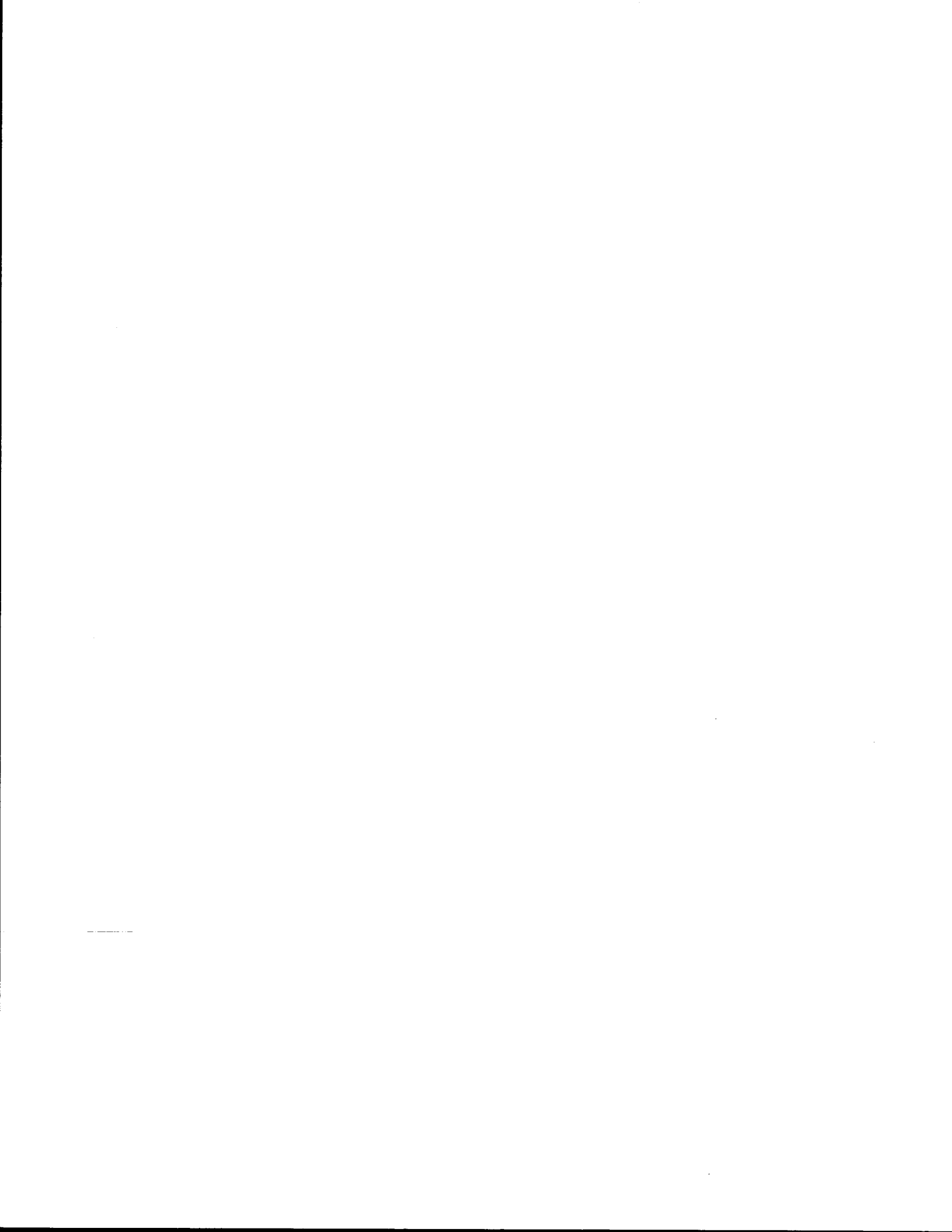


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16. Abstract The years from 1950 to 1980 represented a period of extremely rapid growth in Texas. The trends documented in this report illustrate the impact of three main themes on the amount of commuter traffic that was handled by the roadway system in Texas metropolitan areas. The increase in suburban commuting, commuting by private automobiles and the increase in the number of people in the labor force were the three main themes of "Commuting in America," a report prepared by Alan Pisarski for the Eno Foundation for Transportation. This report used that document as a basis for analyzing the commuting patterns in Texas. In general, Texas urban areas also exhibited these trends. This volume includes data used in the preparation of this study for each Texas metropolitan area. The data are grouped into three appendices. Appendix A -- Basic Demographic Characteristics Appendix B -- Commuter Flows and Patterns Appendix C -- Commuter Mode and Travel Time			
17. Key Words Transportation Planning, Commuting Patterns, Journey-to-Work Demographics, Labor Force, Suburban Commuting, Mode Share, Metropolitan Characteristics, Commuting Travel Time		18. Distribution Statement No restrictions. This document is available to the public through the: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161	
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**An Analysis of Commuting Patterns
in Texas Urban Areas**

By

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Research Report 1193-1F
Volume II - Appendix

Research Study 2-10-88-1193

Sponsored by

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November 1989



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APPENDIX A

BASIC DEMOGRAPHIC CHARACTERISTICS

- Population
- Vehicles
- Labor Force
- Households

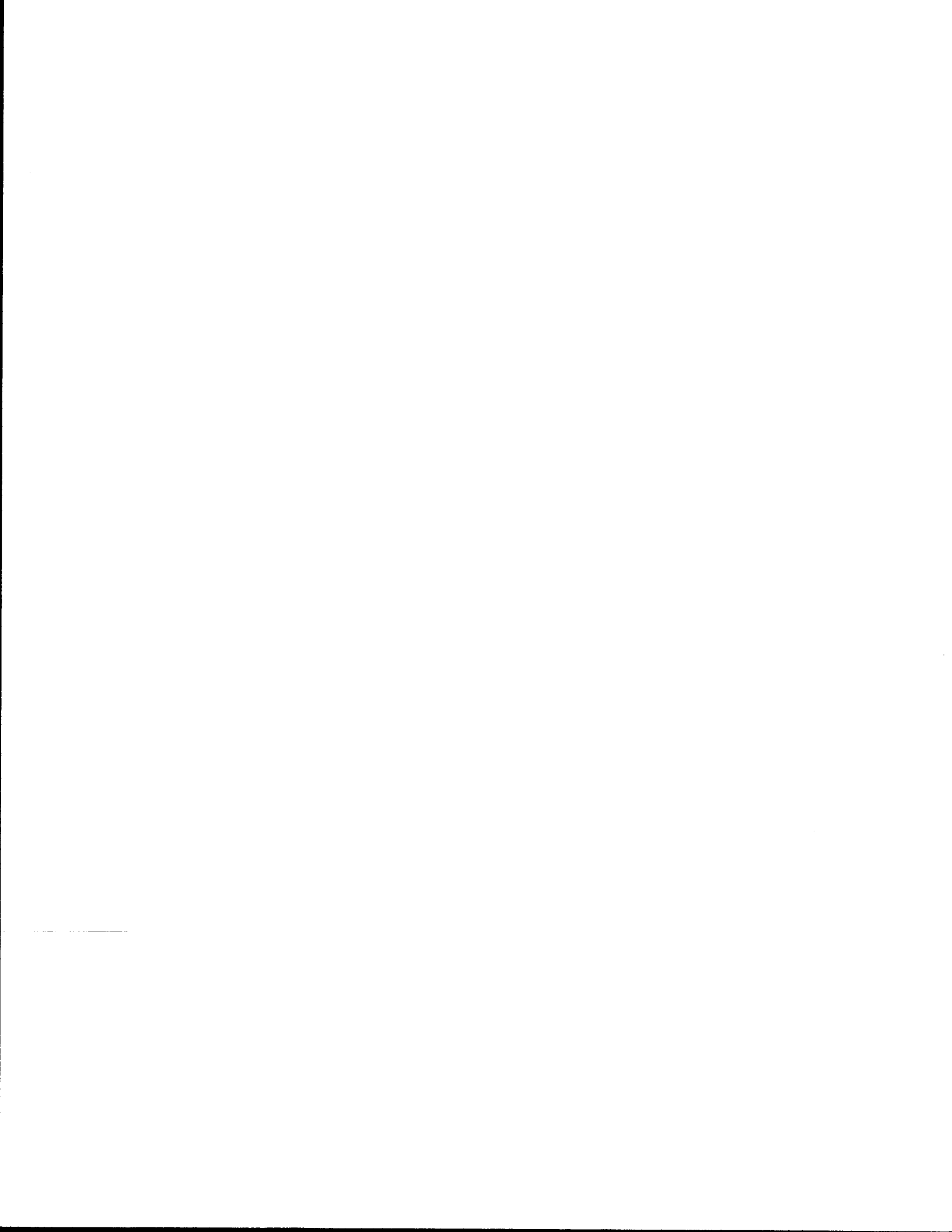


Table A-1. Growth in Workers Versus Growth in Population

Metropolitan Area	Total Employment (Thousands)	Annual Employment Increase (Thousands)	Annual Percent Employment Increase	Annual Percent Population Increase
Abilene				
1960	45.8	--	--	--
1970	45.1	-0.7	-0.2	-0.5
1980	63.3	18.2	3.4	2.0
1988	49.5	-13.8	-2.4	-1.1
Amarillo				
1960	62.2	--	--	--
1970	58.3	-3.9	-0.7	-0.3
1980	82.5	24.2	3.5	1.9
1988	78.0	-4.5	-0.6	1.2
Austin				
1960	79.2	--	--	--
1970	120.1	40.8	4.2	3.0
1980	260.2	140.1	8.0	4.1
1988	349.6	89.4	3.0	2.2
Beaumont-Port Arthur-Orange				
1960	104.3	--	--	--
1970	110.6	6.3	0.6	0.5
1980	149.6	39.0	3.1	0.8
1988	128.3	-21.3	-1.5	0.6
Brownsville-Harlingen San Benito				
1960	45.9	--	--	--
1970	39.3	-6.6	-1.5	-0.7
1980	69.4	30.1	5.9	4.1
1988	66.7	-2.7	-0.4	2.7
Bryan-College Station				
1960	--	--	--	--
1970	--	--	--	2.6
1980	40.5	--	--	4.9
1988	47.6	7.1	1.6	1.1
Corpus Christi				
1960	71.8	--	--	--
1970	98.9	27.1	3.2	2.5
1980	136.9	38.0	3.3	1.4
1988	124.9	-12.0	-0.9	0.9
Dallas-Ft. Worth				
1960	648.9	--	--	--
1970	953.3	304.4	3.9	3.4
1980	1469.1	515.8	4.4	2.4
1988	1845.6	376.5	1.8	1.5
El Paso				
1960	109.1	--	--	--
1970	122.2	13.1	1.1	1.4
1980	181.5	59.3	4.0	2.9
1988	188.2	6.7	0.4	1.9
Galveston-Texas City				
1960	50.2	--	--	--
1970	64.0	13.7	2.5	1.9
1980	89.2	25.2	3.4	1.4
1988	70.3	-18.9	-2.4	0.9

Table A-1. Growth in Workers Versus Growth in Population (cont'd)

Metropolitan Area	Total Employment (Thousands)	Annual Employment Increase (Thousands)	Annual Percent Employment Increase	Annual Percent Population Increase
Houston				
1960	461.5	--	--	--
1970	779.6	318.1	5.4	3.4
1980	1419.0	639.4	6.2	3.8
1988	1463.4	46.4	3.1	2.0
Killeen-Temple				
1960	--	--	--	--
1970	--	--	--	3.1
1980	103.2	--	--	3.0
1988	70.5	-32.7	-3.7	2.0
Laredo				
1960	--	--	--	--
1970	--	--	--	1.2
1980	32.5	--	--	3.1
1988	36.6	4.1	1.2	2.3
Longview-Marshall				
1960	--	--	--	--
1970	--	--	--	.5
1980	65.6	--	--	2.3
1988	65.4	-0.2	0.0	1.6
Lubbock				
1960	56.5	--	--	--
1970	67.8	11.3	1.8	1.4
1980	98.9	31.1	3.8	1.7
1988	92.3	-6.6	-6.9	0.8
McAllen-Pharr-Edinburg				
1960	--	--	--	--
1970	51.0	--	--	0.0
1980	92.4	41.4	6.1	4.5
1988	90.1	-2.3	-0.3	2.9
Midland				
1960	--	--	--	--
1970	--	--	--	0.3
1980	40.9	--	--	2.4
1988	44.5	3.6	0.9	1.7
Odessa				
1960	--	--	--	--
1970	--	--	--	0.1
1980	55.8	--	--	2.3
1988	43.5	-12.3	-2.5	1.6
San Angelo				
1960	--	--	--	--
1970	--	--	--	1.0
1980	40.4	--	--	1.8
1988	36.4	-4.0	-1.0	1.1
San Antonio				
1960	242.8	--	--	--
1970	318.0	75.1	2.7	1.9
1980	449.1	131.1	3.5	1.9
1988	507.3	58.2	1.2	1.2

Table A-1. Growth in Workers Versus Growth in Population (cont'd)

Metropolitan Area	Total Employment (Thousands)	Annual Employment Increase (Thousands)	Annual Percent Employment Increase	Annual Percent Population Increase
Sherman-Denison				
1960	--	--	--	--
1970	--	--	--	1.3
1980	39.2	--	--	0.8
1988	38.0	-1.2	-0.3	0.5
Texarkana				
1960	--	--	--	--
1970	36.1	--	--	1.0
1980	29.6	-6.5	-2.0	2.3
1988	45.2	15.6	4.3	--
Tyler				
1960	--	--	--	--
1970	--	--	--	1.2
1980	56.3	--	--	2.8
1988	50.6	-5.7	-2.2	1.9
Victoria				
1960	--	--	--	--
1970	--	--	--	1.5
1980	30.7	--	--	2.5
1988	27.6	-3.1	-1.1	1.4
Waco				
1960	55.3	--	--	--
1970	55.1	-0.2	0.0	-0.2
1980	72.0	17.0	2.7	1.5
1988	78.2	6.1	0.8	0.9
Wichita Falls				
1960	51.2	--	--	--
1970	52.0	0.7	0.1	-0.2
1980	63.2	11.2	2.0	0.2
1988	50.6	-12.6	-2.2	-0.7

Table A-2. Population Growth Rates Within Texas Metropolitan Areas

Metropolitan Area	Percent Growth	
	1960-1970	1970-1980
Abilene		
Central City	-1	18
Suburbs	-15	35
Amarillo		
Central City	-8	17
Suburbs	51	41
Austin		
Central City	36	36
Suburbs	33	79
Beaumont-Port Arthur- Orange		
Central Cities	-6	2
Suburbs	24	17
Brownsville-Harlingen- San Benito		
Central Cities	-4	45
Suburbs	-14	61
Bryan-College Station		
Central Cities	32	59
Suburbs	11	82
Corpus Cristi		
Central City	47	13
Suburbs	-2	17
Dallas-Ft. Worth		
Central Cities	22	5
Suburbs	66	50
El Paso		
Central City	16	32
Suburbs	-1	48
Galveston-Texas City		
Central Cities	1	3
Suburbs	68	34
Houston		
Central City	31	29
Suburbs	56	71
Killeen-Temple		
Central Cities	28	29
Suburbs	41	39
Laredo		
Central City	14	33
Suburbs	-7	104
Longview-Marshall		
Central Cities	7	28
Suburbs	2	23
Lubbock		
Central City	16	17
Suburbs	9	25

Table A-2. Population Growth Rates Within Texas Metropolitan Areas (cont'd.)

Metropolitan Area	Percent Growth	
	1960-1970	1970-1980
McAllen-Pharr-Edinburg		
Central Cities	8	58
Suburbs	-4	55
Midland		
Central City	-5	19
Suburbs	17	103
Odessa		
Central City	-3	16
Suburbs	33	79
San Angelo		
Central City	9	15
Suburbs	23	61
San Antonio		
Central City	11	20
Suburbs	58	22
Sherman-Denison		
Central Cities	13	1
Suburbs	16	21
Texarkana		
Central City	2	13
Suburbs	18	36
Tyler		
Central City	13	22
Suburbs	12	47
Victoria		
Central City	25	23
Suburbs	-8	46
Waco		
Central City	-3	6
Suburbs	0	33
Wichita Falls		
Central City	-4	-1
Suburbs	8	14

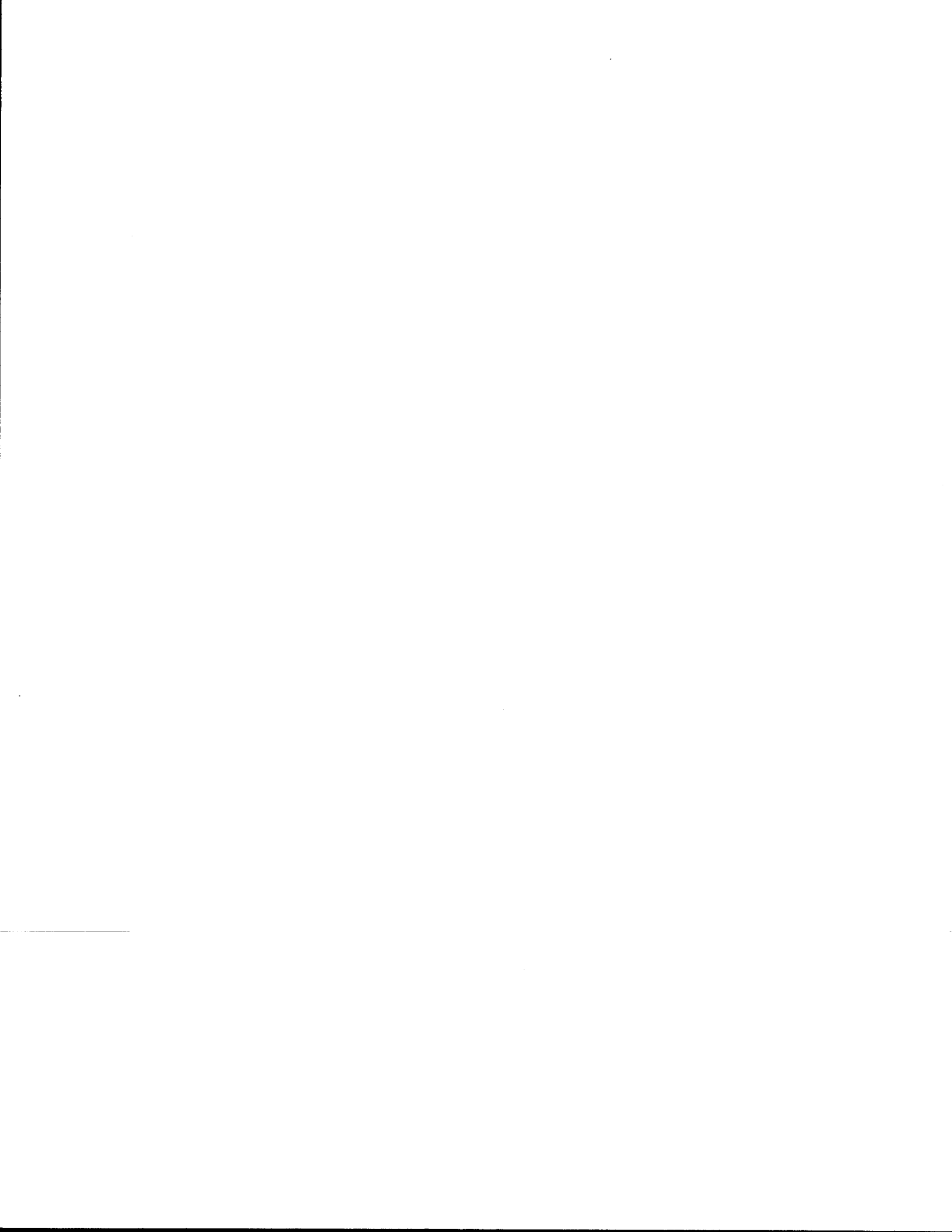
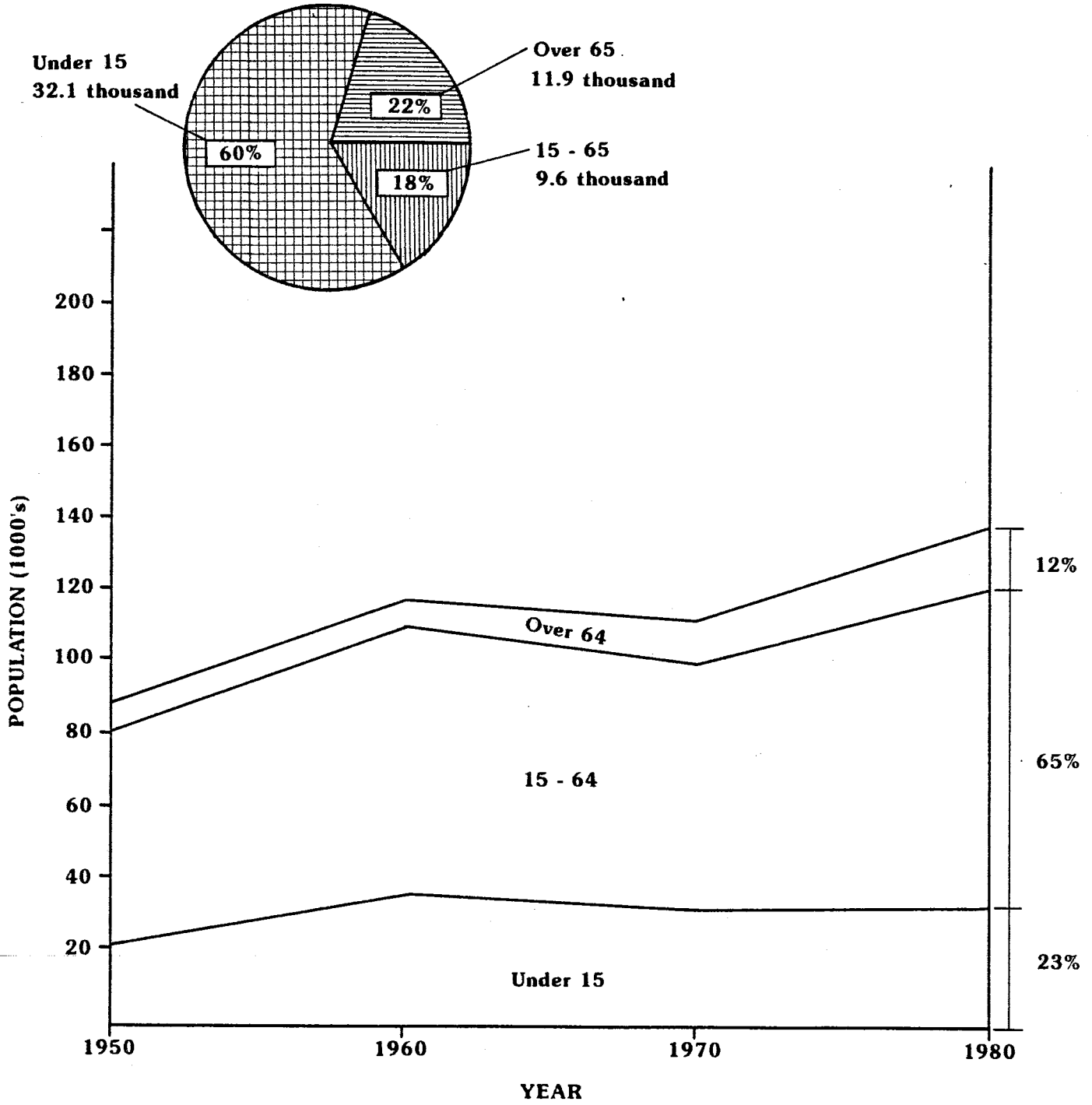


