CBI
Ministry of Foreign Affairs

CBI Product Factsheet:

Chains in Europe

Introduction

The chains market in Europe is relatively stable although there is a gradual shift towards more cost effective, low maintenance and energy efficient chains. European imports of chains are stable around €1.1 billion annually, of which about 20 22% supplied by exporters from Developing Countries. Germany and the United Kingdom are Europe's main chain importers, while also France, Italy and the Netherlands can be interesting focus countries. Developing Country exporters that want to target the European market can either partner/subcontract with European producers or sell their products to European importers.

Product description

Roller chain drives are one of the primary systems used in industry to transmit power and convey products. There are three main application types of roller chain: industrial roller chain, automotive chain and bicycle chain. For the purpose of this document the focus will be on the industrial ranges of transmission roller chains. Since roller chain drives are widely used, productivity in many industries is highly dependent on the performance of roller chain. Roller chain that suffers from premature elongation ("stretch") due to wear and needs to be replaced on a frequent basis will negatively impact productivity and increase the cost of the operation.

When 'chains' are referred to in this survey, this concerns the selection of products in Table 1, unless stated otherwise. Table 1 also shows the list of Prodcom codes used for the production statistics of chains.

Table 1: Selected products, based on CN and Prodcom nomenclature

CN code	Prodcom code	Description
73151110	28152130 Iron or steel roller chain of a kind used for cycles and motor cycles	roller chain of iron or steel, of a kind used for cycles and motorcycles
73151190	28152150 Iron or steel roller chain (excluding of a kind used for cycles or motor-cycles)	roller chain of iron or steel (excl. roller chain of a kind used for cycles and motorcycles)
73151200	28152170 Iron or steel articulated link chain (excluding roller chain)	articulated link chain of iron or steel (excl. roller chain)
73151900	28153200 Iron or steel parts of articulated link chain	parts of articulated link chain, of iron or steel
73152000		skid chain for motor vehicles, of iron or steel
73158200		welded link chain of iron or steel (excl. articulated link chain, skid chain and stud-link chain)
73158210		welded link chain of iron or steel, the constituent material of which has a maximum cross-sectional dimension of <= 16 mm (excl. articulated link chain, skid chain and stud-link chain)
73158290		chains of iron or steel, welded at the intersection, the constituent material of which having a maximum cross-sectional dimension of > 16 mm (excl. articulated link chain, skid chain and stud-link chain) [01/01/1988-31/12/1994
73158900		chain of iron or steel (excl. articulated link chain, skid chain, stud-link chain, welded link chain and parts thereof; watch chains, necklace chains and the like, cutting and saw chain, skid chain, scraper chain for conveyors, toothed chain for
73159000		parts of skid chain, stud-link chain and other chains of heading 7315 (excl. articulated link chain)

Source: CN and Prodcom Nomenclature

Geographic scope

The geographic scope is the Europe, however, in certain parts of this survey, the focus is on a selected group of countries: Germany, France, United Kingdom, Italy and the Netherlands. These countries are the largest importers of chains in Europe, accounting for 55% of total imports. When 'focus countries' are referred to in this survey, this concerns the selection of these five countries, unless stated otherwise.

Product and process specifications

Specifications of chains as required by European buyers are described below. Pictures 1-6 show some examples of chains and how they can be packed.

Roller Chain structure

- Three Basic Dimensions

Pitch, Roller Diameter and Inner Width are known as the "Three Basic Dimensions of Roller Chain." When these three dimensions are identical, roller chains and sprockets are dimensionally compatible.

- Raw Material

The raw material used in the making of the wear components is critical for the quality of the chain. Chemical composition and mechanical properties of the raw material are essential in the fabrication and heat treatment of the components.

- Basic Parts
    - Link Plate

The plate is the component that bears the tension placed on the chain. Usually this is a repeated loading, sometimes accompanied by shock. Therefore, the plate must not only have great static tensile strength, it must also hold up to the dynamic forces of load and shock. A high waist plate shape is thought to allow better stress distribution. The plate thickness should be maximised within the constraints of the (BS, ANSI or DIN) standard to improve life. Triple punch holing ensures controlled positional location of pin and bushing for even wear.

    - Pin

The pin is subject to shearing and bending forces transmitted by the plate. At the same time, it forms a load-bearing part (together with the bush) when the chain flexes during sprocket engagement. Therefore, the pin needs high tensile and shear strength, resistance to bending, and must also have sufficient endurance against shock and wear. End-softened pins make it easy to disassemble the chain.

    - Bush

The bush is subject to complex forces from all parts, especially from the repetition of shock loads when the chain engages the sprocket. Therefore, the bush needs extremely high shock resistance. In addition, the bush forms a load-bearing part together with the pin and, as such, requires great wear resistance. Roundness of the bushing is critical, providing the maximum contact area between the pin and bushing. Any irregular surface within the contact area can lead to accelerated wear and a shortened chain life. A solid extruded bush is thought to provide improved roundness and strength compared to curled bushes.

    - Roller

The roller is subject to impact load, as it mates with the sprocket teeth during engagement of the chain with the sprocket. After engagement, the roller changes its point of contact and balance. It is held between the sprocket teeth and bush, and moves on the tooth face while receiving a compression load. Therefore, it must be resistant to wear and still have strength against shock, fatigue and compression (note that there are some bush chains available which do not have rollers).

    - Roller Link

Two bushes are press fit into two roller link plates and rollers are inserted to allow rotation around the outside of the bushes during operation. This is the same for single and for multi strand chains.

    - Pin Link and Intermediate Plate

The pin link consists of two pins that have been press fit into two pin link plates. In the case of multi-strand roller chain up till size 08B, an intermediate plate is added to the pin link. In the case of multi-strand roller chain above size 08B, two intermediate plates are added to the pin link. The intermediate plates are slip fit for standard roller chain and press fit for some high performance roller chains.
More information, including an illustration, is available on Wikipedia.

- Assembly Parts

Roller chains are usually made up of a number of inner and outer links in an endless formation. Although offset links can be used when there is an odd number of links in the roller chain, it is better to use a design that requires an even number of links. If an odd number of links cannot be avoided, it is recommended to use a two-pitch offset link instead of a one-pitch offset link. As it is riveted into the chain, a two-pitch offset link has a 100% maximum allowable load, where as the one-pitch offset link has a maximum allowable load of 65%.

