



Patenting Landscape in India



**A close
On an
Evaluéservice found that only 22 of the top 200 filers are
organizations.**

**eresting trends.
n Patent Office,
' Indian**

May 2008



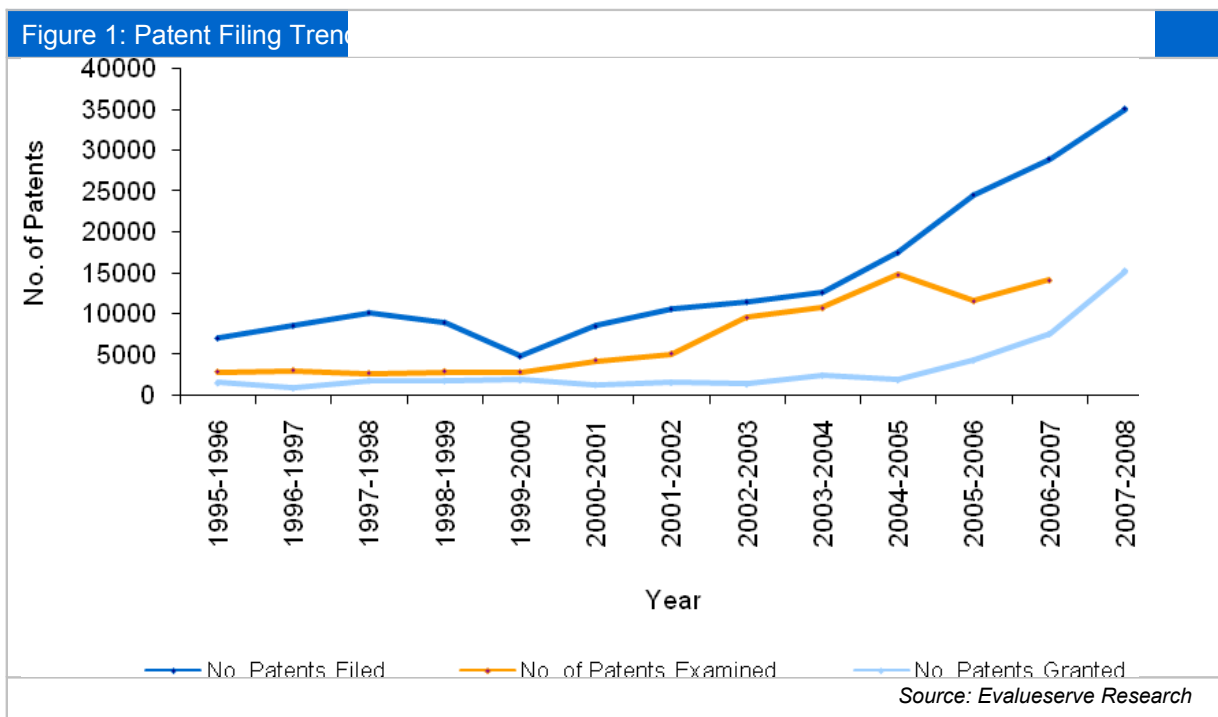
1. Introduction

The rapid rise of India in the global economic landscape has necessitated a closer examination of the country as a potential destination for research, development and innovation. One of the primary indicators of innovation is patenting intensity, determined by the number of patent filings. This yardstick is probably a more accurate measure than patent grants because it provides a more updated view of innovation across an organization and an industry. In this regard, various Indian organizations have prioritized filing in different jurisdictions such as the Indian Patent Office (IPO), the United States Patent and Trademark Office (USPTO) and the European Patent Office (EPO). A large number of Indian companies file Patent Cooperation Treaty (PCT) applications and then prosecute these in individual jurisdictions to obtain local patent protection by entering the “national phase”.

2. Patent Application Filings at the IPO

The number of patent applications filed at the IPO has steadily increased over the years, except for a slight dip in 1999-2000, which correlated with India joining the PCT and extended the period to enter the national phase to 31 months. During the 2007-08 fiscal year, more than 35,000 patent applications were filed at the IPO, which is a 21% increase over the previous year [Refs. 1 and 2]. Moreover, for the same period, the number of granted patents doubled to 15,262 as compared to the last fiscal year. The number of examined patent applications, however, decreased slightly in 2005–06, which could have been due to understaffing of examiners at the IPO or the increased complexity of the applications examined, or a combination of the two.

Figure 1 shows the increasing trend of patent filings at the IPO over the last 12 years. During the last six years, there has been a more than three-fold increase in the number of patent applications filed at the IPO.



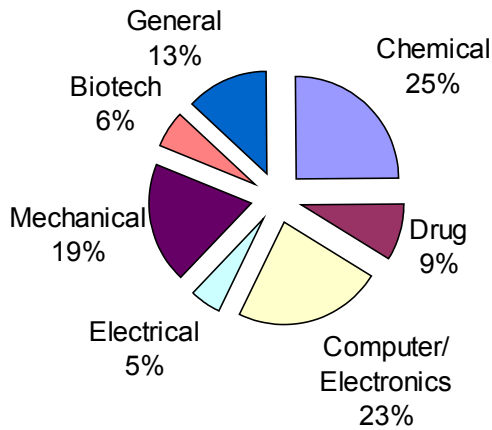
*The fiscal year end of the IPO is March 31. Hence, the data for 2006–07 actually corresponds to the period April 1, 2006–March 31, 2007

Figure 2 provides a domain-wise breakdown of the patent applications filed with the IPO during 2005–06. The most active industry was Chemicals and Drugs (33%), followed by Computer/Electronics (23%), and Mechanical (19%).