FIGURE A-1

**POPULATION BY AGE GROUP
1950 TO 1980**

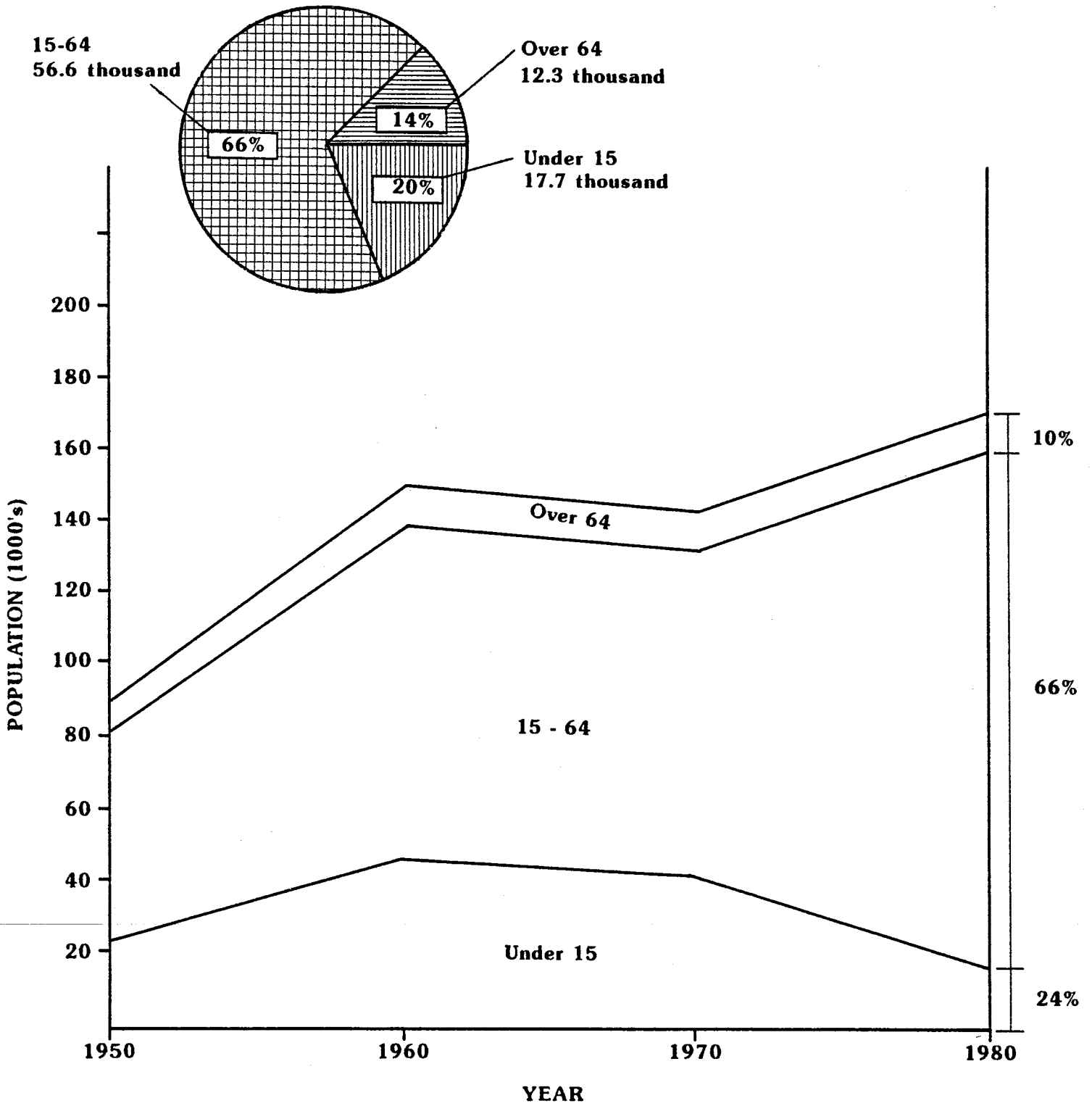
ABILENE

Shares of Population Change
by Age Group: 1950 - 1980



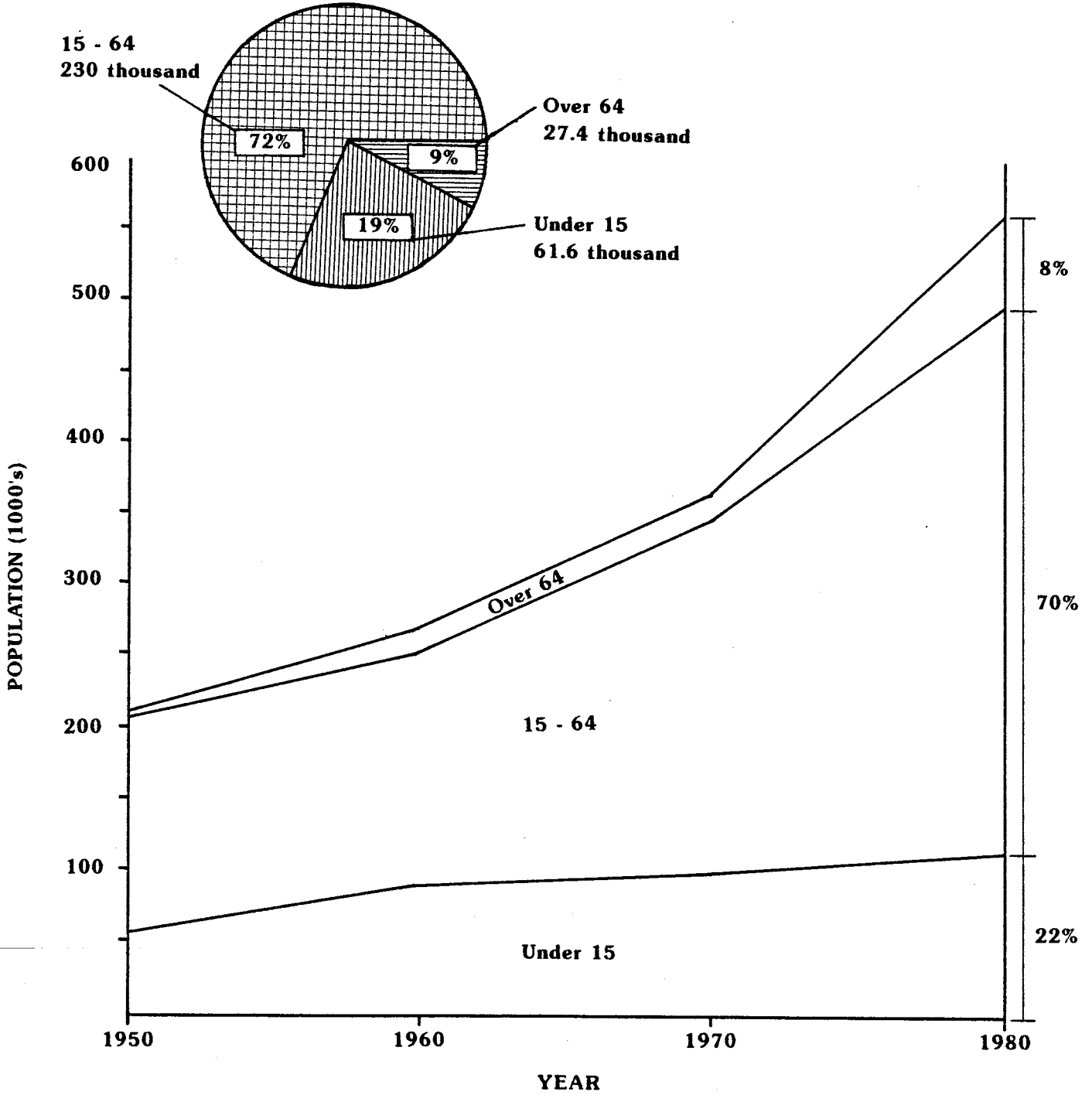
AMARILLO

Shares of Population Change
by Age Group: 1950 - 1980



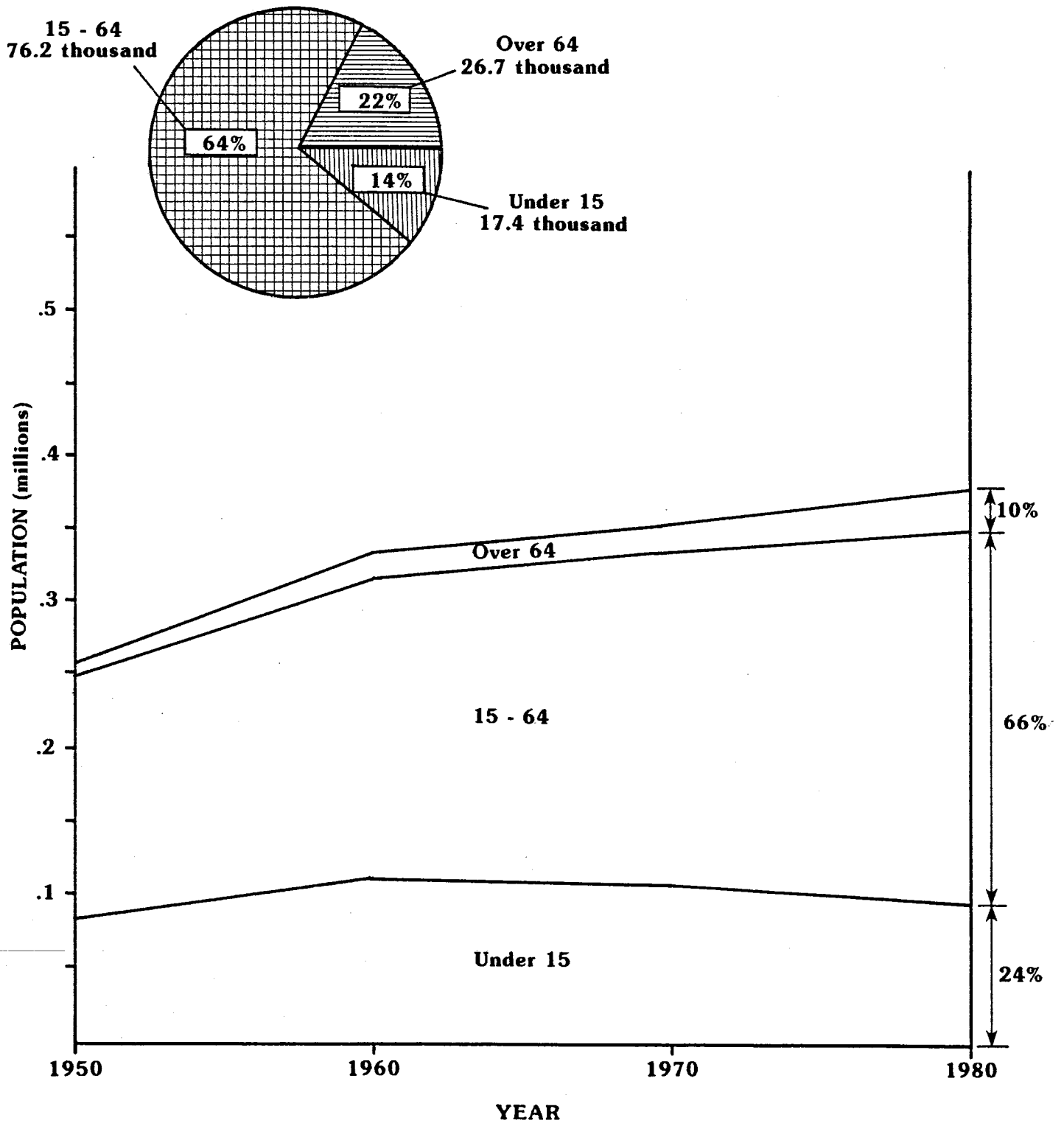
AUSTIN

Shares of Population Change
by Age Group: 1950 - 1980



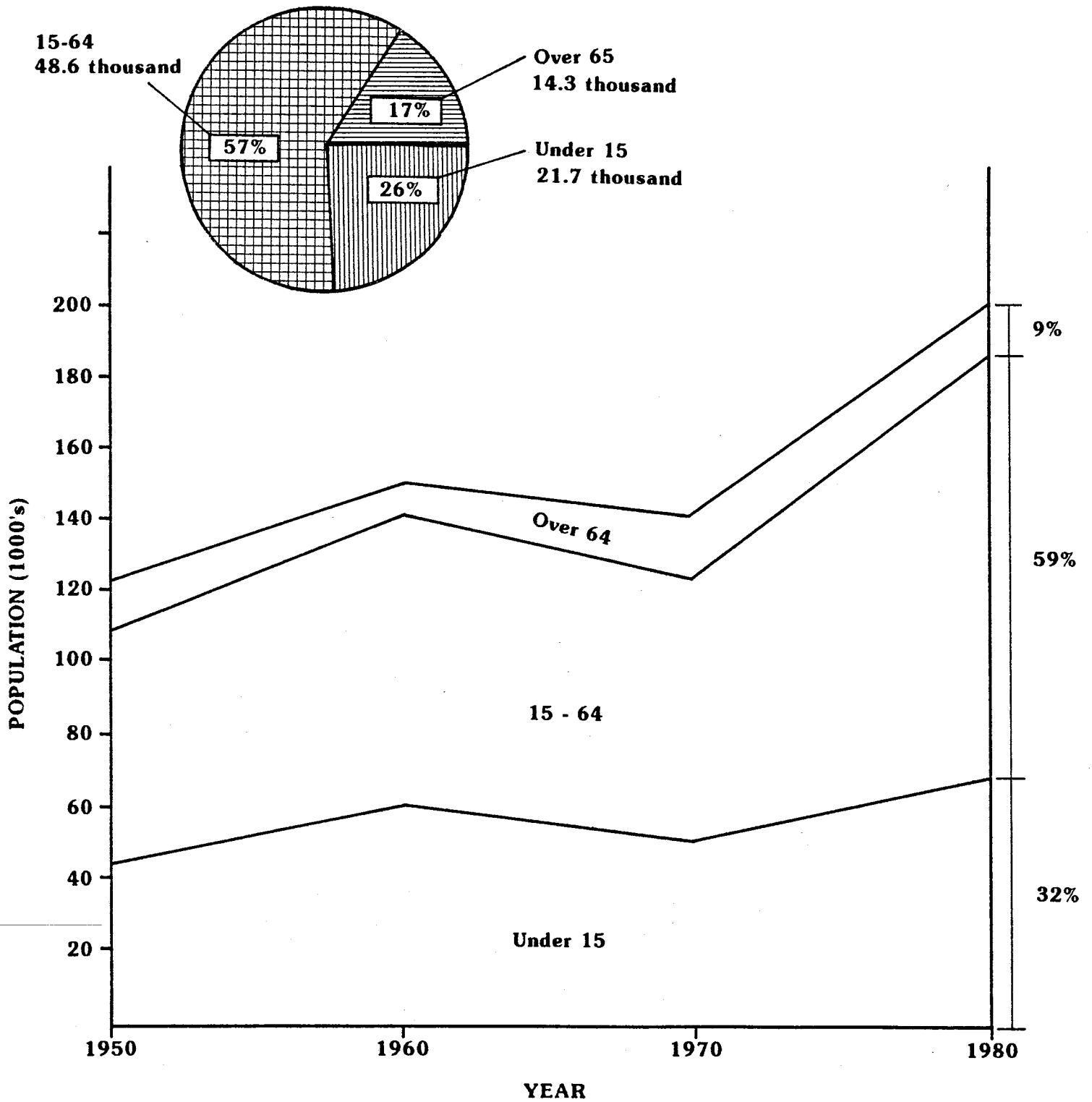
BEAUMONT - PORT ARTHUR - ORANGE

**Shares of Population Change
by Age Group: 1950 - 1980**



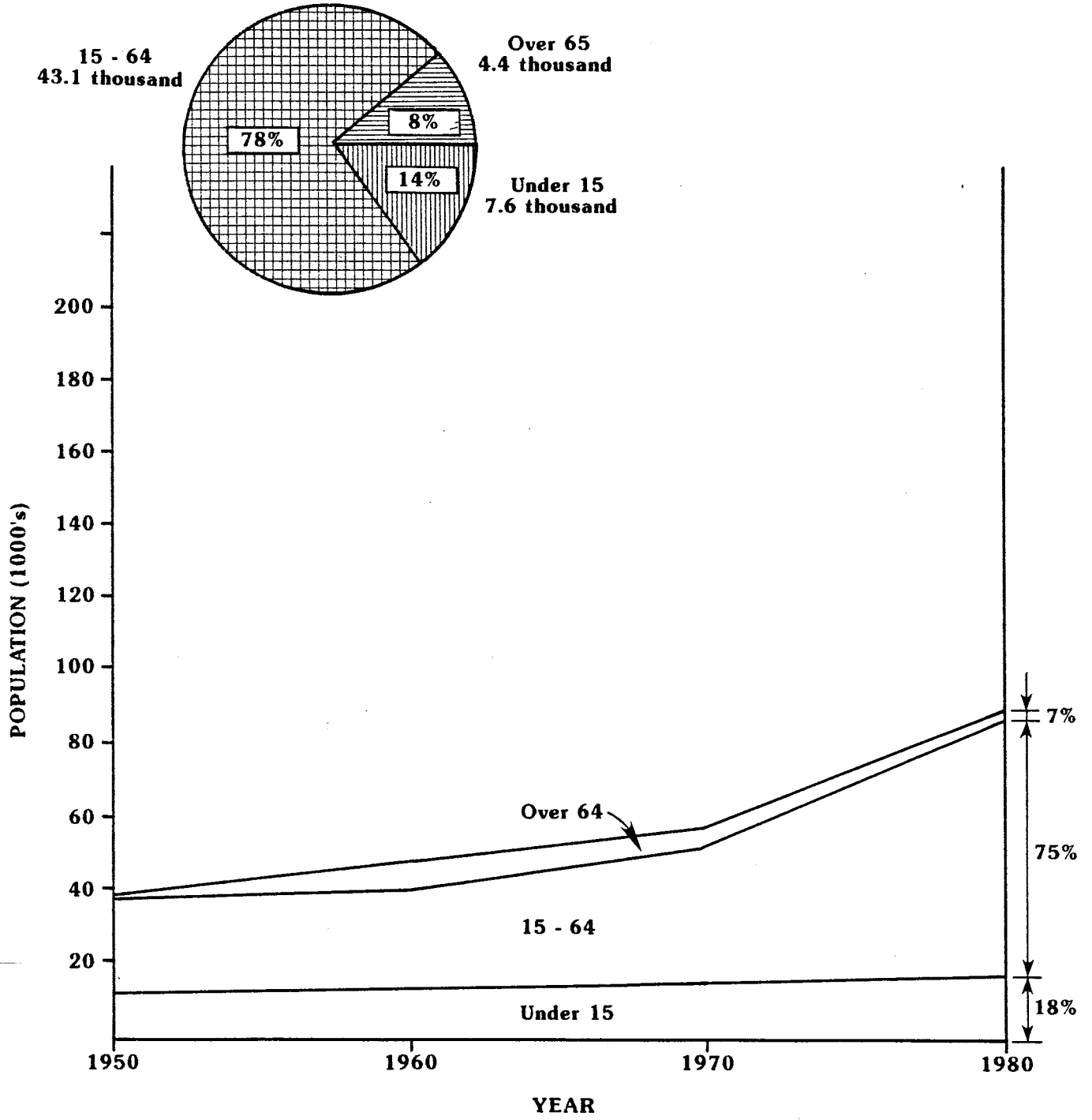
BROWNSVILLE - HARLINGEN - SAN BENITO

Shares of Population Change
by Age Group: 1950 - 1980



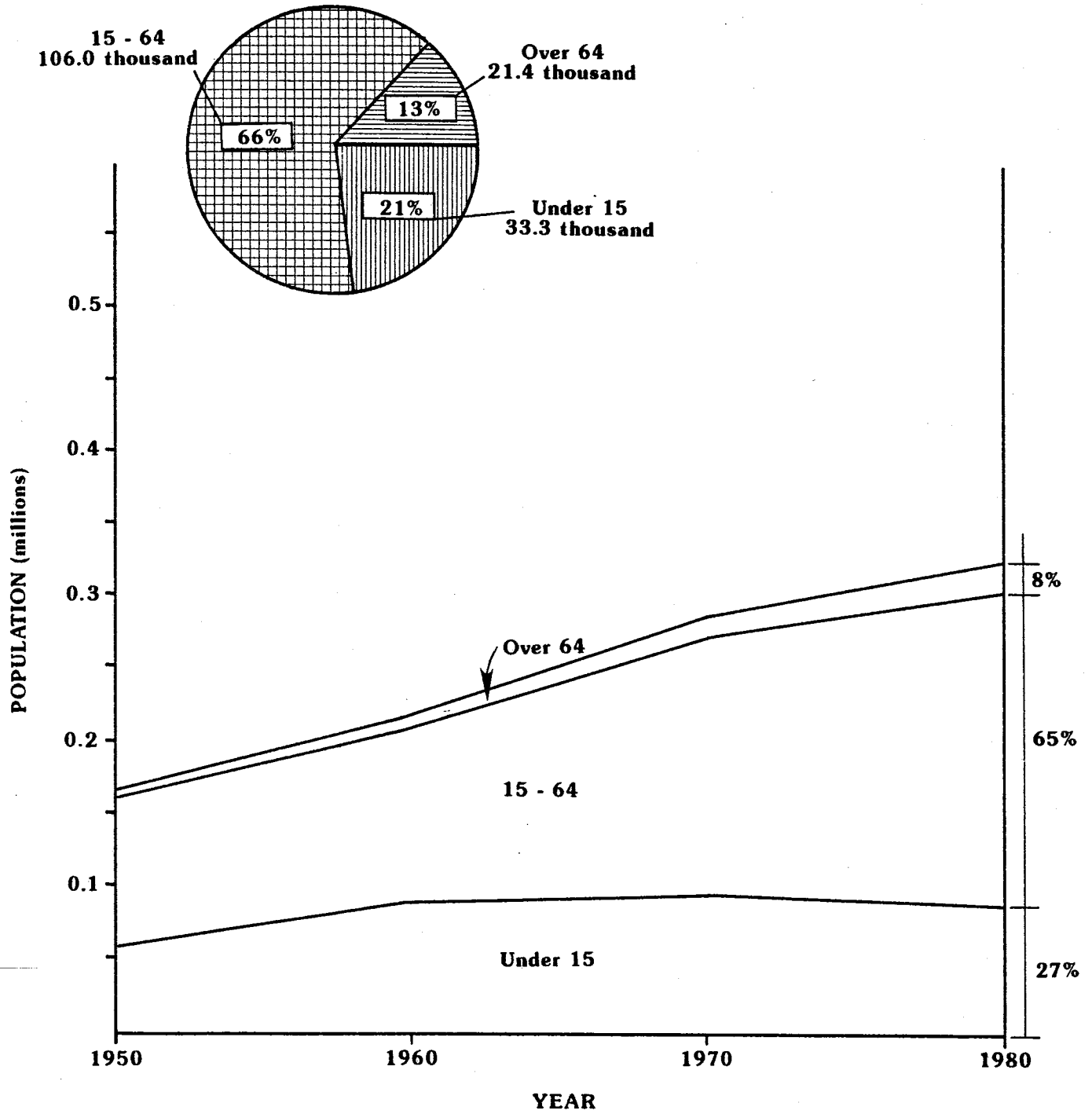
BRYAN - COLLEGE STATION

Shares of Population Change
by Age Group: 1950 - 1980



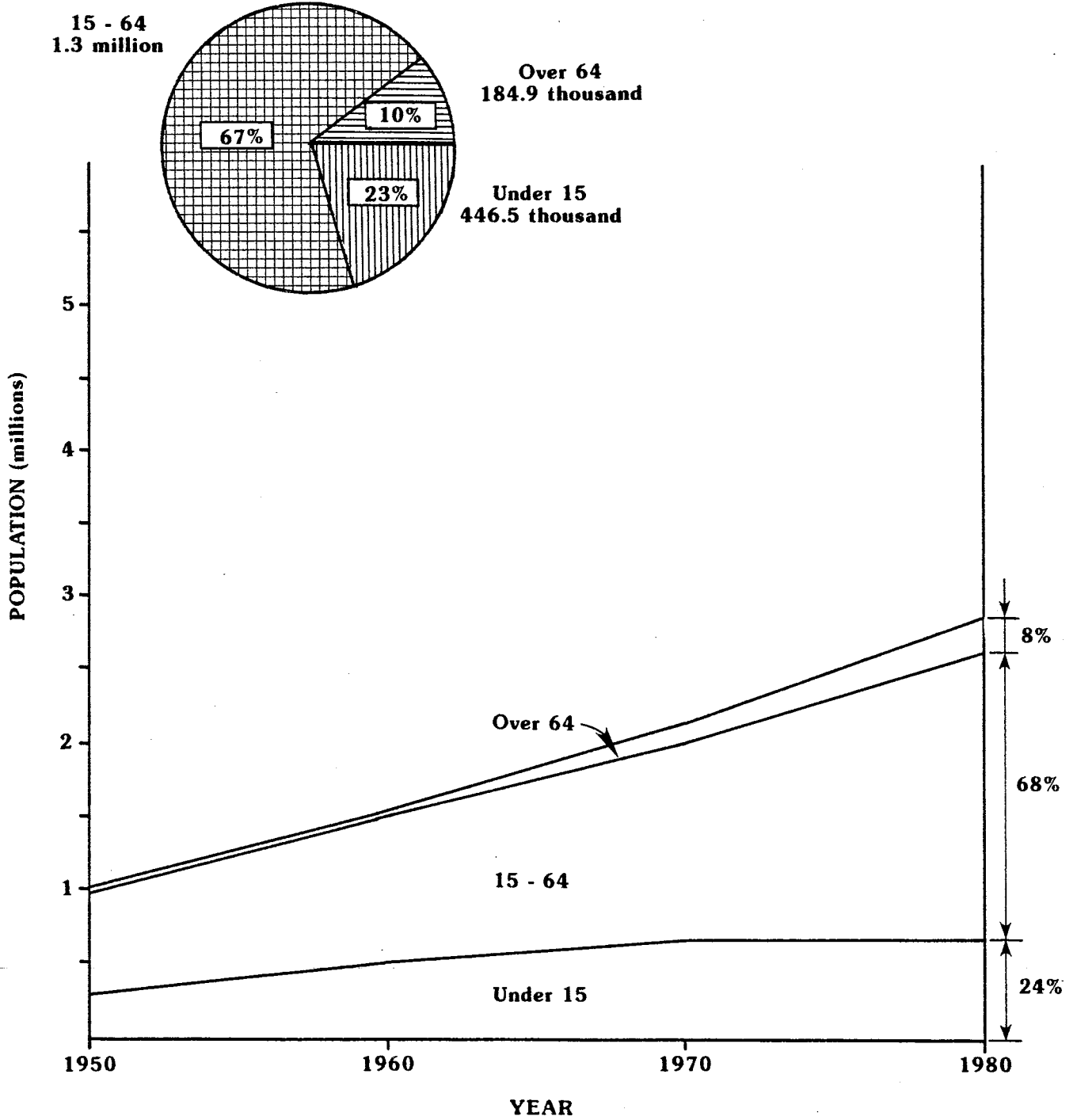
CORPUS CHRISTI

Shares of Population Change
by Age Group: 1950 - 1980



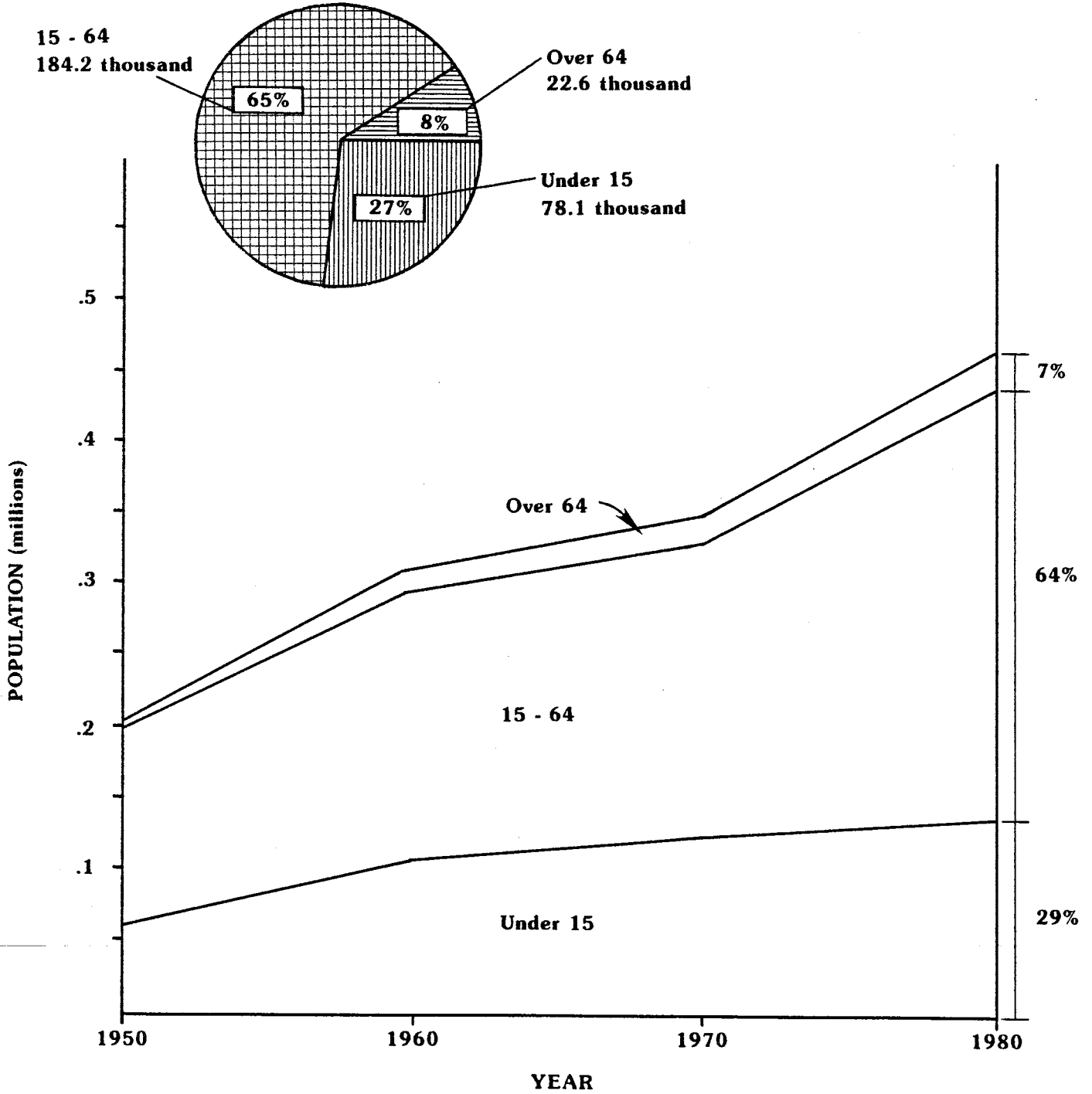
DALLAS - FT WORTH

Shares of Population Change by Age Group: 1950 - 1980



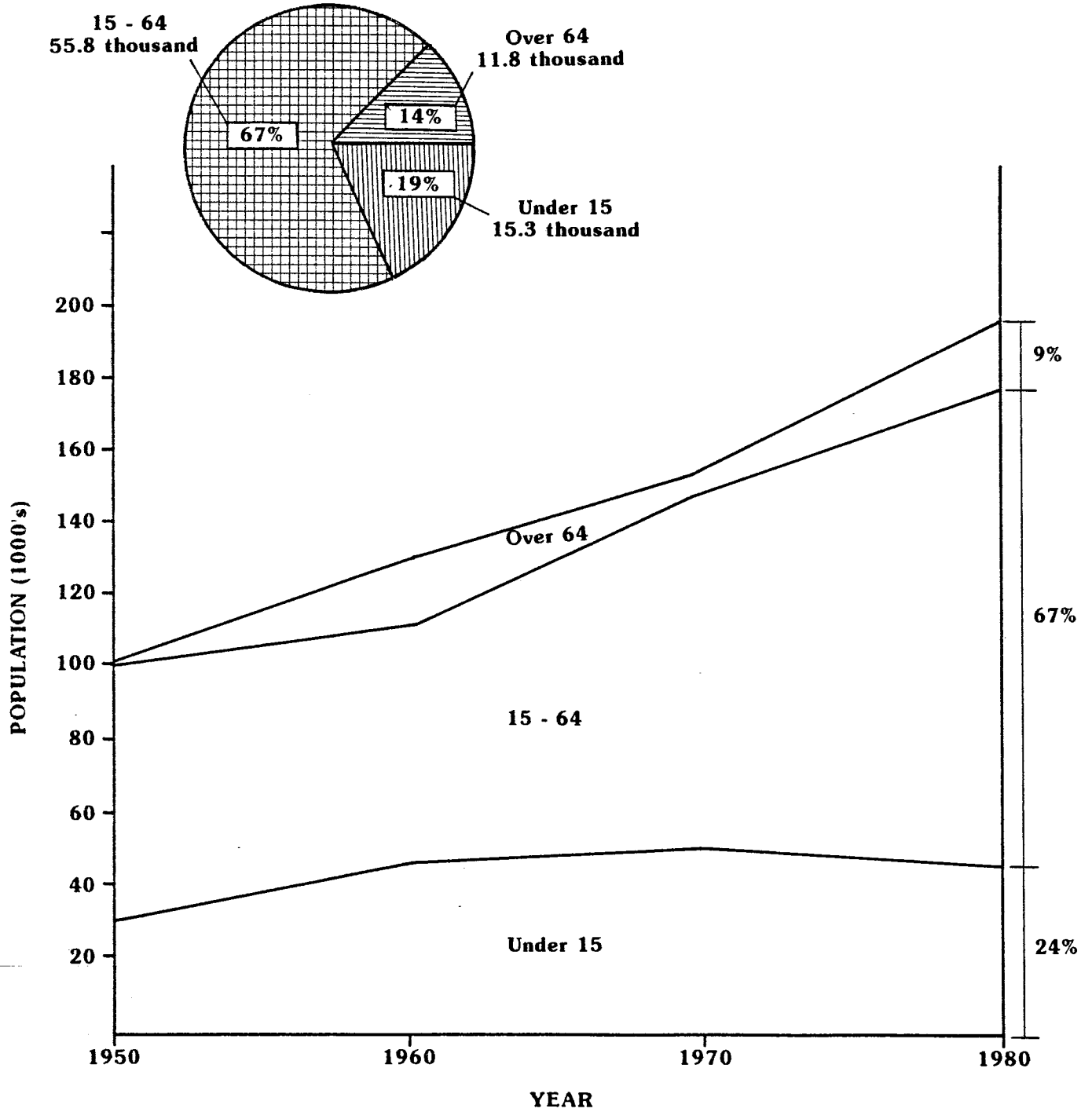
EL PASO

Shares of Population Change
by Age Group: 1950 - 1980



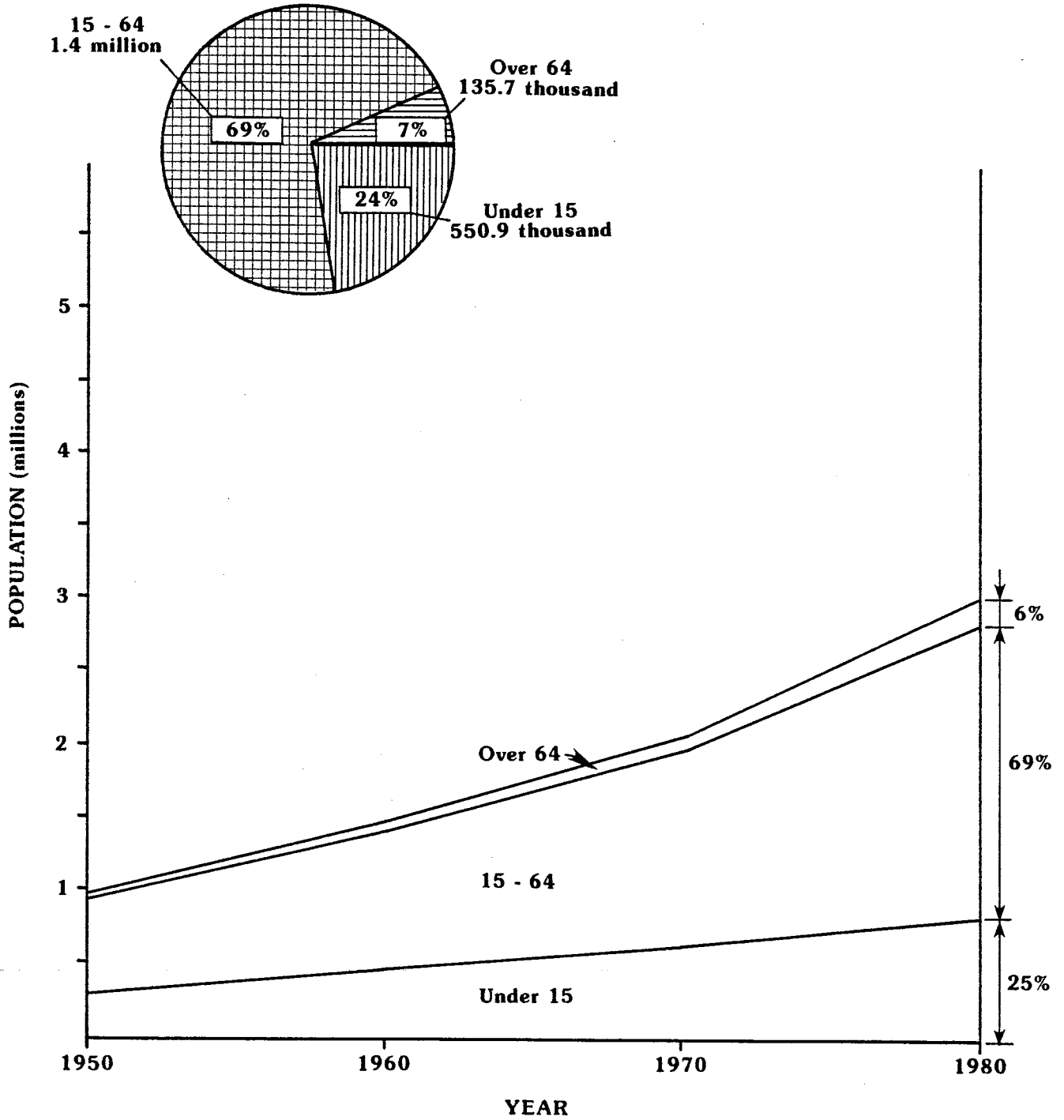
GALVESTON - TEXAS CITY

Shares of Population Change
by Age Group: 1950 - 1980



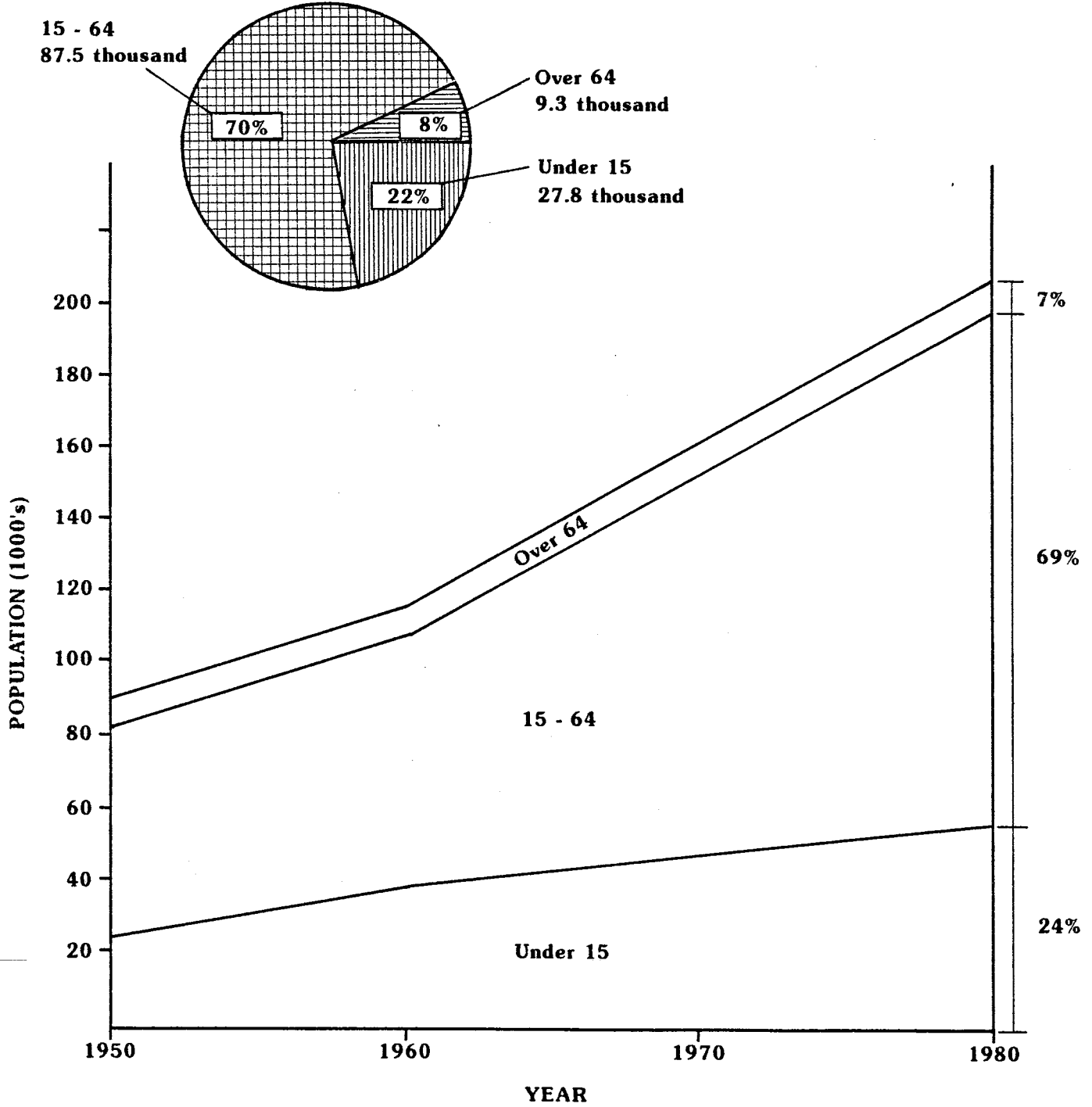
HOUSTON

Shares of Population Change
by Age Group: 1950 - 1980



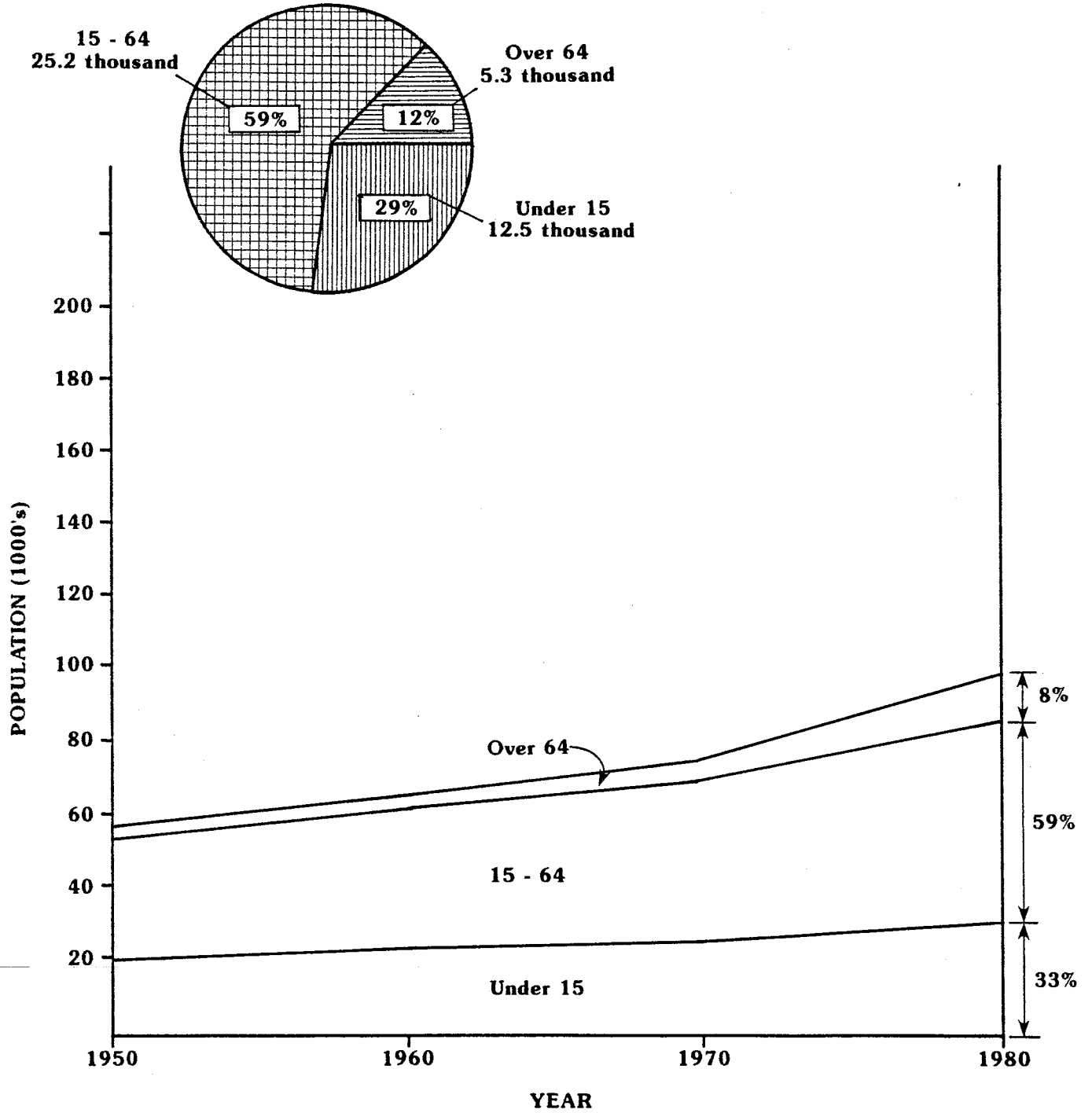
KILLEEN - TEMPLE

Shares of Population Change
by Age Group: 1950 - 1980



LAREDO

Shares of Population Change
by Age Group: 1950 - 1980

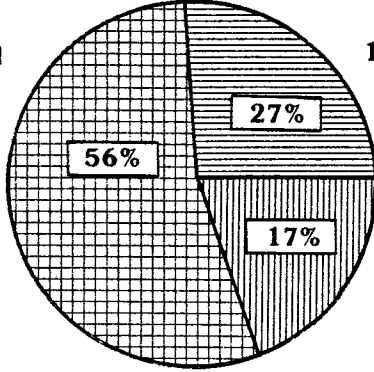


LONGVIEW - MARSHALL

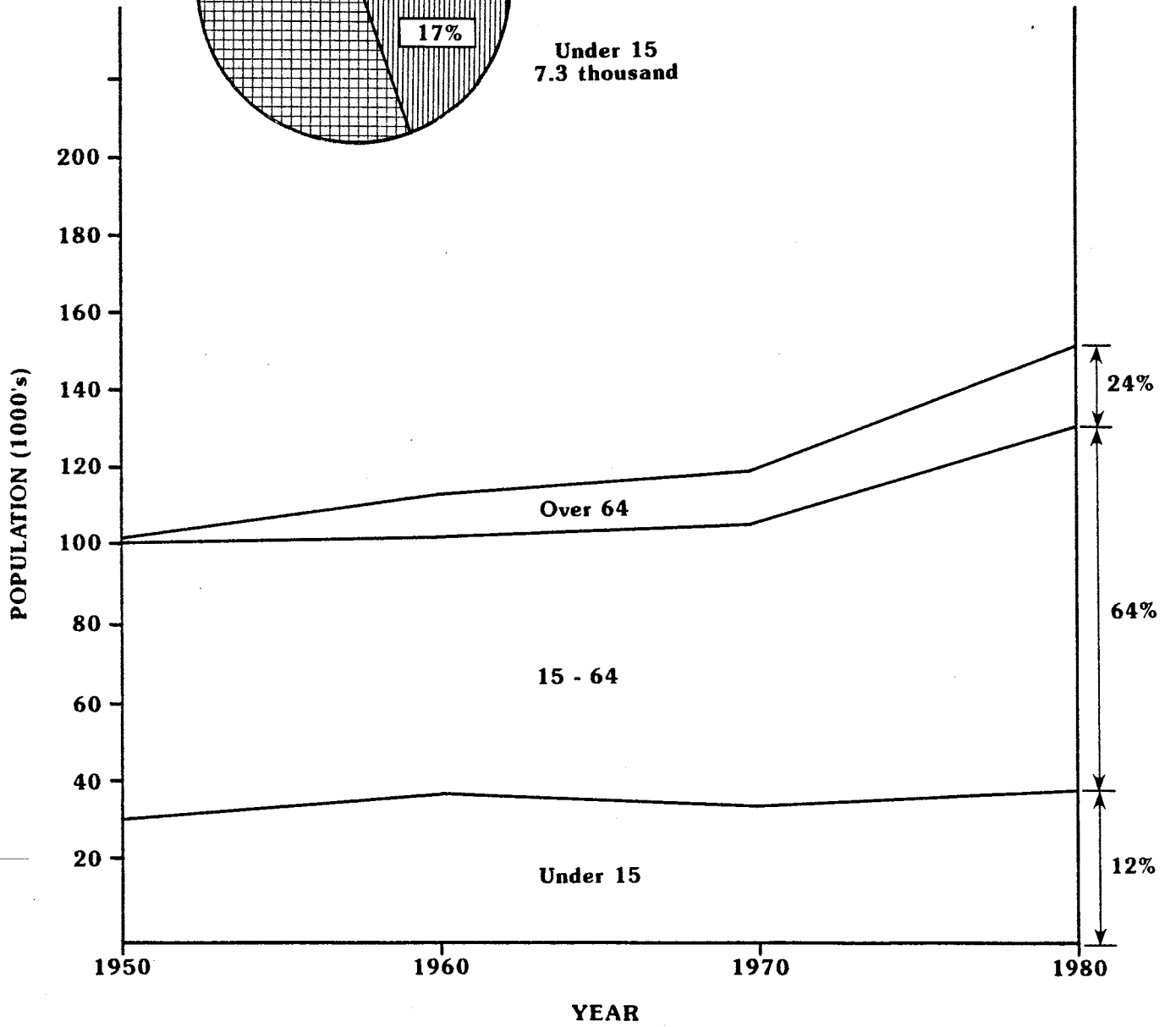
Shares of Population Change
by Age Group: 1950 - 1980

