



IOM International Organization for Migration
OIM Organisation Internationale pour les Migrations
OIM Organización Internacional para las Migraciones



IOM's International Dialogue on Migration
Co-sponsored by WHO and CDC

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Exporting health workers to overseas markets, Binod KHADRIA

TABLE 1. Occupational profile of Indian immigrants in the United States, 1999-2001

	1999			2000			2001		
	No.	%	Share of all immigr.	No.	%	Share of all immigr.	No.	%	Share of all immigr.
Professional and technical	3 492	11.6	9.4	8 632	20.6	14.7	19 935	28.4	23.8
Executive, administr. and managerial	1 112	3.7	7.1	1 644	3.9	7.9	3 062	4.3	11.1
Clerical and administrative support	576	1.9	4.2	573	1.4	3.9	643	0.9	3.9
Sales	648	2.1	6.1	689	1.6	5.3	842	1.2	5.4
Service	559	1.9	3.2	798	1.9	2.6	1 041	1.4	2.7
Farming, forestry and fishing	1 328	4.4	11.7	1 080	2.6	9.5	1 161	1.7	12.8
Skilled workers	301	0.9	0.9	308	0.7	0.8	389	0.6	0.8
Total with occupation	8 016	26.5	5.7	13 724	32.7	7.2	27 073	38.5	11.3
Occupation not specified	22 221	73.5	4.4	28 322	67.3	4.3	43 217	61.5	5.2
Total immigrants	30 237	100	4.7	42 046	100	4.9	70 290	100	6.6

Source: Tables 3.20 and 3.25 in Khadria (1999a) for data until 1996, later calculations worked out by the author in Khadria (2004a).

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TABLE 2. Comparative overview of brain drain estimates of some institution-based surveys

Indicators	Indian Institute of Technology Bombay, Mumbai	Indian Institute of Technology Madras, Chennai	All India Institute of Medical Sciences, Delhi	Indian Institute of Technology Delhi, New Delhi
Year of study	1987	1989	1992	1997
Period covered	1973-77	1964-87	1956-80	1980-90
Population size	1262	5942	1224	2479
Sample size	501	429	402	460
In India	179	184	200	316
Out of India	322	245	202	144
Magnitude of brain drain	30.8% (+/-2%)	25.28%	56.2% (+/-1.3%)	23.1% (+/-1.5%)

Source: Various Government of India, Department of Science and Technology sponsored institution-based survey studies as cited in Khadria (1999a).

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RANK (1-77)	COUNTRY	INDIAN DOCTORAL RECIPIENTS (1991-99)		INDIAN DOCTORAL RECIPIENTS (2000-02)		INDIAN DOCTORAL RECIPIENTS (2003-05)	
		NO.	%	NO.	%	NO.	%
1	USA	10,000	100.0	10,000	100.0	10,000	100.0
2	GERMANY	1,000	10.0	1,000	10.0	1,000	10.0
3	FRANCE	1,000	10.0	1,000	10.0	1,000	10.0
4	UK	1,000	10.0	1,000	10.0	1,000	10.0
5	INDIA	1,000	10.0	1,000	10.0	1,000	10.0
6	NET	10,000	100.0	10,000	100.0	10,000	100.0
7	NET	10,000	100.0	10,000	100.0	10,000	100.0
8	NET	10,000	100.0	10,000	100.0	10,000	100.0
9	NET	10,000	100.0	10,000	100.0	10,000	100.0
10	NET	10,000	100.0	10,000	100.0	10,000	100.0
11	NET	10,000	100.0	10,000	100.0	10,000	100.0
12	NET	10,000	100.0	10,000	100.0	10,000	100.0
13	NET	10,000	100.0	10,000	100.0	10,000	100.0
14	NET	10,000	100.0	10,000	100.0	10,000	100.0
15	NET	10,000	100.0	10,000	100.0	10,000	100.0
16	NET	10,000	100.0	10,000	100.0	10,000	100.0
17	NET	10,000	100.0	10,000	100.0	10,000	100.0
18	NET	10,000	100.0	10,000	100.0	10,000	100.0
19	NET	10,000	100.0	10,000	100.0	10,000	100.0
20	NET	10,000	100.0	10,000	100.0	10,000	100.0
21	NET	10,000	100.0	10,000	100.0	10,000	100.0
22	NET	10,000	100.0	10,000	100.0	10,000	100.0
23	NET	10,000	100.0	10,000	100.0	10,000	100.0
24	NET	10,000	100.0	10,000	100.0	10,000	100.0
25	NET	10,000	100.0	10,000	100.0	10,000	100.0
26	NET	10,000	100.0	10,000	100.0	10,000	100.0
27	NET	10,000	100.0	10,000	100.0	10,000	100.0
28	NET	10,000	100.0	10,000	100.0	10,000	100.0
29	NET	10,000	100.0	10,000	100.0	10,000	100.0
30	NET	10,000	100.0	10,000	100.0	10,000	100.0
31	NET	10,000	100.0	10,000	100.0	10,000	100.0
32	NET	10,000	100.0	10,000	100.0	10,000	100.0
33	NET	10,000	100.0	10,000	100.0	10,000	100.0
34	NET	10,000	100.0	10,000	100.0	10,000	100.0
35	NET	10,000	100.0	10,000	100.0	10,000	100.0
36	NET	10,000	100.0	10,000	100.0	10,000	100.0
37	NET	10,000	100.0	10,000	100.0	10,000	100.0
38	NET	10,000	100.0	10,000	100.0	10,000	100.0
39	NET	10,000	100.0	10,000	100.0	10,000	100.0
40	NET	10,000	100.0	10,000	100.0	10,000	100.0
41	NET	10,000	100.0	10,000	100.0	10,000	100.0
42	NET	10,000	100.0	10,000	100.0	10,000	100.0
43	NET	10,000	100.0	10,000	100.0	10,000	100.0
44	NET	10,000	100.0	10,000	100.0	10,000	100.0
45	NET	10,000	100.0	10,000	100.0	10,000	100.0
46	NET	10,000	100.0	10,000	100.0	10,000	100.0
47	NET	10,000	100.0	10,000	100.0	10,000	100.0
48	NET	10,000	100.0	10,000	100.0	10,000	100.0
49	NET	10,000	100.0	10,000	100.0	10,000	100.0
50	NET	10,000	100.0	10,000	100.0	10,000	100.0
51	NET	10,000	100.0	10,000	100.0	10,000	100.0
52	NET	10,000	100.0	10,000	100.0	10,000	100.0
53	NET	10,000	100.0	10,000	100.0	10,000	100.0
54	NET	10,000	100.0	10,000	100.0	10,000	100.0
55	NET	10,000	100.0	10,000	100.0	10,000	100.0
56	NET	10,000	100.0	10,000	100.0	10,000	100.0
57	NET	10,000	100.0	10,000	100.0	10,000	100.0
58	NET	10,000	100.0	10,000	100.0	10,000	100.0
59	NET	10,000	100.0	10,000	100.0	10,000	100.0
60	NET	10,000	100.0	10,000	100.0	10,000	100.0
61	NET	10,000	100.0	10,000	100.0	10,000	100.0
62	NET	10,000	100.0	10,000	100.0	10,000	100.0
63	NET	10,000	100.0	10,000	100.0	10,000	100.0
64	NET	10,000	100.0	10,000	100.0	10,000	100.0
65	NET	10,000	100.0	10,000	100.0	10,000	100.0
66	NET	10,000	100.0	10,000	100.0	10,000	100.0
67	NET	10,000	100.0	10,000	100.0	10,000	100.0
68	NET	10,000	100.0	10,000	100.0	10,000	100.0
69	NET	10,000	100.0	10,000	100.0	10,000	100.0
70	NET	10,000	100.0	10,000	100.0	10,000	100.0
71	NET	10,000	100.0	10,000	100.0	10,000	100.0
72	NET	10,000	100.0	10,000	100.0	10,000	100.0
73	NET	10,000	100.0	10,000	100.0	10,000	100.0
74	NET	10,000	100.0	10,000	100.0	10,000	100.0
75	NET	10,000	100.0	10,000	100.0	10,000	100.0
76	NET	10,000	100.0	10,000	100.0	10,000	100.0
77	NET	10,000	100.0	10,000	100.0	10,000	100.0

