

### 2.3 ANALYSIS OF NONRESPONSE BIAS

The analysis of nonresponse bias was designed to answer the following question: "Can we generalize from our sample of 105 "promising" inventors and 131 "other" inventors to the total population of 557 inventors?" The response rate for the group of "promising" inventors was so high—at 79%—that the impact of any nonresponse bias could have only minimal impact on the evaluation's findings. As a result, the existence of nonresponse bias in surveying these inventors was not assessed. The response rate for "other" inventors, however, was sufficiently low—at 35%—that nonresponse bias could significantly influence the evaluation's findings. As a result, the nature and extent of any nonresponse bias in this sample was assessed.

Our approach to examining nonresponse bias involves comparing various indicators of commercial progress for the sample of 131 "other" inventors with the sample of 11 inventors from the "targeted followup." The results are presented in Tables 2.2 and 2.3. Due to the small sample sizes, it is not possible to apply statistical tests to determine the significance of any differences between the two groups.

**Table 2.2 Analysis of Response Bias: Sales and Licensing**

Activity Category:	Targeted Followup (N=11)		Other Inventors (N=131)	
	Number of Respondents	Percent of Respondents	Number of Respondents	Percent of Respondents
Technologies with sales	1	9%	22	17%
Licensed technologies	1	9%	10	8%

The two samples of inventors are not notably different in terms of the stage of development of their technologies or the incidence of sales and licensing. One inventor (i.e., 9%) in the targeted followup sample of 11 inventors experienced modest sales in the early 1980's as the result of a licensing agreement.<sup>4</sup> This is similar to the 17% rate of sales and 8% rate of licensing among the sample of 131 other inventors. The major difference between the two samples is in activity status: none of the targeted followup sample of inventors is actively pursuing the development of their ERIP technologies, while 63% of the other technologies are being actively developed. This finding suggests that we can generalize from our sample of other inventors only on indicators which measure progress to date and not on measures of current activity or likely future progress.

<sup>4</sup> This inventor was not among the "promising" sample because he had not participated in any earlier evaluations nor had he been in touch with DOE's invention coordinators to share information about his sales with them.