

Institute for Public Policy and Business Research  
The University of Kansas

**SURVEY OF NEW EMPLOYEES HIRED BY NEW AND EXISTING  
COMPANIES IN LAWRENCE/DOUGLAS COUNTY  
BETWEEN 1989 AND 1990**

by

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### **Purpose of the Survey**

The Institute for Public Policy and Business Research at the University of Kansas conducted a survey of newly hired employees in Lawrence/Douglas County in December 1990 with a follow-up survey in February 1991. The main goal was to generate meaningful input variables for a cost-benefit model to be used in assessing property tax abatements. Within this framework, the survey focused on a few key questions:

- (1) Proportion of new residents (in-migrants) associated with new local job opportunities generated by a new plant.
- (2) Number of present and future school-aged children to be expected from new employees.
- (3) Proportion of newly hired employees which are commuting to Douglas County for work and have an out-of-county residence.
- (4) Household size of newly hired employees, in particular new residents.
- (5) Occupational categories of new employees.
- (6) Previous employment status (employed, unemployed, new labor force entrant, etc.)

### **Survey Method and Reliability**

A mail survey was designed so that the (personnel) manager of each participating company had to distribute the questionnaires directly to newly hired employees for completion. The questionnaire focused on residence, the beginning year of employment and the key questions outlined above (see attached questionnaire).

The survey was sent to all new companies in Lawrence/Douglas County starting operation after 1988. Since there were only five new qualifying companies, the existing manufacturing companies with more than 100 employees were also included in the survey. The rationale for surveying existing companies was to increase the sample size and to include a broader spectrum of manufacturing industries. And many of the existing companies have hired a substantial number of new employees in the past two years.

A total of 662 valid questionnaires were evaluated in this survey. The response rate among the newly hired employees in individual companies was high, ranging between 60 and 75%. All five new companies participated in the survey. The overall response rate for the group of new companies was 70%. Of the existing companies, nine out of thirteen participated, but a response rate could not be calculated.<sup>1</sup>

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<sup>1</sup> Lack of accurate employment data for companies which chose not to participate did not allow to calculate a response rate for the group of existing companies. It is estimated to be 60-65%.

Due to the relatively small sample of new firms and a limited number of existing local manufacturing firms, the results of this survey are not necessarily representative for a broad spectrum of industries. Depending on the type of industry, the type of jobs and the wage level provided by a new company, household characteristics and living patterns of the workforce of a future company could deviate slightly from the survey results. Thus, the generalization of the survey results is limited to the types of industries surveyed (non-high tech manufacturing companies). Overall, the survey results for Lawrence/Douglas County provide good estimators for input variables used in a cost-benefit analysis evaluating property tax abatements.

## Survey Results

The survey provides valuable and unique information regarding the recruitment, residence and household characteristics of new employees hired between 1989 and 1990 by Douglas County firms. Overall, newly hired employees have been mainly recruited from local sources, i.e. Douglas County residents including students. But commuters and new residents (in-migrants) made up one-third of the new workforce.

The results of the survey are presented in the subsequent Tables 1-8. The main findings are summarized below:

1. The vast majority of new employees hired between 1989 and 1990 lived in Lawrence/Douglas County. Of the 662 new employees surveyed, 62% lived in Lawrence, and an additional 15.6% resided outside Lawrence, but within Douglas County (Table 1).
2. Commuters make up a sizable portion of the new workforce. Of the 662 employees surveyed, 22.5% are commuting to Douglas County for work (Table 1). Of the 149 residents of other counties, 34% live in Jefferson County, 10% in Leavenworth, 13% in Johnson, 16% in Shawnee, 5% in Jackson, and 11% in other counties.
3. The majority of newly hired employees hold full-time positions (94.5%), and have lived in the county for several years. Table 2 indicates that 56% of the new employees residing in Douglas County have lived there for more than 5 years.
4. Of the 512 newly hired employees who lived in Douglas County and responded to the question, 15% moved to Lawrence/Douglas County as a result of their decision to work for a new or existing company in Douglas County (Table 3). This ratio, however, does not reflect the true migration effect of new local job opportunities. Since it does not account for additional in-migrants due to vacated jobs and the employment multiplier effect. As can be seen from Table 7, 49.8% of the old residents or 124 persons vacated a full-time job in Douglas County. If one assumes that the vacated jobs will be filled in the same

manner as the new jobs, the impact of 100 new jobs will be 29% migrants instead of 15%. For the professional jobs, the real migration ratio is 50.4%, and for maintenance and production workers the real ratio is 14.5%.