    - Connecting Links

There are three types of connecting links: spring clip connecting link, cotter pin connecting link and spring pin connecting link. It's common to use slip fit spring clip connecting links for small size roller chains. Cotter pin and spring pin connecting links are used for large size roller chains and on customer request.

    - Offset Links

An offset link is used when an odd number of chain links is required. Different types are available: *One pitch offset link* (OL). The pin and two plates are slip fit. The fatigue strength is 35% lower than the chain itself.

- Two pitch offset link (2POL).

Two pitch offset links are the combination of a roller link and an offset link connected with a rivet pin. The fatigue strength is the same as the fatigue strength of the base chain.
After assembly, the manufacturer should apply an initial load to the chains, called preload. This preloading approximates the recommended maximum loading in service. Preloading can be done either statically or dynamically. Preloading is done as a final alignment of the various chain components such as pins, bushings and link plates. Preloading helps to greatly eliminate the initial elongation often found in lower quality chains. Elimination of this initial elongation can increase usable service life. The chain that has no or little preload applied will experience a significant amount of elongation during initial start-up of the drive before levelling off. The chain will then elongate at a steady rate until the case hardness on the wear components is gone and the chain experiences rapid elongation. A chain that has been properly preloaded has very little elongation during initial start-up, which ultimately results in additional wear life.

Tip:

- With these criteria in mind, it is recommended that chain manufacturers should employ their own metallurgist and lab personnel to closely monitor and maintain the highest quality standards.

Labelling and packaging

In general, multi-packaging is used for smaller parts and single packaging can be applied to large seals. Packaging consists of an outer package and sometimes an interior package. The outer package is usually made up of carton lined with plastic sheeting and should contain brand name and type number. The interior package is a plastic envelope, or sometimes hermetically vacuum-sealed synthetic pouches. The package for ocean transportation is a wooden or plastic pallet, wrapped in plastic sheeting and packed with strips. The sizes of the boxes depend on the handling possibilities. Moreover, it may well be the case that the customer has his own (additional) packaging requirements and preferences. Batch numbers on individual boxes may also be a requirement.

Specifications depend on the application

The specifications of the chains depend a lot on the application. For example, in the bulk material handling industry and steel industry, an optimal combination of chain and sprockets is very important as it requires components resistant to high temperatures, optimal press fits, and fatigue resistant materials with high surface qualities. Another example is the food industry, where acid- and corrosion-resistant materials are used that do not require any re-lubrication, for instance nickel plated and stainless steel.

Tip:

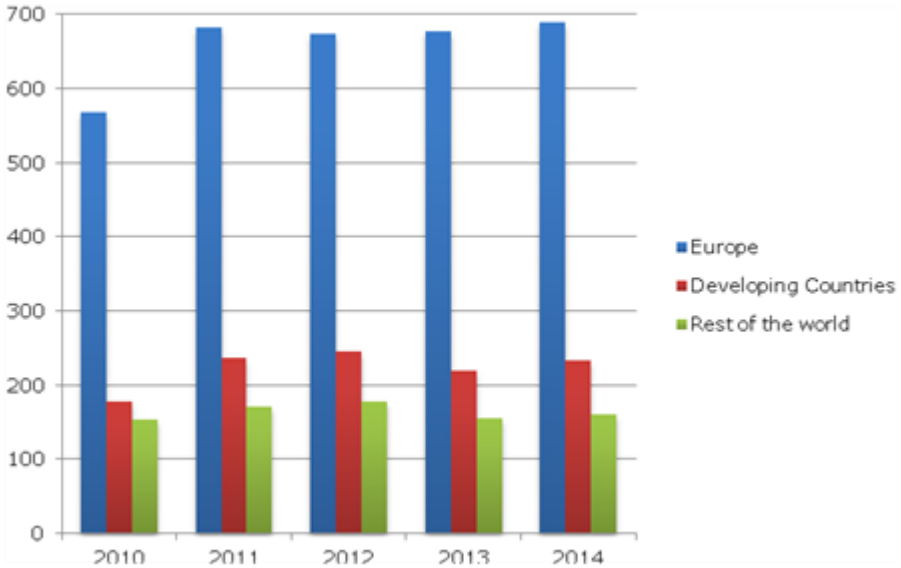
- Developing Country exporters can choose one or a few market segments to focus on. Another strategy can be price competitiveness with the supply to all market segments.

What is the demand for chains in Europe?

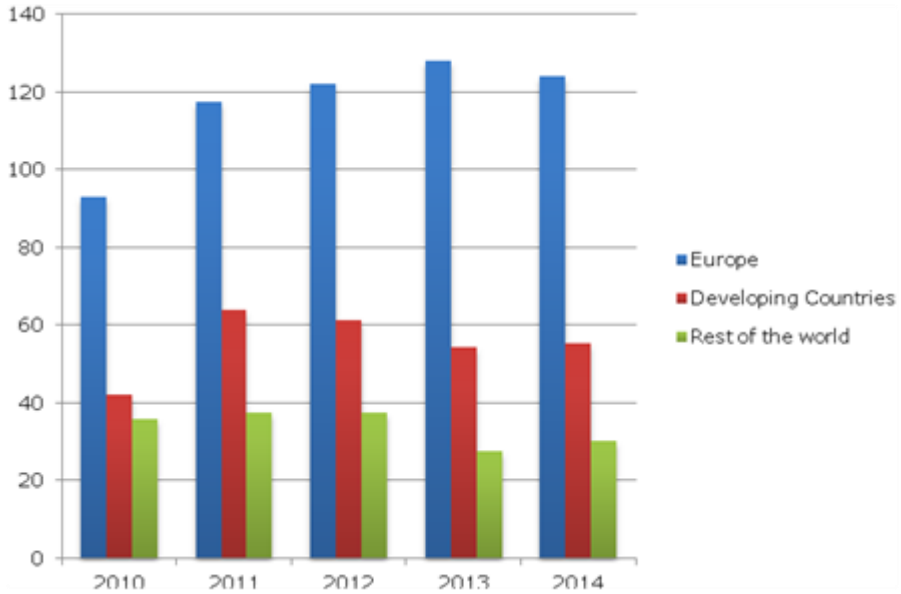
Imports

Figure 1-6: Imports of chains to Europe and focus countries, by main origin, € million, 2010-2014

