

## CBI MARKET SURVEY

# THE ELECTRONIC COMPONENTS MARKET IN GERMANY

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### Report summary

This CBI market survey discusses, among other things, the following highlights for the electronic components market in Germany:

- Germany is by far the largest market for electronic components in Europe. The largest product group is semiconductors, which is also the fastest growing product group. The other groups are expected to increase in 2006 as well, though at a lower rate.
- Local production decreased in the period 2000-2004 due to a growing trend of outsourcing to EMS (electronic manufacturing services) providers in Central and Eastern European countries.
- Despite a considerable decline in imports in recent years, Germany remains the largest importer of the EU by far. The import share of DCs rose to 21% in 2005, with the principal country being China. Other major DC suppliers to Germany were Malaysia, the Philippines, India, Indonesia and Mexico. In the area of assemblies, the DCs' share increased to as much as 19%.
- An indicative online questionnaire reveals the increasing interest among German buyers to do business with DC suppliers.

This survey provides exporters of electronic components with sector-specific market information related to gaining access to Germany. By focusing on a specific country, this survey provides additional information, complementary to the more general information and data provided in the CBI market survey 'The electronic components market in the EU', which covers the EU in general. That survey also contains an overview and explanation of the selected products dealt with, some general remarks on the statistics used as well as information on other available documents for this sector. It can be downloaded from <http://www.cbi.nl/marketinfo>

## 1. Market description: industrial demand and production

### Industrial demand

Germany is the largest electronics producer in Western Europe and the fifth largest worldwide. The country is one of the leading global producers of industrial electronics and also ranked number one in Western Europe for telecommunications. Due to Germany's strength in industrial electronics, the country still sees an increase of its share of West European electronics output.

### Total market size

Germany is by far the largest market for electronic components in Europe, with a forecast value of € 18.3 billion in 2006 (+5% compared to 2005 and +16% compared to 2003). The largest product group is semiconductors, which is also the fastest growing product group (+6% to € 12.3 billion). The other groups are expected to increase in 2006 as well, though not that fast (about 2%).

### Product groups

#### Active components

The German market for semiconductors – the largest group within active components – increased fast in recent years. After a growth of 2.6% in 2005, growth will accelerate again in 2006 (6.0%), to € 12.3 billion. Compared to 2003, in 2006 the market has will actually have grown more than 20%. ICs account for the major part of this product group, with an expected

value of € 9.9 billion in 2006. The remainder is for the group of discrettes and sensors, which is expected to grow 7.1% in 2006, after a 4.3% decline in 2005. Regarding applications, electronic data processing (EDP) will strengthen its position as the most important application in 2006 again (+8.6% compared to 2005, growing to € 4.4 billion in 2006). 2006 growth figures look sound for consumer applications, automotive and industrial as well, except telecom, which is decreasing in importance (- 1.9% after -7.5% in 2005). After EDP, automotive is the second largest end user (€ 3.6 billion in 2006), followed by telecom (€ 2.5 billion), with the balance left for industrial (€ 1.5 billion) and consumer applications (€ 374 million).

Beside semiconductors, active components also include micro mechanical electronic sensors and actuators. After a good growth in 2003 and 2004, this market declined a little in 2005 (- 3% to € 547 million). The automotive industry is by far the major end user, accounting for 85% of total market value in 2005.

#### *Passive components*

After a relatively stable period, the market for passives decreased 3.6% in 2005. For 2006 the German industry association (ZVEI) expects the market to increase again, by 2%, to € 1.28 billion. The breakdown by product shows that capacitors remains the largest product group (€ 446 million) in 2006, followed by inductors/EMV components (€ 372 million), resistors (€ 215 million) and HF components/piezo ceramics (€ 251 million). While capacitors declined in recent years, this was almost compensated by the growth in HF-components/piezo ceramics. With regard to the main applications, a change is occurring. Telecommunications is again expected to lose market share in 2006 (-6% to € 222 million), as are consumer applications (-7% to € 100 million), industrial (-0.5% to € 386 million) and EDP (-5% to € 38 million). Together with industrial applications (+4%), automotive is again the sector that may (more than) compensate this decrease (+7% to € 525 million).

