

INSTITUTE FOR PUBLIC POLICY AND BUSINESS RESEARCH  
THE UNIVERSITY OF KANSAS

**Evaluation of the Kansas Department of Commerce  
Kansas Industrial Training (KIT)  
and  
Kansas Industrial Retraining (KIR)  
Programs**

*prepared for*

KANSAS INC.

*by*

Ronald A. Ash, Ph.D.  
and  
Charles Stevens, MBA

Anthony L. Redwood  
Executive Director

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## INTRODUCTION

The State of Kansas Department of Commerce (KDOC) administers two customized training programs. The Kansas Industrial Training (KIT) program is available to companies wanting to locate a new facility in Kansas or for existing companies wanting to expand their current Kansas work forces. The Kansas Industrial Retraining (KIR) program is designed to assist restructuring Kansas companies whose employees may lose their jobs because of obsolete job skills and knowledge. Both programs are available to manufacturing, distribution, and regional or national service-related operations training 10 or more employees. To date, the KIT/KIR programs have provided funds for customized training to a variety of businesses and industries. These include aircraft manufacturing, telemarketing, financial services, and meat processing. The funds have been used to train people to produce such things as elevators, aluminum wheels, wood cabinets, batteries, industrial belts, pet food, auto decals and computer software. Each company receiving KIT/KIR funds designs its own particular training program using its own supervisory staff, a vocational-technical school, a community college, vendors, consultants, or a mix of these to meet the company's specific training needs (Jack, September 1990).

The KIT program appears to have a dual purpose. On one hand, it is used to provide training funds to firms as part of an incentive package to encourage firms to locate or expand their businesses in Kansas. On the other hand, the training provided to Kansas workers should increase their human capital, making them more employable. The KIR program is designed to provide cost sharing in the retraining of workers for other jobs within an organization when restructuring makes current jobs obsolete. This training, too, should help increase the human capital of those Kansas workers involved.

## RESEARCH QUESTIONS

1. What role do KIT funds play in affecting firm decisions to locate a business in Kansas, and/or expand an existing Kansas business?
2. To what extent is the human capital (i.e., knowledge, skills, and abilities) of Kansas workers trained through KIT funded programs enhanced?
3. What role do KIR funds play in affecting firm decisions to retain and retrain current workers when firms undergo significant restructuring?
4. To what extent is the human capital (i.e., knowledge, skills, and abilities) of Kansas workers trained through KIR funded programs enhanced?

## RESEARCH METHODOLOGY

KDOC currently conducts an annual evaluation of the KIT/KIR programs. In the summer of 1990, a two-page survey questionnaire was mailed to 41 recipients of KIT funds during FY 1989. Thirty-nine of those 41 companies were still in business at the time, and 16 of the 39 completed and returned the questionnaire. Steven Jack, the KIT/KIR program manager, furnished a summary of the survey results to the IPPBR researchers, and this survey served as one starting point for the current evaluation research effort. In addition, KDOC planned to conduct a similar mail survey of the businesses receiving KIT/KIR FY 1990 funds during the summer of 1991.

The brief KDOC mail survey was viewed as a useful starting point from which to begin the current evaluation effort. However, substantial additional effort was undertaken to ensure a more complete evaluation, and to answer clearly the primary research questions posed above. While mail surveys can be sent to all firms receiving KIT/KIR funds in a given year, note that the response rate obtained by KDOC was less than 50 percent, a typical occurrence with mail surveys. Furthermore, we felt it highly desirable to avoid the potential confusion which may have resulted if firms received two survey questionnaires on their experience with the KIT/KIR program—one from IPPBR researchers and the normal KDOC evaluation instrument. Note, too, the rather sensitive nature of the research questions posed above. For all of these reasons, the IPPBR researchers decided to use a series of mini case studies on a small stratified representative sample of firms receiving KIT/KIR program funds during fiscal years 1989, 1990, and 1991, as the primary research methodology.

Specifically, the study sample was drawn from 143 firms which received KIR (19) and KIT (124) funds during the last three fiscal years. KIT program participants forming new businesses in Kansas were considered separately from KIT program participants expanding existing businesses. Thus, the desired sample stratification would have resulted in drawing an equal number of KIR, KIT-New and KIT-Expanding program participants from each of the three fiscal years 1989, 1990, and 1991, from the universe of 143 firms. However, only three firms participated in the KIR program during each of FY 1989 and FY 1990. We attempted to include all six of these firms in the sample, plus five (of 14) additional FY 1991 KIR program participants. For each fiscal year, we attempted to include five KIT-New and five KIT-Expanding program participants in the sample. Thus, the target sample included a total of 41 firms (29% of the universe of 143).

Data were actually obtained from 37 firms—14 businesses receiving KIT-New grants, 16 businesses receiving KIT-Expanding grants, and 7 businesses receiving KIR grants. The primary difficulty was in obtaining the desired representation of businesses receiving KIR grants. We were unable to obtain participation from any of the three recipients of FY 1989 KIR grants. We were unable to contact two of the firms, and the person having primary knowledge of the KIR grant was no longer employed at the third firm. We did obtain participation of two of the three firms receiving FY 1990 KIR grants, and the targeted five participants receiving FY 1991 KIR grants. There are 14 rather than 15 KIT-New participants due to some difficulties with respondents. The contact person at a Junction City business failed to keep his interview appointment (in Junction City) with the IPPBR researcher, and was subsequently "unavailable".

The knowledgeable contact person at another business has severe diabetes, and is only available for work about two hours per day—sometimes. He, too, missed his scheduled interview appointment with the IPPBR researcher, and was extremely difficult to contact subsequently. However, one of the two pilot study interviews was conducted in an organization receiving KIT-New funding, and this interview was substituted, yielding the total of 14. There is an extra (16 rather than 15) KIT-Expanding company in the sample because we included a pilot interview in this set, also. Complete information was obtained in both pilot study interviews. Due to the substantial similarity of responses obtained across respondents, the researchers are confident that the results obtained from the sample are representative of the universe of program participants.

For each firm included in the study, data were collected through two different approaches. One approach involved a thorough examination of each firm's KIT/KIR program file maintained at the Kansas Department of Commerce. According to the program manager, each participating firm must file a formal training plan, identify the trainers and all trainees, and supply receipts for all supplies, materials, and other items for which the firm is reimbursed. The quality of this documentation was evaluated. The second and primary data collection approach involved a site visit from the IPPBR researchers to each firm, during which a structured interview with discretionary probing questions was conducted. In general, the areas covered through the structured interview included the role and importance of KIT funds in locating or expanding the business in Kansas, the importance of KIR funds in restructuring aspects of the business and retaining current employees, the number of employees trained/retrained and retained, the extent to which the company would have trained/retrained and retained workers without KIT/KIR funds, the specific nature of the training (i.e., the knowledge, skills, and abilities acquired by trainees), utility of the training to the firm, other savings or benefits to the firm of participation in the KIT/KIR programs, retention of trained employees, how the firm has or intends to replace employees trained through KIT/KIR program who leave the firm, wage rates for KIT/KIR trainees, firm size, extent to which the firm would recommend participation in KIT/KIR programs to others, and comments on the program in general.

## RESULTS—KIT/KIR PROGRAM FILE ANALYSIS

In an interview with the IPPBR researchers, the KIT/KIR Program Manager stated that each firm involved with the program must (1) file a formal training plan, identify the (2) trainers and all (3) trainees, and supply (4) receipts for all supplies, materials and other items for which the firm is reimbursed. Thus, these four categories were the main focus of the file analysis. Files for the 39 firms (15 KIT-N; 17 KIT-E; and & 7 KIR) originally selected for inclusion in the study were examined by the researchers.

**Training Plan.** The results of the file examination for the inclusion of a training plan are shown in Table 1. As one can see, all 39 files contained a training plan filed by the participating organizations. Of these training plans, the researchers felt that especially detailed plans had been filed by 24 percent of the 17 KIT-E organizations, 27 percent of the 15 KIT-N organizations, and 29 percent of the 7 KIR organizations. Thus, 100 percent of the total sample had filed training plans, and 26 percent of the total sample were judged to have submitted particularly detailed plans.