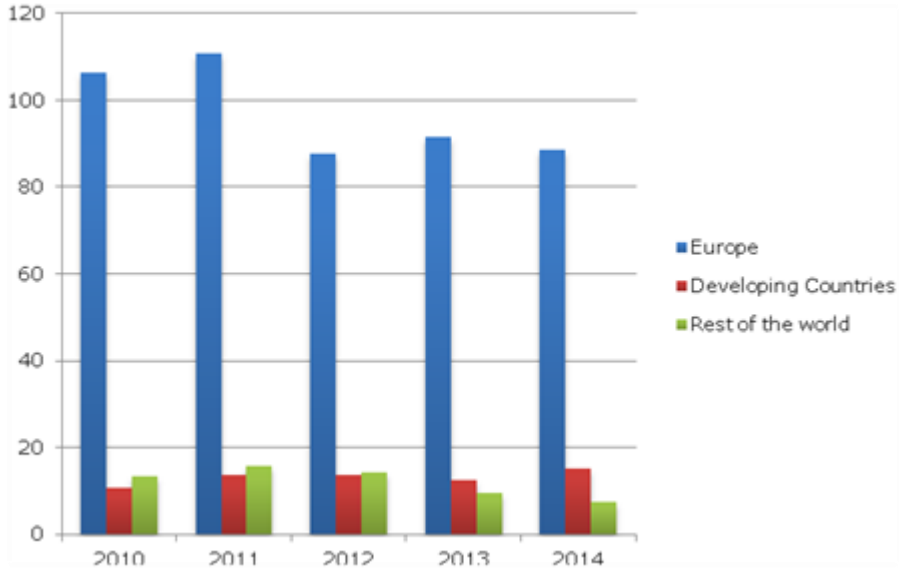
Europe



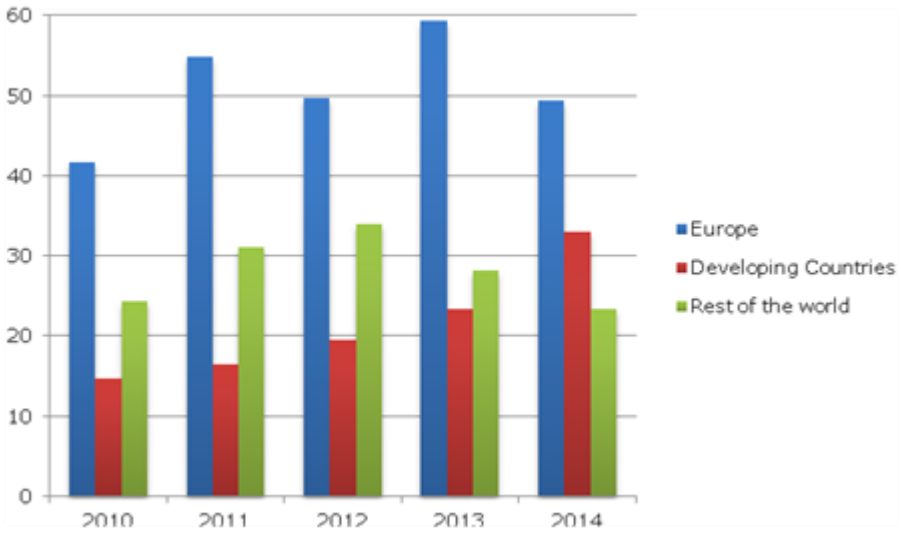
Germany



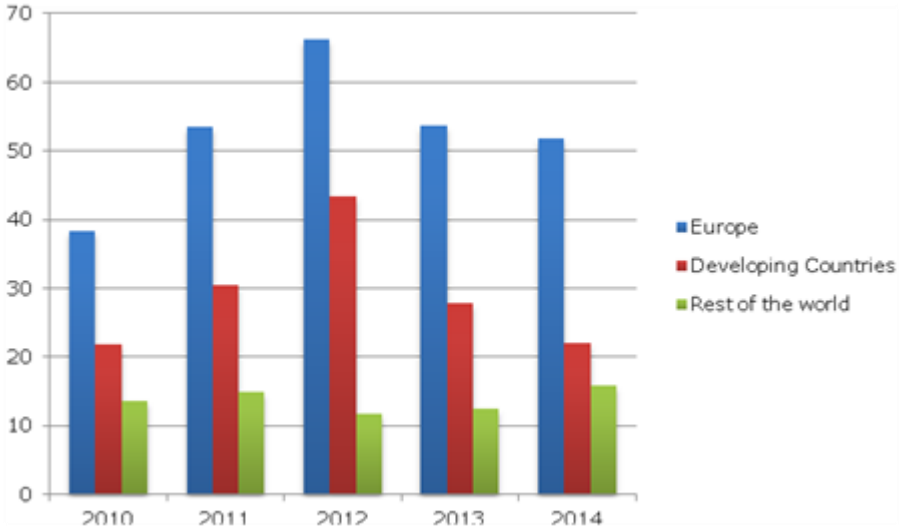
France



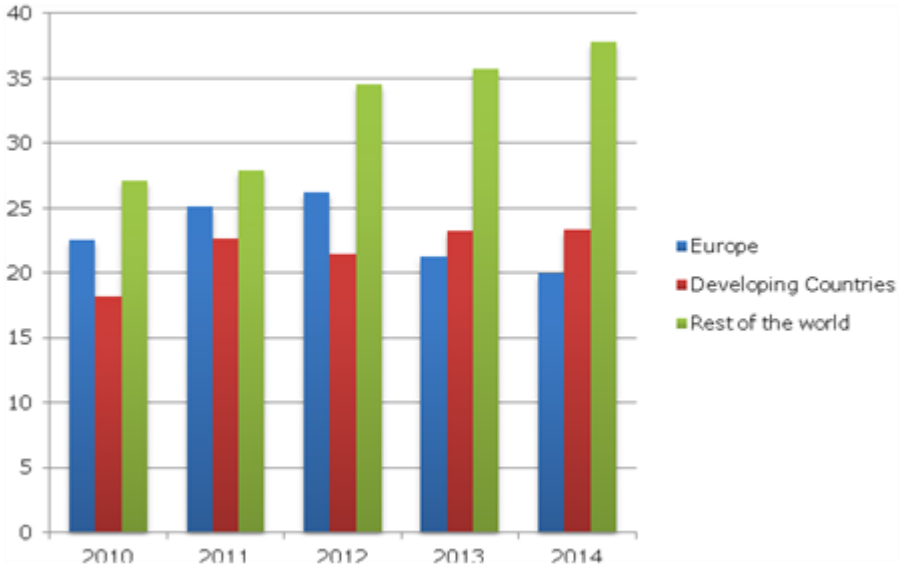
United Kingdom



Italy

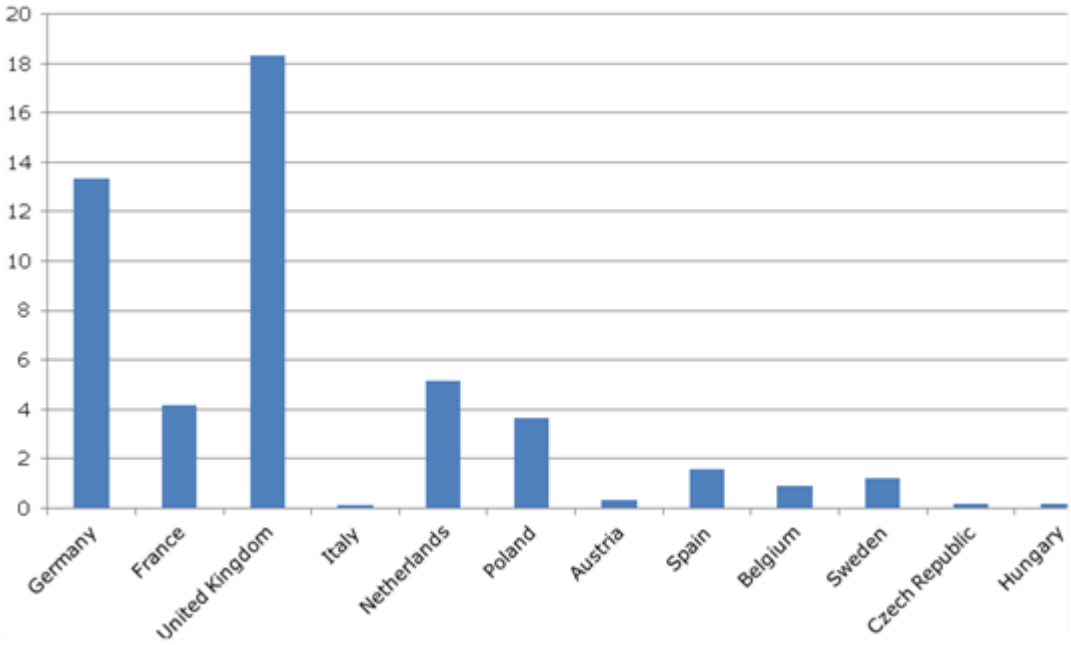


The Netherlands



Source: Trademap

Figure 7: Absolute Developing Country import growth 2010-2014, € million (countries in range of largest importers), of chains



Source: Trademap

- European imports of chains reached €1.1 billion in 2014. Average annual growth in 2010-2014 was 4.7%.
- The Developing Country share in European imports has moved in a range of 20-22% in the period under review. Most imports originate from intra-European sources (almost 65% of all imports). For the coming years, the Developing Country share is forecast to be relatively stable between 20-23%.
- The five focus countries represent 55% of European imports in 2014.
