.715.464	3.883.348	1.677.455
- *Coach screws*	18.745	16.773	28.377	24.916	26.637	23.568
- *Other wood screws*	208.058	108.136	254.578	134.597	244.974	130.851
- *Screw hooks and screw rings*	22.986	8.055	26.441	9.538	26.265	9.270
- *Self-tapping screws*	375.376	135.248	434.201	154.500	388.972	136.662
- *Other screws and bolts, whether or not with their*	1.850.554	806.586	2.197.014	927.973	2.189.897	924.978
- *Nuts*	511.824	239.936	639.646	315.758	589.275	295.891
- *Other*	338.281	109.188	392.928	148.182	417.328	156.235
b. Non-threaded articles	794.300	157.704	983.662	183.892	991.774	179.373
- *Spring washers and other lock washers*	86.893	14.566	101.604	16.100	165.567	26.158
- *Other washers*	207.351	50.174	280.211	64.471	205.179	47.708
- *Rivets*	81.447	18.385	94.485	18.818	92.539	18.441
- *Cotters and cotter-pins*	59.697	9.589	70.839	13.141	69.820	12.934
- *Other*	358.912	64.990	436.523	71.362	458.669	74.131
B. BUIDERS HARDWARE	**5.233.359**	**888.247**	**6.027.673**	**1.304.882**	**6.086.763**	**1.307.490**
1. Padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal	**1.524.606**	**130.206**	**1.733.941**	**148.845**	**1.751.033**	**151.015**
a. Padlocks	95.553	15.281	116.499	17.463	112.185	16.488
b. Locks of a kind used for motor vehicles	577.119	38.787	634.538	41.028	651.748	43.066
c. Locks of a kind used for furniture	42.870	3.819	51.559	5.171	50.258	5.293
d. Other locks	380.398	33.775	421.029	39.074	424.698	39.381
e. Clasps and frames with clasps, incorporating locks	18.532	1.891	18.055	2.558	20.026	2.838
f. Parts	337.448	31.558	396.943	37.163	410.698	38.290
g. Keys presented separately	72.686	5.095	95.318	6.388	81.420	5.659
2. Base metal mountings, fittings, etc	**3.708.753**	**758.041**	**4.293.732**	**1.156.037**	**4.335.730**	**1.156.475**
a. Hinges	465.948	101.679	534.690	111.483	552.059	115.340
b. Castors	93.201	28.282	109.171	28.011	110.873	28.575
c. Other mountings, fittings and similar articles suitable	503.446	56.971	532.672	63.239	605.496	72.289
d. Other mountings, fittings and similar articles	2.313.498	469.078	2.740.026	813.999	2.668.948	792.411
- *Suitable for buildings*	1.000.492	173.631	1.184.986	382.340	1.159.340	373.599
- *Other, suitable for furniture*	779.529	218.374	913.937	259.537	914.476	260.243
- *Other*	533.477	77.073	641.103	172.122	595.132	158.568
e. Hat-racks, hat-pegs, brackets and similar fixtures	101.611	27.918	109.953	31.531	124.579	35.688
f. Automatic door closers	231.049	74.113	267.220	107.774	273.775	112.171

Source: Eurostat (2003)

Table A2.2 EU Imports of fasteners and builder's hardware 1999-2001 and main source countries
EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	**Volume**	**Value €**	**Volume**	**Value €**	**Volume**
Total	9,645,819	2,735,485	11,293,733	3,490,611	11,271,422	3,159,427
Extra EU	2,963,091	1,106,914	3,735,853	1,291,748	3,864,404	1,301,051
Developing Countries	668,786	378,458	925,472	485,368	1,052,310	511,001
Top suppliers						
Germany	2,521,194	527,547	2,773,202	655,926	2,743,388	654,550
Italy	1,176,106	365,915	1,376,907	581,197	1,316,681	384,278
France	678,322	170,050	786,227	148,424	715,314	154,687
Top developing countries						
China	324,103	197,177	494,955	277,914	568,476	300,863
India	70,045	30,914	87,941	36,960	101,910	43,250
Slovenia	53,143	21,052	66,190	25,901	68,288	23,333
Malaysia	50,744	47,076	67,964	58,522	56,944	47,600
Turkey	29,051	16,047	33,169	17,701	39,904	18,900
South Korea	42,105	20,197	40,250	13,791	38,901	11,049
Thailand	28,100	21,079	38,801	25,280	38,784	22,922
Indonesia	0	0	0	0	27,178	11,283
Philippines	15,701	5,655	21,438	5,522	20,316	5,389
South Africa	9,097	3,553	12,391	5,381	14,380	6,288