#### *Electromechanical components*

The German market for electromechanical components is expected to grow 1.7% in 2006, reaching € 2.7 billion. Connectors account for more than 67% of the market, leaving the balance for switches. While telecommunications is again anticipated to lose market share (- 3.6% to € 379 million, as is consumer applications (-0.7% to € 134 million), growth is expected for industrial (4.5% to € 743 million), EDP (3% to € 286 million) and automotive (1.7% to € 1.16 billion). Compared to 2003, industrial applications showed the best growth of all application groups (+17%).

#### *Electronic assemblies*

According to ZVEI-data, the German EMS (electronic manufacturing services) market will increase to € 22.5 billion in 2006 (+3.8% compared to 2005). Telecom is expected to continue declining -3.5% to € 4.3 billion in 2006. EDP will be the largest grower (9%), followed by automotive (+5.8%) and industrial (+2.3%). Automotive will be the largest end user (€ 8.0 billion) of assemblies in 2006, followed by EDP (€ 5.4 billion), telecom (€ 4.3 billion), with the balance left for consumer applications (€ 811 million).

The German market for PCBs, part of the EMS market, consists of five sectors: multi layered, commodity (paper, composite and rigid glass), flexible, microvia and single layer PCBs. The market for PCBs is increasing, to an estimated € 1.4 billion in 2006 and € 1.5 billion by 2008. It is by far the largest market in Europe, holding 36.2% of the European market. Regarding end users of PCBs, consumer applications is expected to continue declining (-5% to € 90 million) in 2006, while EDP will be the largest grower (4% to € 130 million), followed by industrial (+4% to € 405 million), automotive (+2% to € 440 million) and telecom (1.6% to € 310 million).

### Market segmentation

Automotive has been the largest end user industry for years and will be so again in 2006. It is expected to increase to € 6.3 billion, from € 5.3 billion in 2003. Of the total market size (€ 18.3 billion in 2006), automotive will take a 34% share. While EDP is expected to show major growth (8.5%) in 2006, after 11.8% growth in 2005, telecom is expected to decrease again (-2.3% in 2006; -6.8% in 2005). The industrial sector demand will comprise € 3.1 billion worth in components in 2006, leaving the remainder for consumer electronics (€ 700 million).

The country counts a large number of end users. Some examples are: ABB (<http://www.abb.com>), Blaupunkt (consumer electronics, <http://www.blaupunkt.de>), Bosch Group (<http://www.bosch.de>), EADS (<http://www.eads.net>; aerospace, aircraft and defence) Festo (<http://www.festo.com>), Harting (<http://www.harting.com>), Kathrein (<http://www.kathrein.com>), Leoni (<http://www.leoni.de>), Miele (<http://www.miele.de>; home appliances), Moeller (<http://www.moeller.net>), Rittal (<http://www.ritamedical.com>), Loewe Opta (<http://www.loewe.de>), Motorola (<http://www.motorola.com>), Panasonic Europe (<http://www.panasonic-europe.com>), Rhode & Schwartz (<http://www.rsd.de>; electrical engineering), SAP (<http://www.sap.com>) and Siemens (<http://www.siemens.de>). The last company of the row, the Siemens group, not only dominates the German electronics industry, but it is also one of the largest industrial corporations worldwide, in terms of numbers of employees. Siemens is a world-class leader in many electronic applications such as automotive, medical, industrial, rail systems, power and lighting.

### Trends in consumption

- After the sales of its mobile phone division to the Taiwanese BenQ, and the merger of its communication division with Nokia, Siemens' divesture strategy could create a fragile situation for the German component market's future, in terms of size and growth, as the new owners might consider relocating German production to other countries.

### Production

#### Total production

Table 1.1 shows an indication of the production of electronic components in Germany. Please note that reliability of Eurostat data is limited. However, they can be used to analyse the development over years. Germany remained Europe's biggest producer of electronic components in 2004, although its value declined fast. Compared to 2000, the total value went down 30% in 2004. All product groups decreased in both production value and volume between 2000 and 2004, except the group of electromechanical components. The growth of production of this product group in the period 2002-2004 – in value by 14% and in volume by 27% - shows that Germany successfully defended its historically strong position in electromechanicals. Furthermore, the electronic assemblies also showed a positive trend: in the period 2002-2004, the production value of this group increased 20%.

