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ABSTRACT

The study identified the social and economic factors affecting present commuting behavior and the willingness to commute and to relocate of the residents in north-central New Mexico. Central hypothesis was that Spanish Americans were less mobile than Anglo Americans in this region. Data were collected in a personal interview survey of 800 households in the 7-county region. Every city and most rural villages were cluster-sampled to reflect the rural-urban, sex, and occupational makeup of the region's population. Willingness to commute and to relocate were measured by specially constructed bidding games. Analyses were restricted to data from 643 completed questionnaires. Analysis included 2 phases: (1) a cross-classification analysis of mean scores by ethnic group and other socioeconomic variables and (2) a stepwise multiple regression analysis of socioeconomic characteristics and the 2 dependent variables--willingness to commute and to relocate. Some findings were: (1) Spanish Americans were more willing to commute but less willing to relocate than were Anglo Americans; (2) young household heads were more willing to commute than the older ones; (3) commuters tended to be younger, Spanish American, and male with lower occupational status, lower educational levels, and larger families (more dependents); and (4) Anglo Americans with 0-6 years of education indicated the greatest willingness to relocate. (NQ)

A Socioeconomic Analysis of Labor Mobility, North-Central New Mexico

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SUMMARY

The motivation to commute is conditioned by many factors, social and cultural as well as economic. Commuters to a major metropolitan center frequently regard their travels as an evil necessary to sustain their life-style in suburban areas removed from the inner city. Such a commuter must have at least a moderate income to support both his commuting and his life-style. Frequently, his income derives from substantial educational attainment.

Commuters from a rural region often fail to fit this stereotype of a commuter. They may pick their abode for cultural or social reasons without particular concern for economic considerations. The more affluent rural residents may locate quite close to their place of employment, exactly the opposite of the situation around a major metropolitan center.

Previous studies of commuting behavior concur on one point. Commuters do not fit a concise profile, local conditions and social, cultural, and economic factors heavily influence who is the commuter.

The study reported here focuses on north-central New Mexico, the region of the original Spanish settlement and the primary part of the state where residents of Spanish descent constitute a majority of the population. The study assessed people's willingness to commute and to relocate in response to various levels of increased income. These responses were related to socioeconomic and personal factors to extract characteristics which altered mobility. Such factors should be regarded as descriptive, not causative, of the population's aggregate mobility, because any particular person's mobility is a highly personal matter. In fact, about 70 percent of the variation in mobility reflects unidentified personal components while the remaining 30 percent has a well established relation to socioeconomic and identified personal factors.

Ethnicity (Spanish-American and Anglo-American) was included as a possible factor. If it could be isolated from all other factors, it probably would have very little effect of and by itself. Since it cannot be isolated, it describes a host of social and cultural factors in which these subpopulations differ. For example, Eastman has demonstrated that Spanish-Americans have rather different land attitudes from Anglo-Americans. Overall, Spanish-Americans appear much more willing to commute than Anglo-Americans. Upon closer examination, however, ethnicity does not emerge as a primary explanatory variable. Instead, ethnicity conditions the magnitude of the relation between mobility and some of the explanatory variables.

Knowledge of the likelihood of rural residents taking advantage of job opportunities by relocating near the opportunity or by commuting from primarily rural areas to more central places is critical for private investors, planners, and public officials – anyone involved in economic development programs and policies. This report presents results of an analysis of willingness to commute and willingness to relocate of residents of north-central New Mexico. It includes results of analysis of the characteristics of those who are now commuting to work.

The data were collected in a personal interview survey of 800 households in the seven-county region. Every city and most villages were cluster-sampled according to the proportion of regional population. Care was taken to represent the ethnic, sex, and occupational makeup of the total population. Willingness to commute and to relocate were measured by specially constructed bidding games. Analyses were restricted to data from 643 respondents who completed all questions on commuting and relocating.

The central hypothesis of the study was that Spanish-Americans are less mobile than Anglo-Americans in north-central New Mexico. The following sub-hypotheses were tested:

- Young heads of households are more willing to commute and more willing to relocate than are older heads of households.
- Willingness to commute and willingness to relocate increase with years of education.
- High-income earners are less willing to commute and less willing to relocate than are low-income earners.
- A history of past geographic mobility is indicative of higher willingness to commute and willingness to relocate.
- Job training is positively related with willingness to commute and willingness to relocate.
- Willingness to commute and willingness to relocate varies by occupation of the household head.
- Respondent willingness to commute and willingness to relocate is influenced by the household's composition.

These sub-hypotheses were tested and evaluated through both tabular analysis and stepwise multiple

regression techniques. The tabular analysis served initially to identify factors which might be significant in the more rigorous regression analysis. These descriptive results support or contradict a number of the sub-hypotheses. Final judgment on these sub-hypotheses, however, was made following the regression analysis.

Analysis revealed that Spanish-Americans were more willing to commute but less willing to relocate than were Anglo-Americans. However, ethnicity was not a primary explanatory factor for willingness to commute, but rather it conditions other factors related to mobility.

Tabular analysis results supported the sub-hypothesis that young heads of households are more willing to commute than are older heads of households. Age, however, was not a significant factor in the multiple regression analysis, so no definite conclusion on the sub-hypothesis was reached. Age of the head of the household was a statistically significant variable in the regression analysis of relocation mobility, and because the regression coefficient was negative (indicating that as heads of households became older they were more reluctant to relocate) this part of the first sub-hypothesis was accepted.

The cross-classification analysis results neither supported nor contradicted the sub-hypothesis on willingness to commute in relation to years of education. The sub-hypothesis was rejected, however, on the basis that years of education of the head of the household was a significant variable in the multiple regression analysis, and the negative regression coefficient indicated a decline in willingness to commute with higher levels of education attainment. Education was not a major explanatory variable of willingness to relocate, and the regression coefficient was negative, leading to the rejection of the hypothesized positive relationship between willingness to relocate and years of education.

Total family income was a significant variable in both the analysis of commuting and relocation mobility. The positive regression coefficient for total family income is incompatible with the third sub-hypothesis, and therefore led to the rejection of this part of the sub-hypothesis. On the other hand, the coefficient for total family income in the relocation mobility equation supports the hypothesized relationship.

A history of having worked outside the county of residence was an important explanatory variable in the willingness to commute analysis and the positive regression equation led to acceptance of the hypothesized relationship between commuting mobility and past geographic mobility. The hypothesized relationship between willingness to relocate and history of past geographic mobility was not substantiated in either the tabular analysis or the multiple regression analysis.

The sub-hypothesis concerning job training was rejected in the analysis of commuting mobility because this variable did not appear as a significant variable in the regression analysis, but was significant in the analysis of willingness to relocate. Job training positively influences willingness to relocate, but this influence is negatively conditioned by an education-job training interaction.

The sixth sub-hypothesis was accepted because a number of occupational categories were significant in the analyses of both commuting and relocating mobility. In particular, individuals in occupation 41 – craftsmen, foremen, and kindred – and in occupation 42 – operatives and kindred – evidenced a greater willingness to commute than did individuals in the other occupational specified categories. Individuals in occupation 36 – professional, technical, and kindred workers – and occupation 38 – managers, officials, and proprietors – appear to have significant relocation preferences, professional, technical, and kindred workers were more willing to relocate while managers, officials, and proprietors were significantly less willing to relocate than those in other occupational categories.

The seventh sub-hypothesis, relating willingness to commute and to relocate to household composition, was rejected because these factors did not appear as significant in either the regression analysis of willingness to commute or to relocate.

These results are most useful in defining the characteristics of the mobile labor force in north-central New Mexico. Research is now under way to extend this behavioral analysis to projections of the labor forces available to the six major towns and cities in the region. These labor force projections, by incentives scales, should serve both public and private decision-makers interested in population distribution and economic development in north-central New Mexico.

