Volume Title: A History of Corporate Governance around the World: Family Business Groups to Professional Managers

Volume Author/Editor: Randall K. Morck, editor

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-53680-7

Volume URL: http://www.nber.org/books/morc05-1

Conference Date: June 21-22, 2003

Publication Date: November 2005

Title: The Evolution of Concentrated Ownership in India: Broad Patterns and a History of the Indian Software Industry

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URL: http://www.nber.org/chapters/c10272

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The Evolution of Concentrated Ownership in India

Broad Patterns and a History of the Indian Software Industry

Tarun Khanna and Krishna G. Palepu

5.1 Introduction

Concentrated ownership has been an important feature of the Indian private sector for the past seven decades. In this respect, India is no different from several other countries, including Canada, France, Germany, Japan, Italy, and Sweden. However, we show that, unlike in these countries, the identity of the primary families responsible for the concentrated ownership changes dramatically over time. In fact, by some measures the changes are even more dramatic than in a comparable set of U.S. data.

Concentrated ownership exists at any point in time because of institutional voids, the absence of specialized intermediaries in capital markets (Khanna and Palepu 1997, 2000c). However, if these concentrated owners are not exclusively, or even primarily, engaged in rent-seeking and entry-deterring behavior, there is no intrinsic reason why concentrated ownership is inimical to competition. Indeed, as a response to competition, we argue that at least some Indian families—the concentrated owners in question—have consistently tried to use their business group structures to launch new ventures. In the process they have either failed—hence the turnover in identity—or reinvented themselves.

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We are grateful to Randall Morck for coordinating and spearheading the project on the history of concentrated ownership at the National Bureau of Economic Research and for seminar audiences who commented on earlier drafts of this paper in Cambridge and Fontainebleau. The Division of Research at the Harvard Business School financed this work. All errors remain our own.

Further, family-owned business groups, typically diversified over several industries, can coexist with specialist firms focused on a particular industry. We demonstrate this through an examination of the history of India's globally competitive software industry. This is an intriguing setting in which to explore the role of concentrated ownership since it is the setting least hospitable to the advantages that groups might have. We argue that groups' generally advantageous access to capital and talent through internal markets—when external markets do not work as well—offers less of an advantage, if any, in this setting. Here groups are also least able to influence regulations, since the sector is one of the few left untouched by vestiges of India's famed regulatory miasma, the License Raj. Yet it turns out that concentrated ownership, in the guise of business groups, plays a defining and prominent role even in this inhospitable setting, and does so in a way that is not inimical to entry from de novo entrepreneurs. We interpret the privately successful and socially useful persistence of groups in the software industry as a lower bound on the persistence of concentrated ownership in the economy writ large.

The rest of the paper is organized as follows. Section 5.2 begins with a sweeping overview of dominant business groups in India over the past century. We show that, while particular families have acted as concentrated owners at each of three points in time in the past seven decades, the identity of these families has changed drastically over this time period. We then consider two, not mutually exclusive, explanations for the persistence of concentrated ownership. The first (section 5.3) is political relationships between dominant families and the power structure. The second (section 5.4) is a process of entrepreneurship by the dominant families. From these sections we conclude that it is difficult to tell a story of concentrated ownership resulting purely in stasis and rent seeking. Section 5.5 characterizes changes in India during the last decade as moving toward less regulation and government intervention and toward freer markets. Even in this setting, we point out that family-based business groups continue to thrive. Finally, in section 5.6, we study the software industry.

5.2 A Brief History of Corporate Ownership in India

While there has been organized economic activity in India for hundreds of years, it was relatively fragmented until the advent of the British Raj. Under the Mughals, from approximately 1100 AD to 1650 AD, there was only a semblance of a "national market." The Mughals were content with tax revenues and tributes that they received as a result of their power and therefore did not rely on the merchant classes. The fragmentation and demise of the Mughal empire marked the advent and coexistence of dozens of smaller principalities, each of whom came to rely on local merchants

Table 5.1 **Origin of concentrated ownership over the years**

	1900s	1950s	1960s	1990s
Period	Preindependence	Postindependence	License Raj	Liberalization
Representative business group	Tata, Birla	Goenka, Khaitan	Ambani	Wipro/Infosys Ranbaxy/DRL
Factor underlying rise	Ethnic community	Transfer of assets	Playing the license game	Advent of markets

and local financiers to sustain their princely states. Thus were created the nuclei of several prominent family businesses.

The British empire gradually filled the void left by the Mughals. And British merchants set up trading businesses in India after the East India Company lost its monopoly on trade with India, giving rise to the creation of several large trading houses.

Table 5.1 offers a bird's-eye view of the different factors underlying the emergence of family-based business groups over the past century. We list representative business groups that arose in each of four different time periods (though the Tata and Birla groups predate 1900), as well as a generic factor that described the rise of that type of group at that time.

By the early 1900s, in addition to the British trading houses, a number of indigenous business groups had come into prominence. Whether this happened in an atmosphere inimical to the rise of indigenous enterprise (Swamy 1979), indifferent to it (Das 2000, chap. 5), or supportive of it (Ferguson 2002) is a matter of continuing controversy.

Subsequently, the Indian economy underwent several phases of major structural changes after India achieved independence from Britain in 1947. In the first phase, in the 1950s, the assets controlled by the British trading houses were transferred to Indian owners. In the second phase, from the late 1950s through the 1970s, the Indian government intervened in the economy through a variety of measures, which collectively came to be known as the "Licence Raj." Finally, there was an economic reform era, which began with small steps of deregulation in the 1980s and picked up speed in the 1990s following a major economic crisis in 1991.

The next two subsections show that concentrated ownership persisted in India over several decades but that the identity of the concentrated owners changed over time quite drastically.

5.2.1 The Persistence of Concentrated Ownership

Remarkably, while the economy was governed by these significantly different regimes over time, family business groups continued to dominate the Indian corporate landscape. Table 5.2 shows comparative statistics on the Indian state-owned enterprises (SOEs, or public-sector companies)

Table 5.2 **Comparison of Indian public sector, private sector, and multinational corporations, 1993**

Expressed in ratio	Private sector vs. public sector[a]	Indian private sector vs. all foreign companies[b]
No. of corporations	16.92	17.18
Sales	1.53	4.32
Profits	2.22	3.87
Assets	1.21	9.07
Equity	0.51	6.71

Source: Author's calculations from a database maintained by the Center for Monitoring the Indian Economy (CMIE), Bombay, India. Found in Tarun Khanna, "Modern India," HBS Case No. 979-108 (Boston: Harvard Business School Publishing, 1997, p. 7).

[a]The private sector is composed of Indian group-affiliated firms (IG) and Indian nongroup affiliated firms (IN). The public sector is composed of central and state government owned firms (P). This column depicts, for each category, the ratio (IG + IN)/P (i.e., there are 16.92 times as many companies in the private sector as there are in the public sector, but total sector sales are only 1.53 times greater than total public-sector sales).

[b]This column depicts the Indian private sector relative to foreign firms (F), i.e., the ratio (IG + IN)/F.

and exchange-listed private-sector companies, and multinational companies (MNCs) operating in India, as of 1993.[1] The ratio of number of traded private-sector companies to state-owned companies was approximately seventeen to one. Thus, there were far more traded private-sector companies than public-sector companies. However, public-sector companies were on average significantly larger than traded private-sector companies. Revenues of all traded private-sector companies were only 1.5 times the revenues of state-owned companies; similarly, assets of traded private-sector companies were only 1.2 times the assets held by the public-sector companies. More strikingly, the total amount of equity capital in traded private-sector companies was only 0.51 times the equity in public-sector companies. Thus, private-sector companies, while large in number, were more fragmented and relied on far less equity investment relative to the public-sector companies.

Table 5.2 also compares the traded Indian private-sector companies with multinational companies operating in India as of 1993. For each MNC operating in India, there were approximately seventeen exchange-listed private-sector companies. Domestic private companies were 4.3 times larger than MNCs in sales, 9 times in terms of assets, and 6.7 times in terms of equity. Thus, MNCs played a relatively minor role in the Indian corporate sector as of 1993.

Within the indigenous private sector, a distinction should be drawn between group-affiliated companies and unaffiliated companies. The term

1. This date is drawn from Khanna (1997).

group deserves discussion. Hazari (1966), in a classic study of Indian business groups, defined a group as the "area over which a decision-making authority holds sway" (p. 7). The decision-making authority in question was almost always a family, though it could be a close-knit ethnic community as well. The area of control in effect was almost always a very diversified range of businesses. Hazari started his work by saying that it was "based on the proposition that the business group, not the individual joint stock company, is the unit of decision and, therefore, of economic power" (see his preface). Earlier work concurred. For example, another influential study opined that the study of concentration of economy power is "unreal if divorced from a study of communities" (Gadgil 1951, p. 29; the reference is to ethnic communities).[2] Hazari's study provided an influential evaluation of the extent to which business groups had exercised monopoly power (he concluded that they had). Subsequent regulators and policymakers (e.g., Dutt Report 1969) built on this work to demonstrate that the control that Hazari used as the defining feature of groups was often exercised through nonequity channels—for example, through family ties or through manipulation of the boards of directors.

In 1993, a total of 1,113 group companies were publicly listed on one of India's several stock exchanges. Postindependent India also gave birth to a large number of new companies that went on to become publicly listed on the country's stock exchanges. In 1993, there were 1,539 publicly listed nongroup companies. These companies were in part a result of the government's policy of restricting existing companies from expanding their capacity. Promoters of these companies were also able to launch these businesses with relatively small amounts of own equity, thanks to the access to capital from state-owned financial institutions and public capital markets.

Table 5.3 compares group and nongroup companies listed on the Bombay Stock Exchange (BSE) as of 1993.[3] The sample consists of 567 group firms and 437 nongroup firms for which the necessary data were available. The group affiliates are members of 252 different groups. Ninety-five percent of the groups have five or fewer affiliates traded on the BSE, and the largest group (the Tata group) has twenty-one affiliated companies traded on the BSE. The mean (median) sales of group affiliates is 1,411 (666) million Indian rupees. This is significantly larger than the mean (median) sales of unaffiliated firms, which is 366 (217) million rupees. The mean (median) age of group firms, which is 28.3 (22) years, is also significantly larger than mean (median) age of unaffiliated firms. The mean (median) Tobin's q for

2. In recent work, Khanna and Rivkin (2002) have demonstrated econometrically that business groups in Chile can, at best, be identified only partially on the basis of equity interlocks. Director ties and common owner ties play an important role in delineating what Chileans (regulators and participants in financial markets) deem to meaningfully be part of a business group. Thus control is exercised, de facto, in ways very similar to India.

3. These data are from Khanna and Palepu (2000).

Table 5.3 **Comparison of group and nongroup firms listed on the Bombay Stock Exchange in 1993**

	Group firms		Nongroup firms	
Variable	Mean	Median	Mean	Median
Sales (millions of rupees)	1,411	666	366	217
Age (years)	28.3	22	19.8	14
Tobin's *q*	1.39	1.14	1.37	1.06
Ownership by foreign institutional investors (%)	10.1	2.3	7.4	0.9
Ownership by Indian institutional investors (%)	15.6	13.3	11.3	6.5
Ownership by insiders (%)	31.9	31.3	20.8	17.1
Directors' ownership (%)	5.7	1.1	14.2	10.7
Top fifty owners excluding the above categories (%)	4.9	3.2	7.6	5
No. of firms	567	567	437	437

Source: Khanna and Palepu 2000a, p. 276. Data obtained from the Center for Monitoring the Indian Economy (CMIE) for 567 affiliates of 252 different groups and for 437 unaffiliated firms traded on the BSE.