5. The majority of the newly hired employees surveyed had taken jobs that fall in the lower paid job categories. Table 4A shows that 57.7% of the 509 employees who responded to the question, fell in the lower paid job categories (maintenance and production workers). Only 22.6% of the new employees had professional jobs.
6. Most of the new residents were in the higher paid, professional and technical job categories. Table 4A reveals that 46% of all new residents filled jobs in the professional job category. Adversely, 30% of all new professional jobs went to new residents versus 70% going to old residents (Table 4B).
- 7a. Of the 68 new residents who moved to the community to work for a new or existing company and responded to the question, 68% had no school-aged children. On average, the new residents had 0.53 school-aged children in 1990 per employee (Table 5A). For 1995, the new residents reported 0.85 school-aged children per employee surveyed.
- 7b. Of the 375 newly hired employees surveyed who resided in the community before taking their new job and responded to the question, 64% had no children, with a ratio of 0.57 children per employee in 1990 and 0.75 in 1995.
8. The average household size of new residents (in-migrants) is 2.64 persons compared to 2.81 persons for the old residents. Table 6 shows that production workers have slightly larger households than professional workers.
9. The labor force status of new employees prior to their current employment is shown in Table 7. This information gives an idea of the number of vacated jobs due to new job opportunities in the community. Of the 289 employees responding to the question, 49.8% previously held a full-time job in Douglas County, 14.5% were half-time employees, 5.6% new labor force entrants, and 24.5% were unemployed prior to their current employment.
10. Students compose 12.1% of the new employees surveyed (Table 8). Overall, 75.7% of the student workers were full-time employees.

## Comparison of Key Survey Results with Literature Findings

Since the survey included a small sample of firms in a relatively small community, it was imperative to compare some survey results with the principal literature on the subject.

### 1. Relationship between Employment Growth and In-Migration

The survey showed that during the past two years the new and existing companies in Lawrence/Douglas County which participated in the survey have drawn their new workforce mainly from local sources including students. Only 29% of all new employees were new residents or in-migrants. This proportion accounts for the full effect of in-migration resulting from incremental employment including a first, second, third, etc. round of vacated jobs. The majority of the new employees surveyed (57.1%) vacated their previous job in Douglas County. The vacated jobs are expected to be filled with three kinds of workers: (1) employees residing in Douglas County and changing jobs (57.1%), (2) new labor force entrants (5.6%), (3) unemployed (24.5%), (4) in-migrants (15%), and (5) others, including underemployed, self-employed, disabled and other persons (5.6%). These results allow to calculate the full migration effect resulting from vacated jobs.

Generally, communities with low unemployment rates are expected to have a higher number of in-migrants filling new and vacated jobs than areas with high unemployment. However the labor supply in Lawrence/Douglas County is influenced by an ever increasing number of students filling part-time jobs, even in manufacturing industries.

The interrelationship between incremental employment opportunities and in-migration has been studied in the economic literature. Literature findings based on empirical estimates and a time-series model of migration and employment growth suggest that an average of 45% of the new jobs in the 57 largest metropolitan areas are filled by in-migrants in the short run.<sup>2</sup> In the long-run, 70-80% of the new jobs may go to in-migrants.<sup>3</sup> This implies that the fiscal impact of new residents on the city and county governments, and on the school district might be higher than the survey results suggest. However, the survey results give a lower bound regarding in-migration due to incremental employment opportunities.