ACKNOWLEDGMENT

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TABLES

A Socioeconomic Analysis of Labor Mobility, North-Central New Mexico

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The President's Task Force on Rural Development asserts:

> Job creation is at the heart of rural development. Private industry should launch a new national effort to help develop the rural countryside in response to, and in cooperation with, local communities exercising their own initiative.[3]

The Commission suggests that private industry has both an opportunity and responsibility in the education and retraining of rural labor forces and should utilize this eager labor force as an instrument for industrial dispersion. Population dispersion through planned dispersion of new job opportunities should yield additional dividends in that it will revitalize rural infrastructures and economies, while lessening the problems of urban congestion.

Private industry decision-makers will, of course, require some knowledge of the quantity and quality of labor available in target development regions. In particular, if a target population is to be reached, they must focus on the likelihood of rural residents taking advantage of job opportunities by relocating near the opportunities or commuting from predominantly rural areas to the more central places within the region. Planners and public officials will require similar assessments in designing economic development programs and policies. This report presents the results of an analysis of willingness to commute and willingness to relocate of residents of north-central New Mexico.

North-central New Mexico is a likely place in terms of quantity of surplus labor resources for private employment opportunity development. The region shares the problems of many rural areas in the United States: it has relatively high underemployment and unemployment rates; low per capita income, resource depletion and erosion; outmigration of its young people; and a preponderance of declining rural communities.[4] The region differs from most other rural areas in that the movement of labor out of agriculture into other sectors of the economy appears to be progressing at a relatively slower rate than the national rate, and it is unique in ethnic balance of population. Here, Spanish-Americans outnumber Anglo-Americans who, in turn, outnumber Indians. The unique social and cultural attitudes presented by this blend of ethnic groups have conditioned the region's past development and appear certain to greatly influence its future development.

OBJECTIVES AND HYPOTHESES OF THE STUDY

The general objective of this study was to identify the social and economic factors affecting present commuting behavior and the willingness to commute and willingness to relocate of north-central New Mexico residents. The central hypothesis of the study was that Spanish-Americans are less mobile than Anglo-Americans in north-central New

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[3]A New Life for the Country, the report of the President's Task Force on Rural Development, March 1970, p. 20.

[4]The characteristics of the north-central New Mexico region are summarized in Carruthers and Eastman, *An Inventory of Natural, Human, and Social Overhead Capital Resources in North Central New Mexico*, New Mexico State University Agricultural Experiment Station, Research Report 184, 1971, Las Cruces, New Mexico.

Mexico. A set of sub-hypotheses that mobility varies within and between ethnic groups in relation to the following socioeconomic characteristics of respondents were also investigated.

- Young heads of households are more willing to commute and more willing to relocate than are older heads of households.
- Willingness to commute and willingness to relocate increase with years of education.
- High income earners are less willing to commute and less willing to relocate than are low income earners.
- A history of past geographic and commuting mobility is indicative of higher willingness to commute and willingness to relocate.
- Job training is positively related with willingness to commute and willingness to relocate.
- Willingness to commute and willingness to relocate varies by occupation of the household head,
- Respondent willingness to commute and willingness to relocate is influenced by the household's composition.

PROCEDURES

This regional analysis of geographic and commuting mobility was part of a more comprehensive socioeconomic analysis of north-central New Mexico.

Data Collection

Primary data for analysis were obtained by personal interview of 800 households in north-central New Mexico.[5] Cluster sub-samples were drawn from each city and most of the rural villages to reflect the rural-urban, sex, and occupational makeup of the region's population (see figure 1). Each area was sampled in proportion to its contributions to total regional population. The sample was drawn from the adult working-age population of the counties shown in figure 1, according to a modified cluster sampling technique. This region conforms closely to the area of original Spanish settlement and is the region in New Mexico where Spanish-Americans constitute a majority of the population. Los Alamos, the home of the Atomic Energy Commission Research Laboratories, was included in the study area because the laboratories are a major employer and, hence, an integral part of the economic region. Furthermore, its population, which is largely professional, upper-middle class, and Anglo, provides an "outside" sub-sample for comparison with the local population.

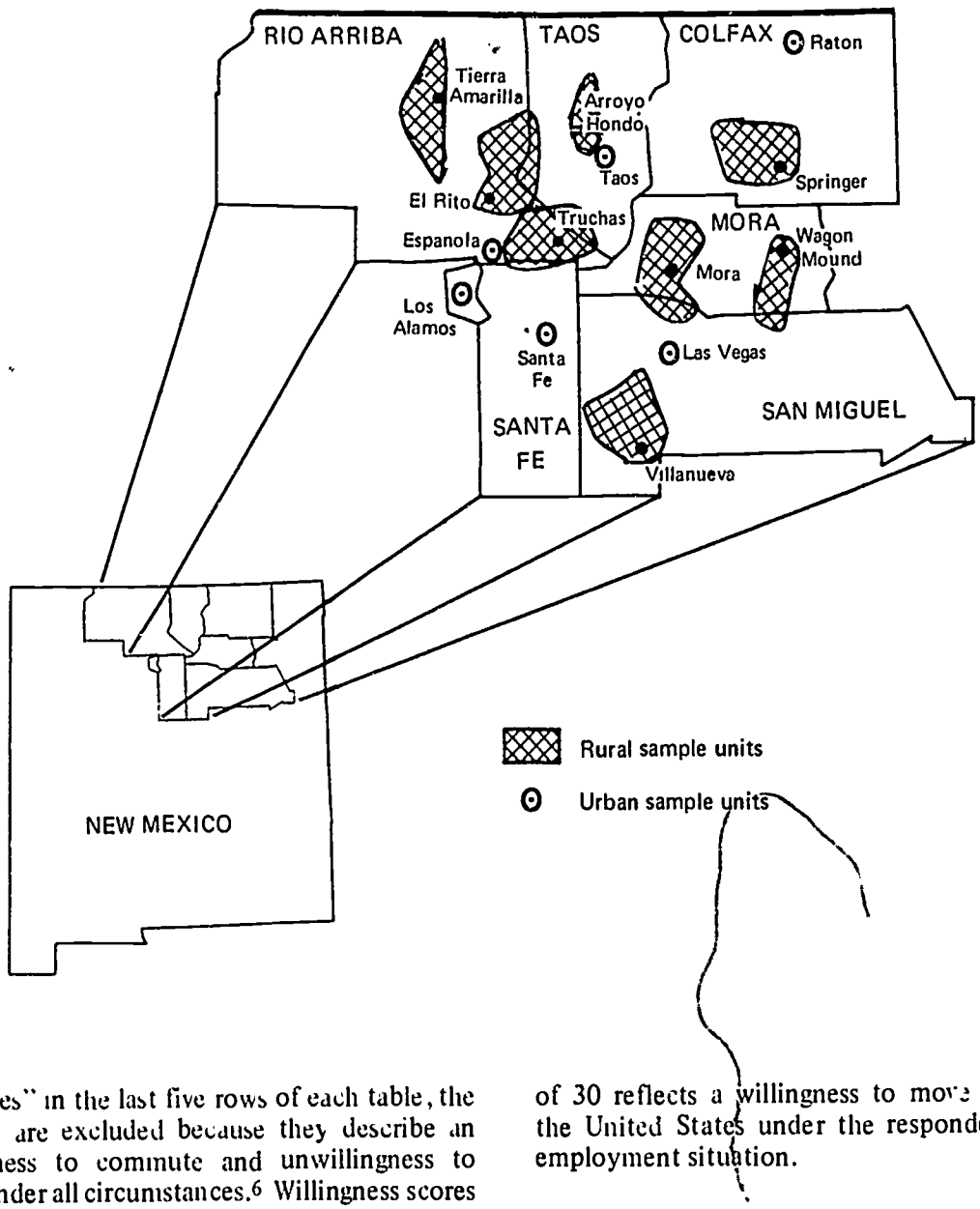
Subsequent analysis was restricted to information gained from 643 completed questionnaires. Respondents not answering all questions considered in the mobility study were excluded from the sample population. The questionnaire was translated into Spanish so that each respondent could be interviewed in the language of his preference.