Notes: The summary statistics in this table are based on 1993 values. Tobin's *q* is defined as (market value of equity + book value of preferred stock + book value of debt)/(book value of assets). Sales are measured in millions of rupees, with an approximate exchange rate at this time of U.S. $1.00 = Rs 30.00. Age measures number of years since incorporation. Foreign institutional ownership aggregates ownership of foreign corporations as well as that of foreign financial intermediaries. Domestic institutional ownership aggregates ownership in the hands of all state-run financial intermediaries. Insider ownership includes the stakes held by group family members and by other group firms and measures stakes held by insiders for nongroup firms. Directors' ownership captures the ownership of nonfamily directors. Top fifty ownership captures the largest shareholders not included in the aforementioned categories. Group membership is based on definitions of groups from CMIE (see text of paper for comments). The mean and median values for all the variables except for the mean value of Tobin's *q* and change in Tobin's *q* are significantly different between the group and nongroup firms at the 5 percent significance level.

group firms was 1.39 (1.14), insignificantly different from the mean (median) value of 1.37 (1.06) for the nongroup firms.

The total sample has the following mean (median) ownership structure: foreign institutions, 8.9 (1.6) percent; domestic institutions, 13.9 (10.2) percent; insiders, 27.1 (26.5) percent; directors, 9.4 (3.4) percent; top fifty owners excluding the above categories, 6.21 (4.0) percent. The remainder is held by dispersed shareholders. Relative to unaffiliated firms, group firms, on average, have significantly higher percentages of foreign and domestic institutional ownership, and higher insider ownership.

In summary, the Indian corporate sector as of the early 1990s had the following profile: a little more than 100 relatively large state-owned enterprises and more than 2,500 smaller publicly traded private-sector companies, roughly equally split between group affiliated and nongroup compa-

nies. In the private sector, companies affiliated with business groups, with concentrated family ownership, accounted for a substantial proportion of assets.

5.2.2 The Lack of Persistence of the Identity of Concentrated Owners

While there has been a significant persistence in the phenomenon of concentrated family ownership in India over much of the twentieth century, there was less persistence in the actual composition of the top business groups themselves. The Tata group remained the largest Indian group during the entire sixty-year period on which we present data below. But other leading groups from the pre-Independence era (e.g., British groups such as Martin Burn, Andrew Yule, Inchcape) did not persist in the form they then had. Several new business houses rose to prominence during this period, including the Thapar group in the 1950s and 1960s, the Ambani group in the 1970s and 1980s, and the Wipro and Munjal groups in the 1980s and 1990s. Thus, the history of the modern Indian corporate sector is characterized by both a persistence of concentrated ownership at the aggregate level and a significant lack of persistence of dominance at the individual business group level.

To demonstrate this point more formally, we analyzed the persistence of dominance for Indian business groups over the past sixty years. This is based on size rankings (assets) for the fifty largest business groups compiled by Dr. Gita Piramal of Mumbai, India, for the years 1939, 1969, and 1999 (table 5.4). Her rankings have themselves been compiled from miscellaneous historical sources, including, but not limited to, various government reports commissioned by the government of India at various points in time. Note that the rankings are not of firms but of groups. That is, all firms controlled by a single entity, typically a family, are treated as a single economic unit. As a benchmark against which to compare our analysis of the persistence of Indian groups, we also amass market value–based rankings of the fifty largest U.S. firms at identical time periods. These data are compiled from Compustat and are provided in table 5.5.

Consult table 5.6 for some summary statistics. Our first observation is that the Indian data show considerable turnover in ranks. Thirty-two out of fifty of the top groups in 1969 were not in the top-fifty list in 1939. Forty-three of the top groups in 1999 were not in the top-fifty list in 1969. This flux in the list of largest entities is greater than that in the United States in comparable time periods, where twenty-eight and thirty-seven firms enter the top-fifty U.S. list in 1969 and 1999, respectively. The comparison is all the more dramatic because the Indian data measure groups, which are collections of firms, while the U.S. data measure firms. (In other words, individual firms within Indian groups almost certainly would have greater turnover than that suggested by the data on groups.)

Of the eighteen groups that remain in the top-fifty list in the 1939–69

Table 5.4 **Top 50 Indian business groups over the years**

	1939		1969		1997	
Ranking	Group	Assets	Group	Assets	Group	Assets
1	Tata	62.42	Tata	505.36	Tata	37,510.80
2	Martin Burn	18.02	Birla	456.40	B.K.-K.M. Birla	19,497.94
3	Bird	12.40	Martin Burn	153.06	Reliance	19,345.59
4	Andrew Yule	12.38	Bangur	104.31	RPG	9,664.12
5	Inchcape	10.70	Thapar	98.80	Essar	9,593.78
6	E.D. Sassoon	9.56	S. Nagarmull	95.61	O.P. Jindal	5,456.10
7	ACC	8.68	Mafatlal	92.70	MAC	4,782.10
8	Begg	5.75	ACC	89.80	L.M. Thapar	4,434.09
9	Oriental Tel. & Elec.	5.60	Walchand	81.11	Ispat	4,425.35
10	Dalmia	5.51	Shriram	74.13	Group USHA	4,210.87
11	Jardine	5.33	Bird Heilgers	68.62	Lalbhai	4,112.44
12	Wallace Bros.	5.33	J.K. Singhania	66.84	Videocon	3,737.87
13	Birla	4.85	Goenka	65.34	Lloyd Steel	3,705.27
14	Wadia	4.70	Sahu Jain	58.75	Bajaj Group	3,415.87
15	Duncan	4.54	Macneill & Barry	57.28	Williamson Magor	3,351.62
16	Finlay	3.84	Sarabhai	56.72	Hari S. Singhania	3,275.80
17	Scindia	3.66	Scindia	55.99	K.K. Birla	3,094.90
18	Killick	3.51	Lalbhai	51.20	Torrent	3,077.23
19	Kilburn	3.23	Killick	51.08	Hinduja	2,967.20
20	Sarabhai	3.00	ICI	50.06	Arvind Mafatlal	2,862.94
21	Brady	2.82	Andrew Yule	46.75	Murugappa Chettiar	2,840.62
22	Rajputana Textiles	2.80	TVS	43.83	Escorts	2,642.22
23	Steel Bros.	2.77	Kirloskar	43.02	Mahindra	2,633.70
24	MacLeod	2.67	Parry	41.93	G.P. Goenka	2,630.43
25	Walchand	2.61	Jardine Hend.	40.19	C.K. Birla	2,530.32
26	Lawrie	2.55	Mahindra	38.58	Kirloskar	2,622.61
27	Thackersey	2.56	Bajaj	35.28	Nagarjuna	2,511.54
28	Mafatlal	2.45	Simpson	32.92	Jaiprakash Group	2,442.48
29	BIC	2.38	Seshasayee	32.72	Indo Rama	2,440.88
30	Lalbhai	2.33	Gill Arbuthnot	29.02	U.B. Group	2,414.65
31	Kettlewell	2.23	Kilachand	27.22	Kalyani	2,395.29
32	Gillanders	2.16	Dalmia J.	26.72	G.E. Shipping	2,357.59
33	Shri Ram	2.16	Naidu G.V.	26.41	Oswal Agro	2,342.36
34	Swedish Match	2.05	Shapoor Pallonji	26.36	Wadia	2,334.97
35	Octavious Steel	2.00	Turner Morrison	23.15	Manu Chhabria	2,286.02
36	Shaw	1.95	Ruia[a]	22.40	T.S. Santhanam	2,214.06
37	C.V. Mehta	1.90	Naidu V.R.	21.55	S.K. Birla	2,080.11
38	Mangaldas	1.80	A&F Harvey	21.33	Vijaypat Singhania	1,979.88
39	Daga	1.67	Wadia	20.56	Modern	1,967.85
40	Forbes	1.59	Shaw Wallace	20.14	M.M. Thapar	1,963.47
41	Harvey	1.50	Murugappa	20.07	Ranbaxy	1,875.71
42	Dunlop	1.42	Modi	19.38	SRF/A. Bharat Ram	1,863.26
43	Spencer	1.38	RamaKrishna	18.79	Finolex	1,712.73
44	Williamson	1.23	Chinai	18.36	Godrej	1,695.97
45	Harrisons	0.89	Jaipuria	18.24	BPL	1,691.57
46	Henderson	0.63	Kamani	18.05	Vinod Doshi	1,519.89
47	C. Jehangir	0.42	Rallis	17.94	Usha Martin	1,514.06

Table 5.4 (continued)

	1939		1969		1997	
Ranking	Group	Assets	Group	Assets	Group	Assets
48	Turner	0.39	Thackersey	17.19	OWM	1,412.76
49	Provident	0.34	Thiagaraja	16.55	Amalgamation	1,353.47
50	J. Warren	0.22	Swedish Match	15.70	Vardhman	1,282.40

Sources: 1939 data compiled from Markovits (1985), pp. 192–93. Significant exclusions (for miscellaneous reasons) from the list are BAT, Thomas Duff, J. Taylor, Assam Company, Burmah Oil, E. Peek, and Hukumchand. As we are concerned only with Indian groups and as rankings are not relevant for the purpose of this article, we can safely assume that all the key Indian business houses have been accounted for in the preindependence period in the table. 1969 data compiled from Report of the Industrial Licensing Policy Inquiry Committee, 1969. 1997 data compiled from *Business Today.*

Notes: Assets in RsCr. Normally sales or market cap are the accepted international criteria for ranking business performance. However, assets have been taken in this case for the sake of uniformity. Accurate, reliable, and complete data for Indian business houses by sales are not available pre-1984.

[a]Ruia in 1969 list should not be confused with Essar Ruia of the 1997 list.

period (fifty less thirty-two), sixteen change ranks, while only two have ranks that remain unchanged. Further, ten of the eighteen groups whose ranks change do so dramatically (that is, by more than ten ranks in either direction). In contrast, a smaller proportion of the firms whose ranks change in the U.S. top-fifty list in 1939–69 do so dramatically (five out of twenty-two). The proportion of radical rank changers is also higher in India during the 1969–99 period (three out of seven) than in the United States in the same period (five out of thirteen).

Note also that the turnover in the ranks of Indian groups is greater in the second thirty-year window than in the first. This is important because part of the turnover in the 1939–69 period was due to transfer of assets from British ownership to Indian ownership at the end of the British colonial rule of India. The turnover in the 1969–99 period reflects less unusual circumstances.

Finally, an analysis of the groups or firms that are born in any period suggests that they do not generally leapfrog to the top of the rankings, nor do the top groups or firms in any period dramatically fall off the rankings. A regression of ranks on "births" and on a variable that measures whether the group or firm is going to "die" (that is, exit the top rankings) the following period reveals positive and significant coefficients on both variables. That is, firms born in a particular period have higher ranks (are smaller), and firms that are about to die in the next period have higher ranks (are smaller). The regression reveals point estimates that are quite similar for both the Indian top-fifty group and U.S. top-fifty firm rankings, hinting at some underlying similarity in the competitive processes underlying such turnover.