**Table 1.1 German production of electronic components, 2000-2004, € million and million units**

	2000		2002		2004	
	value	volume	value	volume	value	volume
Active components	4,935	2,169	6,128	5,289	2,423	1,936
Electromechanical components	4,776	9,505	3,999	11,869	4,566	15,093
Passive components	3,485	9,375	2,635	3,062	2,231	2,362
<b>Electronic components (excl ass)</b>	<b>13,195</b>	<b>21,050</b>	<b>12,762</b>	<b>20,220</b>	<b>9,220</b>	<b>19,391</b>
Electronic assemblies	6,121	726	4,721	793	5,657	539

Source: Eurostat (2006)

### Major players

Some major manufacturers of electronic components in Germany are AB Elektronik (<http://www.abelektronik.de>), Bosch (<http://www.bosch.com>), Cherry

(<http://www.cherrycorp.com>; switches and keyboards), Epcos (<http://www.epcos.com>; passives), FCI Automotive (<http://www.fciconnect.com>), Harting (<http://www.harting.com>; connectors), ITT Cannon (<http://www.ittcannon.com>) and NXP (former Philips Semiconductors - <http://www.nxp.com>). Some large players in the PCB sector include Infineon (<http://www.infineon.com>; Siemens' semiconductors business), Vogt Electronic AG –the market leader in 2003 with more than one third market share- (<http://www.vogt-electronic.com>), Ruwel-Werke (<http://www.ruwel.de>) and Schweizer Electronic AG (<http://www.seag.de>). Two EMS (electronic manufacturing services) providers are DS Keyboard Technic (<http://www.dekorsy.com>) and Maschinenfabrik Reinhausen (<http://www.reinhausen.com>).

### ***Trends in production***

- In recent years, electronic assemblies (including PCBs) production has certainly been affected by transfers to EMS providers manufacturing outside of the German market in e.g. the Czech Republic, Hungary, Poland and South East Asia. For example: the number of PCB manufacturers has continued to decline in recent years, as well as production value. While in 2004, there were still 104 companies producing PCBs, with a value of € 1.04 billion, in 2005 their number had decreased to 90, producing PCBs with a value of € 981 million.
- According to industry specialists, Germany is considered to be a highly qualified location to set up microelectronics R&D centres. One example is AMD, which announced large investment plans for a German R&D centre.

### ***Opportunities and threats***

- + The German market is the largest of the EU and it is expected to grow in the coming years.
- Growing demand for specialized components.
- Local production has been decreasing in the period 2000-2004 due to a growing trend of outsourcing to EMS providers in Central and Eastern European countries.

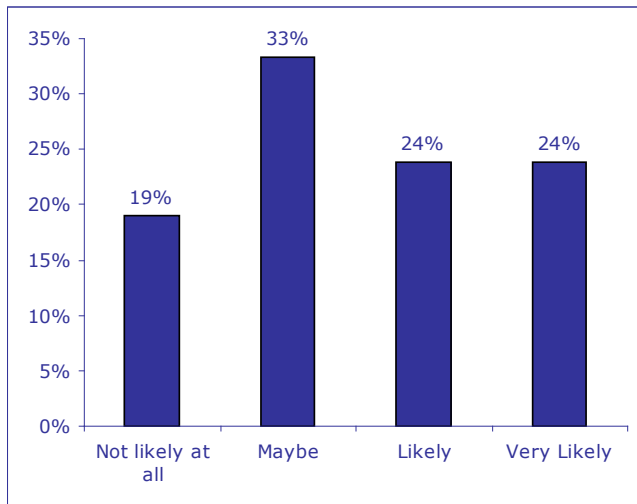
### ***Interest in developing countries***

In February and March 2006, FFF held an indicative online questionnaire among 18 German buyers of electronic components. It can be roughly concluded that there is an interest in developing countries in all sectors in the industry. Some highlights follow hereafter:

#### *Level of interest*

Figure 1.1 shows the level of interest of German buyers in doing business with suppliers of electronic components from developing countries (excl. China). The outcome is quite positive. Almost 24% answers 'very likely' and another 24% finds it 'likely'. Only 19% does not take it into consideration at all.

**Figure 1.1 'Likelihood German buyers doing business with DC suppliers (excl. China) in next two years' (n=18)**



Source: Online questionnaire FFF (March 2006)

*Developing countries considered*

When looking at the likelihood that German buyers will do business with suppliers of electronic components in the next two years, the following countries score the best: India (mentioned 7 times out of 18 positive respondents), Thailand (7), Indonesia (6), South Africa (5), Vietnam (5), Sri Lanka (4) and the Philippines (3).