The segments of the general questionnaire dealing with this study are presented in Appendix A. The primary response resulted from an interview technique in which each respondent indicated how far his household was willing to commute or where they would relocate to receive specified awards. Specifically, respondents were asked to indicate acceptable commuting times, (0, 15, 30, 60, 90 minutes one way, and return home only on the weekend) for each of the following rewards: 1) no increase in income; 2) $100 per month increase in income; 3) $100 per month increase in income plus commuting expenses; 4) $200 per month increase in income; 5) $200 per month increase in income plus commuting expenses, and 6) $300 per month increase in income. A similar bidding game for willingness to relocate required respondents to indicate where they were willing to move (not willing to relocate; only within the county; only within the region; only within the state; only as far as neighboring states; or anywhere in the U.S.) given the following incentives: 1) equal conditions; 2) $100 per month increase in income, 3) $100 per month increase in income plus moving cost, 4) $100 per month increase in income plus moving costs. plus job training, 5) $200 per month, and 6) $300 per month increase in income.

Based on each respondent's answers a 6 x 6 table was produced (rewards on the top and degree of mobility on the side) with each cell containing a yes or no. (For example, see figure 2, the bidding table for willingness to commute.) The willingness to commute and willingness to relocate reflect the respondent's degree of mobility, but subsequent analysis required its quantification. Hence, the willingness to commute and willingness to relocate indices were defined as the number of cells con-

[5]For a more detailed description of data collection procedures see James A. Liefer, "Attitudes Toward Land Ownership and Usage in North-Central New Mexico," unpublished masters thesis, New Mexico State University, Las Cruces, June, 1970.

Fig. 1. Study region, north-central New Mexico, rural and urban sample units



taining "yes" in the last five rows of each table, the first rows are excluded because they describe an unwillingness to commute and unwillingness to relocate under all circumstances.[6] Willingness scores may, therefore, range from zero at one extreme to 30 at the other. A zero score, in either case, would represent an unwillingness to commute or to relocate under any condition. A willingness-to-commute score of 30 indicates a willingness to commute, coming home only on weekends, for no change in income. A willingness-to-relocate score of 30 reflects a willingness to move anywhere in the United States under the respondent's current employment situation.

Analysis

The analysis included two phases. Hypotheses were initially evaluated from the results of a cross-classification analysis of mean scores by ethnic group and other socioeconomic variables. Cross-classification analysis is limited in that factor interactions are not considered; however, it does permit identification of apparent contributing factors. The second phase included a step-wise multiple regression analysis of socioeconomic characteristics and the two dependent variables, willingness to commute and willingness to relocate. Subsequent evaluation of willingness to commute results suggested

[6]This response does not measure willingness in the same sense as measuring weight and length. Yet it scales willingness because the score increases when conditions which will motivate the respondent to be more mobile increases. Further, normality assumptions which underlie some of our subsequent statistical procedures seem plausible because the response results from the sum of 30 dichotomous basic responses, a condition which allows the application of a generalized version of the central limit theorem.

Fig. 2. Bidding table, willingness to commute

Score	Willingness to Commute	Conditions					
		Current	$100/Mo.	$100/Mo. +Expenses	$200/Mo.	$200/Mo. +Expenses	$300/Mo.
0	Not willing to commute	x	x	x	x	x	x
1	15 minutes, one way			x	x	x	x
2	30 minutes, one way				x	x	x
3	1 hour, one way					x	x
4	1½ hours, one way						x
5	Commute to work & return home only on weekends						

The score for this observation would be 10; 4 yes responses in row 2, 3 yes responses in row 3, 2 in row 4, 1 in row 5, and none in row 6. Row 1 is not included because it does not reflect willingness to commute.

the need to consider analytically three apparent subpopulations: those who would not commute under any circumstances (zero score), those who expressed degrees of willingness to commute (scores from 1 to 29), and those who would commute and return only on weekends under current reward conditions (score of 30). To evaluate the characteristics of these subpopulations, a three category discriminant analysis technique was utilized.

COMMUTING MOBILITY

Present Commuting Patterns

There are basically six labor destination points in north-central New Mexico: Santa Fe, Los Alamos, Las Vegas, Raton, Taos, and Espanola. Shelly, using data from the survey, computed the percentage distribution of commuters by commuting time and these six work locations.[7] Over 92 percent of those commuting to Santa Fe commuted 15 minutes or less one way (table 1). At the other extreme, commuters to Los Alamos and Espanola spent longer times commuting. Espanola, located approximately equal distance from both Los Alamos and Santa Fe, serves as a "bedroom community" for both of these larger centers. At the same time, a high percentage of Espanola's work force interviewed drove for more than 15 minutes one way to work. Many Espanola residents apparently commute to Los Alamos and Santa Fe for work, while residents of surrounding rural areas commute to Espanola for work.

[7] Vernon Shelley, "Commuting Patterns in North-Central New Mexico," a paper submitted to Dr. Clyde Eastman in fulfillment of the requirements of Sociology 598 - Special Problem, September 4, 1970, New Mexico State University, Las Cruces, New Mexico.

Table 1. Percentage distribution of commuters, by commuting time and work location, 1,069 employed residents, north-central New Mexico, 1969

Commuting Time	Santa Fe	Los Alamos	Las Vegas	Raton	Taos	Espanola	All Locations
				-percent			
15 min. or less	92.10	67.79	83.70	89.83	80.00	51.16	82.03
16 to 30 min.	1.72	10.74	4.35	3.39	2.22	34.88	6.33
31 to 45 min.	2.75	13.42	1.09	3.39	6.67	6.98	5.45
46 to 60 min.	1.37	3.35	6.52	1.69	2.22	4.65	2.80
61 to 75 min.	.69	3.35	3.26	1.69	--	--	1.62
76 to 90 min.	1.03	.67	--	--	6.67	--	1.03
Over 90 min.	.34	.67	1.09	--	2.22	2.32	.74

Shelley concluded from his analysis of north-central New Mexico commuters that.