This pattern of corporate ownership in India is inconsistent with a pure

Table 5.5 **Top U.S. firms over the years**

Ranking	1939	1969	1999
1	AT&T	International Business Machs	Microsoft
2	General Motors	AT&T	General Electric
3	DuPont	General Motors	Cisco Systems
4	Standard Oil (New Jersey)	Eastman Kodak	Wal Mart Stores
5	General Electric	Standard Oil (New Jersey)	Exxon Mobil
6	Union Carbide	Sears Roebuck	Intel
7	U.S. Steel	Texaco	Lucent Technologies
8	International Nickel (Canada)	Xerox	International Business Machs
9	Texas Co.	General Electric	Citigroup
10	Sears Roebuck	Gulf Oil	America Online
11	Coca Cola	Minnesota Mining & Mfg	American International Group
12	SH Kress & Co.	DuPont	SBC Communications
13	Allied Chemical & Dye	Avon Products	AT&T
14	Procter & Gamble	Coca Cola	Oracle
15	Eastman Kodak	Mobil Oil	Home Depot
16	Kennecott Copper	Procter & Gamble	Merck
17	Standard Oil (Indiana)	Standard Oil (California)	MCI WorldCom
18	Chrysler	Polaroid	Procter & Gamble
19	Socony-Vacuum Oil	Merck	Coca Cola
20	FW Woolworth Co.	Atlantic Richfield	Nortel Networks
21	RJ Reynolds	American Home Products	Dell Computer
22	Consolidated Edison (New York)	International Telephone & Telegraph	Johnson & Johnson
23	Commonwealth Edison	Standard Oil (Indiana)	Bristol Myers Squibb
24	United Gas Improvement	Johnson & Johnson	Pfizer
25	Standard Oil (California)	International Nickel (Canada)	Sun Microsystems

26	Chesapeake & Ohio Railway	GTE	QualComm
27	Pennsylvania Railroad	Shell Oil	Hewlett Packard
28	Norfolk & Western Railway	Ford Motor	Yahoo
29	Westinghouse Electric & Mfg	Burroughs Corp.	EMC
30	Montgomery Ward	JC Penney	Bell Atlantic
31	American Can	Pacific Telephone & Telegraph	Motorola
32	International Harvester	Caterpillar Tractor	BellSouth
33	Bethlehem Steel	Weyerhaeuser	Bank of America
34	Anaconda Copper Mng	Westinghouse Electric	TimeWarner
35	American Tobacco	Georgia Pacific	Morgan Stanley Dean Witter
36	General Foods	Union Carbide	Daimlerchrysler AG Stuttgart
37	Roan Antelope Copper Mines	Goodyear	Texas Instruments
38	United Fruit	Chas. Pfizer & Co.	Berkshire Hathaway
39	JC Penney	Bristol Myers	American Express
40	Pacific Telephone & Teleg	Honeywell	BP Amoco PLC
41	Liggett & Myers Tobacco	RCA	Eli Lilly
42	Parke-Davis	Warner-Lambert Pharmaceutical	Warner-Lambert
43	Pacific Gas & Electric	Dow Chemical	DuPont
44	Union Pacific Railroad	General Foods	GTE
45	Phelps Dodge	Imperial Oil	Wells Fargo
46	North American	Creole Petroleum	Tyco International
47	Phillips Petroleum	Pacific Gas & Electric	AT&T
48	Commercial Investment Trust	SS Kresge	Chase Manhattan
49	Public Svc	RJ Reynolds	Federal National Mortgage
50	William Wrigley Jr.	U.S. Steel	Schering Plough

Source: Compustat, based on market values.

Table 5.6 **Persistence of dominance of Indian groups and U.S. firms over sixty years**

	Indian groups		U.S. firms	
	1939–69	1969–99	1939–69	1969–99
Birth	32	43	28	37
RankUp	6	3	7	5
RankDown	10	3	15	6
RankUp10	5	2	1	2
RankDown10	5	1	4	3
RankSame	2	1	0	2

Notes: Birth refers to the number of groups or firms that are "born" in the thirty-year window in question—that is, that enter the top 50 list for that country in that time window, given that they were not part of the list in the previous thirty-year window (there are no groups or firms that exit and then re-enter the top 50 list in either country). RankUp refers to the number of groups or firms that rise in the asset-based size rankings. A smaller rank measures a larger group or firm, with rank = 1 and rank = 50 being the largest and the smallest of the top-50 groups or firms in each country in each time period. RankUp10 counts the groups or firms whose rank rises by more than 10. RankDown and RankDown10 are defined analogously. RankSame counts the number of groups or firms whose rank remains unchanged during that thirty-year period.

corporate ownership entrenchment story. We will turn, in each of the next two sections, to considering two potential explanations for concentrated ownership in an emerging economy like India (Ghemawat and Khanna 1998; Khanna 2000). The first explanation has to do with rent-seeking behavior by prominent business families with strong political connections. Under this hypothesis, business families control business groups to extract personal gains, and they attain their position through directly unproductive economic activities and through their influence over government policies and actions. The second hypothesis is that family business groups arise as a result of their entrepreneurial activity, which is in short supply in emerging economies such as India with significant market failures and institutional voids (Khanna and Palepu 1997, 1999, 2000b,c).

5.3 Political Connections and Rent-Seeking Behavior

In this section, we first describe how business-government relationships evolved over the relevant time frame for this paper, and then we consider particular groups' relationships with the government, with a view to uncovering whether or not there is systematic evidence to support the political connections story for persistence of concentrated ownership.

5.3.1 Shifting Contours of Business-Government Relations

A close relationship between business and government had existed for quite some time in India. During the British colonial rule, the interest of British companies was naturally favored over the interest of Indian busi-

ness houses (Piramal 1998, pp. 162, 230). As the movement for freedom from the British Raj gathered momentum in the 1920s and 1930s, close relationships developed between Indian businesses and leaders of the political movement for India's independence. Underscoring their symbiotic relationship in a letter, as he was building steam for India's independence movement in 1927, Mohandas Gandhi told G. D. Birla, a prominent Indian businessman, "I am ever hungry for money" (cited in Piramal 1991).

The pragmatic collaboration between the new Indian government and the business community to build modern India continued in the immediate aftermath of independence (1947 to 1960). For example, Hindalco and Telco collaborated with the government of India to set up Hindustan Aeronautics Limited to develop the aviation sector in India. However, the relationship soured in the 1960s as Indian government, under the leadership of Prime Minister Jawarharlal Nehru, moved the country's economic policies toward socialism. This period, often characterized as the License Raj, began with the government's desire to curb big business houses and to directly intervene in economic activities through public-sector corporations.

Several prominent government commissions, including the Mahalanobis Committee of 1964, the Monopolies Inquiry Commission of 1965, the R. K. Hazari Committee of 1966, and the Industrial Licensing Policy Committee of 1969, were established during this period. These commissions documented evidence that big business houses were exerting significant influence on Indian economy and that they were exploiting growth opportunities through favorable access to finance and government permits. These commissions were followed by the creation of the Monopolies and Restrictive Trade Practices Act (MRTP) and the Foreign Exchange Regulation Act (FERA), and the nationalization of the largest private-sector banks. These policy changes, spearheaded by the government of Prime Minister Indira Gandhi, imposed strict government controls on the private sector's ability to pursue growth opportunities, access domestic finance, or collaborate with foreign technology or business partners. The FERA also required that multinational companies operating in India divest their ownership so that a majority of the ownership in the Indian operations was held by Indian shareholders.

In the mid-1980s, under the government of Prime Minister Rajiv Gandhi, a gradual move toward deregulation began. These reforms relaxed some of the MRTP and import restrictions and freed up some of the economy from licensing requirements. Despite these changes, the Indian economy grew at a fairly modest rate during this entire period, culminating in a foreign exchange payment crisis in the early 1990s. This crisis led to a dramatic deregulation and liberalization of the Indian economy. Under the Congress Party government of Prime Minister Narasimha Rao, and then subsequently under the Bhartiya Janata Party government of Prime Minister Atal Behari Vajpayee, the MRTP and FERA Acts were repealed,

several sectors of the economy, including telecommunications, commercial aviation, and banking—previously reserved for the public sector—were opened to the private sector, and import duties were dramatically reduced.

5.3.2 Business Groups and Government

As the contours of business-government relations shifted in India during the past half century, there were complex shifts in relationships between individual business groups and the government in power. Different groups occupied different positions of favoritism at different times. There is evidence that these political connections played an important role in the rise and fall of different business houses. But it is interesting that the groups that remained dominant throughout did so despite ebbs and flows in their relationship with the government. Clearly proximity to government was not the only cause of their success.

Consider the House of Tata. J. R. D. Tata, in the preindependence period, presided over a group that was, in fact, quite reliant on government contracts. Before World War I, Tata Steel would not have started without a guarantee from the British government for Indian Railways, nor would Tata Steel have grown into the largest integrated steel factory in the British Commonwealth without such government contracts. And Tata Steel was protected by tariffs against German and Japanese, if not British, steel (Hazari 1986). The Tatas adopted a neutral stance in the Independence movement. As Piramal (1998, p. 481) puts it, in the British Raj, the Tata Group "bristled" with knights.

But by 1960, the group remained India's largest even though it had fallen out of favor, as it was opposed to the socialist philosophy of Prime Minister Nehru. Reacting to the various government commissions suggesting that large business houses manipulated and abused the licensing system, J. R. D. Tata is reported to have cynically said, "Yesterday in Parliament, they called me a monopolist with 'great concentration of power.' I wake up every morning and I am supposed to say, 'I have great concentration of power. Whom shall I crush today? A competitor or a worker in my factory or the consumer?' . . . No dear boy I am powerless. . . . I cannot decide how much to borrow, what shares to issue, at what price, what wages or bonus to pay, and what dividend to give. I even need the government's permission for the salary I pay to a senior executive" (quoted in Das 2000, pp. 168–69). Indeed, far from manipulating the licensing system to its advantage, the Tata group reportedly made 119 new proposals for expansions in (existing or de novo) businesses between 1960 and 1989, and every one of them was rejected (Das, p. 93). Further, some of the Tatas' assets were nationalized, most famously Tata's airline. And J. R. D. Tata contributed to the Swatantara Party's coffers to create an alternative to Nehru's Congress since the former stood for less regulation than that espoused by the latter.

Let us turn to the Birlas next. Under G. D. Birla, the group supported the Independence movement financially. Sarojini Naidu, herself a prominent figure in the India of that era, famously said, "it took all Birla's millions to enable Gandhi to live in poverty. And he gave for free" (Piramal 1998). The group rose to prominence in the postindependence period and by 1969 became the second-largest Indian business group. However, under the government of Prime Minister Indira Gandhi, the Birla group became the target of criticism for its manipulation of the licensing system, as it was targeted by the Hazari reports and criticized for preempting licenses—that is, for applying for licenses that it then failed to use. Indeed G. D. Birla's successor, Aditya Birla, was allegedly sufficiently disappointed by being, in his view, unfairly tarnished by the government's allegations, that he simply shifted his expansion plans overseas. So much so that, between 1970 and 1995, the Birlas had established plants in Egypt, Indonesia, Malaysia, the Philippines, and Thailand, with overseas activity accounting for a third of their overall business, and the world's leading position in viscose staple fiber, palm oil, and insulators, and the world's sixth-largest position in the manufacture of carbon black (Das 2000, p. 176). The implication is that the size and prominence of the group is due to the Birlas' entrepreneurial tendencies' finding expression around the licensing restrictions at least in part, rather than by embracing them and engaging purely in rent-seeking activities.