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TABLE 3. Indian doctoral recipients from US universities, with plans to stay in the United States, 1991-99

	1991	1992	1993	1994	1995	1996	1997	1998	1999
All fields									
No. of PhDs	924	1072	1139	1289	1425	1500	1427	1285	1077
% plan to stay	74.6	82.1	80.8	81.4	82.7	84.3	80.7	85.3	88.9
% firm plan to stay	56.1	56.8	50.7	51.4	52.4	58.8	59.4	65.5	64.8
All sciences & engineering									
No. of PhDs	752	860	932	1065	1206	1276	1211	1082	888
% plan to stay	73.7	81.7	81.4	81.8	83.2	85.0	81.5	86.8	89.6
% firm plan to stay	54.3	56.4	49.6	50.3	52.4	59.0	59.5	67.8	64.6
Natural sciences									
No. of PhDs	304	365	382	474	499	520	515	471	406
% plan to stay	74.0	84.1	82.5	82.1	83.6	87.3	81.0	87.5	90.6
% firm plan to stay	57.2	60.3	52.4	53.0	56.3	60.8	57.3	67.3	63.8
Engineering									
No. of PhDs	357	405	448	480	572	625	587	518	368
% plan to stay	76.2	82.7	82.1	83.8	85.5	86.2	83.8	88.2	90.8
% firm plan to stay	53.5	54.8	46.7	49.0	51.0	60.2	63.5	71.2	67.1
Social sciences									
No. of PhDs	91	90	102	111	135	131	109	93	114
% plan to stay	62.6	67.8	74.5	72.1	71.9	69.5	71.6	75.3	82.5
% firm plan to stay	47.3	47.8	52.0	45.0	43.7	46.6	47.7	51.6	59.6

Notes: Foreign doctoral recipients are on temporary visas. Natural sciences include physical, earth, atmospheric, oceanographic, and biological sciences. Social sciences include psychology, sociology, and other social sciences. Those who 'plan to stay' think that they will locate in the United States. Those with 'firm plans to stay' have a post-doctoral research appointment, or academic, industrial, or other firm offers of employment in the United States.

Source: National Science Foundation, United States, Science and Engineering Indicators 2002.

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Temporary / circulatory / return migration replaces individual immigrants but size of immigrant community grows.

Individual immigrant families become nomadic due to

“forced” circulatory migration. (Painful)

Receiving countries gain on two counts:

I. Safety-valve

II. Low-cost **labour replacement** for advantages of :

Age

wAge

vintAge

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