15 - 64
20.1 thousand

Over 64
11.4 thousand

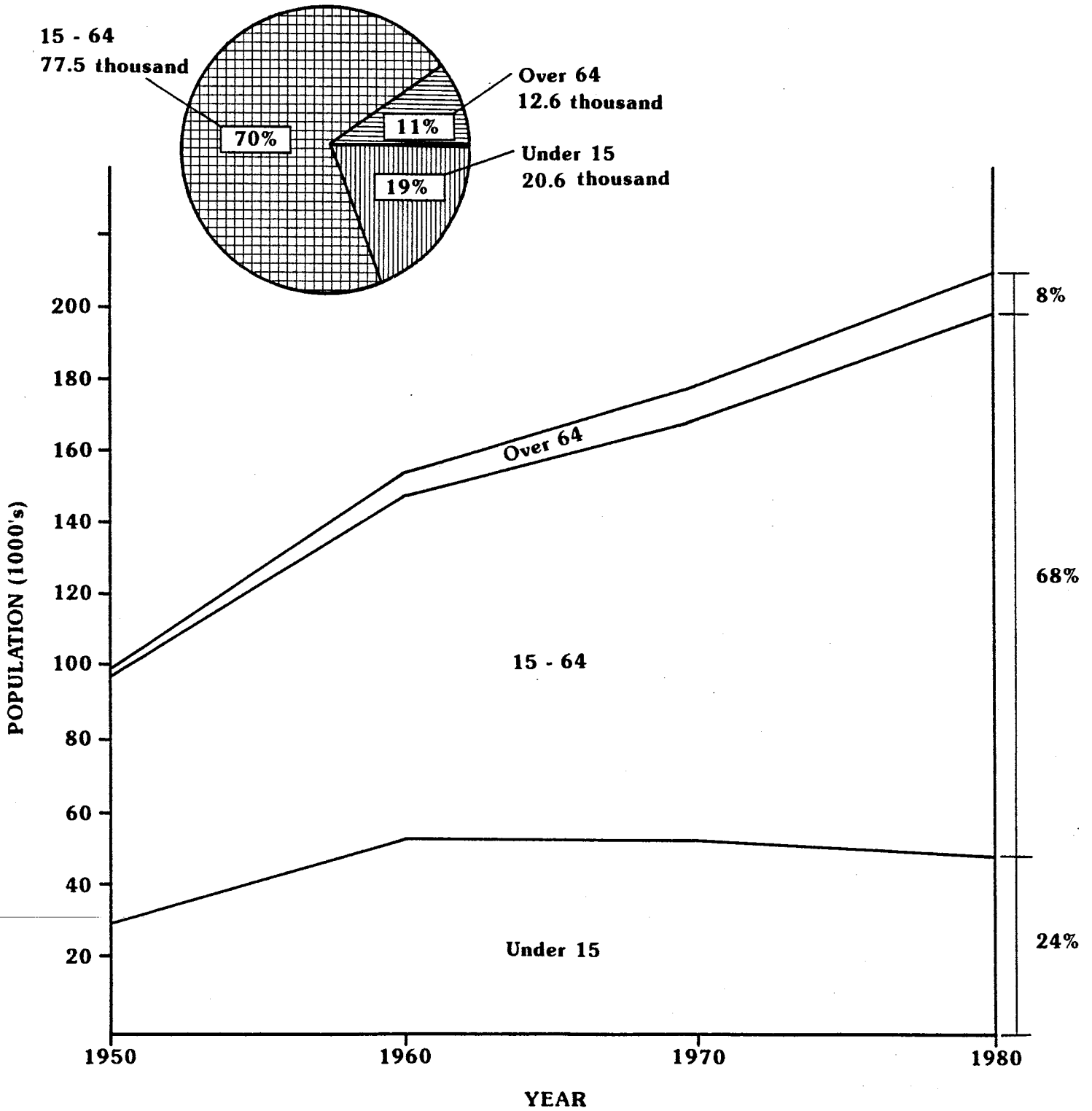


Under 15
7.3 thousand



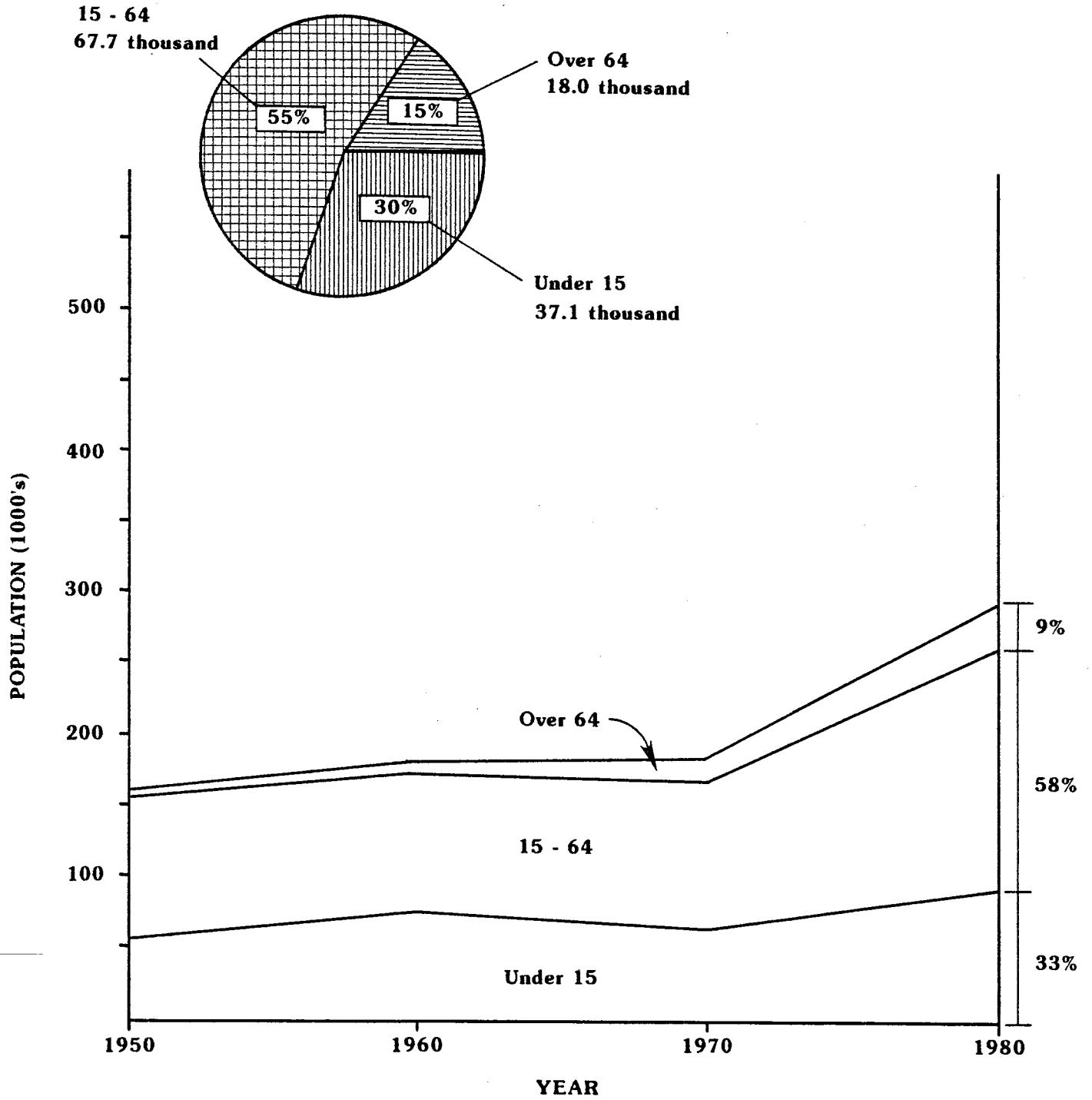
LUBBOCK

Shares of Population Change
by Age Group: 1950 - 1980



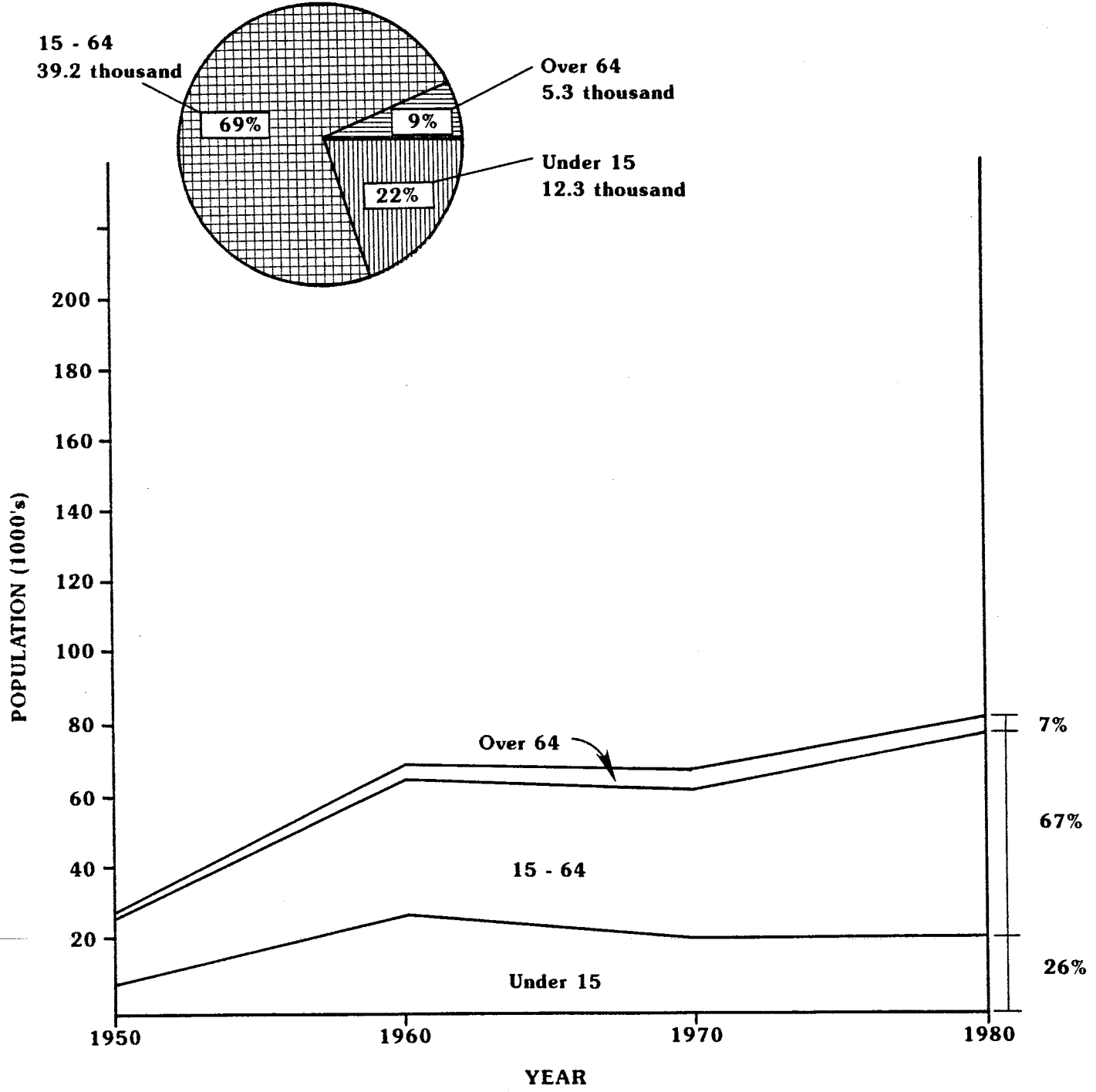
MCALLEN - PHARR - EDINBURG

Shares of Population Change
by Age Group: 1950 - 1980



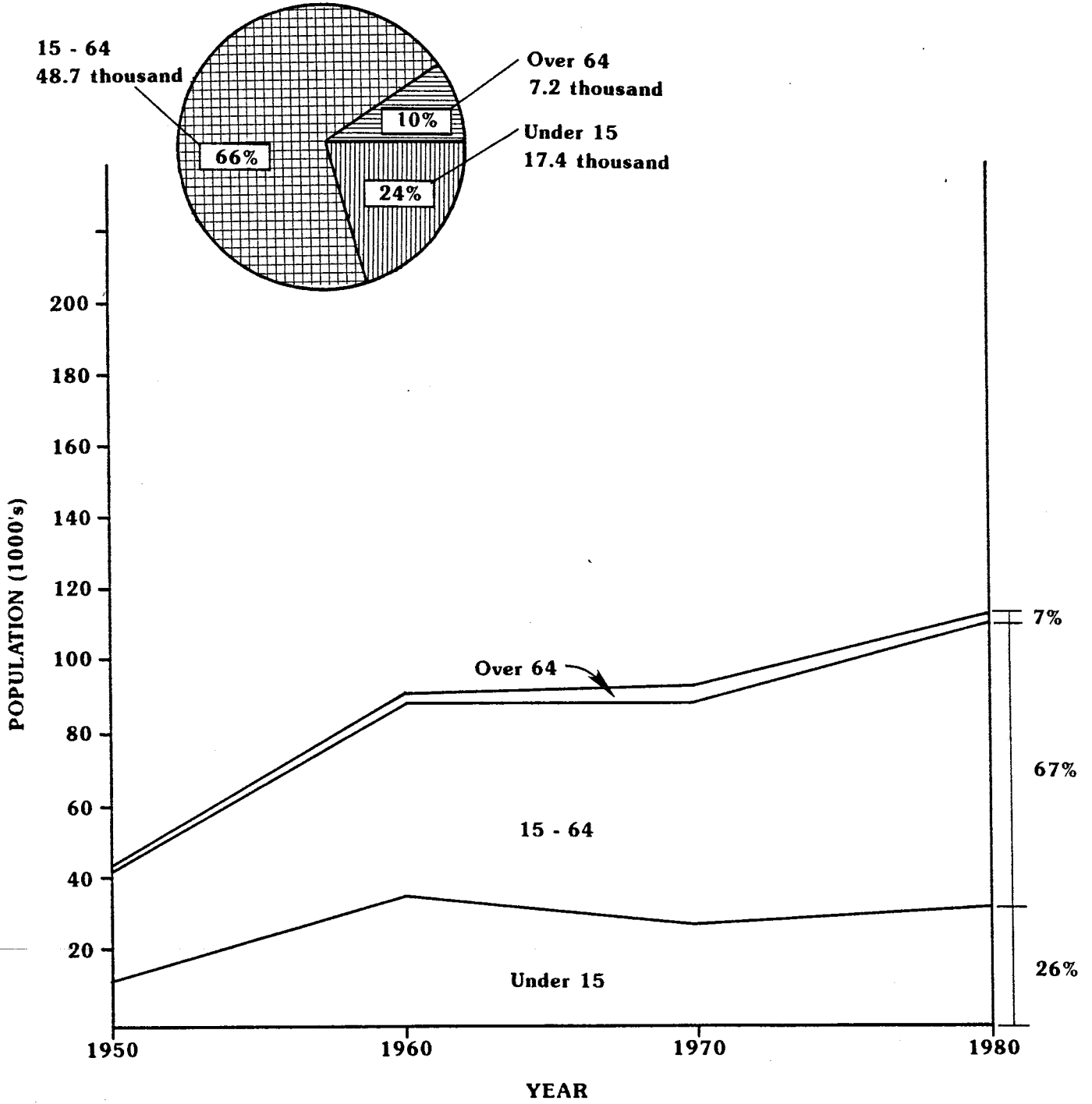
MIDLAND

Shares of Population Change
by Age Group: 1950 - 1980



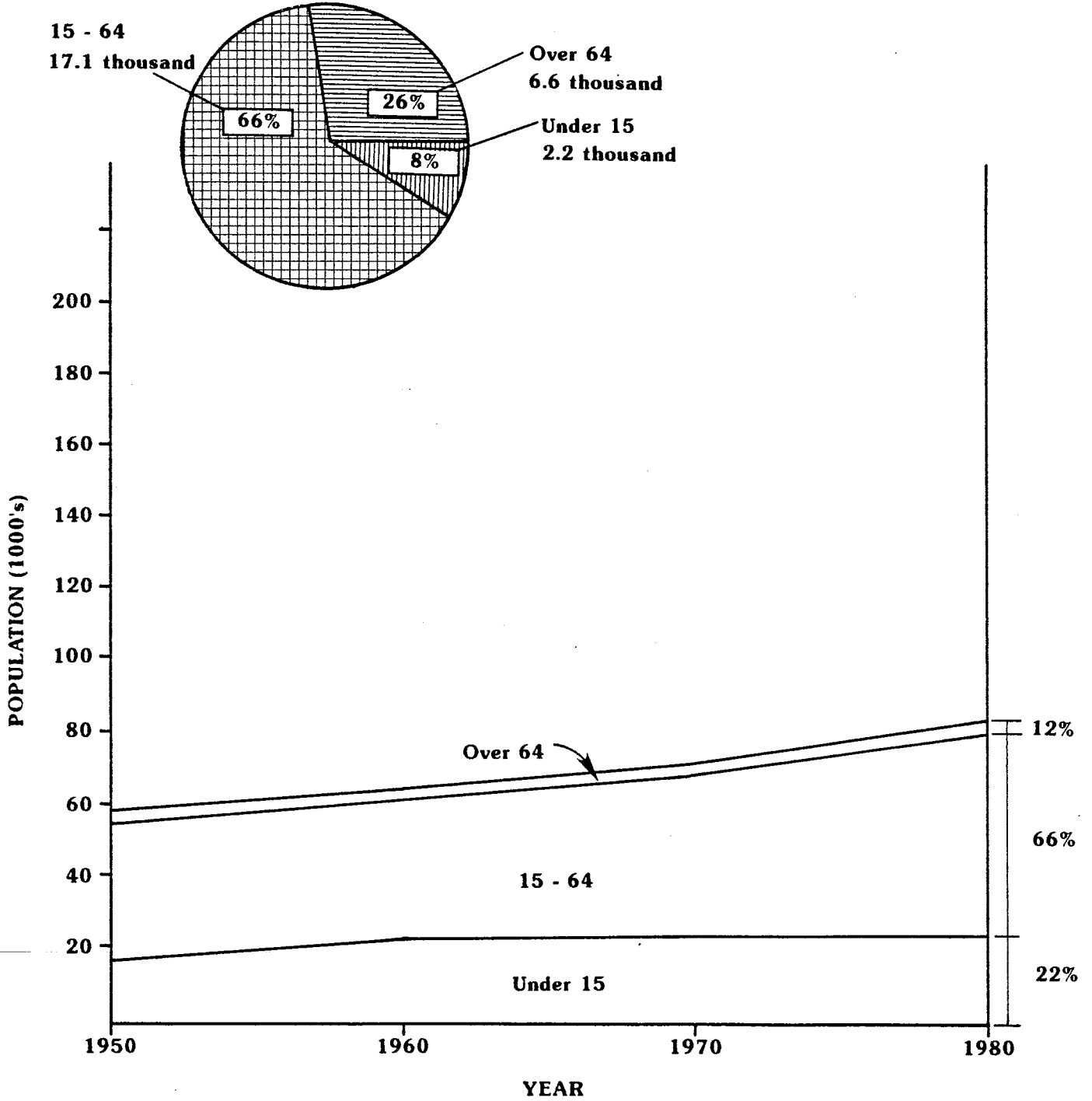
ODESSA

Shares of Population Change
by Age Group: 1950 - 1980



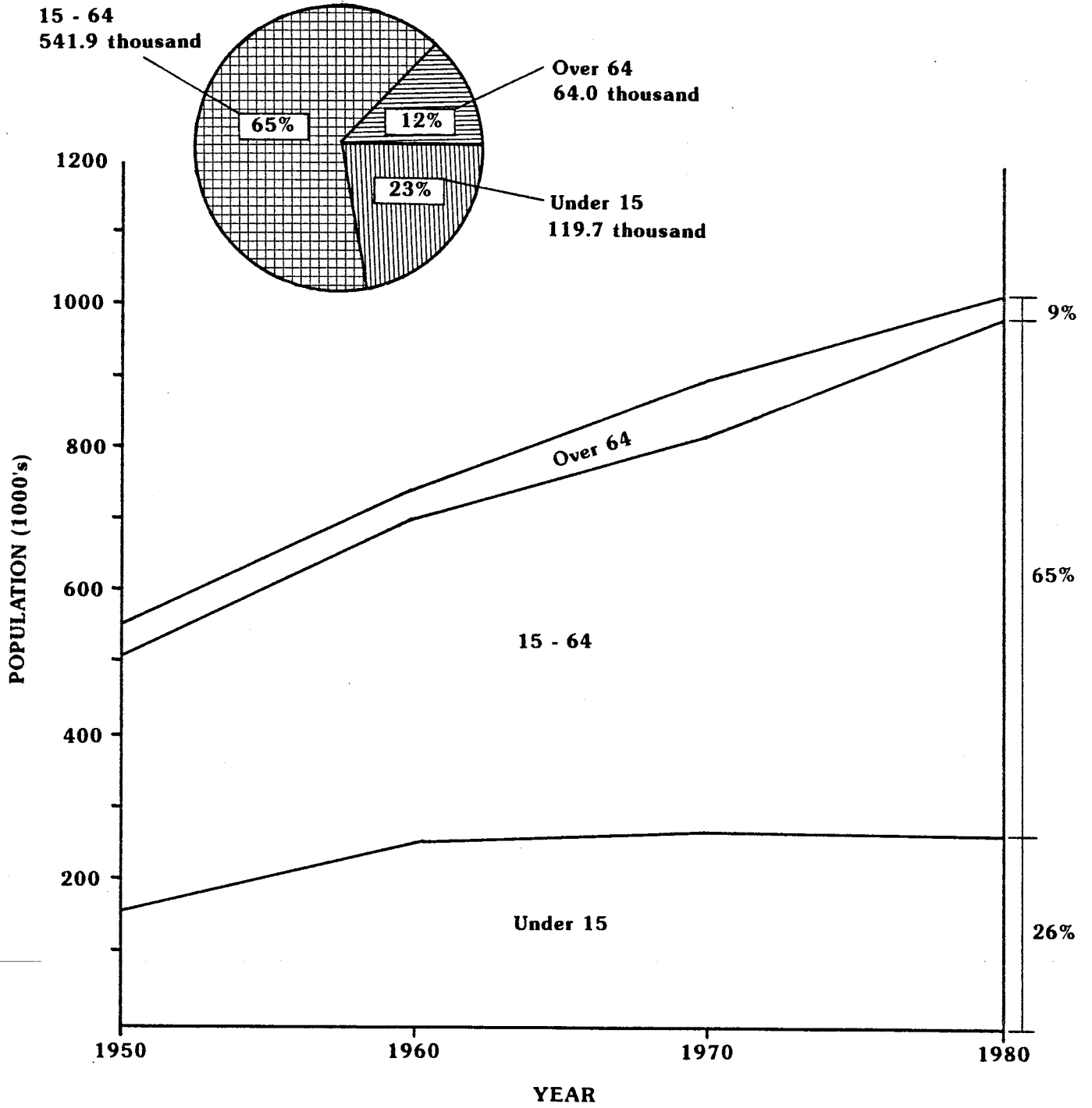
SAN ANGELO

**Shares of Population Change
by Age Group: 1950 - 1980**



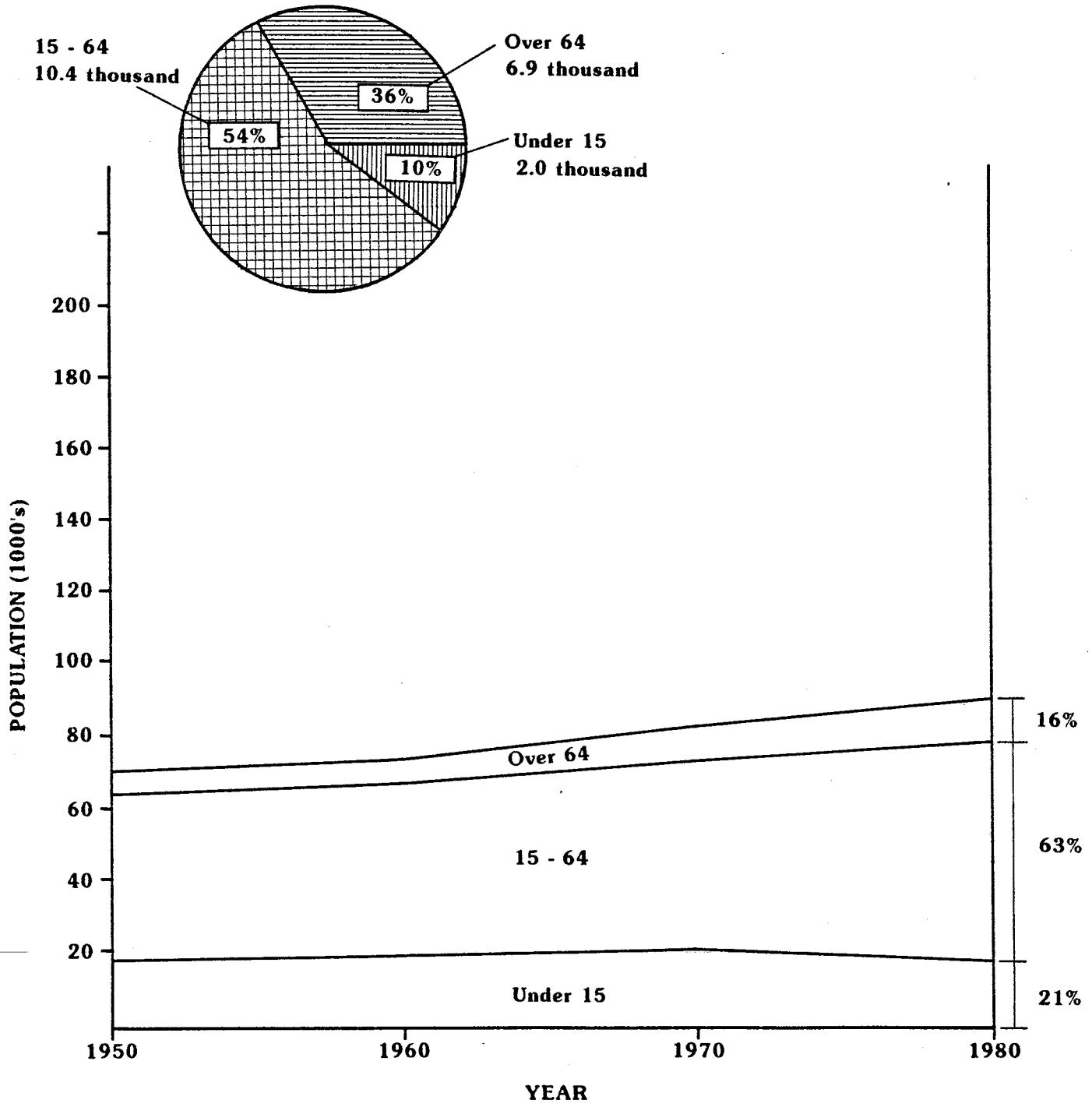
SAN ANTONIO

Shares of Population Change
by Age Group: 1950 - 1980



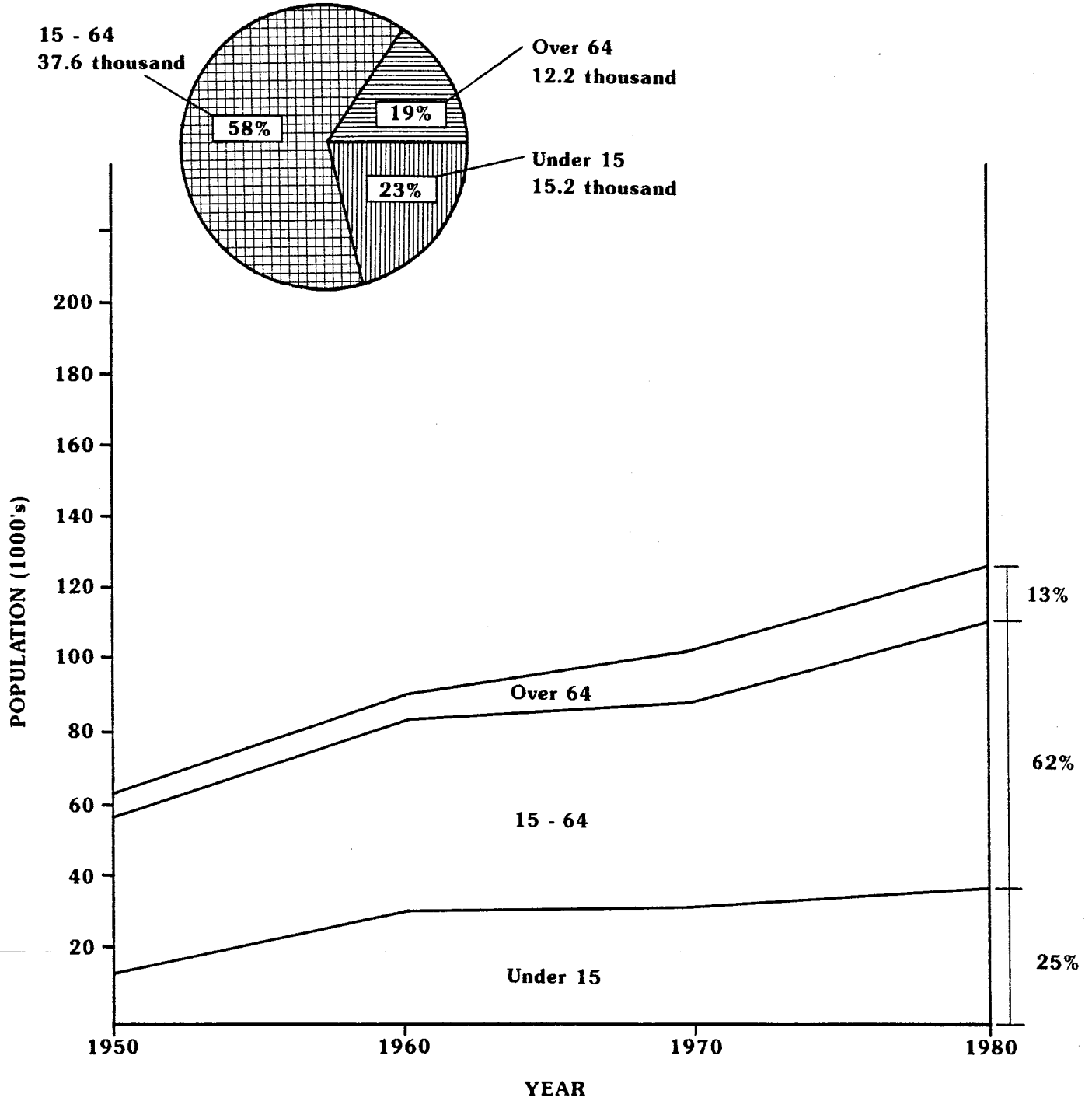
SHERMAN - DENISON

Shares of Population Change
by Age Group: 1950 - 1980



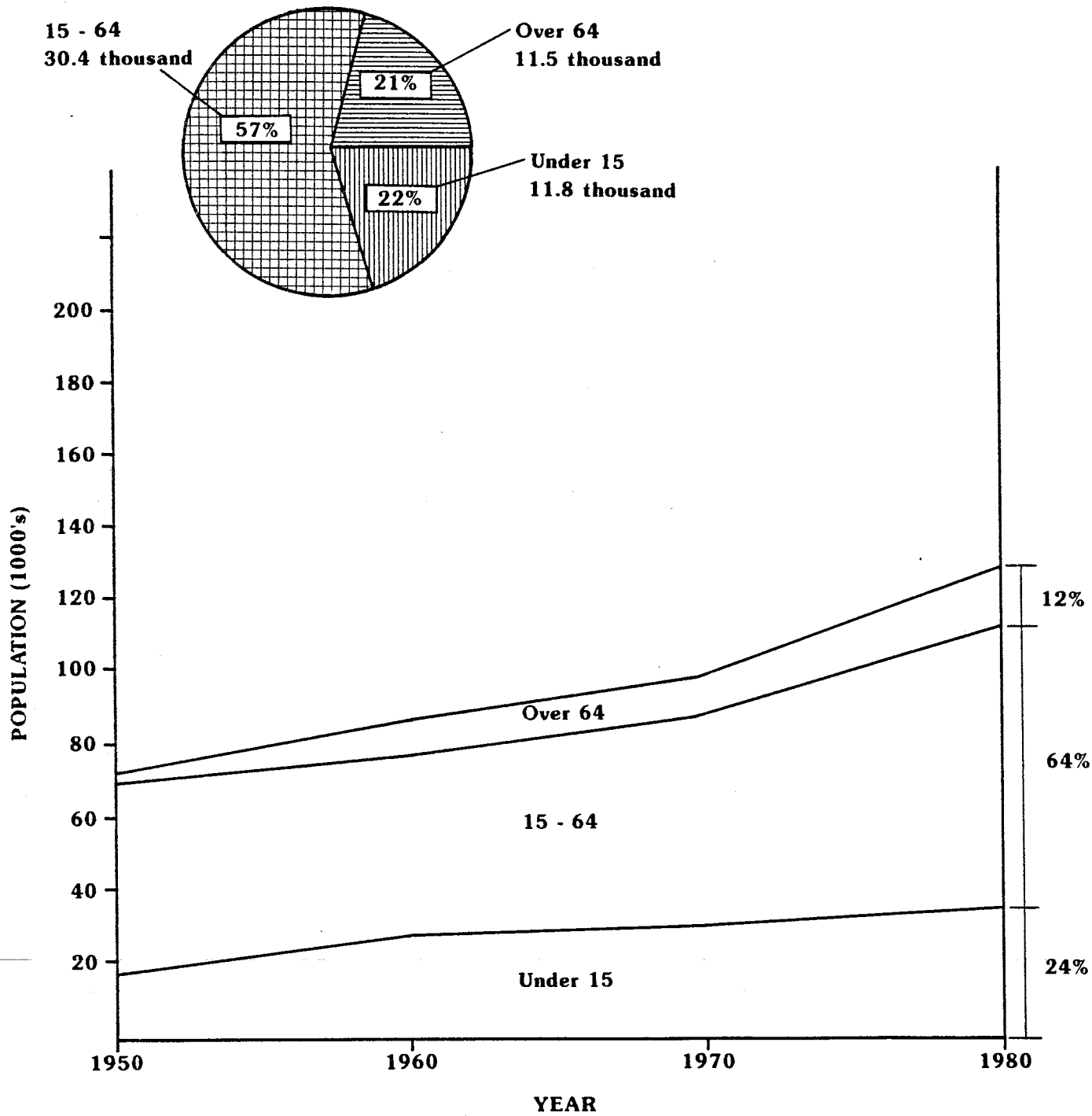
TEXARKANA

Shares of Population Change
by Age Group: 1950 - 1980



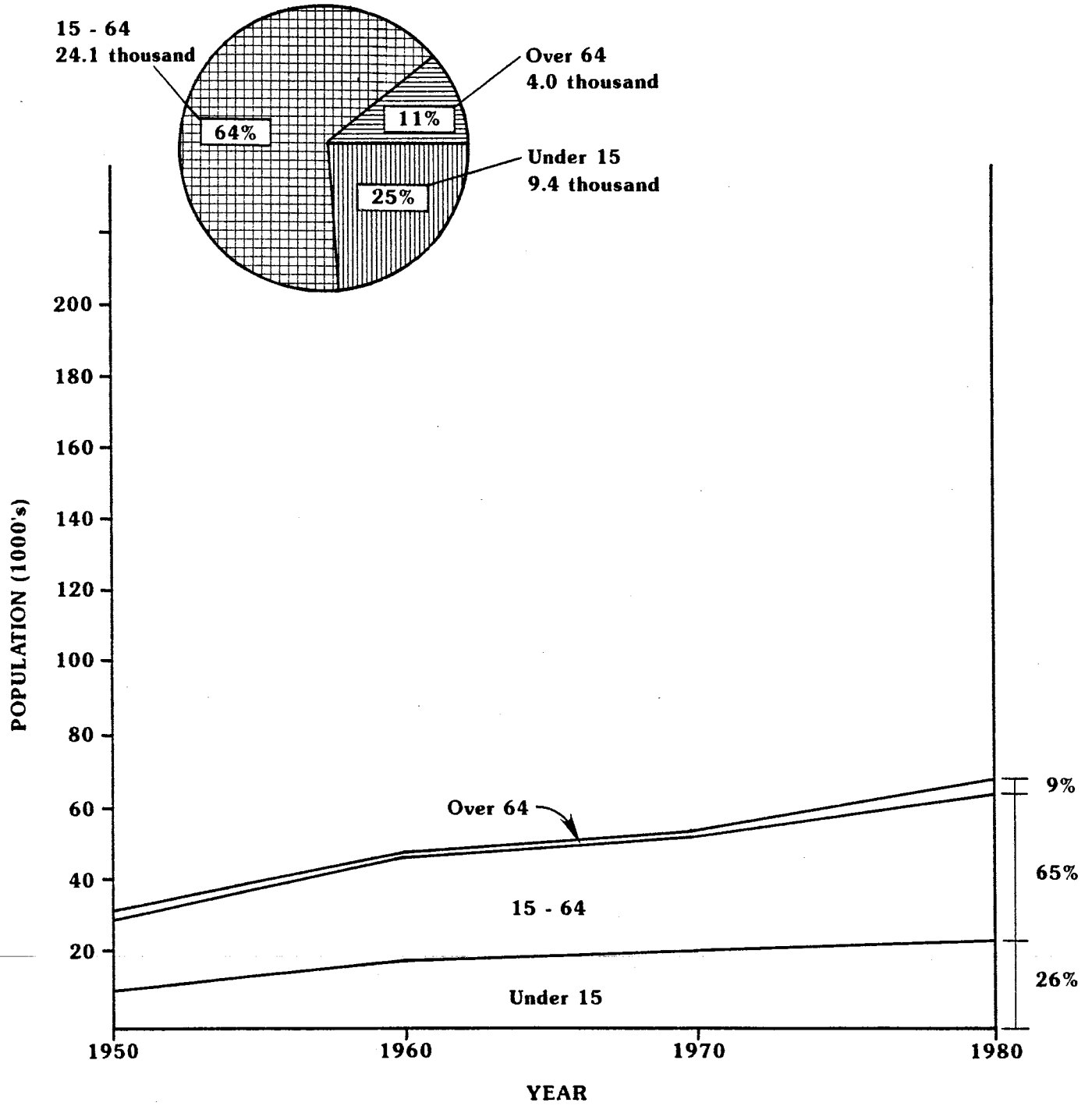
TYLER

Shares of Population Change
by Age Group: 1950 - 1980



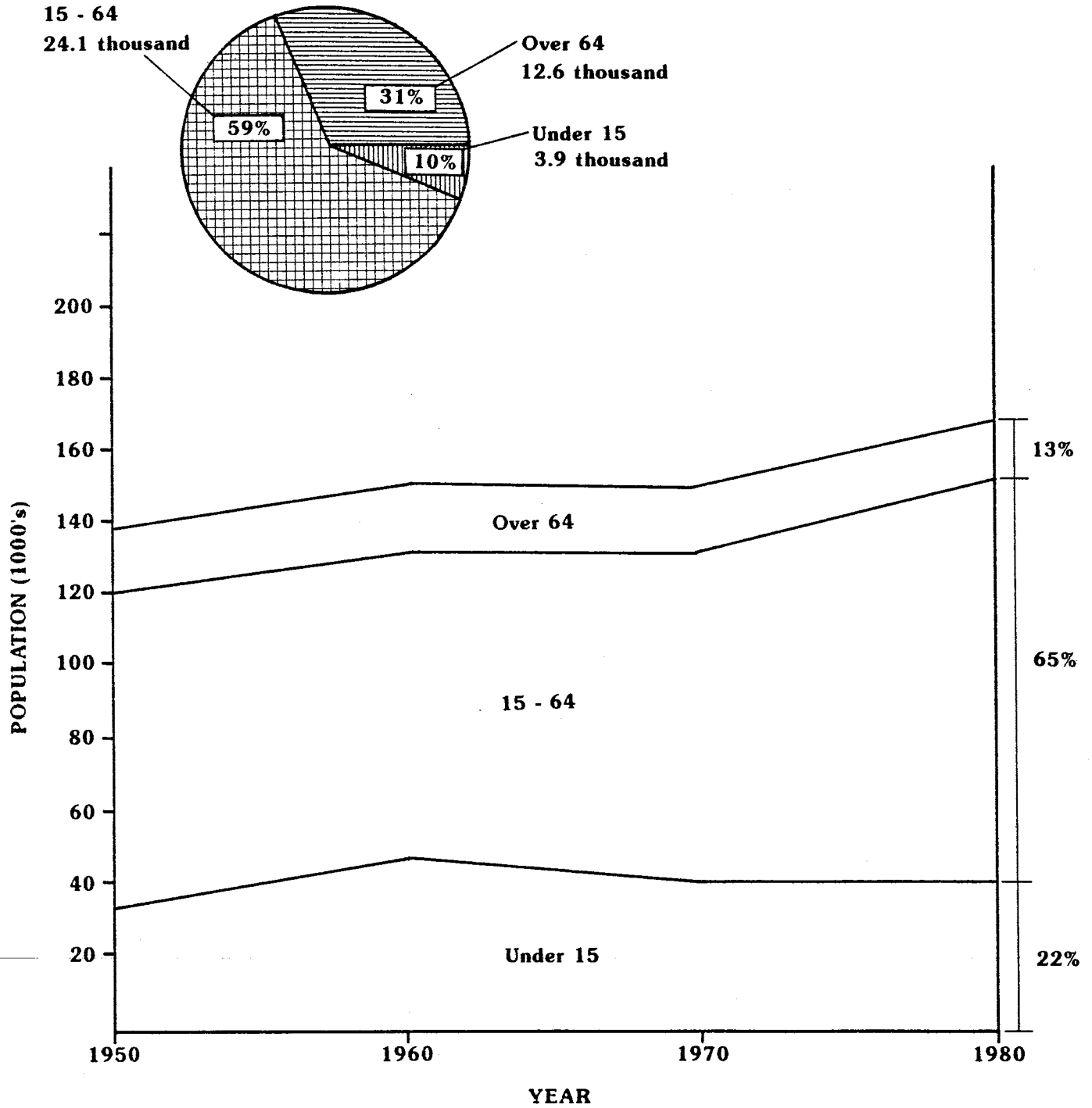
VICTORIA

**Shares of Population Change
by Age Group: 1950 - 1980**



WACO

Shares of Population Change
by Age Group: 1950 - 1980



WICHITA FALLS

Shares of Population Change
by Age Group: 1950 - 1980

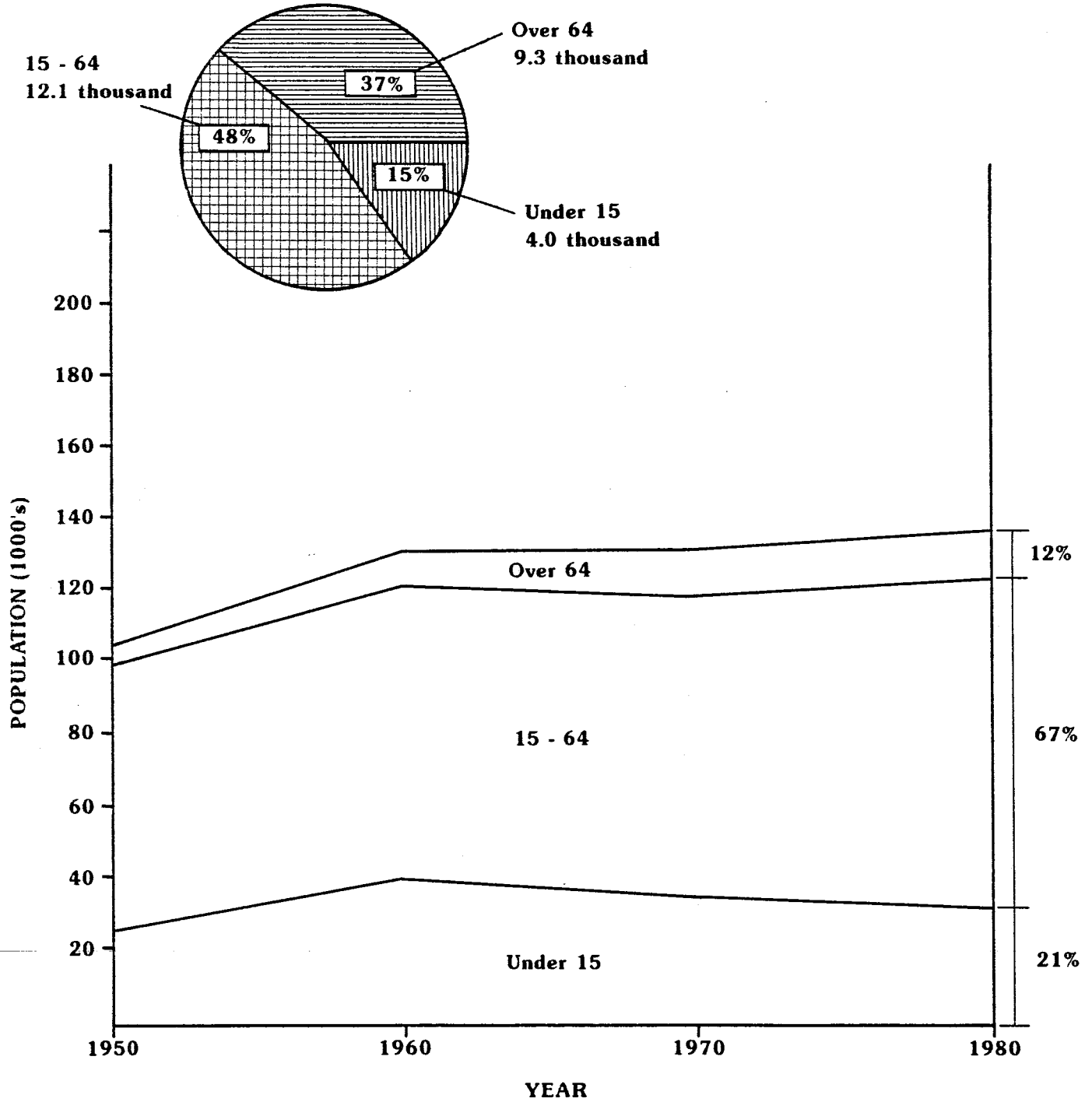


Table A-3. Population Changes During the 1970s (Percent)

Metropolitan Area	Total	Under 15	15-34	35-64	Over 64
Abilene	22	1	40	15	43
Amarillo	20	-1	40	14	47
Austin	49	21	70	42	65
Beaumont-Port Arthur-Orange	9	-12	28	2	40
Brownsville-Harlingen-San Benito	49	33	73	41	68
Bryan-College Station	61	13	110	34	44
Corpus Christi	15	-5	33	9	49
Dallas-Ft. Worth	27	1	47	26	43
El Paso	34	13	52	33	53
Galveston-Texas City	15	-8	39	11	37
Houston	45	17	79	38	49
Killeen-Temple	34	17	61	16	30
Laredo	36	23	56	30	43
Longview-Marshall	26	9	48	15	42
Lubbock	18	-7	36	14	47
McAllen-Pharr-Edinburg	56	40	76	48	84
Midland	26	-3	65	14	79
Odessa	26	2	56	13	84
San Angelo	19	-3	41	12	35
San Antonio	21	-1	37	21	42
Sherman-Denison	8	-14	20	7	27
Texarkana	26	10	43	18	43
Tyler	32	12	57	23	49
Victoria	28	3	53	22	66
Waco	16	-2	44	2	24
Wichita Falls	2	-18	15	1	22

Table A-4. Average Household Sizes in Texas Metropolitan Areas

Metropolitan Area	Average Household Size (Persons/Household)			
	1950	1960	1970	1980
Texas Metropolitan	3.35	3.38	3.22	2.82
Abilene	--	3.21	2.98	2.68
Amarillo	3.15	3.23	3.00	2.64
Austin	3.33	3.26	3.02	2.61
Beaumont-Port Arthur-Orange	3.35	3.40	3.20	2.81
Brownsville-Harlingen-San Benito	--	4.13	3.92	3.56
Bryan-College Station	--	--	--	2.60
Corpus Christi	3.66	3.76	3.52	3.08
Dallas-Ft. Worth	3.18	3.22	3.10	2.72
El Paso	3.71	3.83	3.65	3.32
Galveston-Texas City	3.73	3.27	3.16	2.79
Houston	3.27	3.36	3.21	2.79
Killeen-Temple	--	--	--	2.85
Laredo	4.28	--	--	3.79
Longview-Marshall	--	--	--	2.75
Lubbock	3.39	3.47	3.20	2.76
McAllen-Pharr-Edinburg	--	--	4.14	3.71
Midland	--	--	--	2.77
Odessa	--	--	--	2.83
San Angelo	3.27	--	--	2.67
San Antonio	3.55	3.56	3.39	2.97
Sherman-Denison	--	--	--	2.58
Texarkana	--	--	3.02	2.74
Tyler	--	--	--	2.73
Victoria	--	--	--	2.96
Waco	3.23	3.16	2.93	2.65
Wichita Falls	3.16	3.22	2.96	2.63

Table A-5. Share of the Population in the Suburbs of Metropolitan Texas

Metropolitan Area	Share of Population in Suburbs (%)		
	1960	1970	1980
Abilene	30	27	29
Amarillo	8	12	14
Austin	30	30	36
Beaumont-Port Arthur-Orange	36	43	46
Brownsville-Harlingen-San Benito	30	28	30
Bryan-College Station	13	11	13
Corpus Christi	37	28	29
Dallas-Ft. Worth	40	48	57
El Paso	12	10	11
Galveston-Texas City	29	41	47
Houston	34	38	45
Killeen-Temple	54	57	59
Laredo	6	5	8
Longview-Marshall	44	43	42
Lubbock	18	17	18
McAllen-Pharr-Edinburg	64	61	61
Midland	8	9	15
Odessa	12	15	22
San Angelo	9	10	14
San Antonio	20	26	27
Sherman-Denison	35	35	40
Texarkana	50	54	58
Tyler	45	41	41
Victoria	29	23	26
Waco	35	35	41
Wichita Falls	23	25	28

Table A-6. 1980 Distribution of Workers Within Texas Metropolitan Areas

<u>Metropolitan Area</u>	<u>Percent of Metro Workers in Suburbs</u>	<u>Difference from Texas</u>
Texas Metropolitan	42	0
Abilene	27	-15
Amarillo	14	-28
Austin	33	-9
Beaumont-Port Arthur-Orange	46	+4
Brownsville-Harlingen-San Benito	28	-14
Bryan-College Station	15	-27
Corpus Christi	26	-16
El Paso	12	-30
Dallas-Ft. Worth	57	+15
Galveston-Texas City	47	+5
Houston	43	+1
Killeen-Temple	61	+19
Laredo	8	-34
Longview-Marshall	40	-2
Lubbock	16	-26
McAllen-Pharr-Edinburg	56	+14
Midland	15	-27
Odessa	20	-22
San Angelo	13	-29
San Antonio	30	-12
Sherman-Denison	38	-4
Texarkana	58	+16
Tyler	44	+2
Victoria	25	-17
Waco	43	+1
Wichita Falls	26	-16

Table A-7. Vehicle Availability by Households

Metropolitan Area	1970 (1000)	1980 (1000)	% change 1970-1980	% of 1980 Households
Abilene				
0 Vehicle	3.1	2.6	-16.1	5.3
1 Vehicle	18.3	16.2	-11.5	33.1
2+ Vehicles	14.4	30.2	109.7	61.6
Amarillo				
0 Vehicle	3.8	3.5	-7.9	5.4
1 Vehicle	20.2	21.1	4.5	32.8
2+ Vehicles	23.2	39.8	71.6	61.8
Austin				
0 Vehicle	8.7	13.9	59.8	7.1
1 Vehicle	43.0	70.5	64.0	36.0
2+ Vehicles	38.9	111.6	186.9	56.9
Beaumont-Port Arthur-Orange				
0 Vehicle	11.6	10.9	-6.0	8.3
1 Vehicle	44.0	41.8	-5.0	31.7
2+ Vehicles	41.8	79.2	89.5	60.0
Brownsville-Harlingen-San Benito				
0 Vehicle	6.9	7.1	-2.9	12.2
1 Vehicle	18.0	23.7	31.7	40.6
2+ Vehicles	10.5	27.5	161.9	47.2
Bryan-College Station				
0 Vehicle	--	2.2	--	6.8
1 Vehicle	--	11.6	--	35.7
2+ Vehicles	--	18.7	--	57.5
Corpus Christi				
0 Vehicle	9.1	8.3	-8.8	7.9
1 Vehicle	36.0	36.6	1.7	35.0
2+ Vehicles	34.6	59.7	72.5	57.1
Dallas-Fort Worth				
0 Vehicle	76.0	70.4	-7.4	6.5
1 Vehicle	308.0	358.1	16.3	33.3
2+ Vehicles	349.1	647.7	85.5	60.2
El Paso				
0 Vehicle	15.1	15.3	1.3	10.9
1 Vehicle	46.2	52.1	12.8	37.0
2+ Vehicles	34.5	73.3	112.5	52.1
Galveston-Texas City				
0 Vehicle	7.9	6.9	-12.7	10.0
1 Vehicle	24.5	23.4	-4.5	33.8
2+ Vehicles	20.6	38.9	88.8	56.2
Houston				
0 Vehicle	70.8	71.6	1.1	7.0
1 Vehicle	268.7	363.8	35.4	35.4
2+ Vehicles	271.2	591.7	118.2	57.6
Killeen-Temple				
0 Vehicle	--	4.9	--	7.3
1 Vehicle	--	27.0	--	40.4
2+ Vehicles	--	34.9	--	52.3

Table A-7. Vehicle Availability by Households (cont'd.)

Metropolitan Area	1970 (1000)	1980 (1000)	% change 1970-1980	% of 1980 Households
McAllen-Pharr-Edinburg				
0 Vehicle	8.1	8.4	3.7	11.0
1 Vehicle	21.8	30.3	39.0	39.9
2+ Vehicles	13.6	37.2	173.5	49.1
Laredo				
0 Vehicle	--	4.7	--	18.1
1 Vehicle	--	9.9	--	38.3
2+ Vehicles	--	11.3	--	43.6
Longview-Marshall				
0 Vehicle	--	4.5	--	8.4
1 Vehicle	--	16.4	--	30.4
2+ Vehicles	--	33.0	--	61.2
Lubbock				
0 Vehicle	4.3	3.5	-18.6	4.8
1 Vehicle	24.6	24.9	1.2	34.2
2+ Vehicles	24.4	44.2	81.1	60.9
Midland				
0 Vehicle	--	1.2	--	3.9
1 Vehicle	--	9.1	--	31.4
2+ Vehicles	--	19.4	--	65.3
Odessa				
0 Vehicle	--	1.8	--	4.6
1 Vehicle	--	12.7	--	31.4
2+ Vehicles	--	25.9	--	64.0
San Angelo				
0 Vehicle	--	2.0	--	6.5
1 Vehicle	--	10.3	--	33.8
2+ Vehicles	--	18.1	--	59.7
San Antonio				
0 Vehicle	34.5	35.5	2.9	10.2
1 Vehicle	114.2	124.9	9.4	35.8
2+ Vehicles	95.2	188.9	98.4	54.0
Sherman-Denison				
0 Vehicle	--	2.5	--	7.3
1 Vehicle	--	11.0	--	32.4
2+ Vehicles	--	20.5	--	60.3
Texarkana				
0 Vehicle	6.1	5.1	-16.4	11.2
1 Vehicle	15.7	14.4	-8.3	31.6
2+ Vehicles	11.2	26.1	133.0	57.2
Tyler				
0 Vehicle	--	3.2	--	6.9
1 Vehicle	--	14.2	--	30.9
2+ Vehicles	--	28.6	--	62.2
Victoria				
0 Vehicle	--	1.5	--	6.5
1 Vehicle	--	7.1	--	31.0
2+ Vehicles	--	14.4	--	62.5

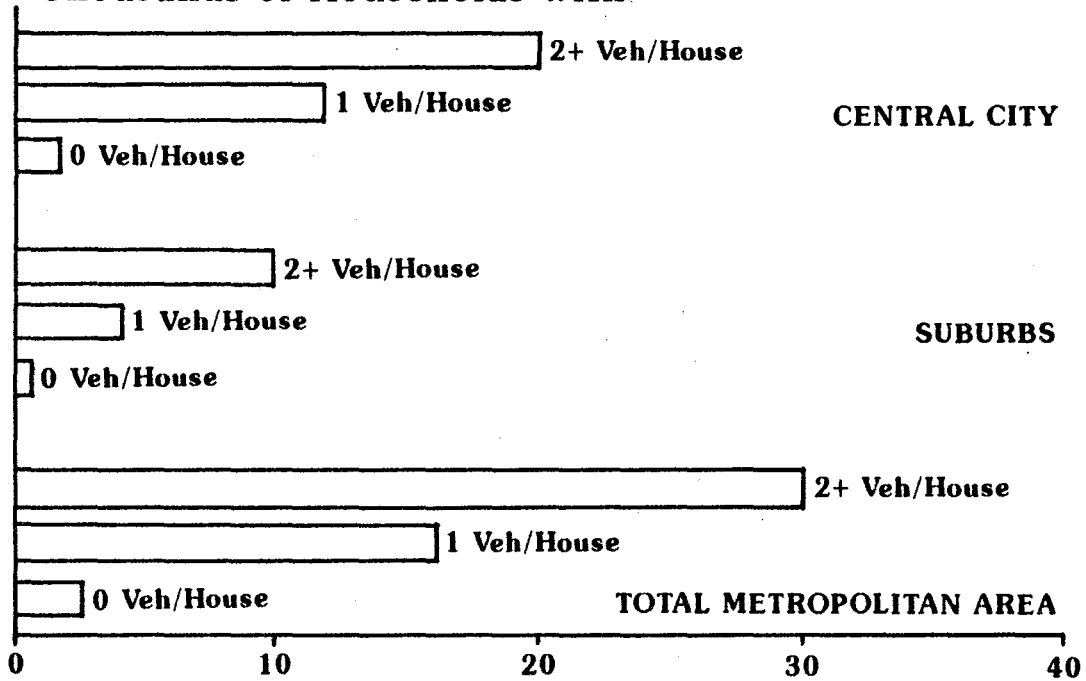
Table A-7. Vehicle Availability by Households (cont'd.)

Metropolitan Area	1970 (1000)	1980 (1000)	% change 1970-1980	% of 1980 Households
Waco				
0 Vehicle	6.7	5.4	-19.4	8.8
1 Vehicle	20.8	20.9	0.5	34.0
2+ Vehicles	20.6	35.2	70.9	57.2
Wichita Falls				
0 Vehicle	4.1	3.0	-26.8	6.4
1 Vehicle	20.7	15.8	-23.7	33.9
2+ Vehicles	15.0	27.9	86.0	59.7

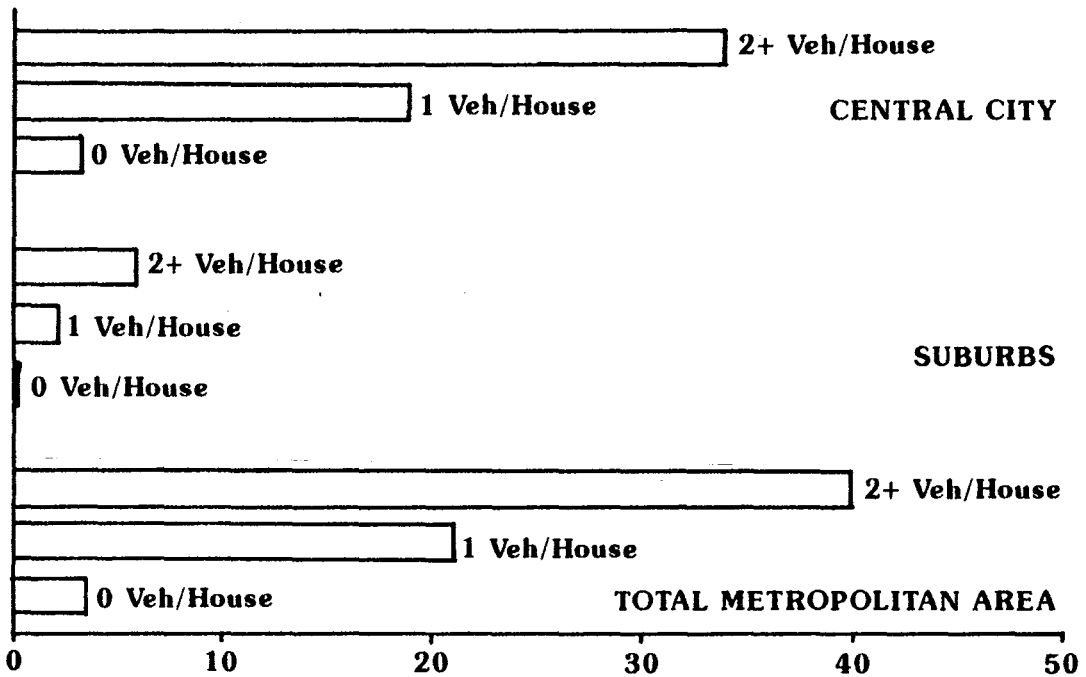
FIGURE A-2

VEHICLE OWNERSHIP BY HOUSEHOLD LOCATIONS, 1980

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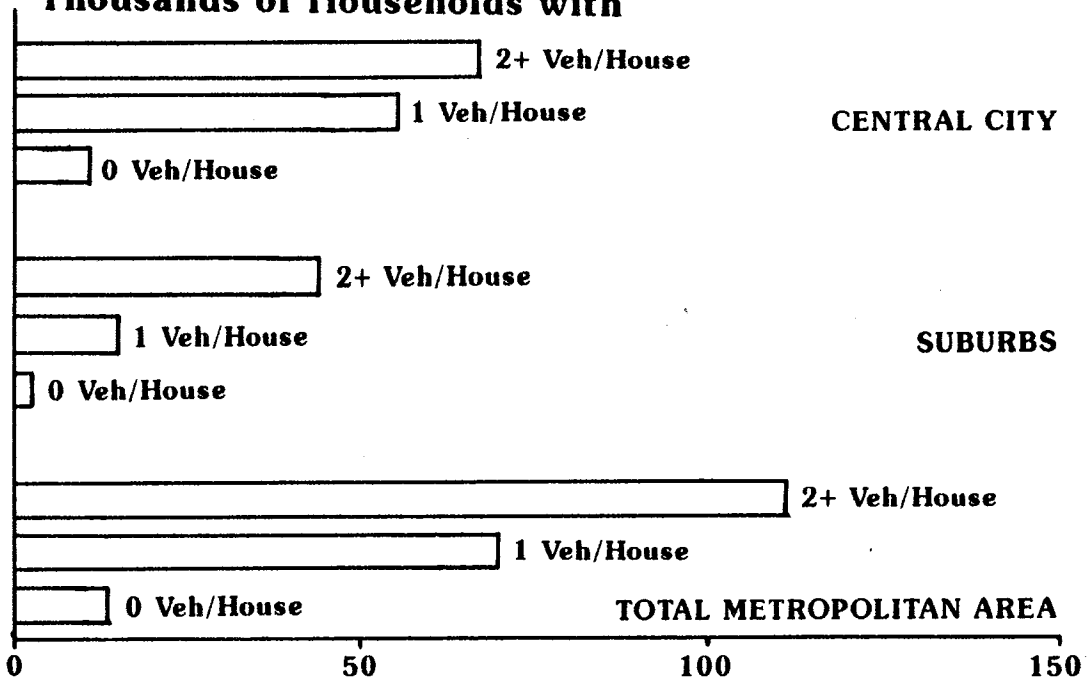


