

Table 5.2 Sales per FTE Employee

Year	Ratios of Sales to FTEs (in thousands of dollars):	
	Direct Sales	Indirect Sales ^a
1984	67	119
1985	84	100
1986	67	109
1987	73	223
1988	72	266
1989	82	117
1990	72	114
1991	63	173
1992	82	165

^a Sales through a licensee or new owner of the ERIP technology.

The ratio of sales to jobs is low for inventions sold directly by an inventor's business, with mean values ranging from \$63,000 to \$84,000 for the years 1984 through 1992. This is somewhat lower than the national average for small businesses with some R&D—the U.S. General Accounting Office (1984) estimated the ratio to be \$107,000 (in 1982 dollars).

The dollar volume of sales per employee working on an ERIP project under a licensee is much higher, ranging from \$100,000 to \$266,000 over the same nine-year period. The ratios of sales to full-time equivalent employees in 1991 and 1992 are \$173,000 and \$165,000, respectively.

The FTEs supported by technologies for which sales have not occurred, have varied widely over the past seven years. This is partly an artifact of the different sample sizes used during the five different evaluation surveys conducted in 1984, 1987, 1989, 1991, and 1993. The 1984 sample (Brown, et al., 1987) was the largest of the four samples (N=204) and thus included a high proportion of non-commercialized inventions. It therefore documented a high number of jobs for inventions without sales. The 1985 and 1986 values (48 and 59 FTEs) are particularly low because the 1987 sample of randomly-drawn inventions was quite small (Brown and Snell, 1988), and it is the random sample which contains a disproportionate share of technologies that have not yet entered the market.

On the basis of these results, Fig. 5.1 portrays the estimated numbers of FTEs supported by ERIP technologies — 582 FTEs in 1984, 470 in 1985, 788 in 1986, 671 in 1987, 716 in 1988, 768 in 1989, 758 in 1990, 645 in 1991, and 668 in 1992. Thus, the total number of jobs associated with ERIP technologies since 1986 has remained steady, ranging from 645 to 788 FTEs.