

Global Pharmaceutical Trade and Contribution of India



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Abstract: Trends in global pharmaceutical market in terms of sale, product category, product, regions and countries help in exploring and expanding pharmaceutical export business. The export figures of India as a whole are very promising with respect to global pharmaceutical business. However, India's contribution is low with overall global export business. There is a huge scope to increase the export business. There is a necessity to understand that Indian pharmaceutical companies to explore export business into new countries in addition to current countries of export business.

Introduction

Indian pharmaceutical industry has proved in the production of globally accepted quality pharmaceutical products and among the total drug master files at USFDA, India stands first with 2658 filings. The number of Indian companies registered as drug manufacturers with facilities that are approved at USFDA are 475 and 306 including sister concerns respectively (includes all the foreign company establishments in India). In addition to this, India stands first globally in export of drugs, pharmaceuticals and fine chemicals by volume in formulations. The current article is to bring out global pharmaceutical trade statistics and the contribution of India.

Global Pharmaceutical Market

The global pharmaceutical market for the year 2010 is US \$ 875 bn (audited and un-audited) with a growth of 4.1 % over the previous year. In 2003, a maximum growth of 9.1 % over the previous year was recorded. Table 1 clearly indicates the down trend in the

Year/Market	2003	2004	2005	2006	2007	2008	2009	2010
Total Global Market in US \$ billion (average exchange rate)	561	603	647	692	740	785	840	875
Growth Over Previous year (average exchange rate)	9.1%	7.6%	7.2%	7.0%	6.9%	6.1%	7.1%	4.1%

Table 1: Global Pharmaceutical Market in US \$ billion

global pharmaceutical market value with respect to previous year which might be a reason of periodic expiry of various process and product patents. However, the overall market has boosted up to 65 % with respect to 2003 in terms of value.

Global Pharmaceutical Market by Region

The total market size for entire regions in the world is US \$ 874.6 bn (audited and un-audited). As per table 2, the expected growth rate for the year 2011 is 4-5 % with an expected value of US \$ 918.33 bn. The expected market for the year 2012 is US \$ 973.42, for year 2013 is US \$ 1,031.82 bn, for year 2014 is US \$ 1093.72 bn and for year 2015 is US \$ 1159.34 bn considering at a maximum growth rate of 6 percent.

Year	2010	2010	2006-2010	2011	2011-2015
	Market Size	% Growth over previous year	CAGR %	Forecast % Growth	CAGR %
US \$ in Billion	\$874.6	4.1%	6.2%	4 - 5%	3 - 6%

Table 2: Total Size of Pharmaceutical Market by Region

When compared among global regions, figure 1 indicates that the pharmaceutical market is maximum in North America region with US \$ 335.1 bn and 38 % share and is minimum in the Latin America region with US \$ 54.3 bn and 6 % share of total global market. Highest growth rate is expected at a range of 11 – 14 % in the two regions Asia/Africa/Australia and Latin America.

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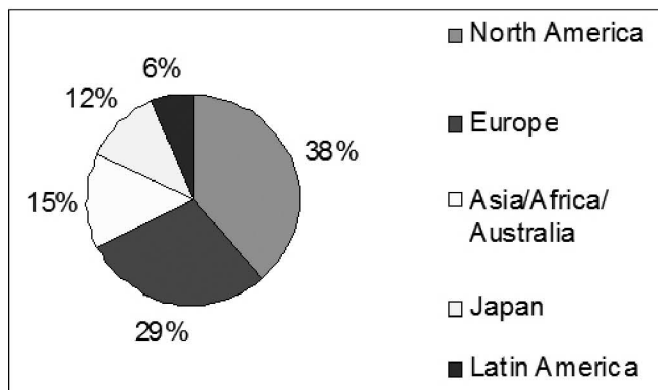


Figure 1 Pharmaceutical Market by Region for the year 2010 (US \$bn)