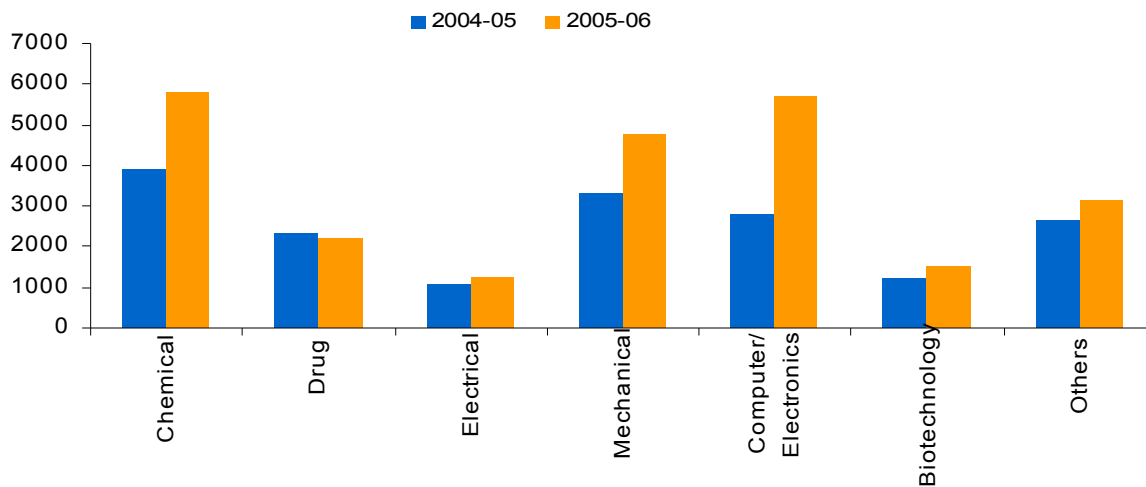
Figure 3 indicates that from 2004-05 to 2005-06, there was a significant increase in the number of patent filings in the areas of Computer/Electronics (105%), Chemical (48%) and Mechanical (43%).

Figure 2: Domain-wise Breakdown of Patent Applications Filed at the IPO (2005-06)



Source: 2005-06 Annual Report, IPO

Figure 3: Growth of Patent Applications



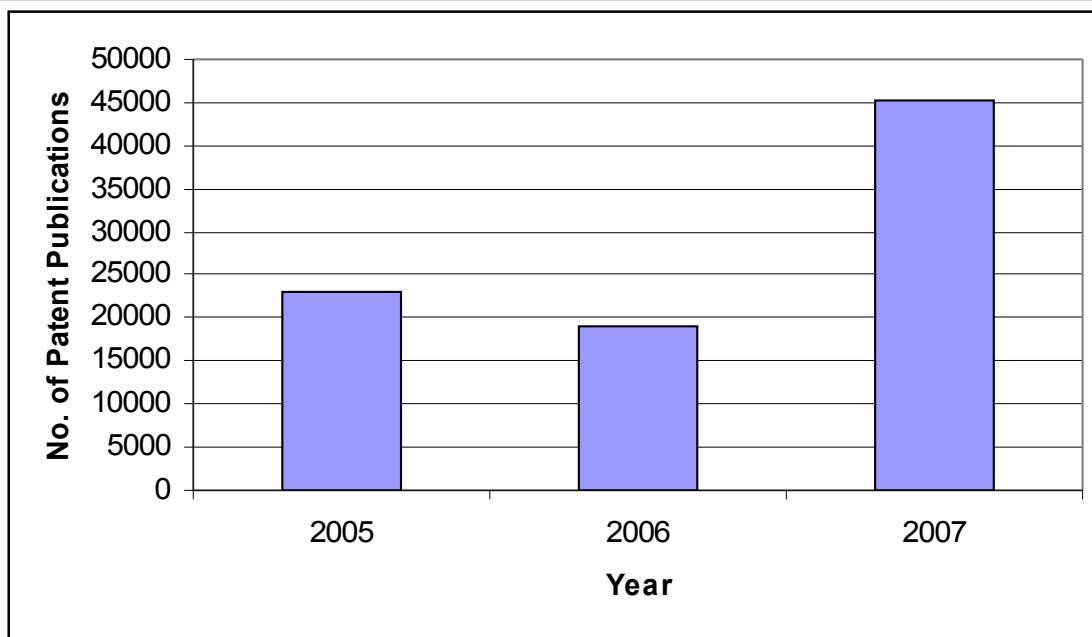
Source: 2005-06 Annual Report, IPO



3. Top Filers at the IPO

Evalueserve, a global research and analytics firm, has identified the top patent filers at the IPO for the last three years by analyzing 87,245 patent applications published by the IPO during the period spanning January 2005 to December 2007 [Ref. 3]. As shown in Figure 4, 22,945 of these 87,245 applications were published in 2005, 19,005 in 2006, and 45,295 in 2007. In fact, more than half of the patent applications published in this three-year period were published in 2007. This may be due to the recent growth in patent application filings and the efforts made by the IPO to reduce the backlog of patent applications pending review [Ref. 4].

Figure 4: Number of Publish



Source: Patent Journal of the IPO 2005-2007

Table 1 lists the top 50 patent filers at the IPO. Only four Indian organizations appear in the top 50 list provided in this table. They include the Council of Scientific and Industrial Research (CSIR), Ranbaxy Laboratories, Dr. Reddy's Laboratories and the Indian Institutes of Technology. The top patent filers have been selected on the basis of the number of patent applications published by them because this gives a more accurate and up-to-date picture of patenting intensity. By and large, most patent jurisdictions publish a patent application 18 months after its earliest effective filing date, after which it is considered to be in the public domain. Before this publication, the content and the very act of filing is proprietary information that is closely guarded by most filers.