AMARILLO
Thousands of Households with



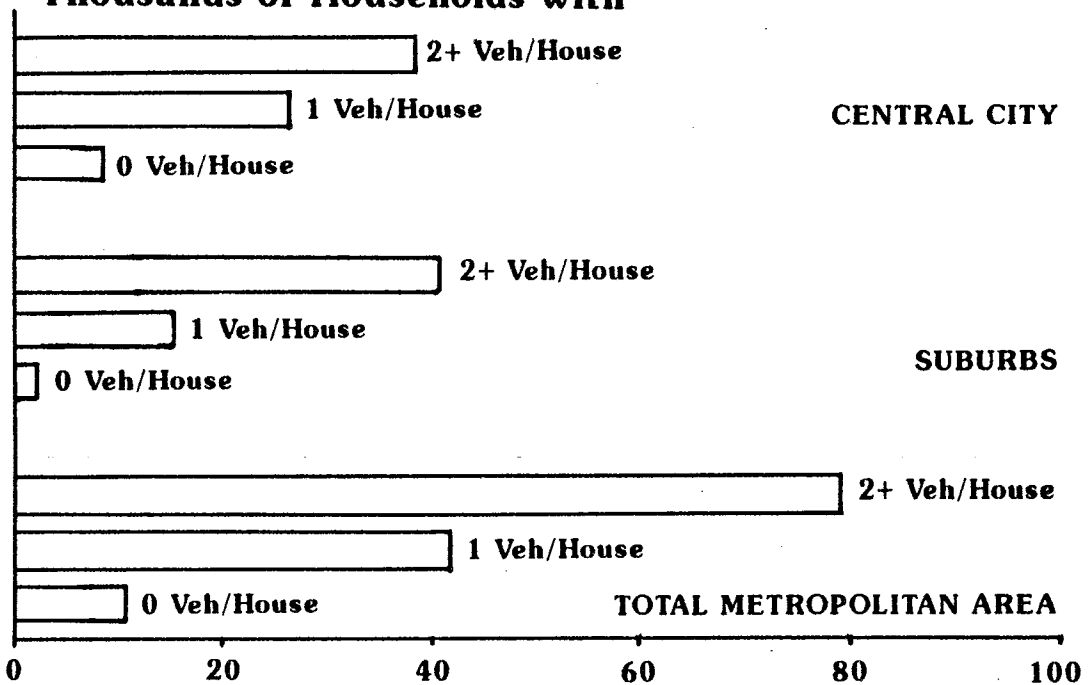
AUSTIN

Thousands of Households with



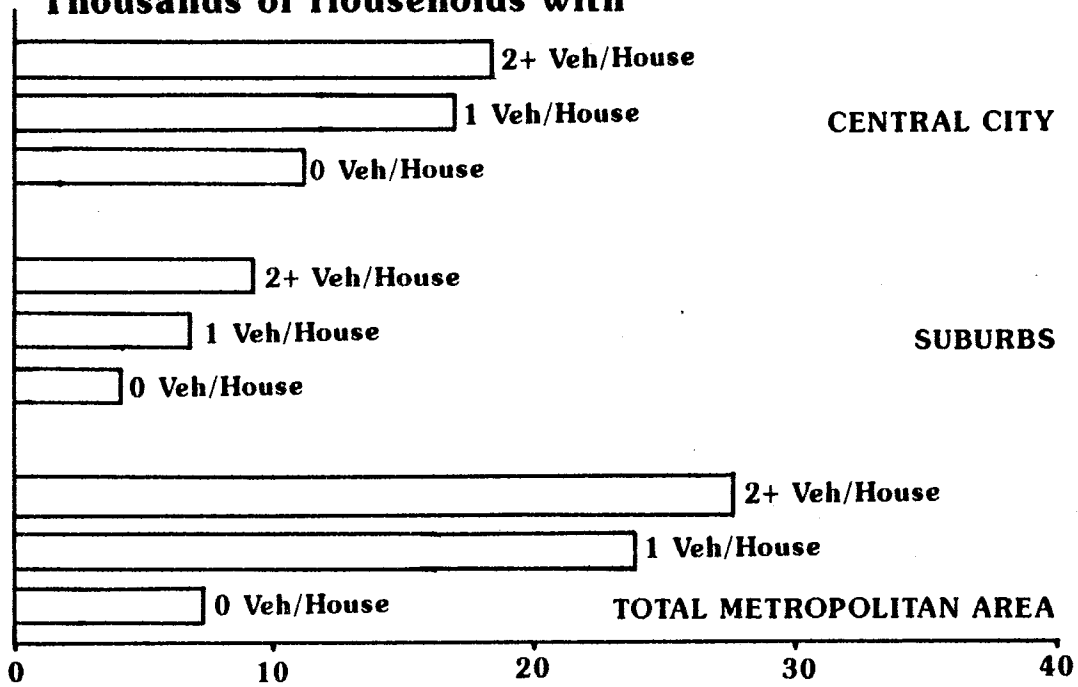
BEAUMONT-PORT ARTHUR-ORANGE

Thousands of Households with



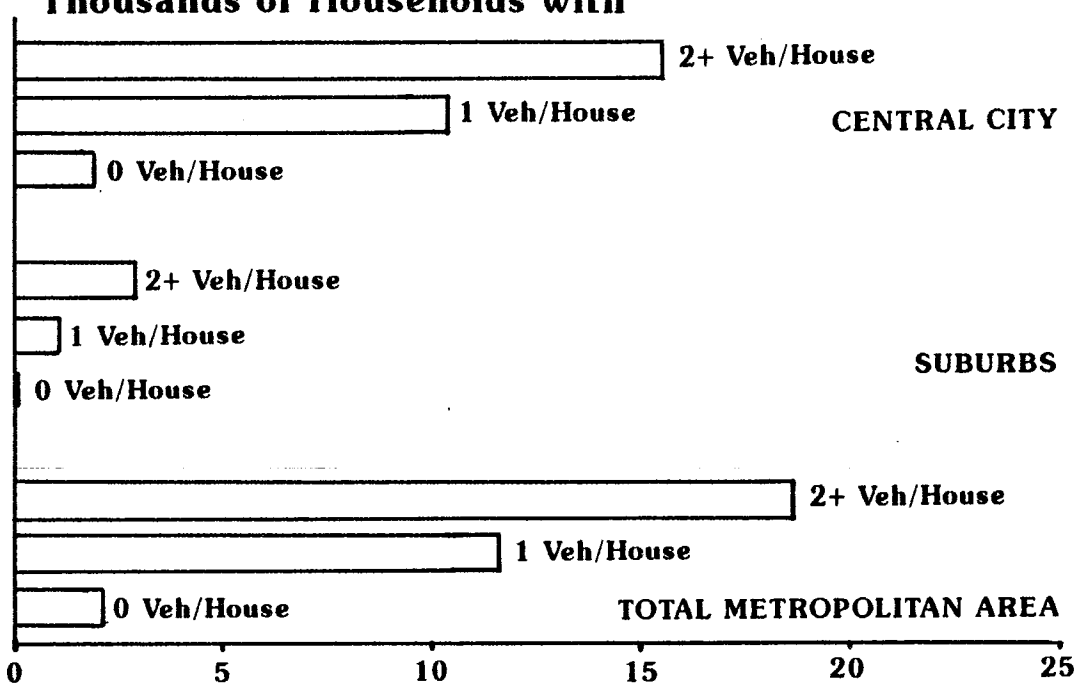
BROWNSVILLE-HARLINGEN-SAN BENITO

Thousands of Households with

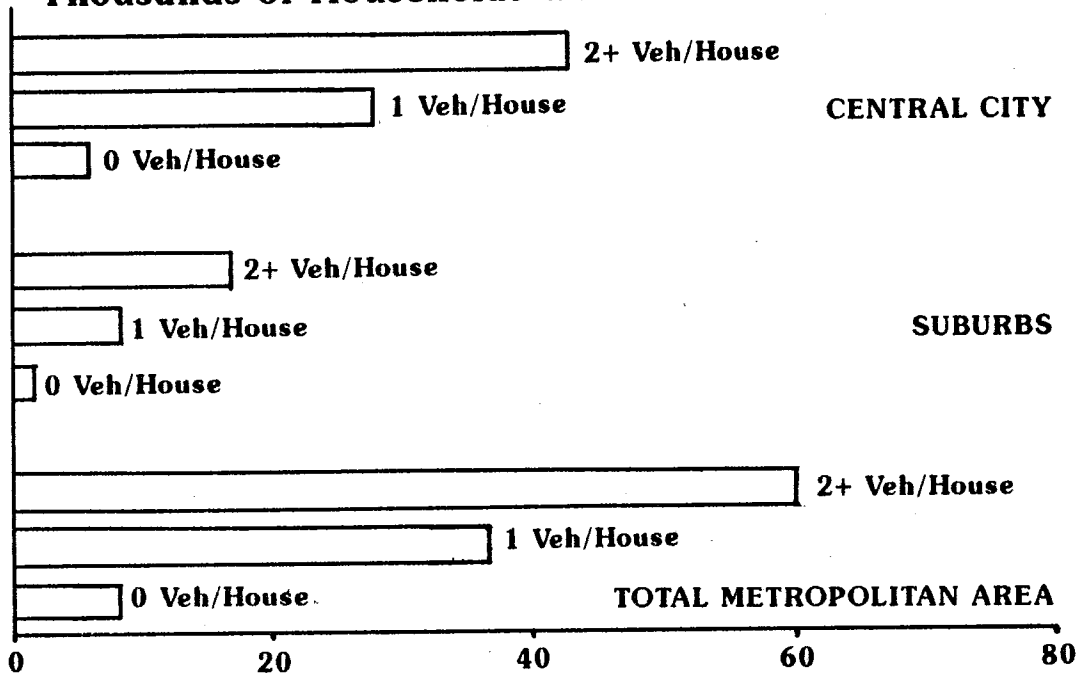


BRYAN-COLLEGE STATION

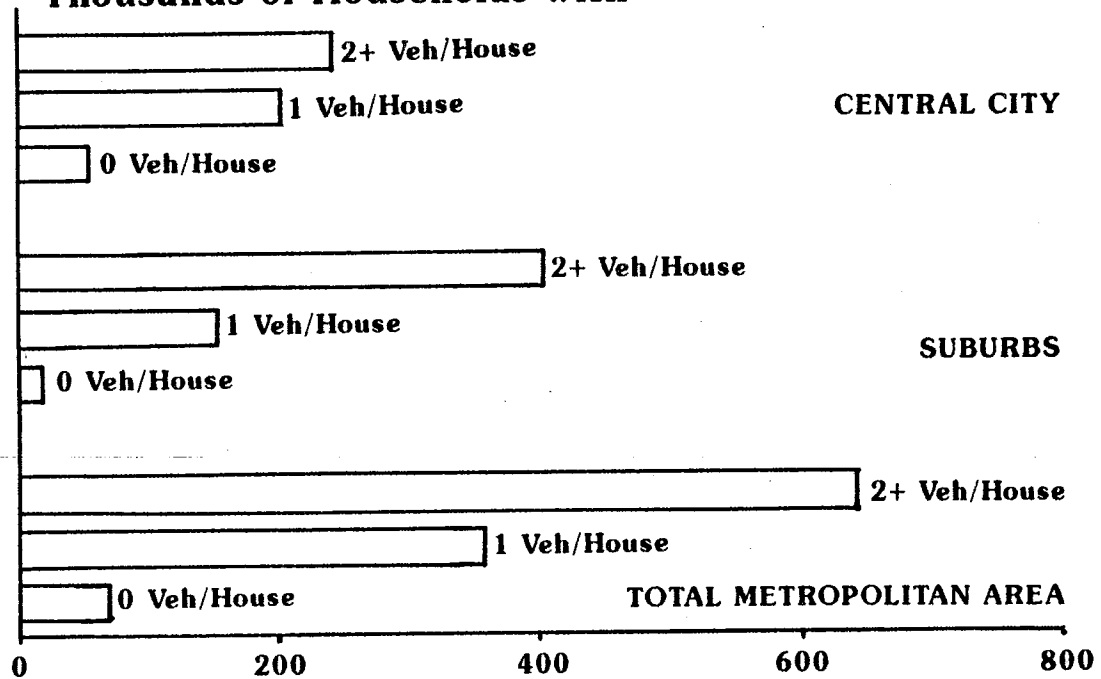
Thousands of Households with



CORPUS CHRISTI
Thousands of Households with

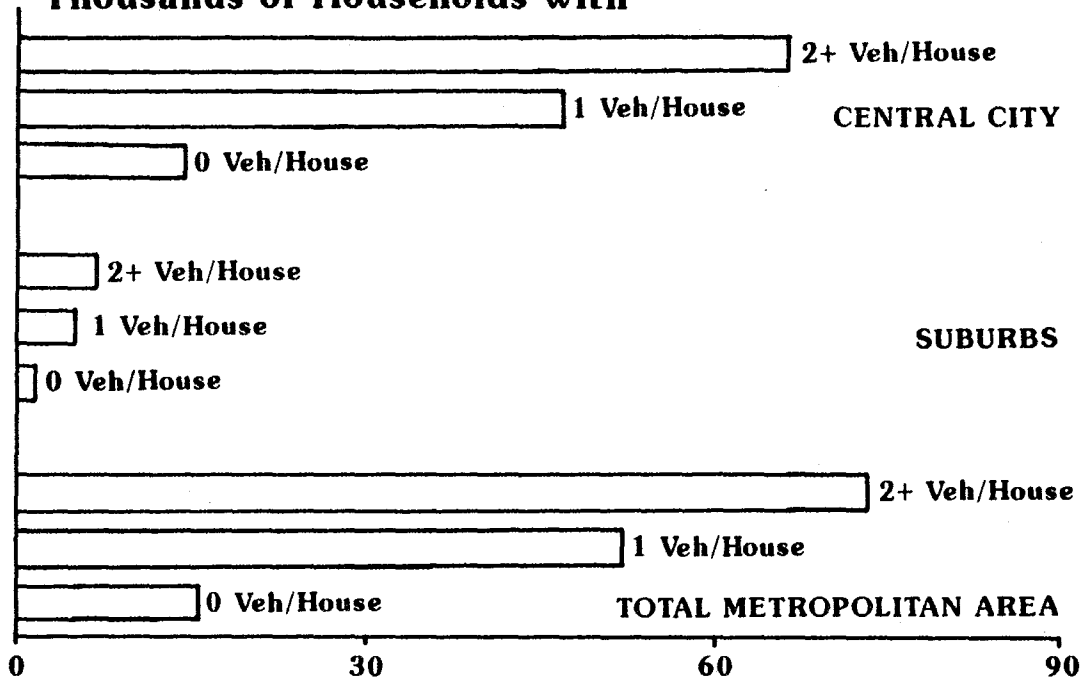


DALLAS-FT. WORTH
Thousands of Households with



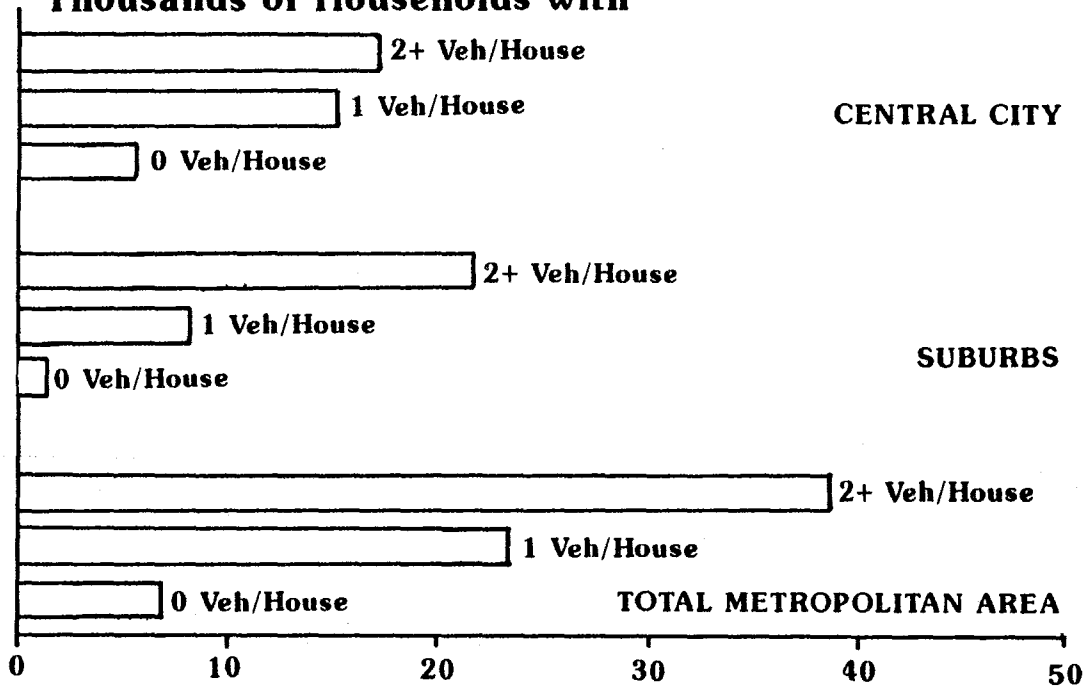
EL PASO

Thousands of Households with

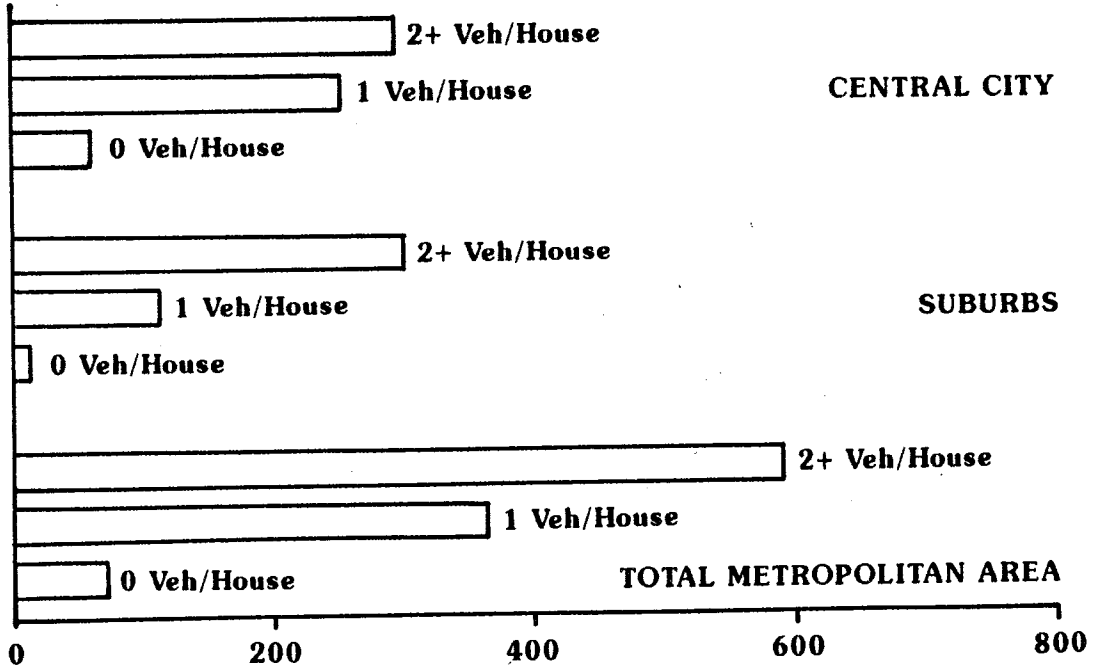


GALVESTON-TEXAS CITY

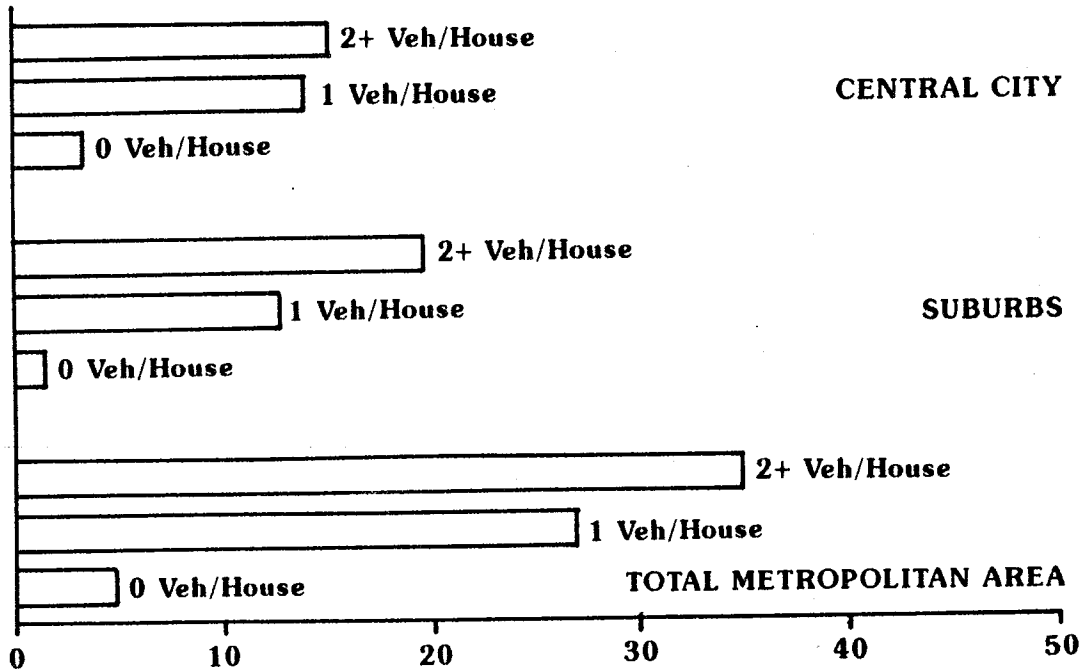
Thousands of Households with



HOUSTON
Thousands of Households with

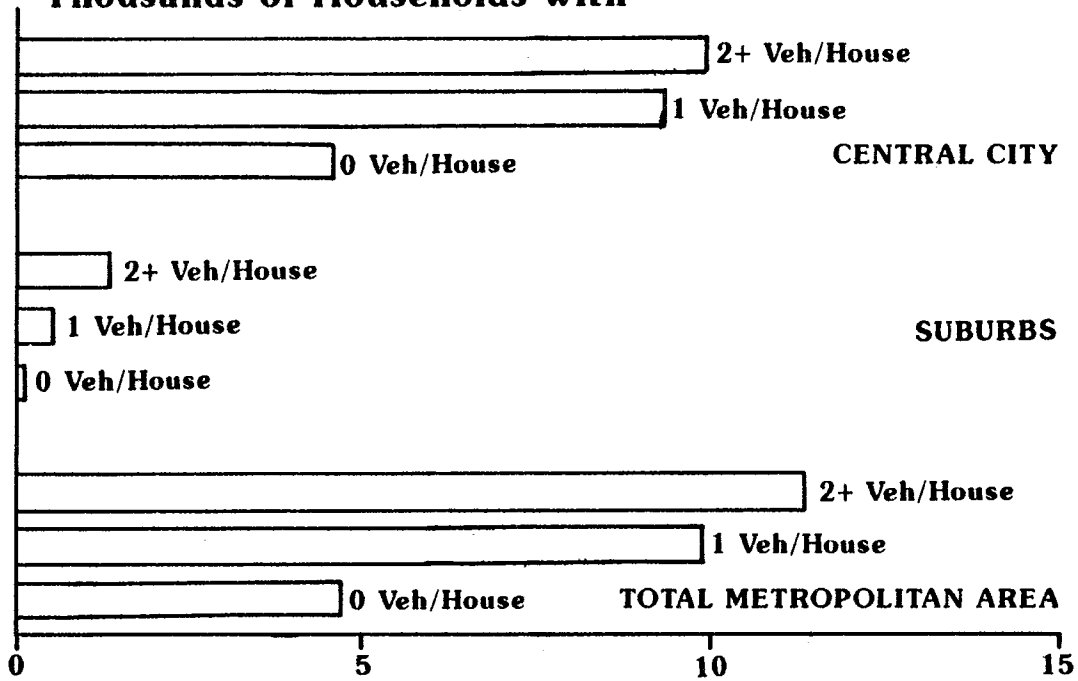


KILLEEN-TEMPLE
Thousands of Households with



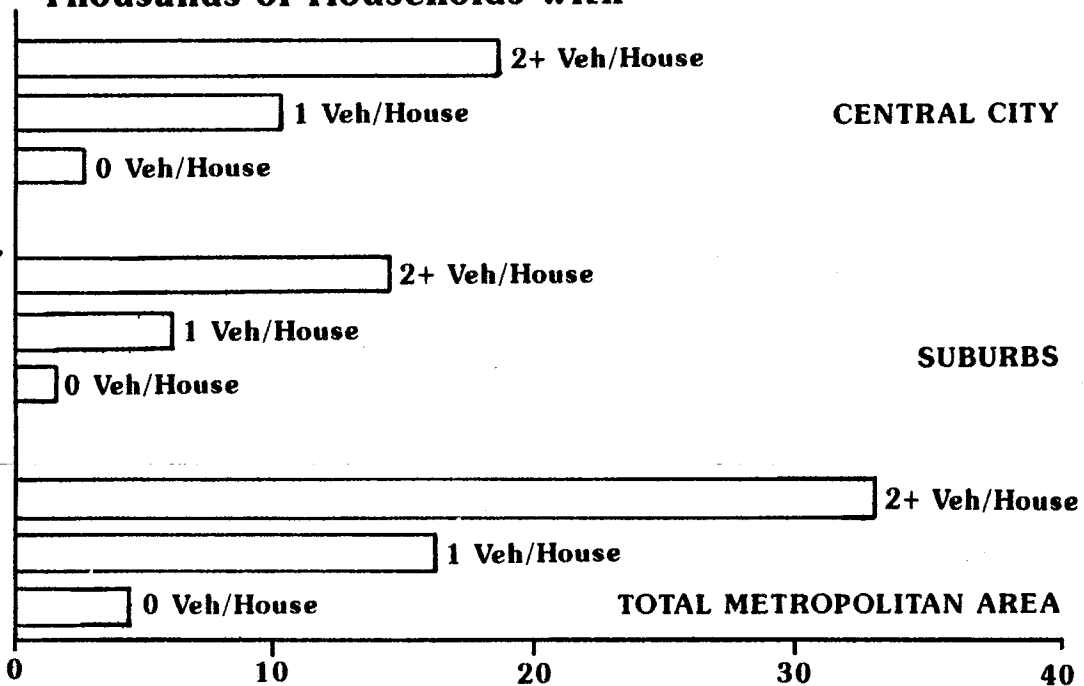
LAREDO

Thousands of Households with

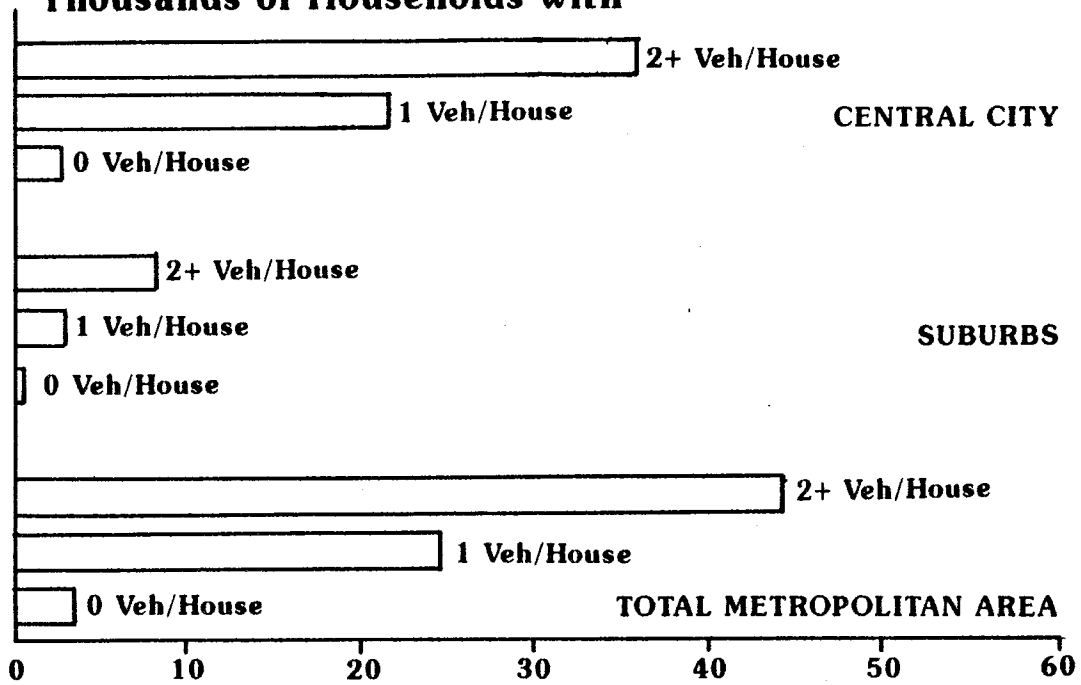


LONGVIEW-MARSHALL

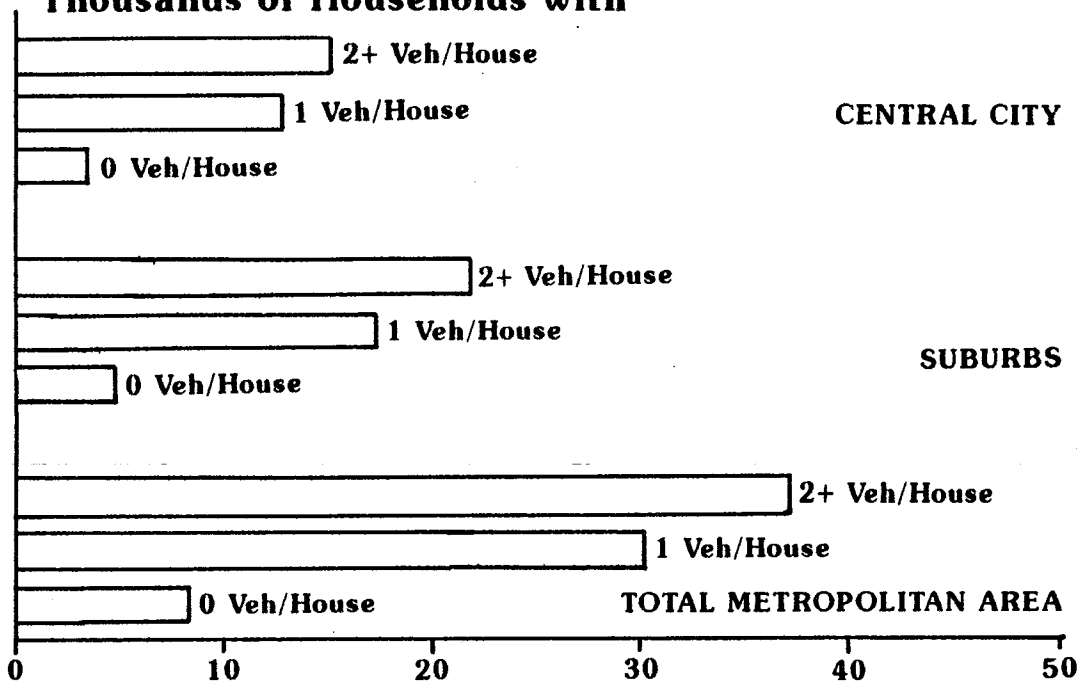
Thousands of Households with



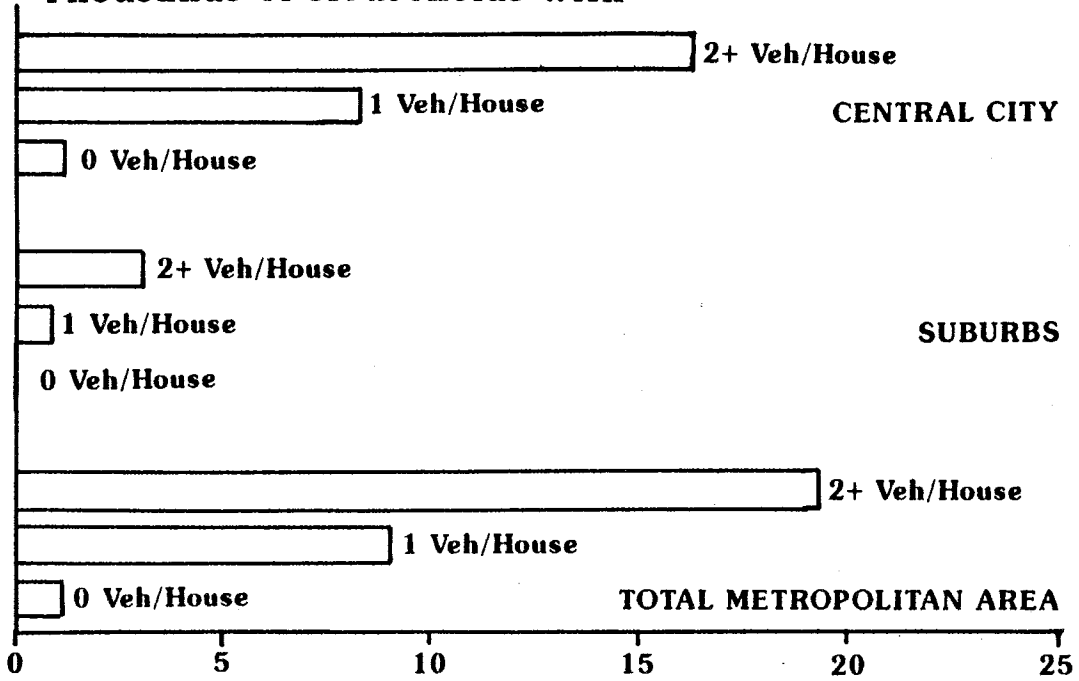
LUBBOCK
Thousands of Households with



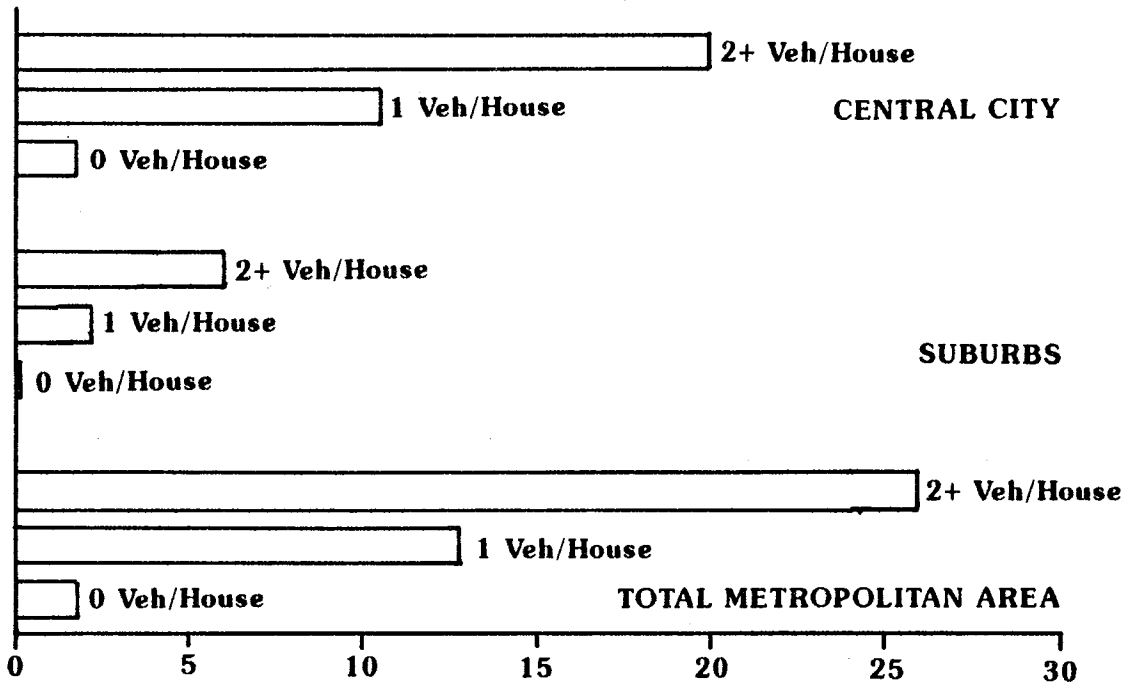
MCALLEN-PHARR-EDINBURG
Thousands of Households with



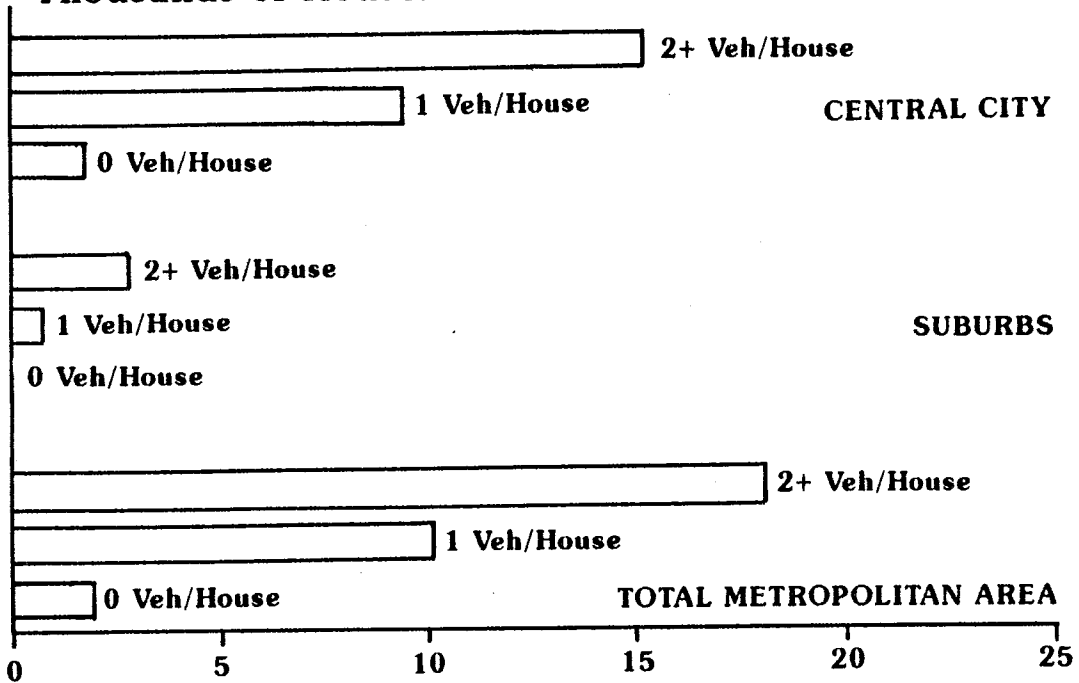
MIDLAND
Thousands of Households with



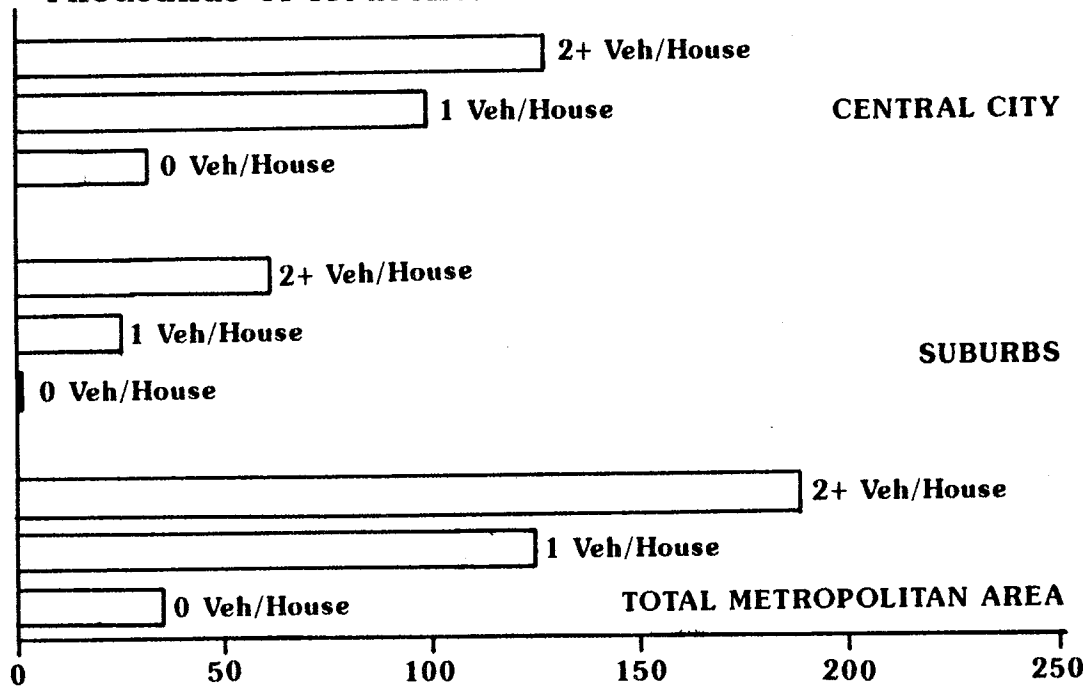
ODESSA
Thousands of Households with



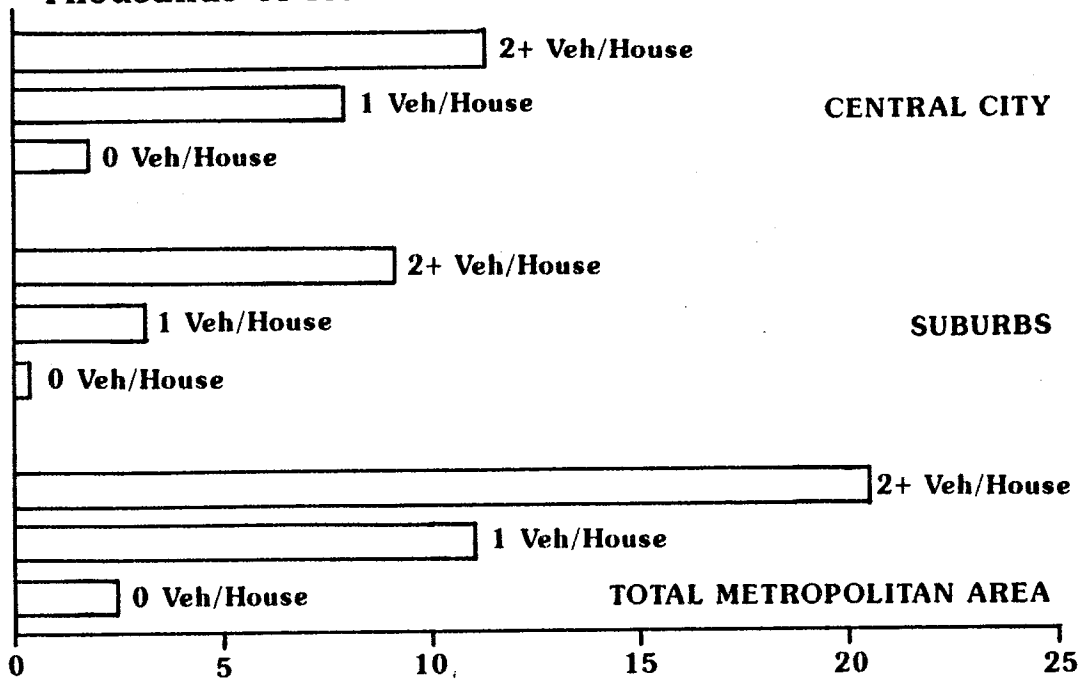
SAN ANGELO
Thousands of Households with



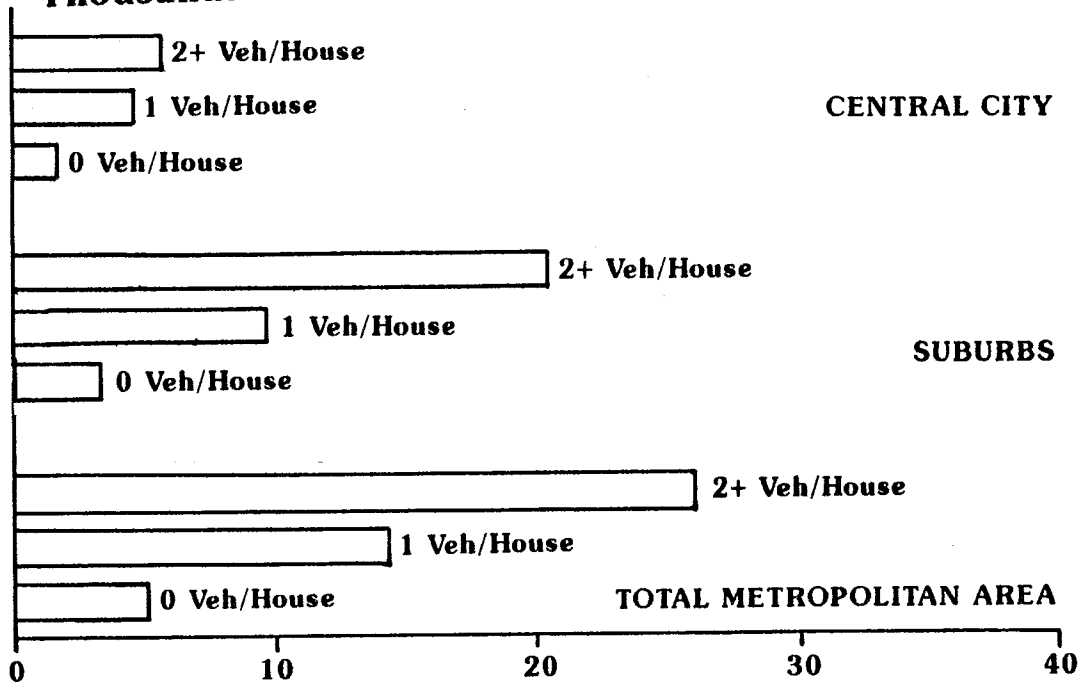
SAN ANTONIO
Thousands of Households with



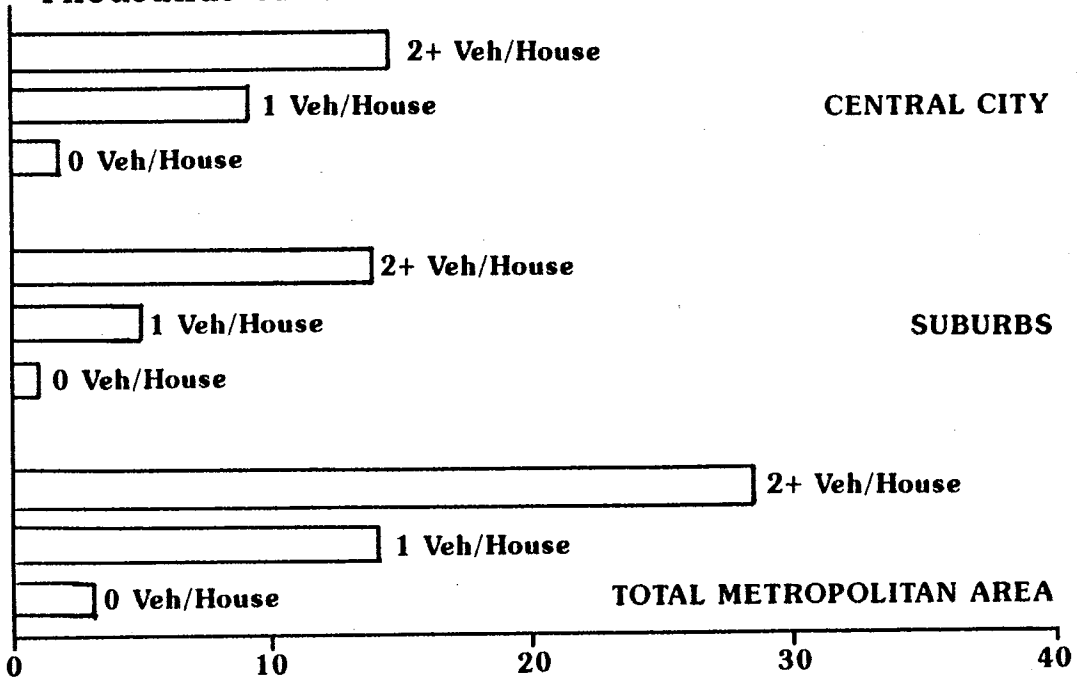
SHERMAN-DENISON
Thousands of Households with



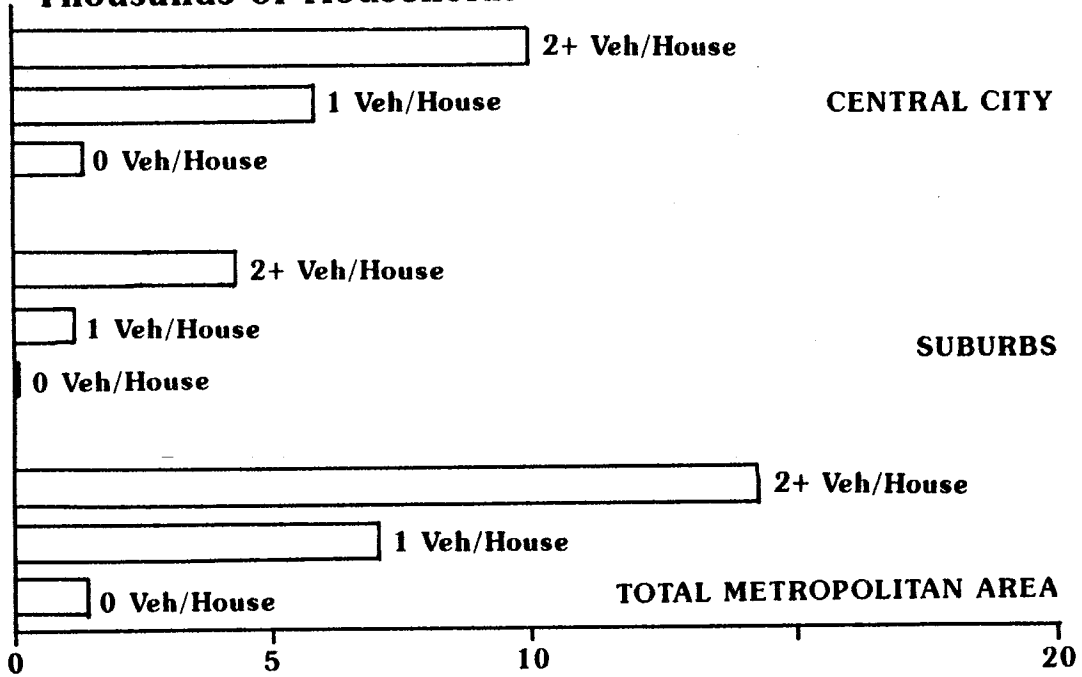
TEXARKANA
Thousands of Households with



TYLER
Thousands of Households with

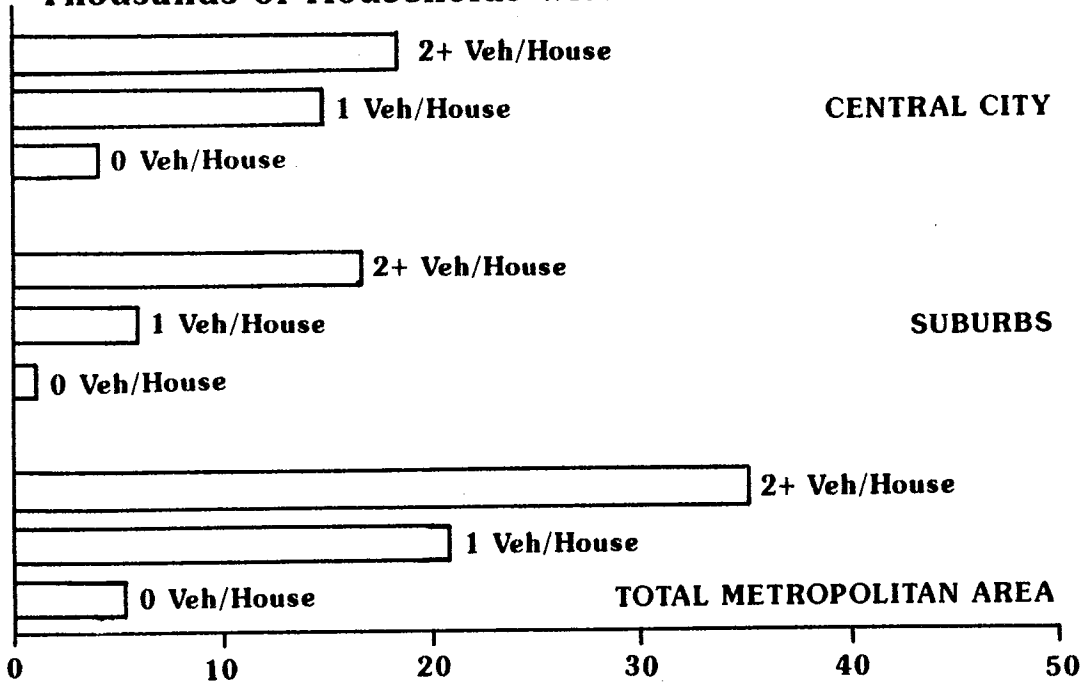


VICTORIA
Thousands of Households with



WACO

Thousands of Households with



WICHITA FALLS

Thousands of Households with

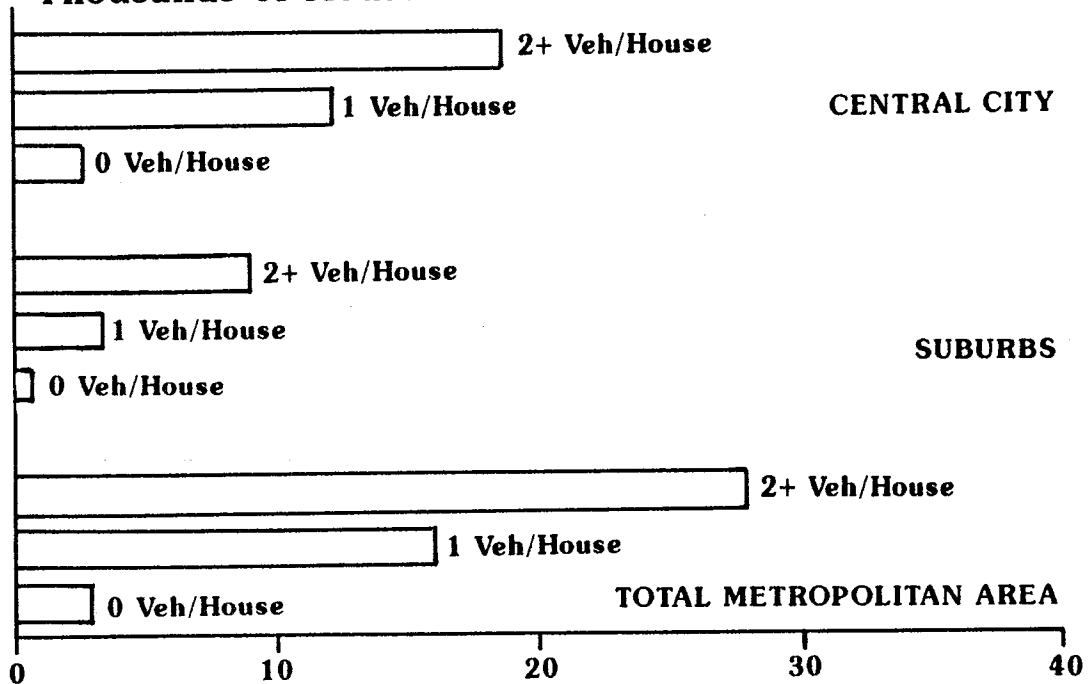


Table A-8. Work Force Characteristics

Metropolitan Area	Total Work Force (Thousands)	Percent of Work Force		Percent of Working Age Population in Work Force		
		Male	Female	Male	Female	Total
Abilene						
1960	45	70	30	86	37	62
1970	45	63	37	83	45	64
1980	63	58	42	84	56	70
Amarillo						
1960	62	72	28	92	40	67
1970	58	62	38	83	46	64
1980	82	58	42	85	58	71
Austin						
1960	79	64	36	60	35	48
1970	120	61	39	61	40	50
1980	260	56	44	77	61	69
Beaumont-Port Arthur-Orange						
1960	104	71	29	76	30	52
1970	111	68	32	72	32	51
1980	149	61	39	76	46	61
Brownsville-Harlingen-San Benito						
1960	46	69	31	81	34	57
1970	39	63	37	69	34	50
1980	69	58	42	70	45	57
Bryan-College Station						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	41	59	41	62	53	58
Corpus Christi						
1960	72	70	30	82	33	57
1970	99	67	33	79	37	57
1980	137	61	39	81	50	65
Dallas-Ft. Worth						
1960	649	66	34	87	42	64
1970	953	62	38	82	48	65
1980	1,469	57	43	85	61	73
El Paso						
1960	109	72	28	85	34	60
1970	122	66	34	76	38	57
1980	182	62	38	74	44	59
Galveston-Texas City						
1960	50	68	32	83	37	59
1970	64	64	36	80	42	60
1980	89	58	42	79	57	68
Houston						
1960	462	68	32	75	33	53
1970	779	64	36	82	44	62
1980	1,419	60	40	84	58	71

Table A-8. Work Force Characteristics (cont'd.)

Metropolitan Area	Total Work Force (Thousands)	Percent of Work Force		Percent of Working Age Population in Work Force		
		Male	Female	Male	Female	Total
Killeen-Temple						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	103	70	30	86	49	70
Laredo						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	32	61	39	72	41	55
Longview-Marshall						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	66	57	43	83	53	68
Lubbock						
1960	57	71	29	85	36	60
1970	68	64	36	77	42	59
1980	91	58	42	80	57	68
McAllen-Pharr-Edinburg						
1960	--	--	--	--	--	--
1970	51	64	36	69	34	50
1980	92	59	41	71	43	56
Midland						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	41	61	39	90	56	73
Odessa						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	56	63	37	90	53	72
San Angelo						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	40	56	44	84	62	73
San Antonio						
1960	243	71	29	80	33	56
1970	314	66	34	79	40	59
1980	449	59	41	78	51	64
Sherman-Denison						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	39	57	43	82	57	69
Texarkana						
1960	--	--	--	--	--	--
1970	36	62	38	77	43	59
1980	30	58	42	46	30	38
Tyler						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	56	58	42	82	56	69

Table A-8. Work Force Characteristics (cont'd.)