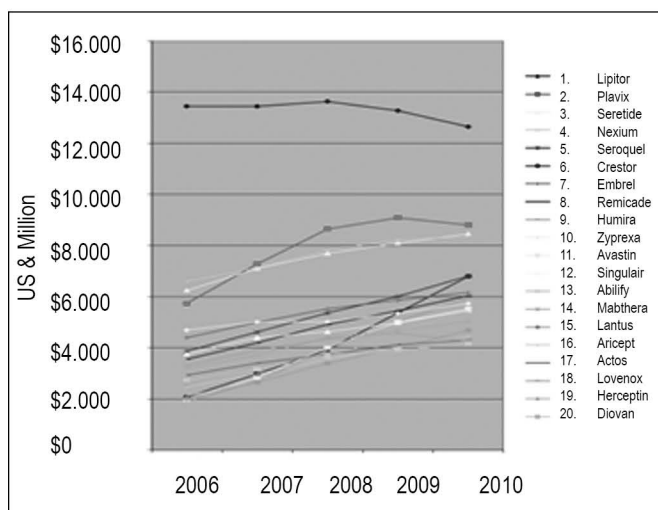


Figure 2: Top 20 Pharmaceutical Product Sales Globally

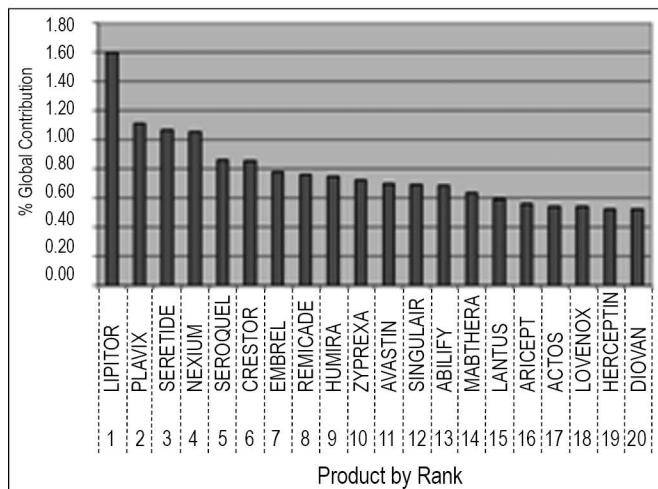


Figure 3: Percent Contribution of Top 20 Pharmaceutical Product Sale in year 2010

Top 20 Global Pharmaceutical Products and their sales

Figure 2 gives trend in top 20 pharmaceuticals and their sale (audited) during the year 2006 to 2010. Anti-lipidemic, Atorvastatin has the highest sale of US \$ 12,657 mn. However, a fall in the sale of Atorvastatin by US \$ 631 mn over the previous year is observed. Top 20 pharmaceutical product sales globally range from US \$ 1900 mn to US \$ 13646 mn during the year 2006 to 2010.

Among the top 20 pharmaceutical products by sales in the year 2010 globally, Figure 3 indicates, the contribution of Atorvastatin is 1.6 % of the total global sales. Monoclonal antibody Rituximab has the lowest contribution of 0.64 % among the top 20 products by sale.

Top 20 Therapeutic class sales during 2006-2010

When a comparison is made among the top 20 therapeutic classes by sales (audited), oncologic drugs have the highest sales of US \$ 55972 mn globally. Even though Atorvastatin sales is the highest in the world, table 3 gives the indication of second place in sales as per therapeutic class. Vitamin and mineral nutrients have their place in the top 20 therapeutic class with a sale of US \$ 12971 mn for the year 2010. When compared with global pharmaceutical product sale and global therapeutic class sale, lipid regulators have up trend over the previous year in global therapeutic class sale, while Atorvastatin shows down and Rosuvastatin shows up trends over the previous year in global pharmaceutical product sale.

Percentage contribution of Top 20 Companies in Global Pharmaceutical Markets, 2010

A comparison of top 20 companies global sales (audited) of pharmaceutical products with over all global pharmaceutical market, the contribution of the top 20 companies in global sales