Source: Eurostat (2003)

Table A2.3 EU Imports of nails, tacks, drawing pins, corrugated nails, staples and similar articles of iron or steel by source from developing countries 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
Total	318,442	278,030	349,267	301,868	325,635	262,865
Extra EU	137,178	161,002	149,607	172,590	144,206	164,810
Developing Countries	18,918	21,879	22,028	21,021	21,276	16,587
Top 3 suppliers						
Fr Germany	43,153	25,279	47,585	27,376	46,975	23,317
Poland	26,869	38,940	32,442	46,785	35,505	44,627
France	23,794	13,940	23,716	8,809	22,280	7,860
Top 10 developing countries						
China	9,086	11,016	12,197	11,932	14,450	11,132
South Korea	5,419	5,081	4,530	2,885	2,963	1,624
Turkey	1,888	2,943	2,136	3,000	1,548	1,836
South Africa	380	231	517	772	516	945
Colombia	435	64	555	68	486	63
India	490	456	729	794	391	236
Slovenia	164	91	340	116	386	89
Malaysia	211	156	178	135	174	183
Malta	133	255	167	315	117	263
Croatia	52	20	177	127	54	17

Source: Eurostat (2003)

Table A2.4 EU Imports of threaded screws, bolts, nuts, coach, screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers) and similar articles, of iron or steel by source from developing countries 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
Total	3,303,097	1,411,998	3,936,211	1,700,679	3,873,053	1,663,849
Extra EU	1,306,316	648,029	1,643,891	749,045	1,628,945	745,202
Developing Countries	266,969	234,470	371,257	299,235	427,949	321,099
Top 3 suppliers						
Fr Germany	735,743	242,444	829,778	369,810	821,573	369,708
Italy	405,096	196,182	482,925	227,214	454,613	213,182
Taiwan	325,819	245,610	394,594	255,789	364,147	223,016
Top 10 developing countries						
China	112,918	116,201	173,450	163,038	199,760	180,819
Malaysia	43,151	45,509	57,494	56,408	49,132	45,343
Thailand	22,536	19,700	29,808	24,273	28,182	21,460
India	18,345	15,634	22,974	17,578	26,482	21,110
Indonesia	0	0	0	0	26,262	11,061
Turkey	11,747	7,848	17,054	10,800	20,029	11,967
Philippines	14,720	5,507	18,055	5,027	15,966	4,801
South Korea	18,947	11,882	15,285	7,429	14,767	6,543
Slovenia	8,689	2,591	10,587	3,053	12,345	3,532
Vietnam	1,708	505	7,534	1,800	11,975	3,174

Source: Eurostat (2003)

Table A2.5 EU Imports of non-threaded screws, bolts, nuts, coach, screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers) and similar articles, of iron or steel by source from developing countries 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
Total	793,555	157,631	983,489	183,871	991,329	176,137
Extra EU	292,359	52,136	364,622	63,236	367,840	60,595
Developing Countries	29,103	19,348	44,807	27,724	46,493	24,354
Top 3 suppliers						
Fr Germany	222,062	50,205	285,120	53,510	230,468	55,642
USA	95,312	5,434	124,196	5,728	120,981	5,896
Switzerland	101,764	9,120	112,169	8,920	117,533	8,536
Top 10 developing countries						
China	13,796	12,924	25,938	20,196	22,486	16,500
Slovenia	3,261	1,697	4,676	2,632	7,763	2,826
India	3,828	1,801	5,333	2,171	4,534	1,822
Turkey	3,825	1,530	3,710	1,278	4,331	1,508
South Africa	282	44	795	238	1,573	334
Thailand	604	340	337	157	1,212	413
Croatia	337	138	458	123	855	182
Malaysia	422	132	357	74	785	190
South Korea	1,137	356	1,170	379	783	188
Brazil	978	106	831	147	768	33