**Table 1**  
**Department of Commerce File Analysis—Training Plan**

<u>Program</u>	<u>Training Plan Present</u>	<u>"Detailed" Training Plan Present</u>	<u>No Training Plan</u>
KIT-E	76%	24%	0
KIT-N	73%	27%	0
KIR	71%	29%	0
Total Sample	74%	26%	0

**Trainers.** The results of the file examination for the inclusion of a listing of trainers by the 39 firms in the sample are shown in Table 2. Seventy-six percent of the KIT-E files contained a complete listing of trainers, 60 percent of the KIT-N files contained a complete listing of trainers, and 57 percent of the KIR files contained a complete list. Partial lists of trainers were present in 18 percent of the KIT-E sample, 27 percent of the KIT-N sample, and 14 percent of the KIR sample. Trainers were not listed in 6 percent of the KIT-E sample files, 13 percent of the KIT-N sample, and 29 percent of the KIR sample. Overall, complete lists of trainers were found in 67 percent of the total sample, partial lists of trainers were found in 20 percent of the total sample, and no lists of trainers were found in 13 percent of the total sample.

**Trainees.** The results of the file examination for the inclusion of a listing of trainees by the 39 firms in the sample are shown in Table 3. Sixty-five percent of the KIT-E files contained a complete listing of trainees, as did 67 percent of the KIT-N files and 72 percent of the KIR

files. Partial lists of trainees were present in 6 percent of the KIT-E sample files, 13 percent of the KIT-N sample files, and 14 percent of the KIR sample files. Trainees were not listed in 29 percent of the KIT-E sample files, 20 percent of the KIT-N sample files, and 14 percent of the KIR sample files. For the total sample, complete list for trainees were found in 67 percent of the cases, partial lists were found in 10 percent of the cases, and no lists of trainees were found in 23 percent of the cases.

**Table 2**  
Department of Commerce File Analysis—Trainers

<u>Complete List Program</u>	<u>Partial List of Trainers</u>	<u>Trainers of Trainers</u>	<u>Not Listed</u>
KIT-E	76%	18%	6%
KIT-N	60%	27%	13%
KIR	57%	14%	29%
<b>Total Sample</b>	<b>67%</b>	<b>20%</b>	<b>13%</b>

**Table 3**  
Department of Commerce File Analysis—Trainees

<u>Program</u>	<u>Complete List of Trainees</u>	<u>Partial List of Trainees</u>	<u>Trainees Not Listed</u>
KIT-E	65%	6%	29%
KIT-N	67%	13%	20%
KIR	72%	14%	14%
<b>Total Sample</b>	<b>67%</b>	<b>10%</b>	<b>23%</b>

**Table 4**  
Department of Commerce File Analysis—Receipts/Invoices

<u>Program</u>	<u>Receipts/Invoices in File</u>	<u>Receipts/Invoices Not in File</u>
KIT-E	100%	0
KIT-N	100%	0
KIR	100%	0
<b>Total Sample</b>	<b>100%</b>	<b>0</b>

**Receipts/Invoices.** The results of the file examination for the inclusion of receipts and invoices are shown in Table 4. As seen in the table, all firms in the sample (100 percent) had provided receipts and invoices as required by the KIT/KIR Program Manager.

**Computer Files and Other Information.** With the help of an assistant, the KIT/KIR Program Manager was able to begin keeping computerized records for the program in FY 1990. These records provide identifying information and up-to-date accounting information on each KIT/KIR contract. In addition, all files in the sample contained correspondence and notes relevant to the particular contract. Also, newspaper clippings relevant to companies in the program were found in 10 (26%) of the sample files.

## RESULTS—SITE VISIT SURVEYS OF PROGRAM PARTICIPANTS

### KIT-New

On-site structured interviews were conducted with knowledgeable individuals at 14 companies which participated in the KIT-New Business program in fiscal years 1989, 1990, and 1991. Results are described in the following sections.

**Discovery and the Application Process.** First, participants were asked how they found out about the KIT program. A complete accounting of the responses is presented in Table 5. The majority of participants reported learning of the program through local (city or county) government (43%) or the Department of Commerce (DOC) (29%). Table 6 shows that the majority

Table 5

**Item 1. How did you find out about the KIT program?**

<u>Frequency*</u>	<u>Percent*</u>	
6	43%	Local government (city or county)
4	29%	Department of Commerce (DOC)
2	14%	Local chamber of commerce
2	14%	Community college
2	14%	DOC promotional materials
2	14%	From another business person
1	7%	Department of Education
1	7%	"Don't know"
1	7%	State university

\*Multiple responses were received and recorded. Therefore, these figures do *not* sum to 14 or 100%.



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Table 6

*Item 2. Describe your impression of the process of applying for KIT assistance.*

<u>Frequency</u>	<u>Percent</u>	
7	50%	Easy
4	29%	Very easy
2	14%	Somewhat difficult
1	7%	No response

*Item 2A. Would you apply again?*

<u>Frequency</u>	<u>Percent</u>	
14	100%	Yes

*Item 2B. Respondents indicating that they received help with filling out the KIT grant application.*

<u>Frequency</u>	<u>Percent</u>	
3	21%	Indicated receiving help

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of participants indicated that the process of applying for KIT assistance was "very easy" (29%) or "easy" (50%), and 100 percent indicated that they would apply again. Three (21%) of the participants indicated that they had received help with filling out the KIT grant application. Table 7 shows that Kansas industrial officials who set up the KIT contracts were regarded highly by the participants, with 43 percent of the respondents indicating that the assistance provided was "excellent" or "superior," and another 43 percent calling it "very good." For the most part, these ratings applied to either state officials only (43%) or to both state and local officials (43%).

*Adequacy and Importance of the KIT-New Funds.* Table 8 shows that the majority of participants found the KIT-New funds adequate to meet their training needs (71%), while an additional 14 percent indicated that the funds were "somewhat" adequate. Another 14 percent stated that the funds were not adequate to meet their training needs. Table 9 shows the responses to the question, "How important a role did the availability of KIT funds play in your decision to locate in Kansas?" A majority (50%) of firms indicated that the availability of KIT funds played an important or very important role in the location decision, and another 7 percent indicated that the funds were "somewhat" important. Twenty-one percent of the firms indicated that the KIT funds did not play an important role in their location decision, and 21 percent indicated

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Table 7

*Item 3.* How would you rate the assistance provided to you by the Kansas Industrial officials who set up your contract?

<u>Frequency</u>	<u>Percent</u>	
6	43%	Excellent/superior/outstanding/great
6	43%	Very good
1	7%	Good
1	7%	No response

*Item 3A.* This rating applies to:

<u>Frequency</u>	<u>Percent</u>	
6	43%	State officials only
6	43%	Both
1	7%	Local officials only
1	7%	No response

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Table 8

*Item 4.* Were the funds provided by KIT adequate to meet your training needs?

<u>Frequency</u>	<u>Percent</u>	
10	71%	Yes
2	14%	Somewhat
2	14%	No

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that they had already made the location decision prior to learning about KIT. Table 10 shows that 64 percent of the respondents indicated that they would have located their businesses in Kansas if KIT funds had not been available. Fourteen percent were unsure, and 21 percent indicated that they would not have located in Kansas if the KIT funds had not been available. Of those 11 respondents indicating that they would or may have located in Kansas even if KIT funds had not been available, 36 percent indicated that their workers would not have received equivalent training without the KIT funds, while 46 percent indicated that their workers would have received less extensive training. Only 18 percent indicated that their workers would have received equivalent training without the KIT funds. Table 11 indicates that 64 percent of the

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Table 9

*Item 5. How important a role did the availability of KIT funds play in your decision to locate in Kansas?*

<u>Frequency</u>	<u>Percent</u>	
4	29%	Very important
3	21%	Not important
3	21%	Made decision prior to knowing about KIT
2	14%	Important part of overall incentive package
1	7%	Important
1	7%	Somewhat important

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Table 10

*Item 6. Would you have located in Kansas if KIT funds had not been available?*

<u>Frequency</u>	<u>Percent</u>	
9	64%	Yes
3	21%	No
2	14%	Maybe/Maybe not

*Item 7 (If "Yes" or "Maybe" to Item 6). Would your workers have received equivalent training if KIT funds had not been available?*

<u>Frequency</u>	<u>Percent</u>	
5	46%	Somewhat (It would have taken significantly longer to accomplish the training, or the training would not have been as extensive)
4	36%	No
2	18%	Yes
(3)	(21%)	Responded "No" to Item 6— <i>Not</i> included in % calculations for this item.

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Table 11

**Item 8. Did you consider locating your business in any other states?**

<u>Frequency</u>	<u>Percent</u>	
9	64%	Yes
5	36%	No

**Item 8A. If "Yes," which ones?**

States mentioned include Arkansas, Illinois, Iowa, Missouri, Montana, Nebraska, Oklahoma, South Carolina, Tennessee, Texas, as well as the country of Mexico.