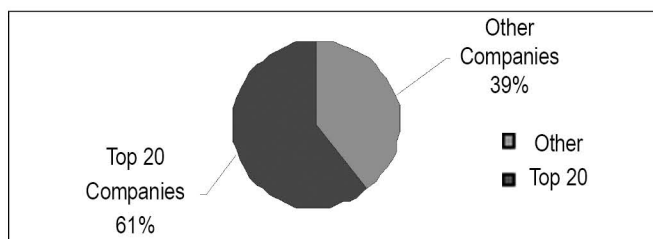


Figure 4: Top 20 Global Companies, 2010 by Sales and their Global % Contribution

Rank	Therapeutic Class/ Global Market	2010	2009	2008	2007	2006
0	Global Market	\$791,449	\$752,022	\$727,067	\$671,164	\$609,614
1	Oncologics	\$55,972	\$52,372	\$49,438	\$41,949	\$34,905
2	Lipid Regulators	\$36,400	\$35,281	\$34,445	\$34,141	\$35,358
3	Respiratory Agents	\$35,926	\$33,596	\$31,186	\$28,775	\$24,796
4	Antidiabetics	\$34,429	\$30,406	\$27,548	\$24,401	\$21,310
5	Anti-ulcerants	\$27,972	\$29,610	\$30,032	\$29,174	\$27,619
6	Angiotensin II Antagonists	\$26,630	\$25,209	\$22,998	\$19,418	\$16,405
7	Antipsychotics	\$25,412	\$23,248	\$22,742	\$20,693	\$18,060
8	Autoimmune agents	\$20,710	\$17,961	\$15,612	\$12,815	\$10,629
9	Antidepressants	\$20,216	\$19,416	\$20,194	\$19,581	\$20,374
10	HIV Anti-viral	\$15,432	\$13,758	\$12,280	\$10,699	\$9,175
11	Platelet Aggr. Inhibitors	\$15,244	\$14,604	\$13,647	\$11,952	\$10,624
12	Vitamins & minerals	\$12,971	\$11,951	\$11,374	\$10,109	\$9,026
13	Anti-epileptics	\$12,553	\$12,995	\$16,792	\$15,136	\$12,955
14	Narcotic analgesics	\$12,011	\$11,235	\$10,534	\$9,530	\$8,219
15	Cephalosporins & combs	\$11,466	\$10,586	\$10,188	\$9,489	\$8,849
16	Non-Narcotic Analgesics	\$10,986	\$10,917	\$10,896	\$10,179	\$8,862
17	Vaccines	\$10,972	\$10,690	\$11,172	\$10,911	\$7,311
18	Erythropoietins	\$10,596	\$10,829	\$11,486	\$12,866	\$13,791
19	Anti-Rheumatics, Non-Steroidal	\$10,152	\$9,668	\$9,897	\$9,318	\$9,187
20	Multiple Sclerosis	\$9,844	\$8,712	\$7,716	\$6,245	\$5,533

Table 3: Top 20 Global Therapeutic Class by Sales, 2006-2010 (US \$ Million)

is found to be 61 %. Figure 4, gives a clear indication that the pharmaceutical market is occupied by top multinational companies having sound basic research with good number of patents.

Top 20 Companies in Global Pharmaceutical Sales, 2010

When a comparison is made with respect to the company wise sale with global pharmaceutical sales, figure 5 clearly indicates Pfizer as the global leader with revenue of US \$ 55602 mn. The percentage contribution of Pfizer with global pharmaceutical industry by Sales is 7 %. When all the companies are observed, the top 20 company's revenue by sales may be mainly by their patented products both in terms of bulk drugs and formulations.

India's Export-Import of Drugs, Pharmaceuticals and Fine Chemicals from 2004 to 2011

India's exports in the field of Drugs, Pharmaceuticals and Fine Chemicals is raised from US \$ 3312.99 mn to US \$ 10393.53 mn which is more than three fold increase, where as imports to India, raise from US \$ 644.17 mn to US \$ 2375.61 mn which

is about 3.6 fold increase during the years 2004 to 2011. When the net balance between India's exports with imports is observed, the balance as indicated in Table 4, Figure 6 is a positive balance which indicates India's pharmaceutical products are well accepted globally. When a comparison is made among India's

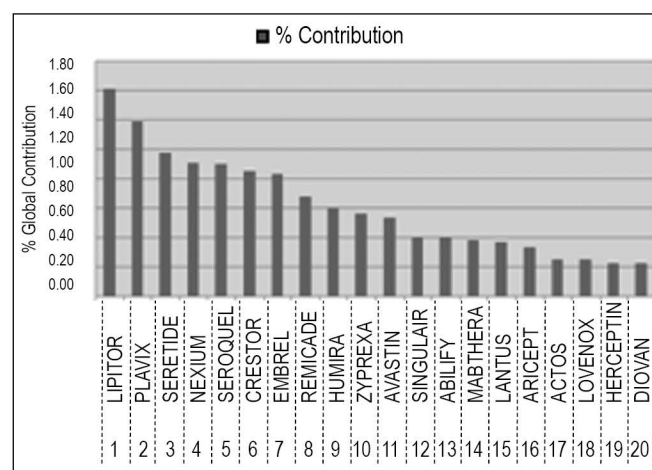


Figure 5: Top 20 Companies Percentage Contribution by sales Globally in year 2010