- The leading importer is Germany (19% of European imports), followed by France and the United Kingdom (each with 10%), Italy and the Netherlands (each with 8%), Poland and Austria (each with 6%). In terms of Developing Country imports, Germany is leading, ahead of the United Kingdom, the Netherlands, Italy, France and Spain.
- The import of chains is expected to show a small growth in the next few years, in the range of 1-4%.

Leading suppliers

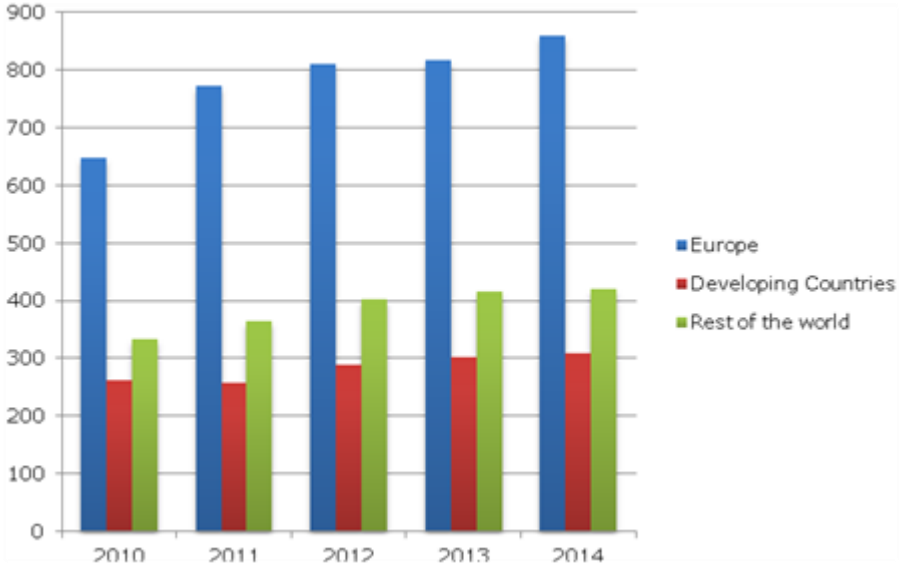
- Most leading suppliers of chains to Europe are Developed Countries. Germany, China, Italy, Japan and the Netherlands are the top 5 leading suppliers.
- China (with a value of €195 million good for 18% of European imports) in 2014, is the only Developing Country in the list of leading suppliers.
- Other Developing Countries that export chains to Europe are India (€12 million), Turkey (€9 million), South Africa (€5 million) and Serbia (€3 million).
- Japan is by far the largest supplier in the category 'rest of the world', followed by Taiwan and USA.