All this is not to deny that rent seeking existed. Clearly there were abuses in the system; far too many indicators are consistent with this. See recently Bertrand, Mehta, and Mullainathan (2002), for example, and our own earlier work (Khanna 2000; Khanna and Palepu 2000a) on the dark side of business groups.[4] But it is a mistake to tar the entire corporate sector with the same broad brush. As the caselets above suggest, some of the groups remained dominant despite sustained periods of falling out of favor. Others directed their energies to expansion outside India rather than manipulating the licensing system.

Further, note the following possibility of possibly misplaced emphasis and incorrect inference. We do not contest that the License Raj was bad for economic development. As Hazari (1986, p. xxiv) put it, "the abuses and failures are no longer, as the Italians say, mere *apertura;* they are wide-open doors." But whether concentrated ownership was the cause of this miasma is less clear. The "Kafkaesque maze of controls" (Bhagwati 1993) had more to do with a heady fascination with the intellectual cuisine of the London School of Economics and Cambridge (Hazari 1986), and the wonder of the then-ascendant Soviet planning machine, than with the actions of India's

4. De Long (2001) suggests, based on an analysis of growth rates of several countries, that the effects of the License Raj might have been overstated (or, at least, the negative effects were offset by other positive factors).

dominant family businesses. Business groups had to either manipulate it, as some did, or invent themselves around it, as did others.

5.4 Entrepreneurship in the Context of Institutional Voids

In an emerging economy, many institutions necessary for the functioning of product markets, labor markets, and financial markets are typically missing or underdeveloped. In India, this was certainly true under colonial rule. Indeed, the heavy state intervention in the economy in the first few decades of independence was justified by successive governments as a way to deal with these market failures.

As Khanna and Palepu (1997, 1999, 2000b,c) and others (Leff 1976, 1978; Strachan 1976) argue, business groups could be seen as a private-sector response to the institutional voids in the economy. Groups often perform functions traditionally performed by market institutions in more mature markets. One such important function is the provision of something akin to venture capital, consisting of identifying promising new business opportunities in the economy and exploiting them with in-house risk capital and managerial talent, which are traditionally in short supply in the economy at large. This, in turn, leads to the observed predominance of the business group type of organizational form in emerging economies.

It is important to note that this hypothesis only implies that economies such as India will have a preponderance of business group–type organizations. It does not necessarily imply that the same set of business groups will continue to be prominent in the economy over time. This continued success of a business group under this explanation depends on its ability to sustain its entrepreneurial nature over a long period of time. While some groups may succeed in this endeavor, others may fail. In this sense, the rise and fall of business groups over time in emerging economies is akin to the rise and fall of businesses in advanced economies.

The history of the Tata group provides a classic example of how some Indian business groups pursued new business opportunities successfully over time. Figure 5.1 shows the time line of the entry of the Tata group into various new businesses, from 1870 to 2001—textiles in 1874, the hospitality industry in 1902, steel in 1907, power in 1910, cement in 1912, soaps and toiletries in 1917, printing and publishing in 1931, aviation in 1932, chemicals in 1939, consumer electronics in 1940, commercial vehicles and locomotives in 1945, cosmetics in 1952, air-conditioning in 1954, pharmaceuticals in 1958, tea and coffee in 1962, information technology in 1968 (see section 5.6), watches and financial services in 1984, auto components in 1993, telecom services in 1994, passenger cars in 1998, retail in 1999, and insurance in 2001. Despite the remarkable diversity of these businesses, the group has been able to maintain a leading position in many, if not most, of the businesses it entered over time. It had to exit only a small handful of businesses

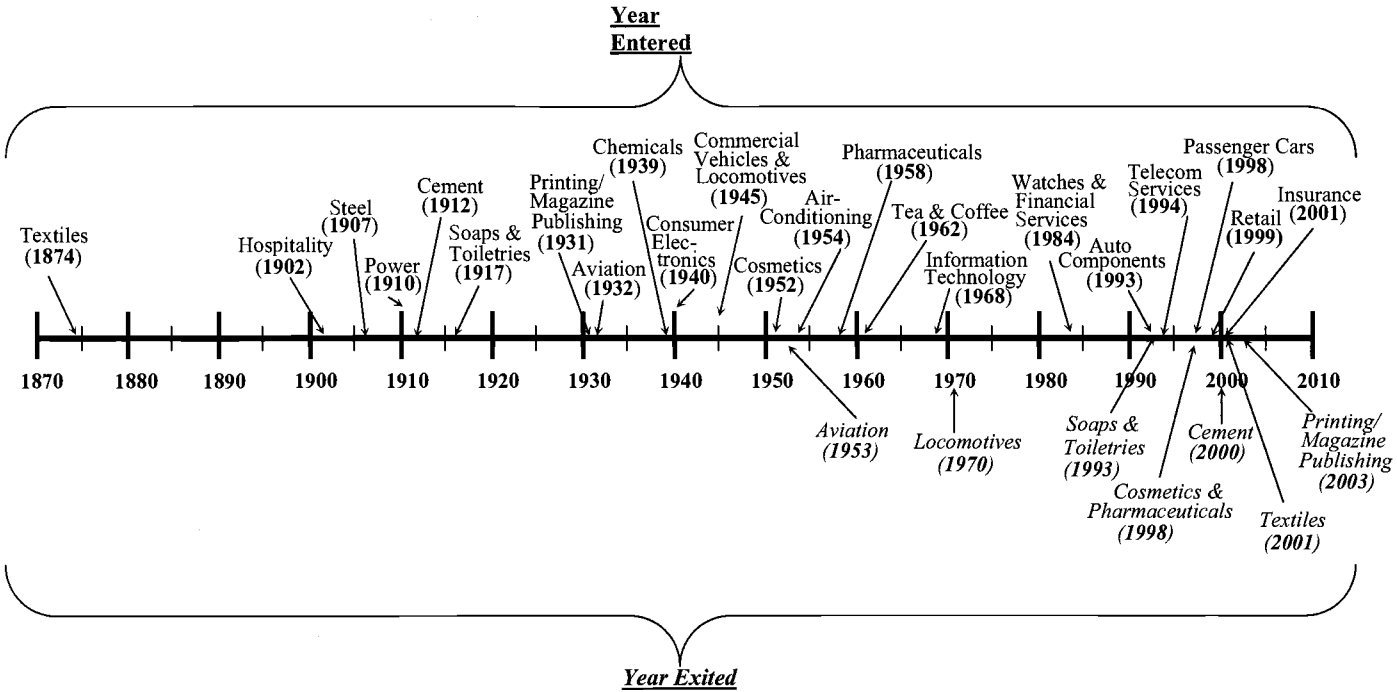

Fig. 5.1 Evolution of the Tata group, 1900–2003

Source: Tata Sons Private Limited, Mumbai, India.

in its history—aviation in 1953 (due to government nationalization), locomotives in 1970, soaps and toiletries in 1993, cosmetics and pharmaceuticals in 1998, cement in 2000, textiles in 2001, and printing and publishing in 2003.[5]

The role played by the Tatas is exactly to fill the institutional void of venture capital in these instances as well as to provide an exit mechanism to aspiring entrepreneurs in the absence of well-functioning public markets. For example, Tata Chemicals supported its engineers' efforts to innovate. In some instances, these engineers left to start up their own companies, and the Tatas had been known to buy out the results of these efforts subsequently (see example in Piramal 1998, p. 473).

It is interesting that this process of entrepreneurship is often criticized in the media as being undisciplined and characterized by a failure to adhere to core competencies. This reflects a mistaken notion of what constitutes the "core competence," as it were. Here it is at least as much an ability to circumvent institutional voids as it is some industry-specific knowledge. As N. A. Soonawala, a board member of Tata Sons, the main holding company of the Tatas, said to us in 1998 in response to criticisms by leading multinational consulting firms at the time, "If everyone is told not to go into unrelated businesses, how will the airlines, oil, and telecommunications industries develop? The government has said that they can't do it. So there's a social benefit to all this diversification" (Khanna, Palepu, and Wu 1998).

An important feature of entrepreneurship in India is the reliance on the ethnic group to supplement family networks (Lamb 1976). The Marwari, Gujerati, and Parsi communities are, by far, the dominant business communities in India in recent decades, and even today. For example, these communities collectively controlled 62 of the 100 largest companies in 1989 (Piramal 1989). Other active communities include the Punjabis, Chettiars, and Maharashtrians.

These communities share their distinctive tenors. For example, Gujeratis were traditionally traders with countries in the Middle East and East Africa. Parsis, from the small minority Zoroastrian community in India, were most "Westernized" in their business outlook, and traditionally played the role of intermediaries with Europe. Marwaris, a demographically small segment originally from the state of Rajasthan in western India, have been the most geographically spread business community, pursuing businesses all over the country. By 2000, Das (2000, p. 174) quotes an estimate that says that the Marwaris controlled half the industrial assets of India.

Timberg (1978) chronicled the modus operandi of Marwari businesses. Traditionally, the great Marwari firms had networks spreading all over

5. There appears to have been a short-lived and aborted entry into shipping in the late 1890s. This effort, along with those of a number of other Indian entrepreneurs until the establishment of Walhand Hirachand's Scindia shipping company, foundered when faced with the British-controlled shipping "conference" controlled by Inchcape and others.

Asia and deep into China. They relied on their own kin for information and for effective contractual enforcement. In our terminology, these ethnic networks were substitutes for institutional voids, and shared features with the networks used by the Genoese and Maghribi traders studied by Greif (1994) and by the Rothschilds. Famously, the Marwaris' simple and rigorous, if manual, cost-accounting systems provided a cost-effective means of financing that allowed them to stomach risks in a time of capital scarcity.

In pre-British and British India, the history of prominent business groups is characterized by the willingness of the successful members of each ethnic community to help spawn new members, sometimes even to compete with their existing businesses. For example, several prominent Marwari groups in existence today are spun off from the Birla group. Birlas have been known to actively encourage talented employees to pursue their own business opportunities, and sometimes even finance these new ventures. Several groups spun off the Birla group (e.g., Khaitan and Kejriwal, to cite just a couple) and continue to exist today (Piramal 1998, pp. 142–43). Kasturbhai Lalbhai, a prominent textile businessman, helped his ethnic group members with the technology of setting up textile mills. Walchand Hirachand Doshi actively promoted shipping companies, including direct competitors of his own, as part of the struggle against the British Raj (Piramal, pp. 162, 230). As Lamb (1976) puts it, the acts of entrepreneurship in British India were heroic, especially in view of the powerful interests arrayed against the entrepreneurs.

The entrepreneurship has continued in modern times and extends beyond expansion of product lines to institutional innovation. A good example is that of the Ambanis. A relatively recent entrant into the leading business groups, the flagship company, Reliance, is India's only entry into the Global Fortune 500. While many point to a close relationship with the government of Mrs. Indira Gandhi as being part of the reason for the company's initial success—founder Dhirubhai Ambani famously said he would "salaam" (salute) anyone to sell his ideas[6]—the fact remains that the group has developed world-class capabilities in managing large-scale capital intensive projects and is an innovative financier. Its most notable contribution to institutional innovation in India is perhaps the creation of an equity cult. As Das (2000, chap. 13) chronicles, Dhirubhai Ambani singlehandedly mobilized small investors around the country in 1977 and listed on the Bombay and Ahmedabad stock exchanges when the dominant public financial institutions would not lend him capital. Between 1980 and 1985, the number of Indian shareholders went from one to four million, and fully 25 percent of these shareholders owned shares in Reliance, the Ambani company.