Source: Eurostat (2003)

Table A2.6 EU Imports of padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal by source from developing countries 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
Total	1,523,561	130,126	1,733,457	148,779	1,750,089	150,921
Extra EU	420,576	49,566	530,069	58,241	598,326	63,690
Developing Countries	118,007	22,810	151,060	28,796	155,729	27,233
Top 3 suppliers						
Fr Germany	456,832	26,888	452,131	32,511	440,093	28,286
France	163,595	9,680	198,444	10,388	180,449	12,940
Czech Rep.	89,488	10,680	111,456	11,370	150,449	14,375
Top 10 developing countries						
China	80,990	18,290	106,405	22,777	103,421	20,752
South Korea	10,956	466	12,086	666	14,992	785
Albania	2,822	622	4,367	935	7,259	1,634
Malaysia	5,569	661	7,014	790	3,800	284
Turkey	2,602	539	2,967	628	3,787	704
Bosnia-Herz.	143	39	890	211	3,415	374
Slovenia	3,127	365	3,038	334	3,129	346
Morocco	2,979	807	4,118	1,274	3,118	895
Mexico	1,465	120	1,496	88	2,687	165
Brazil	716	44	1,757	95	2,356	147

Source: Eurostat (2003)

Table A2.7 EU Imports of base metal mountings, fittings, etc by source from developing countries 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	**Volume**	**Value €**	**Volume**	**Value €**	**Volume**
Total	3,707,164	757,700	4,291,309	1,155,414	4,331,316	905,655
Extra EU	806,662	196,181	1,047,664	248,636	1,125,087	266,753
Developing Countries	235,789	79,951	336,320	108,592	400,863	121,728
Top 3 suppliers						
Fr Germany	1,063,404	182,731	1,158,588	172,719	1,204,279	177,597
Italy	572,819	133,290	678,843	303,814	650,110	131,911
Austria	290,623	60,987	308,955	64,928	326,686	68,788
Top 10 developing countries						
China	107,313	38,746	176,965	59,971	228,359	71,660
India	45,037	12,565	56,224	15,890	68,273	19,659
Slovenia	37,902	16,308	47,549	19,766	44,665	16,540
Turkey	8,989	3,187	7,302	1,995	10,209	2,885
Thailand	4,429	540	8,071	752	7,824	933
South Africa	3,955	591	5,871	891	6,571	920
Mexico	3,689	1,089	5,284	1,565	6,139	1,482
South Korea	5,646	2,412	7,179	2,432	5,396	1,909
Brazil	4,573	599	4,366	542	4,448	716
Philippines	971	145	3,252	458	4,138	534

Source: Eurostat (2003)