Tip:

- Benchmark your company against your peers from European countries, China and Japan. Several factors can be taken into account, such as market segments served, perceived price and quality level, countries served, etc. A useful source to find exporters/producers of chains per country is the ITC Trademap.

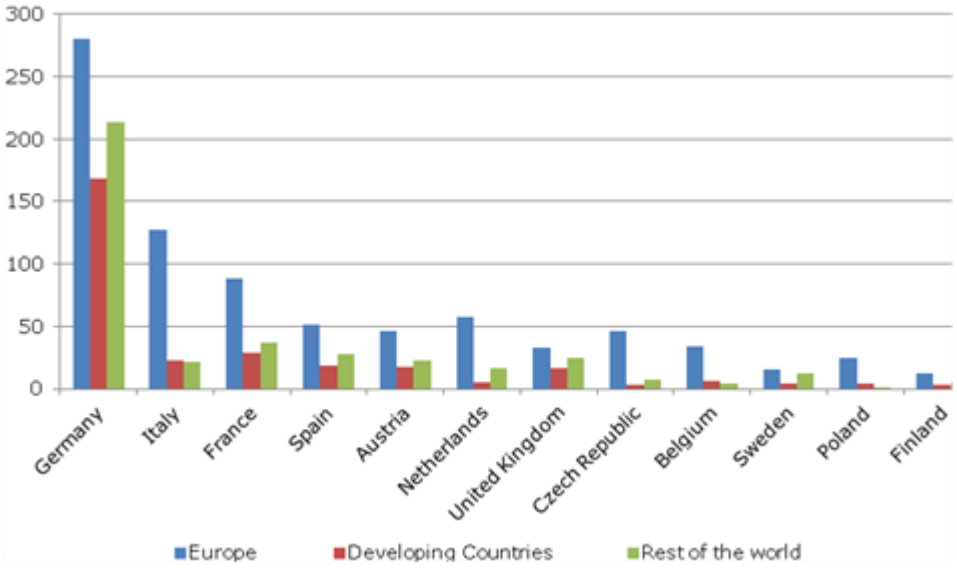
Exports

Figure 8: Exports of chains from Europe, by main destination, € million, 20010-2014



Source: Trademap

Figure 9: Main exporters of chains, € million, 2014



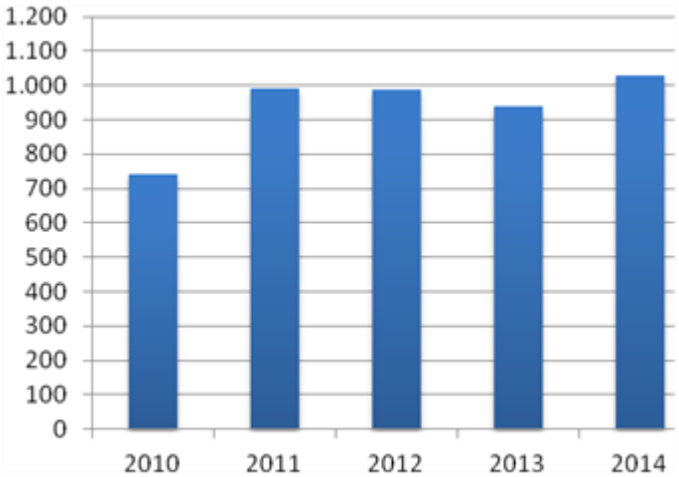
Source: Trademap

- European exports of chains have shown an upward trend in the last 4 years, amounting to €1.6 billion in 2014. Average annual growth in 2010-2014 was 6.3% and was mainly caused by the weak reference year (2010) and the resulting strong growth in European demand in the period under review.
- The Developing Country share in European exports was highest in 2010 (21%). In 2014 it reached 19%. China will remain the main destination in this category. For the coming years, the Developing Country share in exports is forecast to be stable at about 20%.
- Most exports go to intra-European destinations (54% of all exports) (however note that this also includes some re-exports of imports originally from Developing Countries).
- The five focus countries represent 72% of European exports in 2014.
- The leading exporter is Germany, accounting for 42% of total exports from Europe, far ahead of Italy (11%) and France (10%). The Netherlands and the United Kingdom account for 5% each.

- German exports to Developing Countries are massive; they represent 55% of European exports to Developing Countries. Of the total of €169 million, 40% is going to China. France is in 2nd position (9%), followed by Italy (7%).
- The European export of chains is expected to show a small growth in the next few years, in the range of 2-4%.