### 2. Ratios of School-Aged Children

The survey findings on the number of school-aged children per new employee surveyed are summarized in Table 5A. Table 5B reflects calculated ratios of school-children per working household member (assuming every other spouse, partner or household member of the employee is working in Douglas County). The ratios in Table 5B are more meaningful as inputs for a cost-

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<sup>2</sup> See Greenwood, Michael and Gary Hunt, "Migration and Interregional Employment Redistribution in the United States", The American Economic Review, Vol. 74, No. 5, Dec. 1984, 959-969.

<sup>3</sup>Bartik, Timothy, "The Market Failure Approach to Regional Economic Development Policy," Economic Development Quarterly, Vol. 4, No. 4, Nov. 1990, 363-370; and Muth, Richard, "Differential Growth among Large U.S. Cities," in J.P. Quick and A.M. Zarley, eds., Papers in Quantitative Economics, Lawrence: University Press of Kansas, 1968, 311-355.

TABLE 2

Employees Hired by Firms in Douglas County (1989-90)  
by Length of Residence

Residence in Douglas County	Number of Employees	Percent
Less than 1 year	41	8.4%
1-3 years	112	22.9%
3-5 years	61	12.5%
More than 5 years	275	56.2%

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Sample size = 489

Source: Institute for Public Policy and Business Research, The University of Kansas,  
Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 3

Employees Hired by Firms in Douglas County (1989-90)  
by Place and Length of Residence

Old Resident of Dgl. County	85.0%
New Resident of Dgl. County (In-Migrant)	15.0%

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Sample Size = 512

Source: Institute for Public Policy and Business Research, The University of Kansas,  
Survey of New Employees, Dec. 1990-Mar. 1991.

benefit analysis assessing tax abatements, since a working spouse or partner keeps another person (with school-children) from moving to the community to take the new job. An average ratio of 0.353 school-children per working household member of new employees in 1990 compares with an average ratio of 0.58 school-children per family in 1989 in the U.S. The latter ratios were used in the cost-benefit model.

TABLE 1

Employees Hired by Firms in Douglas County (1989-90)  
by Place of Residence

Lawrence	61.9%
Remainder of Douglas County	15.6%
Outside Douglas County	22.5%

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Sample Size = 662

Source: Institute for Public Policy and Business Research, The University of Kansas,  
Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 4A

### Job Characteristics of Newly Hired Employees (1989-1990)

	Number of Responses	Professional	Technical	Secretarial	Maintenance	Other (Prod. workers)
New Residents	76	46.1%	26.3%	1.3%	3.9%	22.4%
Old Residents	433	18.5%	8.8%	9.5%	3.0%	60.3%
Total	509	22.6	11.4%	8.3%	3.1%	54.6%

Sample Size = 509

Source: Institute for Public Policy and Business Research, The University of Kansas, Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 4B

### Job Characteristics of Newly Hired Employees (1989-1990) by Length of Residence

Occupational Category	Number of Jobs	New Residents	Old Residents
Professionals	115	30.3%	69.6%
Technical	58	34.5%	65.5%
Secretarial	42	2.4%	97.6%
Maintenance	16	18.8%	81.3%
Other (Prod. workers)	278	6.1%	93.9%

Sample size = 509

Source: Institute for Public Policy and Business Research, The University of Kansas, Survey of New Employees, Dec. 1990-Mar. 1991.



TABLE 5A

### School Children Per Newly Hired Employee (1989-1990)

	Number of Responses	<u>School-Children in 1990</u>		Number of Responses	<u>School-Children Expected in 1995</u>	
		Number	Ratio per Employee		Number	Ratio per Employee
New Residents	68	36	0.53	67	57	0.85
Old Residents	375	215	0.57	366	275	0.75
Total	443	251	0.56	433	332	0.76

Sample size = 443

Source: Institute for Public Policy and Business Research, The University of Kansas, Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 5B

### School Children Per Working Household Member of New Employees (1989-1990)

	Number of Working Household Members	School-Children Per Working Household Member in 1990	School-Children Per Working Household Member Expected in 1995
New Residents	102	0.353	0.559
Old Residents	562.5	0.382	0.489
Total	664.5	0.377	0.499

Sample size = 443

Note: The number of working household members is calculated by multiplying the number of responses by 1.5. The assumption is that every other spouse, partner or other member is working in Douglas County and keeps another person (with children) from moving to the community and taking the new job.

