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electronic marketplaces for international business

ELECTRONIC COMMERCE IN THE PHARMACEUTICAL INDUSTRY

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Report



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Definition and characteristics of the industry

Definition of the pharmaceutical sector

According to the Classification of Economic Activities in the European Community, the pharmaceutical sector comprises a wide range of activities including the manufacture of pharmaceutical products, medicinal and botanical chemicals and the manufacture of soaps, detergents and other cleaning and polishing products.

Characteristics and trends in the sector

In 2005 the global pharmaceutical sector was worth €454.87 billion (\$565.90 billion) at factory prices. The North American market (USA and Canada) continues to be the largest in the world with a market share of 47%, significantly larger than Europe or Japan. However, in 2005 the European market outperformed the American market in terms of growth for the first time in more than a decade, growing by an estimated 7.1% in Europe compared to 5.2% in North America.

The European pharmaceutical industry makes an important contribution to the EU, not only economically but also in terms of high quality employment and investment in scientific capacity and public health. As well as being a driving force in medicine and improving health in Europe and the rest of the world, the research-focused pharmaceutical industry is a key asset for the European economy, being one of the leading European high-tech sectors. These sector's statistics are as follows:

The European pharmaceutical market (2003)

Pharmaceutical market at factory prices	Approx. €110 billion
Pharmaceutical market at retail prices	Approx. €170 billion

Statistics on the EU pharmaceutical sector (2004)

Value of production	Approx. €160 billion
Value of exports	Approx. €95 billion
Trade balance	> €30 billion (surplus)
Employment	580,000-600,000

Research and development in the EU pharmaceutical sector

Number of people employed in pharmaceutical R&D	More than 100,000
Contribution to the EU's R&D expenditure	Approx. 10%
R&D expenditure	Approx. €20 billion

There are 1,815 laboratories in the pharmaceutical sector in the European Union that recorded sales in excess of €109 billion in 2004. The sector employs 530,000 people and production exceeds €144 billion. Germany is the most important European market in the sector in terms of employment and for exports and imports.

General data for the EU pharmaceutical sector (2004)

Country	Nº Labs (*)	Production (€millions) (**)	Employ.	Int. sales (€millions)	Imports (€millions)	Exports (€millions)
Germany	310	20,893	114,200	21,551	21,991	27,333
Austria	105	1,597	9,523	2,312	2,996	2,875
Belgium	140	4,799	27,185	3,539	23,316	24,599
Denmark	41	4,593	16,759	1,410	1,734	4,525
Spain	239	90,656	39,000	10,671	6,716	3,999
Finland	64	724	6,648	1,689	1,283	490
France	257	33,141	99,400	22,760	12,963	17,196
Greece	65	449	11,300	3,468	2,254	677
Holland	48	5,660	16,000	3,579	8,241	8,989
Ireland	56	15,866	22,500	1,306	1,988	15,156
Italy	213	17,742	73,266	15,195	10,448	9,060
Portugal	141	1,590	10,717	2,879	1,597	308
United Kingdom	74	22,555	73,000	16,110	12,742	18,207
Sweden	62	5,565	20,100	2,608	1,999	5,791
Total EU-15	1,815	144,830	539,598	109,077	113,448	139,205

(*) Member laboratories of EFPIA associations

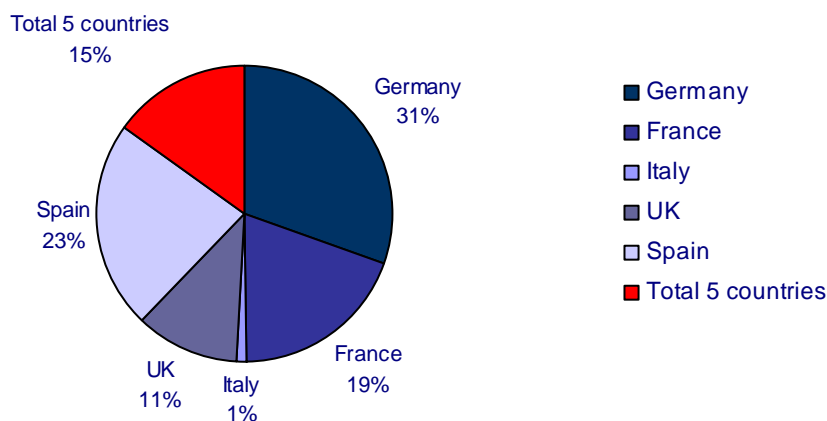
(**) Figures refer to production activities of pharmaceutical specialties and raw materials for human and veterinary use, except in Spain, where the figure relates solely to human use.