Year/Commodity	Financial Year	2004	2005	2006	2007	2008	2009	2010	2011
Drugs, Pharmaceuticals And Fine Chemicals	Export	3312.99	3972.81	4994.52	5939.75	7644.05	8802.64	8955	10393.53
Medicinal and Pharmaceutical Products	Import	644.17	705.08	1027.75	1292.32	1668.22	1889.11	2100.61	2375.61
Net (Positive Balance)	Net Balance	2668.82	3267.73	3966.77	4647.43	5975.83	6913.53	6854.39	8017.92

Table 4: India's Exports-Imports in Drugs, Pharmaceuticals and Fine Chemicals for Financial Year 2002-2011 (in US \$ Million)

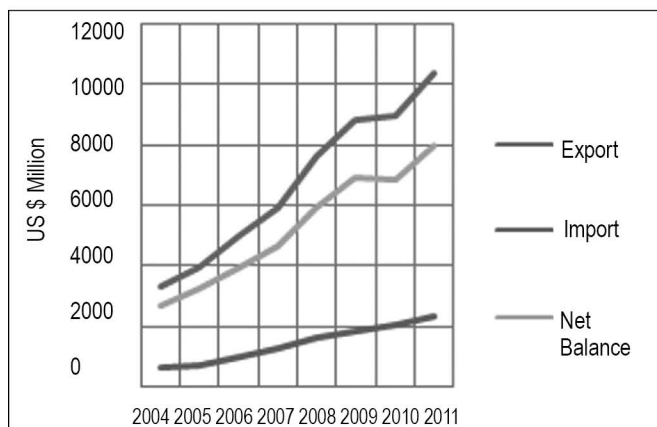


Figure 6: India's Exports-Imports in Drugs, Pharmaceuticals and Fine Chemicals for Financial Year 2001-2011

export of US \$ 10393.53 mn in Drugs, Pharmaceuticals and Fine Chemicals with US \$ 791449 mn of Global Market sale, a 1.31 % contribution is from India. The 1.31 % India's contribution in Global Pharmaceutical Market is near to one of the top 20 company's sale of pharmaceutical product globally. The drastic difference is mainly due to India's contribution only for bulk drug and generic drug manufacture. While, the top 20 company's sale contribution may be the contribution of their innovative, patented products in addition to conventional bulk drugs and formulations. Pharmaceutical Export Promotion Council (Pharmexcil) a setup by Ministry of Commerce and Industry, Govt. of India established in the year 2004 has strengthened Indian pharmaceutical exports from US \$ 3312.99 mn to US \$ 10393.53 mn during the years 2004 to 2011.

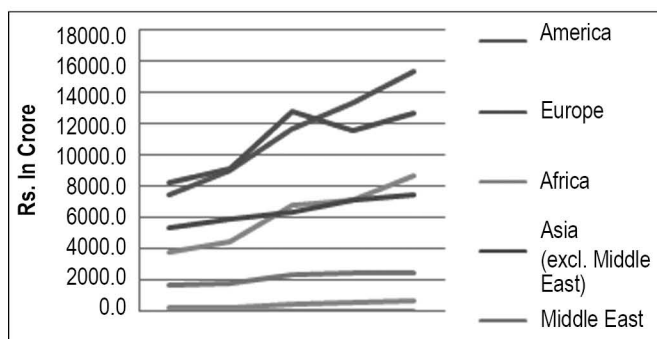


Figure 7: India's Exports in Drugs, Pharmaceuticals and Fine Chemicals-Region wise

India's Exports in Drugs, Pharmaceuticals and Fine Chemicals Region Wise

For the year 2011 exports of Drugs, Pharmaceuticals and Fine Chemicals by region wise is in the range of Rs. 39.62 cr to Rs. 15393.17 cr. Among the regions, American region has the highest India's export of Rs. 15393.17cr, while region coming under other category have the lowest India's export of Rs. 39.62 cr. When compared to individual regions, Figure 7 indicates America has up trend of India's exports during 2007-2011, while in Europe a down trend is observed after 2009. India has the capability of exporting to all the countries globally; however the reason behind low contribution in some of the regions is economic viability to Indian companies.