To recapitulate, we have considered two classes of explanations—rent-

6. The quotation is from *India Today,* 30 June 1985 (cited in Piramal 1991).

seeking behavior and entrepreneurial activity—to explain the dual phenomena of persistence of concentrated ownership but turnover in the identity of the concentrated owners. Both explanations have circumstantial evidence in favor of them. Superficial attempts to attribute data to one or the other of these explanations should be met with disdain. It is hard to believe, in particular, that rent seeking can provide a full explanation, especially of the shifting identity of concentrated ownership.

5.5 The Recent Evolution of Groups and Markets

The evidence presented to this point is consistent with the idea that Indian business groups with family and community ties arose historically, in part, due to the absence of well-developed financial markets. During the past three decades, financial markets in India have developed significantly, in part due to paradoxical consequences of policies aimed at other ends during the era of socialism, and in part due to direct attempts by the government aimed at market development during the more recent reform era.

Under the Foreign Exchange Regulation Act passed during the socialist era of the 1960s and 1970s, multinationals operating in India were required to reduce their ownership to below 40 percent and divest the rest to Indian investors. To comply with this requirement, many multinationals offered their shares to public investors through public offerings on the BSE. The issue prices were set by the Controller of Capital Issues, a government body, at book values that were often dramatically below economic values. As a result, individual investors were able to buy shares at very attractive prices in very good companies. These public offerings had a number of spillover effects. First, they created a culture of equity ownership in India on a large scale, because many retail investors were attracted to the opportunity of earning significant returns that were almost assured. Second, the process of listing these companies on the BSE resulted in the creation of an intermediation and market infrastructure—accounting and auditing professionals, financial analysts, investment bankers, and stockbrokers.

When India began to liberalize its economy in the 1990s, one of the key objectives of the government policy was to attract foreign institutional investors. To accomplish this, the government established the Securities and Exchange Board of India (SEBI), modeled closely after the U.S. Securities Exchange Commission. Following the establishment of SEBI, a number of significant capital market reforms were put in place: new regulations strengthening corporate disclosure and governance standards, new regulations and enforcement mechanisms to ensure orderly and fair trading practices on the country's stock exchanges, and the opening of the market to international financial intermediaries. Companies were allowed to float shares at market prices, rather than at the artificially low prices dictated by the Controller of Capital Issues. Finally, Indian companies were also al-

lowed for the first time to list on international stock exchanges. All these changes resulted in significantly improved financial markets in India and enhanced the ability of entrepreneurs and established businesses to access domestic and international equity capital.

These changes, coupled with a significant deregulation of product markets, led to new opportunities and challenges for business groups. A number of first-generation entrepreneurs were able to tap into the capital markets to exploit new business opportunities. Prominent among them was the Reliance group, which raised vast sums of money on the BSE to finance its petrochemical ventures to become one of the largest enterprises in India. Reliance went on to become a diversified business group when it began to exploit new business opportunities thrown open with the deregulation of power and telecommunication sectors. This era also gave rise to a number of prominent companies in the software and pharmaceutical sectors—Infosys, Wipro, and Satyam Computer Services in software, and Ranbaxy and Dr. Reddy's in pharmaceuticals. Some of these companies are family controlled but professionally managed (Wipro, Satyam, Ranbaxy, and Dr. Reddy's); some are diversified (Wipro operating in consumer products and information technology); while others are focused in one sector (Infosys, Satyam, Ranbaxy, and Dr. Reddy's).

While the development of capital markets and the deregulation and globalization of the Indian economy have given rise to the birth of these new entrepreneurial firms, some of the old family business groups have also adapted and grown during this era. The most prominent among them is the Tata group, which continues to be the largest business group in India. The Tata group has been able to exploit many of the new business opportunities in software and telecom. Today, Tata Consultancy Services, one of the Tata group companies, is the country's largest information technology services company, and Tata Telecom is one of the largest telecommunication companies in India.

5.6 The Indian Software Industry

5.6.1 Why study the software industry?

The software services industry provides a lower bound on the relative advantage of family business groups over independent entrepreneurs in exploiting new opportunities for a number of reasons. First, the industry was very conducive to de novo entry because of low capital requirements, little government regulation on entry, and a relatively low level of minimum economic scale to achieve profitability. Further, the Indian government invested in elite technical institutions, such as the Indian Institutes of Technology and Indian Institutes of Management, and a large number of other engineering colleges. These institutions produced abundant talent, a criti-

cal input for the software services industry. Graduates of these institutions, relying on a recognized education brand, were more willing to work for de novo startups than for incumbent business groups. Finally, government policies restricting operations of multinationals such as IBM left plenty of opportunities for domestic entrepreneurs. Given all these factors, software services is one industry where individual entrepreneurs could compete effectively with the established family business houses of India. Further, business houses could not rely on any ability they might have had to exercise regulatory muscle, since there were no regulations to muscle into. Thus, the history of software industry, and the role of business groups in this industry, provide further evidence on why business groups play such an important role in India even today.

5.6.2 Origins of the Indian Software Industry

Until the mid-1960s, there was virtually no software development going on in India. Whatever software sold was bundled with computers sold by multinational companies like IBM. The early software development efforts focused on producing in-house applications for efficient use of these computers. Government policies attempted to encourage the growth of a domestic hardware industry through high import tariffs on hardware. State-owned hardware companies, such as the Electronic Corporation of India Limited, attempted to produce computers for domestic (academic and commercial) use, and these efforts included development of operating systems, compilers, and application packages. Most of these efforts, however, were not very successful.

Of course, many of the reasons to which modern observers attribute the success of today's Indian software industry—for example, low-cost talent, English language, and a tradition of entrepreneurship—did in fact exist prior to the 1960s. The fact that the industry did not, however, and the fact that the industry continues not to have made a mark in other low-cost, English-speaking countries suggests that these are certainly not sufficient conditions for the success of the Indian software industry.

It is instructive that the industry really got its start with the establishment in 1968 of Tata Consultancy Services (TCS), a wholly owned subsidiary of Tata Sons, itself the holding company of the Tata Group, a diversified business group and the epitome of concentrated ownership. According to Heeks (1996), TCS was the first commercial organization to subscribe to the export commitment–related terms under which the Indian government allowed the import of hardware. Tata's ostensible purpose was to allow its diverse companies to use computers in their operations. Toward this end, the company formed an alliance with Burroughs Corporation. Under this alliance, Burroughs would help secure U.S. clients for TCS; in return, TCS would act as an exclusive sales agent for Burroughs hardware in India. Based on this alliance, TCS secured its first U.S. client—the De-

troit police department. Today TCS is the largest software services company in India, employing more than 19,000 software engineers. The company is privately held, fully owned by Tata Sons Limited, the apex of the Tata group companies.

But it was a serendipitous event that triggered the rise of TCS, having to do with the withdrawal of the incumbent, IBM, in 1978. IBM took this step in response to the FERA, which limited MNCs to a maximum of 40 percent ownership stake in their Indian subsidiaries and specified policies for access to foreign exchange for imports and for the use of foreign exchange earned through exports. Multinational companies had to choose between reducing their stake to this level by selling their shares to the Indian public and leaving the country. Several MNCs chose to dilute their stakes through public offerings on the BSE, but IBM and Coca-Cola were two prominent exceptions. The decision of IBM to leave India meant that 1,200 employees of the company had to look for other alternatives to exploit their skills. Many of these employees set up small software consulting companies that would offer software development and maintenance services to former IBM customers, leading to the beginnings of the Indian software industry. The departure of IBM also allowed many smaller hardware companies to expand into India, exposing Indian software programmers to a variety of software platforms.

Other unintended consequences of Indian government policy also played a role in shaping the nascent industry. For example, the severe import restrictions on hardware—requirements of government permits, high customs duties, and control of foreign currency availability—gave a fillip to the industry practice that received the derogatory title of "bodyshopping," whereby programmers were shipped off to the client site and worked on the client's computers. This in turn led to some companies' building relationships with their clients that were then to play a major role in shaping the industry.

The outward-looking nature of the industry from the outset was also influenced by the unattractiveness of the domestic market. This, in turn, had several causes. First, fearing unemployment from automation, the government did not encourage the adoption of computerization in government and state-owned enterprises. Second, its interest in developing a domestic hardware industry led the government to impose extremely high tariffs (350 percent in much of the 1970s and early 1980s). Third, Indian private-sector companies had little incentive to adopt information technology to improve operations and productivity, given the highly protected nature of the economy. As a result, Indian software firms found it difficult to generate much demand for their services in the domestic market. This outward orientation stood in significant contrast to the orientation of much of the Indian private sector, which was focused on the Indian domestic market rather than the export market.

More broadly than these specific serendipitous events, software slipped under the discerning bureaucrat's otherwise omnipresent proverbial radar screen, so to speak. The origin of India's socialist policies and heavy-handed micromanagement of enterprise lay in Oxford- and Cambridge-indoctrinated Fabian socialism, which sought to regulate the "commanding heights" of the economy. But this required physical assets to control. Software, with its characteristic intangibles, was too ephemeral to be included in the purview of these regulations.

Other than the intangible nature of the assets in question in the software industry, another reason why the industry escaped some of the pernicious effects of Indian socialism had to do with its non-capital-intensive nature. The state's stranglehold on the financial sector did not matter as much. Several of the last decade's changes have helped move an already existing industry along. For example, far-ranging deregulation initiated following an exchange rate crisis in 1990 generically improved the outlook for business. The delicensing of hardware imports and the greatly falling hardware prices internationally meant that entry barriers into the Indian domestic software industry fell drastically. Software firms were allowed to set up private telecommunications networks to promote remote software services (often to clients in the west). The party in power until early 2004, the Bhartiya Janata Party (BJP), was generally pro-business and the first to explicitly support the software industry in its election manifesto.

But our general point is that these recent changes do not shed much light on the origins of the industry. It is interesting to ask how a low-cost, talent-intensive environment could become a world player in a knowledge-intensive industry. Clearly serendipity, as opposed to explicit design, played a role. More interesting for our purposes, concentrated ownership, in the garb of TCS, was the best positioned to capitalize on the opportunities revealed by serendipity. Indeed, the ownership links among the Tata companies were among the ties that cemented them (along with director interlocks, a shared if informal access to the Tata brand, and shared senior-level talent) and permitted TCS to leverage the Tata group's reputation. It is doubtful that an entity could have arisen in a vacuum, unaffiliated with an existing reputable private-sector entity, to capitalize on the software industry opportunity. In a subsequent subsection, we will show how TCS's approach differed from that of other firms in India and that not only did TCS not deter the entry of de novo aspirants, but it actually facilitated entry.

5.6.3 The Modern Industrial Organization of the Indian Software Industry

Table 5.7 shows the distribution of the companies in the industry by revenues. Table 5.8 shows a list of top-twenty companies and their revenues. The top five firms in the industry, with sales greater than 10 billion Indian

Table 5.7 Structure of Indian software exports industry

Annual turnover	No. of companies 2000–2001	2001–2002
Above Rs. 1,000 crore	5	5
Rs. 500–1,000 crore	7	5
Rs. 250–500 crore	14	15
Rs. 100–250 crore	28	27
Rs. 50–100 crore	25	55
Rs. 10–50 crore	193	220
Below Rs. 10 crore	544	2,483

Source: Adapted from NASSCOM (2003).