Table A2.8 EU Exports by product group 1999-2001, EUR 1,000 / tonnes

	1999		2000		2001	
	Value €	Volume	Value €	Volume	Value €	Volume
A. FASTENERS	**3.903.565**	**1.451.171**	**4.560.416**	**1.579.121**	**4.383.504**	**1.329.410**
1. Nails, tacks, drawing pins, corrugated nails, staples (other than those of heading No 8305) and similar articles, of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper	**246.598**	**176.325**	**281.582**	**196.883**	**266.023**	**178.314**
2. Screw, bolts, nuts, coach, screws, srew hooks, rivets, cotters, cotterpins, washers (including spring washers) and similar articles, of iron or steel	**3.656.967**	**1.274.846**	**4.278.834**	**1.382.238**	**4.117.481**	**1.151.096**
a. Threaded articles	3.012.673	1.166.201	3.509.785	1.255.443	3.338.357	1.035.362
- *Coach screws*	23.516	18.080	26.084	19.455	31.044	21.412
- *Other wood screws*	128.819	47.395	155.459	57.043	150.872	55.394
- *Screw hooks and screw rings*	21.885	5.716	24.505	6.250	21.963	5.843
- *Self-tapping screws*	265.227	59.678	308.692	68.572	283.529	64.742
- *Other screws and bolts, whether or not with their*	1.795.344	765.566	2.096.159	822.849	2.007.177	650.792
- *Nuts*	426.169	148.945	500.950	145.654	419.875	103.314
- *Other*	351.713	120.821	397.936	135.620	423.897	133.865
b. Non-threaded articles	644.294	108.645	769.049	126.795	779.124	115.734
- *Spring washers and other lock washers*	95.187	14.648	109.775	16.771	114.399	15.769
- *Other washers*	113.915	24.943	155.898	33.441	148.462	30.204
- *Rivets*	74.041	12.558	78.515	16.934	79.035	14.399
- *Cotters and cotter-pins*	47.711	6.125	42.653	7.646	43.070	5.329
- *Other*	313.440	50.371	382.208	52.003	394.158	50.033
B. BUIDERS HARDWARE	**6.719.833**	**987.637**	**7.327.817**	**1.079.771**	**7.691.463**	**1.214.848**
1. Padlocks and locks (key, combination or electrically operated), of base metal; clasps and frames with clasps, incorporating locks, of base metal; keys for any of the foregoing articles, of base metal	**1.757.675**	**136.381**	**1.878.371**	**140.798**	**1.882.586**	**143.689**
a. Padlocks	66.941	6.355	73.416	6.854	78.267	6.634
b. Locks of a kind used for motor vehicles	688.609	42.578	707.465	38.638	661.200	40.216
c. Locks of a kind used for furniture	70.300	4.363	81.723	6.218	72.762	5.035
d. Other locks	468.251	38.681	501.945	39.866	524.985	42.921
e. Clasps and frames with clasps, incorporating locks	19.849	3.172	20.579	3.322	20.268	3.245
f. Parts	336.585	36.037	370.831	40.217	398.276	39.644
g. Keys presented separately	107.140	5.195	122.412	5.683	126.828	5.994
2. Base metal mountings, fittings, etc	**4.962.158**	**851.256**	**5.449.446**	**938.973**	**5.808.877**	**1.071.159**
a. Hinges	660.746	123.001	754.111	140.995	816.831	154.354
b. Castors	130.157	24.594	112.629	22.947	124.043	24.759
c. Other mountings, fittings and similar articles suitable	824.339	111.978	843.462	109.294	1.024.497	125.158
d. Other mountings, fittings and similar articles	2.930.917	543.489	3.254.222	610.297	3.343.900	709.997
- *Suitable for buildings*	1.284.980	184.098	1.385.226	196.232	1.468.068	208.457
- *Other, suitable for furniture*	1.002.840	272.572	1.148.647	320.946	1.188.336	331.153
- *Other*	643.097	86.819	720.349	93.119	687.496	170.387
e. Hat-racks, hat-pegs, brackets and similar fixtures	98.163	22.762	113.393	25.923	110.956	24.828
f. Automatic door closers	317.836	25.432	371.629	29.517	388.650	32.063

Source: Eurostat (2003)

APPENDIX 3 USEFUL ADDRESSES

A3.1 STANDARDS ORGANISATIONS

INTERNATIONAL
Internationalisation Standardisation Institute (ISO)
E-mail: central@iso.ch
Internet: www.iso.ch

EUROPEAN UNION
Comité Européen de Normalisation (CEN)
European Normalisation Committee
E-mail: infodesk@cenorm.be
Internet: www.cenorm.be