Table 1: List of Top 50 patent Filers at the IPO (during Jan 2005 and Dec 2007)

Rank	Assignee	No. of Published Patent Applications	Rank	Assignee	No. of Published Patent Applications
1	Council Of Scientific And Industrial Research (CSIR)	1523	26	Sony	448
2	Qualcomm	1431	27	Du Pont	423
3	Bayer	1311	28	International Business Machines (IBM)	404
4	Philips Electronics	1272	29	Mitsubishi	370
5	Hindustan Unilever	1088	30	Motorola	352
6	Honda	960	31	Shell	350
7	Microsoft	908	32	Akzo Nobel	336
8	Samsung	901	33	Novo Nordisk	331
9	Pfizer	895	34	ABB	328
10	BASF	865	35	Intel	323
11	AstraZeneca	787	36	Robert Bosch	321
12	Glaxo SmithKline Beecham	739	37	Ranbaxy Laboratories	320
13	Sanofi-Aventis	737	38	Dr Reddy's Laboratories	315
14	Thomson Licensing	681	39	ExxonMobil Chemical Patents	308
15	Novartis	676	40	Boehringer Ingelheim International	302
16	Johnson & Johnson	650	41	Dow Global Technologies	300
17	Ericsson	617	42	Sumitomo Corporation	298
18	Merck Patent	599	43	LG Electronics	291
19	Procter & Gamble	596	44	Rieter	284
20	Nokia	592	45	Wyeth	278
21	Roche	567	46	DSM IP Assets BV	276
22	CIBA Specialty Chemicals Holding	505	47	Indian Institute Of Technology	237
23	Siemens	492	48	Saint-Gobain Glass France	234
24	Matsushita Electric Industrial	455	49	Research In Motion	227
25	General Electric	449	50	Hewlett-Packard	224

4. Top Domestic Filers at the IPO

For its list of Indian organizations among the top 200 list of filers, Evalueserve extracted USPTO, EPO and PCT patent-filing information by counting the number of published patent applications for the period January 2005-December 2007. On analyzing the list of published patent applications by the IPO, Evalueserve found that only 22 of the top 200, i.e., 11%, are “pure-bred” Indian organizations. Table 2 lists these 22 Indian organizations, with the ranks indicated in the first column in Table 2 being in accordance with the number of IPO patent applications published during the period. Among these 22 organizations, 9 are pharmaceutical companies, 6 research institutes, and 1 a government-owned enterprise.

Table 2: Top Indian Patent Filers at the IPO (Jan 2005–Dec 2007)



Rank *	Companies	IPO Published Invention Patent Appls	US Published Invention Patent Appls	PCT Published Invention Appls	EPO Published Invention Appls	Revenues (2005–07) (in USD million)	Revenue/ No. of Patent Publications at the IPO (Ratio)	Revenue/ No. of Patent Publications at the IPO, US, EP and PCT
1	Council of Scientific Industrial Research (CSIR)	1,523	356	381	240	NA	NA	NA
37	Ranbaxy Laboratories	320	108	458	194	2,859	8.9	2.6
38	Dr Reddy's Laboratories	315	27	113	39	2,622	8.3	5.3
47	Indian Institutes of Technology	237	19	25	6	NA	NA	NA
59	Bharat Heavy Electricals	189	3	6	0	10,556	56	53
67	Orchid Chemicals & Pharmaceuticals	149	17	47	11	634	4.3	2.8
69	Cadila Healthcare	148	17	67	23	1,002	6.8	3.9
70	Cipla	138	27	67	39	2,296	16.6	8.5
71	Steel Authority of India	136	0	0	0	23,906	176	176
72	Larsen & Toubro	123	2	2	0	11,932	97	94
73	Sun Pharmaceutical Industries	121	18	81	12	1,378	11.4	5.9
74	TVS Motors	121	0	0	0	2,582	21	21
76	Tata Steel	119	1	10	3	14,028	118	105
107	Aurobindo Pharma	84	3	52	2	1,254	14.9	8.9
111	Defence Research & Development Organisation (DRDO)	83	3	11	4	NA	NA	NA
117	Indian Council of Agricultural Research	82	0	1	1	NA	NA	NA
140	Indian Space Research Organisation	67	1	1	1	NA	NA	NA
145	Tata Motors	66	0	0	0	17,898	271	271



174	Torrent Pharmaceuticals	54	4	20	9	629	11.6	7.2
185	Lakshmi Machine Works	52	0	0	1	1,086	21	20
187	Indian Institute of Science	51	3	13	5	NA	NA	NA
199	Matrix Laboratories	43	3	47	10	801	19	7.8

* Rank is determined according to the number of patent publications by the IPO during Jan 2005-Dec 2007

4.1. Filing Trend Analysis: Domestic Pharmaceutical Companies

Table 3 provides the patent-filing trends (by revenues) of the top nine Indian pharmaceutical companies. As expected, all these companies are among the top 200 filers with the IPO. It is, however, interesting to see the marked difference in the focus of these organizations with respect to different patent jurisdictions. Whereas Dr. Reddy's Laboratories files a large proportion of its patent applications with the IPO, Ranbaxy Labs files the larger percentage of its applications in jurisdictions outside India. In fact, when the sum of the USPTO, PCT and EPO patent applications is considered, Ranbaxy's filing numbers are more than four times those of Dr Reddy's.