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Europe is a net exporter of medicines. The European pharmaceutical sector produces a large trade surplus equivalent to €32.2 billion in 2004. In the last 15 years, the total pharmaceutical surplus has more than quadrupled from €7.1 billion in 1990 to €32.2 billion in 2004. The three leading trade members of the EU jointly supplied 87.6% of its imports in 2004 and acquired 55.8% of its exports.

Nevertheless, there has been a definite slowdown in the sector according to figures from recent years. Of the five big European pharmaceutical markets, four have recorded equal or lower growth than the previous year (UK, Italy, Spain and France) and only Germany is growing faster than in 2004 largely driven by the end of the frozen price period which began in 2002.

Evolution of the pharmaceutical market in the leading European countries: Variation (%) 2005/04



Despite the sector's strength, Europe's leadership position as a centre for pharmaceutical development and production is being eroded. In 1992 six out of every 10 best selling medicines in the world came from Europe compared to four out of ten from the USA. By 2002 this situation had reversed with 80% of the best selling products originating from the USA and only 20% from Europe.

The European Commission intends to reverse this trend so that Europe becomes the primary source of pharmaceutical products once again. On 1 June 2005, Günter Verheugen, Vice-president of the Commission announced a new industrial strategy for the sector. This strategy is based on three core elements: competitiveness, innovation and patients. Over the next three years the Commission will promote specific work programs in each of these areas. The objective is to establish the foundations so that the sectors for innovation, generic medicines and self-medication can grow, progressing the EU's new agenda for growth and employment, as well as helping to implement European public health strategy.

E-business in the pharmaceutical sector

Statistical estimates of the use of e-commerce tools and new technologies

The pharmaceutical sector appears to have the ideal characteristics for using electronic business tools that support B2B relations (business to business) for buyers as well as sellers. Firstly, many of the products that it sells lend themselves to a simple description and exhibit a high degree of standardization. Furthermore, the specific challenges faced by the pharmaceutical sector, such as managing product recalls, is encouraging collaboration along the whole value chain. These factors increase the use of commercial and communication platforms in the sector. Finally, the global nature of the pharmaceutical sector means that companies have to sell or manufacture in diverse international markets.

Commercial B2B platforms support the buying and selling activities of pharmaceutical companies in different ways. Pharmaceutical companies appear to be the typical online purchaser. Nearly 40% of companies in the pharmaceutical sector state that they use the internet or other IT networks for purchasing goods or services, a figure slightly lower than the weighted average for all sectors. It should also be noted that the difference between small and large companies is relatively insignificant, with more than 30% of micro-companies (1-9 employees) in the sector claiming to carry out online purchases. A more detailed analysis reveals that the strategic importance of online purchases is significantly limited. Only 7% of all pharmaceutical companies in the EU-7 purchase more than 25% of their supplies online, a figure that is similar to the weighted average of the ten sectors in the survey.

Online purchases and use of specific IT solutions in e-procurement (purchasing over the internet)

	Online purchases	Purchase > 5%	Purchase > 25%
	% of companies	of their supplies online	of their supplies online
Weighting:	% of companies	% of companies	% of companies
Pharmaceutical firms (EU-7)	38	19	7
1-9 employees	34	19	9
10-49 employees	44	19	3
50-249 employees	47	19	5
250+ employees	49	31	8
Germany	41	29	5
Spain	35	19	0
France	37	12	7

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Italy	27	9	4
United Kingdom	64	40	21
Czechoslovakia	62	27	12
Poland	34	17	10
Total (10 sectors, EU-7)	44	25	10
Base (100%)	All		

"% of companies" = % of companies as legal entities independent of size.

Source: e-Business W@tch

The pharmaceutical sector are more internationalized than the average and 18% of companies deal primarily with international suppliers compared to an average of only 13%. Overall, the bulk of online purchases in this sector come from regional or national suppliers.