**Item 8B. If "Yes," what did they offer in the way of training funds?**

These answers varied extensively from "No training funds" through "They all offered something" and ". . . training program isn't nearly as good as Kansas' program" to "Similar to Kansas." Other answers mentioned that some states were too slow to respond to inquiries to be considered, and that Kansas' "right-to-work" status was important in the decision to locate here.

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firms considered locating their business in states (or countries) other than Kansas. Other locations mentioned as competitors included Arkansas, Illinois, Iowa, Missouri, Montana, Nebraska, Oklahoma, South Carolina, Tennessee, Texas, and the country of Mexico (specifically, Monterey). The respondents indicated that some locations offered training funds, but that others did not. Speed of government agency response to questions regarding economic incentives like training funds appeared to be important in some of the location decisions, as did the quality of the worker training incentive available. Kansas' status as a right-to-work state appeared to play an important role in the location decision of some respondents, also.

**Organization Contributions and Benefits to Kansans.** Table 12 shows that 100 percent of the organizations participating in the KIT-New Business program contributed monetary resources to their training efforts. In addition, the organizations contributed such things as materials and supplies (50%), equipment (36%), instructors (29%), facilities (14%), transportation (14%), and other items detailed in Table 12. Table 13 presents data on the number of people hired and trained by these new businesses. An average of 98.7 Kansas residents were hired by these firms. The number hired ranged from 15 to 486, with a median number of 31. These firms transferred an average of 12.5 residents from other states. The transfer figures ranged from 0 to 114, with a median of 3. On average, 83 workers per firm were trained using KIT funds. The number trained ranges from 6 to 540, with a median of 29 per firm. The disparity between the two measures of central tendency—the average (mean) and median—is indicative of the variety among organizations receiving KIT funds in terms of organization size. Both large and small firms have received support through the KIT-New Business program.

**Table 12**

**Item 9. Did your organization contribute any resources to the training effort?**

<u>Frequency</u>	<u>Percent</u>	
14	100%	Yes

**Item 9A. Types of resources contributed (specifically mentioned by respondents).**

<u>Frequency*</u>	<u>Percent*</u>	
14	100%	Money
7	50%	Materials and supplies
5	36%	Equipment
4	29%	Instructors
3	21%	Trainee salaries
2	14%	Training room or other training space in facility
2	14%	Transportation
1	7%	Development of training program
1	7%	Training of trainers
1	7%	Management training

\*Multiple responses were received and recorded. Therefore, these figures do *not* sum to 14 or 100%.

**Table 13**

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<b>Item 10.</b> Number of Kansas residents hired as workers for your organization?	98.7	31.0	130.1	15	486
<b>Item 11.</b> How many residents of other states were hired (or transferred into Kansas)?	12.5	3.0	30.6	0	114
<b>Item 12.</b> How many people were trained using KIT funds?	83.0	29.0	138.0	6	540

Table 14

*Item 13. Have you laid off any workers since the training took place?*

<u>Frequency</u>	<u>Percent</u>	
6	43%	No
4	29%	Yes
4	29%	Yes, but called back

*Item 13A (If "Yes" to Item 13). Were any of these workers the ones who received the KIT funded training?*

<u>Frequency*</u>	<u>Percent*</u>	
8	100%	Yes

*Item 14 (If "Yes" to Item 13). Why was it necessary to lay off these employees?*

<u>Frequency*</u>	<u>Percent*</u>	
3	38%	Seasonal business
2	25%	Lack of work
2	25%	Recession
2	25%	Business fluctuations and Slowdowns
1	13%	Equipment breakdown

\*Percentages calculated on the basis of 8 firms indicating that they have laid off workers. In Item 14 multiple responses were accepted and account for the frequency sum exceeding 8 and the percent sum exceeding 100%.

***Loss of Trained Workers by Participating Firms.*** Table 14 indicates that 58% of the participants in the KIT-New Business program had to lay off workers. However, 29 percent indicated that they called the workers back. KIT-trained workers were included among those laid off in all of the firms which had to lay off workers. Reasons for laying off workers include seasonal business (38%), lack of work (25%), the recession (25%), business fluctuations and slowdowns (25%), and equipment breakdown (13%). Table 15 indicates that in 86 percent of the participating firms, workers have left for reasons other than lay off. Fifty percent of the firms report that replacement workers have received equivalent training, and 25 percent report that replacement workers have received "almost equivalent" training. Eight percent of the firms hired experienced workers as replacements, and 17 percent report that the replacement workers have not received equivalent training. When equivalent or almost equivalent training was provided to replacement workers, this training was company financed in 89 percent of the cases.

Table 15

Item 15. Have any KIT-trained workers left your organization for other reasons?

<u>Frequency</u>	<u>Percent</u>	
12	86%	Yes
2	14%	No

Item 16 (If "Yes" to Item 15). Have replacement workers received equivalent training?

<u>Frequency</u>	<u>Percent*</u>	
6	50%	Yes
3	25%	Almost equivalent
2	17%	No
1	8%	Hired experienced workers as replacements

Item 16A (If "Yes" to Item 16). How was this training financed?

<u>Frequency</u>	<u>Percent**</u>	
8	89%	Company
1	11%	KIT

\*Based on N=12. \*\*Based on N=9.

*Nature of the Training.* Table 16 shows that 100 percent of the participating firms indicate that their respective companies performed the training. Others performing the KIT-funded training include state universities (21%), consultants (21%), and community colleges (7%). Table 17 shows that six firms indicate that they received assistance from an area education agency in administering their KIT-funded training program. Two-thirds of these firms indicated that the assistance was "excellent" or "very good." One firm (17%) described the assistance and agency as "very cooperative," while another firm (17%) indicated that the agency "served its purpose," but that the firm "could have done without it." Table 18 addresses the issue of whether the training provided with KIT funds was company-specific, industry-specific, or general. As shown in the table, the bulk of the training is considered to be industry-specific (64%) or general (43%). In only 14 percent of the firms was the training primarily company-specific.

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Table 16

Item 17. Who did the training of your employees?

<u>Frequency*</u>	<u>Percent*</u>	
14	100%	Company
3	21%	Consultants
3	21%	State university
1	7%	Community college

\*Multiple responses were received and recorded, accounting for the frequency sum exceeding 14 and the percent sum exceeding 100%.

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Table 17

Item 18 (If assistance was received from an education agency). How would you rate the assistance provided to you by the education agency that helped administer your program?

<u>Frequency</u>	<u>Percent*</u>	
2	33%	Excellent
2	33%	Very good
1	17%	Very cooperative
1	17%	Served purpose but could have done without it

\*Based on N=6 firms indicating that they received assistance from an education agency in administering their KIT program.

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Table 18

Item 19. Were the skills taught in your KIT-funded training program company-specific, industry-specific, or general?

<u>Frequency*</u>	<u>Percent*</u>	
9	64%	Industry-specific
6	43%	General
2	14%	Company-specific

\*Multiple responses were received and recorded, accounting for the frequency sum exceeding 14 and the percent sum exceeding 100%.

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The nature of the training provided to new workers was determined by each firm, and varied dramatically from firm to firm. One set of employees learned machine sewing skills including machine operation and knowledge of thread, fabrics, style and color. Other manufacturing training included various machine operation knowledge and skills, safety training, and knowledge quality standards. Other training was largely on-the-job and involved assembly, painting, testing, and packing the product. One set of employees learned how to run presses and printing equipment. Another set was taught machine repair. Several firms trained employees in statistical process control (SPC) and total quality management (TQM) techniques. Some of the training was sales training, covering product knowledge, selling techniques, communication skills, listening skills, and telephone etiquette and technique. In addition, there was on-the-job sales training involving monitoring and coaching. There was training in general supervision and leadership, fire-fighting, first-aid including CPR, and general equipment maintenance. At least two firms sent supervisory employees to home offices and factories out of the country to learn both specific manufacturing techniques and company culture. One firm engaging solely in custom manufacturing cross-trained their engineers and plant workers in their office procedures.

Table 19

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<i>Item 20.</i> Average wage of KIT- trained workers at time of hire (Wage 1)*	5.52	5.00	1.46	4.25	9.03
Average wage of KIT- trained workers at time of hire (Wage 2)**	14.42	14.42	NA	14.42	14.42
<i>Item 21.</i> Average wage of these KIT- trained workers today (Wage 1)	6.86	6.50	1.76	4.45	9.65
Average wage of these KIT- trained workers today (Wage 2)**	16.82	16.82	NA	16.82	16.82

\*Wages reported in dollars per hour.