In Table 3, the ratio of reported worldwide revenues for three years (2005-2007) to the number of IPO publications during the same period provides interesting insights. A company with a lower ratio than that of its peers implies that the inventive activity exhibited by the firm is higher than that of its peers. This ratio is approximately 9 for the two largest pharmaceutical companies, but is significantly lower (approximately, 4.3) for Orchid Chemicals & Pharmaceuticals. This implies that during the three-year period, Orchid Chemicals & Pharmaceuticals filed more intensely at the IPO than its peers, including some with larger revenues. The data on Cipla shows that in spite of it being the third-largest pharmaceutical company by revenue, it lags significantly behind its peers in inventive activity.

Table 3: Published Patent Applications (Jan 2005-Dec 2007)								Revenue/No. of Patent Publications at the IPO, US, EP and PCT	
Rank*	Indian Pharma Companies	IPO Publications	US Publications	EP Publications	PCT Publications	Worldwide Publications	Ratio (Worldwide/IPO)	Ratio (Worldwide/US, EP and PCT)	
34	Ranbaxy Laboratories	320	108	458	194	2,859	8.9	2.6	
36	Dr Reddy's Laboratories	315	27	113	39	2,622	8.3	5.3	
68	Orchid Chemicals & Pharmaceuticals	149	17	47	11	634	4.3	2.8	
70	Cadila Healthcare	148	17	67	23	1,002	6.8	3.9	
73	Cipla	138	27	67	39	2,296	16.6	8.5	
76	Sun Pharmaceutical Industries	121	18	81	12	1,378	11.4	5.9	
107	Aurobindo Pharma	84	3	52	2	1,254	14.9	8.9	
174	Torrent Pharmaceuticals	54	4	20	9	629	11.6	7.2	



	cals							
199	Matrix Laboratories	43	3	47	10	801	19	7.8

* Rank is determined according to the number of patent publications filed at the IPO during Jan 2005-Dec 2007.

On analyzing Table 3, the following general trends are observed:

- Pharmaceutical companies, as compared to organizations in other industry verticals, actively file in jurisdictions outside India because protection of their products and processes in these jurisdictions is important for their business.
- The ratio of revenue to the number of patent publications at the IPO is relatively healthy for almost all the top pharmaceutical companies, with the average ratio being 11.3 (the lower the ratio, the better is the patent-filing rate per US dollar of revenue). This indicates that pharmaceutical companies are actively investing in patenting their innovations. However, a separate analysis shows that Indian pharmaceutical companies significantly lag behind their foreign counterparts with respect to investments in research and development.
- The ratio of revenues to the sum of the patent publications (IPO, USPTO, EPO and PCT) gives an indication of worldwide patenting activity. Cipla and Aurobindo Pharma, with a ratio of 8.5 and 8.9, respectively, exhibit the lowest patent activity in their peer group. On the other hand, Ranbaxy, Orchid and Cadila score high with ratios between 2.6 and 3.9. Companies with high inventive activity (low ratios) are more likely to be considered attractive for buyout as compared to those with low inventive activity (high ratios). This could be one of the reasons for the acquisition of an approximate 15% stake by Ranbaxy in Orchid [Ref. 5].

4.2. Filing Trend Analysis: Domestic IT Companies

The absence of information technology (IT) or software companies in the list of top filing Indian firms is somewhat symptomatic of the perception among such companies that the IPO does not grant software patents. However, more importantly, the absence of filing at the IPO by Indian IT and software firms seems to indicate that many such firms are predominantly serving markets outside India, and their clients usually own the Intellectual Property they produce. In contrast, it is interesting to note that foreign IT majors such as Microsoft, IBM and Oracle have stepped up their patent filing in India. Microsoft had 908 published patent applications, IBM 404, and Oracle 108 (at the IPO) during the period January 2005-December 2007.

One of the reasons for low patenting activity among domestic IT companies could be lack of clarity on the patentability of software inventions in India. According to section 3(k) of the Indian Patent Act 1970, a computer program per se or an algorithm is excluded from patentable subject matter. However, according to the Manual of Patent Practice and Procedure [Ref. 6], a software invention may be patentable in India under the following circumstances:

- Invention having a technical application and solving a technical problem
- Process that is under the control of a software program or hardware
- A novel solution to a problem that relates to the internal operations of a computer
- Application of a mathematical method or an algorithm

Table 4 ranks (by cumulative revenues during 2005-07) the top eight IT and IT-enabled services (ITES) firms in India that have substantial Indian ownership and are all listed on the Indian public bourses. (Included in this table are their revenues and their patent filing trends.) It is evident from this data that there is almost no patent-filing activity at these firms, and that the filing intensity exhibited by these firms is not commensurate with their respective revenues and the rate of growth in these revenues.

Table 4: Published Patent Applications Filed by Top Indian IT Companies (Jan 2005–Dec 2007)



Indian IT Companies		Revenues (2005–07) (in USD million)	IPO Published Patent Appls	US Published Patent Appls	PCT Published Appls	EPO Published Appls	Revenue/ No. of Patent Publications at the IPO	Revenue/ No. of Patent Publications at the IPO, US, EP and PCT
1	Tata Consultancy Services (TCS)	9647	35	8	2	5	276	193
2	Wipro Technologies	7975	0	0	0	0	NA	NA
3	Infosys Technologies	7664	29	22	3	0	264	142
4	Satyam Computer Services	3836	2	10	0	0	1918	320
5	Cognizant	2897	0	0	0	0	NA	NA
6	HCL Technologies	2814	1	0	0	0	2814	2814
7	Tech Mahindra	1243	0	1	1	0	NA	621
8	Patni Computer Systems	675	0	0	0	0	NA	NA

All the companies listed in Table 4 generate most of their revenues from outside India, typically from more mature markets such as the United States and Western Europe. However, quite surprisingly, even their USPTO and PCT filing trends show little to no patenting activity.