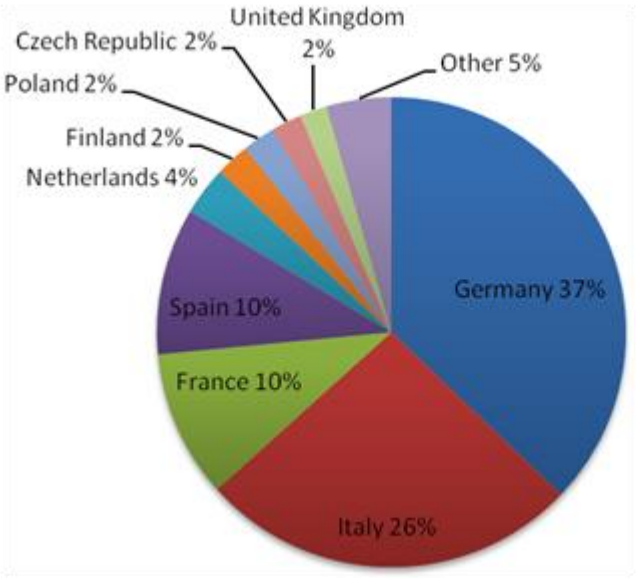
Production

Figure 10: European production of chains, 2010-2014, € million



Source: Eurostat Prodcom

Figure 11: Main European producers of chains, 2014



Source: Eurostat Prodcom

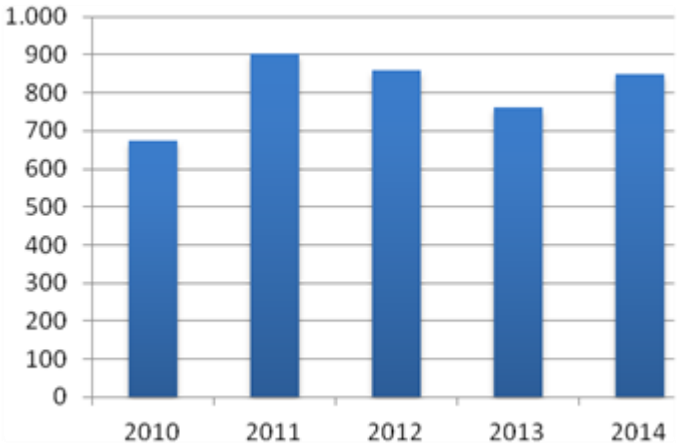
- European production totalled €1.0 billion in 2014, after an average annual increase of 8.5% in the period 2010-2014.
- Germany accounted for slightly more than 37% of total European production in 2014, Italy for 26%.
- Chain application covers many industrial segments. Some European companies are producing chain drive elements for different types of applications, but others are highly specialised for niche markets, such as amusement parks and the sugar processing industry.

Tip:

- Figure 11 reveals that in addition to Germany and Italy, there is also considerable production output in France and Spain. The presence of producers in these countries offers subcontracting opportunities for Developing Country exporters. The Useful Sources (last section of this document) offer some links to databases where producers of chains can be found.

Apparent demand

Figure 12: Apparent demand for chains in Europe, 2009-2013, € million



Source: Eurostat Prodcom

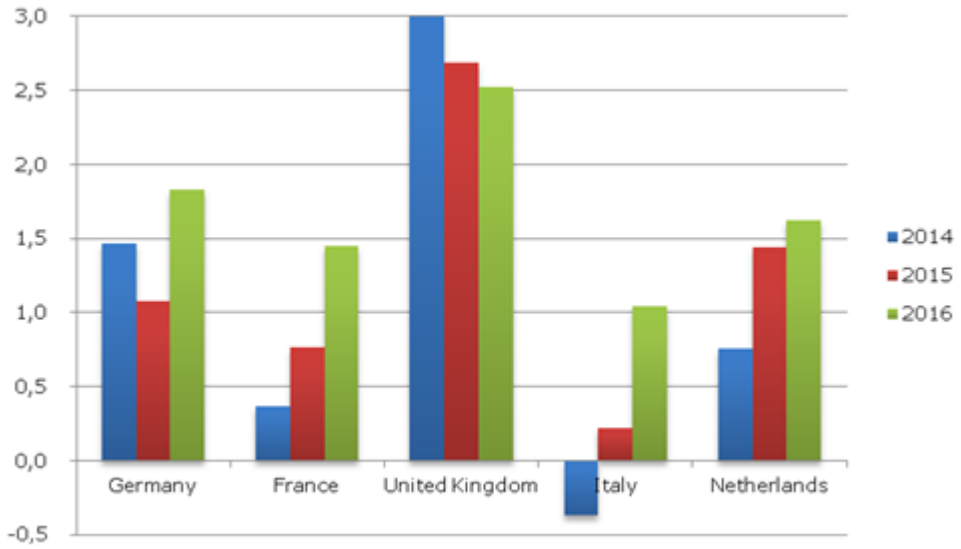
- European apparent demand totalled €848 million in 2014, subsequent to an average annual increase of 5.8% in the period 2010-2014. This growth is accounted for by the positive growth following the period of decline due to the financial crisis in 2009 and 2010. Apparent demand was under pressure in 2012 and 2013 because some major market segments (e.g. automotive, machine building, construction equipment) had difficult times. In 2014 market growth picked up again.
- While Germany, Italy, France and Spain are the dominant chain production countries in Europe; they are also the countries with the largest apparent demand for chains.
- European industrial production is set to increase further in 2015, after it recorded some strong year-over-year gains in 2013 and 2014. Signals of progress in industrial machinery production will continue to create favourable conditions for industrial suppliers in and to Europe in 2015 and 2016. Positive factors like a low inflation rate and a slowly improving level of industrial investments should support these positive developments and result in a growth of chains demand in 2015 and 2016.
- Each focus country has its own specific market profile. The five focus countries can be described as follows:
    - Germany is the number one producer in virtually every industry in Europe. It is well-known for its output of machinery, cars, and electronics.
    - France's leading industries produce machinery; chemicals; automobiles; metals; aircraft; electronics equipment; textiles; and food. Most machinery production is focussed on agricultural machinery, and machinery for textile, apparel and leather.
    - Key manufacturing sectors in the United Kingdom include Aerospace; Automotive; Chemicals; Oil; Defence equipment; Electronics; and Food and beverages. The United Kingdom has a long tradition of producing machinery and equipment. Important market segments include 'Agricultural Machinery' and 'Construction, Quarrying and Mining Machinery'.
    - Italy's main industries are iron and steel; machinery; chemicals; textiles; food processing; motor vehicles; footwear; clothing; and ceramics. After Germany, the country is the 2nd largest machinery producer in Europe; the country produces virtually all categories of machinery.
    - The Netherlands is home to a large agricultural and horticultural industry network. Other key sectors are metal and engineering products; electronic machinery and equipment; chemicals; petroleum; construction; microelectronics; and fishing. In terms of machinery production, there are two segments that stand out: agricultural machinery and machinery for food, beverage and tobacco processing.

Tip:

- Developing Country exporters could focus on market segments that are strongly represented in the focus countries. Specialisation in any of those segments may give exporters a competitive advantage, as there is an increasing demand for customized solutions. European importers therefore prefer specialised suppliers that are able to offer customer support and joint engineering in specific market segments.