- A larger proportion of males commute than females.
- There is an inverse relationship between age and commuting time.
- A larger proportion of the Spanish-American population commutes than the Anglo-American population.
- There is an inverse relationship between the educational level of an employee and the extent of commuting.
- The health of an employed person does not appear to affect the extent of commuting.
- Higher occupational status individuals commute less, with respect to time dimension, than do lower occupational status individuals.
- There is no relation between level of income and commuting time.
- Commuters tend to have larger families than non-commuters.[8]

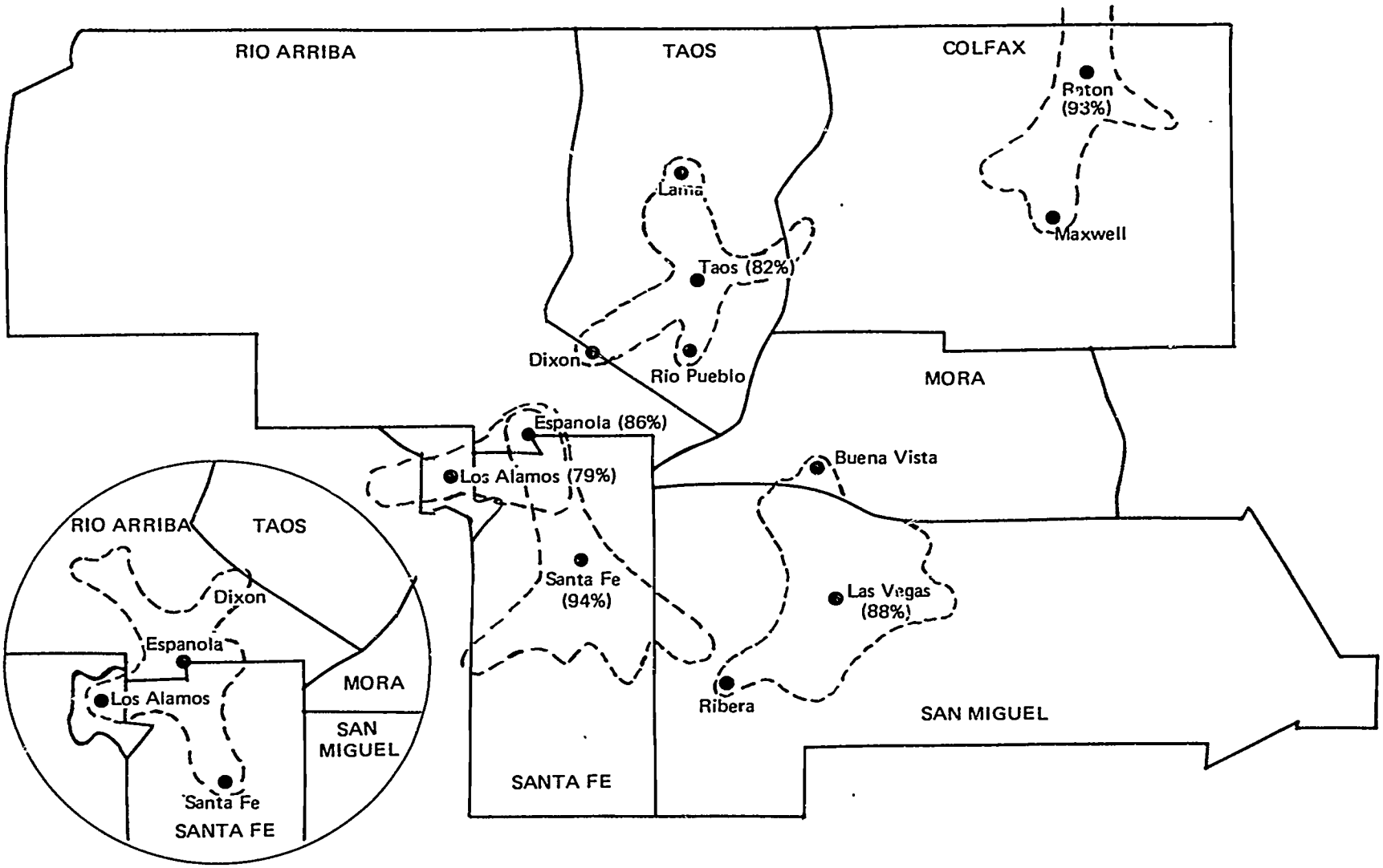
A definite pattern emerges from the above findings. Commuters tend to be younger, Spanish-American, and male with lower occupational status, lower educational levels, and larger families (more dependents). Although no data were collected, cost and/or availability of housing and job security were often mentioned as important factors in the decision to move from rural areas into the cities. Most villages in this region are predominantly Spanish-American, and this commuting pattern probably represents the first migratory step from rural to urban life for many younger families. Indeed, it is very difficult to find many able-bodied men of working age in the more remote villages, especially during the summer. They are off working in the harvest fields, on construction, and at other seasonal employment. It is equally important to dwell for a moment on the two factors not related to commuting, health and wealth. Despite the findings on education and occupational status, no patterned relationship was found for income and commuting time. One might expect healthier people to commute further, but this was not the case.

Commuting patterns for north-central New Mexico are illustrated in figure 3. The dotted lines delimit the area within a 30-minute drive of the central place. The percentage of commuters in the sample who lived within the 30-minute radius is shown in parentheses. It varies from 79 percent in Los Alamos to 94 percent in Santa Fe. Very few (less than two percent) commute more than one hour each way. One hour seems to be the practical limit for most people; if their work is farther, they stay away from home and commute on weekends.

Three labor markets—Las Vegas, Raton, and Taos—are essentially isolated, while the other three - Los Alamos, Espanola, and Santa Fe—are interconnected. Some workers in each of the three commute from both the other cities. Very few villages in north-central New Mexico are outside reasonable commuting distance (i.e., 45 to 60 minutes) from a labor market area. Many are within 30 minutes. The major exceptions are Chama and the Tierra Amarilla-Park View area of northern Rio Arriba County. Improved roads in the region have led to this situation, as has the wider availability of the automobile. The Chimayo Valley is one of the few remaining densely populated areas where a narrow winding road seriously slows travel.

[8] Ibid, pp. 56-57.

Fig. 3. Principal labor market areas in north-central New Mexico (Espanola market area is inset)



--- Indicates areas within a 30-minute drive of the market city
(%) Percentage of sample commuters having a 30-minute drive or less

Willingness to Commute

Cross-classification analysis results. It was hypothesized that Spanish-Americans in north-central New Mexico were less willing to commute than were the region's Anglo-Americans. The analysis of mean commuting mobility scores strongly implies the opposite. As indicated in table 2, the mean score of 14.14 for Anglo-Americans was considerably lower than Spanish-Americans' average score of 20.00. The average score for Spanish-Americans indicated a willingness to commute for a driving time of slightly over one hour, one way; this score for Anglo-Americans reflected their lesser willingness to commute for a driving time of only one-half hour, one way. The magnitude of the difference between the average scores suggests, in conflict with the hypothesis, significantly greater willingness to commute by Spanish-Americans.

Additional information in this table supports sub-hypothesis 4, a history of past commuting mobility is indicative of higher willingness to commute. One-half of the Anglo-Americans had worked outside their county of residence. The mean scores for those Anglos having worked elsewhere is over seven points higher than those without this experience. The mean score for Spanish-Americans without outside work experience approached that of Anglos with this experience, i.e., they were as willing to commute to the same extent as Anglos having worked outside the county. The 186 Spanish-Americans in the sample having worked outside the county had over five points higher score than did the other Spanish-American respondents.

The evidence in table 3 was not sufficient to either substantiate or refute the sub-hypothesis that willingness to commute increased with years of education. Mean commuting scores for the Anglo-American group increased initially and then declined at higher education categories. The lowest commuting mobility score (11.01) was for Anglo-Americans having 17 or more years of education. Spanish-Americans responded somewhat differently, being relatively constant through the third category (11 to 12 years) and then declining for those with some college education. The trend exhibited for all respondents appears to contradict the hypothesized relationship; in the aggregate, highly educated members of the population are least willing to commute.