The following are some explanations that can individually or collectively explain this trend:

- These Indian firms lack a cohesive strategy to protect their intellectual property.
- The services and products delivered by these firms eventually become the intellectually property of their clients.
- There is lack of patentable innovation at these firms (as gauged by standards of novelty, non-obviousness and industrial applicability).
- These firms choose to protect their intellectually property through trade secrets rather than by filing patents.
- Most of the innovation at these firms is not patentable subject matter according to the Indian Patent Law, the European Patent Law, and similar laws in other jurisdictions.

As depicted in Table 4, the average ratio of revenue to the number of patent publications at the IPO is around 1318. Thus, as compared to the pharmaceutical sector, these IT firms generate 115 times less patenting activity at the IPO (on a per US dollar revenue basis).

4.3. Filing Trend Analysis: Domestic Automobile Companies

Table 5 details the patent-filing trends of the top four Indian automobile companies, ranked according to their patenting intensity at the IPO.



Table 5: Published Patent Applications Filed by Indian Automobile Companies (Jan 2005–Dec 2007)

	Indian Auto Companies	IPO Published Appls	US Published Patent Appls	PCT Published Appls	EPO Published Appls	Revenues (2005–07) (in USD million)	Revenue/ No. of Patent Publications at the IPO	Revenue/ No. of Patent Publications at the IPO, US, EP and PCT
1	TVS Motors	121	0	0	0	2582	21	21
2	Tata Motors	66	0	0	0	17898	271	271
3	Bajaj Auto	29	1	20	3	6437	222	121
4	Mahindra and Mahindra	27	2	2	3	6714	249	197

The following are some insights that can be gleaned from the data in Table 5:

- Among these auto companies, the TVS Motors has the maximum number of patent applications published by the IPO (121), followed by Tata Motors (66), Bajaj Auto (29), and Mahindra & Mahindra (27).
- Bajaj Auto and Mahindra & Mahindra have filed patent applications outside India (US, EP and PCT), whereas TVS Motors and Tata Motors have no published patent applications outside India, at least from January 2005 to December 2007.
- The average ratio of revenue to the number of patent publications at the IPO is 191, which indicates that the patenting activity of the auto majors in the auto sector at the IPO is seven times more than that of the IT sector, but is approximately 17 times less than that of the pharmaceutical sector.
- Among these Indian auto companies, only Bajaj Auto shows any significant patenting activity outside India, as indicated by its PCT filings.

The recent patent row between Bajaj Auto and TVS Motors underscores the importance of patent protection of key automotive technologies, especially in emerging markets such as India and China. In a market where more than eight million two-wheelers are sold every year, and where this market has been growing at an annual rate of 15% [Ref. 7], Bajaj Auto successfully moved the Indian courts to block the TVS 125 cc motorcycle from being manufactured and sold by demonstrating that it infringed Bajaj’s patent [Ref. 8].

5. Case Study: The Tata Group

The Tata Group is one of the largest Indian industrial conglomerates that is rapidly going global with its acquisition of Corus Steel of the UK (acquired in 2007 for USD 12.1 billion), Energy Brands, Inc. of the US (acquired in 2006 for USD 773 million), Tetley of the UK (acquired in 2000 for USD 465 million), and recently Jaguar and Land Rover (acquired in 2008 for USD 2.3 billion from the Ford Motor Company) [Ref. 9].

Evalueserve studied the patent-filing trends (for the period January 2005 to December 2007) of the three largest companies in the Tata Group’s portfolio. The findings are shown in Table 6. Evalueserve then ranked these companies according to their filing intensity at the IPO. The top filers at the IPO in this portfolio included Tata Steel (119), Tata Motors (66) and Tata Consultancy Services (TCS) (35).



Table 6: Patent-filing Trends of the Tata Group (Jan 2005–Dec 2007)

S. No.	Group	Revenue (2005–07) (in USD million)	Operating profit (2005–07) (in USD million)	IPO Published Patent Apps	US Published Patent Apps	EP Published Appls	PCT Published Appls	Revenue (2005-07)/ No. of Patent Publications at IPO	Revenue (2005-07)/ No. of Patent Publications at the IPO, US, EP and PCT
1	Tata Steel	14,028	5,105	119	1	3	10	118	105
2	Tata Motors	17,898	2,330	66	0	0	0	271	271
3	TCS	9,647	2,596	35	8	5	2	276	193

Table 6 shows that Tata Steel's ratio of revenue to its number of IPO patent publications is significantly better than that of the other Tata Group companies. The average ratio for the Tata Group companies is 222, which indicates that the company's patent-filing activity is poor, considering its economic strength. Ratan Tata, the Chairman of the Tata Group, acknowledged this fact in a recent interview, *"We are not doing enough in terms of really generating intellectual property rights (IPRs), really getting involved in R&D as against just product development"* [Ref. 10].