Macro-economic indicators

Figure 13: Real GDP, % change from previous year



Source: OECD Economic Outlook 96 database

- The major determinant of chains demand is spending activity in the end-user industries. Chains demand depends both (and increasingly) on the demand for replacement parts as well as demand for new equipment. In turn, this demand is stimulated by economic growth. In each focus country, GDP is expected to show continued growth year-on-year in the years to come. This is a good basis for demand and import growth in the coming years.
- The profitability of chains imports is influenced by the €:US$ exchange rate, as many engineered parts sourced globally are paid in US$. While the €:US$ exchange rate was not forecast to go beyond 0.80 until 2020, this did happen in 2015, with an exchange rate of 0.88-0.93 in the period March-October 2015. This has a large effect on the price level of imports. Especially if this situation will stay for years, it will have a negative impact on the level playing field of European imports paid in US$, versus local European production.

Tip:

- Looking at the current low value of the Euro; if the Euro stays on the level of approximately 0.90US$, Developing Country producers should increasingly focus on cost reduction to remain competitive in the European market.

What trends offer opportunities on the European market for chains?

Although there is a slow, general move away from traditional chain drives towards direct drives (no chains or belts included in the drive system), the chain market is still considerably large and marked by research and development activities. As chains are used in applications where movement and energy are key, it is obvious that most trends are related to technical innovation of which several are coupled with energy efficiency improvements. Most developments are related to improving functionality:

- Continuous new and further development of chains involves low-maintenance or maintenance-free chains. This requires the chain to be made of new steel grades or with new coating technologies and sinter components.
- New lubricants or lubricant-free solutions are also an important industry trend. This is especially important in industries with frequent conveyor applications. Also look at this example from the bakery industry.

Traditionally, the automotive industry is a front runner in new technology, which also involves chains. New developments for the automotive industry include low-maintenance and lubrication-free chains. In addition, CO2 reduction and fuel economy are growth drivers. The automotive industry is also keen on building lighter and lighter vehicles. Depending on the segment, a premium of between three and ten euro per kilogram of weight saved can be expected for internal combustion engines. Therefore, the timing chains of tomorrow are smaller, lighter of weight, but powerful, quiet, and of high performance.

Tips:

- Developing Country exporters recognising the several trends should invest in R&D to develop cost-effective solutions that are also energy efficient.
- Developing Country exporters can highly improve their competitiveness if they develop low-maintenance or lubrication-free chains and also focus their export marketing toward lowering maintenance costs for potential buyers.

What requirements should chains comply with to be allowed on the European market?

You can find a general overview of legislative requirements in the EU buyer requirements for motion control on the Market Intelligence Platform of CBI. The requirements for chains don't differ significantly from those for the general sector. Also refer to the EU Export Helpdesk, the ITC Market Access Map and the ITC Standards Map for more information related to gaining access to the European market.

For chains, a 2.7% duty is levied on European imports from third countries. Several countries benefit from a preferential 0% tariff, for example Indonesia, Pakistan, Vietnam, the Philippines, Bosnia and Egypt. Note that it is only possible to claim a preferential tariff treatment with a Certificate of Origin.

The customer's main requirements will be related to the technical properties; design, material, dimensions, and finishing must meet the customer's specifications.

In addition, there are many non-legal (voluntary) standards applying to chains. In fact, these customer requirements are key in the sample phase. If the customer accepts the samples and all other conditions are agreed upon, the contract can be signed. After that, the main challenges of the suppliers are to deliver the products according to the agreed specifications, delivery times, and volumes.

Examples of additional requirements are ANSI, ASA, BS, DIN, ISO, or JIS standards. The common standard for the European market are BS, ANSI and DIN. For material requirements, the following can be said in general: the material that is used must be covered by an (international) standard and approved with an EN10204 - type 3.1 certificate. This type of certificate is internationally accepted.

In addition, for highly demanding applications, the customer may also have testing requirements for all production batches, such as NDT (non-destructive testing) surface (MTI or magnetic testing, PTD or penetrant testing) and section (UT or ultrasonic testing and RT or X-ray testing) tests.

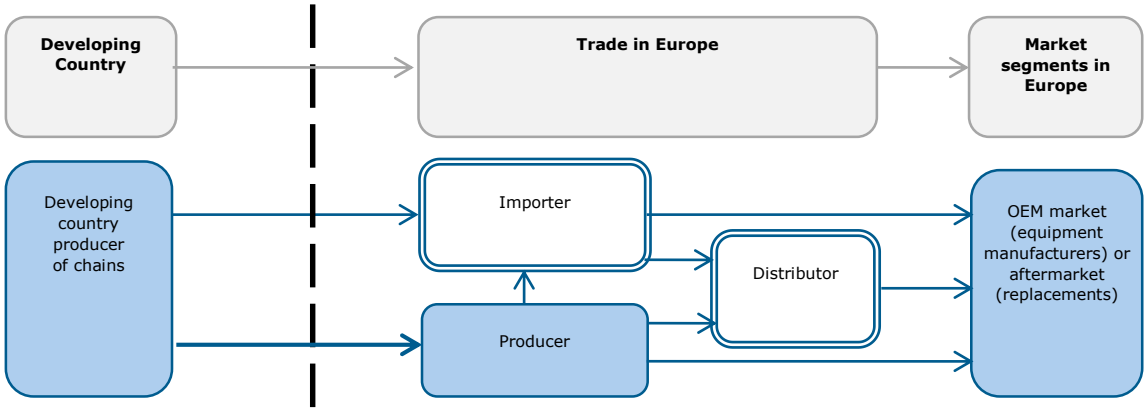
Tips:

- More details can be found at the following websites:
  - ISO Catalogue - Click on "TC 100" (Chains and chain sprockets for power transmission and conveyors) for an overview of ISO standards.
  - Search EN norms in the online shop of the British Standards Organisation.

What do the trade channels and interesting market segments look like in Europe for chains?

Developing Country producers of chains have two main options for entering the European market: importers and chain manufacturers. An explanation of the types of prospects is given below, including a few examples per type and per focus country. Sources of prospects are included in the section "Useful sources". For additional information on finding buyers, see the CBI document on Finding Buyers in the Motion Control Industry. Another important resource is the CBI document on Doing Business in the Motion Control Industry.