Note: In 2001–2, companies with under Rs. 10 crore in revenues included non-NASSCOM member companies.

Table 5.8 Top 20 IT software and services exporters from India

Ranking	Company	Rs. crore	US$ million
1	Tata Consultancy Services	3,882	813
2	Infosys Technologies Ltd.	2,553	535
3	Wipro Technologies	2,256	481
4	Satyam Computer Services Ltd.	1,703	357
5	HCL Technologies Ltd.	1,319	277
6	IBM Global Services India Pvt. Ltd.	764	160
7	Patni Computer Services	732	153
8	Silverline Technologies	603	126
9	Mahindra-British Telecom Ltd.	541	113
10	Pentasoft Technologies Ltd.	459	96
11	HCL Perot Systems Ltd.	449	94
12	Pentamedia Graphics Ltd.	431	90
13	NIIT Ltd.	400	84
14	Mascot Systems Ltd.	399	84
15	i-Flex Solutions Ltd.	392	82
16	Digital Globalsoft Ltd.	331	69
17	Mphasis BFL Group (consolidated)	313	66
18	Mascon Global Ltd.	307	64
19	Orbitech	264	55
20	Mastek Ltd.	259	54

Source: Adapted from NASSCOM (2003).

rupees, account for 32 percent of the total revenues of the industry. These five firms are TCS, Infosys Technologies, Wipro Technologies, Satyam Computer Services, and HCL Technologies. Wipro, TCS, and Satyam are affiliated with family-owned business groups, which entered the software industry as part of a diversification move by their parent groups. Within these three, TCS is privately owned; Wipro is publicly traded, but approx-

imately 84 percent of the shares are held by the founder; Satyam is publicly traded, with only 11 percent of the shares held by the founding family. Infosys and HCL were started by computer professionals and are publicly listed companies. There are also several large Indian software companies that are affiliates of multinational companies. These include Indian arms of overseas software services firms such as IBM Global Services. Also, there are arms of multinational operating companies that use India as a base for their internal software development needs. Examples include Siemens Information Systems Limited and Motorola. Affiliates of multinational companies together account for 22 percent of the industry's total revenues. There are twenty-four large software companies that are publicly traded on the Indian stock exchanges.[7] Three of these—Infosys, Satyam, and Wipro—are also listed on the U.S. stock exchanges.

Compare the industrial organization of the software industry to that of the Indian economy as a whole reported in tables 5.2 and 5.3. The role of the private sector looms much larger than that of the (absent) public sector in the software industry than it does in the economy at large. There are large, dominant software firms that have emerged—separating the wheat from the chaff, as it were—and this has happened through the normal forces of global competition. Three of the five most successful companies in the software industry—TCS, Wipro, and Satyam—were launched by business groups and remain affiliated to these groups.[8] Whereas the absence of capital barriers to entry characterizes the industry, reputation, the forte of those groups that have succeeded, poses a formidable barrier to entry. Further, from the fact that multinationals have not been able to displace the domestic group companies, we can conjecture that the reputation of the former is probably based at least in part on some hard-to-replicate ability to run a software company in India.

5.6.4 The Success of the Indian Software Industry

The case of the Indian software industry provides a contrasting picture to the received wisdom that primarily emphasizes the ills of concentrated ownership.[9] Here, we provide some broad data to support the claim that the software industry is, in fact, a success story despite the ubiquity of con-

7. There were also other software companies that are publicly listed, but these have very small amounts of sales.

8. A fourth company, Infosys, has a very high level of insider ownership even though it is not affiliated with a business group.

9. Morck, Shleifer, and Vishny (1988) used U.S. data to argue that the monitoring benefits of concentrated ownership declined beyond a certain threshold level of concentrated ownership. A more recent literature on corporate governance around the world points to the exploitation of minority shareholders by controlling concentrated owners as being a prevalent problem (La Porta et al. 2000; Shleifer and Wolfenzon 2002). Morck, Shleifer, and Vishny have argued that concentrated ownership has resulted in the onset of "Canadian disease," which they associate with slower growth, lower innovation, and other forms of noncompetitive malaise.

centrated ownership. Why do we think of this as a success? In contrast to the lackluster performance of the Indian economy as a whole, the performance of the Indian software industry has been impressive.[10] The industry's total revenues in 2002 stood at $10.2 billion, and it grew at more than 40 percent per year during the 1990s. The industry accounted for $7.7 billion in exports in 2002, which was a significant portion of the approximately $73.3 billion total exports of goods and services from India in that year. One indication of technical prowess is that five of the nine software development centers in the world with capability maturity model (CMM) level 5 ratings, the highest ratings on the predominant quality scale developed for software at Carnegie-Mellon University, were located in India. Companies like General Electric, Citicorp, and IBM had their only CMM-certified operations in India rather than in the United States.[11] According to a report prepared by the international consulting firm McKinsey for the National Association of Software and Service Companies (NASSCOM), an industry trade association, the industry is expected to grow to $77 billion by 2008, accounting for 7 percent of India's gross domestic product (GDP), 33 percent of its foreign exchange inflows, and four million jobs. By all these measures, software industry is the crown jewel of India's postindependence economy.

While this establishes that the Indian software industry has done well relative to any sensible domestic benchmark, two other benchmarks are worth considering. Consider, first, comparisons with U.S. software companies, and then comparisons of the Indian industry with itself, as it were, over time.

10. This history relies on the following sources: De Long and Nanda (2002), Heeks (1996), Ghemawat (1999), NASSCOM (2002, 2003), Kennedy (2001), and Kuemmerle (2003).

Some aggregate performance indices for the country are worth keeping in mind to interpret the software industry numbers. At the macro level, India's overall economic performance during the postindependence years can only be characterized as relatively poor. For example, the United Nations' Human Development Report of 2002 ranks India 124 among the 173 countries. According to the statistics reported by the Planning Commission of the Government of India, the country's gross national product (GNP) grew at annual average rate of approximately 4 percent between 1951 and 1990. This rate increased to approximately 6 percent in the postreform years of 1990 to 2002. India's population grew significantly to 1.05 billion by 2002. While government spending on public education was more around 3 percent of GNP, a disproportionate amount of this went to supporting higher education. According to the Indian government's 2001 Census of India, the adult illiteracy rate stood at 34.6 percent in 2001. Agriculture still remained the dominant source of income for a very significant portion of the population, and there were significant levels of unemployment and underemployment. Per capita GNP in 2001 stood at approximately $450. A caveat to this interpretation is that, in the two decades leading to 2000, India's cumulative average growth rate was second only to China's in this time period. Our reading is that it was a good performance, but not stellar enough to alleviate the suffering of the Indian masses. In a recent analysis, De Long (2001) argues that India was in the middle of the pack of countries that he analyzes over longer time periods.

11. It may be that quality concerns are greater when a firm is located in an environment with a reputation for poor governance and poor quality products. Perhaps U.S. firms do not find it necessary to seek certification of this sort.

Table 5.9 **A comparison of the large U.S. and Indian software companies**

	Revenues (June 2002, $ million)	Operating margin (June 2002, %)	No. of employees (June 2002)	Market capitalization (October 2002, $ million)
U.S. companies				
Accenture	11,600	3.9	75,000	12,400
CSC	11,500	4.7	67,000	4,800
EDS	22,300	10.3	143,000	6,370
KPMG Consulting	2,368	5.6	9,300	1,240
Sapient	217	n.a.	2,427	123
Indian companies				
HCL Tech	340	28.1	5,587	1,209
Infosys	571	32.1	10,470	7,140
Satyam	421	26.7	9,532	1,370
TCS	810	25	19,000	8,100
Wipro	734	24.5	13,800	6,340

Source: Adapted from NASSCOM Newsline, November 2002.
Note: n.a. = not available.

Table 5.9 compares the largest Indian software companies with some of the largest U.S. software companies in terms of revenues, employees, profitability, and market capitalization, all as of 2002. Indian companies are clearly not as large as some of the largest U.S. software firms, such as CSC, Accenture, and EDS, in terms of revenues or manpower. However, in terms of profitability, Indian firms are significantly better than their U.S. counterparts. The stock market valuations of Indian companies, despite their smaller size, are often larger than the market capital of the U.S. firms.[12]

Consider, now, the industry's evolution over time. Table 5.10 shows the time series of the total activity of the Indian software industry from 1988 to 2002. The industry had a total revenue of 0.7 billion Indian rupees in 1988, and the proportion of exports to domestic sales was 41 percent. By 2002, the industry grew to a size of 365 billion rupees, with exports accounting for 76 percent. This is driven by the rising importance of offshore services (51 percent of export revenues in 2002 from 5 percent in 1991), the value-added part of the Indian software firms' offerings. This, in turn, is a reflection of gradually developed reputations for reliability and high quality of services, starting from a base of primarily bodyshopping (Banerjee and Duflo 2000). By 2000, the United States accounted for 66 percent of the total exports of the industry, and the United Kingdom

12. Software industry market capitalization on Indian stock exchanges rose from $4 billion in January 1999 to a high of $90 billion and then, following the NASDAQ crash and its ripple effect in India, settled at $55 billion by mid-2000.

Table 5.10 **India's software exports, domestic sales, and imports (Rs. billion/U.S. $ million)**

Time period	Exports		Domestic sales	Exports/total sales (%)
	Rs.	US$		
1987–88	0.70	52	1.00	41
1990–91	2.50	128	2.25	52
1991–92	4.30	164	3.20	57
1992–93	6.70	225	4.90	57
1993–94	10.20	330	6.95	59
1994–95	15.30	485	10.70	59
1995–96	25.20	735	16.70	60
1996–97	39.00	1,110	25.00	61
1997–98	65.30	1,790	35.80	64
1998–99	109.00	2,650	49.50	68
1999–2000	171.50	4,000	94.10	70
2000–2001	283.50	6,230	98.90	74
2001–2	365.00	7,680	115.00	76

Source: Adapted from Ghemawat (1999), p. 20. Data from Heeks (1996) and NASSCOM.
Note: The figures for the domestic software activity do not include in-house development of software by end users, which is presumed to be a considerable amount.

accounted for the second-largest share of exports, at 14 percent. Of the Fortune 500 U.S. companies, 185 were customers of the Indian software services industry.

This smorgasbord of data leaves us relatively convinced that, despite the ubiquity of concentrated ownership, it is hard to tell a story of a sclerotic industry, engulfed with rent-seeking behavior and in its death throes. Quite the contrary. It is also instructive to note that direct measures of corporate governance, which we turn to below, also do not yield predictions consistent with the predicted dismal effects of concentrated ownership.

The Indian software industry, on average, appears to follow better corporate governance practices relative to the rest of the Indian industry, consistent with the hypothesis that globalization puts pressure on companies to improve their governance to global standards. Some data from Credit Lyonnais Securities Analysis (CLSA; 2001) supports this assessment of the current state of Indian corporate governance. The data are from a set of questions regarding corporate governance administered to 482 companies in twenty-four emerging markets in 2001. The companies are generally the ones of greater interest to foreign investors, typically characterized by some subset of the following characteristics: large size, greater equity float, and foreign listings. When we ranked countries by the mean corporate governance score constructed by CLSA, we found that India ranked in about the middle. Since most countries in these data have poor average corporate governance (with some exceptions like Hong Kong and Singapore), and

since the selected companies are generally the better governed ones, this confirms the characterization offered above.