Metropolitan Area	Total Work Force (Thousands)	Percent of Work Force		Percent of Working Age Population in Work Force		
		Male	Female	Male	Female	Total
Victoria						
1960	--	--	--	--	--	--
1970	--	--	--	--	--	--
1980	31	63	37	88	50	69
Waco						
1960	55	67	33	84	40	62
1970	55	60	40	75	46	60
1980	72	56	44	74	56	65
Wichita Falls						
1960	51	72	28	89	37	64
1970	52	68	32	86	43	65
1980	63	61	39	87	58	73

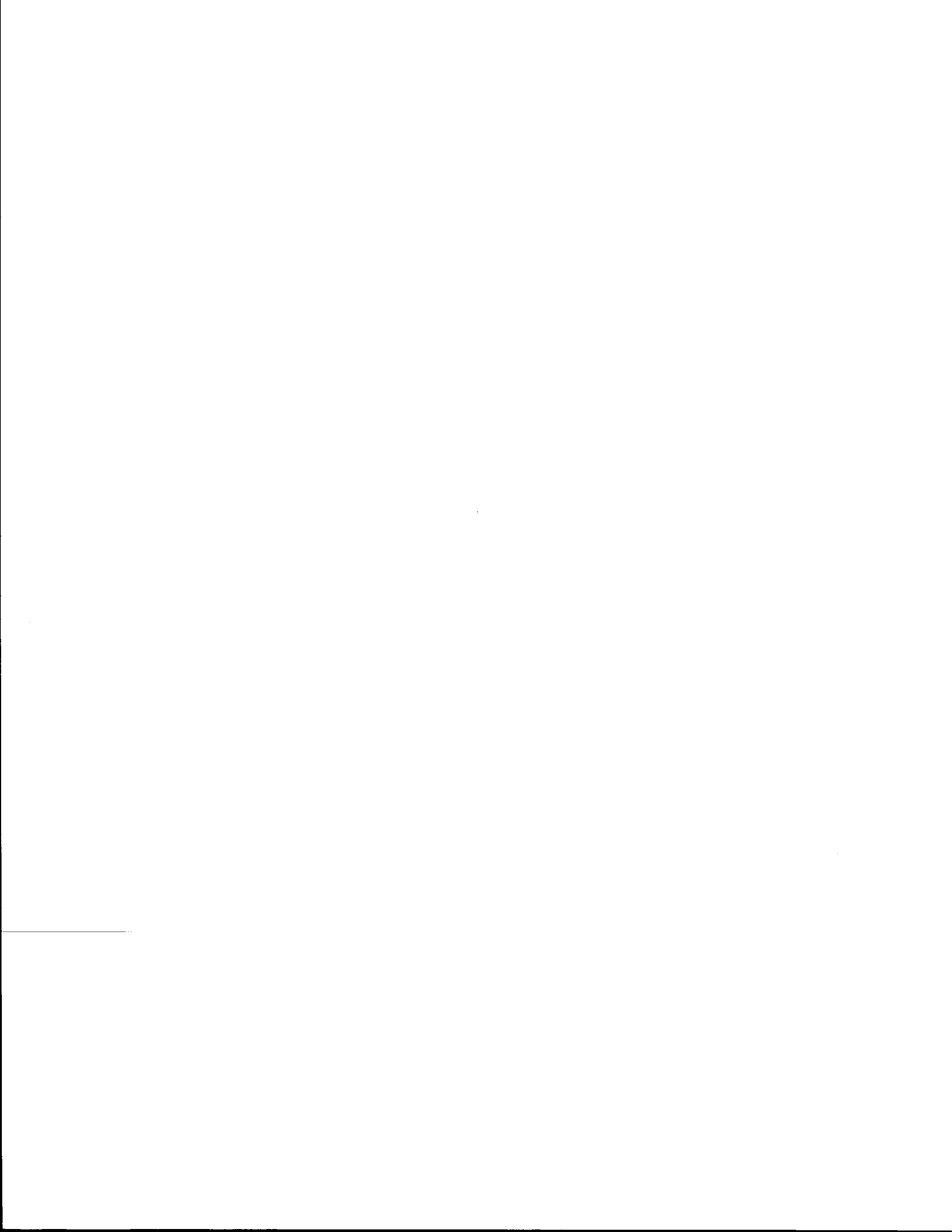
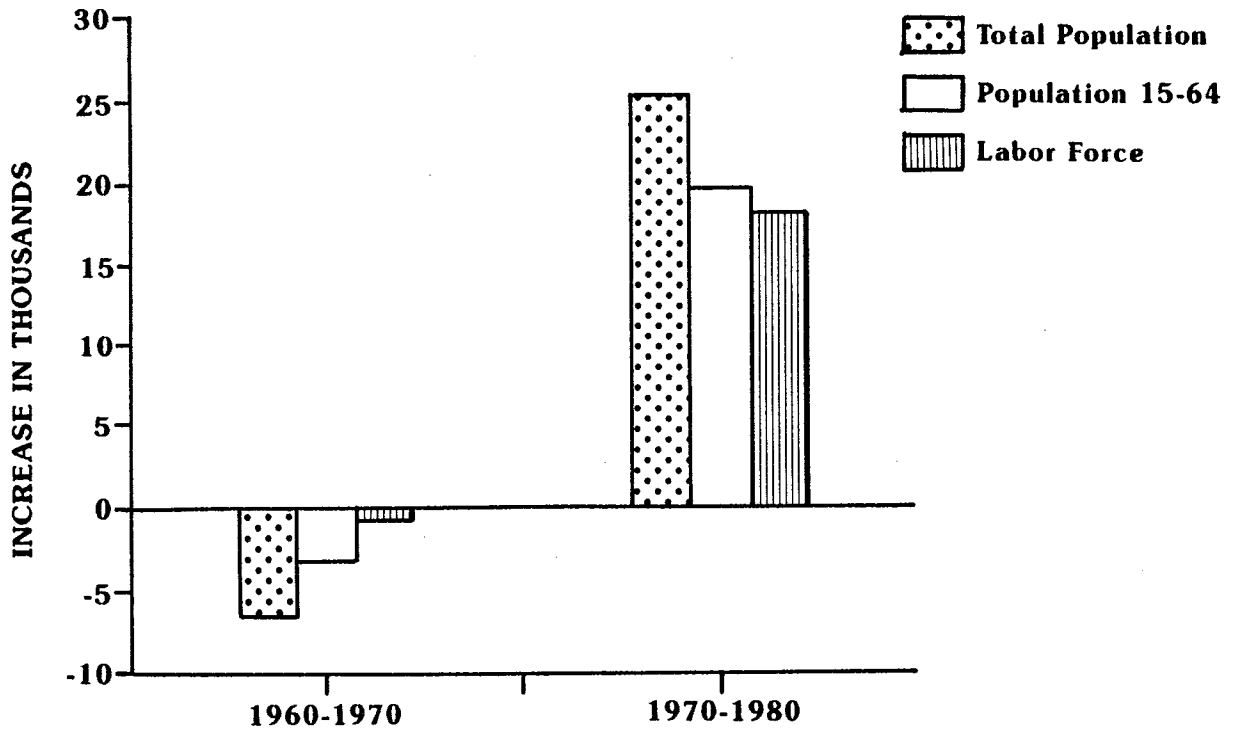


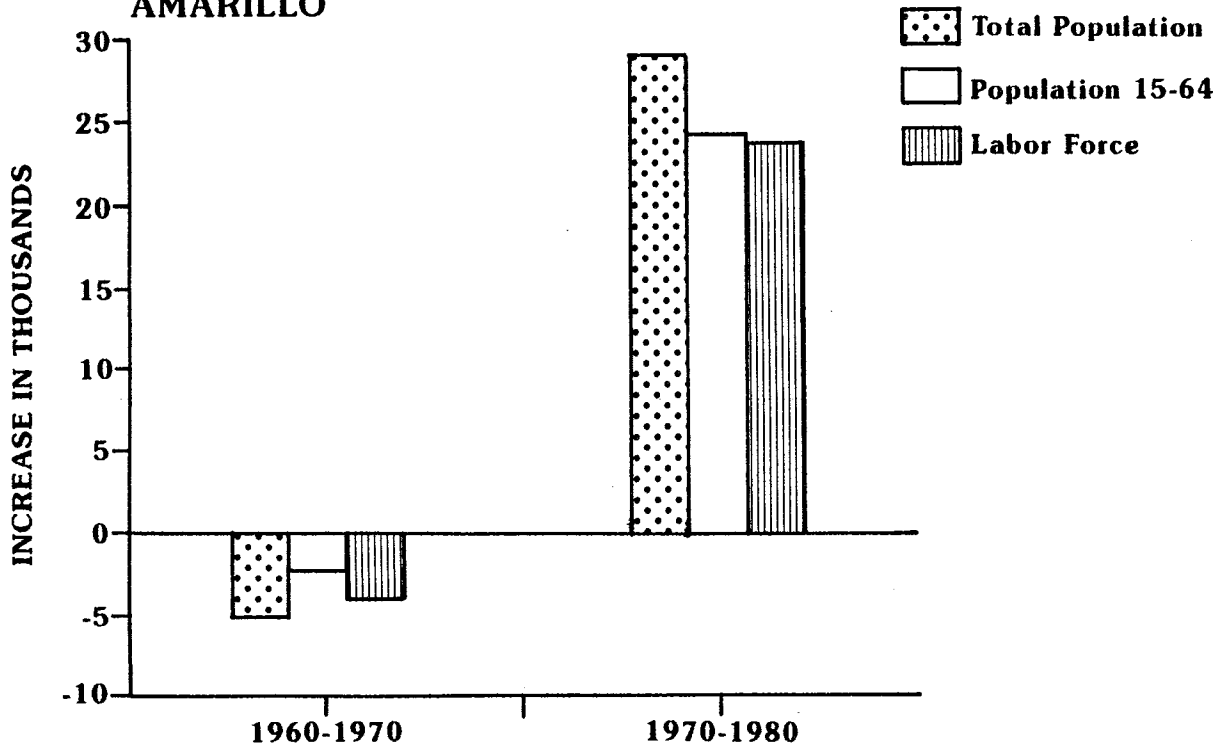
FIGURE A-3

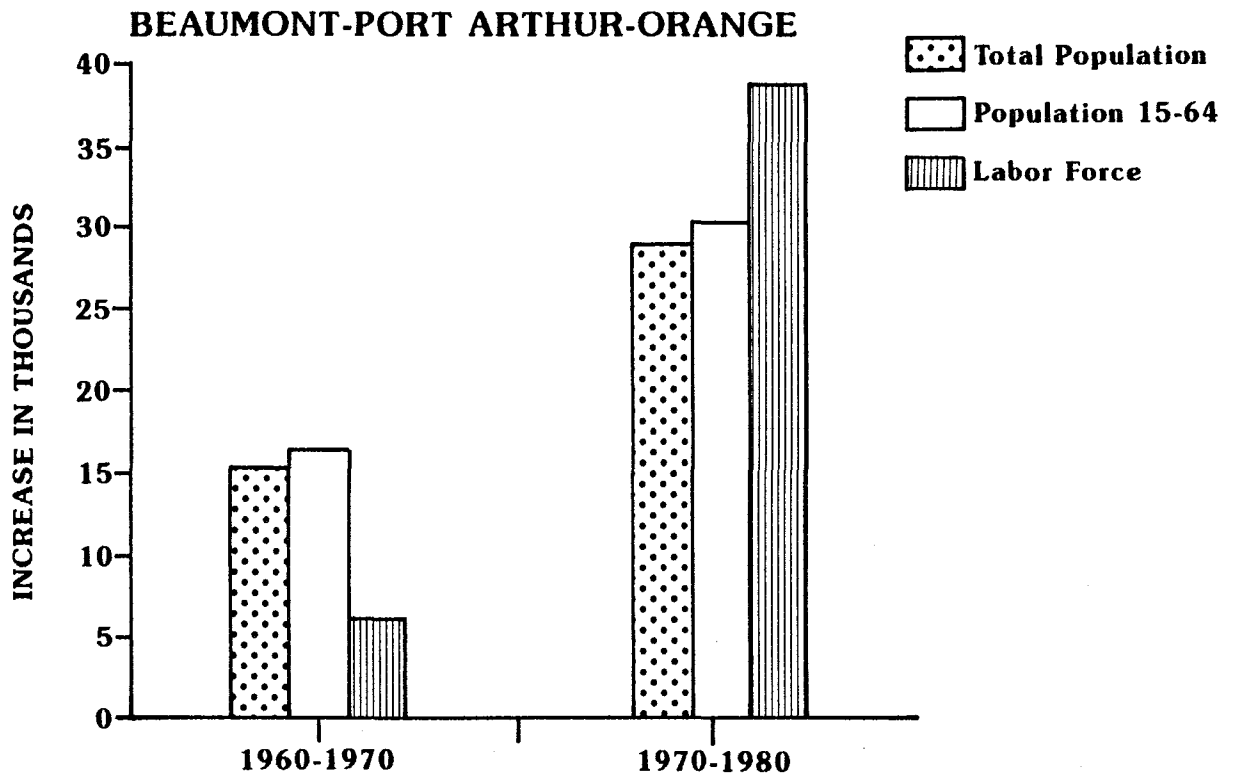
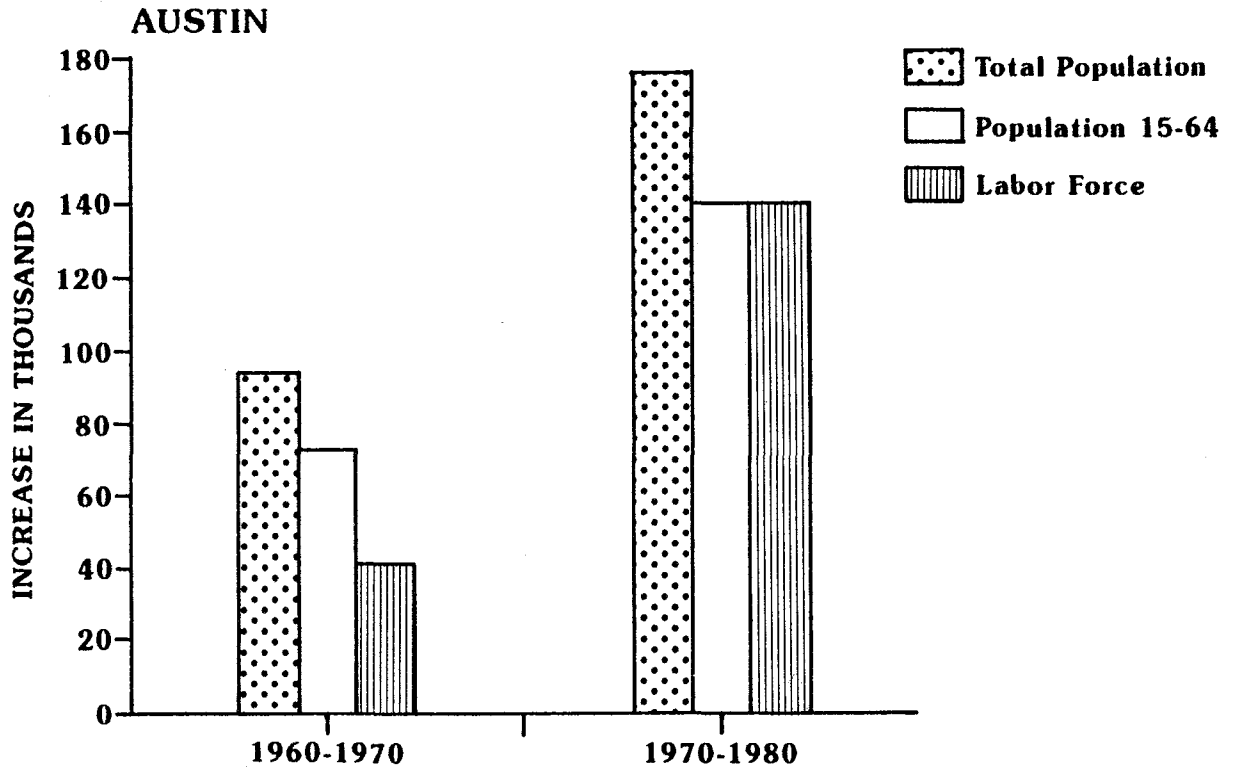
**POPULATION AND LABOR FORCE CHANGES (THOUSANDS)
1960 TO 1980**