Source: Institute for Public Policy and Business Research, The University of Kansas, Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 6

Household Characteristics of Newly Hired Employees  
(1989-1990)  
by Length of Douglas County Residence

	Number of Response	Persons Per Household
New Residents	77	2.64
Old Residents	432	2.81
Professionals	114	2.59
Production Workers (maintenance and prod. workers)	294	2.89
All Employees	509	2.87

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Sample size = 509

Note: Average household size in Kansas was 2.62 persons in 1989 (U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 441, Nov. 1989).

Source: Institute for Public Policy and Business Research, The University of Kansas, Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 7

### Labor Force Status of Old Residents Prior to Current Employment

	Number of Responses	Percent
Full-Time Employee	124	49.8%
Half-Time Employee	36	14.5%
New Labor Force Entrant	14	5.6%
Unemployed	61	24.5%
Other (underemployed, disabled and other)	14	5.6%

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Valid Answers = 249

Source: Institute for Public Policy and Business Research, The University of Kansas,  
Survey of New Employees, Dec. 1990-Mar. 1991.

TABLE 8

### Percentage of Students Among Newly Hired Employees (1989-1990)

	Number of Responses	Percent of Total
Students	37	12.1
Non-Students	270	87.9

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Sample Size = 307

Source: Institute for Public Policy and Business Research, The University of Kansas,  
Dec. 1990-Mar. 1991.

**Employee's Questionnaire**  
**Survey of Douglas County's Workforce**

1. When did you start working for this company?  
a) \_\_\_\_1990   b) \_\_\_\_1989   c) \_\_\_\_1988   d) \_\_\_\_earlier
2. Where do you live now?  
a) \_\_\_\_Lawrence  
b) \_\_\_\_Outside Lawrence but within Douglas County  
c) \_\_\_\_Outside Douglas County

\_\_\_\_\_  
(County, state)

**If you live outside Douglas County, please end survey here.**

3. How long have you lived in Douglas County?  
a) \_\_\_\_Less than 1 year  
b) \_\_\_\_1-3 years  
c) \_\_\_\_3-5 years  
d) \_\_\_\_More than 5 years
4. Did you move to Lawrence or Douglas County as a result of your decision to work for this company?  
\_\_\_\_Yes   \_\_\_\_No
5. What is the size of your household?   \_\_\_\_Number of persons (include yourself)
6. How many members of your household (spouse, partner, adult child) work inside Douglas County?   \_\_\_\_Number
  - a) How many members have full-time jobs in Douglas Co. \_\_\_\_Number
  - b) How many members have part-time jobs in Douglas Co. \_\_\_\_Number
7. How many members of your family are or will be enrolled in local public schools in Lawrence/Douglas County (kindergarten through grade 12)?  
\_\_\_\_Number in 1990/91   \_\_\_\_Number five years from now
8. Which occupational category best describes your current job?  
\_\_\_\_Professional   \_\_\_\_Maintenance   \_\_\_\_Other (Production worker,  
\_\_\_\_Technical   assembler, mechanic,  
\_\_\_\_Secretarial   warehouseman)
9. Are you a full-time employee?   \_\_\_\_Yes   \_\_\_\_No
10. Are you a college student?   \_\_\_\_Yes   \_\_\_\_No
11. What describes your situation before taking this job?  
\_\_\_\_full-time employee in Douglas County   \_\_\_\_new labor force entrant (never had a full-time job before)  
\_\_\_\_half-time employee in Douglas County   \_\_\_\_unemployed

**Thank you very much for your cooperation!**