*Products considered*

The products that the respondents consider sourcing in developing countries were power supplies, resistors, capacitors, sensors and microsystems and assemblies and subsystems in particular.

**Useful sources**

- Association for Electrical, Electronic & Information Technologies (VDE) – <http://www.vde.com>
- Association for Sensor Technology (AMA) – <http://www.ama-sensorik.de>
- Association of Electronics-Design - <http://www.fed.de>
- Automotive Association - <http://www.vda.de>
- Electrical and Electronic Industry Association (ZVEI) - <http://www.zvei.org>

**2. Trade: imports and exports**

**Imports**

**Total imports**

In 2005, Germany was the largest importer of electronic components in Europe, far ahead of the UK and France. Regarding electronic assemblies imports, the country is a good second behind the Netherlands. The total import value in Germany declined fast in recent years: almost 60% in the period 2001-2005. The most important suppliers were Japan, China and the Netherlands. Moreover, the Netherlands, as well as the Czech Republic and Austria, were leading suppliers to Germany of locally produced components. Beside China, other major DC suppliers to Germany were Malaysia, the Philippines, India, Indonesia and Mexico. Compared to 2004, the total share of DCs rose 3% to 21%. In the area of assemblies, DCs' share actually increased 5% to 19%. China gained import market share (in 2004 just 3%), while Morocco and Tunisia lost their position (in 2004 4 and 3% respectively). In the field of assemblies, most

striking is that in 2004 Malaysia didn't have a relevant share while in 2005 the country accounted for 3% of imports.

**Imports by product group**

Table 2.1 shows that all product groups, as well as the electronic assemblies, decreased in value between 2001 and 2005. Relatively, electromechanicals were least hit. In each product group, as well as in assemblies, China was the most important DC supplier. Furthermore, Malaysia was a large supplier of active components and assemblies, while this country together with Indonesia, Tunisia and Brazil was also a leading DC supplier of passives to Germany. Compared to 2004, most striking is that China gained market share in all product groups. In active components its share even grew from 2 to 14%. Moreover, South Africa lost market share in actives (4% in 2004) and Thailand's share in passives – in 2004 still 4% – annihilated.

Regarding all intra EU imports, most probably part of them are re-exports, but the exact value is unknown, as Eurostat doesn't allow such detailed analysis.

**Table 2.1 Leading suppliers of electronic components and electronic assemblies per product group to Germany, 2005, share in % of value**

Product	2001 € mln	2005 € mln	Leading suppliers (share in %)	Share (%)
Active components	13,848	3,710	Intra EU : Netherlands (11), UK (5), Austria (5) Ext EU excl DC : Japan (20), USA (7), Taiwan (4) DC : China (14), Malaysia (8), India (2), Philippines (1), Mexico (1), Thailand (1)	36 37 27
Electromechanical components	3,062	2,573	Intra EU : Czech Rep. (10), France (6), Netherlands (6) Ext EU excl DC : Switzerland (10), USA (6), Japan (5) DC : China (8), Mexico (1), Philippines (1), Tunisia (1), Malaysia (1), Thailand (1)	59 29 13
Passive components	2,804	1,952	Intra EU : Austria (10), Czech Rep. (6), UK (5) Ext EU excl DC : Japan (16), USA (4), Israel (4) DC : China (9), Indonesia (3), Malaysia (2), Tunisia (2), Brazil (2), Thailand (1)	43 36 21
Total electronic components (excl. electronic assemblies)	19,713	8,235	Intra EU : Netherlands (8), Czech Rep. (5), Austria (5) Ext EU excl DC : Japan (15), USA (6), Switzerland (4) DC : China (11), Malaysia (4), Philippines (1), India (1), Indonesia (1), Mexico (1)	45 34 21
Electronic assemblies	8,382	5,940	Intra EU : Netherlands (17), UK (6), Portugal (4) Ext EU excl DC : South Korea (13), USA (9), Taiwan (5) DC : China (12), Malaysia (3), Thailand (1), Philippines (0), Brazil (0), Mexico (0)	45 37 19

Source: Eurostat (2006)

**Exports**

The total export value of Germany declined fast in recent years: over 50% in the period 2001-2005, totalling € 8.9 billion in 2005. Despite this decline, Germany remained - by far - the largest exporter in Europe in 2005. In the period 2001-2005, electronic assemblies exports also decreased - but less steeply - by 18%. While in 2001 actives took 64% of all exports, in 2005 share of this product group had shrunk to 29%. Electromechanical components (51%) took over the main share in exports in 2005, with the remainder for passives (20%).