India's Exports in Drugs, Pharmaceuticals and Fine Chemicals to G7 Countries

When a comparison is made of India's exports in Drugs, Pharmaceutical and Fine Chemicals among G7 countries, all the countries show an upward trend in importing Indian pharmaceutical products from year 2007-2011. Some countries like Italy and Canada show down trend in the last two years because of their own drug company resources. When a comparison is made among the G7 countries as indicated in Figure 8, USA has the highest import of Rs. 10856.00 cr and Japan has the lowest import of Rs. 359.27 cr with respect to India's Drugs, Pharmaceuticals and Fine Chemicals. When a comparison is made in overall business with India for Drugs, Pharmaceuticals and Fine Chemicals during the years 2007 to 2011, USA has highest import ranging from Rs. 4479 cr to Rs. 10856 cr whereas,

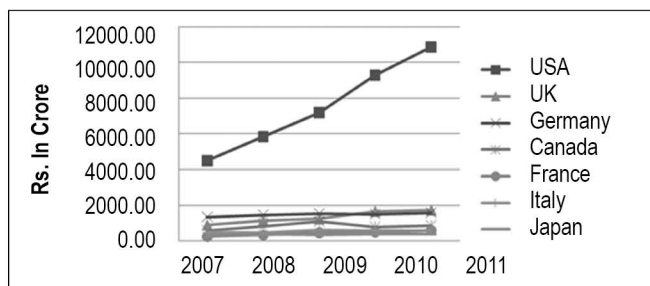


Figure 8: India's Exports in Drugs, Pharmaceuticals and Fine Chemicals to G7 Countries

all the other G 7 countries contribution of accepting India's Drugs, Pharmaceuticals and Fine chemicals is below Rs. 2000 cr. This drastic change is mainly due to well established and well understood US regulatory system. In case of other countries, even though the regulatory system is well established and understood, variations in approvals processes might be a reason why India's penetration of Drugs, Pharmaceuticals and Fine chemicals into other G 7 countries is hindered. Currently, Japan has accepted Indian generic companies as national treatment. This indicates an easy penetration of Indian Drugs, Pharmaceuticals and Fine Chemicals in to Japan.

Top 20 Countries Contribution in India's Export of Drugs, Pharmaceuticals and Fine Chemicals

India's export of Drugs, Pharmaceuticals and Fine Chemicals to the world is Rs. 47363.33 cr. The contribution of India's exports by top 20 countries is Rs. 28336.36 cr which accounts to 59.8 %

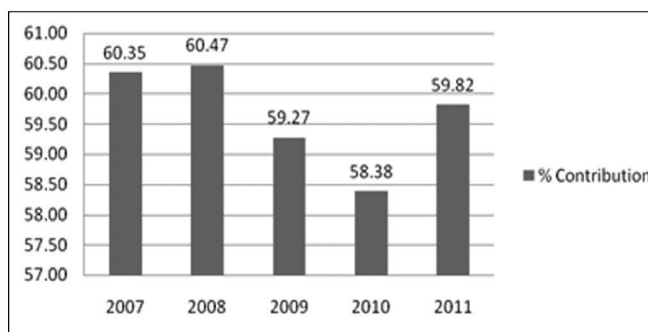


Figure 9: Contribution of India's Exports in Drugs, Pharmaceuticals and Fine Chemicals to Top 20 Countries 2007-2011

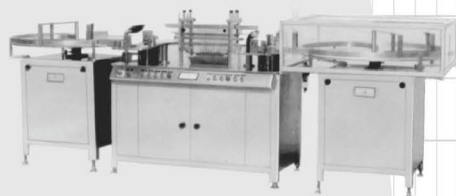
of entire India's exports to world. When comparison is made in the contribution of top 20 countries in India's exports from year 2007 to 2011, figure 9 indicates a down trend of about 2 % during the year 2010 over the year 2008 and India has recovered from the minor fall in the year 2011.