\*\*One firm reported two average wages because two distinctly different groups of workers received training. (One was clerical, the other was professional/technical.)

**Changes in Wages.** Table 19 presents wage information on KIT-trained workers at the time of hire and as of August and September, 1991. On average, most KIT-trained workers started at \$5.52 per hour, and are now making \$6.86 per hour. Median values show a similar increase from \$5.00 to \$6.50 per hour. One firm reported wages for professional/technical jobs for which KIT funds had been used to supply training. These jobs paid \$14.42 at the time of hire, and now pay \$16.82.

**KIT-Expanding**

On-site structured interviews were conducted with knowledgeable individuals at 16 companies which participated in the KIT-Expanding Business program in fiscal years 1989, 1990, and 1991. Results are described in the following sections.

**Discovery and the Application Process.** First, participants were asked how they found out about the KIT program. A complete accounting of the responses is presented in Table 20. The majority of participants reported learning of the program through the local Chamber of Commerce (31%), local (city or county) government (19%), or by having had a previous KIT/KIR grant (19%). Table 21 shows that the majority of participants indicated that the process of applying for KIT assistance was "very easy" (19%) or "easy" (56%), although 19 percent of the respondents indicated that the process was "somewhat difficult," and one participant (6%) indicated that it was "difficult." Ninety-four percent indicated that they would apply again.

**Table 20**

**Item 1. How did you find out about the KIT program?**

<u>Frequency*</u>	<u>Percent*</u>	
5	31%	Local chamber of commerce
3	19%	Local government (city or county)
3	19%	Had a previous KIT/KIR grant
2	12%	Department of Commerce
2	12%	Other business person
1	6%	Community college
1	6%	Dept. of Commerce promotional material
1	6%	Local school district superintendent
1	6%	Local SBA
1	6%	Don't know

\*Multiple responses were received and recorded. Therefore, these figures do *not* sum to 16 or 100%.

Table 21

*Item 2.* Describe your impression of the process of applying for KIT assistance.

<u>Frequency</u>	<u>Percent</u>	
9	56%	Easy
3	19%	Very easy
3	19%	Somewhat difficult
1	6%	Difficult

*Item 2A.* Would you apply again?

<u>Frequency</u>	<u>Percent</u>	
15	94%	Yes

*Item 2B.* Respondents indicating that they received help filling out the KIT grant application.

<u>Frequency</u>	<u>Percent</u>	
10	62%	Did not indicate receiving help
6	38%	Indicated receiving help

*Item 2C.* Number and percentage of respondents that indicated a time factor in the application process.

<u>Frequency</u>	<u>Percent</u>	
4	25%	Indicated process took a lot of time
1	6%	Indicated process did not take a lot of time

Six (38%) of the participants indicated that they had received help with filling out the KIT grant application. Twenty-five percent (4 participants) indicated that the application process "took a lot of time." Table 22 shows that Kansas industrial officials who set up the KIT contracts were regarded highly by the participants, with 25 percent of the respondents indicating that the assistance provided was "excellent" or "superior," and another 50 percent calling it "very good." For the most part, these ratings applied to either state officials only (69%) or to both state and local officials (19%).

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Table 22

*Item 3. How would you rate the assistance provided to you by the Kansas Industrial officials who set up your contract?*

<u>Frequency</u>	<u>Percent</u>	
8	50%	Very good
4	25%	Excellent
2	13%	No response
1	6%	Good
1	6%	Fair

*Item 3A. This rating applies to:*

<u>Frequency</u>	<u>Percent</u>	
11	69%	State only
3	19%	Both
2	12%	No response
0	0%	Local only

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Table 23

*Item 4. Were the funds provided by KIT adequate to meet your training needs?*

<u>Frequency</u>	<u>Percent</u>	
11	69%	Yes
4	25%	No
1	6%	Somewhat

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*Adequacy and Importance of the KIT-Expanding Funds.* Table 23 shows that the majority of participants found the KIT-Expanding funds adequate to meet their training needs (69%), while an additional 6 percent indicated that the funds were "somewhat" adequate. Twenty-five percent stated that the funds were not adequate to meet their training needs. Table 24 shows the responses to the question, "Would the expansion of your business have taken place if you had not received KIT funds?" Forty-four percent of the firms indicated that the expansion

Table 24

**Item 5. Would the expansion of your business have taken place if you had not received KIT funds?**

<u>Frequency</u>	<u>Percent</u>	
7	44%	Definitely yes
3	19%	Yes, but not in Kansas
3	19%	Probably yes
1	6%	Yes, but KIT funds made training possible
1	6%	Yes, but it may not have been maintained
1	6%	Definitely not

**Item 6. Would your workers have received equivalent training if KIT funds had not been available?**

<u>Frequency</u>	<u>Percent</u>	
8	50%	Yes
3	19%	Yes, eventually
2	13%	No
1	6%	Probably not
1	6%	Yes, but not in Kansas
1	6%	Missing value

of their businesses would have definitely taken place even if they had not received KIT funds, and another 19 percent indicated that the expansion probably would have taken place without the funds. However, another 19 percent indicated that while the expansion of their businesses would have definitely taken place, *it would NOT have taken place in Kansas*. Other respondents noted that the business expansion would have taken place but that the KIT funds made the training possible (6%), or that the expansion may not have been maintained without the KIT training funds (6%). Only 6 percent of the participants stated that their business expansion would "definitely not" have taken place without the KIT funds. Of those 15 respondents indicating that the expansions of their businesses would have taken place without the KIT training funds, 19 percent indicated that their workers would not have received equivalent training, and 6 percent indicated that the "equivalent training" would not have occurred in Kansas. Sixty-nine percent indicated that their workers would have received equivalent training without the KIT funds, but 19 percent indicated that the training would have been delayed.

**Table 25**

**Item 7. Did your organization contribute any resources to the training effort?**

<u>Frequency</u>	<u>Percent</u>	
16	100%	Yes

**Item 7A. Types of resources contributed (specifically mentioned by respondents).**

<u>Frequency*</u>	<u>Percent*</u>	
16	100%	Money
8	50%	Instructors
5	31%	Materials and supplies
4	25%	Some equipment
2	13%	Training room or other training space
2	13%	Management time
1	6%	Indirect labor
1	6%	Trainee's salaries
1	6%	Booklets/handouts
1	6%	Other facility

\*Multiple responses were received and recorded. Therefore, these figures do *not* sum to 16 or 100%.

**Organization Contributions and Benefits to Kansans.** Table 25 shows that 100 percent of the organizations participating in the KIT-Expanding Business program contributed monetary resources to their training efforts. In addition, the organizations contributed such things as instructors (50%), materials and supplies (31%), equipment (25%), facilities (13%), management time (13%), and other items detailed in Table 25. Table 26 presents data on the number of people hired and trained by these expanding businesses. An average of 252.3 Kansas workers were employed by these firms prior to their expansions. The number employed ranged from 6 to 1250, with a median number of 82.5. These firms trained an average of 110.6 people with support from KIT funds. The number trained ranged from 4 to 867, with a median of 32. On average, 390.2 workers were employed per firm after completion of the expansions. The number employed after the expansions ranged from 14 to 1400, with a median of 155. The disparity between the two measures of central tendency—the average (mean) and median—is indicative of the variety among organizations receiving KIT funds in terms of organization size. Both large and small firms have received support through the KIT-Expanding Business program.

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**Table 26**

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<i>Item 8.</i> How many workers did you employ before the expansion of your business?	252.3	82.5	366.7	6	1250
<i>Item 9.</i> How many people received the training that was supported through KIT funds?	110.6	32	220.3	4	867
<i>Item 12.</i> How many workers were employed after the expansion was completed?	390.2	155	491.5	14	1400

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*Loss of Trained Workers by Participating Firms.* Table 27 indicates that 37 percent of the participants in the KIT-Expanding Business program had to lay off workers. KIT-trained workers were included among those laid off in 66 percent of the six firms which had to lay off workers. Reasons for laying off workers include business fluctuations and slowdowns (83%), and seasonal business (17%). Table 28 indicates that in 94 percent of the participating firms, workers have left for reasons other than lay off. Sixty-seven percent of the firms report that replacement workers have received equivalent training, and 13 percent report that replacement workers have received "almost equivalent" training. Seven percent of the firms hired experienced workers as replacements. When equivalent or almost equivalent training was provided to replacement workers, this training was company financed in 91 percent of the cases.