**Opportunities and threats**

- + Germany is the largest importer of the EU.
- + Considerable import shares for DCs in components as well as in assemblies.
- + Compared to 2004, total share of DC countries rose 3% to 21%.
- Import value of components has been declining very fast in recent years, while import value of assemblies has been decreasing as well.
- Export value of components has been declining fast in recent years.

**Useful sources**

- EU Expanding Exports Helpdesk - <http://export-help.cec.eu.int/>. Go to: trade statistics.
- Eurostat – official statistical office of the EU - <http://epp.eurostat.cec.eu.int>. Go to: 'themes' on the left side of the home page - 'external trade' - 'data – full view' - 'external trade - detailed data'.

**3. Trade structure**

**Trade channels**

Please refer to the CBI market survey “The Electronic Components market in the EU” for general information on trade structures in Europe. Additionally, there are about 450 distributors active in the German market. According to German market experts, electronic components for automotive are usually sold via manufacturers’ sales offices. Furthermore, high volume production is usually sold directly to the customer, while low volume products are usually traded via distributors. Next to the large multinational distributors, such as Arrow (<http://www.arrow.com>), Avnet (<http://www.avnet.com>) and Farnell (<http://de.farnell.com>), Germany is also home to a number of typically German distributors, such as Beck (<http://www.beck-elektronik.de>), Betronik (<http://www.betronik.de>) and MSC & Gleichmann (<http://www.msc-ge.com>). In addition, the country is home to a large retailer of electronic components (<http://www.conrad.de>).

**Preferences German buyers**

**Purchase preferences**

The German respondents to the online questionnaire also indicated how they consider purchasing from developing countries. Most respondents will buy directly (82%), while some 12% will buy via local agents. As a rule, direct buying only is done when the shipment value exceeds € 10,000, because of relatively high customs clearance fees. Again, clear communication is mentioned as an important success factor.

**Decision criteria**

The German buyers interviewed base their purchasing decisions on a set of elements (figure 3.1). Not only price is important, it involves especially quality and also the whole package. The fact that not all respondents have mentioned certification as a major criterion, can be explained by the fact that it is seen as a basic prerequisite in the industry. All suppliers are expected to have it.

**Figure 3.1 Decision criteria German buyers in selecting DC suppliers (n=18)**

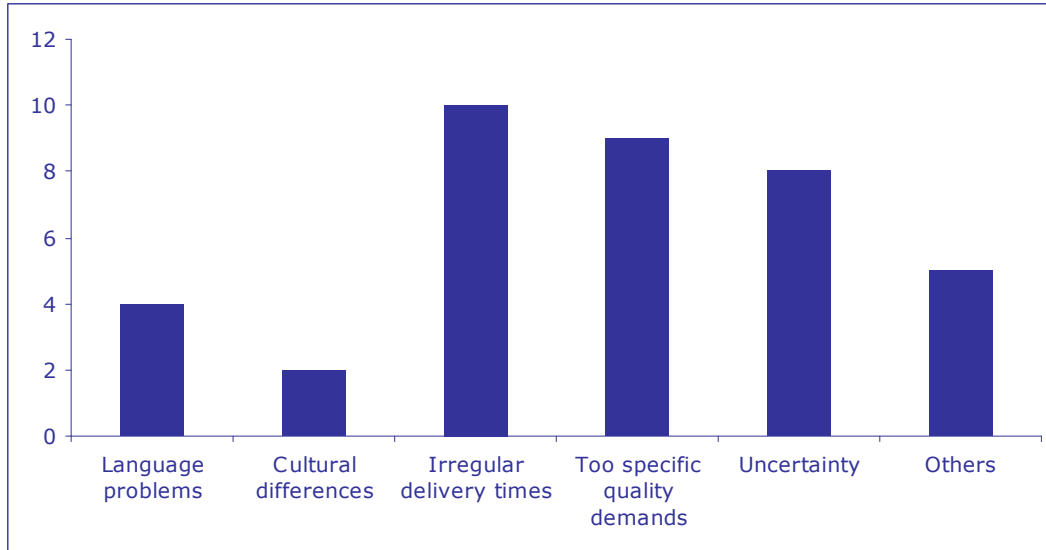


Source: Online questionnaire FFF (March 2006)

**Barriers**

According to the buyers, especially irregular delivery times, too specific quality demands and uncertainty are barriers to doing business with developing countries (figure 3.2).