It was hypothesized that higher-income earners would be less willing to commute than low-income respondents. The evidence in table 4 partially

Table 2. Number of respondents and mean commuting mobility scores, by ethnic group and history of having worked or not worked outside the county of residence, north-central New Mexico, 1969

Worked Outside County	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
Yes	113	17.73	186	23.13	299	21.09
No	113	10.56	231	17.47	344	15.20
Total	226	14.14	417	20.00	643	17.94

Table 3. Number of respondents and mean commuting mobility scores, by ethnic group and education of head of household, north-central New Mexico, 1969

Years of Education	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0-6	3	16.67	60	20.98	63	19.98
7-10	20	17.90	152	20.43	172	20.30
11-12	71	15.32	133	20.52	204	18.71
13-16	74	14.34	50	17.68	124	15.69
17+	58	11.01	22	15.09	80	12.14
Total	226	14.14	417	20.00	643	17.94

Table 4. Number of respondents and mean commuting mobility scores, by ethnic group and total family income categories, north-central New Mexico, 1969

Total Family Income in Dollars	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0- 2,999	6	19.17	71	20.04	77	19.97
3,000- 5,999	17	18.53	152	21.28	169	21.00
6,000- 8,999	47	14.30	95	20.43	142	18.40
9,000-11,999	50	15.58	48	17.10	108	16.40
12,000-14,999	40	15.47	26	19.19	66	16.94
15,000 +	66	10.55	15	16.60	81	11.67
Total	226	14.14	417	20.00	643	17.94

supports the sub-hypothesis in that both Anglo-Americans and Spanish-Americans earning $15,000 or more per year expressed, on the average, the lowest willingness to commute. This contradicts the commuting patterns of major cities. The trends exhibited for each ethnic group do not substantiate the sub-hypothesis, however, as the mean scores fluctuate by income category. The trend for all responses is more consistent with the sub-hypothesis, but the trend is not convincing enough to readily accept the stated sub-hypothesis.

Of primary interest to private investors is the willingness to commute of individuals in occupations utilized by their firms. The information in table 5 is included to indicate the willingness to commute, by occupation. As a first evaluation, this willingness varies by occupation of the respondent. Of all respondents, managers-officials-proprietors expressed the lowest willingness to commute (12.78), with professional-technical kindred workers (14.39) and clerical and kindred workers (15.15) indicating slightly more enthusiasm for commuting. Operative and kindred workers expressed the highest willingness to commute to job opportunities (23.65), followed closely by Spanish-American farm laborers and foremen. Salesworkers (21.36), craftsmen-foremen and kindred workers (21.30), and unskilled laborers (21.56) had consistent and relatively high willingness-to-commute mean scores. Evidence in the table supports the sub-hypothesis of a difference in willingness to commute among occupational categories.

The information in table 6 affirms a difference in willingness to commute according to household composition, supporting sub-hypothesis 7 listed earlier. There are no discernible trends with respect to composition from these statistics, but they do point out a relative reluctance on the part of respondents in categories 0, 2, and 5 to commute to job opportunities. Respondents in category 0–single persons–may have more flexibility in where they live and thus may be more likely to live near their place of work.

Respondent job training experience has little impact on willingness to commute. Anglos with job training were slightly more willing to commute than were Anglos without this experience; the mean

Table 5. Number of respondents and mean commuting mobility scores, by ethnic group and occupational classification, north-central New Mexico, 1969

	Ethnic Group					
	Anglo-American		Spanish-American		Total	
Occupational Categories*	No.	Mean score	No.	Mean score	No.	Mean score
36	94	12.52	51	17.82	145	14.39
37	2	18.00	23	17.70	25	17.72
38	45	12.47	46	13.09	91	12.78
39	12	10.17	22	17.86	34	15.15
40	3	20.00	8	21.88	11	21.36
41	43	18.19	97	22.68	140	21.30
42	6	25.00	40	23.45	46	23.65
43	19	13.74	64	19.86	83	18.46
44	0	0.0	14	23.29	14	23.29
45	2	23.50	52	21.48	54	21.56
Total	226	14.14	417	20.00	643	17.94

*Occupational Categories:
36 - Professional, technical, and kindred workers
37 - Farmers and farm managers
38 - Managers, officials, and proprietors
39 - Clerical and kindred workers
40 - Salesworkers
41 - Craftsmen, foremen and kindred workers
42 - Operatives and kindred workers
43 - Service workers and private household workers
44 - Farm laborers and foremen
45 - Laborers unskilled

Table 6. Number of respondents and mean commuting mobility scores, by ethnic group and household composition, north-central New Mexico, 1969

	Ethnic Group					
	Anglo-American		Spanish-American		Total	
Household Composition*	No.	Mean score	No.	Mean score	No.	Mean score
0	9	12.22	12	15.17	21	13.90
1	6	11.00	22	19.36	28	17.57
2	50	13.40	42	16.76	92	14.93
3	18	15.33	44	19.20	62	18.08
4	48	14.69	82	20.34	130	18.25
5	34	11.44	26	19.23	60	14.82
6	21	14.76	78	21.41	99	20.00
7	31	17.61	82	20.61	113	19.79
8	9	13.78	29	22.52	38	20.45
Total	226	14.14	417	20.00	643	17.94

*Household composition:
0 - Single person in the household
1 - Adults only male head (or female) under 40
2 - Adults only male head (or female) over 40
3 - Adults with children under 5
4 - Adults with children 5-15
5 - Adults with children 16-20
6 - Adults with children up to 5 and 5-15
7 - Adults with children 5-15 and 16-20
8 - Adults with children up to 5, 5-15, and 16-20

Table 7. Number of respondents and mean commuting mobility scores, by ethnic group and job training experience, north-central New Mexico, 1969

Job Training	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
Yes	123	14.41	170	19.42	293	17.32
No	103	13.83	247	20.39	350	18.46

scores for Spanish-Americans reflect a reversal in this outcome, but as with Anglo respondents, the difference in scores was not wide (table 7).

As age of the head of household increases, there is a greater reluctance, in the aggregate, to commute to work (table 8). The exception to the general rule appears to be Spanish-Americans in the 46 to 55 year age group. In this category, 88 respondents were willing to commute at least 1 to 1½ hours driving time each way, with some being willing to return only on weekends under enhanced employ ment conditions. Nevertheless, evidence in this table supports the sub-hypothesis of an inverse relationship between age of the head of household and willingness to commute.

Regression analysis results. Regression analysis allows simultaneous consideration of the factors summarized in the previous section, recognition of factor interactions, determination of the significance of these factors on willingness to commute and offers within the framework a convenient "shorthand" method of reporting research results.

Table 8. Number of respondents and mean commuting mobility scores, by ethnic group and age categories, north-central New Mexico, 1969

Age - Head of Household	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
15-25	12	20.42	37	20.14	49	20.20
26-35	35	14.00	100	20.70	135	18.96
36-45	69	15.39	103	19.48	172	17.84
46-55	66	12.55	88	22.08	154	17.99
56-65	40	13.52	80	18.74	120	17.00
65+	4	7.50	9	8.33	15	8.08

The statistical analyses were undertaken in the realization that, relative to commuting, respondents could belong to any of the following groups:

- Ones who could not be motivated to commute.
- Ones who could be induced to commute for sufficient rewards.
- Ones who would commute any distance to have a job. These correspond respectively to commuting scores of 0, 1 to 29, and 30. There were 67, 459, and 117 respondents in these respective categories.

A three population discriminant analysis substantiated this supposition. A history of having worked outside the county and a large interaction between ethnicity and occupational category 38 (managers, officials, proprietors) provided the major basis for the discrimination. Variables related to ethnicity, employment, and education provided a minor base for discrimination.

Discriminant analysis results prompted stepwise multiple regression analysis of responses from motivatable commuters (scores of 1 to 30) as well as the whole data set. The results are shown in table 9, where again respondent history of having worked outside the county stands out as the dominant variable. Otherwise, family dependency ratio, occupation, employment history and education dominate among variables which serve to predict willingness to commute.[9] Ethnicity has little if any overall effect, but has an important conditioning effect with income and occupational categories. In particular, Spanish-Americans' willingness to commute goes up with their income, probably reflecting the means through which they can raise their income.