AUSTRIA
Österreichisches Normungsinstitut (ON)
Austrian Standards Institute
E-mail: infostelle@on-norm.at
Internet: www.on-norm.at

BELGIUM
Institut Belge de Normalisation (IBN)
Belgian Institut for Standardisation
E-mail: info@ibn.be
Internet: www.ibn.be

DENMARK
Dansk Standard (DS)
Danish Standards Organisation
E-mail: dansk.standard@ds.dk
Internet: www.ds.dk

FINLAND
Suomen standardisoimisliito r.y. (SFS)
Finish Standards Organisation
E-mail: info@sfs.fi
Internet: www.sfs.fi

FRANCE
Association Française de Normalisation (AFNOR)
French Association for Standardisation
Telephone: +33 (0)1 42915555
Fax: +33 (0)1 42915656
Internet: www.afnor.fr

GERMANY
Deutsches Institut für Normung eV (DIN)
German Institute for Standardisation
E-mail: postmaster@din.de
Internet: www.din.de

GREECE
Hellenic Organisation for Standardisation (ELOT)
E-mail: info@elot.gr
Internet: www.elot.gr

ITALY
Ente Nazionale Italiano di Unificazione (UNI)
Italian National Standards Body

E-mail: uni@uni.unicei.it
Internet: www.unicei.it

IRELAND
National Standards Authority of Ireland (NSAI)
E-mail: nsai@nsai.ie
Internet: www.nsai.ie

LUXEMBOURG
Service de l'Energie de l'Etat (SEE)
State Energy Services
E-mail: see.normalisation@eg.etat.lu
Internet: www.etat.lu/SEE/

THE NETHERLANDS
Nederlands Normalisatie Instituut (NEN)
Netherlands Standardisation Institute
E-mail: info@nen.nl
Internet: www.nen.nl

PORTUGAL
Instituto Português Da Qualidade (Ipq)
Portuguese Institute for Standardisation
E-mail: ipq@mail.ipq.pt
Internet: www.ipq.pt

SPAIN
Asociación Española de Normalización y Certificación (AENOR)
Spanish Association for Normalisation and Certification
E-mail: info@aenor.es
Internet: www.aenor.es

SWEDEN
Standardiseringen i Sverige (SIS)
Swedish Standards Institute
E-mail: info@sis.se
Internet: www.sis.se

UNITED KINGDOM
British Standards Institution (BSI)
E-mail: info@bsi.org.uk
Internet: www.bsi.org.uk

A3.2 SOURCES OF PRICE INFORMATION

Components direct
E-mail: sales@comdir.co.uk
Internet: http://www.comdir.co.uk

Chronos Ltd.
E-mail: sales@chronos.ltd.uk
Internet: http://www.chronos.ltd.uk

Universal Fittings
E-mail: sales@universal-fittings.co.uk
Internet: http://www.universal-fittings.co.uk

Screwfix Direct
E-mail: online@srewfix.com
Internet: http://www.srewfix.com

Fastfix
E-mail: sales@fastfix-direct.co.uk
Internet: http://www.specialty-fasteners.co.uk/

B&Q
E-mail: imports@b-and-q.co.uk
Internet: http://www.diy.com

A3.3 TRADE ASSOCIATIONS

EUROPE
FEDIYMA
European Federation of DIY Manufacturers
E-mail: no email provided, reference to national trade associations
Internet: http://www.fediyma.com/

GERMANY
BAU + DIY GERMANY
E-mail: info@bau-und-diy.de
Website: www.bau-und-diy.de

FRANCE
UNIBAL FRANCE
E-mail: info@unibal.org
Website: www.unibal.org

UK
British Hardware and Housewares Manufacturers' Association
E-mail: bhhma@brookehouse.co.uk
Website: www.bhhma.co.uk

Association of Building Hardware Manufacturers (ABHM)
E-mail: associations@compuserve.com
Internet: http://www.abhm.org.uk

British Hardware Federation (BHF)
E-mail: webcontact@bhfgroup.demon.co.uk
Internet: http://www.bhfgroup.co.uk