Rank	Country	2007	Country	2008	Country	2009	Country	2010	Country	2011
1	USA	4479.40	USA	5839.35	USA	7177.06	USA	9264.96	USA	10856.00
2	Germany	1343.83	Germany	1448.01	Germany	1530.49	UK	1652.82	Russia	1907.09
3	Russia	1321.64	Russia	1243.81	Russia	1529.60	Germany	1515.00	UK	1723.84
4	UK	901.60	UK	1146.52	Austria	1417.83	Russia	1302.82	Germany	1579.17
5	Brazil	777.03	China	879.42	UK	1235.83	South Africa	1165.64	South Africa	1464.98
6	China	686.55	Canada	789.15	Brazil	1167.64	Brazil	995.32	Nigeria	1038.86
7	Nigeria	629.80	Brazil	771.61	South Africa	1127.38	Nigeria	905.00	Brazil	1008.64
8	Canada	562.45	South Africa	684.27	Canada	1096.04	Canada	775.46	Netherlands	876.01
9	Israel	538.97	Nigeria	671.24	Nigeria	1040.75	Vietnam	709.33	Canada	860.90
10	Ukraine	519.67	Netherlands	522.69	Ukraine	687.45	Netherlands	688.93	Kenya	842.43
11	Italy	504.54	Turkey	502.10	Israel	686.47	Turkey	662.63	Turkey	728.90
12	South Africa	501.57	Spain	501.42	Netherlands	683.28	China	645.37	Vietnam	660.70
13	Netherlands	480.63	Ukraine	497.14	Italy	633.87	Italy	594.54	Israel	633.87
14	Turkey	470.30	Vietnam	483.56	Turkey	627.99	UAE	580.76	Spain	610.93
15	Spain	466.73	Italy	471.28	Spain	622.89	Thailand	575.08	Ghana	606.74
16	Mexico	455.56	Israel	456.80	China	564.81	Ukraine	569.38	China	604.31
17	Vietnam	415.06	Mexico	442.49	Kenya	544.08	Spain	568.84	France	597.96
18	Singapore	413.18	UAE	426.11	Vietnam	536.73	Kenya	552.32	Italy	590.58
19	Sri Lanka	404.81	Pakistan	417.08	Belgium	524.11	Iran	535.05	Sri Lanka	582.33
20	Iran	357.99	Singapore	406.86	Mexico	522.42	Israel	526.01	Ukraine	557.11
Top 20 Sub Total		16231.29		18600.91		23956.70		24785.26		28331.36
World Trade		26895.18		30759.64		40421.71		42455.66		47363.33
% Contribution by top 20		60.35		60.47		59.27		58.38		59.82

Table 5: India's Exports of Drugs, Pharmaceuticals and Fine Chemicals to top 20 nations during 2007 to 2011 (Rs. in Crore)

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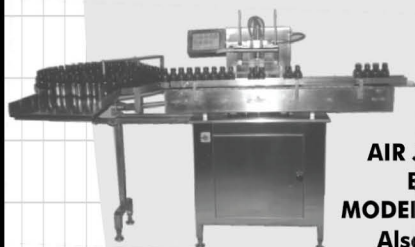


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Top 20 Country Destinations of India's Exports of Drugs, Pharmaceuticals and Fine Chemicals during 2007 to 2011

When a comparison is made during the year 2007 to 2011 of India's exports in Drugs, Pharmaceuticals and Fine Chemicals, Table 5 indicates clearly, USA stands first for all the five years in import of India's produce. The reason of Indian pharmaceutical company's more interest towards USA might be high margin of profits and well understood regulatory procedures. In addition to this, Indian pharmaceutical companies have developed their products to the standards of USFDA which are also well accepted and easily approved in all other regulated markets in the world.

In 2007, India's exports to China are Rs. 686.55 crore ranking 6th top country in importing Indian Drugs, Pharmaceuticals and Fine Chemicals, while in the year 2011 China's imports from India are Rs. 604.31 crore. This is a clear indication of China's revolutionary changes of in house manufacture relating to Drugs, Pharmaceuticals and Fine Chemicals.

Brazil, Nigeria and South Africa are the promising countries for Indian pharmaceutical companies in export of Drugs, Pharmaceuticals and Fine Chemicals.

Conclusion

Indian pharmaceutical companies are best utilizing and framing strong forecast strategies for export business. It can be assumed that a few companies are well established with intellectual property, regulatory and market forecast strategies when compared to the total number of companies established in India as manufacturers. The contribution of Indian pharmaceutical industry for exports can increase by involving new exporters, exports to new countries. It is necessary to understand that the common inspection, filing procedures accepted among regions, countries may help the industry a faster growth.

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