The results of the regression analysis for all data appear in table 9. The regressor variates account for 32 percent of the observed variation, large enough for useful consideration, but indicating a need for further study. The independent variables for all data are listed in order of relative importance as indicated by the computed F to remove. For interpretation purposes the significant independent variables were grouped as follows: 1) work characteristics, 2) household characteristics, 3) educational characteristics, and 4) occupational characteristics.

[9]Dependency ratio is the number of household members working to the number in the household.

Table 9. Stepwise multiple regression of commuting mobility, north-central New Mexico households, 1969

Dependent variable:	Commuting mobility score		
Scale:	0 to 30		
Population:	643 households		
		Total Sample	Motivatable Commuters
Special characteristics:	Multiple correlation coefficient (R)	.5647	.4491
	Fraction of explained variance (R^2)	.3189	.2017
	F ratio	16.070	16.2750
	Constant term	117.6990	19.0378
	Regession degrees of freedom	19	7
	Residual degrees of freedom	623	451

	Total Sample		Motivatable Commuters	
Independent variable	Regression Coefficient	F to Remove[1]	Regression Coefficient	F to Remove[1]
Worked out of county	4.63	46.4	2.19	14.8
Dependency ratio	-6.39	20.8		
Ethnicity by income	.27	11.9		
Occupational category 41 (craftsmen, foremen, and kindred workers)	2.809	11.6	1.78	6.9
Weeks worked in 1968	- .133	10.1		
Ethnicity by occupation 38 (managers, officials, and proprietors)	-4.29	10.1		
Total Family income (1000's)	.30	9.6	- .11	4.9
Years of education of head of household	- .302	9.4	- .285	10.7
Occupation category 42 (operatives and kindred)	9.12	7.3	2.68	5.9
Health by education	.00105	6.2	.00061	2.9
Number of household members working	1.46	5.4		
Education by household composition 4 - children 5-15	- .205	5.0		
Home ownership	-1.72	4.1		
Employed in 1968	7.41	4.0		
Vehicle ownership	3.25	3.0		
Birthplace of head of household	1.44	2.9		
Occupational category 40 (salesworkers)	4.22	2.9		
Residence by income	.11	2.1		
Ethnicity by occupational category 42 (operatives and kindred workers)	-5.1	2.0		
Ethnicity			2.33	11.3

[1]F to Remove is a partial F value used in the stepwise regression technique to determine if independent variables were to be retained in the equation. All variables with partial F values less than 2.0 were deleted.

Work characteristics. Important work or employment characteristics included a history of having worked outside the county, number of weeks worked, and number of additional family members working. A history of past commuting was the most important explanatory variable (a dummy variable) in the regression equation (F value to remove of 46.4) with the highest contribution to R^2 (9.26 percent). The positive regression coefficient implied that heads of households who have commuted

in the past remain more willing to commute than heads of households who have not commuted in the past. A negative regression coefficient for number of weeks worked in 1968 indicated that fully employed heads of households are less willing to commute than are the unemployed or underemployed. Willingness to commute increased as the number of family members working increased.

Household characteristics. This category included. 1) total family income, 2) interaction between ethnicity and total family income, 3) home ownership, and 4) dependency ratio.

Willingness to commute generally decreased as income went up (indicated by its negative regression coefficient). Further, home-owning households were less willing to commute than households who were renting a place of residence.

A dependency ratio was calculated by dividing the number of household members into the number of household members who were working. Its negative regression coefficient suggests that willingness to commute increased as households had a larger proportion of dependents.

Educational characteristics.. The educational attainment of the head of household was hypothesized to be positively related to commuting mobility. The multiple regression analysis indicated that higher educational attainment has the opposite effect on expressed willingness to commute, hence the sub-hypothesis is rejected. The interaction between education and the following socioeconomic variables were important. 1) health of the head of household and 2) household composition 4–children 5 to 15 years old.

The statistically significant education interaction regression coefficients, with the exception of the interaction with health, are negative. This partially contradicts a study sub-hypothesis that willingness to commute is directly associated with level of educational attainment. However, the regression coefficient for the interaction between health of head of household and education is positive and suggests, that as educational level increases for heads of households in good health, their willingness to commute will be greater. Otherwise, more education decreases willingness to commute, perhaps because the more educated respondents have greater job security and are located nearer their work.

Occupational characteristics. A job description for every head of household was obtained and classified into one of nine occupational categories. These categories were handled as dummy or (0, 1) variables. Results of the stepwise regression analysis indicated that coefficients for the following occupational categories were important 1) occupation 40 salesworkers. 2) occupation 41 craftsmen, foremen, and kindred workers; and 3) occupation 42–operatives and kindred workers.

The three significant occupational categories had positive regression coefficients indicating that heads of households in these occupational categories were more mobile relative to heads of households in the other occupational catagories. The most mobile occupational category included salesworkers, the majority of whom were probably commuting at the time they were interviewed.

The interaction term of occupation 38, containing managers-officials-proprietors, and ethnicity has a negative regression coefficient. A similar negative regression coefficient was obtained when ethnicity was combined with occupation category 42, which contained operatives and kindred workers. These results indicated that Spanish-Americans in occupational categories 38 and 42 are less willing to commute than Anglo-Americans in the same categories

Willingness to commute was hypothesized to be higher for young heads of households than it was for older heads of households. Preliminary tabular analysis and multiple regression analysis indicated that this hypothesized relationship did not exist.

RELOCATION MOBILITY

A once popularly professed strategy for rural development was to relocate rural residents near economic opportunities, in the major cities and growing central places. It is now recognized that this strategy–perhaps naturally evolving to the extreme–has contributed, directly and indirectly, to a number of the problems in these cities. With recent emerging interest in the new cities concept, there will be renewed interest in the willingness of rural people to relocate. However, this interest will be in the new context and not directed as much to shifting of labor resources to major industrial areas. This section on willingness to relocate is included becausc it is of interest as the country considers population distribution policies and because it supplements the report on willingness to commute with further evidence of this region's labor mobility. This information must be interpreted in the light that none of the respondents were ex-residents of the region, i.e., they had moved away and never returned. For a complete and proper assessment of the factors influencing willingness to relocate, some of these ex-residents would have to be interviewed to identify the elements contributing to their decision to move

Tabular Analysis Results

The general study hypothesis was that Spanish-Americans in the study area were less mobile than their Anglo-American neighbors; in this analysis relocation mobility was the central issue. The mean willingness to relocate score for Spanish-Americans was 11.43, the score for Anglo-Americans was 13.65, thus tabular analysis supports this sub-hypothesis. The sub-hypothesis specifying an inverse relationship between age and willingness to relocate is strongly substantiated by the evidence in table 10. The aggregate mean score declines 17.7 points over the age continuum, reflecting, for those 65 years or older, a willingness to relocate only in the immediate vicinity. Respondents in the 15 to 25 age groups, on the other hand, were willing to relocate within the state or as far as neighboring states. These statistics reflect a common occurrence in many rural areas of this country—the young people are leaving, reducing the indigenous population of rural regions to a few children, the retired, and older working adults.

Home ownership was thought to have some bearing on willingness of north-central New Mexico residents to relocate. Over 75 percent of the respondents indicated they owned or were in the process of purchasing their homes (table 11). An approximate eight-point difference between aggregate mean scores of home owners and non-home owners suggested that home ownership may constrain future relocation mobility. Both Spanish-Americans and Anglo-Americans who owned their homes expressed rather low mobility intentions. Anglo-Americans who were renting their place of residence appeared to be relatively willing to relocate.