Table 27

*Item 11. Have any of your employees been laid off since the expansion?*

<u>Frequency</u>	<u>Percent</u>	
10	63%	No
5	31%	Yes
1	6%	Seasonal shut downs

*Item 12 (If 11 is "Yes"). Were any of these workers the ones who received the KIT funded training?*

<u>Frequency</u>	<u>Percent</u>	
4	66%	Yes
1	17%	No
1	17%	Don't know

*Item 13 (If 11 is "Yes"). Why was it necessary to lay off these employees?*

<u>Frequency</u>	<u>Percent</u>	
5	83%	Business fluctuations and slowdown
1	17%	Seasonal Business

*Nature of the Training.* Table 29 shows that 81 percent of the participating firms indicate that their respective companies performed the training. Others performing the KIT-funded training include vo-tech schools (25%), community colleges (12%), local school districts (6%), and consultants (6%). One company (6%) used KIT funds to train company trainers who subsequently trained workers. Table 30 shows that nine firms indicate that they received assistance from an area education agency in administering their KIT-funded training program. Two-thirds of these firms indicated that the assistance was "excellent" or "very good." One firm (11%) described the assistance and agency as "good," another (11%) described the assistance as "good but expensive," while yet another firm (11%) described the agency assistance as "useful." Table 31 addresses the issue of whether the training provided with KIT funds was company-specific, industry-specific, or general. As shown in the table, the bulk of the training is considered to be industry-specific (75%) or general (63%). Only 25 percent of the respondents described a significant amount of company-specific training.



Table 28

*Item 14. Have any workers that were trained using KIT funds left your organizations by means other than being laid off?*

<u>Frequency</u>	<u>Percent</u>	
15	94%	Yes
1	6%	No

*Item 15 (If "Yes" to Item 14). Have replacement workers received equivalent training?*

<u>Frequency</u>	<u>Percent</u>	
10	67%	Yes
2	13%	Almost equivalent
1	7%	Hired experienced workers as replacements

*Item 15A (If "Yes" to Item 15). How was this financed?*

<u>Frequency</u>	<u>Percent</u>	
10	91%	Company financed
1	9%	KIT

The nature of the training provided to workers under the KIT-Expanding program was very similar to that provided under the KIT-New program as described earlier. The training was determined by each firm, and varied dramatically from firm to firm. Several firms trained workers in general areas such as blueprint reading, industrial mathematics (algebra, geometry, using tables in the machinist handbook), and job relations (ethics, hygiene, and orientation to the job environment). In addition, one firm provided training in basic reading skills to ready employees for the general equivalency degree (GED) examination. Some workers were taught welding, sheet metal work, basic electricity, iron work, pipe work, and basic safety. Others were taught the operation of basic machine tools, including drill presses, milling machines, grinders, etc., not to mention rivet guns, saws, and cranes. Some workers were trained in basic inspection and testing techniques using hardness testers, testing metals for carbon content, yield and structural testing, tensile strength, etc. Some were taught logbook paper work and procedures. There was training in finishing, painting, packing, and shipping product. Again, there was SPC and TQM training. There was training in claims examination and adjudication,

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Table 29

Item 16. Who did the training of your workers?

<u>Frequency*</u>	<u>Percent*</u>	
13	81%	Company
4	25%	Vo-tech
2	12%	Community college
1	6%	School district
1	6%	Consultants
1	6%	Company used KIT funds to train company trainers who subsequently trained workers

\*Multiples responses were received and recorded. Therefore, these figures do *not* sum to 15 or 100%.

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Table 30

Item 17 (If assistance was received by an education agency). How would you rate the assistance provided to you by the education agency that helped administer your program?

<u>Frequency</u>	<u>Percent</u>	
4	44%	Very good
2	22%	Excellent
1	11%	Good but expensive
1	11%	Good
1	11%	Useful

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Table 31

Item 18. Were the skills taught company-specific, industry specific, or general?

<u>Frequency*</u>	<u>Percent*</u>	
12	75%	Industry specific
10	63%	General
4	25%	Company specific

\*Multiple responses were received and recorded, accounting for the frequency sum exceeding 16 and the percent sum exceeding 100%.

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medical management, and administrative training including managing premiums, billing, record-keeping and setup, and basic accounting. There was training in establishing new accounts, customer satisfaction, authorizations, collections, credit policy, running credit bureau reports, computer systems, basic telephone communications skills, team building, and problem solving. There was also training in company specific manufacturing processes and techniques. In one firm a trainer was sent to a U.S. Naval Weapons Center and became certified as a "Mill Standard 2000 Operator and Instructor." This is a very high Department of Defense standard for soldering electronic assemblies. This trainer then set up a Mill Standard 2000 training program for the company employees. This resulted in a rather dramatic improvement in quality plus permitted expansion into new areas of electronic assembly. The firm reported that this program has enabled them to keep their larger customers and to gain new ones.

**Changes in Wages.** Table 32 presents wage information on KIT-trained workers at the time of hire and as of August and September, 1991. On average, most KIT-trained workers started at \$6.58 per hour, and are now making \$7.39 per hour. Median values show a slightly smaller increase from \$6.90 to \$7.21 per hour.

Table 32

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<i>Item 19.</i> What was the average wage* of the KIT-trained workers at the time of hire?	6.58	6.90	2.011	3.35	9.75
<i>Item 20.</i> What is the average wage* of these workers today?***	7.39	7.21	1.89	4.80	10.50

\*Wages reported in dollars per hour.

\*\*\*Three companies could not respond because one had laid off all relevant workers; another had seen all relevant workers quit; and another had not been in the program long enough for a wage change.

## KIR

On-site structured interviews were conducted with knowledgeable individuals at 7 companies which participated in the Kansas Industrial Retraining (KIR) program in fiscal years 1990 and 1991. Results are described in the following sections.

***Discovery and the Application Process.*** First, participants were asked how they found out about the KIR program. A complete accounting of the responses is presented in Table 33. The majority of participants reported learning of the program through the Department of Commerce (DOC) (57%), having had a previous KIT/KIR grant (43%), or through the Department of Education (29%). Table 34 shows that the majority of participants indicated that the process of applying for KIR assistance was "very easy" (14%) or "easy" (71%), and 71 percent indicated that they would apply again. Three (43%) of the participants indicated that they had received help with filling out the KIR grant application. Fourteen percent (1 participant) indicated that the application process "took a lot of time." Table 35 shows that Kansas industrial officials who set up the KIR contracts were regarded highly by the participants, with 71 percent of the respondents indicating that the assistance provided was "excellent" or "superior," and the other 29 percent calling it "very good." These ratings applied to either state officials only (71%) or to both state and local officials (29%).

***Importance of the KIR Funds.*** Table 36 shows the responses to the question, "Why did you feel that it was necessary to retrain your workers?" Seventy-one percent indicated that the retraining was necessary due to changes in technology; 29 percent indicated that it was necessary due to introduction of a new product line. Other reasons given included competition, workers needing multiple skills, social responsibility, needing teams, and the union bidding system.

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Table 33

*Item 1. How did you find out about the KIR program?*

<u>Frequency*</u>	<u>Percent*</u>	
4	57%	Department of Commerce (DOC)
3	43%	Had a Previous KIT/KIR Grant
2	29%	Department of Education
1	14%	Local government (city or county)
1	14%	Community college
1	14%	Through a professional association
1	14%	Consultant

\*Multiple responses were received and recorded. Therefore, these figures do not sum to 7 or 100%.

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**Table 34**

**Item 2. Describe your impression of the process of applying for KIR assistance.**

<u>Frequency</u>	<u>Percent</u>	
5	71%	Easy
1	14%	Very easy
1	14%	Difficult

**Item 2A. Would you apply again?**

<u>Frequency</u>	<u>Percent</u>	
5	71%	Yes
1	14%	No
1	14%	No response

**Item 2B. Respondents indicating that they received help with filling out the KIR grant application.**

<u>Frequency</u>	<u>Percent</u>	
3	43%	Indicated receiving help

**Item 2C. Respondents mentioning a time factor.**

<u>Frequency</u>	<u>Percent</u>	
2	29%	Did <i>not</i> take a lot of time
1	14%	Took a lot of time

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Table 35

*Item 3.* How would you rate the assistance provided to you by the Kansas Industrial officials who set up your contract?