THE NETHERLANDS
Vereniging van Hang en Sluitwerk (VHS), Association of Builder's Hardware
E-mail: info@vhs.nl
Internet: http://www.vhsbranche.nl

BELGIUM
FEBIN BELGIUM
E-mail: secr@febin.be
Website: www.febin.be

A3.4 TRADE FAIR ORGANISERS

GERMANY
PRACTICAL WORLD (formerly International Hardware Fair/DIY'TEC)
Location: Cologne/Germany
Date: 14-17 March 2004
Organisers: KölnMesse GmbH
Email: info@koelnmesse.de
Internet: http://www.koelnmesse.de/wEnglisch/practicalworld/index.htm

FRANCE
Batimat
Location: Paris
Date: 03-08 November 2003
Email: info@batimat.com
Internet: http://www.batimat.com/

UK
D.I.Y & Garden Show
Location: London
Date: 18-20 January 2004
Email: diyandgardenshow@firstevents.com
Internet: www.diyandgardenshow.com

SPAIN
Salon Internacional Bricolage/Expo-Ocio
Location: Madrid
Date: 13-21 March 2004
Email: info@expo-ocio.es

THE NETHERLANDS
DIY + Hardware
Location: Utrecht
Date: 13.09.04 - 15.09.04
Email: info@jaarbeursutrecht.nl
Internet: http://www.jaarbeursutrecht.nl/

BELGIUM
Do It Yourself & Hardware
Location: Kortrijk, Belgium
Date: 01.02.2004 – 03.02.2004
Organisers: DIY Partners NV
Email: diy@bab.be
Internet: http://www.diy-xpo.be

A3.5 TRADE PRESS

GERMANY

Bau & heimwerker markt (Building and homeworker market)
Language:German
Email: red.bauheimwerkermarkt@rudolf-mueller.de
Internet: http://www.rudolf-mueller.de

Baubeschlag-magazin
Language: German
Email: k.schmidt@wohlfahrt.de
Internet : http://www.schloss-und-beschlagmarkt.de

Bauhandwerk
Language: German
Email: bauhandwerk@bertelsmann.de
Internet: http://www.bauhandwerk.de

BM Bau- und Möbelschreiner
Language: German
Email: bm.redaktion@konradin.de
Internet: http://www.bm-online.de/home.htm

DDS - Der Deutsche Schreiner
Language: German
Email: dds@dva.de
Internet: http://www.dds-online.de

DIY in Europe
Language: German, English, French
Email: info@daehne.de
Internet: http://www.diyglobal.com/

Eisenwaren Zeitung
Language: German
Email: ez.hz@gmx.de
Internet: NA

Eisenwarenbörse
Language:German
Telephone: +49 (0) 521 97 04 40
Telefax: +49 (0) 521 97 04 422
Email: press-medien@t-online.de

Euro Security
Language: English, German
Email: info@euro-security.de
Internet: http://www.euro-security.de

Haus & Wohnung
Language: German
Email: hw.redaktion@hussberlin.de
Internet: http://www.hussberlin.de

Schloss & Beschlag-Markt (lock and fitting market)
Language: German
Email: info@wohlfarth.de
Internet: http://www.schloss-und-beschlagmarkt.de

SelberMachen (do it yourself)
Language: German
Email: redaktion@selbermachen.de
Internet: http://www.jalag.de/38.0.html

Selbst ist der Mann (self made man)
Language: German
Email: selbst@selbst.de
Internet: http://www.selbst.de

Sicherheits-Markt (safety-market)
Language: German
Email: baufachmedien@rudolf-mueller.de
Internet: http://www.rudolf-mueller.de

Sicherheits-Magazin (security magazine)
Language: German
Email: info@wohlfahrt.de
Internet: http://www.schloss-und-beschlagmarkt.de

FRANCE
L'Installateur
Address: 6, passage Tenaille, 75014 Paris, France
Telephone: +33 (0)145 403148
Fax: +33 (0)140 413149
Email: naudin@ediba.fr
Internet: Not available