Table 10. Number of respondents and mean relocation mobility scores, by ethnic group and age categories, north-central New Mexico, 1969

Age in Years	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
15-25	12	25.33	37	21.03	49	22.08
26-35	35	19.69	100	14.32	135	15.17
36-45	69	13.78	103	10.83	172	12.02
46-55	66	12.85	88	10.95	154	11.77
56-65	40	6.82	80	5.49	120	5.93
65+	4	5.00	9	4.11	13	4.38
Total	226	13.65	417	11.43	643	12.21

Table 11. Number of respondents and mean relocation mobility scores, by ethnic group and home ownership, north-central New Mexico, 1969

Home Ownership	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
Own	166	11.49	325	9.68	491	10.30
Rent	60	19.62	92	17.60	152	18.39

The evidence on relocation mobility by education levels presented in table 12 is inconsistent with the hypothesized relationship of increased mobility at higher levels of education. Anglo-Americans with 0 to 6 years of education indicated the greatest willingness to relocate, while the Spanish-American sub-group in the same education category had the least enthusiasm for relocation. Perhaps this partially explains the relatively high unemployment level among Spanish-Americans in this region. Spanish-Americans apparently become increasingly willing to commute up to 16 years of education, but advanced college training curbs this tendency. The Anglo-American response was more erratic with respect to educational levels.

It was hypothesized that past moving experience would be positively associated with higher willingness to relocate. The mean mobility scores presented in table 13 indicate this to be the case. The household moves specified are those which occurred outside the respondent's county of residence; i.e., all but local moves were counted.

Spanish-Americans with incomes in excess of $12,000 per year expressed a willingness to re-

Table 12. Number of respondents and mean relocation mobility scores, by ethnic group and education categories, north-central New Mexico, 1969

Years of Education	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0-6	3	18.33	60	9.25	63	9.68
7-10	20	14.30	152	10.32	172	10.72
11-12	71	15.26	133	12.83	204	13.68
13-16	74	13.84	50	14.62	124	14.15
17+	58	11.99	22	9.32	80	11.26

Table 13. Number of respondents and mean relocation mobility scores, by ethnic group and number of household moves, north-central New Mexico, 1969

Number of Moves	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0	23	10.61	175	10.10	198	10.16
1	83	11.72	54	11.17	137	11.50
2	54	14.61	120	11.40	174	12.40
3+	66	16.35	68	15.12	134	15.73

locate, for the incentives offered, only within the county of residence or, for a limited number, only within the north-central New Mexico region. Anglo-Americans with incomes over $15,000 per year expressed an average willingness to relocate only within the region (table 14). This evidence supports the stated sub-hypothesis—high-income earners are less willing to relocate than are low-income earners—particularly if high income refers to those earning $15,000 per year or more.

There is extreme variation in willingness to relocate by household composition category (table 15). In the aggregate, respondents in category 3—adults with children less than 5 (19.84), and category 1—adults only, head under 40 (17.57)—were most willing to relocate under the incentives offered. On the other hand, adults only with head over 40 (7.45) and adults with children 16 to 20 (8.45) were reluctant to relocate outside their county of residence. This may reflect the tendency noted earlier for the young to express a greater willingness to relocate than do older respondents. The lowest mean score of the tabular analysis is the 4.81 score expressed by the 26 Spanish-American respondents with children 16 to 20 years of age.

Table 14. Number of respondents and mean relocation mobility scores, by ethnic group and total family income category, north-central New Mexico, 1969

Total Family Income in Dollars	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0- 2,999	6	20.17	71	12.04	77	12.68
3,000- 5,999	17	16.82	152	12.66	169	13.08
6,000- 8,999	47	14.28	95	11.53	142	12.44
9,000-11,999	50	14.88	58	10.29	108	12.42
12,000-14,999	40	14.63	26	6.35	66	11.36
15,000+	66	10.27	15	8.60	81	9.96

Table 15. Number of respondents, and mean geographic relocation scores, by ethnic group and household composition, north-central New Mexico, 1969

Household Composition*	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
0	9	10.33	12	10.67	21	10.52
1	6	23.33	22	16.00	28	17.57
2	50	7.96	42	6.83	92	7.45
3	18	21.00	44	19.36	62	19.84
4	48	15.52	82	10.29	130	12.22
5	34	11.24	26	4.81	60	8.45
6	21	18.52	78	13.86	99	14.85
7	31	15.52	82	10.02	113	11.53
8	9	8.78	29	9.48	38	9.32

*Household composition:
0 - Single number household
1 - Adults only, head under 40
2 - Adults only, head over 40
3 - Adults with children less than 5
4 - Adults with children 5-15
5 - Adults with children 16-20
6 - Adults with children up to 5, 5-15
7 - Adults with children 5-15, 16-20
8 - Adults with children up to 5, 5-15, 16-20

In the aggregate, respondents with job training experience were slightly more willing to consider alternative location than were those without job training. The difference in responses within ethnic groups, as is evident from table 16, is negligible, and this would not support the sub-hypothesis of increased mobility following job training. The number of weeks worked, another job-related factor, was thought to be a partial explanation of variation in willingness to relocate. Logically, it would seem fully employed respondents would express less willingness to relocate than would respondents who had been unemployed in past years. The evidence in table 17, to an extent, supports this deduction, respondents who worked more than 47 weeks had the lowest mean willingness to relocate score. However, the respondents working 24 to 31 and 32 to 39 weeks expressed greater reluctance to moving than did those who worked a very short time or those who approached annual full employment. Possibly, respondents in these middle groups are

Table 16. Number of respondents and mean relocation mobility scores by ethnic group and job training, north-central New Mexico, 1969

Job Training	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
Yes	123	13.92	170	11.95	293	12.77
No	103	13.33	247	11.07	350	11.74

Table 17. Number of respondents and mean relocation mobility scores, by ethnic group and number of weeks worked by the head of household, north-central New Mexico, 1969

Number of Weeks Worked	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish American No.	Spanish American Mean score	Total No.	Total Mean score
8-15	0	0.0	1	0.0	1	0.0
16-23	1	0.0	13	19.46	14	18.07
24-31	1	0.0	21	14.00	22	13.36
32-39	4	19.00	12	11.25	16	13.19
40-47	8	16.88	25	16.72	33	16.76
47+	212	13.56	345	10.63	557	11.74

Table 18. Number of respondents and mean relocation mobility scores, by ethnic groups and occupational category, north-central New Mexico, 1969

Occupational Category*	Ethnic Group: Anglo-American No.	Anglo-American Mean score	Spanish-American No.	Spanish-American Mean score	Total No.	Total Mean score
36	94	15.33	51	11.57	145	14.01
37	2	9.00	23	6.22	25	6.44
38	45	9.16	46	6.33	91	7.73
39	12	12.08	22	12.18	34	12.15
40	3	7.33	8	14.88	11	12.82
41	43	14.30	97	13.05	140	13.44
42	6	16.83	40	14.20	46	14.54
43	19	15.32	64	11.58	83	12.43
44	0	0.0	14	12.36	14	12.36
45	2	20.00	52	11.67	54	11.98

* Occupational category:
36 - Professional, technical and kindred workers
37 - Farmers and farm managers
38 - Managers, officials and proprietors
39 - Clerical and kindred workers
40 - Salesworkers
41 - Craftsmen, foremen and kindred workers
42 - Operatives and kindred workers
43 - Service workers and private household workers
44 - Farm labores and foremen
45 - Laborers unskilled

farmers who spend off-season periods in the non-agricultural labor force.

Except for farmers and farm managers and managers-officials-proprietors, respondents expressed fairly similar degrees of willingness to relocate by occupational category (table 18). In these two categories, individuals were willing to relocate, on the average, only within their current county of residence. As would be expected, professional-technical-kindred workers and operatives and kindred workers expressed the least reluctance to moving. However, when viewed by occupation, none of the respondents appeared particularly enthusiastic about moving.