ABILENE

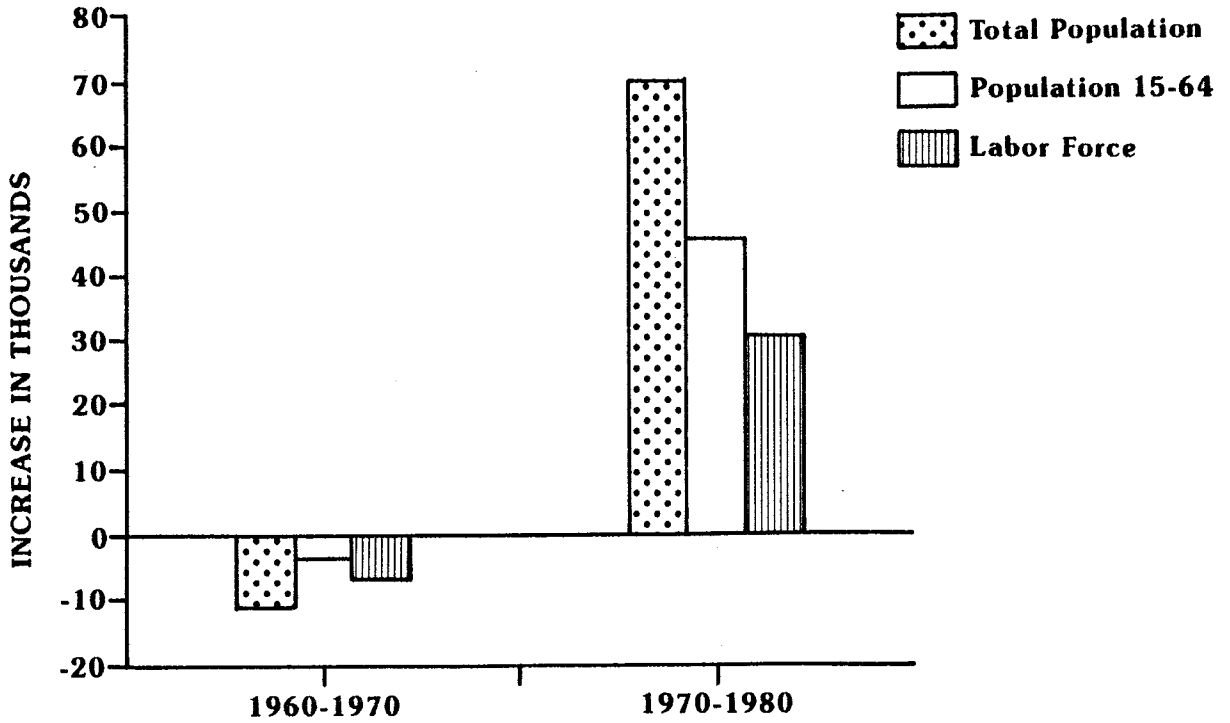


AMARILLO

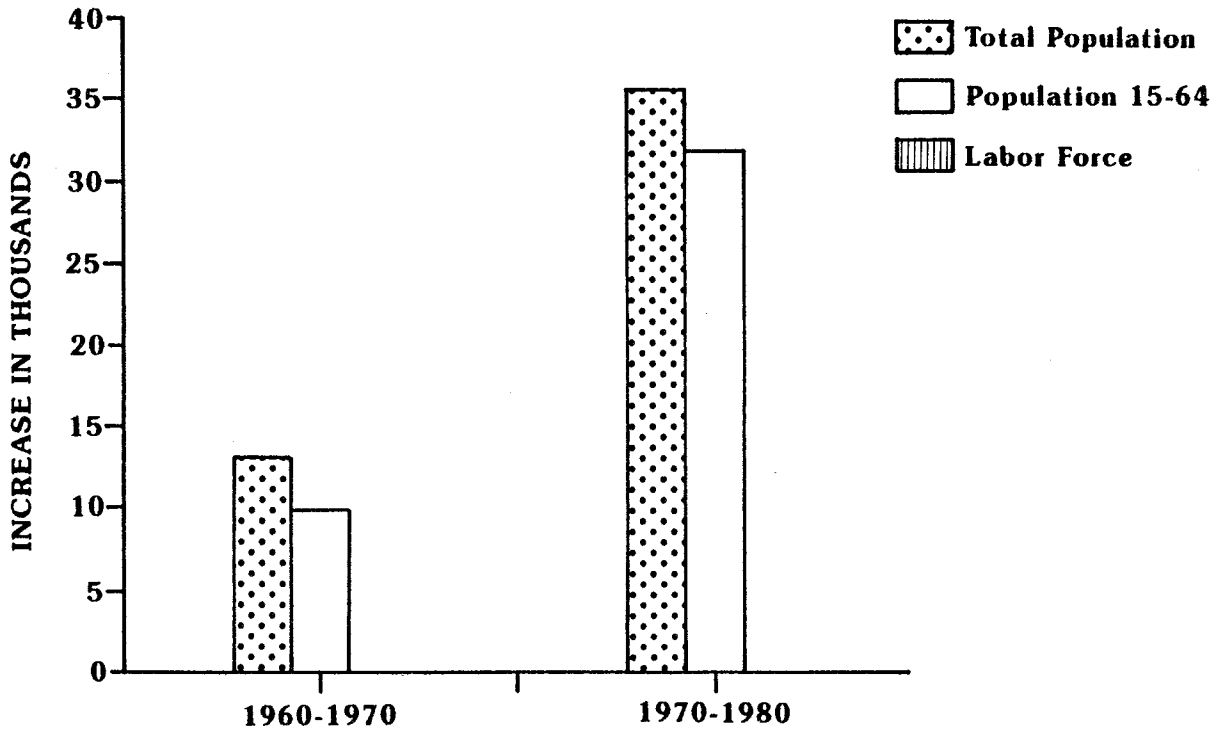




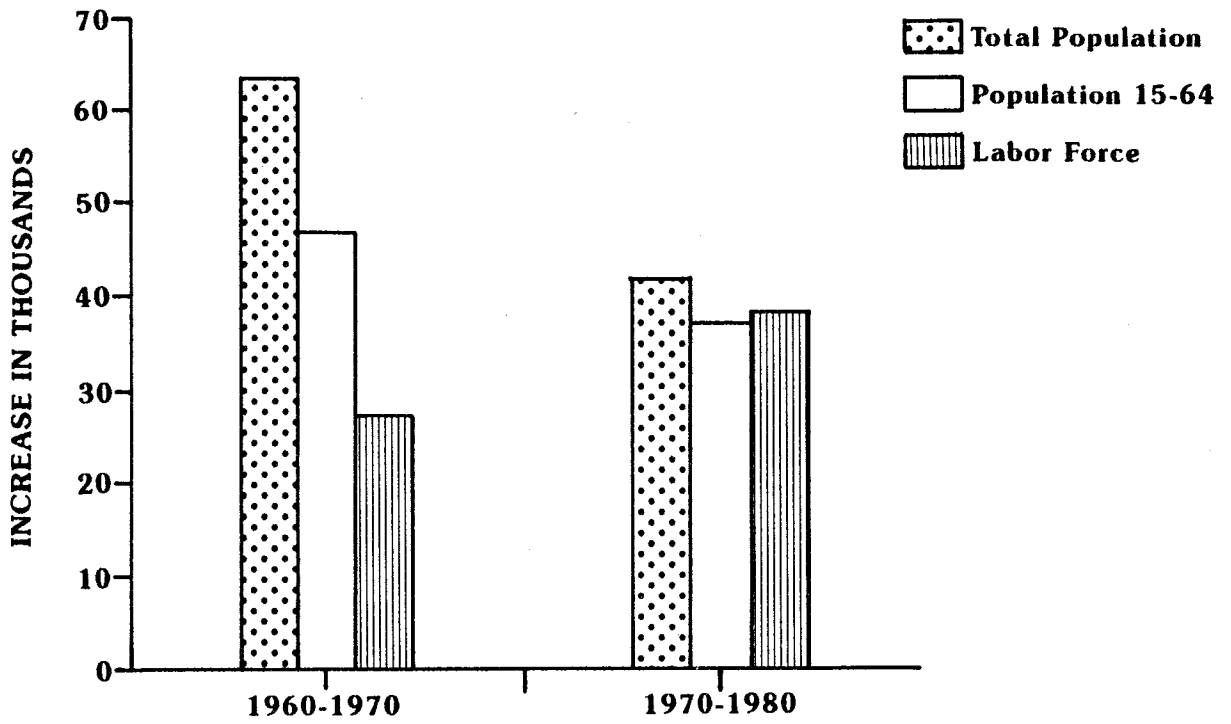
BROWNSVILLE-HARLINGEN-SAN BENITO



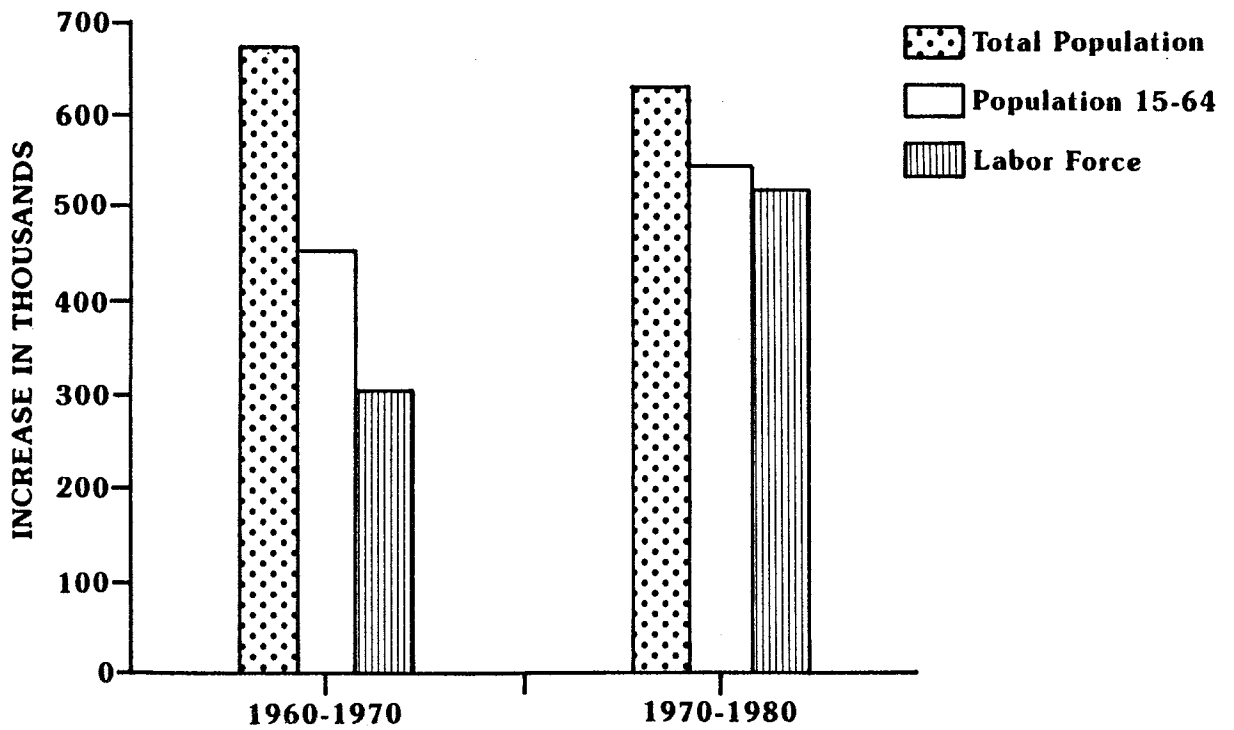
BRYAN-COLLEGE STATION



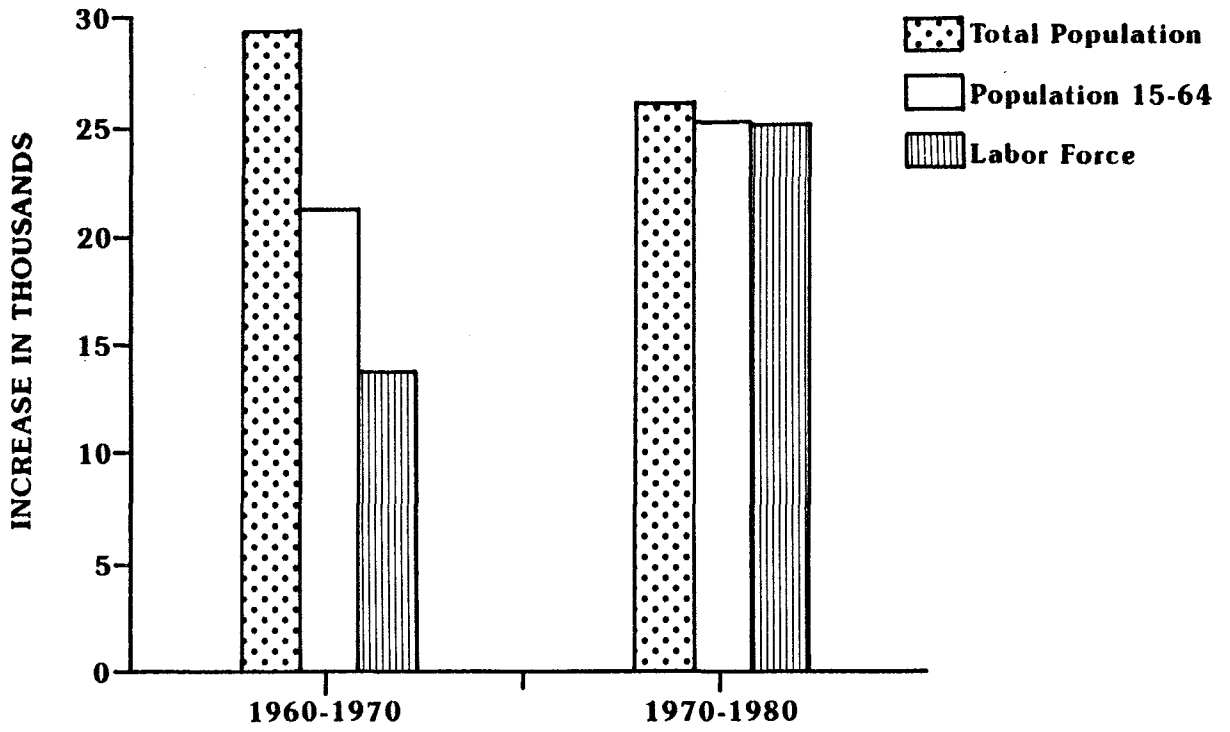
CORPUS CHRISTI



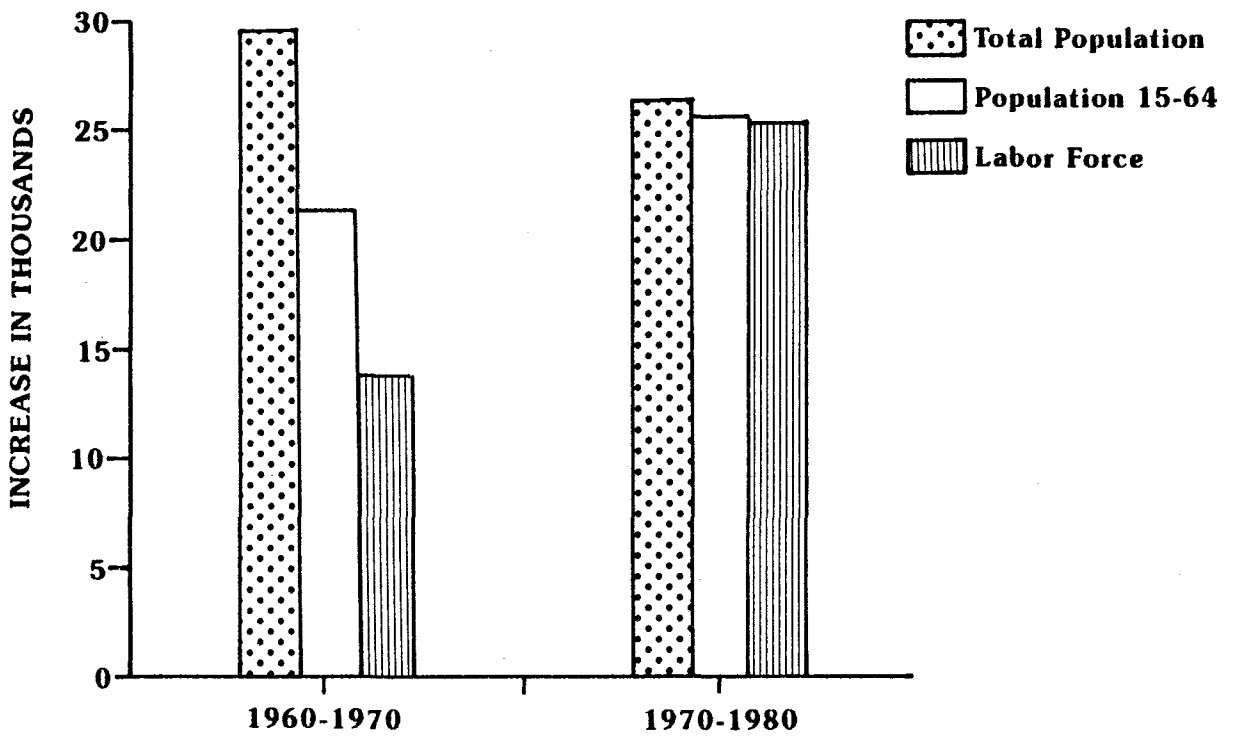
DALLAS-FT WORTH



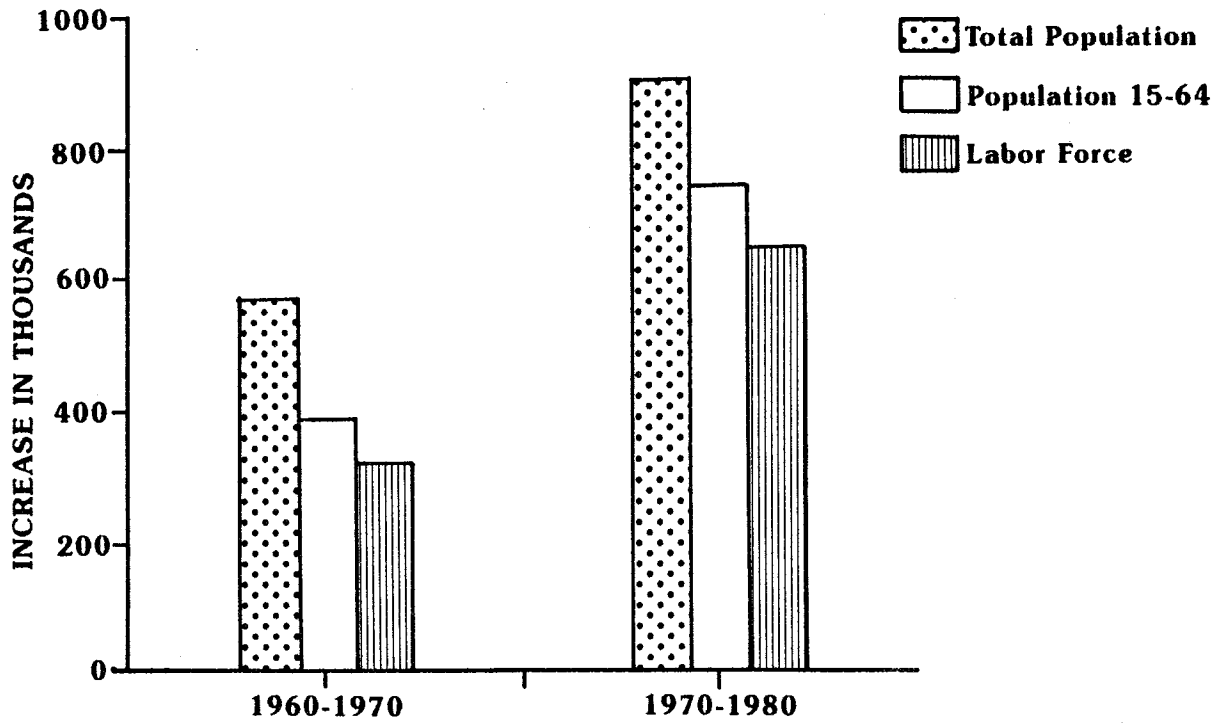
EL PASO



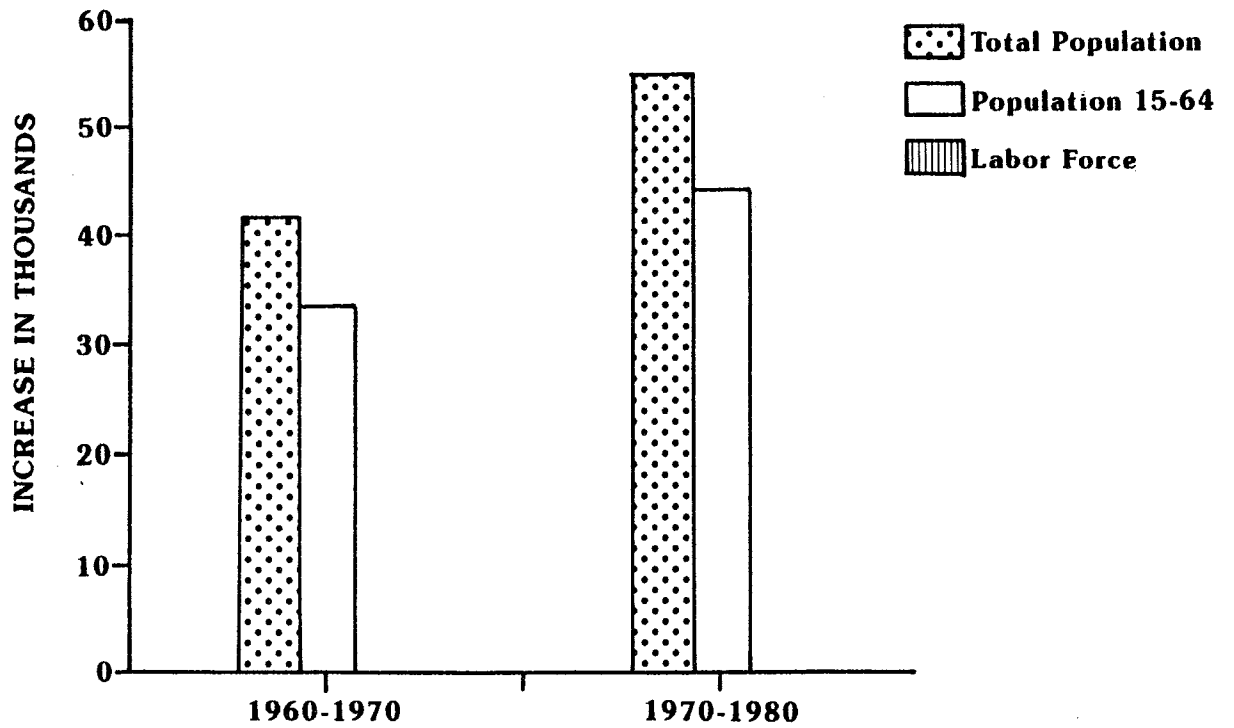
GALVESTON-TEXAS CITY



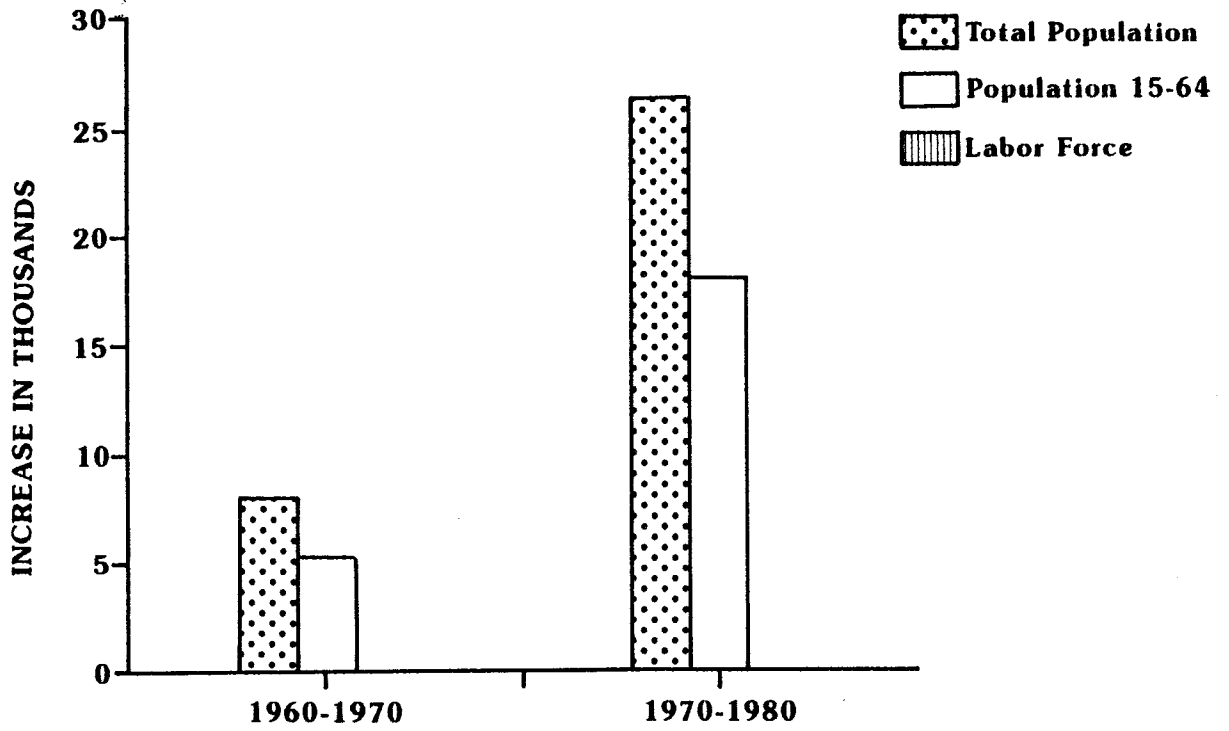
HOUSTON



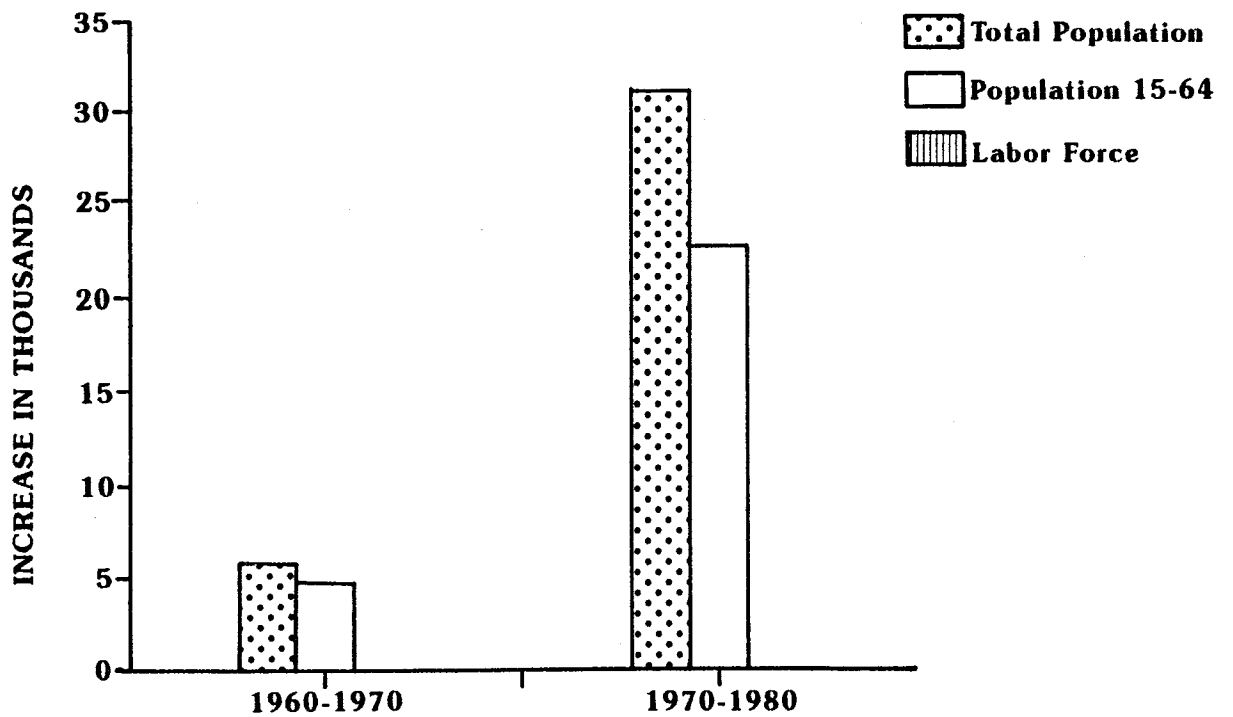
KILLEEN-TEMPLE



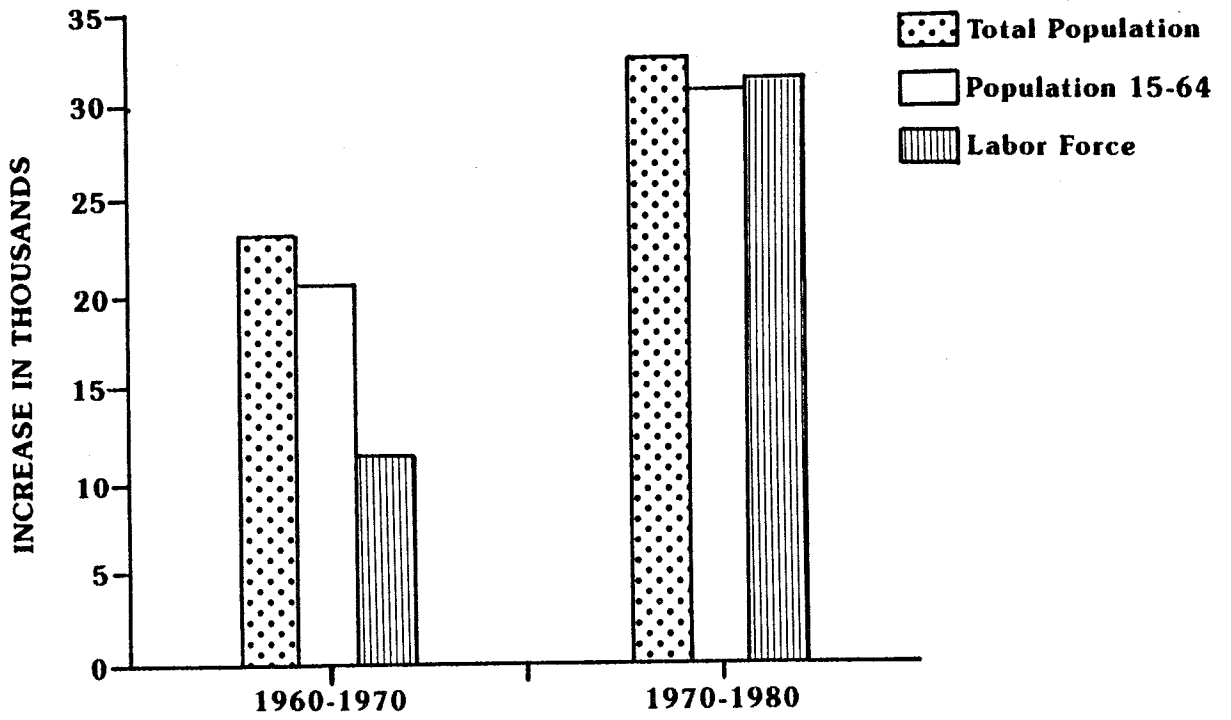
LAREDO



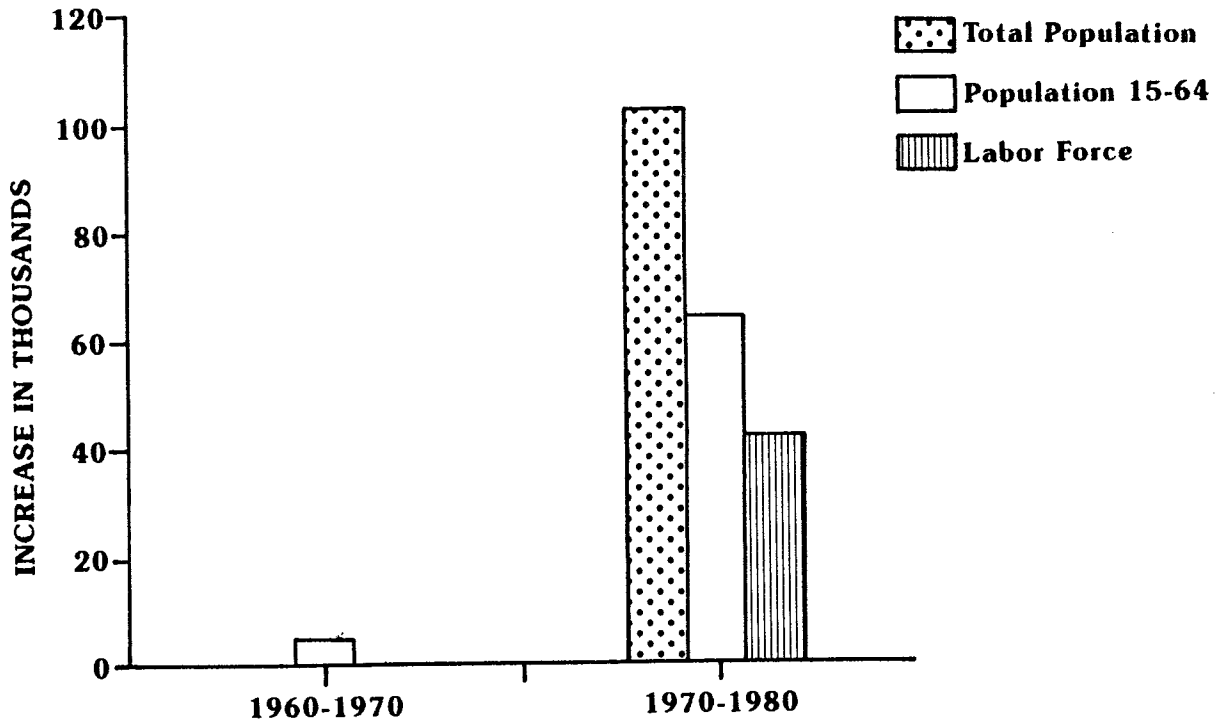
LONGVIEW-MARSHALL



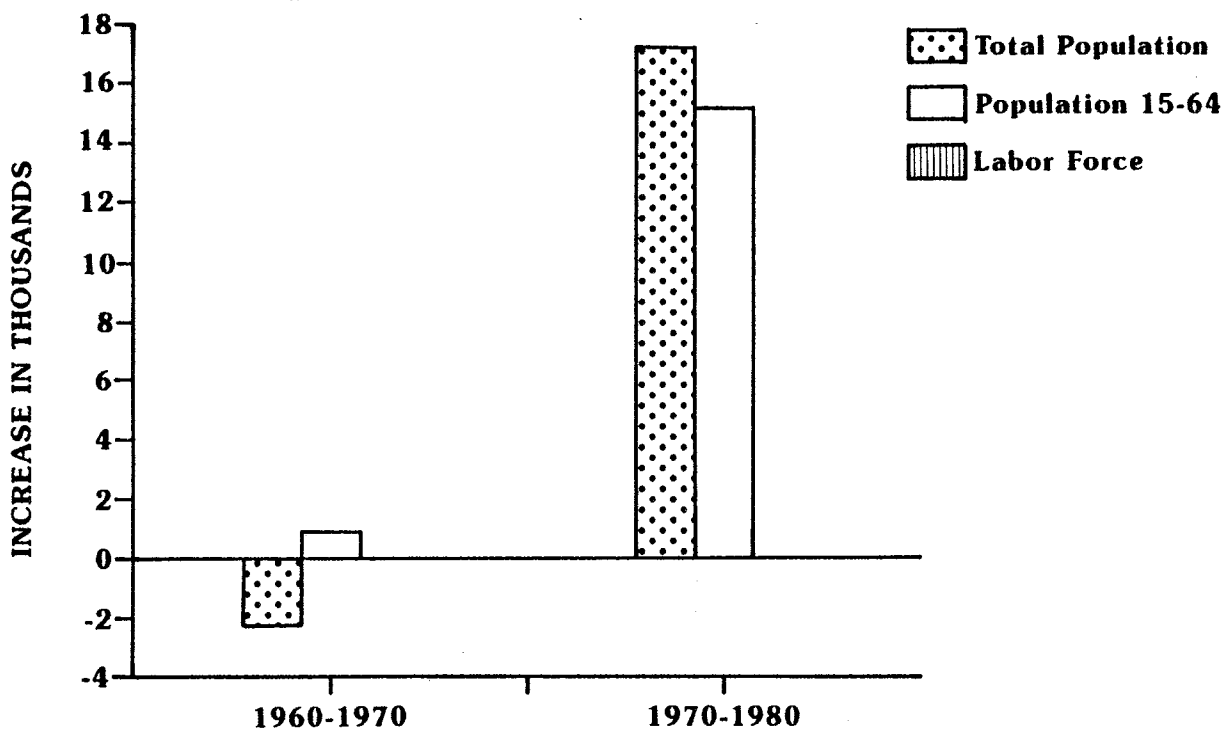
LUBBOCK



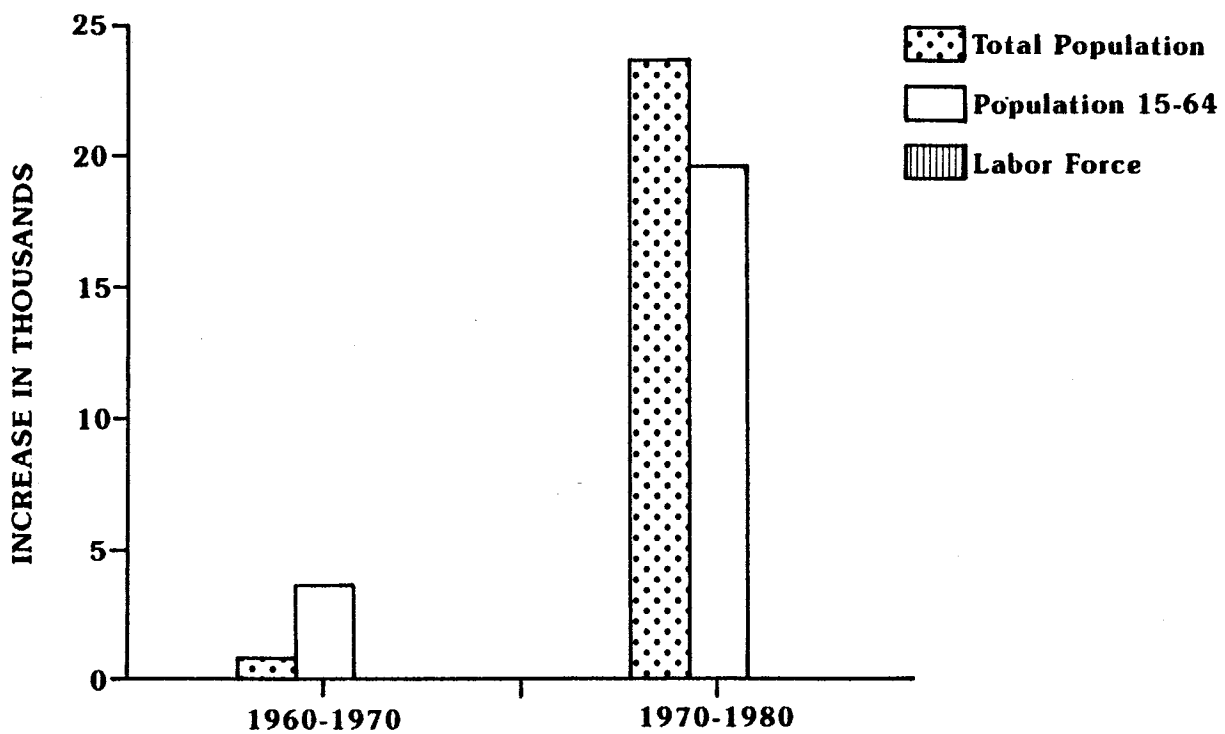
MCALLEN-PHARR-EDINBURG



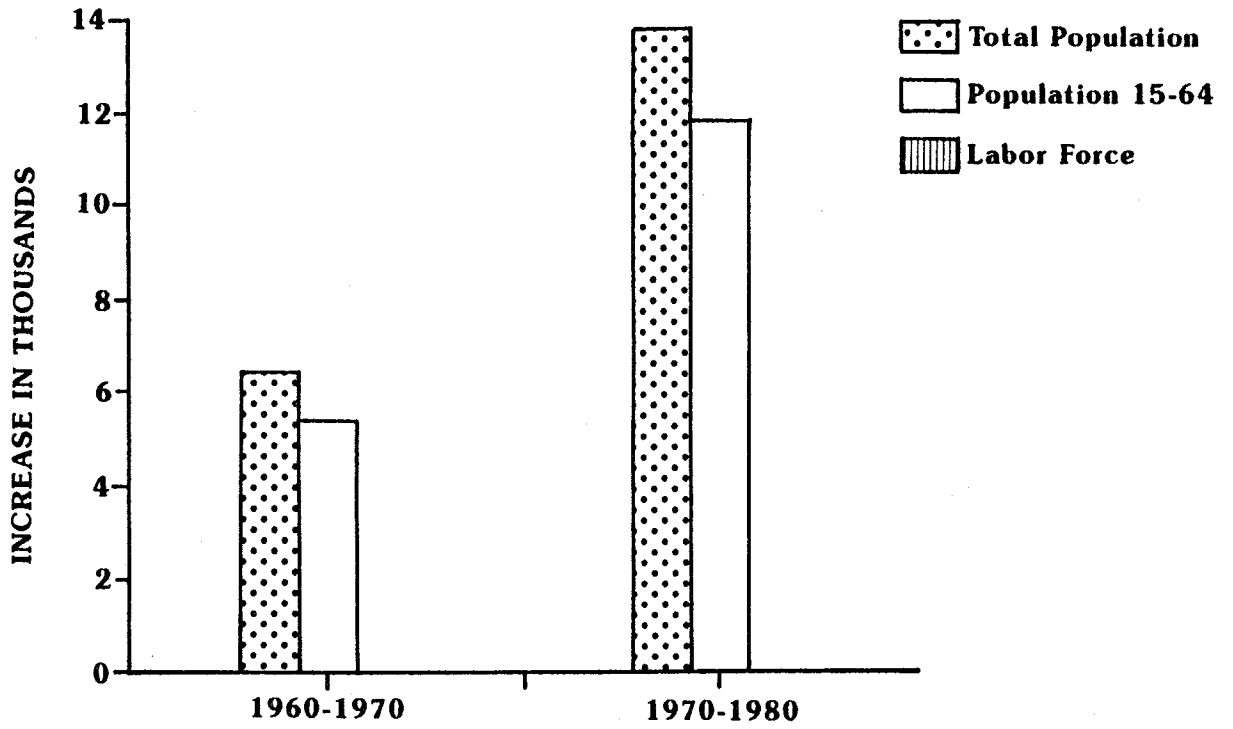
MIDLAND



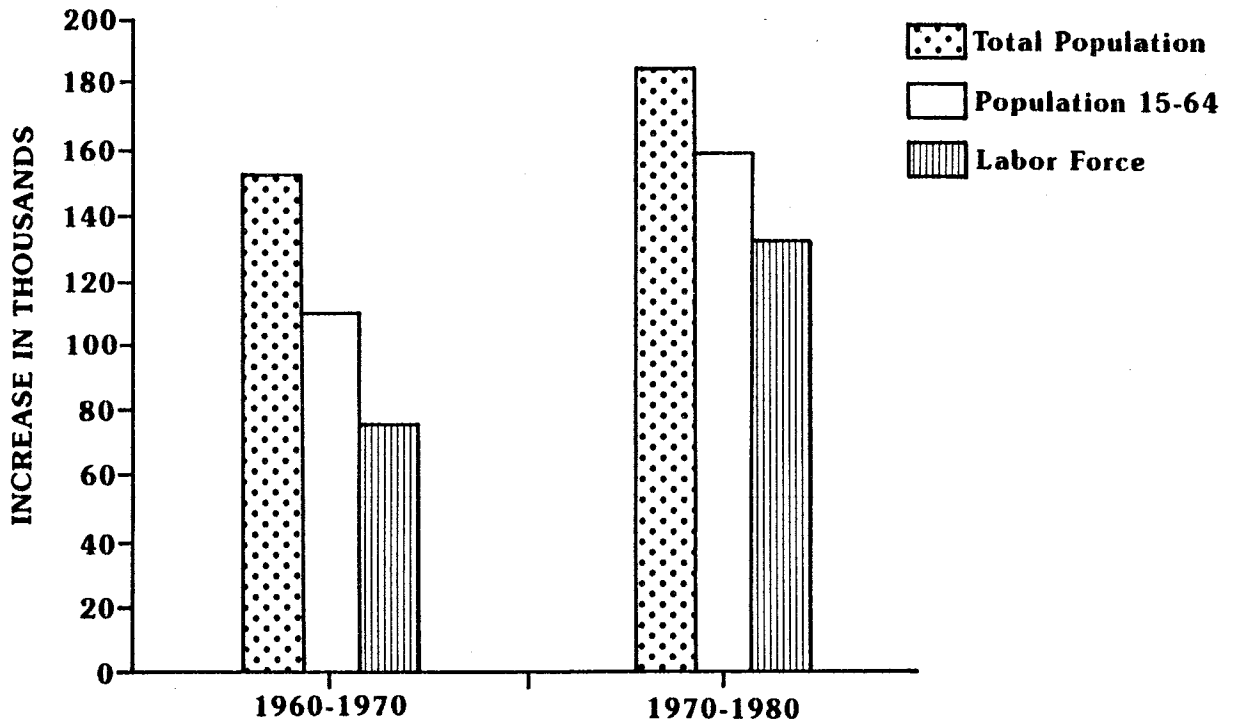
ODESSA



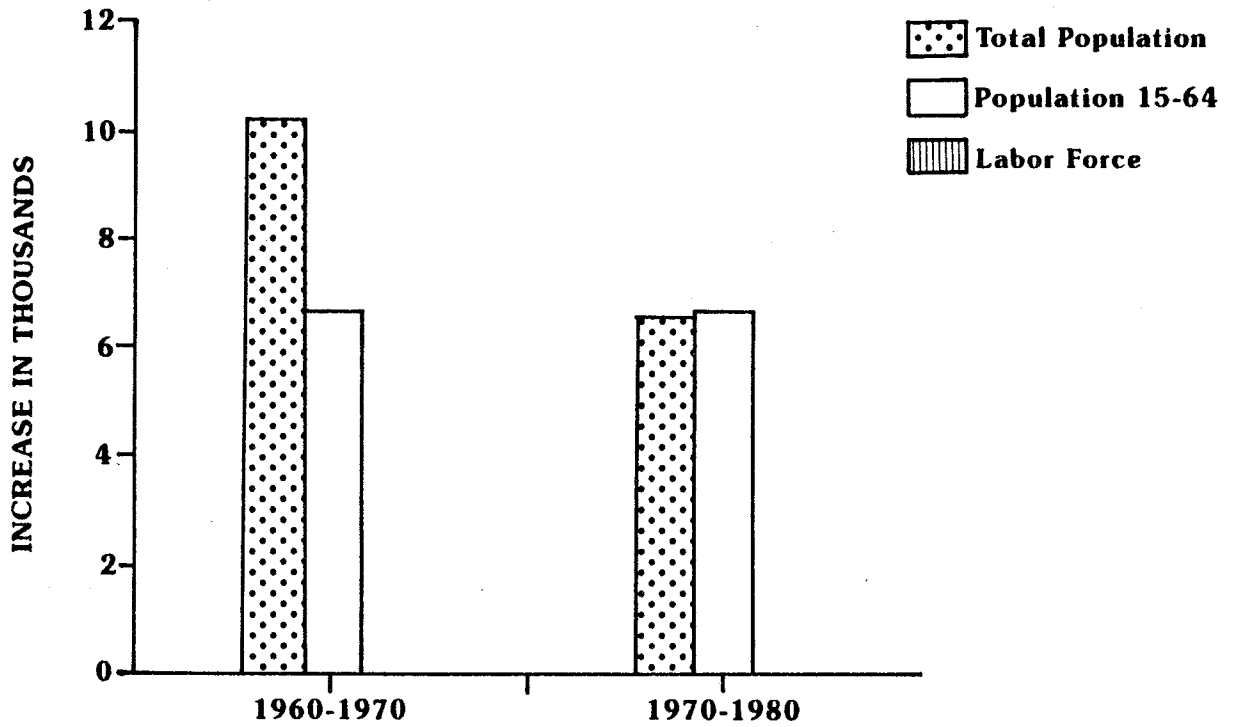
SAN ANGELO



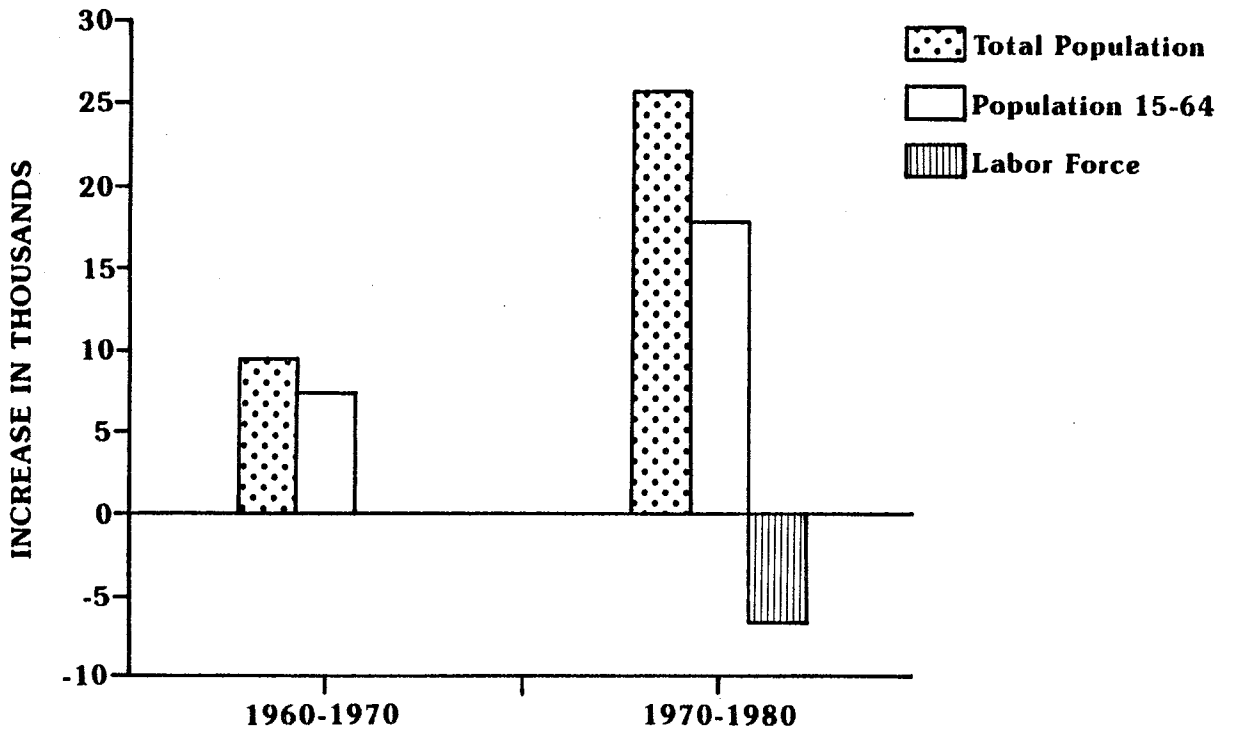
SAN ANTONIO



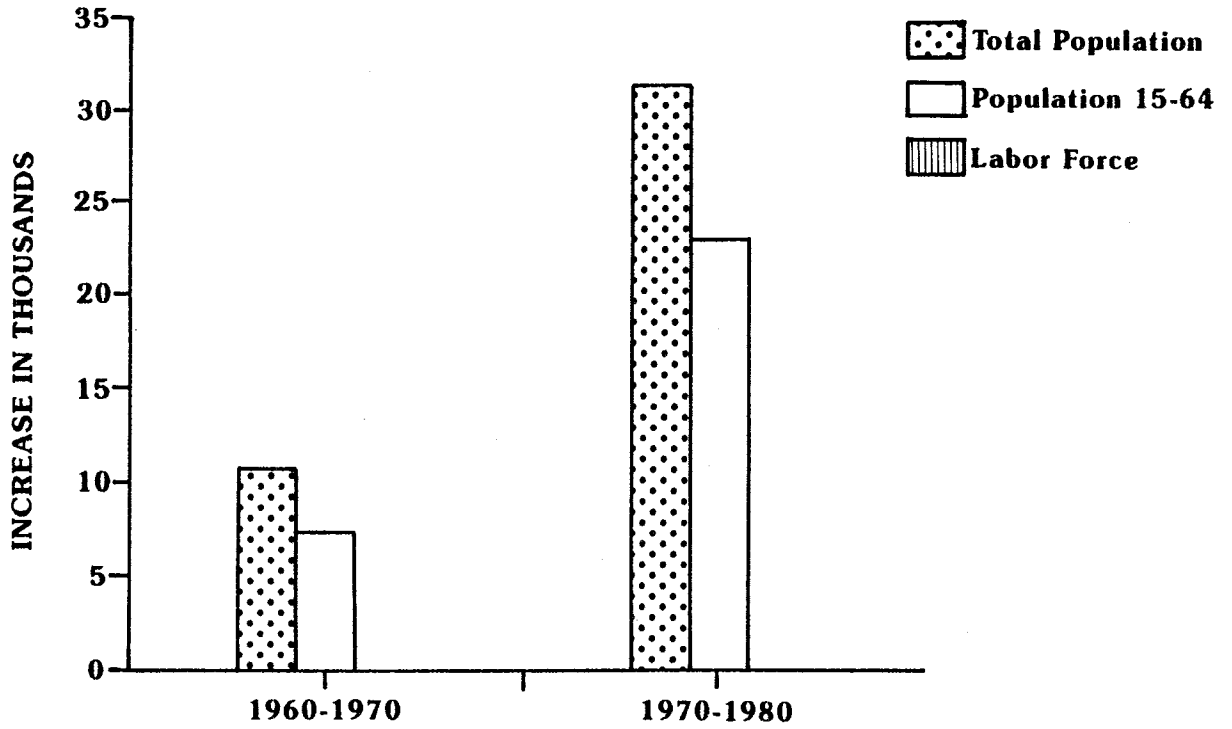
SHERMAN-DENISON



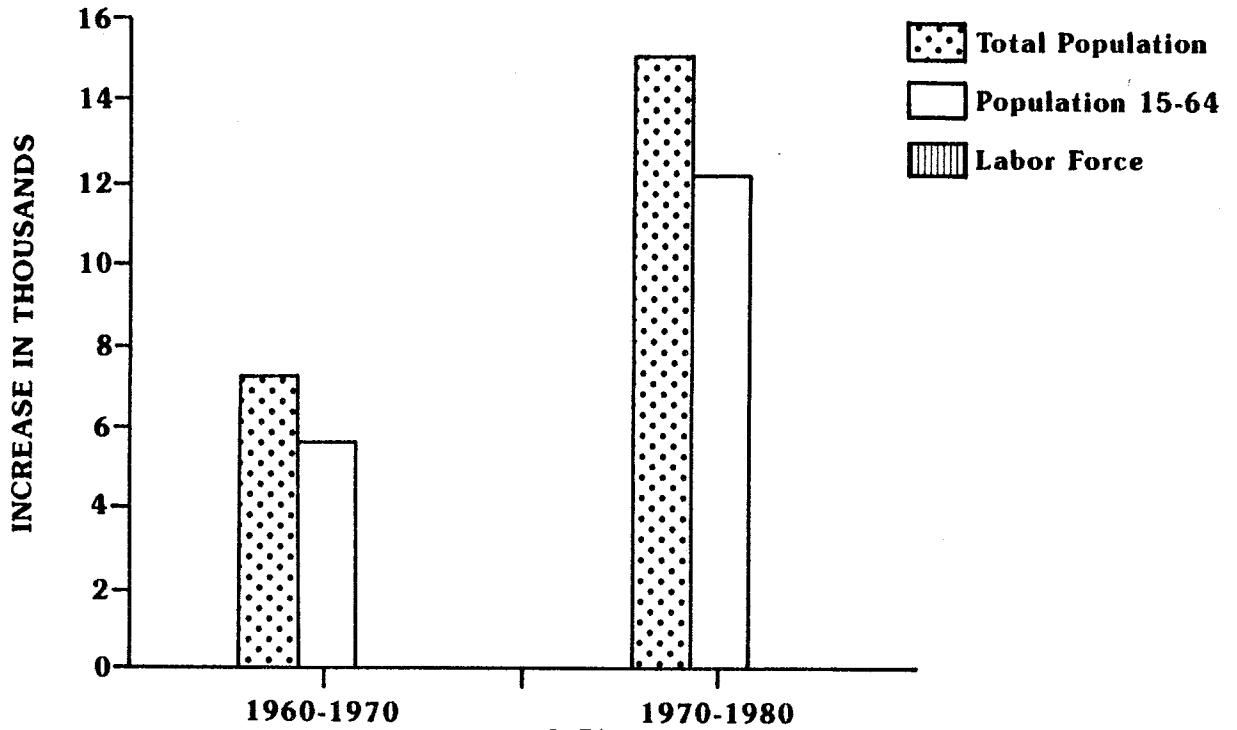
TEXARKANA



TYLER



VICTORIA



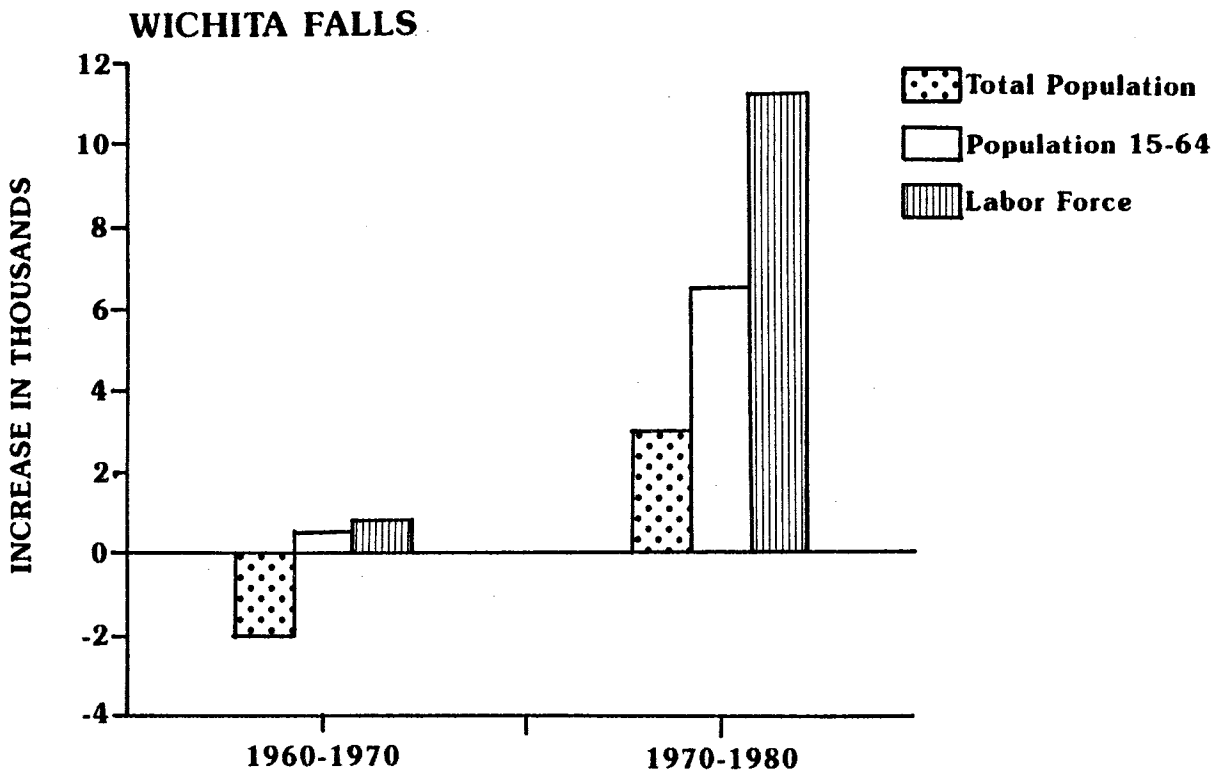
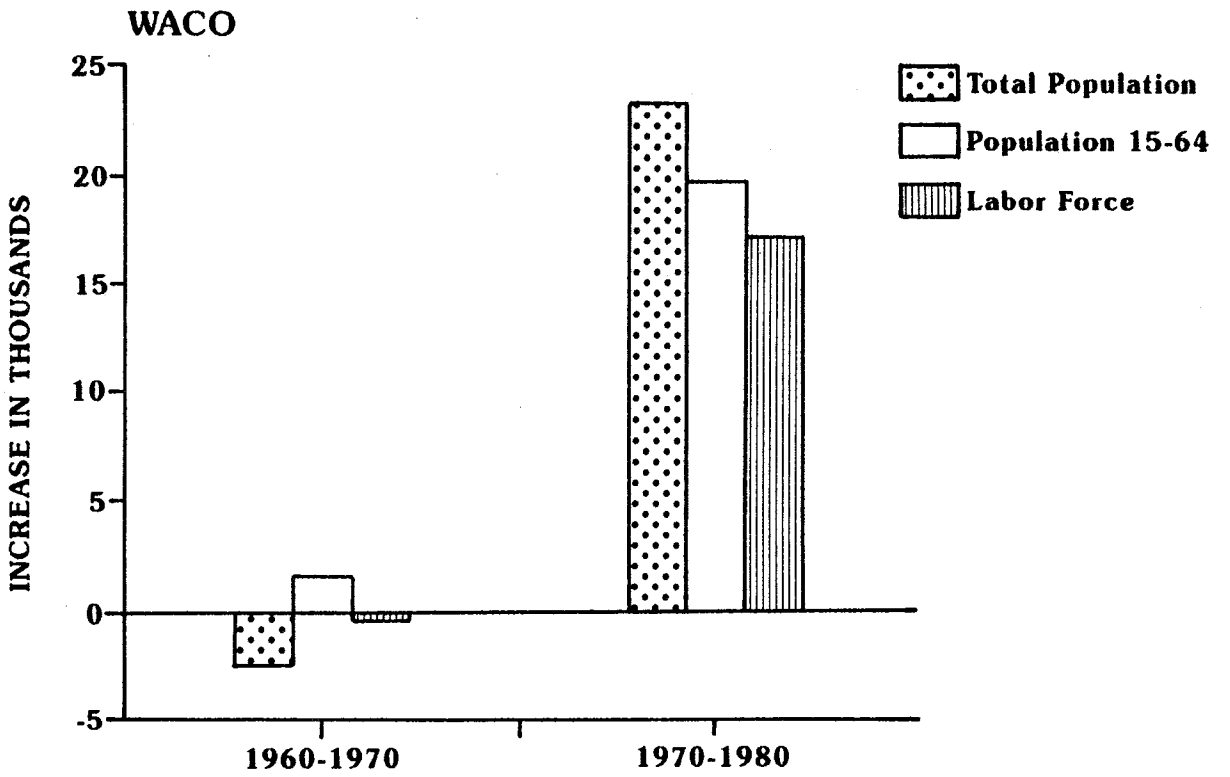




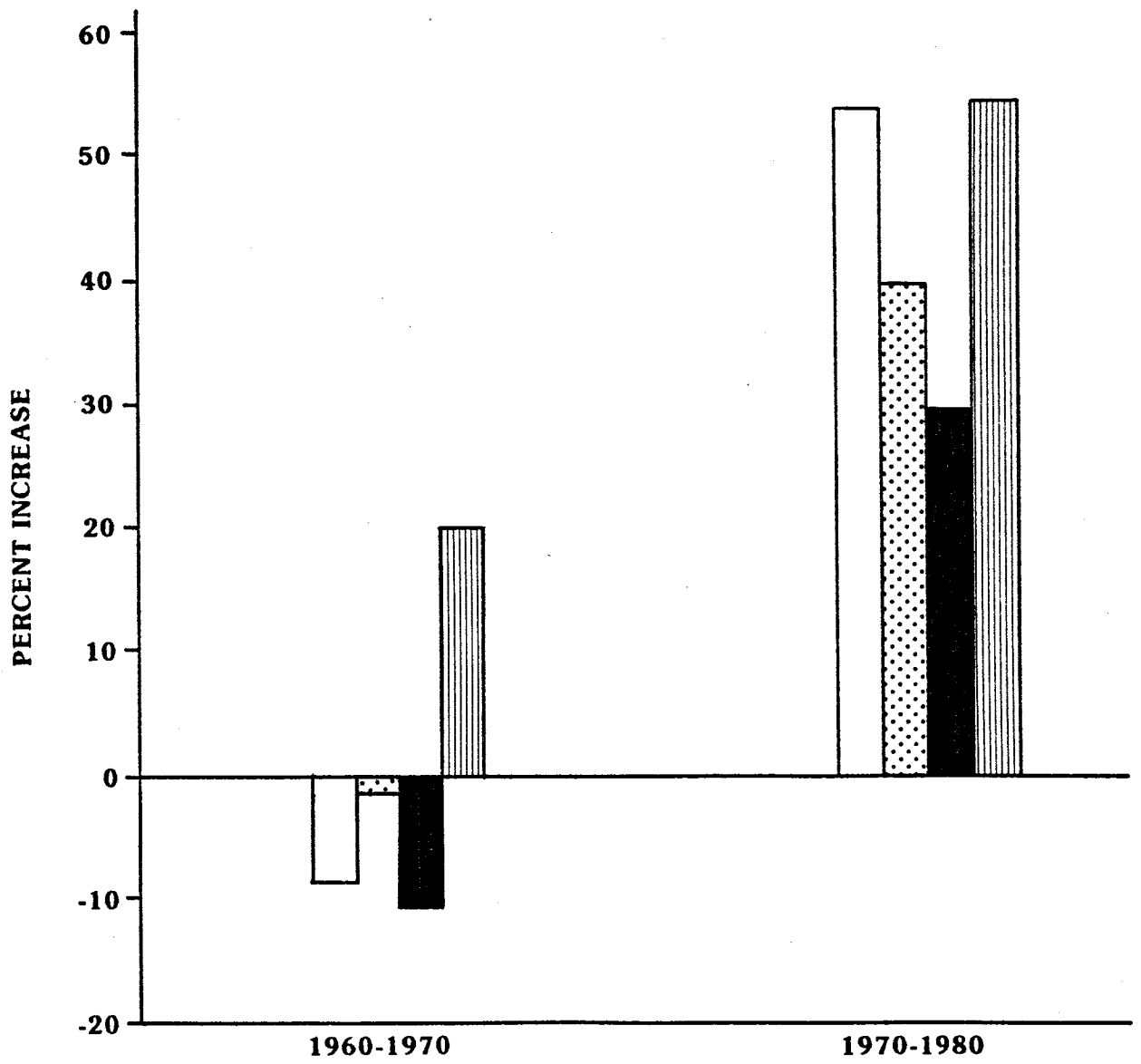


FIGURE A-4

**POPULATION AND LABOR FORCE CHANGES (PERCENT)
1960 TO 1980**

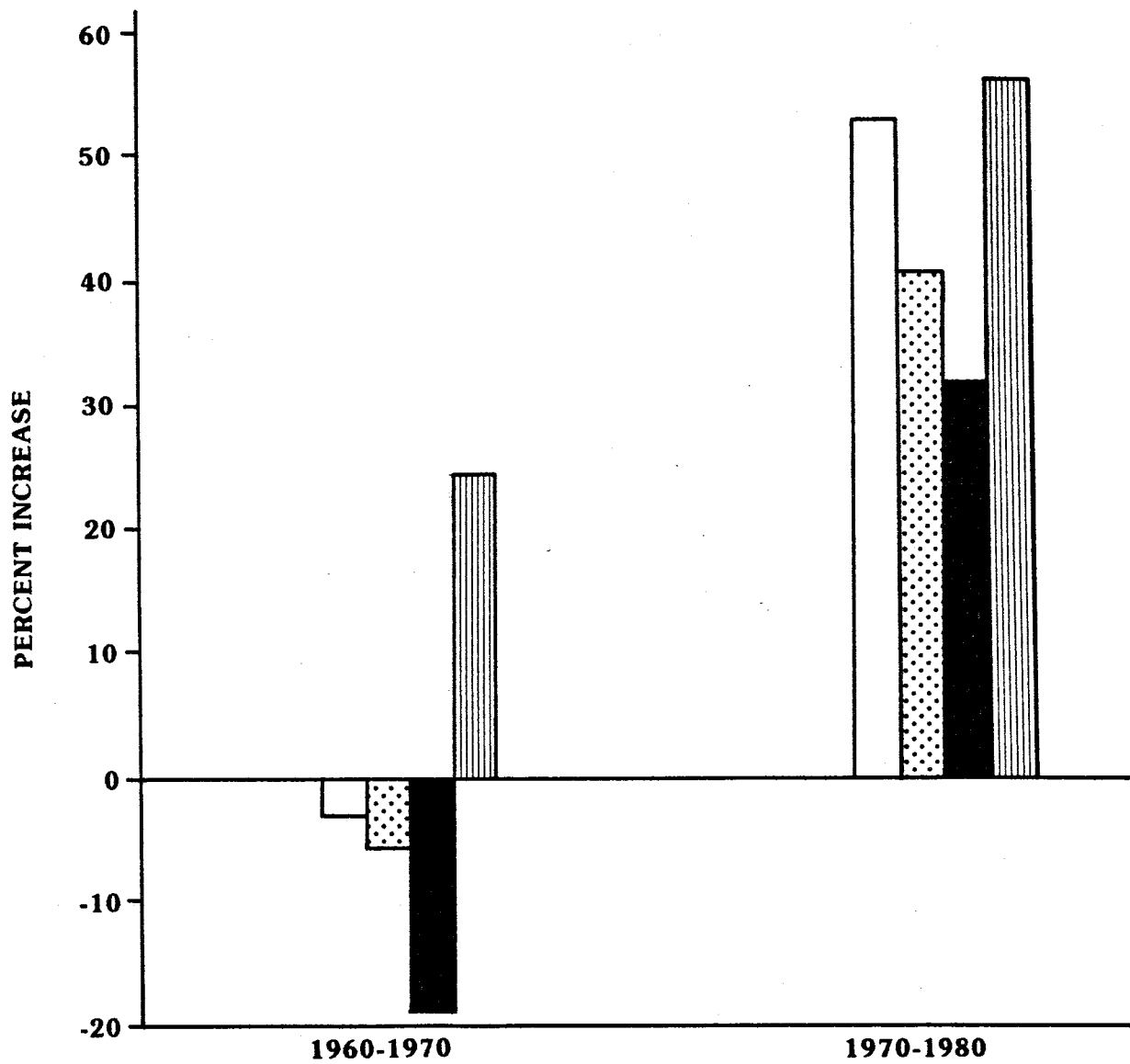
ABILENE

-  Population Age 15 - 64
-  Labor Force
-  Labor Force-Male
-  Labor Force-Female

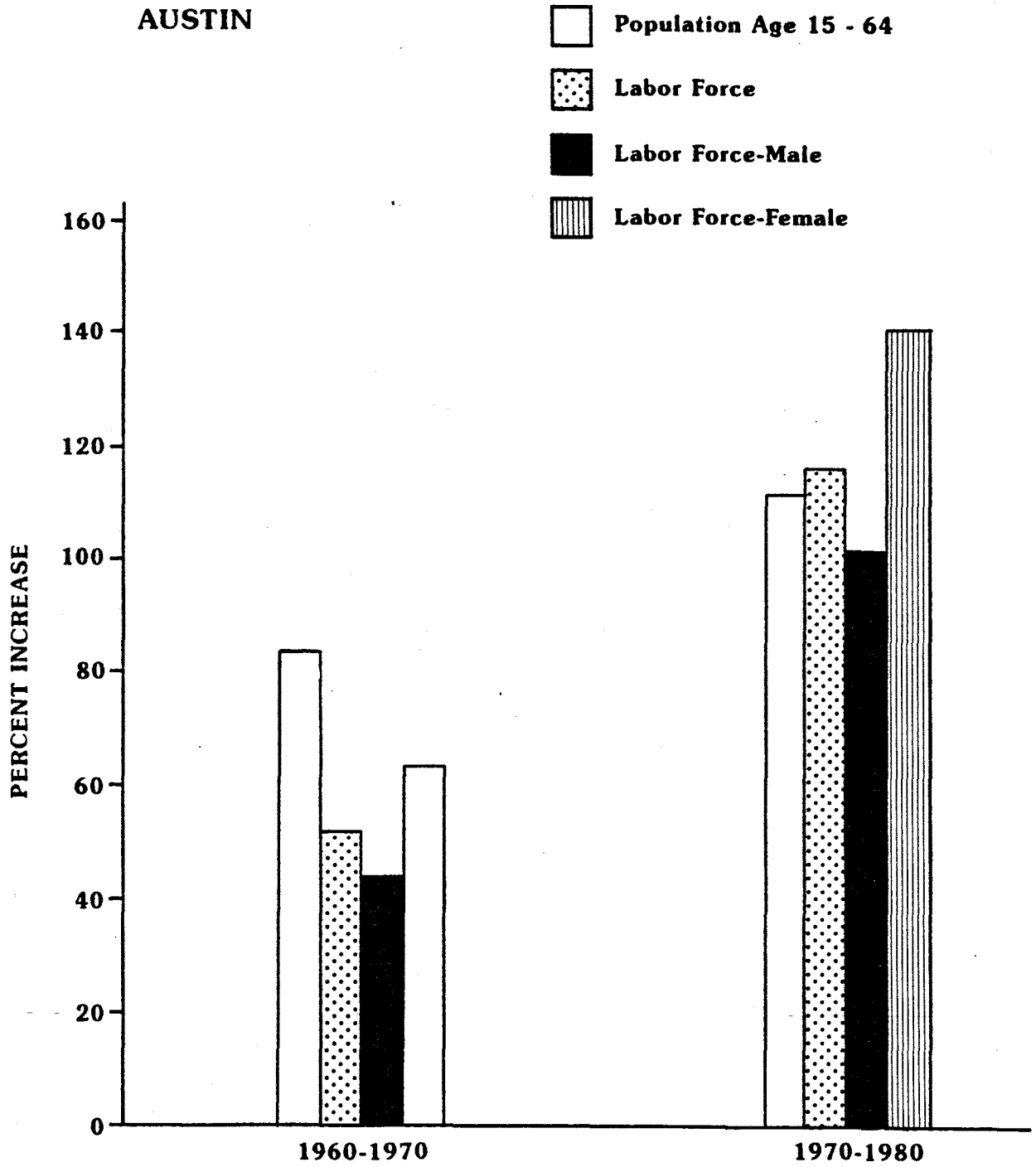


AMARILLO

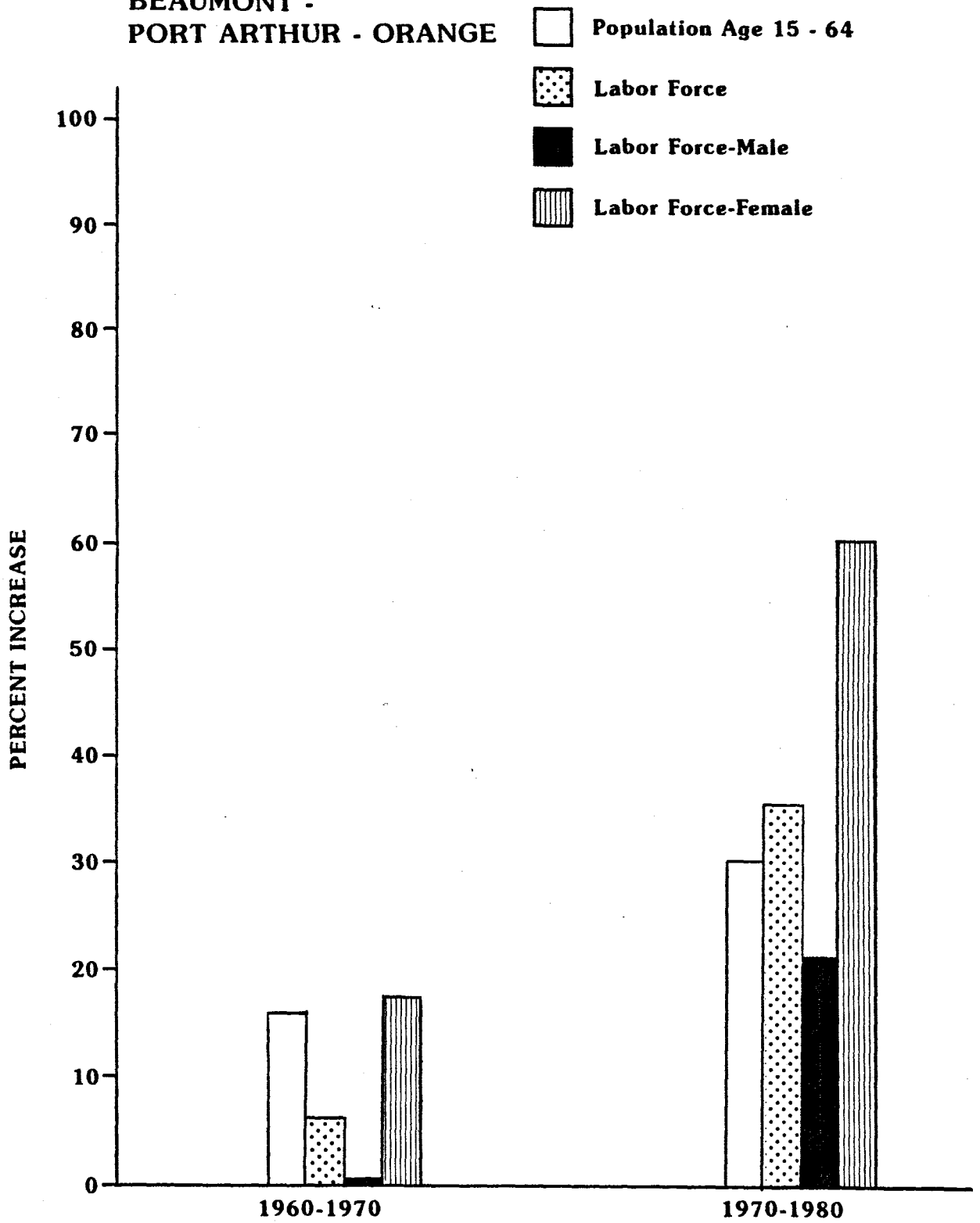
- Population Age 15 - 64
- Labor Force
- Labor Force-Male
- Labor Force-Female







AUSTIN

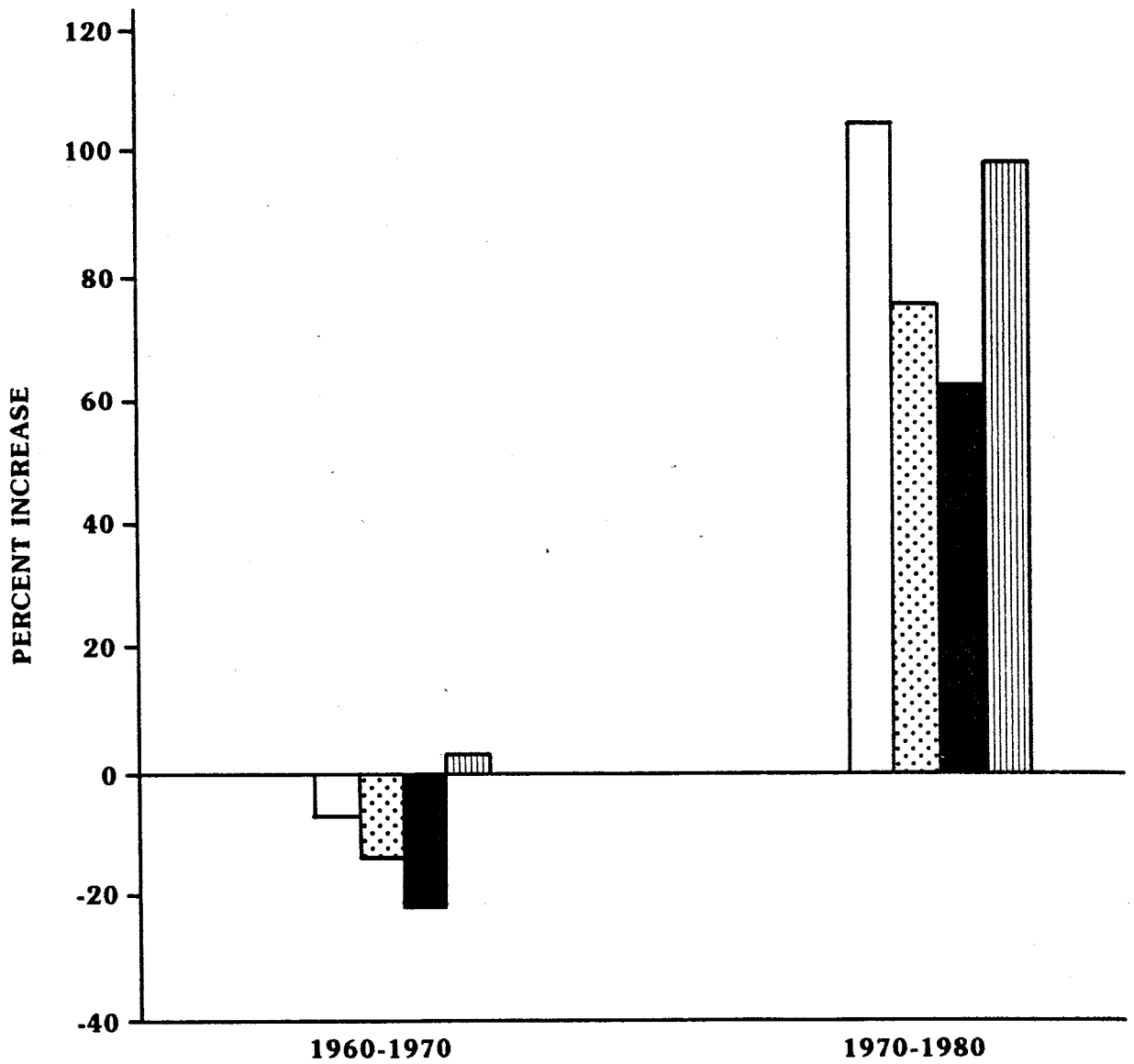


**BEAUMONT -
PORT ARTHUR - ORANGE**







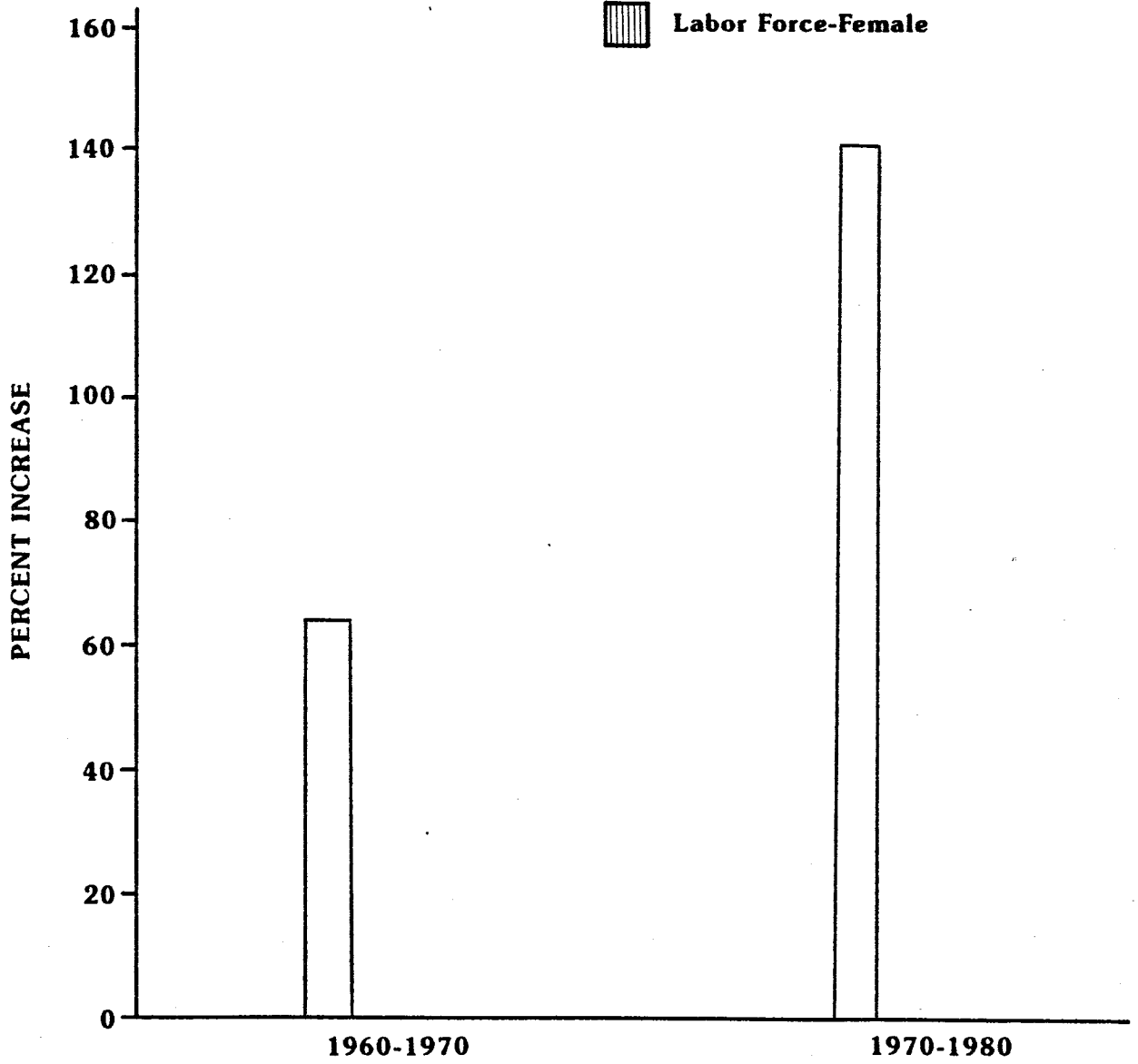
**BROWNSVILLE -
HARLINGEN - SAN BENITO**

-  Population Age 15 - 64
-  Labor Force
-  Labor Force-Male
-  Labor Force-Female