**Figure 3.2 Barriers for German buyers in doing business with DC suppliers (n=18)**



Source: Online questionnaire FFF (March 2006)

**Trends**

- The distribution method is changing from exclusive distribution rights to distribution by several specialized firms, resulting in increased competition.

**Useful sources**

- German Association of Components Distribution - <http://www.fbd.de>
- Refer to section six for more sources to find prospects in Germany.

**4. Prices and margins**

Prices of electronic components and assemblies continue decreasing year after year. While electromechanicals and assemblies are down by 5-10% annually, semiconductors and most passive components decrease 10-30% annually. However, there are some, often temporary, exceptions. The factor material costs is the first variable in these. For example, in the early years of this decennium, prices of tantalum capacitors temporarily increased due to a shortage of tantalum. Another example concerns connectors with golden pins. The increasing gold price in 2005-2006 severely inflates the price of these components. Another factor is the combination of supply and demand, also with regard to individual products. For several products, such as D-ram and flash memory, both demand and supply can fluctuate much. As a result, prices of these products are very volatile.

Regarding the future, according to industry experts, the continuing rise in the cost of energy as well as the implementation of the Restriction on Hazardous Substances (RoHS) directive is driving up the manufacturing costs in the components industry. For example, between January and April 2006, crude oil prices rose over 21%. In addition, metal prices, such as that of gold, aluminium, nickel, tin and copper increased 18, 21, 37, 41, and 59%, respectively. As a result, industry analysts forecast rising prices of PCBs, as manufacturers are expected to pass on the costs to their customers.



**Useful sources**

- Refer to <https://www.em.avnet.com> and <http://www.farnell.com> to search for component prices.
- Another example is the site of Spoerle (<http://www.spoerle.com>), where prices can be found as well (click at the icon of the shopping cart).

**5. Market access requirements**

As a manufacturer in a developing country preparing to access Germany, you should be aware of the market access requirements of your trading partners and the German government. Requirements are demanded through legislation and through labels, codes and management systems. These requirements are based on environmental, consumer health and safety and social concerns.

**Legislative requirements**

National legislation in EU countries is compulsory for all products traded within the country concerned. Therefore, as an exporter in a developing country you have to comply with the legislative requirements that are applicable to your products. For information on legislation for electronic components go to 'Search CBI database' at <http://www.cbi.nl/marketinfo>, select your market sector, and the EU country of your interest in the category search, click on the search button and click on legislative requirements for an overview of all documents on legislation in your country of interest.

**Non-legislative requirements**

Social, environmental and quality related market requirements are of growing importance in international trade and are often requested by European buyers through labels, codes of conduct and management systems. For information on non-legislative requirements applicable to electronic components, go to 'Search CBI database' at <http://www.cbi.nl/marketinfo>, select your market sector and the EU country of your interest in the category search, click on the search button and click on your subject of interest under non-legislative requirements for an overview of all documents on the subject concerned in your country of interest.

**Packaging, marking and labelling**

Special transport packaging is not necessary for most electronic components. Packaging is used to protect against mechanical damage and for certain products additional antistatic protection is needed. The packaging has to satisfy conditions in the field of handling. Most electronic components are made of heavy copper cores, so the use of firm carton boxes is recommended in order to avoid breaking and/or shifting.

If an import duty -no matter the country of origin- applies to a component that enters Germany, the exporter should be able to show a certificate of origin. Furthermore, a Bill of Lading (B/L) and a commercial invoice are obligatory. If a 0% duty applies, the so called Eur 1 Form for ACP countries for customs tax exemption is common.

**Tariffs and quota**

Developing countries benefit from several trade preferences. The most important one is called 'Generalised System of Preferences' (GSP). Following this system, most import tariffs from developing countries of electronic components are zero. To determine import duties and/or quota for your own product(s) and from your specific country, consult the Taric database. Refer to the EU survey for more information. Another useful contact is the European Customs in Germany.

**Useful sources**

- European customs in Germany - <http://www.zoll-d.de>
- Export Helpdesk for Developing Countries - <http://export-help.cec.eu.int>
- Taric database - [http://ec.europa.eu/taxation\\_customs/dds/en/tarhome.htm](http://ec.europa.eu/taxation_customs/dds/en/tarhome.htm)
- In Germany, until 2007, the VAT tariff is 16%. Starting from 1 January 2007, the tariff will be raised to 19%. For more VAT tariffs, consult <http://www.expatax.nl/vatrates>.