<u>Frequency</u>	<u>Percent</u>	
5	71%	Excellent/superior/outstanding/great
2	29%	Very good

*Item 3A.* This rating applies to:

<u>Frequency</u>	<u>Percent</u>	
5	71%	State officials only
2	29%	Both
0	0%	Local officials only

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Table 36

*Item 4.* Why did you feel that it was necessary to retrain your workers?

<u>Frequency*</u>	<u>Percent*</u>	
5	71%	Change in technology
2	29%	New product line
1	14%	Competition
1	14%	Workers needed multiple skills
1	14%	Social responsibility
1	14%	Needed teams
1	14%	Union bidding system

\*Multiple responses were received and recorded, accounting for the frequency sum exceeding 7 and the percent sum exceeding 100.

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Table 37 indicates that all or a significant portion of employees would have been displaced from 43 percent of the firms if the retraining had not taken place. Fourteen percent of the participants indicated that the retraining would not have taken place without the KIR funds, and 43 percent indicated that only part of the retraining would have taken place without the KIR funds. Another 29 percent indicated that the retraining would have been delayed without the KIR funds. Fifty-eight percent of the firms indicated that their workers would not have received equivalent training if the KIR funds had not been available.

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**Table 37**

**Item 5. In your opinion, if the retraining had not taken place, how many of your workers would have been displaced?**

<u>Frequency</u>	<u>Percent</u>	
2	29%	None
2	29%	Probably none
2	29%	All employees
1	14%	20-25% of employees

**Item 6. Would you have retrained our workers if KIR funds had *not* been available?**

<u>Frequency</u>	<u>Percent</u>	
3	43%	Partially
2	29%	Yes, eventually
1	14%	Yes
1	14%	No

**Item 7. Would your workers have received equivalent training if KIR funds had *not* been available?**

<u>Frequency</u>	<u>Percent</u>	
2	29%	Yes, but later (not as fast)
2	29%	No, not as much training; not as many people
2	29%	No, would not have used the Vo-tech
1	14%	Other

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***Adequacy of KIR Funds and Organizational Contributions.*** Table 38 shows that 100 percent of the 7 participating firms indicated that the total amount of money for retraining (both KIR and organization funds) was sufficient to permit the retraining necessary to avoid displacing workers. One firm expressly indicated that it spent more than its required 50 percent match on the retraining program. Fifty-seven percent of the participants indicated that the 50 percent match requirement was not a problem, while 43 percent indicated that the match requirement was problematic to some extent. Seventy-one percent of the participants indicated that they contributed more than 50 percent of the resources to the training effort, and the other 29 percent indicated that they probably did, also.

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**Table 38**

***Item 8. Was the total amount of money for retraining (both KIR and organizational funds) sufficient to permit the retraining necessary to avoid displacing workers?***

<u>Frequency</u>	<u>Percent</u>	
6	86%	Yes
1	14%	Yes, but organization spent more than 50% match

***Item 9. Was the requirement for 50% matching funds a problem for your organization?***

<u>Frequency</u>	<u>Percent</u>	
4	57%	No
3	43%	To some extent

***Item 10. Did your organization contribute more than 50% of the resources to the training effort?***

<u>Frequency</u>	<u>Percent</u>	
5	71%	Yes
2	29%	Probably

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*Benefits to Kansans.* Table 39 presents data on the number of people employed and retrained by these participating businesses. An average of 1541 Kansas workers were employed by these firms prior to their retraining efforts. The number employed ranged from 142 to 6000, with a median number of 359. These firms trained an average of 203 people with support from KIR funds. The number trained ranged from 38 to 500, with a median of 195. On average, 1805 workers were employed per firm after completion of the retraining programs. The number employed after retraining ranged from 142 to 7500, with a median of 344. The disparity between the two measures of central tendency—the average (mean) and median—is indicative of the variety among organizations receiving KIR funds in terms of organization size. Both large and small firms have received support through the KIR program.

**Table 39**

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<i>Item 11.</i> How many workers did you employ before your retraining effort?	1541	359	2302	142	6000
<i>Item 12.</i> How many people received training that was partially funded through KIR funds?	203	195	160	38	500
<i>Item 13.</i> How many were employed after the retraining program was complete?	1805	344	2904	142	7500

*Loss of Trained Workers by Participating Firms.* Table 40 indicates that 43 percent of the participants in the KIR program had to lay off workers, but 14 percent of the firms called back their laid off workers. KIR-trained workers were included among those laid off in 33 percent of the three firms which had to lay off workers. Reasons for laying off workers include business fluctuations and slowdowns (33%), and discontinuation of a product line (33%). Table 41 indicates that in 71% of the participating firms, workers have left for reasons other than lay off. Eighty percent of these firms report that replacement workers have received equivalent training, while 20 percent report that replacement workers have not received equivalent training. When equivalent training was provided to replacement workers, this training was company financed in 75 percent of the cases, and financed at least partially through a subsequent DOC contract in 50 percent of the cases.

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Table 40

**Item 14.** Have any of your employees been laid off since the retraining program was completed?

<u>Frequency</u>	<u>Percent</u>	
4	57%	No
2	29%	Yes
1	14%	Yes, but called back

**Item 15** (If "Yes" to item 14). Were any of these workers the ones who were retrained with the assistance of KIR funds?

<u>Frequency*</u>	<u>Percent*</u>	
1	33%	Yes
1	33%	Don't know
1	33%	No

**Item 16** (If "Yes" to Item 14). Why was it necessary to lay off these workers?

<u>Frequency*</u>	<u>Percent*</u>	
1	33%	Business fluctuations and slowdowns
1	33%	Product line discontinued
1	33%	No response

\*Based on N=3 firms answering "Yes" to Item 14.

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Table 41

*Item 17. Have any workers that were retrained with the assistance of KIR funds left your organization by means other than being laid off?*

<u>Frequency*</u>	<u>Percent*</u>	
5	71%	Yes, the usual resignations, transfers, and terminations
2	29%	No
1	14%	Yes, school leave of absence

*Item 18 (If "Yes" to Item 17). Have replacement workers received equivalent training?*

<u>Frequency**</u>	<u>Percent**</u>	
4	80%	Yes
1	20%	No

*Item 18A (If "Yes" to Item 18). How was this training financed?*

<u>Frequency***</u>	<u>Percent***</u>	
3	75%	Company
2	50%	Subsequent DOC contract

\*Multiple responses were received and recorded. Therefore, frequency exceeds 7 and percent exceeds 100%.

\*\*Based on five respondents who answered "Yes" to Item 17.

\*\*\*Based on four respondents who answered "Yes" to Item 18. Multiple responses received and recorded.

**Nature of the Training.** Table 42 shows that 71 percent of the participating firms indicate that company trainers performed the training. Others performing the KIR-funded training include vo-tech schools (57%), consultants (43%), and state universities (29%). One company (14%) used KIR funds to train company trainers who subsequently trained workers. Another firm (14%) used retired workers provided through a local manpower agency. Another (14%) used on-the-job training, while yet another (14%) used video-tape automated training. Table 43 shows that six firms indicate that they received assistance from an area education agency in administering their KIR-funded training program. Two-thirds of these firms indicated that the assistance was "excellent," 14 percent rated the assistance as "very good," and another firm (14%) indicated that the assistance was "good." Table 44 addresses the issue of whether the training provided with KIR funds was company-specific, industry-specific, or general. As shown in the table, the bulk of the training is considered to be general (86%), with industry-specific and company-specific training indicated by 43 percent of the participating firms.

**Table 42**

**Item 19. Who did the retraining of your workers?**

<u>Frequency*</u>	<u>Percent*</u>	
5	71%	Company trainers
4	57%	Vo-tech school
3	43%	Consultants
2	29%	State university
1	14%	Company uses KIR money to train company trainers who subsequently trained workers
1	14%	Retired workers provided through local manpower agency
1	14%	On-the-job training
1	14%	Video tape automated training

\*Multiple responses were received and recorded. Frequency sum exceeds 7 and percent sum exceeds 100%.

Relative to the KIT programs, the nature of the training under the KIR program was at a higher level on average, and varied less in content across firms. The majority of firms in the KIR program trained their employees in statistical process control (SPC) and total quality management (TQM) techniques, as well as team building. Specific programs included writing standard operating procedures to facilitate cross-training of all individuals within a team on all team jobs and tasks, communication skills, giving feedback, conflict resolution, listening skills, problem solving, and consensus decision-making. Several KIR participants trained employees in computer aided drafting and automated design, as well as computer integrated scheduling.

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Table 43

*Item 20* (If assistance was received from an education agency). How would you rate the assistance provided to you by the education agency that helped administer your program?