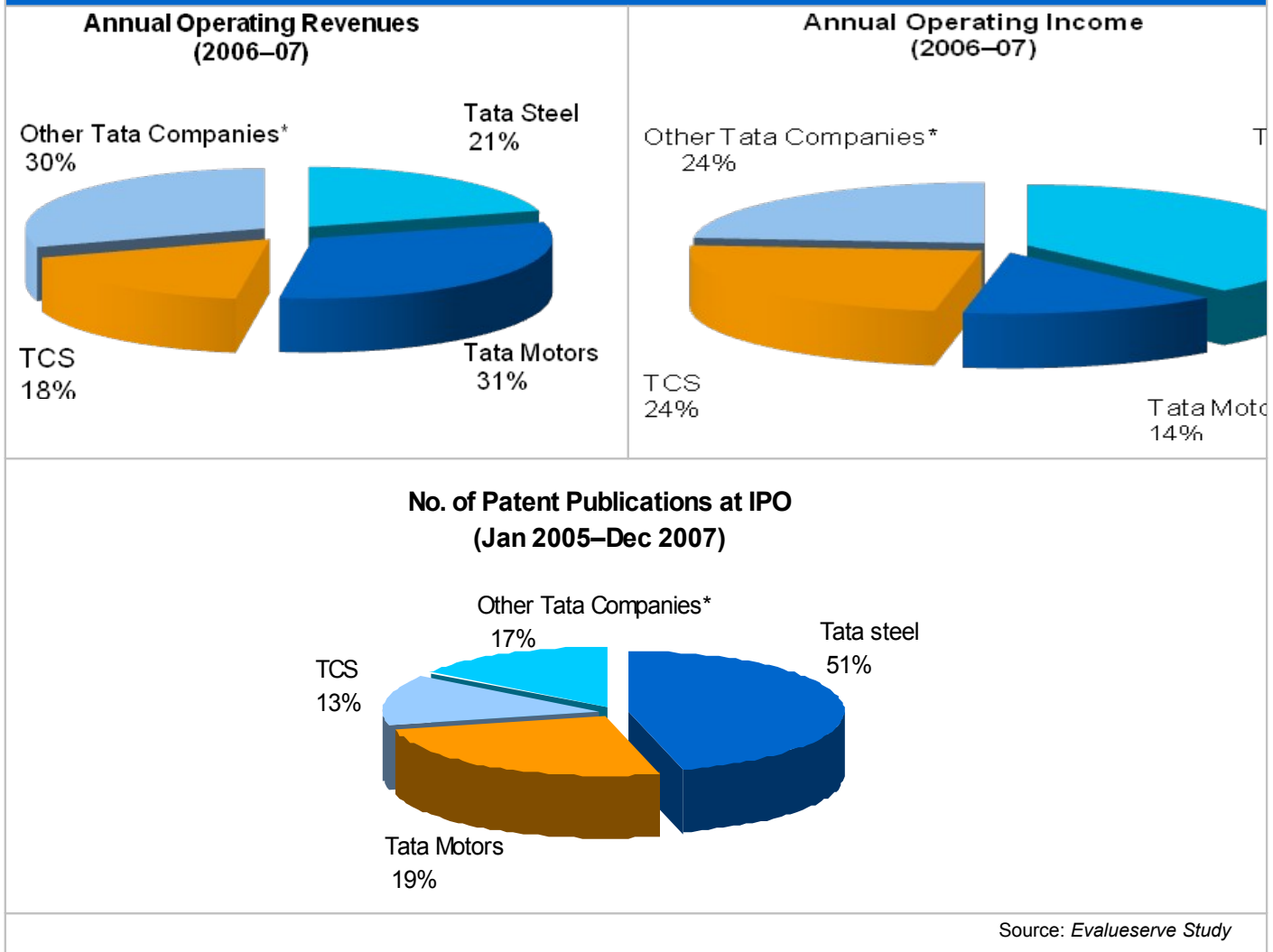
Figure 5 provides a comparative analysis of 2006-07 revenues and the operating income of Tata Group companies. The three largest companies account for 70% of the revenues and 76% of the operating profit of the group. Patenting trends over the period January 2005 to December 2007 show that the same three companies are responsible for 83% of the group's published IPO patent applications.

The key findings from Evalueserve's analysis of patenting activity in the Tata Group:

1. Tata Steel is doing comparatively well in terms of its operating income and patent-filing intensity, but lags behind in patenting activity outside India, i.e., in filing PCT and US applications. This could imply lost opportunities in terms of deriving potential value from its patents outside India. However, Tata Steel's recent acquisition of Corus may have significantly boosted its patent portfolio because of the addition of Corus' patent portfolio to that of Tata Steel.
2. Tata Motors is doing satisfactorily in terms of the number of IPO patent applications (on a per revenue US dollar basis). The company has recently announced that it has filed around 34 patent applications related to innovation in the people's car known as the "Nano", which has a price tag of USD 2500 and has been touted as the world's cheapest car [Ref. 11]. However, Tata Motors is a laggard in filing patent applications outside India. In fact, it does not have any published patent applications at the USPTO, PCT or EPO between January 2005 and December 2007.
3. Tata Consultancy Services (TCS) lags behind other Tata Group firms in terms of its patent-filing intensity-. It has fewer patent applications filed at the IPO as compared to Tata Steel and Tata Motors. The number of its published applications with the USPTO and PCT is also low, considering the fact that most of TCS' revenues come from outside India.



Figure 5: Revenue, Income and Patent Statistics of the Tata Group of Companies (2006–07)



Source: *Evalueserve Study*

*Others include Tata Chemicals, Tata Tea, Rallis India, Titan Industries, Voltas, CMC, Tata Metaliks, Tata Sponge Iron, Tayo Rolls, Trent, Tata Teleservices, Indian Hotels Company, Tata Elxsi, Tata Investment Corporation, Tinplate Company of India, TRF, Nelco, Tata Coffee, Tata Power, and VSNL

6. Comparison with China’s Patent-filing Trends

“We want to catch up with China” screams the headline of an article that appeared in a popular newspaper in India. This utterance is attributed to India’s Finance Minister, P. Chidambaram [Ref. 12]. In fact, the same sentiment seems to be echoed in India almost daily when comparing the two countries with respect to economic, social, health, education and other parameters [Ref. 13]. Hence, it seems worthwhile to compare innovation and patenting intensity in these two countries.