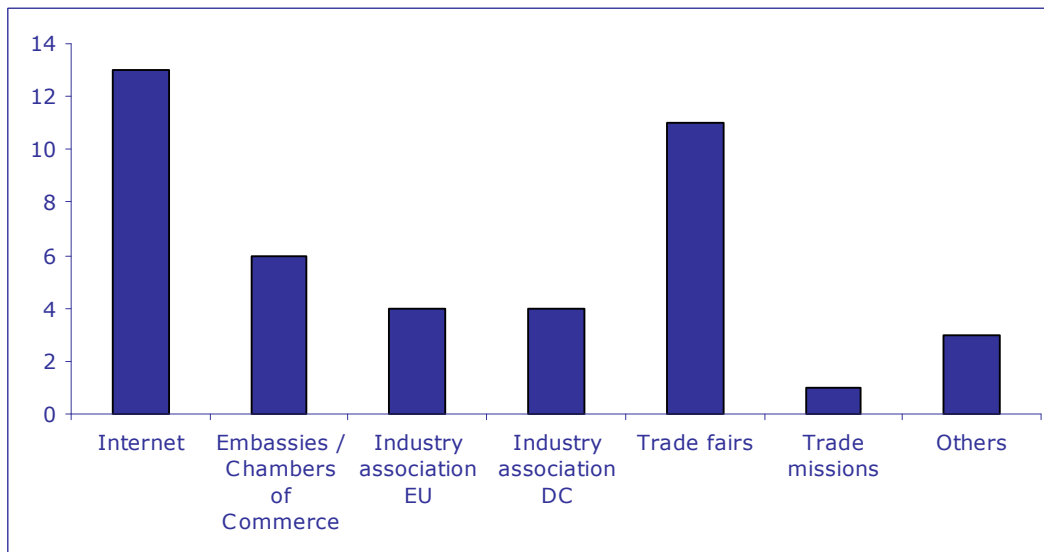
**6. Business practices**

**Selecting a suitable trading partner**

**Information sources**

Figure 6.1 shows that the internet (72%) and trade fairs (61%) are by far the two most important information sources for German buyers when they look for information about possible new suppliers.

**Figure 6.1 Preferred information sources German buyers (n=18)**



Source: Online questionnaire FFF (March 2006)

Certainly, there are several larger but also smaller German companies looking for trade opportunities in developing countries. There are three major ways to find prospects in Germany, which are the internet, sources in the developing country and sources in Germany:

*Internet*

There are some very useful websites that can be used to identify potential prospects (or competitors) in Germany. Some highlights follow below; these are:

- Company databases such as Europages - <http://www.europages.com>, KellySearch - <http://www.kellysearch.co.uk>, Kompass - <http://www.kompass.com> and Thomas Global Register - <http://www.trem.biz>. Refer to the manual "Digging for Gold" for guidelines for searching with these databases.
- European Component Source Directory ( <http://www.componentssource.com>) is a directory containing more than 5,000 addresses of manufacturers, distributors, brokers and importers of electronic components in Europe. Online access only costs € 49.
- Exhibitor database of Electronica 2006 - <http://www.global-electronics.net>, click on "Unternehmensindex." The database of trade fair Electronica can be used to identify key manufacturers worldwide that are active in the electronic components industry, searchable by detailed product.
- German Association for Technical Cooperation - <http://www.gtz.de>

Also refer to CBI's Export Planner (<http://www.cbi.nl>), an export manual that provides information on the different steps to be taken during the export process to the EU market.

#### *In the developing country*

- The foreign-trade chamber of commerce of Germany. Find the relevant chamber of commerce at <http://www.worldchambers.com>.
- The Economic Affairs departments of the official representative (Embassy or Consulate) of Germany. Find the German embassy in your country at <http://www.embassyworld.com>.