Regression Analysis Results

The results of the stepwise multiple regression analysis of the socioeconomic characteristics influencing willingness to relocate are presented in table 19. The dependent variable was the willingness-to-relocate score described in the procedures section of this report.

Again, the willingness-to-move (F to remove) statistic is indicative of the relative importance of the independent variables. Age of the head of household, ethnicity, and home ownership were the most important contributors to the explanation of varying willingness to relocate. All three of these independent variables had negative regression coefficients, indicating an inverse relationship between these variables and willingness to relocate.

Age of head of household accounts for over half of the total variation explained by the regression equation (R^2 of .1207). The negative regression coefficient of -0.25 reflects a reduction in willingness-to-relocate score of 1 for each four years increase in age, all other variables held constant. The significant regression coefficient value of -0.25 supported the sub-hypothesis that younger heads of households were more willing to relocate than older heads of households.

The second most important independent variable was ethnic origin of the head of household. This independent variable was entered as a (0, 1) or dummy variable, 1 was assigned to Spanish-Americans and 0 to Anglo-American respondents.

Table 19. Stepwise multiple regression of relocation mobility, 643 north-central New Mexico households, 1969

Dependent variable:	Relocation mobility score	
Scale:	0 to 30	
Population:	643 households	
Special characteristics:	Multiple correlation coefficient (R)	.4660
	Fraction of explained variance (R^2)	.2362
	F Ratio	10.142
	Constant term	44.85
	Regression degrees of freedom	19
	Residual degrees of freedom	623

Independent variable	Regression Coefficient	F to Remove
Age of head of household	- 0.25	37.32
Ethnicity	-13.46	9.78
Home ownership	- 3.55	9.42
Education by number of household moves	0.05	6.30
Ethnicity by education	0.84	5.83
Occupation 36 (professional, technical, and kindred workers)	11.92	4.50
Occupation 38 (managers, officials and proprietors)	-10.94	4.44
Education by job training	- 0.49	4.32
Number of weeks worked in 1968	- 0.11	4.23
Number of vehicles owned	- 0.91	3.39
Total family income	- 0.0002	3.32
Education by occupation 38 (managers, officials and proprietors)	0.74	3.06
Ethnicity by occupation 36 (professional, technical and kindred workers)	- 4.47	2.88
Job training	4.69	2.49
Education	- 0.56	2.44
Visited major city	- 2.13	2.41
Number of yearly trips to Albuquerque by number of moves	- 0.01	1.99
Education by occupation 36 (professional, technical and kindred workers)	- 0.53	1.92
Ethnicity by occupation 40 (salesworkers)	4.34	1.29

The sign and magnitude of the regression coefficient for ethnicity indicated Spanish-Americans were significantly less willing to relocate than Anglo-Americans. When ethnic origin was combined with education, the interaction coefficient was positive and the coefficient was significantly different from 0. The results suggest Spanish-American willingness to relocate increases with educational attainment.

Home ownership was also entered as a dummy variable. Households owning a home were assigned the value 1 and nonowners were assigned a 0. The significant negative regression coefficient supports the logical premise that households owning their homes are less mobile than households renting their place of residence.

Education by number of household moves, occupations 36 and 38, education by job training interaction, and number of weeks worked were all significant contributors to the explanation of variation in willingness to relocate. Professional, technical, and kindred workers are significantly more willing to relocate than those in other occupations, managers-officials-proprietors are significantly less willing to relocate.

Relationships hypothesized to be significant but rejected on the basis of analysis are those covering 1) total family income, 2) job training, and 3) education and the willingness-to-relocate variable. Education does tend to condition other relationships, but it is not, alone, an important variable.

APPENDIX

EXCERPT FROM QUESTIONNAIRE

ITEMS USED IN MOBILITY STUDY

I. General Characteristics

1.	Interviewer	_____
2.	Location	_____
3.	Sex	M F
4.	Marital Status	S M O
5.	Primary language used in household	S E B O
6.	Ethnicity	SA A
7.	Is the head of household male or female?	M F
8.	Where is the head of households' birthplace?	_____
9.	Has the head of household ever been in the military service?	Yes No
10.	Have you ever been to Denver, Los Angeles or other major cities?	Yes No
11.	How many times a year do you go to Albuquerque?	_____

II. Employment

19. In which county does the head of household earn most of the family income? _____

20. Has the head of household ever worked outside the county in the past five years? yes no
    a. If yes, and in New Mexico, what county? _____
    b. If yes, and outside New Mexico, what state? _____

21. How many years has the head of household lived in Northcentral New Mexico? _____

22. What is the present health of the head of household? P F G E

23. What is the age and number of years of formal education for each member of the household?

Household Members													
Age													
Formal Education (Yrs.)													

CODE: F-Father C-Children Grade School=8 yrs. College=16 yrs.
M-Mother O=Other High School=12 yrs.

24. Has the head of household ever completed any type of job training? yes no
    A. If yes, by which of the following means and for how long? Duration
    a. Completed an apprenticeship a._____
    b. Military vocational training b._____
    c. Public school vocational training c._____
    d. Veteran or government sponsored d._____
    e. Private vocational school e._____
    f. Company sponsored formal training f._____
    g. On the job training g._____
    h. Other: (Specify by which means)_____ h._____

25. What is the employment record for the head of household for 1968?*

Job Description	Location	Duration of Each Job	Income or Wage Rate	Hours Per Week

*If farm, state the size of unit in acres.

26. Did any of the other members of your household have a job outside the home in 1968? yes no

A. If yes, fill in the following table for each member who works outside the home.

Job Description	Location	Duration	Income or Wage Rate	Hours Per Week

27. Which situation applies to your house? Own Rent Other
(Circle one and if other, specify)_____

28. How old is the house? _____

29. Do you own a car or pick-up truck? yes no
A. If yes, how many? _____

30. Has there been any substantial change in the total income of the household in 1969? yes no
A. If yes, please explain:

_____

_____

III. Items Used to Measure Willingness to Commute and Relocate

31. This question is concerned with the head of household's willingness to commute under varying conditions. (Enumerator explains the different driving time situations and then presents the different conditions in order. If person is unemployed, have them base the answers on the head of household's last employment.)

	Willingness to commute	Equal Conditions	$100/mo	$100/mo+ Expenses	$200/mo	$200/mo+ Expenses	$300/mo
0	Not willing to commute						
1	15 minutes driving time one way						
2	30 minutes driving time one way						
3	1 hr. driving time one way						
4	1½ hr. driving time one way						
5	Commute to work and return home only on weekends						

32. This question is concerned with willingness to relocate or move to different areas. (Enumerator--if it is the head of household, ask for his willingness to move; if the wife, ask for the family's willingness; if other person, ask for person's willingness. Have person base their answers on present or most recent employment. Enumerator shows the areas and then presents the different conditions).

		Conditions					
	Willingness to Relocate	Equal Conditions	$100/mo	$100/mo+ Moving Costs	$100/mo+Moving Costs + Job Training	$200/mo	$300/mo
0	Not willing to relocate						
1	Only within the county						
2	Only within the region						
3	Only within the state						
4	Only as far as neighboring states						
5	Anywhere in the U. S.						
6	Preference						

33. Which of the following factors do you thank is more important in making a decision to relocate or move? (Rank the three most important).

a. Money a._____
b. Location b._____
c. Health c._____
d. Climate d._____
e. Family e._____
f. Home ownership f._____
g. Changes in the cost of living g._____
h. Other: (Specify)_____ h._____

34. Has the household or head or household ever moved in the past? yes no

A. If yes, fill in the following table.

Year	From To	Reason For Moving