In 2007, the State Intellectual Property Office of China (SIPO) received a total of 245,161 invention patent applications, which placed China in the third position in the world (after Japan and the United States) with respect to patent application filings. During the last decade, China has seen a frenetic growth rate of 20% in its number of patent filings, as compared to the growth rate of filings (8.7%) at the USPTO. If these filing growth rates at the USPTO and SIPO continue at this rate, by 2012, patent application filings at the SIPO will be more than that at the UPSTO. As compared to the IPO, the SIPO received seven times more applications in 2007, and since filing in both



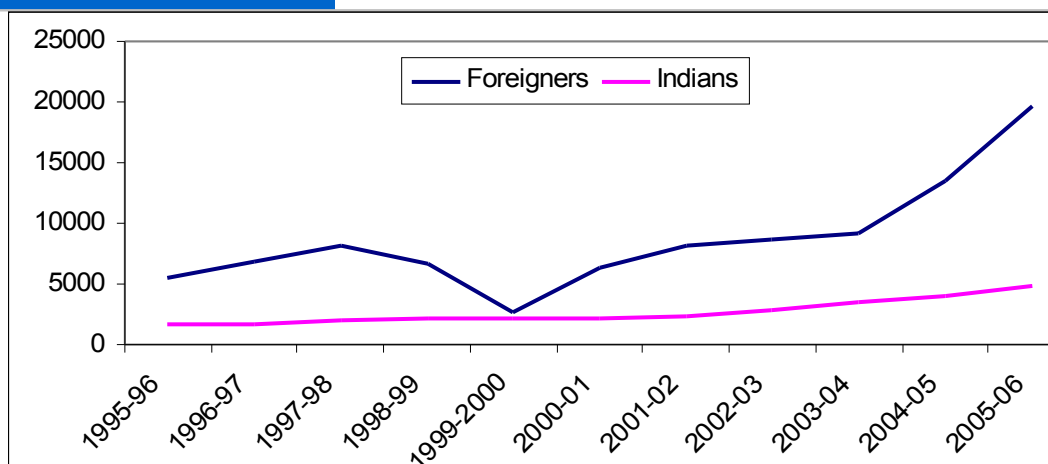
the countries is growing at approximately 20% per year, this inequality is likely to continue for at least the next 4-5 years.

Another remarkable difference is in the ratio of patent-filing numbers (at the IPO and the SIPO) by domestic applicants, as compared to those filed by foreign applicants.

- In 2007, there were 245,161 invention patent applications filed at the SIPO, of which domestic applicants filed more than 62.4%. In contrast, a total of 24,505 applications were filed at the IPO in 2005–06, of which domestic applicants filed 4,855 (approximately 20%) and foreign applicants filed 19,650 (approximately 80%) applications.
- Further, during this period, the year-on-year increase in domestic invention patent application filing in China was 25%, whereas that of foreign filings was only 4.5%. This is a clear indication of increasing awareness of patent application filing among domestic Chinese companies. In contrast (as shown in Figure 6), while the number of patent applications filed by foreigners in India has risen steeply (with an annual growth of 77%), the growth in patent application filing by Indians is substantially less (approximately 20%). This low growth may be ascribed to the lack of awareness among Indian companies with respect to patents and the value strong patent portfolios would provide to them.

Realizing that the lack of awareness among domestic Indian companies is a serious issue (as well as that of Chinese domestic companies being substantially ahead in patent filings), the Ministry of Industry of India recently announced its plans to launch a national Intellectual Property awareness campaign (at a cost of approximately USD 5 million). To help in raising awareness, the Ministry of Industry is requesting universities, laboratories, state-level chambers of commerce and industry, patent attorneys and members of the scientific community to join in this initiative [Ref. 2].

Figure 6: Trend of Patent Applications



Source: Annual reports of the IPO 2001-2006

One of the reasons for the large disparity between patent filing in China and India seems to be the provision of utility model patents in China. These utility model patents are similar to invention patents, but are valid for only 10 years (as opposed to 20 years). In addition, the grant of utility model patent applications is relatively easier and quicker as compared to that of invention patent applications because the former do not have to go through the substantive examination process. Finally, the cost of filing a utility patent application at the SIPO is approximately one-seventh the cost of filing an invention patent application, which makes it much more attractive for domestic Chinese companies. In 2007, 181,324 utility model patent applications were filed at the SIPO, which represented a 12% increase over the previous year. Moreover, more than 99% of the utility model patents filed in 2006 and 2007 were assigned to local Chinese companies.

In China, overall awareness of the advantages of filing patent applications is no longer limited to utility model patents, and a large number of domestic Chinese companies are also filing invention patent applications. Table 7 provides the



patent-filing trends of the top 10 Chinese organizations, ranked according to the number of published invention patent (or 20-year patent) applications at the SIPO during the period January 2005 to December 2007. It is interesting to note that the average ratio of revenue among these organizations to the number of SIPO patent publications (12.6) is substantially higher than the corresponding ratio among the top 10 Indian organizations (46.7). This clearly indicates that the patenting activity exhibited by Chinese companies is almost four times more intense than that in Indian companies.