Figure 14: Trade structure for chains in Europe



There are a few producers in Europe that have specialised in chains. Not surprising, such specialisation is especially possible in large markets, like Germany and Italy. Examples of some specialised manufacturers are Wipperman, KettenWulf and Iwis (Germany), Sedis (France), SIT (Italy), B&W Klaver and Verbaan (Netherlands), Cross + Morse, Diamond Chain and Donghua (United Kingdom). Note that some of these producers, like Diamond and Donghua, don't produce in the EU (anymore), but import the chains from low-cost countries.

Most companies in Europe, however, are producing or at least offering a range of power transmission parts. In several cases, such generalists do not produce the whole range themselves, but they include products from other manufacturers to be able to offer a complete range of transmission parts and products to their customers. Examples of such generalists in some of the European focus countries are Bea Ingranaggi and SATI (Italy), Groupe Fair and Itafran (France), Rexnord (Germany), Medway (United Kingdom); Renold (closed its' UK factory in 2014), and ISG Lettink (Netherlands).

Importers and distributors

Most importers can be classified as generalists. The majority of them sell a very broad range of power transmission parts and products. Examples of such importers in the European focus countries are the following:

- Germany: Helbing & Partner, Werthenbach, Mädler, Tewa Antriebstechnik.
- Italy: Bianchi Cuscinetti, Intec, WMH Latsch, CDC group, Petean.
- France: IPH, Baret Group, Azur Roulements, HPC, Inter Appro.
- United Kingdom: Hayley, Acorn, BRT Group, NBC Group.
- Netherlands: Ammertech, Angs+Pfister, Bruin Aandrijftechniek.
- Multiple countries: Eriks and Brammer.

A few importers/distributors have specialised in chain drives, whether or not in combination with belt drives and often both for transmission and conveyor belt applications. Examples of such specialists are:

- A.Mangold – German importer and distributor of chain and belt drives.
- Urny Antriebselemente – German importer and distributor of chain drives.
- KIM – Dutch importer of chain drives and related products.
- KTN – Dutch importer and distributor of chain and belt drives.

What are the market prices for chains?

To establish an export price, you need to consider many of the factors involved in pricing for the domestic market:

- Aim to charge the price the market will bear and keep in mind the quality-price ratio of your products. It should be in line with competitor prices;
- Pricing is a mix of knowing your domestic costs and calculating costs you will incur in delivering and supporting your activities in a foreign market;
- Use contracts with variable material costs. It is important to set the reference index for the fluctuations in agreement with the buyer. Use, for example, the steel index of the London Metal Exchange;
- Bear in mind that it is not easy to increase prices once you have agreed to deliver at a certain price. The negotiated price should never be below your cost price (except for the first order; in this context you may accept a loss if larger quantities and thus lower costs are expected for the following orders). No European buyer will accept an unreasonable/unexpected price increase after the first order;
- The negotiated price depends on the delivery conditions, the means of payment, credit terms and currency risks, quantities, and the means of transport;
- Exchange rates fluctuate. Cover this risk by including the currency risk in the contract. This practice has been accepted in international business transactions for a few years.

Another very important issue is the responsibilities and rights relating to the tooling. The following tooling issues should all be covered in the contract: financing manufacture and possible repairs, guaranteed life time, ownership, and storage.

Tips:

- Use contracts with variable material costs.
- Include the currency risk in the contract.
- Include the responsibility and rights related to the tooling in the contract.

Useful sources

Germany

- Finding prospects: German Commercial Agents Directory, Wer liefert was?
- Hannover Messe - world's leading annual industrial technology exhibition with numerous product-specific trade fairs, held in Hannover, April. A dedicated MDA (Motion, Drives, and Transmissions) fair is part of the Messe every odd year.
- Industrie - portal with industry news, publication of "Industrie".
- Magazines: Industrie Anzeiger, Industrieweb, Konstruktion + Engineering,
- Maschinen Markt. Springer VDI Verlag is a publisher of technical magazines.
- VDMA - German Engineering Federation. VDMA market contains a database of German industrial companies.
- VTH Verband Technischer Handel - Association of Industrial Distributors.

France

- Associations: CETIM and FIM.
- Finding prospects: Artema (Go to 'Les entreprises adhérentes' and search for companies. You can filter your search – choose 'Reducteurs et Engrenages'), Cyclex.
- Magazines and news: Axes Industries, Industries & Technique, Usine Nouvelle.
- Trade fairs: Industrie Paris (industrial design and production), Midest (subcontracting).

UK

- Finding prospects: Applegate Directory, Hotfrog.
- Connecting Industry - portal that connects industry magazines published in the UK and Ireland, e.g. Industrial Technology and The Engineer. Drives & Controls is UK's leading transmission magazine (with suppliers' directory).
- Subcon - subcontracting manufacturing trade fair, staged annually in Birmingham (May or June). Check out their list of exhibitors.
- Engineering industries association - engineering industry news.
- British Gear Manufacturers Association - Click on 'Membership', then 'Members List' for a list of companies. Select 'chain drives' for a selected group of relevant companies.
- Trade fairs: Drives and Controls and Subcon (list of exhibitors).
- Engineering – matchmaking database. Registration is necessary.

Italy

- Federation of the Italian associations of mechanical and engineering industries - click on 'Associations' to find many specialised associations in the industry. Or click on 'Members' directory' to find company details.
- Finding prospects: Azienda in fiera, Confindustria.
- Italy Business – matchmaking website.
- Trade fairs: MECSPE (engineering)/Sub-fornitura , SPS IPC Drives Italia, and TPA Italia.

Netherlands

- Finding prospects: Products 4 Engineers.
- Magazines and news: Dutch Association of Engineering, Electronics and Contracting, Engineer Online (AB magazine), Mechatronica & Machinebouw, Technisch Weekblad.
- Trade fairs: ESEF (subcontracting/engineering), MOCON (machinery).

Other general sources

- Finding prospects: ABC Business Directories,

- International associations: European Committee of Associations of Manufacturers of Gears and Transmission Parts, European power transmission distributors association.
- International magazines and news: Power in Motion, Power Transmission, Power Transmission Engineering.
- Trade fair databases: AUMA, Eventseye.
- Trade statistics: Eurostat, ITC International Trade Statistics.
- Other: EU Export Helpdesk, Kwintessential.

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