Table: Predominant location of suppliers for companies that purchase over the internet

	Mainly from regional suppliers	Mainly from national suppliers	Mainly from internet suppliers
Weighting:	% of companies	% of companies	% of companies
Pharmaceutical firms (EU-7)	9	73	19
1-9 employees	8	80	12
10-49 employees	10	65	25
50-249 employees	9	66	24
250+ employees	7	64	29
Total (10 sectors, EU-7)	18	69	13
Base (100%)	Companies that purchase online		

"% of companies" = % of companies as legal entities independent of size.

Source: e-Business W@tch

In general SMEs have little interest in more sophisticated electronic business tools. Due to the small size of these companies, improving their purchasing (or selling) procedures does not offer them the same advantages as their larger rivals. Furthermore, many electronic business tools are simply not suitable for use by SMEs (the number of purchases made by

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these companies in general is not sufficient to warrant the use of an online auction). The percentage of large pharmaceutical companies that use specific IT applications to support their buying procedures (36%) is far higher than for smaller companies.

The following table shows revealing data about the specific tasks that the sector uses IT applications for. Finding suppliers, managing requests for quotes or prices (RFQs / RFPs) and making orders are the principal uses when purchasing via internet (e-procurement).

Table: Tasks facilitated by specific IT solutions in contract and provisioning activities

	Finding suppliers	Managing RfQs/RfPs	Product orders	Manage online auctions	Invoicing suppliers	Expenditure analysis
Weighting:	% of companies	% of companies	% of companies	% of companies	% of companies	% of companies
Pharmaceutical firms (EU-7)	10	9	10	2	5	6
1-9 employees	9	8	7	1	4	4
10-49 employees	9	9	9	1	3	4
50-249 employees	12	11	15	3	10	10
250+ employees	19	17	27	10	23	26
Total (10 sectors, EU-7)	8	7	9	3	6	5
Base (100%)	All companies					
"% of companies" = % of companies as legal entities independent of size.						
RfQ = Request for Quote; RfP = Request for Price						

Source: e-Business W@tch

Although a high percentage of pharmaceutical companies purchase online, internet purchases represent on a small proportion of total purchases. Furthermore, the specific IT applications that support purchasing activities are primarily used by large companies.

Opportunities and risks for SMEs

To a certain degree SMEs in the pharmaceutical sector are facing the same challenges as their larger rivals. Nevertheless, they can rarely follow the same strategies of the larger companies when tackling these challenges.

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One of the principal opportunities for pharmaceutical SMEs is their size. SMEs are more flexible than their larger competitors, at least in theory. As a result, it should be easier for them to stay ahead of the growing competition in the mass market by refocusing their business towards **niche markets**, such as producing natural cosmetic products or specialist drugs. The internet is an ideal medium for supporting these activities thanks to its low cost but global coverage.

SMEs can also use electronic business tools to develop **client relations**. One simple tool is the corporate website. Information is fundamental for managing client relations and applies to big and small companies. Although systems for managing client relations are usually focused on the problems (and budgets) of the larger companies, simply having a basic client database can also help small and medium sized companies to manage their client relationships.

Finally, SMEs can also use IT and internet based solutions for **collaborating with business partners**. This allows them to share capacity and jointly improve their respective competitive positions against the sector's giants. The internet can be a common platform for providing supplier services and electronic business tools. Implementation costs can be shared and, as a result of the collaboration, purchasing power is increased.

In terms of risks, **insufficient use of electronic business tools** can occur in some small companies in the pharmaceutical sector. It may be that these tools have been installed but the company lacks the knowledge on the best way to use them.

Furthermore, many electronic business solutions lead to problems that, in practice, only affect large companies. Leading software suppliers have only just begun to pay more attention to designing and selling ERP or CRM **solutions** for smaller companies. **SMEs** that try to imitate large companies in the area of electronic business not only risk using complex and inappropriate IT systems in terms of size, but also run the risk of having to deal with problems that are not relevant to their companies.

The needs of large companies in the sector also carry more significance in relation to future developments of ICTs and e-business. **Technological innovation** may not necessarily **fulfill the needs of SMEs**. Such innovation is often principally determined by the interests of large companies when it is not developed in exclusivity.