The same CLSA data, however, also point out that the corporate governance ratings of the software firms are higher than those of other Indian firms. The mean ratings for software firms (of which there are eight in the CLSA data) and for nonsoftware firms (of which there are seventy-two) are, respectively, 64.3 and 54.7 (minimum of 0 and maximum of 100), with the difference statistically significant with a *p*-value of 0.02. The medians are, similarly, 62.9 and 53.8, with the difference statistically significant with a *p*-value of 0.2.

The data also confirm that software firms are, on average, more exposed to global competition than other Indian firms. To ratify this assertion, we supplemented CLSA data with a variety of indicators of global competition. Software firms are more likely to be traded on a U.S. stock exchange (*p*-value 0.02) and on the London Stock Exchange (*p*-value 0.08) and more likely to be listed on the New York Stock Exchange (*p*-value 0.01). Software firms garner a higher percentage of their revenues through exports (*p*-value 0.01), are more likely to employ foreign talent in senior managerial positions (*p*-value 0.01), and are somewhat more likely to employ a Big 5 accounting firm (*p*-value 0.12).[13]

Finally, having established that the Indian software industry outperforms domestic benchmarks (in terms of profitability, market capitalization, and corporate governance), outperforms U.S. benchmarks, and is improving over time, consider some evidence that, while least precise, is perhaps farthest reaching. The social transformation brought about by the rise of the software industry is difficult to exaggerate. Most compellingly, Indian talents have role models of entrepreneurship—from both de novo bootstrapped firms and from business group offshoots—to spur them forward (Khanna and Palepu 2004). Individuals, in both rural and urban settings, are much closer to having the information they need to be "empowered" (Das 2000). Indeed, rural India is being transformed by the roadside availability of computing power (in much the same way that a previous dissemination of franchised telephone kiosk services around the country revolutionized telecommunication service provision). It is thus difficult to escape the conclusion that the positive spillovers from the Indian software industry exceed, perhaps vastly, the direct benefits internalized by stakeholders of the industry.

5.6.5 A Tale of Two Software Firms

In this section, we provide a more detailed description of two very successful firms in the Indian software industry: TCS, affiliated with the Tata

13. However, there is no statistically significant difference between software and nonsoftware firms in the proportion of equity held by institutional investors.

group, and Infosys, a new entrepreneurial venture arising out of the opportunities provided by the new economic environment. Elsewhere, we have argued that there are two qualitatively different "solutions" to the institutional voids that hamper entrepreneurship in emerging markets. The first is for incumbent groups to leverage their internal access to capital and talent to start new ventures—this is the TCS story—and the second is for aspirants to tap into external institutions outside the country—this is the Infosys story (Khanna and Palepu 2004).

The stories of these two firms show how group-affiliated firms coexist successfully with independent entrepreneurial firms in this industry. It also demonstrates that the success of group-affiliated firms is attributable not to their ability to exploit government connections but to their ability to successfully exploit entrepreneurial opportunities in the economy. Finally, not only is it not the case that the group, the embodiment of concentrated ownership, deterred the entry of the unaffiliated firm, but it actually laid the groundwork for a vast array of subsequent entrants.

The founding of TCS in 1968 marks the birth of the first Indian domestic software firm at a time when IBM was riding herd in India.[14] Tata Consultancy Services was set up by India's oldest business group, the house of Tata, by pooling together management talent from existing Tata companies to create a new entity to act as an information technology bureau for various members of the Tata group. In two senses, it is the prototypical example of the filling of institutional voids (Khanna and Palepu 1997, 1999, 2000b,c), that is, of the creation by diversified business groups of internal solutions to compensate for the absence of external specialized intermediaries (institutional voids). The voids in question here refer to the absence of intermediaries facilitating the pooling of talent to launch such a company and the absence of an entity to provide information technology services to service the corporate demands of the time.

Armed with the reputation of the Tata group and its track record in India, TCS sought business overseas, turning successfully to secure an alliance with Burroughs Corporation in the United States, whereby Burroughs would secure programming contacts and TCS would execute them. Under newly appointed chief executive officer (CEO) F. C. Kohli, TCS built up a credible list of major Indian customers between 1969 and 1973.[15]

It is important to realize that India's distortionary foreign exchange regulations played a key role in prompting TCS to solicit business overseas. Foreign exchange was needed to pay for importing the hardware on which TCS performed its software programming services. It is also worth noting

14. The data, though not the interpretation, for the few paragraphs on the founding of TCS are from Kennedy (2001).

15. It is true that the MIT-trained Kohli's own contacts in the United States, as part of the IEEE association, no doubt played a facilitating role in securing contacts. But of course the Tatas had the reputation to attract someone of Kohli's stature in the first instance.

that such cross-border arrangements have been common in the history of the Tata group. For example, its ventures in the late 1990s included joint venture agreements with the likes of AT&T, NTT, Honeywell, Jardine Matheson, (the then) Daimler Benz, and numerous others. Elsewhere we have argued that the network of joint venture agreements represent credible commitments not to engage in short-term opportunistic behavior toward the marginal joint venture partner, and that the network itself is facilitated by the diverse (cross-industry) scope of the Tata group (Khanna and Palepu 1997).

Experience gained domestically and through Burroughs meant that TCS was well positioned when another distortionary Indian regulation—the requirement of divesting sufficient equity to local partners—forced IBM (and several other multinationals) out of India in 1977. A separate entity—Tata Burroughs (later Tata Infotech)—was created to focus on business based on the Burroughs platform, while TCS decided to focus on the rising IBM platform in its outside-India work. A U.S. office was opened in 1979 to solicit business, and, with successful projects for various banks, American Express, IBM, and others under its proverbial belt, TCS had established the industry, and its position, by the mid-1980s.

In contrast to TCS, Infosys Technologies, another of India's software success stories, is the prototypical example of building a business by leveraging external (i.e., non-India-specific) institutions to compensate for domestic (India-specific) institutional voids. Narayan Murthy, the individual most associated with Infosys today, mused that the biggest challenge facing Infosys was "running a first-world firm in a third world country" (De Long and Nanda 2002, p. 9). Infosys was founded in 1981 by seven entrepreneurs, all ex-employees of Patni Computer Systems (itself one of the entrants into the post-IBM-withdrawal vacuum). Its initial capital consisted of approximately $1,000 of personal savings and no Tata-like reputation to leverage. However, at least one of the founders, Murthy, had his professional outlook sensitized to the importance of personal incentives by his own stint working outside India (in Paris).

Infosys struggled, teetering on the precipice of bankruptcy in 1989, until a foreign exchange crisis forced India to "open up." Reasons cited for Infosys's early difficulties can reasonably be traced to pre-1991 institutional voids in product markets (lack of availability of quality hardware), capital markets (limited availability of financing for de novo entrepreneurs), and labor markets (visa restrictions preventing cross-border talent mobility). A lot of these constraints were removed when barriers to the flow of people, capital, and ideas were relaxed so that Infosys software engineers could be relocated relatively easily to their customer sites, Infosys management did not have to spend excessive time circumventing regulations in New Delhi, foreign know-how regarding the industry was accessible, and equity capital could be accessed locally through listings (which Infosys did in 1993).

While the post-1991 liberalization eliminated some institutional voids, more fundamental ones remained. A *Forbes* article commented that there was a "perception that a smart, honest, reputable company could never come out of a country where cows still run in the street" (Pfeiffer 1999, quoted in De Long and Nanda 2002, p. 13). A 1999 NASDAQ listing was designed to ameliorate informational problems that hampered Infosys from reaching blue-chip companies in the global market. Several executives at Infosys and its competitors, and several regulators at SEBI (India's SEC equivalent), commented to us, for example, that the NASDAQ listing was designed primarily to gain credibility with customers and to permit the issuance of dollar-denominated stock options to compete in global markets for talent.[16] For a company that, by this time, was not liquidity constrained, as we have demonstrated elsewhere (Khanna and Palepu 2004), raising capital was not the reason to list overseas. Securities and Exchange Board of India member Jayanth Verma's comment to us regarding the spate of software listings overseas that followed is instructive: "The industry that probably needs capital the least, went after the international capital markets most aggressively. . . . In fact many of these companies don't know what to do with the capital they raised. . . . The pressures that the capital markets can put on a company that doesn't need to raise capital are next to nothing."

A few final points are worth noting. First, TCS's moves arguably laid the foundation for the industry's development. Azim Premji, founder of Wipro, India's second largest software company and an NYSE-listed company, commented, "The legacy of the early pioneers—Tata Consultancy Services—was a growing number of foreign companies favorably impressed about what Indian companies could do in software" (Ramamurti 2001). Thus, TCS, launched by the Tata group, far from deterring entry, appears to have facilitated it.

5.7 Discussion: The (Socially Useful) Persistence of Concentrated Ownership

In this section, we argue that the persistence of concentrated ownership is, in fact, a robust feature of many, if not most, emerging markets. The story of the Indian software industry, and the (socially) useful role that business groups with concentrated ownership play in it, is not an artifact of serendipitous outcomes but has generalizable aspects to it. In contrast, the literature's current focus on the dark side of concentrated ownership,

16. Note, however, that the international listing was not feasible until Infosys had a stable track record. As Azim Premji, CEO of rival Wipro, commented, "It is also important to remember that Indian companies built their expertise serving domestic customers before venturing abroad" (Ramamurti 2001). Even TCS ventured overseas after it had a strong domestic track record.

to the virtually complete exclusion of the positive aspects, has the potential to understate the beneficial aspects of such ownership, especially in emerging markets.

Consider other instances in space and time that are consistent with this idea of the socially productive longevity of concentrated ownership. We have focused on Chile in earlier work on the sustainability of business groups (Khanna and Palepu 2000b) because Chile is the one country in modern economic history that has arguably undergone one of the most rapid movements toward a market economy, starting from the socialist society left behind by Salvador Allende in 1973 (following his overthrow by the right-wing general Augosto Pinochet). In particular, Chilean markets are widely celebrated as being the best in Latin America, especially since 1990. Thus, if one were to see business groups atrophy as external markets develop, this is where one ought to find the effect most glaringly. Our study confirmed that the value of business group affiliation fell during the ten years between 1987 and 1997. But business group affiliation, even in the relatively developed markets of the late 1990s, continued to be valuable. Our interpretation was that group capabilities, under attack in this instance since 1973 and especially since 1990, fall slowly.

We supplemented this by detailed fieldwork in nine of Chile's largest groups over the same time period (Khanna and Palepu 1999). It is important to note that these were not the ten best-performing groups. Here we found that these groups bucked the trend, so to speak, not only by improving their performance over this time period but also by increasing the trend toward greater concentration in ownership, greater family control, and greater diversification, all allegedly correlates of the deleterious effects of concentrated ownership. Similar field evidence was obtained and reported from India in the 1990–97 time period.

The parallels with business groups in history are uncanny and relatively unexplored (Jones and Khanna 2003). Here we draw largely on the work on multinational trading companies in the 1800s and 1900s by Geoffrey Jones (2000). Primarily around the mid-1800s, British trading houses in particular (and trading houses originating elsewhere in Europe to a lesser extent) were cross-border structural analogs of the sorts of contemporary business groups that one observes in Chile, India, and elsewhere (Khanna 2000). In these trading companies, which Jones describes as business groups, the merchant house was the "core" and was tied through a medley of contracts, informal and formal, to a series of separately publicly quoted (traded) affiliates around the world, which operated in very diverse industries.