Market
Address: 96, Rue de la Victoire, 75009 Paris, France
Telephone: +33 (0)142 819318
Fax: +33 (0)142 803061
Email: journal.market@wanadoo.fr
Internet: Not available

UK
BMJ - Builders Merchants Journal
Language:English
Publisher: Faversham House Group Ltd.
Address: 232a Addington Road, South Croydon CR2 8LE, UK
Telephone: +44 (0) 181 651 7100
Telefax: +44 (0) 181 651 711177
Email: info@fav-house.com
Internet: NA

Builders' Merchants News
Language:English
Email: bm@bmpublications.co.uk
Internet: http://www.buildersmerchantsnews.co.uk

Fastener & Fixing Europe Magazine
Language: English
Email: jerry@fastfair.net
Internet: www.fastfair.net

SPAIN

Correo de la Construccion/ Mundo Industrial (construction mail/industrial world)
Language: Spanish
Email: correo@edicionesroda.es
Internet: http://www.edicionesroda.es

FerrePress (ironmongery press)
Language: Spanish
Email: gee@gee.es
Internet: http://www.gee.es

Ferretería Actualidad (ironmongery actualities)
Language: Spanish
Email: sbn@bcn.servicom.es
Internet: http://www.tecnipublicaciones.com

Ferronoticias (ironmongery notes)
Language: Spanish
Email: gee@gee.es
Internet: http://www.gee.es

THE NETHERLANDS

COBOUW (co-building)
Language: Dutch
Email: cobouw@wkths.nl
Internet: http://www.cobouw.nl

Karwei (handy man's work)
Language: Dutch
Email: redactie@karwei.nl
Internet: http://www.karwei.nl

Vakblad MIX (trade magazine MIX)
Language: Dutch
Email: redactie@mixpress.nll
Internet: http://www.mixnet.nl

Vraag en aanbod (demand and supply)
Language: Dutch
Email: venaredactie@kluwer.nl
Internet: http://www.vraagenaanbod.nl

BELGIUM

Bouwbedrijf / Construction
Language: Dutch, French
Email: info@confederatiebouw.be
Internet: http://www.confederatiebouw.be

De Bouwkroniek (the building chronicles)
Language: Dutch
Email: info@bouwkroniek.be
Internet: http://www.bouwkroniek.be

DOBBIT, Bricolage, Renovation, Jardinage (DOBBIT, DIY, renovation, gardening)
Language: Dutch/French
Email: info@pmgroup.be
Internet: http://www.pmgroup.be

DIY Superstore
Language:English
Publisher: Faversham House Group Ltd.
Address: Faversham House, 232a Addington Roadm, South Croydon, Surrey CR2 8LE, UK
Telephone: +44 (0) 181 651 7100
Telefax: +44 (0) 181 651 7117
Email: info@fav-house.com
Internet: http://www.diyupdate.com

Hardware & Garden Review
Language:English
Publisher: Faversham House Group Ltd.
Address Faversham House, 232a Addington Road, South Croydon, Surrey CR2 8LE, UK
Telephone: +44 (0) 181 651 7100
Telefax: +44 (0) 181 651 71177
Email : info@fav-house.com
Internet NA

Hardware Today
Language:English
Publisher: Indices Publications Ltd.
Address: 14-16 Church Street, Rickmansworth, Herts WD3 1RQ, UK
Telephone: +44 (0) 1923 71 14 34
Telefax: +44 (0) 1923 89 60 63
Email: kevintooe@indices.co.uk
Internet: NA

Professional Builders Merchant
Language:English
Publisher: Hamerville magazines Ltd.
Address: Regal House, Regal Way, Watford, Herts WD2 4YJ, UK
Telephone: +44 (0) 1923 23 77 99
Telefax: +44 (0) 1923 24 69 01
Email: office@hamerville.co.uk
Internet : http://www.hamerville.co.uk

A3.6 OTHER USEFUL ADDRESSES

AMA Research
E-mail: ama.research@virgin.net
Internet: www.amaresearch.co.uk
AMA Research is a specialist market research provider for the UK Building and Home Improvement products industry. This web site contains details of all AMA Research Reports and additional Market Research services.