Table 7: Published Patent Applications Filed by Top Chinese Companies (Jan 2005–Dec 2007)

Rank *	Companies	SIPO Published Invention Patents	US Published	PCT Published	EPO Published	Revenues (2005–07)	Revenue/ No. of Patent Publications (US, EP and PCT)	Revenue/ No. of Patent Publications at the SIPO, US, EP and PCT
1	Huawei Technologies	11964	377	2235	1007	29,431	2.5	1.9
2	ZTE Corporation	3606	17	440	109	11,341	3.1	2.7
3	Zhejiang University	3422	8	10	4	N.A.	N.A.	N.A.
4	Tsinghua University	3054	194	83	45	N.A.	N.A.	N.A.
5	Hong Fu Jin Precision Industry (Shenzhen) Co. Ltd.	2865	114	0	0	N.A.	N.A.	N.A.
6	Hong Hai Precision Industry Co. Ltd.	2756	3939	0	15	N.A.	N.A.	N.A.
7	Inventec	866	1016	6	11	23,545	27.2	12.4
8	BYD Co., Ltd.	544	35	53	28	5,807	10.7	8.8
9	Oceanpower Industry Co., Ltd.	544	0	1	0	N.A.	N.A.	N.A.
10	Haier Group	430	9	6	3	8,4934	19.8	19

*Rank is determined according to the number of invention patent applications published at the SIPO from January 2005 to December 2007.

7. Conclusion

Evalueserve’s research indicates that although patent filings at the IPO have been increasing at an impressive rate, a sizable portion of this increase can be attributed to foreign companies and multinational corporations. On analyzing patenting activity at the IPO for the last three years, Evalueserve’s analysis shows that there are only 22 “pure-bred” Indian companies among the top 200 filers at the IPO.

On closer examination of the patent-filing behavior of Indian companies, significant differences are observed in their patenting strategies with respect to the geographical coverage sought for patent protection. Some companies that fare satisfactorily in their number of IPO filings have much lower patenting activity in foreign jurisdictions. Many Indian companies seem to lack a coherent strategy to coordinate their Indian and foreign filings. Predictably,



pharmaceutical companies fare better than IT and auto companies. However, even among pharmaceutical companies, many lack the foresight to increase their number of foreign filings. The Indian IT sector has a disproportionately low number of patent filings, considering the revenues it generates. Auto companies are roughly midway between the pharmaceutical companies and the IT firms with respect to their patent-filing intensity. Indian organizations can learn substantially from Indian pharmaceutical companies, which are relatively new with respect to building strong patent portfolios, and increase their patenting activity worldwide if they want to become strong global players in their respective domains.

Finally, Indian companies lag behind substantially in patent-filing intensity as compared to their Chinese counterparts. Filing of invention patent applications at the IPO is approximately at the same level as it was at the SIPO in 1997, thereby lagging behind China by a decade. While more domestic Chinese organizations are filing at the SIPO, the reverse is true for domestic Indian firms filing at the IPO, which, in the long term, is unhealthy for the Indian economy (especially since it is trying to transform itself from an agriculture-based to a knowledge-based economy).

References

1. Annual reports of the IPO, 2001-2006, http://ipindia.nic.in/main_text1.htm
2. A lesson learnt from China, India pulls up its patent socks; <http://www.financialexpress.com/news/A-lesson-learnt-from-China--India-pulls-up-its-patent-socks/300273/>
3. The Patent Office Journal (Jan 2005-Dec 2007) http://ipindia.nic.in/ipr/patent/journal_archieve/journal_2008/patent_journal_2008.htm
4. India in Business, Intellectual Property Rights, <http://www.indiainbusiness.nic.in/investment/ipr.htm>
5. Ranbaxy continues on Orchid trail, inches towards 15% stake; http://economictimes.indiatimes.com/Features/The_Sunday_ET/The_Week_That_Was/Ranbaxy_continues_on_Orchid_trail_inches_towards_15_stake/articleshow/2947820.cms
6. Manual for Patent Practice and Procedure ; http://ipindia.nic.in/ipr/patent/DraftPatent_Manual_2008.pdf
7. Two Wheelers Production Trend, <http://auto.indiamart.com/two-wheelers/stat-prod-2w.html>
8. Patent row: Court finds merit in Bajaj complaint; <http://www.ndtvprofit.com/2008/02/16170549/Patent-row-Court-finds-merit.html>
9. Tata acquires Jaguar, Land Rover <http://www.hindu.com/thehindu/holnus/000200803261661.htm>
10. PTI News- *I don't want to go out on a wheelchair*: Ratan Tata;
11. World watches Tata Motors unveil Nano; http://www.tata.com/tata_motors/media/20080111_unveil.htm
12. "We want to catch up with China". Live Mint, April 22, 2008, <http://www.livemint.com/2008/04/22000234/8216We-want-to-catch-up-wit.html>
13. "Why India and China Matter", JM Moran Stanley Research, June 2006, India and China: New Tigers of Asia, Part II
14. Bigpatents India, <http://india.bigpatents.org/>
15. Revenue details as published in annual reports of Company Websites, and Bombay Stock Exchange, <http://www.bseindia.com/qresann/compres.asp> (Currency exchange rate taken as on 18 April 2008)
16. Micropatent (<http://www.micropat.com/>) for count of US and PCT publications
17. US Patent Assignment Database, <http://assignments.uspto.gov/assignments/?db=pat>

About Evalueserve

Evalueserve provides custom research and analytics services to almost 1,300 clients worldwide in the following areas: Intellectual Property, Market Research, Business Research, Investment Research, Data Analytics and Modelling. Evalueserve has completed over 14,000 projects since its inception in December 2000. It currently has



2,250 professionals in its research centres in India, China, Chile, and the US, and will open another research center in Romania by June 2008. Additionally, a team of 50 client engagement managers is located globally – from Silicon Valley to Sydney. For more details, please visit us at <http://www.evalueserve.com>

Disclaimer

The information contained in this article has been obtained from sources believed to be reliable, but Evalueserve and the authors disclaim all warranties as to the accuracy, completeness or adequacy of such information. Evalueserve and the authors shall have no liability for errors, omissions or inadequacies in the information contained herein or for interpretations thereof.

EVS Contact

EVS Media Relations
Tel: +91 124 4154000

pr@evalueserve.com