Examples of such British trading companies included the Inchcape/Mackinnon group, a shipping enterprise spread over Asia and Australia, with a trading business in the Gulf, India, and Africa, and plantations in India. Another was Jardine Matheson, which originated as an opium

trader between China and India and, drawing extensively on its Scottish heritage to source talent, evolved into a multinational business group with operations in China and outposts in Japan, the United States, South Africa, and Peru in diverse services and manufacturing businesses, as well as an active venture capital business in mining worldwide.

Some funds were drawn from British (and other) expatriate savings in the colonies and from the London capital markets, and a lot of funds were sourced locally. That is, there was the structural issue of controlling and minority shareholders that we have already discussed as a hallmark of contemporary groups. Yet, as Jones points out, while the potential for minority shareholder exploitation existed in spades, there were very few such cases. Why? His answer is that reputation mattered, and these business groups sought to build trust by doing things like forgoing commissions (owed to the core firm by the affiliates as compensation for management services rendered) when times were bad. The groups referred to a "moral responsibility" toward their affiliates. Thus we have an instance where concentrated ownership appears to have exercised self-restraint, even amid a weak corporate control environment, a factor that was probably associated with its longevity.

Consider also the adaptability of this historical business group, another reason why the concentrated ownership has persisted. Continuing the examples above, the Inchcape group gradually divested from India in the late 1960s and 1970s as that country became less attractive, and also withdrew from the Middle East and Africa, ultimately reconfiguring itself as a group invested in Southeast Asia, Hong Kong, and Australia. Jardines and Swires recovered from rather drastic business setbacks, including the Communist revolution in China, reconfigured themselves as Hong Kong–based groups, and entered numerous new businesses. Such reconfigurations can be observed even in contemporary groups. The Tata group started, for example, with steel and airlines and insurance in the 1800s, had to undergo nationalization and confiscation of several of its major businesses (including airlines and insurance), built up and eventually divested major businesses in consumer products, and most recently successfully entered automobiles and software. Thus, TCS, discussed above, is a recent diversification of the Tata group. Similarly, the roughly $4 billion Ayala group in the Philippines started with distilleries, evolved into a real estate and financial services group as of the 1990s, and most recently emerged as a major and very successful player in mobile telephony (Khanna, Palepu, and Vargas 2004).

Groups, and the concentrated ownership that they represent, whether in history or in contemporary emerging markets, are robust forms of business organizations. They potentially last centuries, changing their footprint and functional form, and weathering severe shocks. Whereas egregious violations and crony capitalism by groups are often reported (e.g., Fisman's

2001 study of groups in Suharto's Indonesia), the constructive stories are actually far more numerous, even though lacking the drama of exploitation.

As a coda, it is worth commenting on the implicit counterfactual that underpins our assertion that groups are socially productive organizational forms. One should ask, what would happen if there were no groups? Would organized commerce happen in quite the way that it does in emerging markets, when the specialized intermediation needed to facilitate arm's-length transactions between buyers and sellers in all manner of markets are missing? We think not. Such a world would be closer to first-best, but is also patently unrealistic. Then, a critic of groups might say, groups are sensible responses to the absence of specialized intermediation at a point in time, but their very presence deters the emergence of intermediaries. Therefore groups are self-perpetuating. There is some truth to this (Khanna 2000), but it is a characterization that rings more true for extreme concentration of groups as in South Korea or South Africa, than for the "median" emerging market.

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Comment Ashoka Mody

In this paper, the authors offer a panoramic view of Indian business over the past century. They reach three conclusions. First, at any point in time, a small number of family-based business groups, spanning a number of lines of activity, have typically dominated the Indian (nonagricultural) private sector. Second, this dominance has not necessarily meant the persistence of particular groups: there has been significant turnover in the identity of the major groups. And, finally, more recently, professionally

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managed "specialist" firms have coexisted in socially beneficial competitive relationships with family-owned firms.

The main analytical theme underlying these important observations is the value of family-based business groups in emerging markets. The authors caution against the tendency to focus on the "dark side" of concentration of economic resources and power. Instead, they argue that "institutional voids" in emerging markets render family ownership of groups of firms an important mechanism for mobilizing necessary resources for growth.

In this comment, I focus my discussion on two themes. First, owing to the ubiquity of family-owned business groups in emerging markets, a deeper understanding requires scholarship to move to the differentiation of such groups across countries and over time. Group characteristics and country conditions determine the value of family-owned businesses in delivering economic growth and aiding the transformation of the economy. Second, applying this approach of differentiating both group and country features, I review the role of business communities in India and reach a more pessimistic conclusion on their transformational role during the past century.

Consider, first, the interaction between business groups and the state of a country's development. In a comparison of South Korea and Taiwan, I have argued that South Korea deliberately fostered the formation of business groups to acquire new capabilities and thus dynamically change its "factor" endowments to transition to a higher growth path (Mody 1990). The business groups were new—largely a post–World War II phenomenon—and were a calculated effort to break out of a low-growth trajectory. Even in the late 1980s, when this research was originally conducted, some of the Korean business groups were already among the world's largest firms (placing them in *Fortune* magazine's list of the fifty biggest international firms). Since then they have grown further to establish valuable international brand names and occupy prominent positions in several key industrial activities.

Thus, in the Korean context, business conglomerates performed the function of substituting for missing capital and information markets, as emphasized especially by Oliver Williamson in his many writings, and the internal resource-allocation mechanisms generated growth that might otherwise not have occurred. The result was that Korea, which lagged behind Taiwan by most development indicators, progressed rapidly to catch up and even move ahead of Taiwan in certain dimensions.

The comparison of Korea with Taiwan is interesting precisely because Taiwan has itself been such a dynamic economy over the same period. Taiwan was not without its own conglomerates but relied during the 1970s and 1980s primarily on entrepreneurship fostered in relatively small firms. These smaller firms delivered impressive growth, drawing on the econ-

omy's superior human capital and infrastructure. Over time, some of the Taiwanese firms have themselves grown to be large conglomerates, also with their own international brand names.

The Korea-Taiwan comparison offers many lessons and is also subject to important caveats. The structure of business enterprise can have a significant bearing on aggregate growth—micro structures can have macro implications. But there is no simple formula that relates business organization to macroeconomic performance. Thus, as Khanna and Palepu argue, concentrated ownership can be "socially useful" and the persistence of such concentration can be valuable, but both theory and practice suggest more nuanced messages of country and time variation in their performance. Even in the context of Korea, the economic crisis in 1997 and 1998 revealed substantial inefficiencies in the operation of the *chaebol* conglomerates, forcing changes in both private and regulatory approaches to their management.[1]

Thus, under the premise that business groups respond to the context of the country's economic conditions, the performance of Indian business can be viewed broadly over three time periods. The first of these periods commences some time in the late nineteenth century and runs through to India's independence in 1947. The Parsi business houses were pioneers in the textile industry. India's first cotton textile mill, the Bombay Spinning and Weaving Company, was established in 1851 (Gadgil 1944) by Cowasji Nanabhoy Daver, who, Desai (1968) notes, had been active in cotton export and also established three banks between 1845 and 1861. Thus, the concept—and practice—of business conglomerates with internal capital markets goes back a long way.

The question of interest, then, is how well these early business conglomerates performed and what their legacy was for the further evolution of Indian industry. In describing the contributions of the Parsis, Desai (1968) notes that Parsi entrepreneurship was based in Surat and Bombay. He concludes (p. 314) that "Wherever we look among pioneers, they are found to come from or be related to a small circle of shippers, shipbuilders, traders and financiers in Bombay; the landlords and manufacturers of Surat-Navsari do not figure among them." Desai attributes the success of the Bombay Parsis to "their close connections with the British" (p. 315), which allowed them to share in British-controlled foreign trade and to form links to British cotton textile manufacturing in India. Thus, early Indian efforts at factory-based manufacturing, while pioneering, were made in the space provided by British entrepreneurs.

Fast-forwarding, Gadgil (1944, p. 198) concludes that industrial pro-

1. At the same time, continued robust performance of the Korean economy has depended on a high-quality and industrially literate workforce combined with internationally sophisticated infrastructure.

gress in India up until the start of the First World War in 1914 must be judged to have been "very small," especially if the decline in traditional industries is taken into account. Taking stock of progress made in the early 1920s, Gadgil once again states: "Yet the main features of the situation are not substantially changed. Organized industries as yet play too small a part in the national economy, and even in the industrial population a very large proportion is engaged in the simpler seasonal, miscellaneous or repair industries" (p. 294). He then goes on to note: "Indian public opinion had always clamoured for active assistance to industries being given and at last Government appointed in 1916 an Industrial Commission, specifically to inquire as to how direction encouragement to the development of industries could be given by the Government" (p. 323).

Thus, a reading of the preindependence history of industrial development points to some significant achievements, including the establishment of the Tata Iron and Steel Company in 1907 and its initial output of steel in 1913, but the overall picture is one of limited progress, with the domestic business community dependent on its relationship with British business and increasingly calling for active government support. It is not surprising, therefore, that a remarkable document, popularly known as the "Bombay Plan," was written just before independence in 1944 and 1945 by a group of Indian industrialists, among them J. R. D. Tata and G. D. Birla, who went on to lead the two biggest Indian business groups in the first few decades after independence in 1947 (Thakurdas et al. 1944). The Bombay Plan called on government support for industrialization, including a direct role for the government in the production of capital goods, foreshadowing postindependence Indian planning, typically considered an outgrowth of socialist ideas drawn either from the Soviet Union or the so-called Fabian socialists.

Khanna and Palepu go on to recount the story of the second important period, from 1947 to the early 1990s. Scholars continue to debate the end point of this period, but its crucial feature is the collaboration of the big business houses with the government in sustaining an enervating environment. The government chose to control industrial growth in onerous ways, and big business readily acquiesced in this relationship, choosing to make money through its control over scarce licenses to operate. Those that played this game well prospered. It is the case, as Khanna and Palepu document, that new houses emerged during this period, but whether such emergence can be regarded as an entrepreneurial success in any true sense of the term is open to question.

The final period, that of economic liberalization, which continues to the present, is the most interesting. Here, as Khanna and Palepu highlight, a new generation of entrepreneurs emerged. They were not tied to traditional business groups and, rather than originating from shipbuilders, traders, and financiers, they were often the children of public-sector offi-

cials; they were trained in highly subsidized engineering colleges and were ready to exploit the lack of government regulation of a new "software" industry. The Tatas also saw early opportunities in software and developed a successful business, but the sprouting of entrepreneurs from middle-class families with salaried parents is a noteworthy development in the evolution of Indian entrepreneurship. A similar phenomenon has since occurred in the pharmaceutical industry.

This is a moment of high expectation for India, one that poses several questions for students of business. Will some of the successful businesses evolve into conglomerates in the style of Korean conglomerates and use internal capital markets to force the pace of growth? Or is that an antiquated model, given Indian firms' access to world capital markets, as demonstrated by the ability of several to list on international stock exchanges? Of course, the challenge to growth may come from internal infrastructure, human capital, and regulatory bottlenecks, which may imply surrendering the independence that the most innovative firms have enjoyed and which may generate a war of attrition of the type that has stymied Indian business in the past. Or the Indian lead in the knowledge of English and skilled engineers may be tested by China. Another stocktaking, another paper!

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