E-marketplaces in the pharmaceutical sector

The majority of B2B portals in the pharmaceutical sector comprise directories of suppliers and products. Pharmaceutical companies can use these directories to identify manufacturers or distributors within categories such as laboratory equipment and materials, specialized sector software or packaging. Furthermore, manufacturing subcontractors and research project companies (E.g. that carry out clinical surveys) offer their services through online directories.

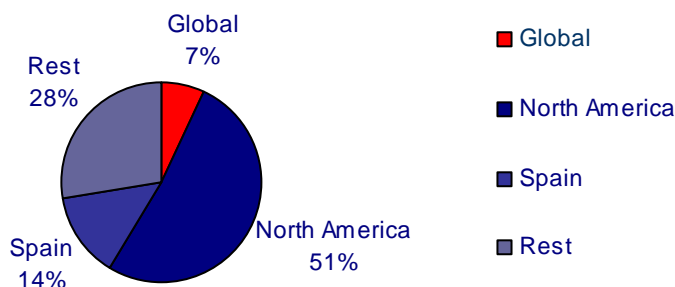
In addition, pharmaceutical companies resort to B2B portals to publicize their own products. Portals offer them the possibility to achieve broader coverage, especially in the case of small companies and specialist suppliers that do not have large distribution networks.

Geographical scope

The eMarket Services directory of electronic markets currently lists 29 active markets for the pharmaceutical and healthcare sector. Geographically we can see that a high proportion of electronic markets are focused on North America (15) and Spain (4).

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Geographical scope of electronic B2B markets in the pharmaceutical sector



Client profile and products

The majority of these e-marketplaces are used by companies that sell and/or distribute products in Spain that are used by hospitals and clinics. Nevertheless, health centers can also be direct clients of these electronic markets.

The products that are sold via these platforms are those used in the pharmaceutical and medical industry, such as surgical instruments, laboratory equipment, healthcare and pharmaceutical materials, and all types of related products and services.

Directory of electronic markets of eMarket Services

Electronic Market	Geographical scope	URL	Available languages
Auctionmart.com	USA	www.auctionmart.com	English
Biolab Direct	New Zealand	www.biolabdirect.co.nz	English
Bioresearch Online	Global, focused on North America	www.bioresearchonline.com	English
BioSupplyNet	North America	www.biosupplynet.com	English
Broadlane	USA	www.broadlane.com	English
Comfort Online	Global	www.comfortonline.it	English, Italian
Drug Discovery Online	Global, focused on North America	www.drugdiscoveryonline.com	English
E-Dental.com	Global, focused on North	www.e-dental.com	English

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	America		
e-opti	Italy	www.e-opti.com	Italian
Global Healthcare Exchange	Global	www.ghx.com	English, Germany
Home Health Provider.com	North America	www.homehealthprovider.com	English
LabX	85% of users are from North America, the global user base includes Europe, Asia, Central and South America and Australia	www.labx.com	English
Long Term Care Provider.com	Global, focused on North America	www.longtermcareprovider.com	English
MaterialSanitario.com	Spain and the Spanish speaking South American countries	www.materialsanitario.com	Spanish
Med2Med	Global, focused on Germany	www.med2med.net	English, Germany
Medbuy	Canada	www.medbuy.com	English
MedequipB2B.com	Asian suppliers, but global purchasers	www.medequipb2b.com	English
Medical Design Online	Global, focused on North America	www.medicaldesignonline.com	English
Medical Virtual Market	Spain	www.medicalvm.com	Spanish
medicforma	Germany and Austria	www.medicforma.de	German
Nurses.com	Global, focused on North America	www.nurses.com	English
Optical Auctions	Global, focused on North America	www.opticalauctions.com	English
Pharmaceutical Online	Global, focused on North America	www.pharmaceuticalonline.com	English
plazasalud24	Spain	www.plazasalud24.com	Spanish
Quiminet	Latin America, Spain, Brazil and USA	www.quiminet.com	Spanish
Safety Online	Global, focused on North America	www.safetyonline.com	English

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Saniline	Spain	www.saniline.com	Spanish
SoluMed.com	Global, focused on USA	www.solumed.com	English
UKprocure	United Kingdom	www.ukprocure.com	English

Source: www.emarketservices.com

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