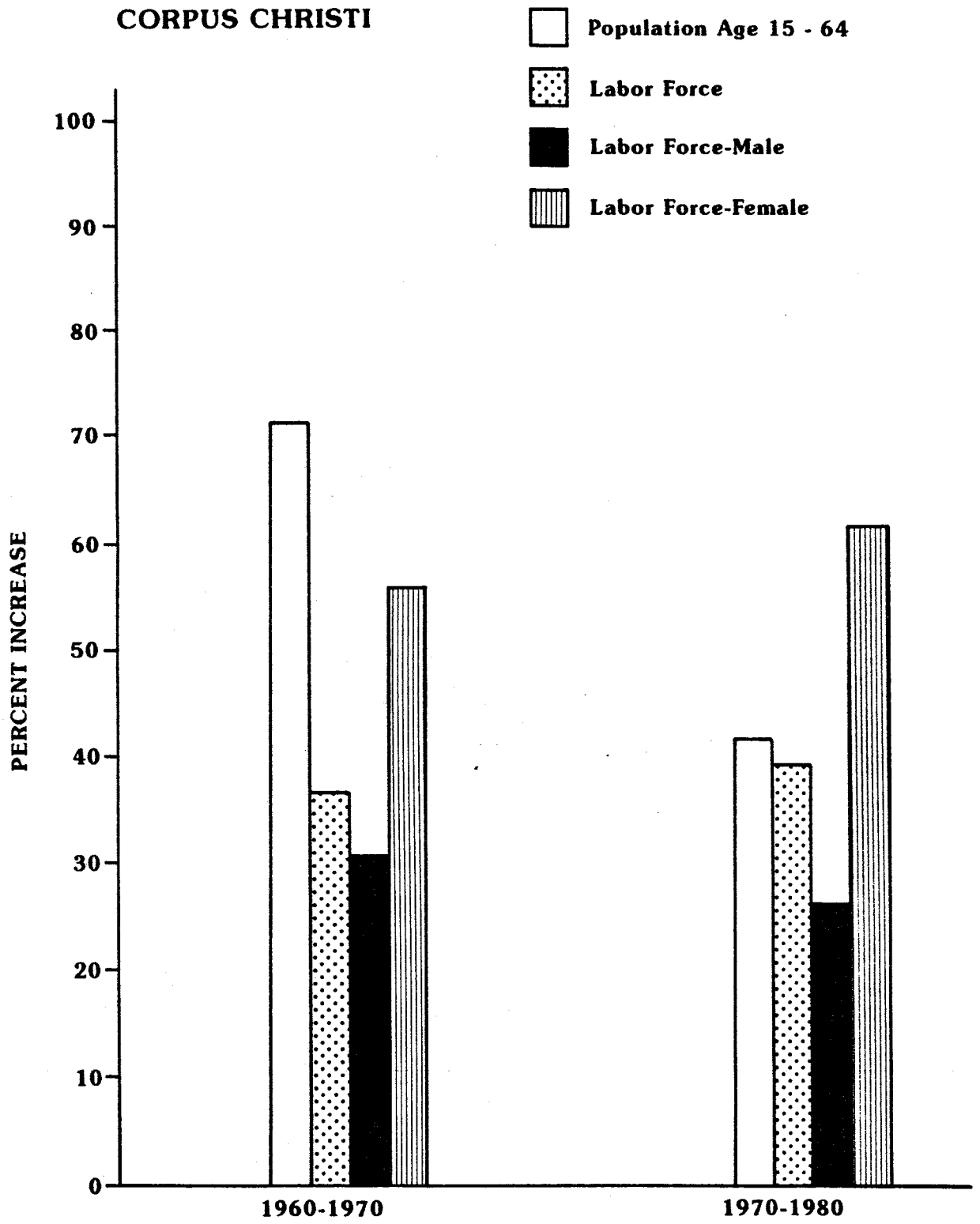


BRYAN - COLLEGE STATION

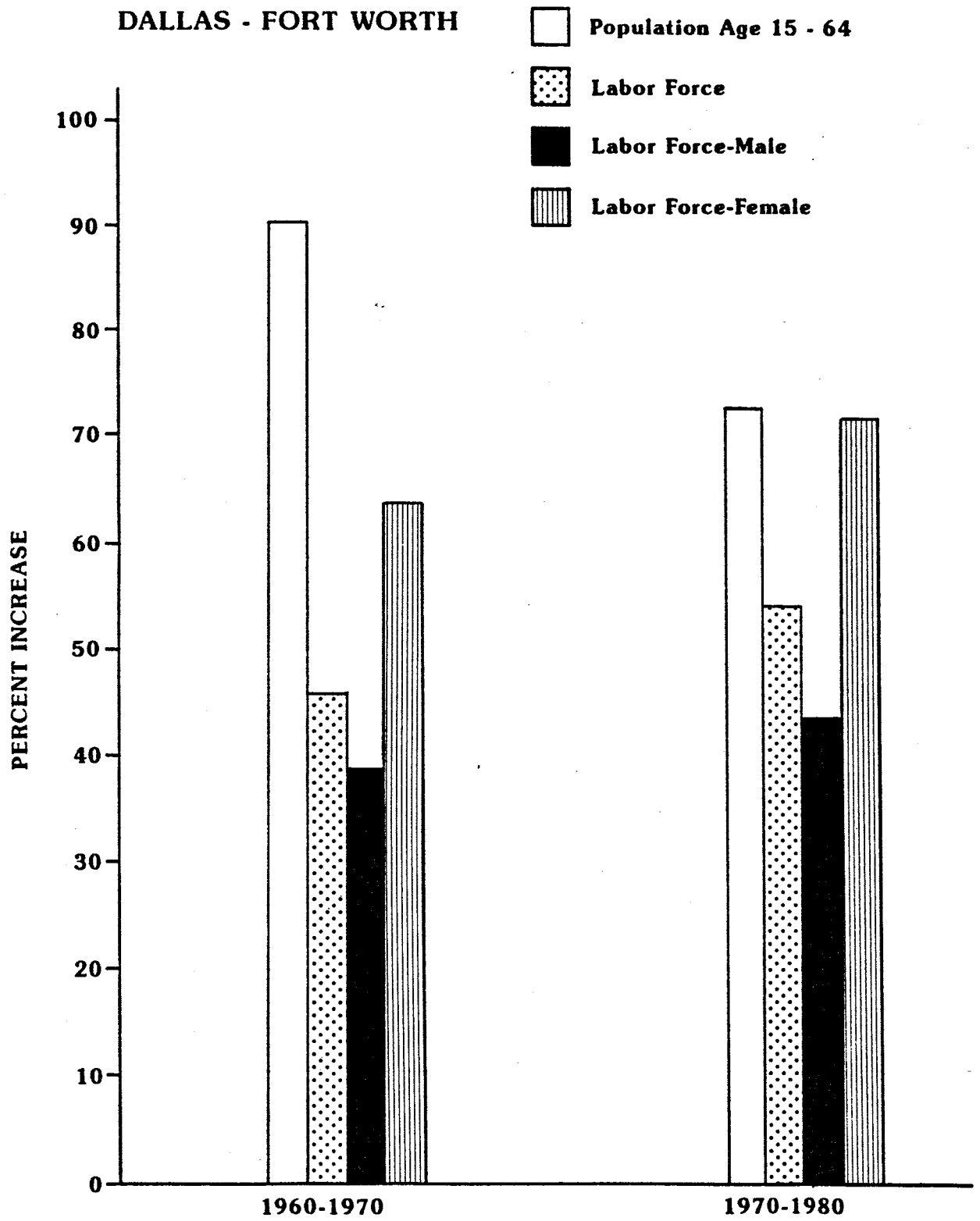
-  **Population Age 15 - 64**
-  **Labor Force**
-  **Labor Force-Male**
-  **Labor Force-Female**



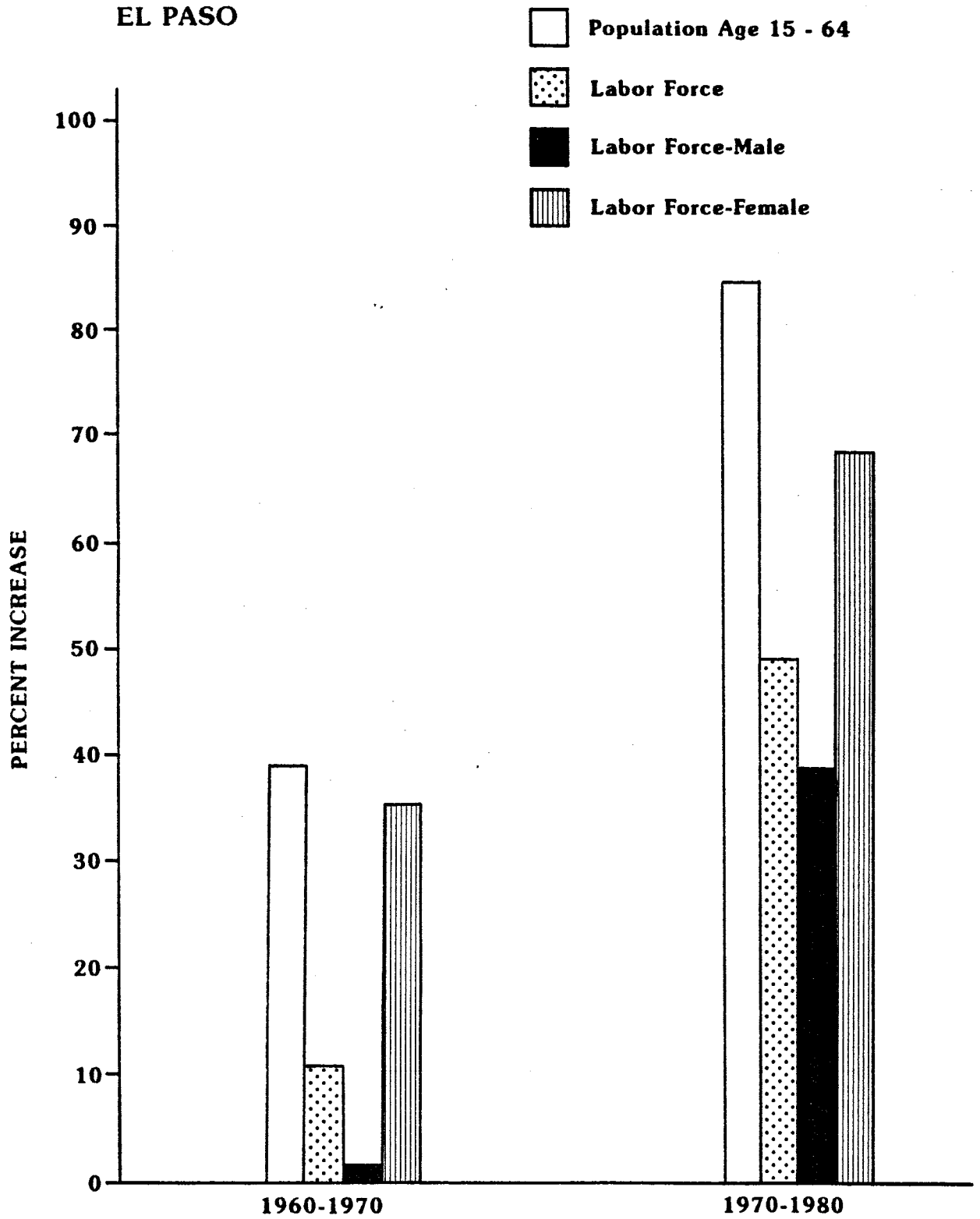
CORPUS CHRISTI



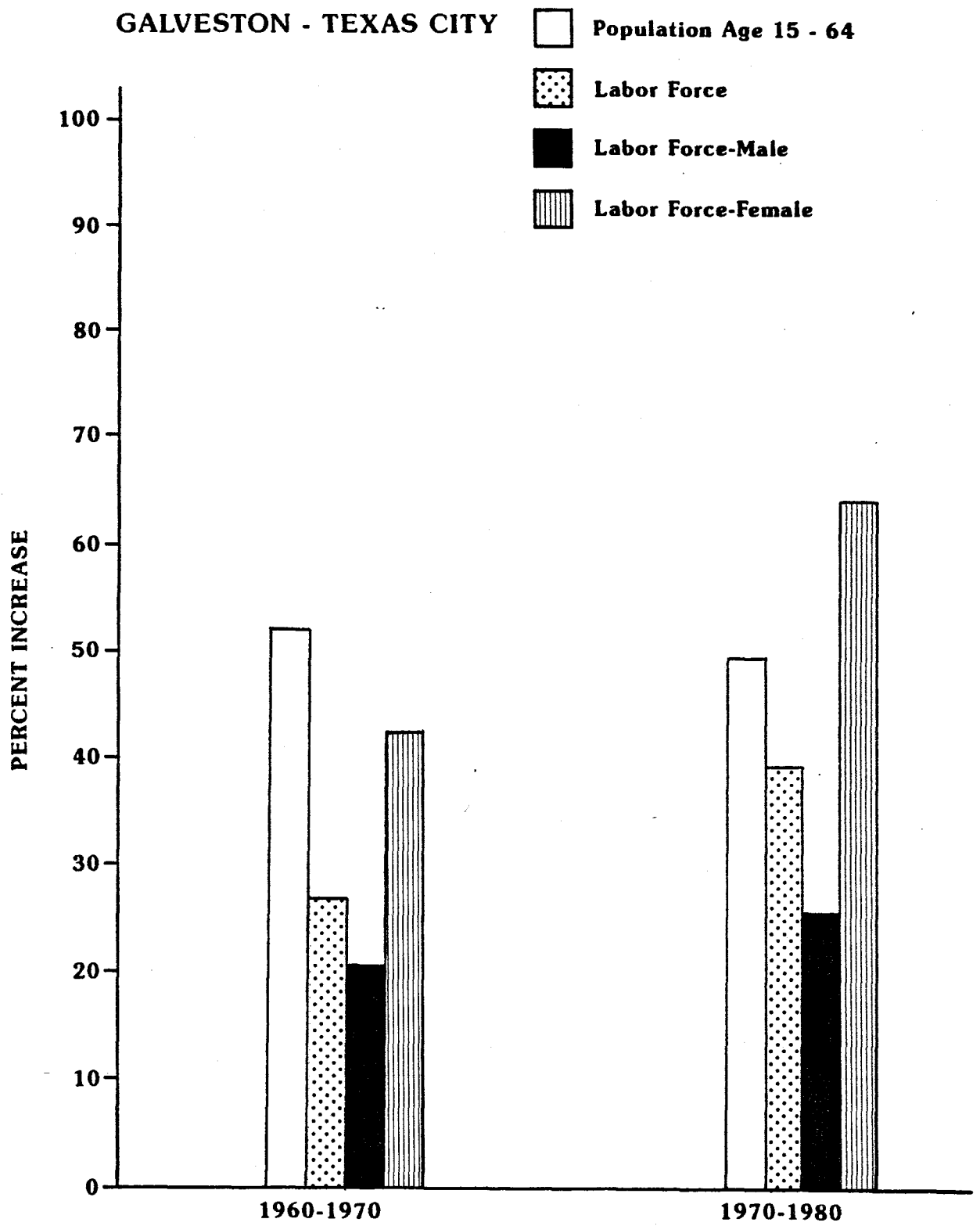
DALLAS - FORT WORTH



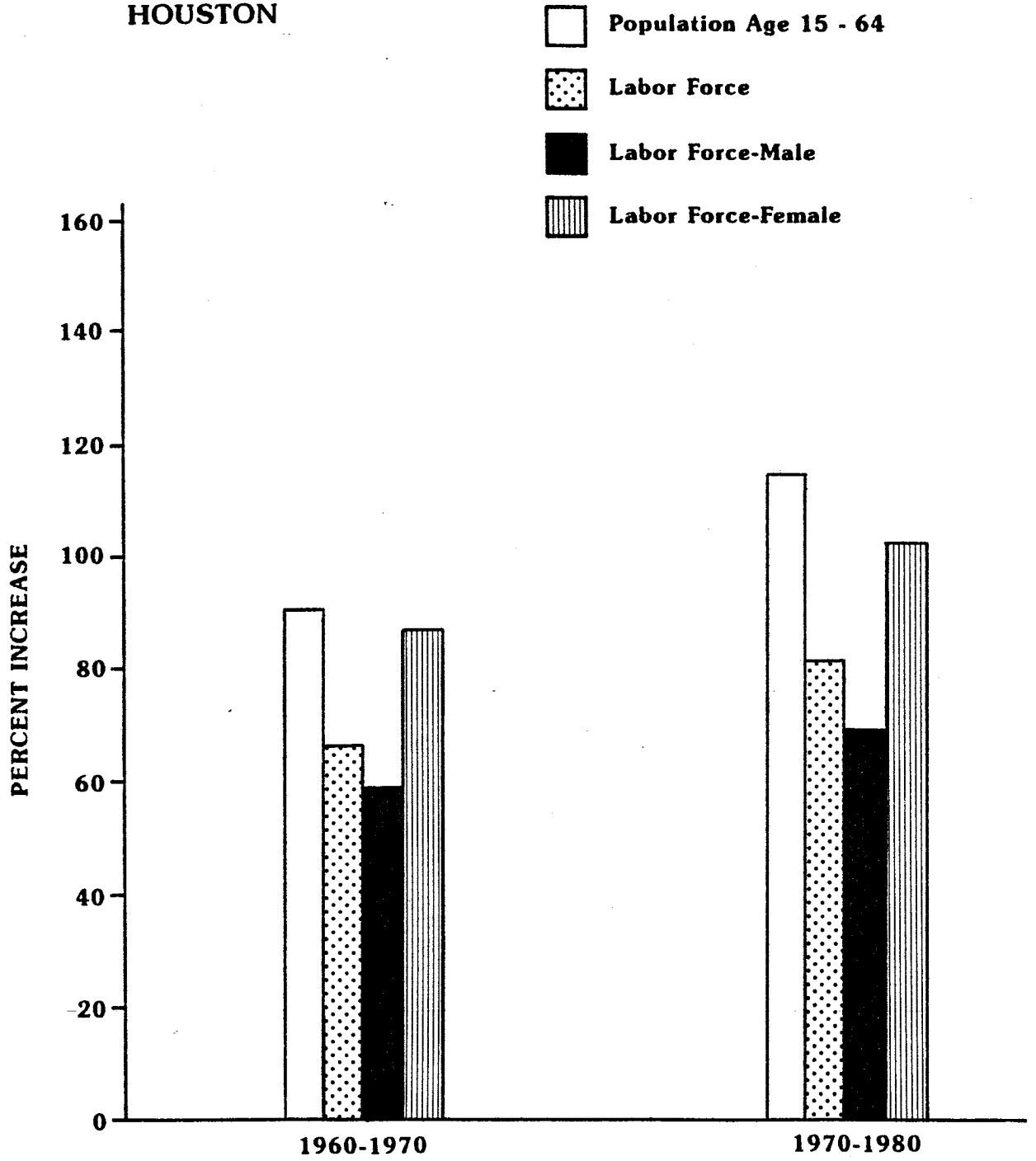
EL PASO



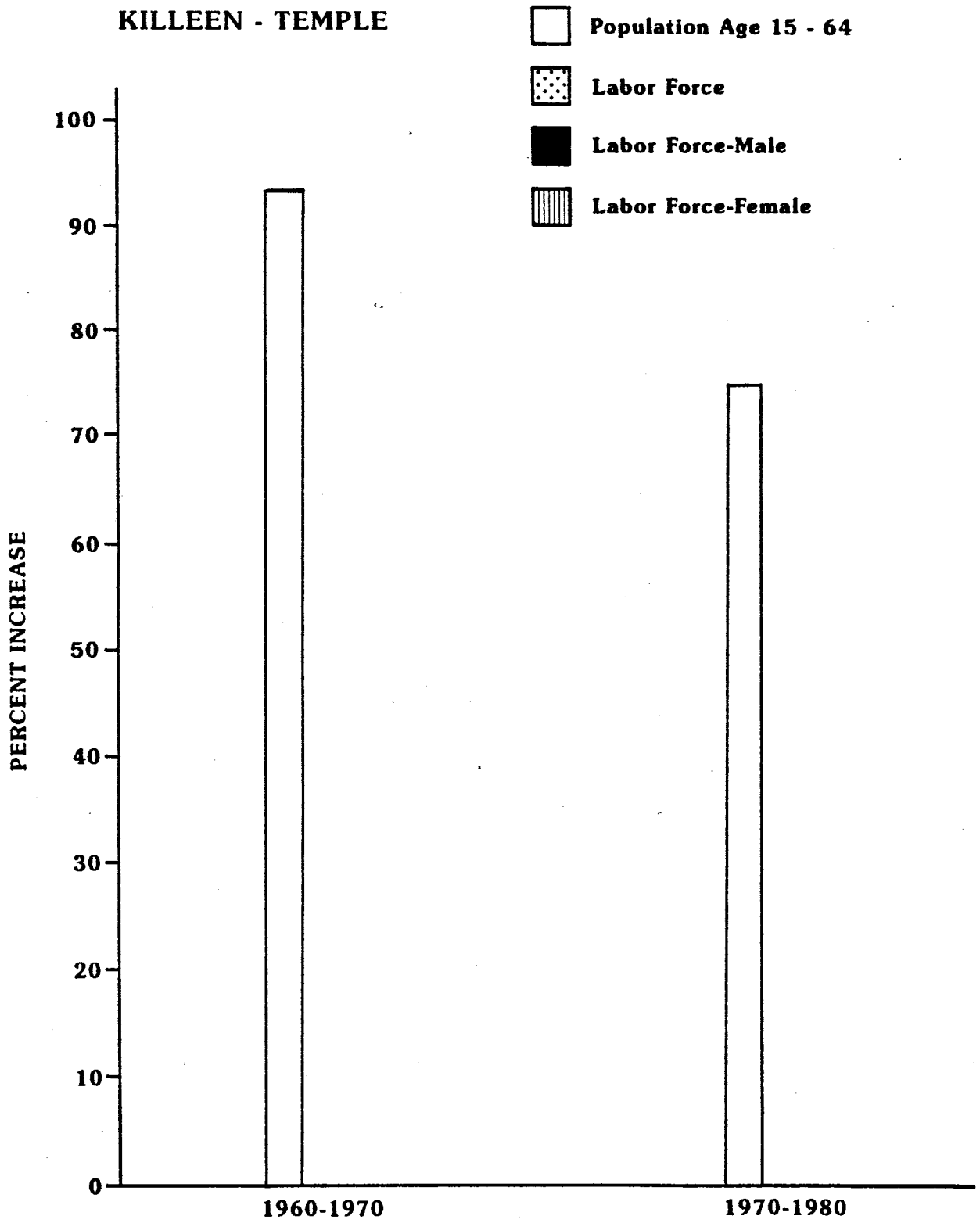
GALVESTON - TEXAS CITY



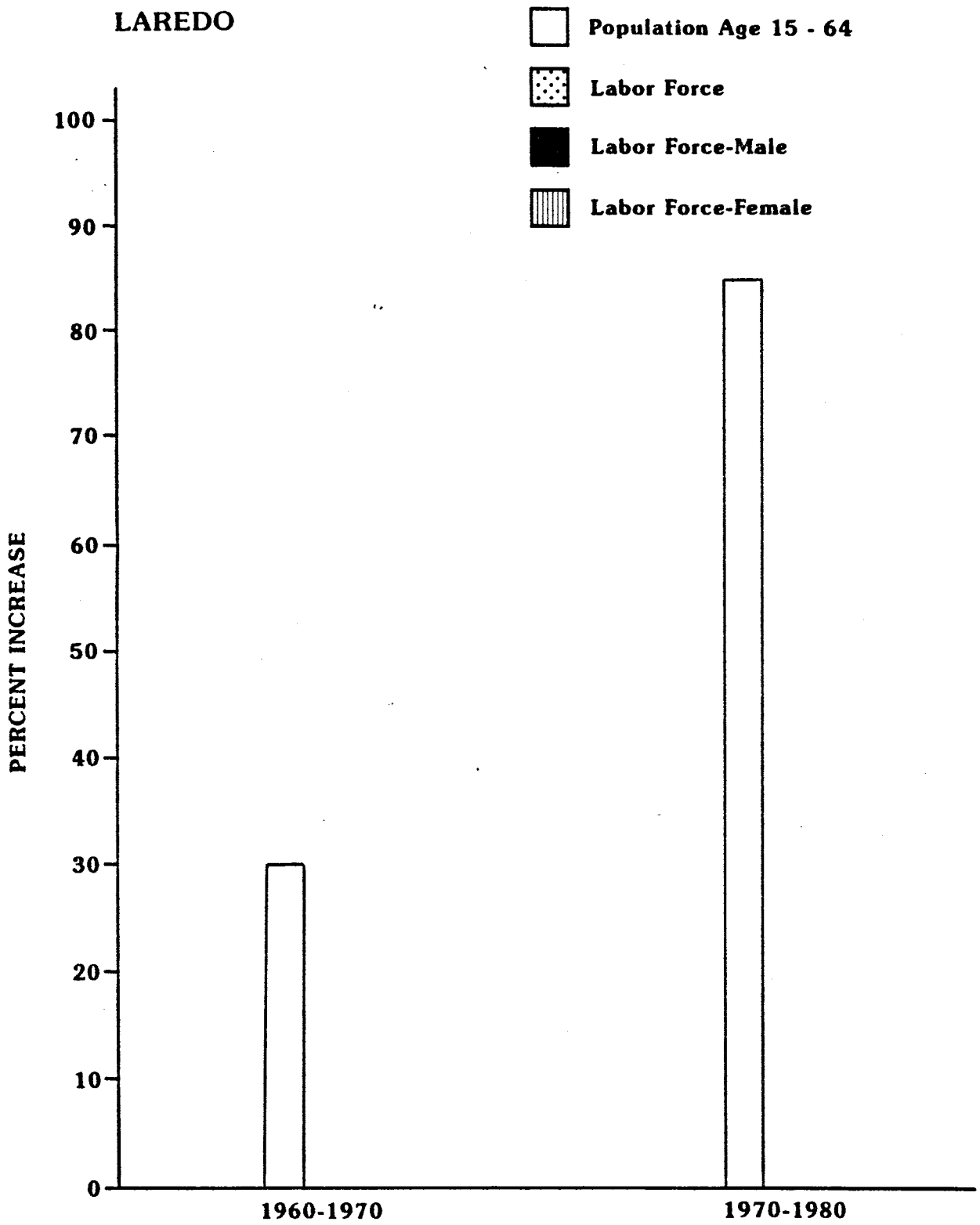
HOUSTON



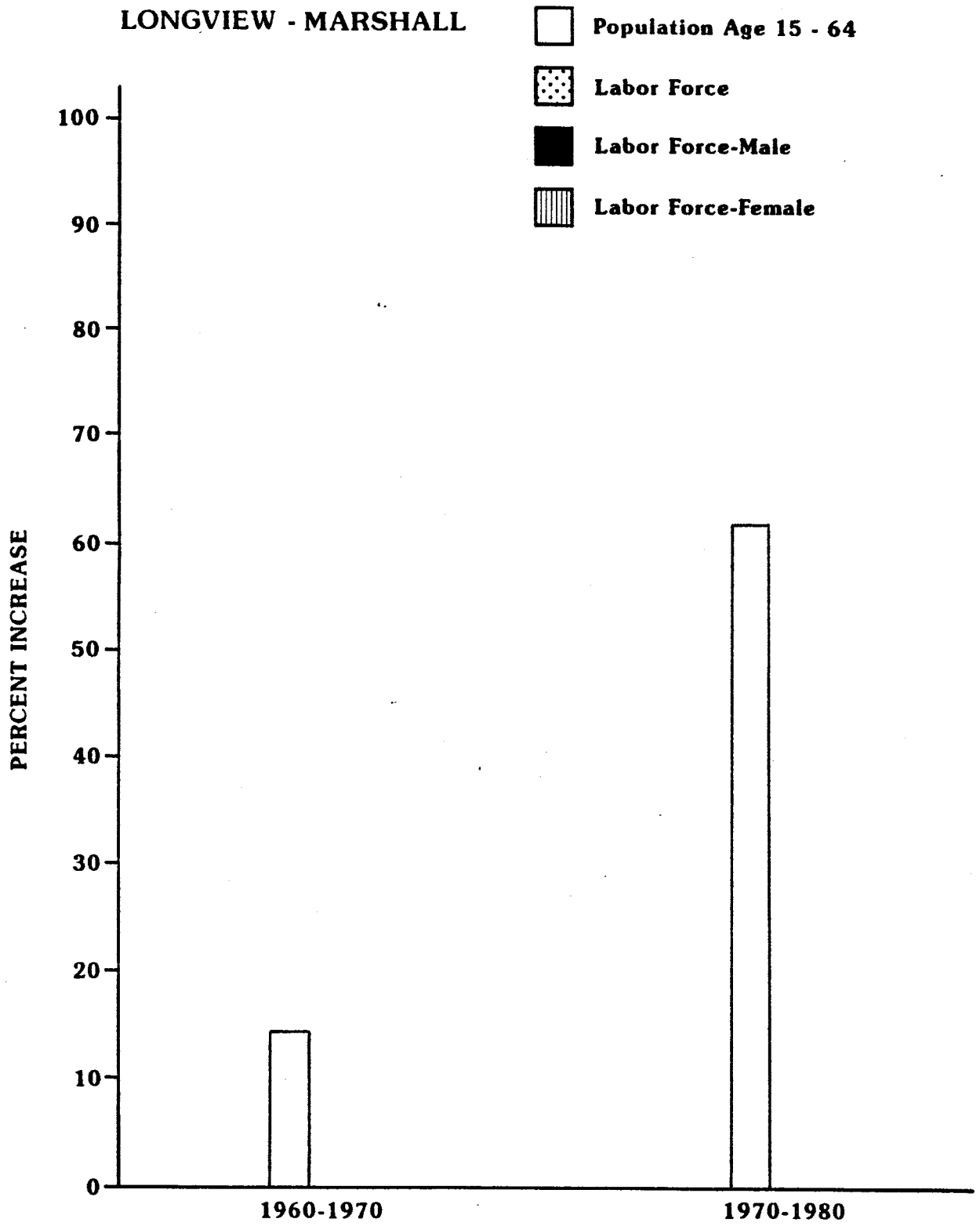
KILLEEN - TEMPLE



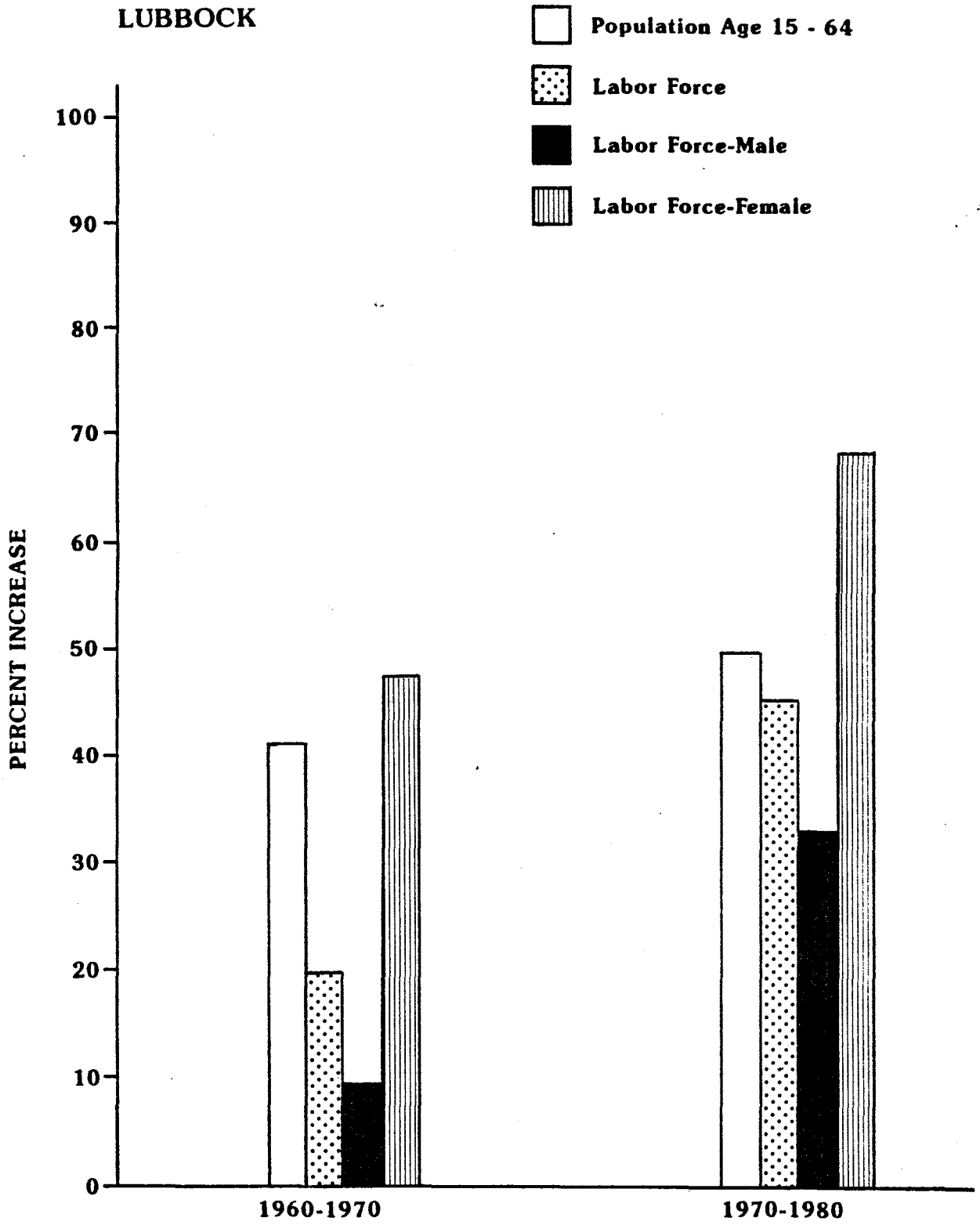
LAREDO







LONGVIEW - MARSHALL

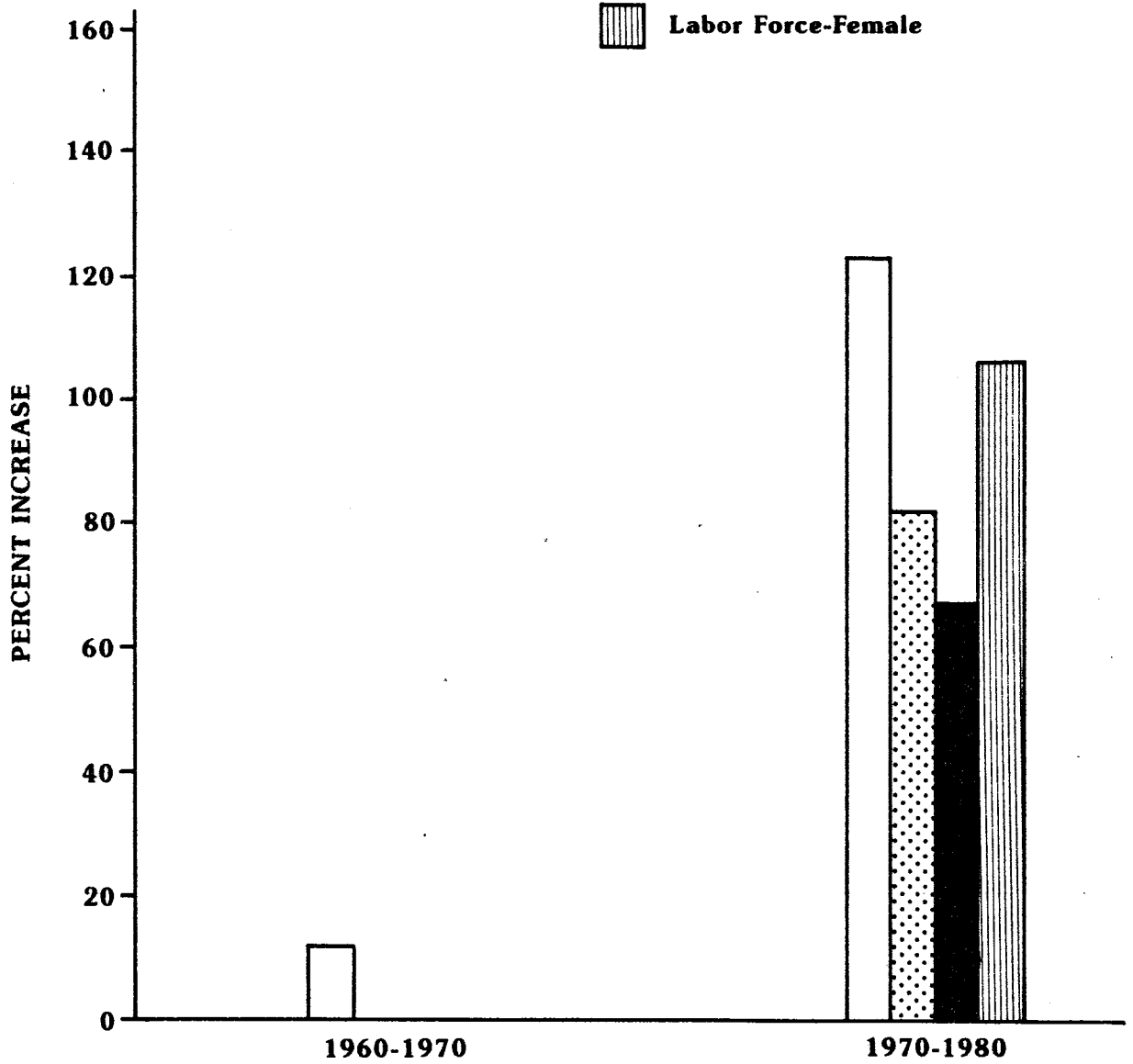


LUBBOCK

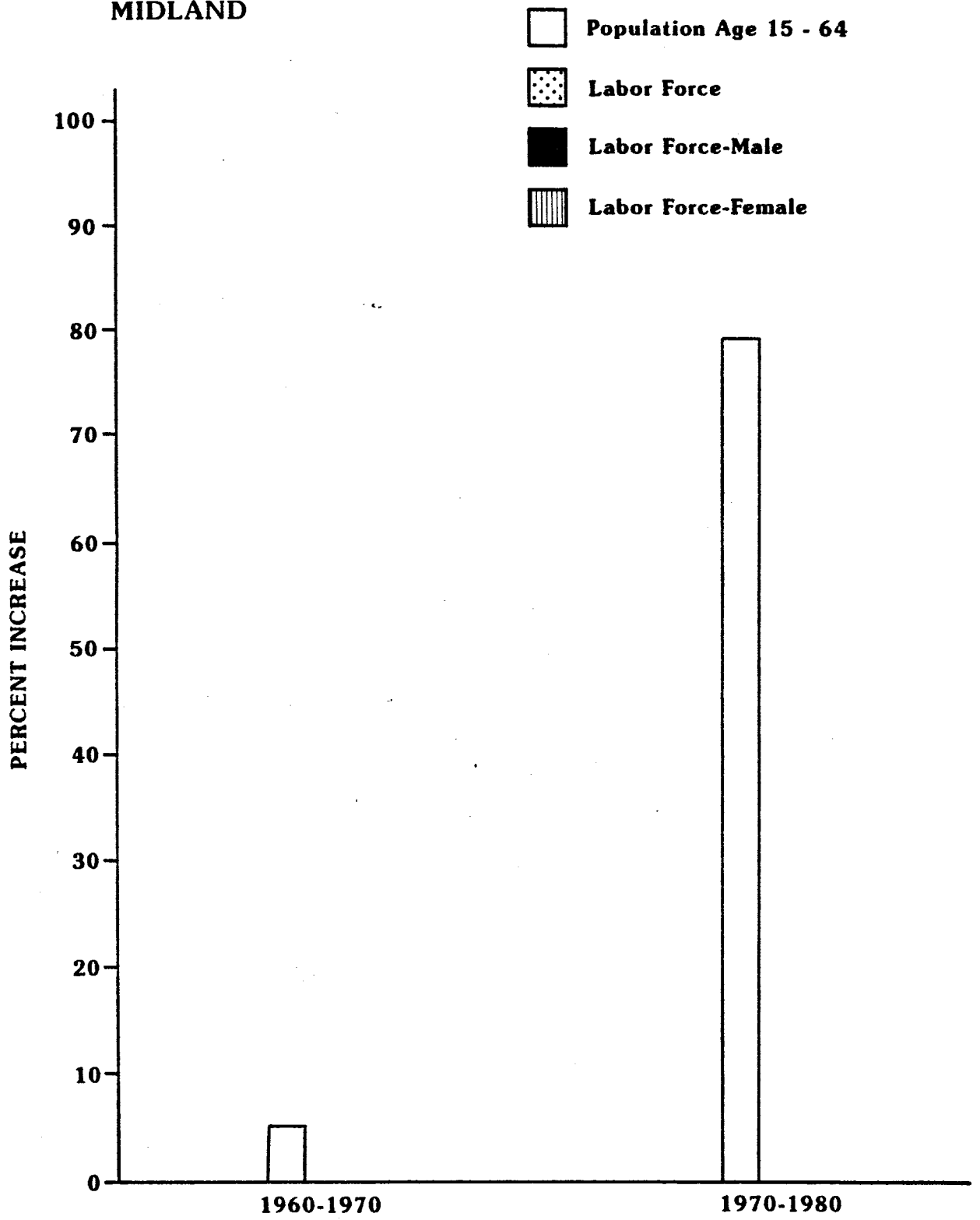


**MCALLEN - PHARR -
EDINBURG**

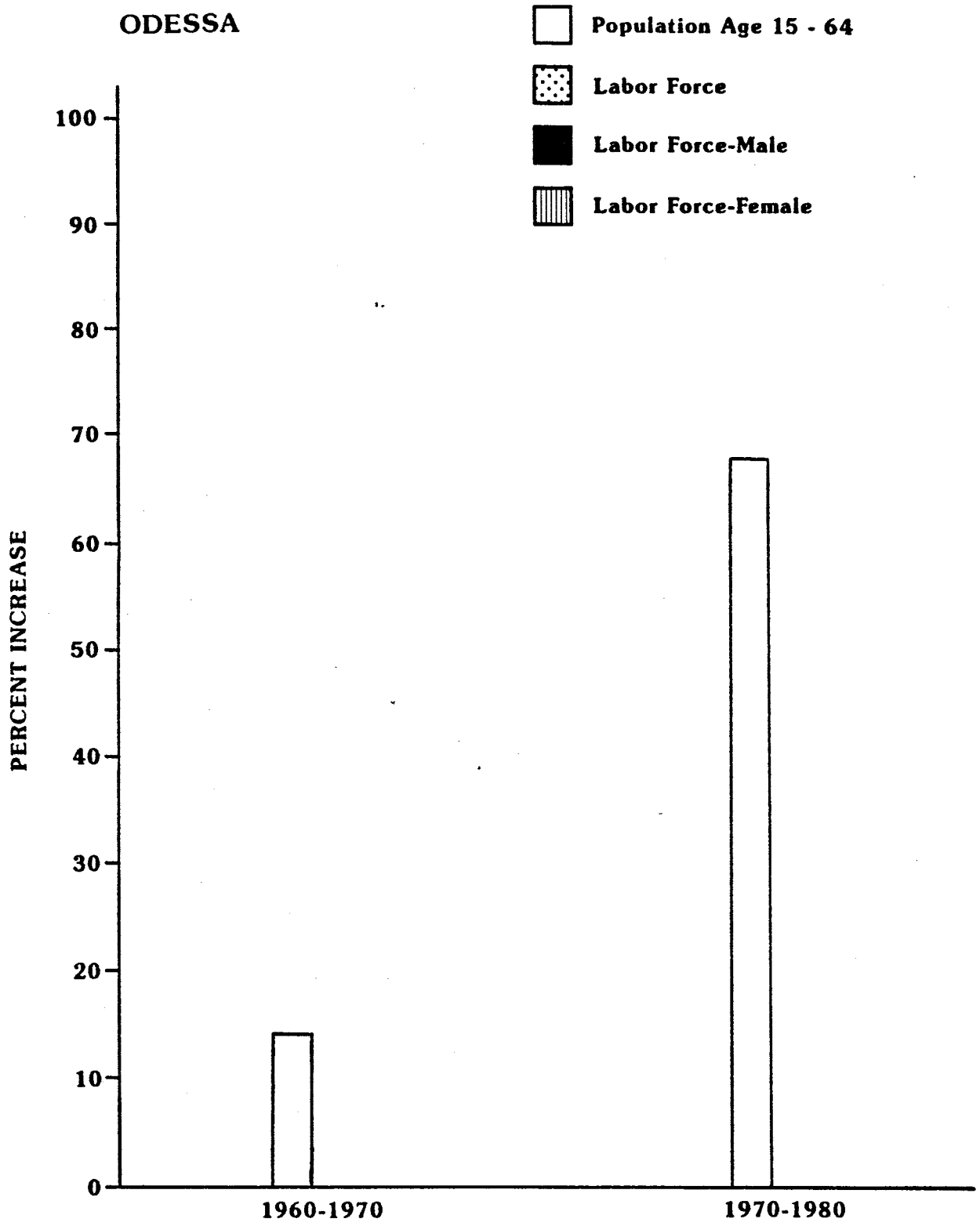
-  **Population Age 15 - 64**
-  **Labor Force**
-  **Labor Force-Male**
-  **Labor Force-Female**