#### *In Germany*

- Members of German technology associations:
  - FBDI - <http://www.fbdi.de>. Click "Der FBDI" and "Mitglieder"
  - ZVEI-Buyers' Guide - <http://www.sachon-zvei-elektro-einkaufsfuehrer.de>. This site contains the listing of many German manufacturers with company profiles.
- Chamber of Commerce - <http://www.ihk.de>.
- German Trade Portal - <http://www.handelsvertreter.de>
- National Federation of German Commercial Agencies and Distribution - <http://www.cdh.de>
- Other portals where German trade partners can be found, such as <http://www.e-trade-center.com> and <http://www.kooperationsboerse.de>

### **Reaching an agreement with your trade partner**

For companies attempting to enter the German market, it is crucial to:

- adjust products to meet European technical specifications;
- be prepared to make concessions to European design expectations;
- adapt products to European quality standards, and
- rigidly adhere to negotiated terms of delivery.

### ***Drawing up an offer***

Trade interviews learn that offers should include technical features, prices as well as other issues such as lead times, stock levels etc. In general, German companies prefer quick and serious responses to offers, which means within a week. In practice, German companies have mixed experiences with this. Also, German companies regard good references (of customers and design) as very important. The DC manufacturer should mention all benefits for the potential German customer.

### ***Method of payment***

Based on interviews, payment for exports to Germany are usually by open invoice, with exception of the first time, when payment is used to be done in advance. German buyers will typically ask for 30 days credit. A 2% to 3% cash discount is commonly granted for payment received within ten or fourteen days. Further, the minimum distributor discount is 25%, which covers storage and marketing costs. In representation agreements, the German company is usually granted a 5% discount from the export list price.

### ***Terms of delivery***

According to industry specialists, deliveries are usually ex-works, but CIF and FOB conditions are no exceptions. In principle, customer wishes are decisive.

### **Sales promotion**

One of the major critical success factors for exporters of electronic components and electronic assemblies to Germany is attention to customer requirements and the ability to maintain good relationships with their German business partners. Sales promotion revolves around developing and expanding these customer relations and thereby maintaining and increasing sales volume. For more information also refer to CBI's Export Planner and Your Image Builder - <http://www.cbi.nl>.

### **Trade press**

Advertising in trade journals is an effective means of entering the German market. The "Electro and Electronics Buyers' Guide" (available in English) is published by the ZVEI and can be ordered on CD-ROM ([www.sachon-zvei-elektro-einkaufsfuehrer.de](http://www.sachon-zvei-elektro-einkaufsfuehrer.de)). There are also numerous magazines in Germany reporting on the electronics industry. An interesting story on your company or new product introduction will boost the company's image and increase user awareness. In that respect, building up contacts with the trade press will be helpful and should be used whenever possible.

The more important magazines, all of which are published in German, are:

- Computer Automation (automation and process industry) - <http://www.elektroniknet.de>
- Design & Elektronik - <http://www.elektroniknet.de>
- Electronic Embedded Systeme (chip, board & system design) - <http://www.awi.de>
- Elektronik - <http://www.elektroniknet.de>
- Elektronik Industrie - <http://www.productronic.de>
- Elektronik Journal - <http://www.elektronikjournal.de>
- Elektronik Praxis - <http://www.elektronikpraxis.de>
- Etz-Elektrotechnische Zeitschrift - <http://www.vde-verlag.de>
- Funkschau (consumer goods and telecom) - <http://www.elektroniknet.de>
- IEE (automation and data processing technology) - <http://www.iee-online.de>
- Industrie Anzeiger - <http://www.industrieanzeiger.de>
- Leiterplatten - <http://www.zev-leiterplatten.de>
- Markt & Technik - <http://www.elektroniknet.de>
- PLUS (portal for the metal finishing industries and PCB & electronics assembly industries) - <http://www.leuze-verlag.de>
- Productronic - <http://www.productronic.de>
- VDI Nachrichten - <http://www.vdi-nachrichten.com>

Further, AT-Fachverlag (<http://www.at-fachverlag.de>) is a publisher of several technical magazines.

### **Trade fairs**

Visiting and participating in a trade fair abroad can be an efficient tool to communicate with prospective customers. It provides more facilities for bringing across the message than any other trade promotional tool. It can also be an important source of information on market development, production techniques and interesting varieties. Beside the largest components trade fair in Europe (Electronica - <http://www.global-electronics.net> – held in Germany every other year), other relevant trade fairs in Germany are:

- Embedded World - <http://www.embedded-world-2006.de>
- Organic Electronics Conference and Exhibition - <http://www.oea-osc.com>
- Sensor - <http://www.sensorfairs.de>

This survey was compiled for CBI by Facts Figures Future in collaboration with Mr. G. Fandrich.

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