<u>Frequency</u>	<u>Percent*</u>	
4	67%	Excellent
1	14%	Very good
1	14%	Good

\*Based on N=6 firms indicating that they received assistance from an education agency in administering their KIR program.

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Table 44

*Item 21.* Were the skills taught in your KIR-funded training program company-specific, industry-specific, or general?

<u>Frequency*</u>	<u>Percent*</u>	
6	86%	General
3	43%	Company-specific
3	43%	Industry-specific

\*Multiple responses were received and recorded. Frequency sum exceeds 7 and percent sum exceeds 100%.

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Other areas of training included word processing and spread sheet software training, blueprint reading, machine operation, design, tooling, inspection, avionics (electrical wiring and installation), basic skills (reading, writing, mathematics), and safety.

**Changes in Wages.** Table 45 presents wage information on KIR-trained workers at the beginning of the retraining effort and as of August and September, 1991. On average, most KIR-trained workers were earning \$10.77 per hour, and are now making \$11.37 per hour. Median values show a similar increase from \$11.37 to \$11.96 per hour. Three firms reported wages for two distinctly different groups of workers for which KIR funds had been used to supply training. These jobs paid an average of \$12.66 at the beginning of the retraining effort, and now pay \$13.01.

Table 45

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
<i>Item 22.</i> Average wage of KIR- trained workers <i>prior</i> to the beginning of the retraining effort (Wage 1)*	10.77	11.37	3.77	6.15	16.02
Average wage of KIR- trained workers <i>prior</i> to the beginning of the retraining effort (Wage 2)**	12.66	9.98	6.96	7.44	20.57
<i>Item 23.</i> Average wage of these KIR- trained workers today (Wage 1).	11.37	11.96	3.67	6.43	16.71
Average wage of these KIR- trained workers today (Wage 2)**	13.01	10.45	7.51	7.11	21.46

\*Wages reported in dollars per hour.

\*\*Three firms reported two average wages because two distinctly different groups of workers received training.

### General Comments From Participants About the KIT and KIR Programs

The very last question asked in each of the site visit semi-structured interviews was, "Do you have any other comments you would like to make about the KIT/KIR program?" A report of the results of this study would be incomplete without a recitation of the participants answers to these questions. In general, KIT/KIR is an extremely popular program among these business participants. That is to be expected to a certain degree because these participants received money through the program. However, it was clear to the interviewers that the level of positive regard for KIT/KIR went well beyond that which one would have for a source of money. The majority of the respondents were zealous in their comments and support. Many—indeed the majority—made very positive comments about DOC KIT/KIR program personnel, especially about Steven Jack, the program manager. In addition, virtually all of these summary comments about the KIT/KIR program were positive. Many of the comments expressed similar themes. What follows is a sampling of these comments:

"It is a very good program—well run. As a taxpayer, I think it is very important that the company input funds also. As a business man, this type of state assistance is absolutely essential if we are going to get jobs here in Kansas."

"We appreciate getting the grant. It really helped the firm out. Much training was done in a short time period. The financial help was very important in allowing this to happen. We have nothing but praise for the program."

"The funds were greatly appreciated. This program put in motion a training program which would have been very difficult to get up and running if it wasn't for these funds. It is a very worthwhile program."

"It is a great program. It's timely. We wish it had more money."

"KIT/KIR is underfunded. Kansas needs to fund these types of programs more. When compared to other states, we (Kansas) don't near match what the other states do for businesses."

"Keep it going! It is a *real* program. The State of Kansas followed through. We found that Kansas did the best (in regard to this type of program) of the states we looked at—Missouri, Oklahoma, and Texas."

"Without this program we could not have started our business. It allowed us to have a more thorough start-up to make sure the business will work."

"KIT/KIR funding was vital because the local labor force did not have the particular skills we needed. The program was good because it was trouble-free and less bureaucratic than trying to obtain Federal money. We stay away from Federal programs because of the red tape. States must offer these programs to attract businesses."

"Hope it stays. It is a great vehicle for the local communities trying to attract new industries."

"We were coming to this area of the country anyway, but Kansas still offered its help. Missouri never offered anything. Kansas was very aggressive in seeking our business."

"It is a good program. It is very helpful for our firm to have the aid in training workers. It helps the employees to become more marketable. Many companies would not provide such training if it wasn't for this type of assistance. Because of the KIT/KIR grant, our company has increased *its* funding of training to 2.2 times the amount it had originally budgeted."

"I would like to see the State help make Kansas businesses successful *some way*. This (the KIT/KIR program) is one way."

"It is a good program. We think it should continue. In our case, the positive economic impact has been much greater than the amount of money the KIT/KIR funds provided. We believe that this program is a good investment for the State."

"It's a great program. For Kansas money to help Kansans is great. It's the parimutuel wagering and lottery money, but that's how the voters voted to use that money. That's economic development the way it should be. This program should be a draw for other manufacturing companies to come into Kansas. The state needs more manufacturing businesses."

"I am concerned that State budget cuts will hurt this program. The program is a very useful recruitment and retention tool for businesses. I have traveled around the state and have seen small towns literally drying up because of no business base. We need economic development for these areas. In contrast, the state which we moved our manufacturing process *from* does not have an economic development program like this. Because Kansas does, this was a big factor in our decision to move the manufacturing process here. This type of program helps employers, employees, and the people of Kansas benefit. Such a use of funds yields loyalty to community. Businesses look for areas where the work force is skilled, but also for an environment where continual training and retraining take place. This is very important. Competition is global."

"Training is needed to be a competitive manufacturer. Capability in engineering is important for economic development. The State needs to offset costs which have *long term* benefits, like for training and engineering. If these things are going to take place, State assistance is needed."

"I have observed first hand the benefits of KIT/KIR. The program benefits not only the employer, but also many, many unskilled people. I hope it stays. KIT/KIR works. Other programs I have experienced—CETA for instance—have not."



## CONCLUSIONS AND POLICY IMPLICATIONS

### Answers to Research Questions

The first research question to be answered was:

"What role do KIT funds play in affecting firm decisions to locate a business in Kansas, and/or expand an existing Kansas business?"

The data bearing on the portion of the question dealing with **firm decisions to locate a business in Kansas** are found in the results KIT-New subsection dealing with adequacy and importance of the KIT-New funds (see Tables 9, 10 and 11). These data present somewhat conflicting information. **Apparently, a minority of firms (21% to 35%) would have located their businesses elsewhere had KIT funds not been available. Yet the availability of KIT funds made needed training possible in a majority (72%) of the firms which would have located in Kansas anyway.** Incidentally, Table 8 reveals that 71% of the participating firms found the funds adequate to meet their training needs, while 14% indicated that the funds were "somewhat" adequate. Thus, the amount of money provided to firms in the individual KIT training grants appeared to be adequate for the most part, and apparently does not complicate the other findings.

The data bearing on the portion of the question dealing with **firm decisions to expand an existing business in Kansas** are found in the results KIT-Expanding subsection dealing with adequacy and importance of the KIT-Expanding funds (see Tables 24 and 25). **It appears that a minority (25%) of firms would not have expanded their businesses in Kansas without the KIT funds, and another 12% to 31% may have experienced some difficulty in their expansions without the KIT funds. Without the KIT funds equivalent training of workers would not have occurred in 25% of the firms, and would have been delayed significantly in another 19%.** Table 23 reveals that 69% of the participating firms found the funds adequate to meet their training needs, while 6% indicated that the funds were "somewhat" adequate. As was the case with the KIT-New grants, the amount of money provided to firms in the individual KIT-Expanding training grants appeared to be adequate in the majority of instances.

The third research question to be answered is similar to the first question, but deals with the Kansas Industrial *Retraining* (KIR) program. Specifically:

"What role do KIR funds play in affecting firm decisions to retain and retrain current workers when firms undergo significant restructuring?"