Euromonitor Customer Service
E-mail: info@euromonitor.com
Internet: http://www.euromonitor.com/default.asp
Euromonitor International is a global provider of market information.

Nationaal Dubo Centrum
E-mail: infodesk@dubo-centrum.nl
Internet: http://www.dubo-centrum.nl
The "Nationaal Dubo Centrum" aims to contribute to the establishment of sustainable building in the building industry through transfer of knowledge. Information on Environment Relevant Product Information (MRPI) can also be obtained at the Nationaal Dubo Centrum.

Stichting MRPI
Address: Postbus 2149, 6802 CC ARNHEM
Telephone: + 31 (0) 10 412 47 66
Fax: + 31 (0) 10 214 29 25
E-mail: info@MRPI.nl
Information about Environment Relevant Product Information (MRPI) regulations can be obtained at this foundation.

Der Grüne Punkt - Duales System Deutschland AG
Tel.: 0 22 03 - 9 37-0
Fax: 0 22 03 - 9 37-190
e-mail: pressestelle@gruener-punkt.de
Internet: www.gruener-punkt.de
Duales System Deutschland AG aims to prevent and recycle sales packaging through Green Dot licensing system. Information on how to join the Dual System and to get licensed for the use of the Green Dot symbol can be obtained at this organization.

APPENDIX 4 LIST OF DEVELOPING COUNTRIES

Please note that the OECD list of developing countries, as applied in this market survey, may include countries that are usually not considered as developing countries.

Afghanistan
Albania
Algeria
Angola
Anguilla
Antigua and Barbuda
Argentina
Armenia
Aruba
Azerbaijan
Bahrain
Bangladesh
Barbados
Belize
Benin
Bhutan
Bolivia
Bosnia & Herzegovina
Botswana
Brazil
Burkina Faso
Burundi
Cambodia
Cameroon
Cape Verde
Central African Rep
Chad
Chile
China
Colombia
Comoros
Congo
Cook Islands
Costa Rica
Côte d'Ivoire
Croatia
Cuba
Djibouti
Dominica
Dominican Republic
East Timor
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
French Polynesia
Gabon
Gambia
Georgia
Ghana
Gibraltar
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
India
Indonesia
Iran
Iraq
Jamaica
Jordan
Kazakstan
Kenya
Kiribati
Korea, Dem. Republic
Korea, Republic of
Kyrghyz Rep.
Laos
Lebanon
Lesotho
Liberia
Libya
Macao
Macedonia
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Marshall Islands
Mauritania
Mauritius
Mayotte
Mexico
Micronesia, Fed. Stat.
Moldova
Mongolia
Montserrat
Morocco
Mozambique
Myanmar
Namibia
Nauru
Nepal
Netherlands Antilles
New Caledonia
Nicaragua
Niger
Nigeria
Niue
Northern Marianas
Oman
Pakistan
Palau Islands
Palestinian Admin. Areas
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Rwanda
Saint Helena
Saint Kitts-Nevis
Saint Lucia
Saint Vincent and Grenadines
Samoa
Sao Tome and Principe
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Slovenia
Solomon Islands
Somalia
South Africa
Sri Lanka
Sudan
Suriname
Swaziland
Syria
Tajikistan
Tanzania
Thailand
Togo
Tokelau
Tonga
Trinidad & Tobago
Tunisia
Turkey
Turkmenistan
Turks & Caicos Islands
Tuvalu
Uganda
Uruguay
Uzbekistan
Vanuatu
Venezuela
Viet Nam
Virgin Islands (UK)
Wallis & Futuna
Yemen
Yugoslavia, Federal Republic of
Zaire
Zambia
Zimbabwe