The data bearing on the role of KIR funds in the retaining and retraining of current workers are found in the results KIR subsection dealing with the importance of KIR funds (see Table 37). **It appears that significant proportions (from 20% to 100%) of employees would have been dismissed rather than retrained in 43% of the participating firms if KIR funds had not been available. Without the KIR funds, only partial or no retraining would have occurred in 57% of the firms, and a significant delay in retraining would have occurred in another**

29%. The primary reasons retraining was necessary are changes in technology (71%) or introduction of a new product line (29%) (see Table 36). The KIR program requires that participating firms provide matching retraining funds equivalent to 50% of the individual KIR grants. Virtually all firms indicated that the combined company and KIR funds were sufficient to accomplish the needed retraining, but virtually all firms also indicated that they exceeded the 50% match requirement, and the majority indicated that they ended up doing more training than they had originally intended (see Table 38). **Apparently the KIR funds typically result in firms increasing both expenditures on training and the level of training beyond what they had originally planned, although 43% of the firms indicated that the 50% match requirement was a problem "to some extent."**

The second and fourth research questions deal with human capital. Specifically:

"To what extent is the human capital (i.e., knowledge, skills, and abilities) of Kansas workers trained through KIT funded programs enhanced?"

and

"To what extent is the human capital (i.e., knowledge, skills, and abilities) of Kansas workers trained through KIR funded programs enhanced?"

Human capital represents knowledge, skills, and abilities (KSAs) which people acquire through education, training, work experience and life experience, and which enhance a person's capabilities—and hence, worth or value—in some designated arena. General human capital refers to KSAs which are useful to people in a wide variety of work or life situations. It enhances a person's value in general. Industry-specific human capital refers to KSAs which are useful to people as they are applied within a particular industry, such as air craft manufacturing, electronic assembly, tire manufacturing, etc. Industry-specific human capital enhances a person's value within a particular industry. Company-specific human capital is the most narrow. It represents KSAs which are useful to people as applied only within the context of a particular company or organization. It involves knowledge of techniques and procedures unique to that company. Hence, company-specific human capital enhances a person's value only within a specific company or organization. Company-specific human capital typically is not transferable (or negotiable) outside of the particular organization.

The results bearing upon these questions are presented in the "Nature of the Training" subsections of the respective KIT-New, KIT-Expanding, and KIR subsections in the site visit survey results section (see Tables 18, 31, and 44). **The skills which Kansas workers acquire through the training funded through the KIT/KIR program appear to be primarily industry-specific and general.** There are some company-specific skills acquired, but the magnitude appears to be substantially lower than that for general and industry-specific skills. **Hence, the KIT/KIR program seems to be adding to the transferable and negotiable human capital of Kansas workers.**

Additional results relating to the value of human capital and economic well-being are contained in the respective subsections titled "Changes in Wages" (see Tables 19, 31, and 45). The median improvement in wages appears to be largest for workers trained under the KIT-New program (\$1.50 per hour), and smallest for workers trained under the KIT-Expanding program (\$0.31 per hour). The median improvement found for workers trained under the KIR program was \$0.59 per hour. **These figures must be interpreted with considerable caution.** The respondents in the KIR sample are from the two most recent fiscal years, rather than three fiscal years, so that one might logically expect the smallest wage change to be reported among the KIR respondents. Also, the alternative for many of the workers trained under the KIR program is layoff due to obsolescence of skills for the employing firm. The situation with workers trained under the KIT-New program is one in which the employer is typically in a start-up phase, which usually involves paying lower wages until the employees produce and derive income for the firm to establish it as a viable entity. Then wages are raised to reward, encourage, and keep skilled workers. Therefore, it is not unreasonable to find a rather dramatic increase in wages among workers trained under the KIT-New program. Expanding businesses, on the other hand, have usually established themselves and are already paying market rates for their respective labor and product markets. Thus, the finding that the wage improvement for workers trained under the KIT-Expanding program is the smallest of the three is not surprising. **What is encouraging is that on average, the wages of workers trained in all three programs have increased.**

Other results related to the human capital research questions involve the number of workers affected (see Tables 13, 14, 26, 27, 39 and 40). Under the KIT-New program, the median number of Kansas residents hired into the new business was 31, plus 3 transfers. Twenty-nine was the median number trained using KIT funds. The comparable means for these KIT - New categories are 98.7 Kansas residents hired, 12.5 residents of other states transferred in, and 83 people trained using KIT funds. The means are considerably higher than the medians due to the influence of a few relatively large enterprises. Under the KIT-Expanding program, the median number of workers employed before expansion was 83, and changed to 155 after expansion. Thirty-two was the median number trained using KIT funds. The averages were substantially higher here also—252, 390, and 111 respectively. Under the KIR program the median number of workers employed before retraining was 359, and the number after retraining was 344. The median number receiving retraining was 195. The median number receiving retraining is very similar to mean (203), but the average before and after employment numbers (1541 and 1805) reveal growth—on average. **Conservatively (i.e., using the median values), KIT funds seem to result in the training of about 30 workers per firm, where KIR funds seem to result in the training of 195 workers per firm. This does *not* necessarily imply that the KIR funds are used more efficiently than the KIT funds. It merely means that the firms engaging in retraining efforts are typically considerably larger than the new or expanding firms.** Note that about 30% of the firms in all three programs reported the necessity of laying off workers after receiving training or retraining funds. This was due primarily to business fluctuations or slowdowns and the recession.

### Other Results

*The KIT/KIR Program File Analysis.* All firms had submitted a *training plan* as required, and these plans were on file in the KIT/KIR Program office. Roughly 25% of the

training plans were judged as very detailed by the researchers. Generally, and as might be expected, these detailed plans were submitted by larger firms with professional training units or departments. In general, the level of detail in the other 75% of the training plans was judged as appropriate.

Overall, complete lists of *trainers* were found in 67 percent of the total sample, partial lists of trainers were found in 20 percent of the total sample, and no lists of trainers were found in 13 percent of the total sample. Here, the KIT/KIR Program personnel might be a bit more vigilant and demanding, and strive for 100% compliance with the requirement that trainers be specifically identified. Given the current level of compliance, this goal seems easily achievable.

Overall, complete lists for *trainees* were found in 67 percent of the cases, partial lists were found in 10 percent of the cases, and no lists of trainees were found in 23 percent of the cases. Here, too, the KIT/KIR Program personnel might be somewhat more vigilant and demanding, and strive for 100% compliance with the requirement that trainees be specifically identified. Given the current level of compliance, this goal also seems easily within reach.

All firms had provided *receipts and invoices* as required, and these were on file. Although no formal audit was performed, it appears that this requirement is strictly enforced by KIT/KIR Program personnel. No invoice or receipt, no reimbursement. It should also be noted that many participants commented on the speed and ease with which reimbursements are made. The KIT/KIR Program personnel are to be commended for their efficiency in this area.

The *computerization* of records beginning in FY 1990 apparently has improved KIT/KIR contract administration, at least from the perspective of KIT/KIR Program personnel. The researchers noted the ease with which accounting transactions can be tracked with the computerized information.

***Satisfaction of Participants with the KIT/KIR Program.*** Firms typically find out about the KIT/KIR Program through the Department of Commerce, local government, local Chambers of Commerce, the Department of Education, and to a lesser extent from community colleges and universities (see Tables 5, 20, and 33). Over 75% rate the application process as "very easy" or "easy," and an even higher percentage indicate that they would apply again (see Tables 6, 21, and 34). Eighty-four percent rate the assistance provided by the Kansas Industrial officials who set up their contracts as either "very good" or "excellent/superior" (see Tables 7, 22, and 35). **These ratings plus the general comments from participants presented at the end of the results section indicate that the KIT/KIR Program participants have a very high level of satisfaction with and positive regard for the program.**

### **Policy Implications**

The KIT/KIR Program is extremely valuable for Kansas businesses and individual Kansas workers who are fortunate enough to be touched by it. Its major contributions appear to be (1) helping to get new businesses and business expansions or changeovers off to solid starts by permitting substantially better training of workers than most organizations could afford by

themselves, and (2) providing valuable enhancements to the human capital of Kansas workers by improving both their general and industry-specific knowledge and skill levels. To paraphrase the comments of several program participants, *this type of State assistance is absolutely essential if we are going to get and keep manufacturing businesses and good jobs here in Kansas.*

A third contribution of the KIT/KIR Program is the role it plays in helping the Kansas Department of Commerce and local communities attract new businesses and business expansions to Kansas. Some 25% of the participating firms in this study indicated that either their businesses or the businesses expansions would not now be in Kansas had it not been for the availability of KIT/KIR funds. While the majority of firms indicated that they would have located or expanded their businesses in Kansas, even if the KIT/KIR funds had not been available, these funds still played a role as part of the total economic incentive package which brought those businesses and jobs to our state.

Given the past success and great value of the KIT/KIR Program, not to mention its extremely high popularity with the Kansas businesses which participated in the program, the policy implications from this study are few and straight forward:

1. **Keep the KIT/KIR program in essentially its present form.**
2. **At a minimum, fund it at its present level.**
3. **If at all possible, increase its level of funding substantially.**