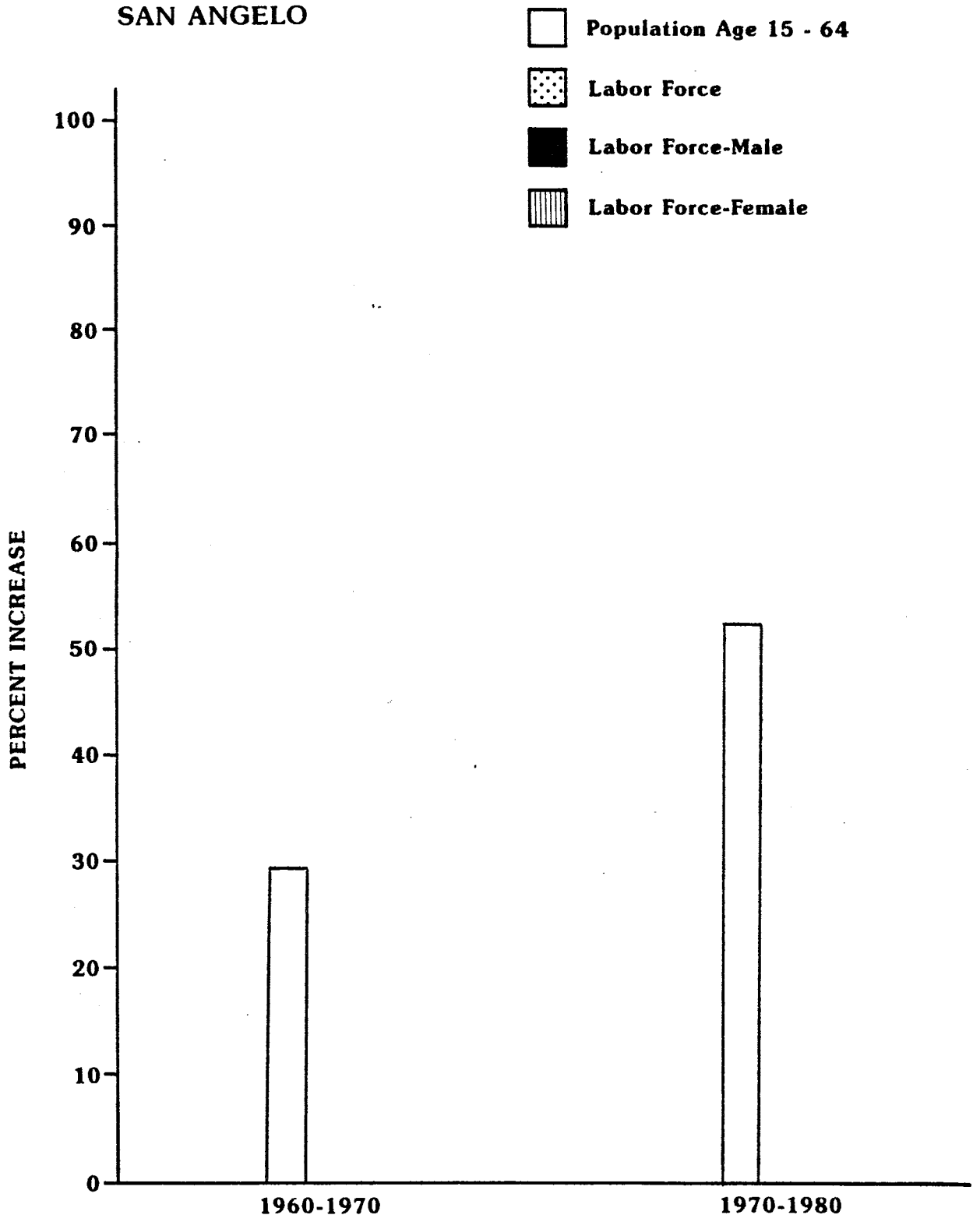
MIDLAND



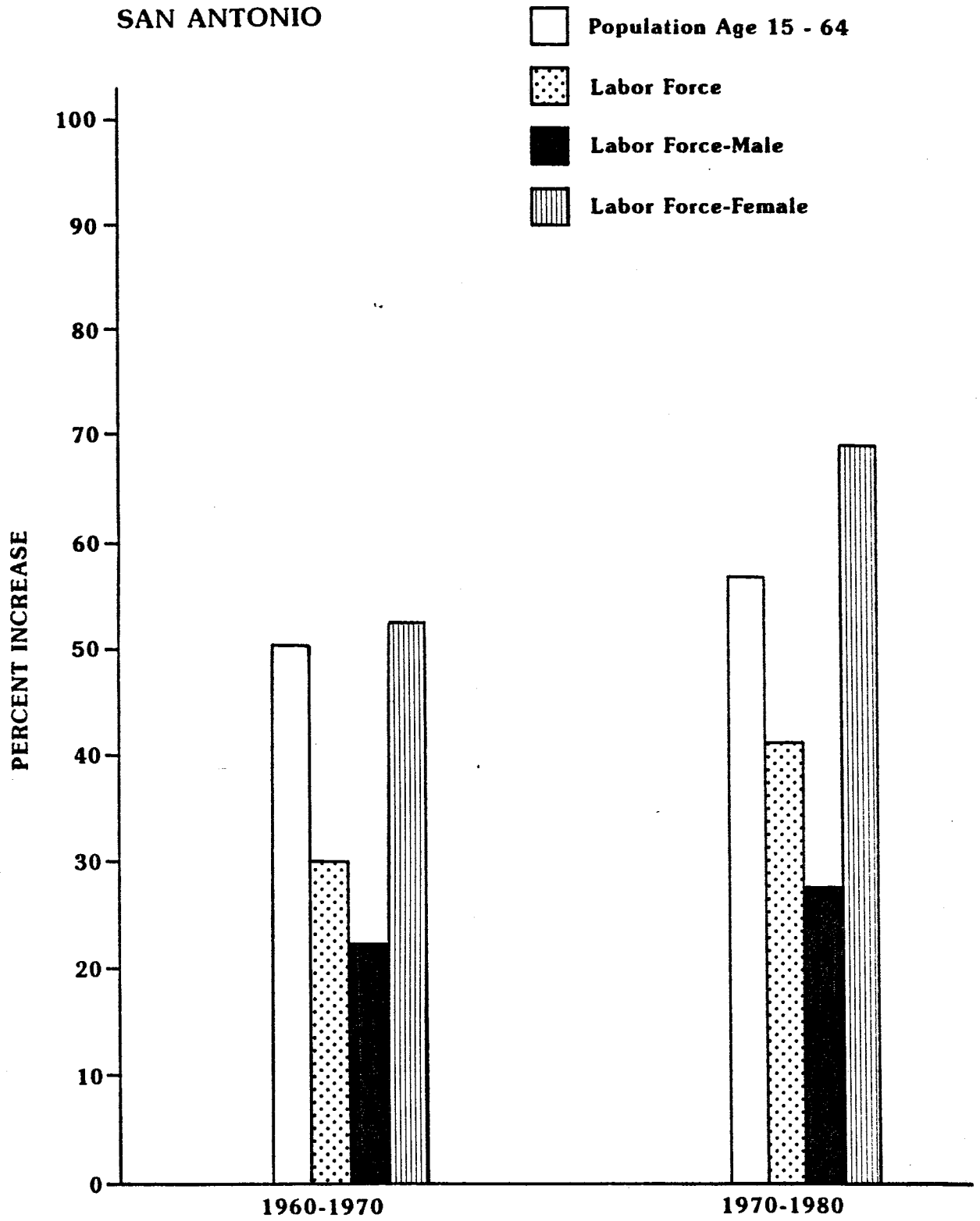
ODESSA



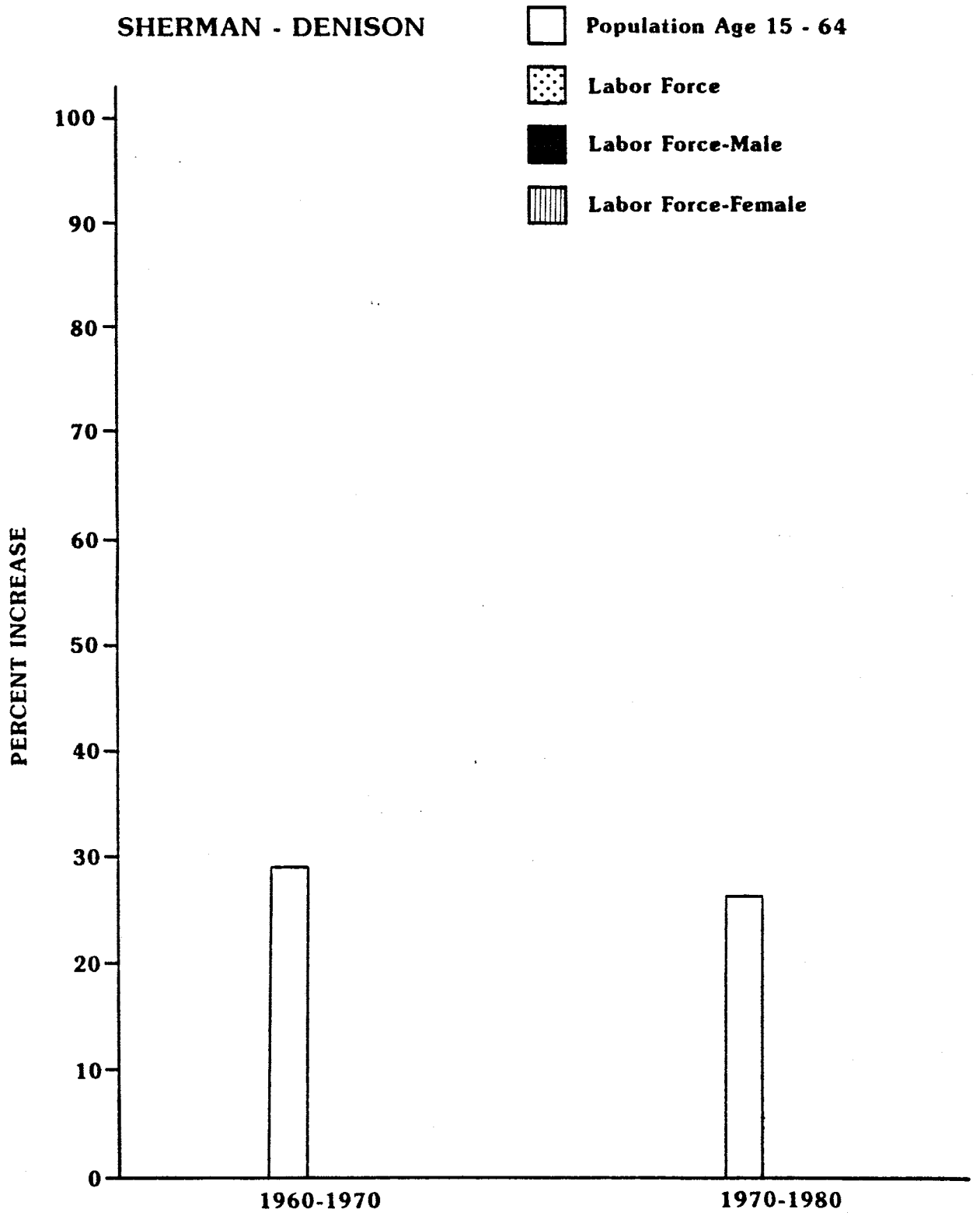
SAN ANGELO







SAN ANTONIO

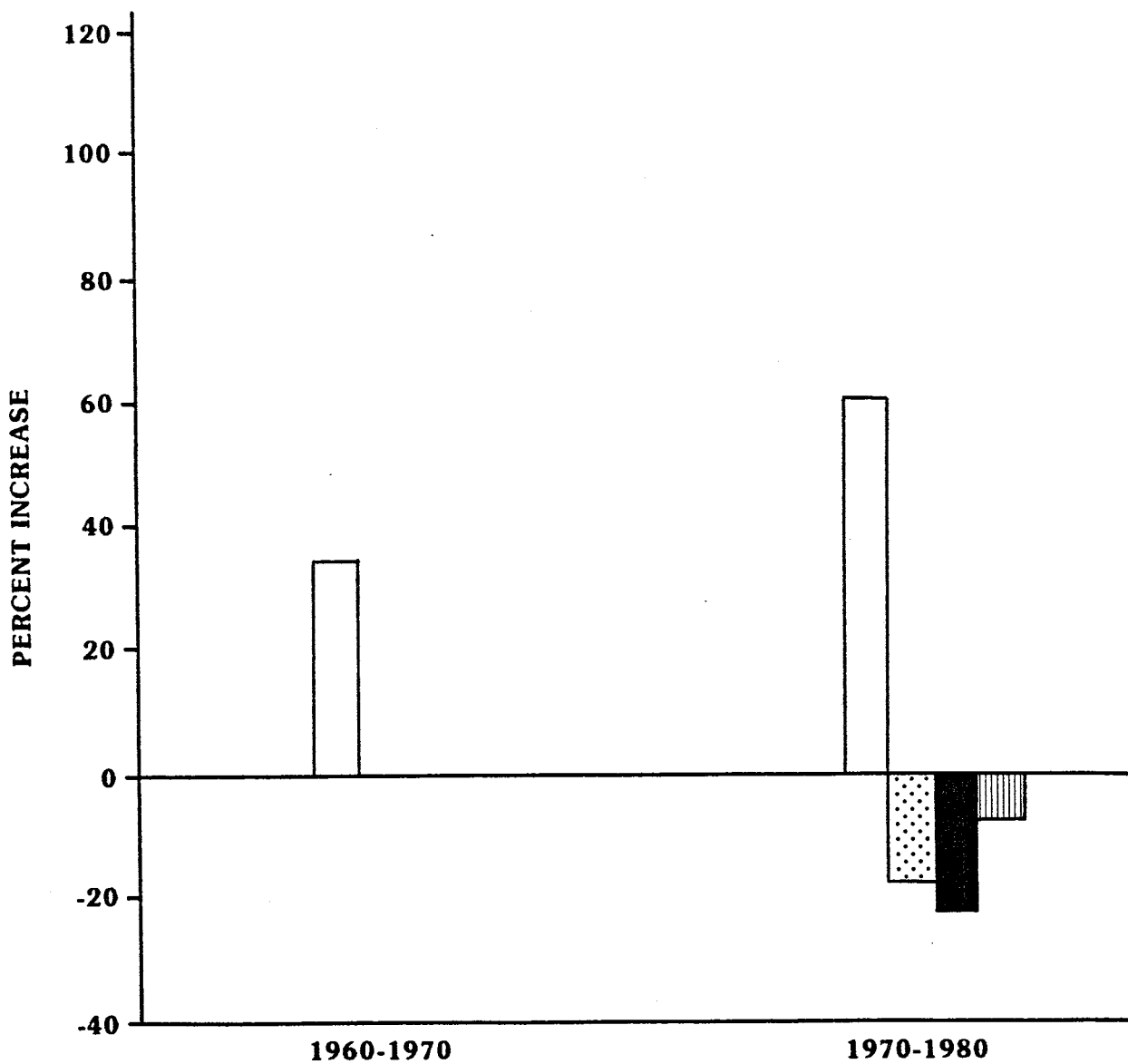


SHERMAN - DENISON

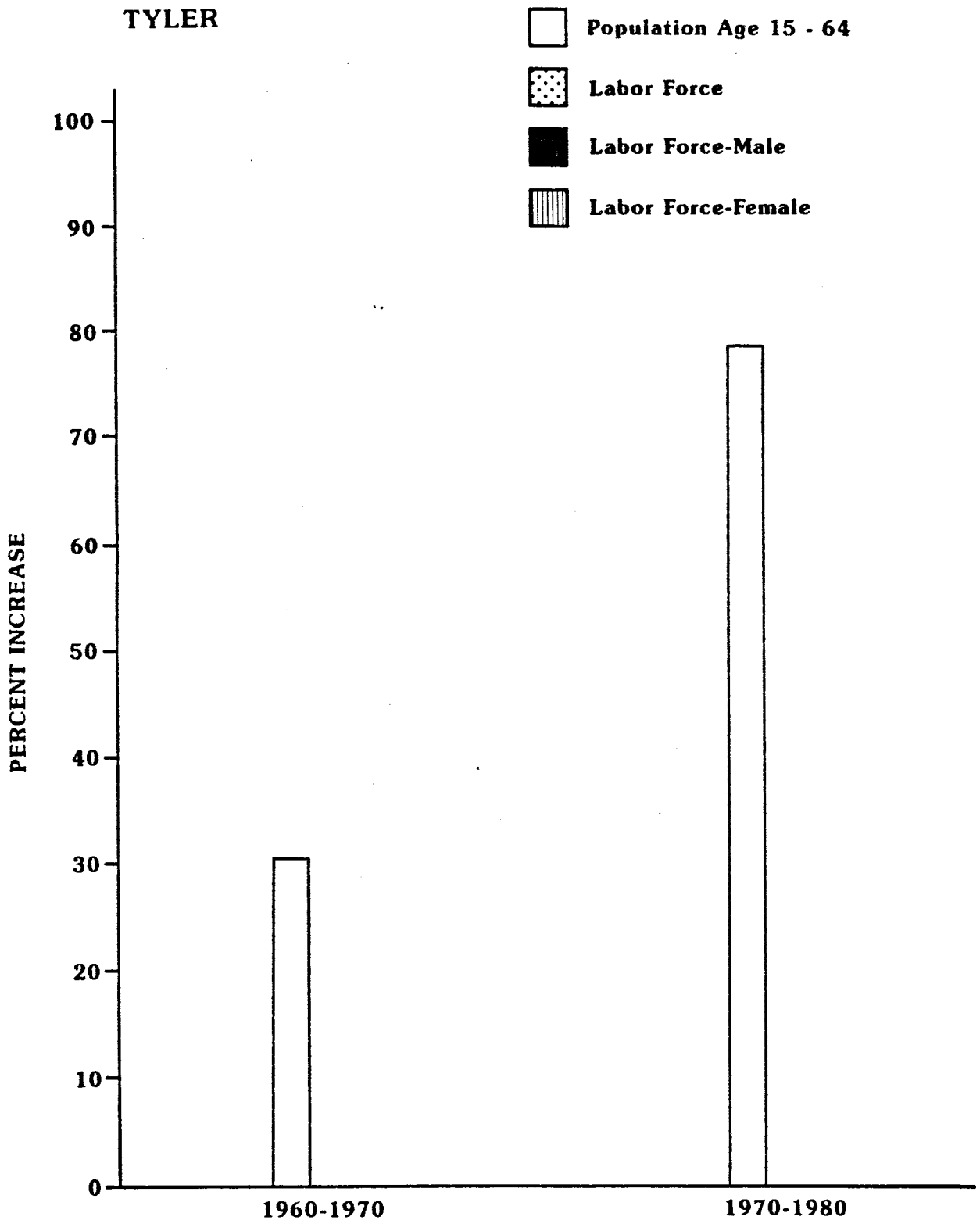


TEXARKANA

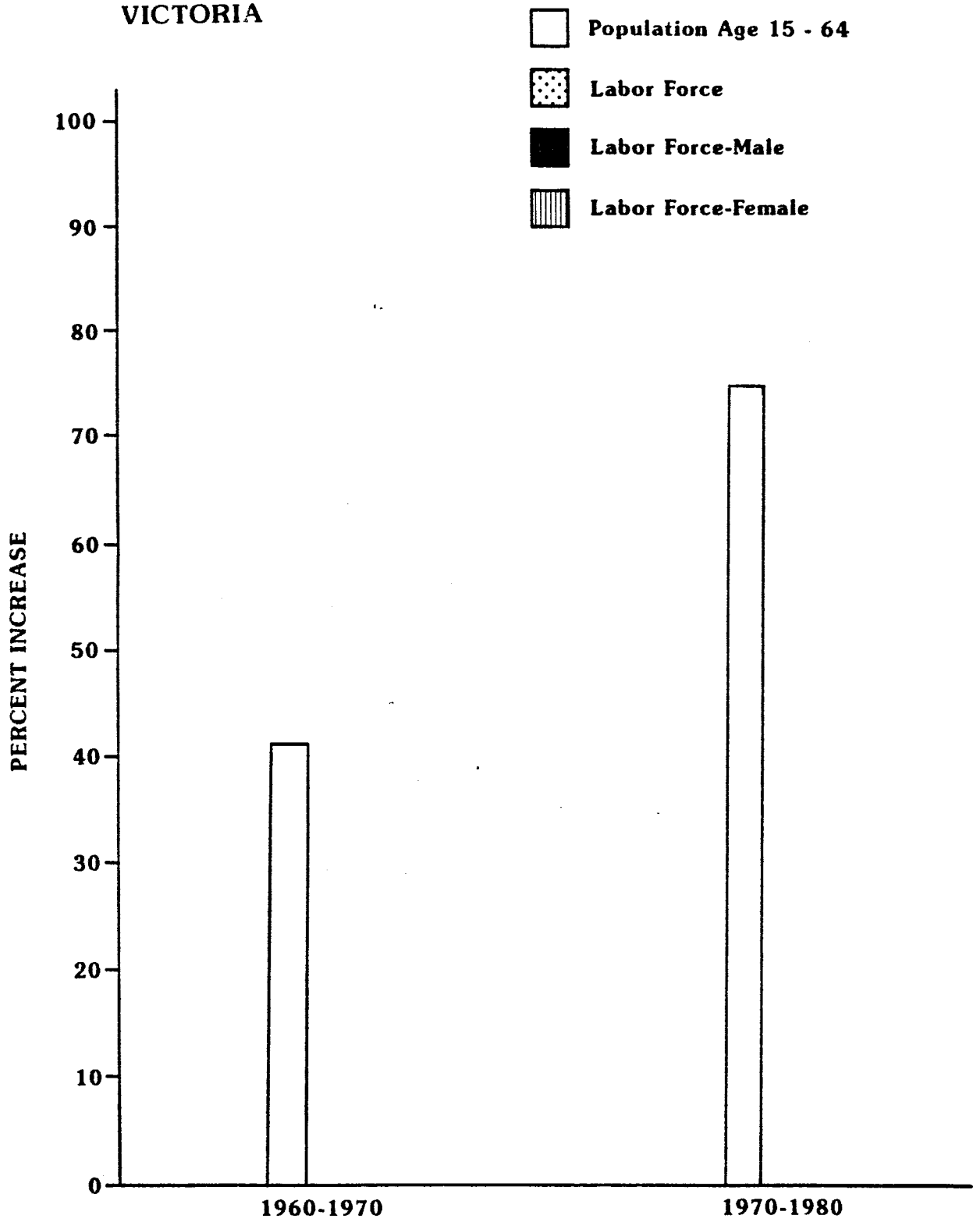
-  Population Age 15 - 64
-  Labor Force
-  Labor Force-Male
-  Labor Force-Female







TYLER

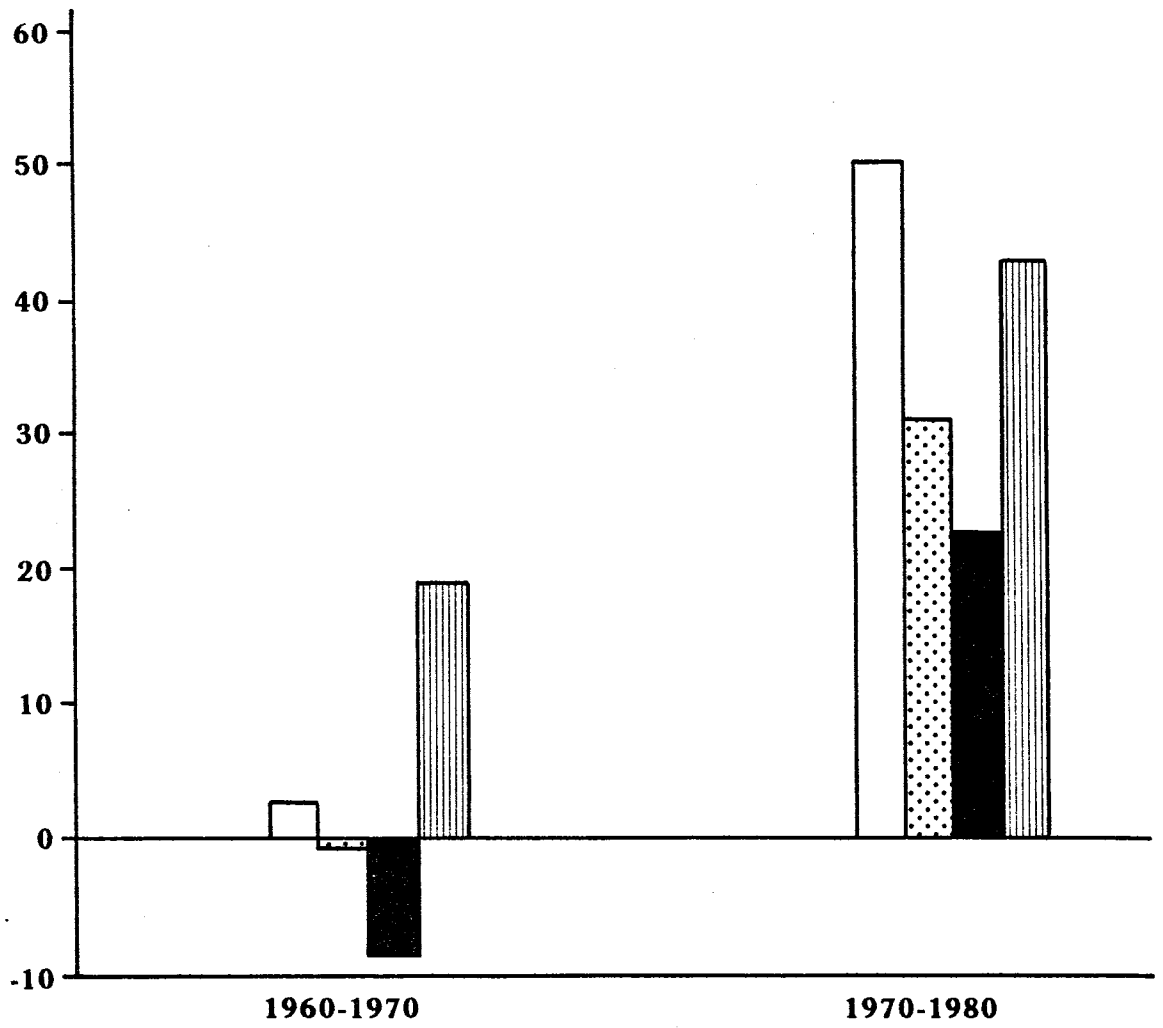


VICTORIA



WACO

-  Population Age 15 - 64
-  Labor Force
-  Labor Force-Male
-  Labor Force-Female



WICHITA FALLS

- Population Age 15 - 64
- Labor Force
- Labor Force-Male
- Labor Force-Female

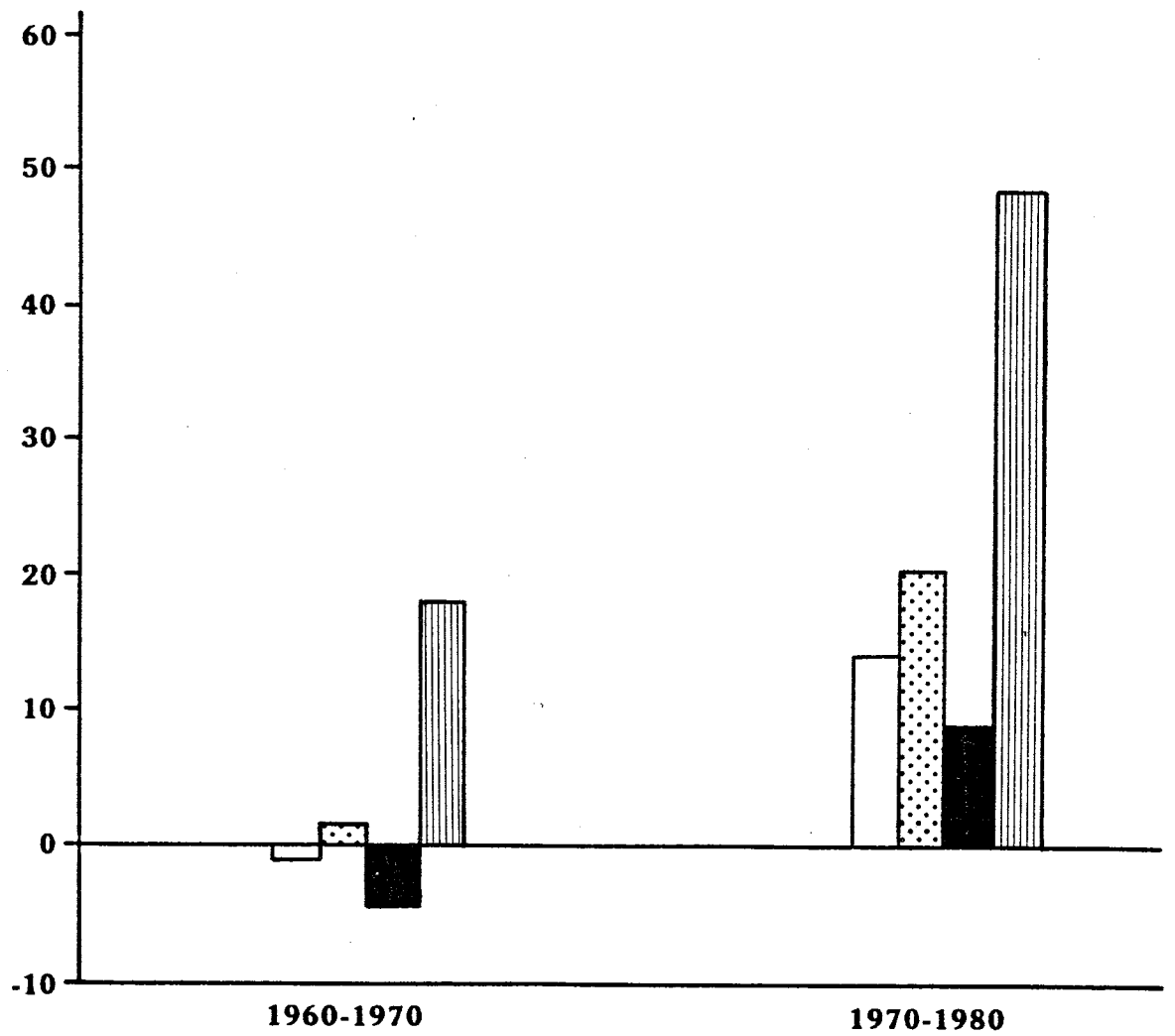


Table A-9. Place of Residence Based on Occupation, 1980

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Abilene				
Professional, Technical	2,700	3,200	700	1,100
Managers, Officials, Proprietors	3,300	1,400	800	400
Sales Workers	2,800	2,500	800	700
Clerical	1,500	5,600	300	2,000
Armed Forces	4,000	300	200	0
Farming	500	100	1,400	100
Others	12,200	6,200	6,200	2,100
Amarillo				
Professional, Technical	4,500	4,700	1,000	1,100
Managers, Officials, Proprietors	5,100	2,100	800	300
Sales Workers	4,800	3,400	800	700
Clerical	2,600	10,100	300	1,600
Armed Forces	--	--	--	--
Farming	700	200	700	100
Others	23,600	9,100	3,400	1,100
Austin				
Professional, Technical	20,500	15,300	8,400	6,700
Managers, Officials, Proprietors	12,700	8,000	7,700	3,700
Sales Workers	10,500	8,500	5,200	4,100
Clerical	7,900	27,500	2,600	11,700
Armed Forces	2,300	200	2,300	100
Farming	1,000	200	2,400	300
Others	40,000	19,000	22,500	8,700
Beaumont-Port Arthur-Orange				
Professional, Technical	5,800	7,000	4,500	4,000
Managers, Officials, Proprietors	4,400	2,000	3,200	1,800
Sales Workers	4,500	4,400	2,600	4,100
Clerical	2,300	9,000	1,800	8,300
Armed Forces	300	0	100	0
Farming	600	200	700	100
Others	28,900	11,100	32,200	5,800
Brownsville-Harlingen-San Benito				
Professional, Technical	2,800	3,800	700	1,100
Managers, Officials, Proprietors	3,400	1,400	1,100	600
Sales Workers	3,800	2,800	800	700
Clerical	1,900	6,000	500	2,000
Armed Forces	100	0	200	0
Farming	1,000	200	2,000	200
Others	15,500	7,100	6,600	3,200
Bryan-College Station				
Professional, Technical	5,000	3,200	700	700
Managers, Officials, Proprietors	2,000	800	400	200
Sales Workers	1,600	1,800	300	300
Clerical	1,100	4,700	200	900
Armed Forces	200	0	0	0
Farming	600	0	400	0
Others	9,100	3,600	1,800	500

Table A-9. Place of Residence Based on Occupation, 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Corpus Christi				
Professional, Technical	7,200	7,500	2,100	2,300
Managers, Officials, Proprietors	7,100	3,300	2,000	800
Sales Workers	5,500	5,200	1,500	1,700
Clerical	3,500	13,300	1,100	3,500
Armed Forces	2,400	300	100	0
Farming	900	100	2,200	200
Others	33,700	11,500	14,000	4,100
Dallas-Ft. Worth				
Professional, Technical	50,200	43,600	72,300	54,000
Managers, Officials, Proprietors	49,500	24,700	73,500	30,200
Sales Workers	39,900	32,700	56,400	43,700
Clerical	27,300	95,300	34,600	130,700
Armed Forces	3,500	300	3,300	200
Farming	3,800	800	8,000	1,700
Others	178,000	85,100	239,800	86,100
El Paso				
Professional, Technical	12,600	11,000	500	700
Managers, Officials, Proprietors	10,800	4,300	500	200
Sales Workers	10,200	8,000	500	400
Clerical	7,300	18,100	300	1,400
Armed Forces	9,600	900	8,500	400
Farming	1,000	100	800	0
Others	44,500	21,700	4,800	2,300
Galveston-Texas City				
Professional, Technical	3,700	4,200	3,600	2,800
Managers, Officials, Proprietors	2,400	1,300	2,600	1,400
Sales Workers	1,500	2,000	2,000	2,300
Clerical	1,700	7,400	1,300	5,700
Armed Forces	400	100	100	0
Farming	400	0	300	100
Others	16,200	5,900	15,700	4,400
Houston				
Professional, Technical	75,700	60,300	55,300	39,600
Managers, Officials, Proprietors	64,300	31,200	56,400	20,400
Sales Workers	47,800	40,200	37,500	32,500
Clerical	34,600	124,200	20,300	85,800
Armed Forces	900	100	600	100
Farming	3,800	700	6,600	1,200
Others	245,400	80,700	202,500	50,500
Killeen-Temple				
Professional, Technical	2,300	3,000	1,900	2,300
Managers, Officials, Proprietors	2,100	1,000	1,700	800
Sales Workers	1,800	2,000	1,400	1,900
Clerical	1,100	3,700	900	4,000
Armed Forces	8,400	900	30,300	1,900
Farming	200	0	1,100	100
Others	8,800	4,500	9,700	5,000

Table A-9. Place of Residence Based on Occupation, 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Laredo				
Professional, Technical	1,600	2,000	200	200
Managers, Officials, Proprietors	1,900	900	400	100
Sales Workers	2,000	2,400	300	100
Clerical	1,800	3,700	200	400
Armed Forces	100	0	0	0
Farming	500	100	100	0
Others	10,100	2,600	600	100
Longview-Marshall				
Professional, Technical	2,600	2,800	1,500	1,300
Managers, Officials, Proprietors	2,800	1,000	1,400	600
Sales Workers	2,500	2,500	1,100	1,500
Clerical	1,200	4,200	700	3,000
Armed Forces	0	0	100	0
Farming	200	0	400	100
Others	14,000	5,400	11,000	3,700
Lubbock				
Professional, Technical	7,400	7,200	600	900
Managers, Officials, Proprietors	6,700	2,600	800	400
Sales Workers	6,600	4,400	800	600
Clerical	3,000	11,400	300	1,800
Armed Forces	1,500	100	1,300	100
Farming	900	200	1,900	100
Others	21,100	9,700	4,700	1,900
McAllen-Pharr-Edinburg				
Professional, Technical	3,100	3,300	2,500	2,800
Managers, Officials, Proprietors	3,000	1,000	2,100	900
Sales Workers	3,500	2,500	3,200	2,100
Clerical	1,300	4,600	1,600	5,400
Armed Forces	100	0	100	0
Farming	1,400	500	5,500	1,500
Others	10,600	5,500	16,500	7,400
Midland				
Professional, Technical	4,400	2,500	400	200
Managers, Officials, Proprietors	3,800	1,100	300	300
Sales Workers	2,100	1,600	300	200
Clerical	1,300	5,100	200	900
Armed Forces	0	0	0	0
Farming	300	0	300	0
Others	9,300	3,400	2,300	500
Odessa				
Professional, Technical	2,800	2,500	300	300
Managers, Officials, Proprietors	3,500	1,400	500	300
Sales Workers	3,600	2,800	700	700
Clerical	1,100	5,700	200	1,100
Armed Forces	100	0	0	0
Farming	200	0	200	100
Others	16,300	4,500	5,800	1,200

Table A-9. Place of Residence Based on Occupation, 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
San Angelo				
Professional, Technical	1,900	2,300	200	300
Managers, Officials, Proprietors	2,200	800	200	200
Sales Workers	2,400	1,900	300	200
Clerical	1,000	4,700	100	700
Armed Forces	1,700	400	100	0
Farming	600	100	600	0
Others	9,900	5,500	1,500	600
San Antonio				
Professional, Technical	20,500	21,500	9,500	8,600
Managers, Officials, Proprietors	19,500	9,500	10,000	4,300
Sales Workers	17,600	16,800	7,900	6,200
Clerical	15,000	41,800	3,900	15,800
Armed Forces	13,600	3,400	21,300	4,500
Farming	2,100	400	2,300	400
Others	94,000	38,800	28,800	11,400
Sherman-Denison				
Professional, Technical	1,500	1,600	1,100	1,000
Managers, Officials, Proprietors	1,500	800	700	300
Sales Workers	1,400	1,200	600	700
Clerical	1,000	2,900	300	1,500
Armed Forces	0	0	0	0
Farming	100	0	700	100
Others	7,800	4,300	5,500	2,500
Texarkana				
Professional, Technical	1,100	900	900	900
Managers, Officials, Proprietors	1,000	400	900	500
Sales Workers	900	500	800	1,000
Clerical	500	1,500	600	2,800
Armed Forces	0	0	100	0
Farming	100	0	400	0
Others	3,700	1,800	6,100	2,100
Tyler				
Professional, Technical	2,700	2,300	1,300	1,600
Managers, Officials, Proprietors	2,600	1,000	1,500	600
Sales Workers	2,000	2,000	1,300	1,400
Clerical	1,000	4,000	700	3,100
Armed Forces	0	0	0	0
Farming	300	0	400	100
Others	9,400	4,400	9,200	3,500
Victoria				
Professional, Technical	1,600	1,500	500	300
Managers, Officials, Proprietors	1,500	600	400	200
Sales Workers	1,400	1,600	400	400
Clerical	400	2,600	200	900
Armed Forces	0	0	0	0
Farming	100	0	400	100
Others	9,400	2,300	3,200	800

Table A-9. Place of Residence Based on Occupation, 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Waco				
Professional, Technical	3,100	3,300	1,900	1,900
Managers, Officials, Proprietors	2,700	1,300	2,000	900
Sales Workers	2,500	2,000	2,100	1,600
Clerical	1,500	5,500	1,100	4,000
Armed Forces	0	0	100	0
Farming	400	0	1,000	100
Others	12,500	6,700	9,900	4,200
Wichita Falls				
Professional, Technical	2,400	2,800	800	1,000
Managers, Officials, Proprietors	2,800	1,200	1,000	400
Sales Workers	2,400	2,100	800	700
Clerical	1,200	5,000	500	1,900
Armed Forces	6,400	1,400	200	0
Farming	200	100	700	100
Others	12,700	5,900	6,100	2,200
Small Texas MSAs				
Professional, Technical	41,900	39,700	15,000	14,600
Managers, Officials, Proprietors	39,000	16,100	13,900	6,500
Sales Workers	33,800	30,200	12,600	12,400
Clerical	19,200	72,900	6,800	30,300
Armed Forces	13,000	2,200	800	100
Farming	5,200	700	8,100	1,000
Others	176,100	71,600	88,400	29,500
Medium Texas MSAs				
Professional, Technical	61,700	58,100	21,100	20,800
Managers, Officials, Proprietors	50,300	23,600	19,000	9,100
Sales Workers	46,400	37,900	16,000	15,600
Clerical	28,200	93,600	9,200	38,100
Armed Forces	24,800	2,500	43,000	2,500
Farming	7,000	1,400	16,500	2,600
Others	203,200	90,200	110,900	38,400
Large Texas MSAs				
Professional, Technical	146,300	125,400	137,100	102,200
Managers, Officials, Proprietors	133,300	65,300	139,900	54,900
Sales Workers	105,300	89,700	101,800	82,300
Clerical	76,800	261,200	58,800	232,300
Armed Forces	18,000	3,800	25,200	4,800
Farming	9,700	1,900	16,900	3,300
Others	517,400	240,600	471,200	148,000
Texas Metropolitan				
Professional, Technical	249,900	223,100	173,200	137,600
Managers, Officials, Proprietors	222,600	105,100	172,900	70,500
Sales Workers	185,500	157,700	130,300	110,300
Clerical	124,300	427,700	74,800	300,700
Armed Forces	55,700	8,500	68,900	7,400
Farming	22,000	3,900	41,500	7,000
Others	896,700	366,300	670,400	215,900

Table A-10. Percent Change in Number of Workers from 1960 to 1980

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Abilene				
Professional, Technical	19	136	87	196
Managers, Officials, Proprietors	0	212	1	213
Sales Workers	48	167	96	148
Clerical	27	85	16	204
Armed Forces	-25	953	57	-
Farming	95	870	-31	-1
Others	34	36	70	62
Amarillo				
Professional, Technical	37	130	230	306
Managers, Officials, Proprietors	1	143	139	376
Sales Workers	58	153	392	1,419
Clerical	-1	83	122	381
Armed Forces	-100	-100	-100	-
Farming	123	641	-12	131
Others	46	59	167	200
Austin				
Professional, Technical	175	249	1,469	2,042
Managers, Officials, Proprietors	128	623	1,205	3,488
Sales Workers	192	435	2,012	2,173
Clerical	105	184	734	1,523
Armed Forces	56	5,850	52	581
Farming	240	527	114	331
Others	114	125	889	1,290
Beaumont-Port Arthur-Orange				
Professional, Technical	36	131	55	163
Managers, Officials, Proprietors	-12	97	32	255
Sales Workers	54	134	119	284
Clerical	-17	64	46	197
Armed Forces	164	-	-92	-
Farming	57	863	-19	226
Others	8	27	72	117
Brownsville-Harlingen-San Benito				
Professional, Technical	118	204	81	171
Managers, Officials, Proprietors	9	114	20	199
Sales Workers	175	145	157	120
Clerical	86	162	74	230
Armed Forces	-98	-100	-60	-100
Farming	-26	30	-42	-59
Others	59	51	69	135
Corpus Christi				
Professional, Technical	74	172	281	342
Managers, Officials, Proprietors	44	249	183	418
Sales Workers	75	221	347	524
Clerical	41	123	199	325
Armed Forces	153	1,255	-95	-82
Farming	109	59	-11	-25
Others	71	117	174	241

Table A-10. Percent Change in Number of Workers from 1960 to 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Dallas-Ft. Worth				
Professional, Technical	51	163	270	514
Managers, Officials, Proprietors	35	290	300	978
Sales Workers	55	192	360	701
Clerical	19	77	193	453
Armed Forces	-10	172	32	1,329
Farming	299	400	-16	115
Others	40	58	211	263
El Paso				
Professional, Technical	109	165	131	179
Managers, Officials, Proprietors	41	188	68	162
Sales Workers	160	216	247	281
Clerical	60	107	158	208
Armed Forces	-24	309	-26	1,074
Farming	113	374	4	87
Others	70	111	205	252
Galveston-Texas City				
Professional, Technical	47	118	248	338
Managers, Officials, Proprietors	-15	126	110	472
Sales Workers	37	157	396	570
Clerical	-13	125	161	351
Armed Forces	-35	-	71	-
Farming	923	-	-40	7
Others	18	32	166	269
Houston				
Professional, Technical	154	305	519	778
Managers, Officials, Proprietors	110	568	595	1,409
Sales Workers	138	360	679	1,188
Clerical	84	206	347	742
Armed Forces	22	-	56	-
Farming	380	745	242	424
Others	102	97	372	500
Lubbock				
Professional, Technical	118	224	134	308
Managers, Officials, Proprietors	25	234	87	303
Sales Workers	81	228	306	375
Clerical	31	145	121	399
Armed Forces	263	-	20	1,650
Farming	33	191	-33	77
Others	33	87	135	145
San Antonio				
Professional, Technical	87	165	487	622
Managers, Officials, Proprietors	40	231	344	881
Sales Workers	89	207	591	1,134
Clerical	31	99	408	676
Armed Forces	18	885	-24	204
Farming	150	223	28	72
Others	92	77	498	1,042

Table A-10. Percent Change in Number of Workers from 1960 to 1980 (cont'd.)

Occupation	Live in Central City		Live in Suburbs	
	Male	Female	Male	Female
Waco				
Professional, Technical	27	74	177	293
Managers, Officials, Proprietors	-15	109	96	359
Sales Workers	10	90	184	240
Clerical	-3	51	86	198
Armed Forces	-96	-100	-98	-100
Farming	47	-86	-55	-25
Others	8	14	63	93
Wichita Falls				
Professional, Technical	-10	85	77	188
Managers, Officials, Proprietors	-27	98	17	186
Sales Workers	36	113	265	214
Clerical	-14	47	104	176
Armed Forces	-31	725	-63	400
Farming	61	175	2	2,375
Others	25	31	51	109
Small Texas MSAs				
Professional, Technical	24	109	181	274
Managers, Officials, Proprietors	-11	135	69	381
Sales Workers	39	135	237	341
Clerical	-2	78	104	255
Armed Forces	-58	388	-84	-55
Farming	116	226	-33	23
Others	27	35	26	-51
Medium Texas MSAs				
Professional, Technical	112	191	246	384
Managers, Officials, Proprietors	42	261	185	561
Sales Workers	121	114	371	462
Clerical	53	134	169	397
Armed Forces	-10	529	-32	245
Farming	51	147	-13	10
Others	57	88	153	257
Large Texas MSAs				
Professional, Technical	98	217	355	605
Managers, Officials, Proprietors	64	372	387	1,096
Sales Workers	91	253	458	871
Clerical	44	126	244	526
Armed Forces	12	707	-19	222
Farming	275	430	27	164
Others	74	75	278	339
Texas Metropolitan				
Professional, Technical	93	196	328	534
Managers, Officials, Proprietors	49	311	323	916
Sales Workers	91	232	430	739
Clerical	41	122	224	484
Armed Forces	-26	557	-27	204
Farming	141	276	0	71
Others	64	46	233	299

Note: Beaumont-Port Arthur, Bryan-College Station, Killeen-Temple, Laredo, Longview-Marshall, McAllen-Pharr-Edinburg, Midland, Odessa, San Angelo, Sherman-Denison, Texarkana, Tyler, and Victoria were not MSAs in 1960.

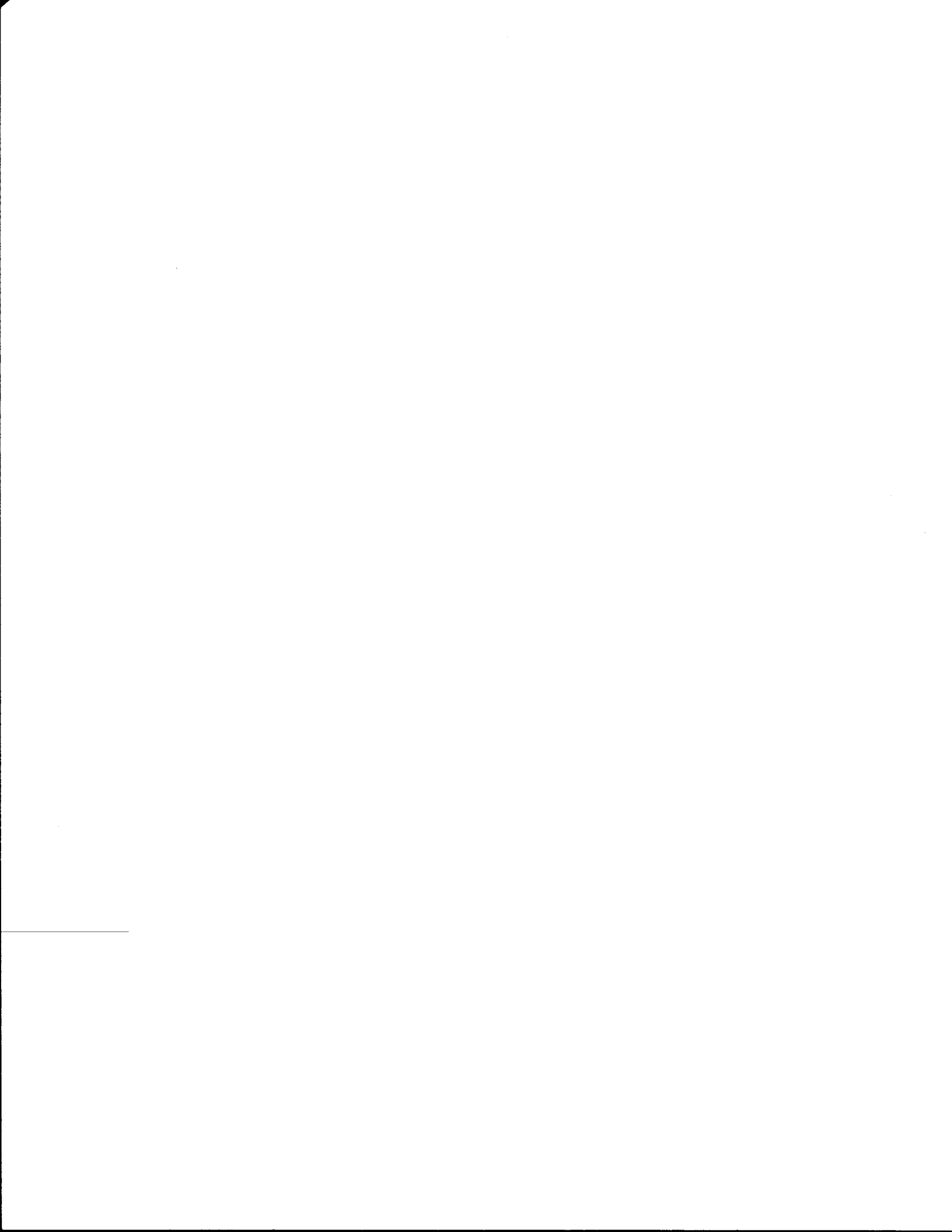
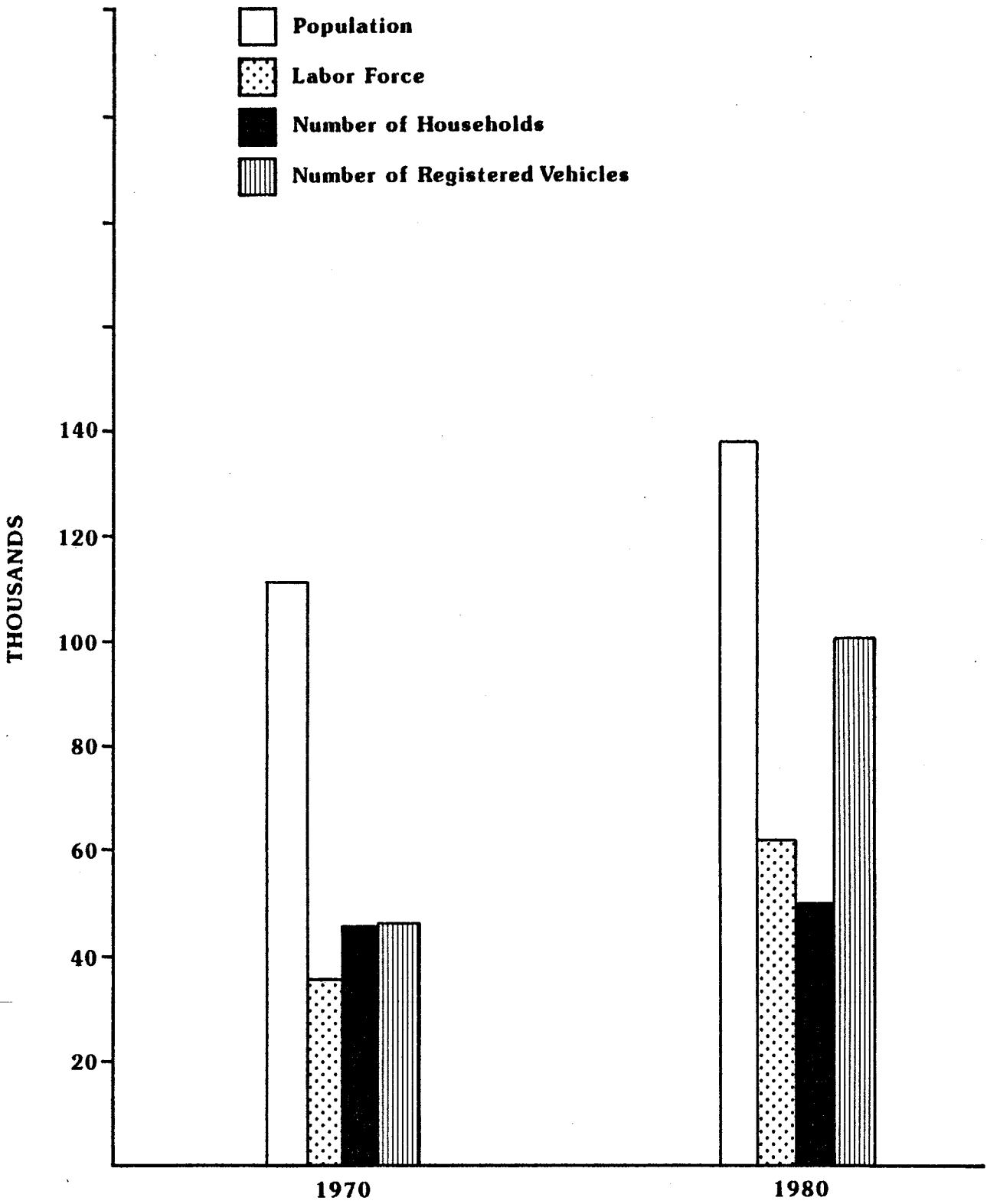


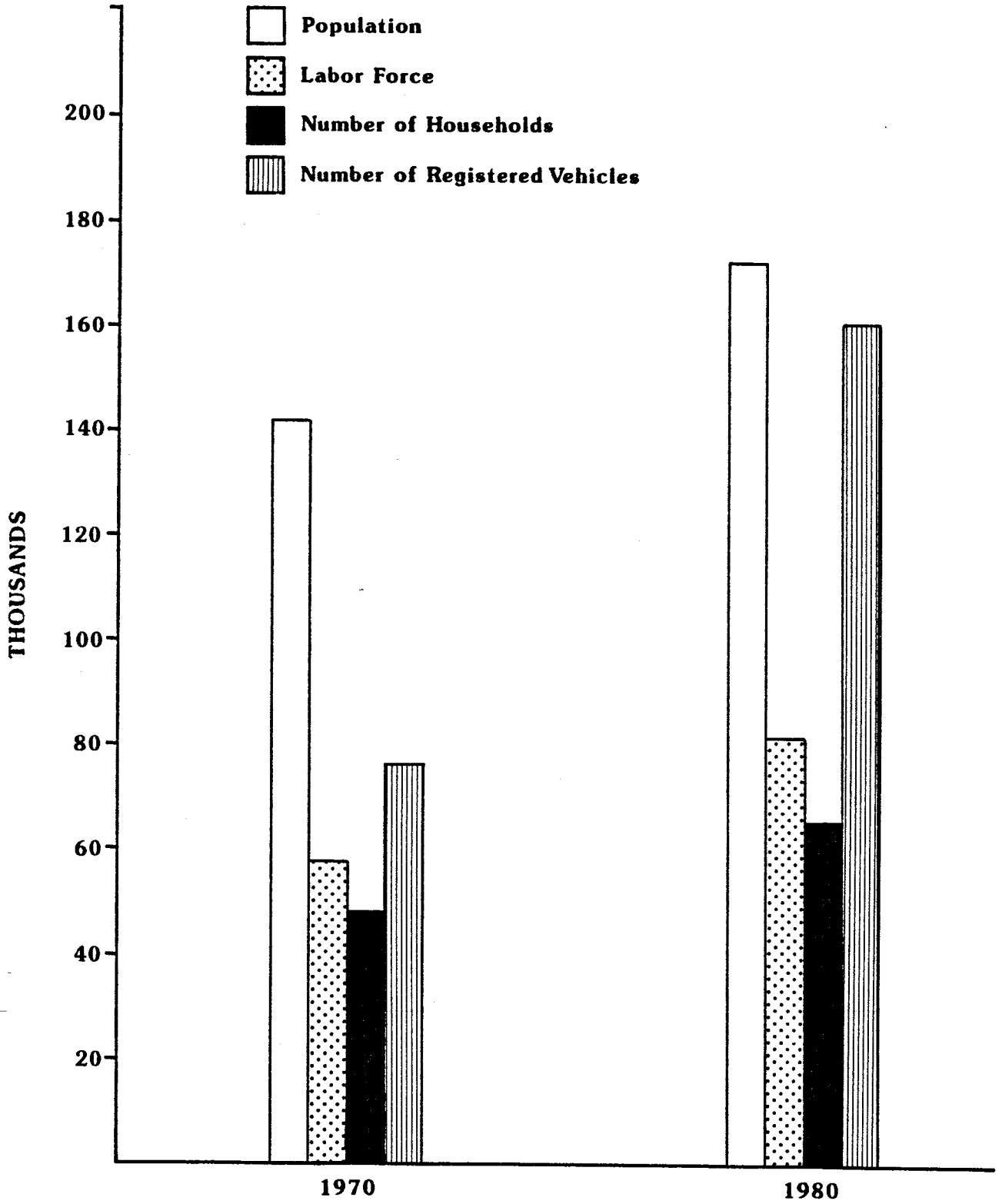
FIGURE A-5

**POPULATION, LABOR FORCE, HOUSEHOLDS AND VEHICLES
FOR EACH METROPOLITAN AREA
1970 AND 1980**

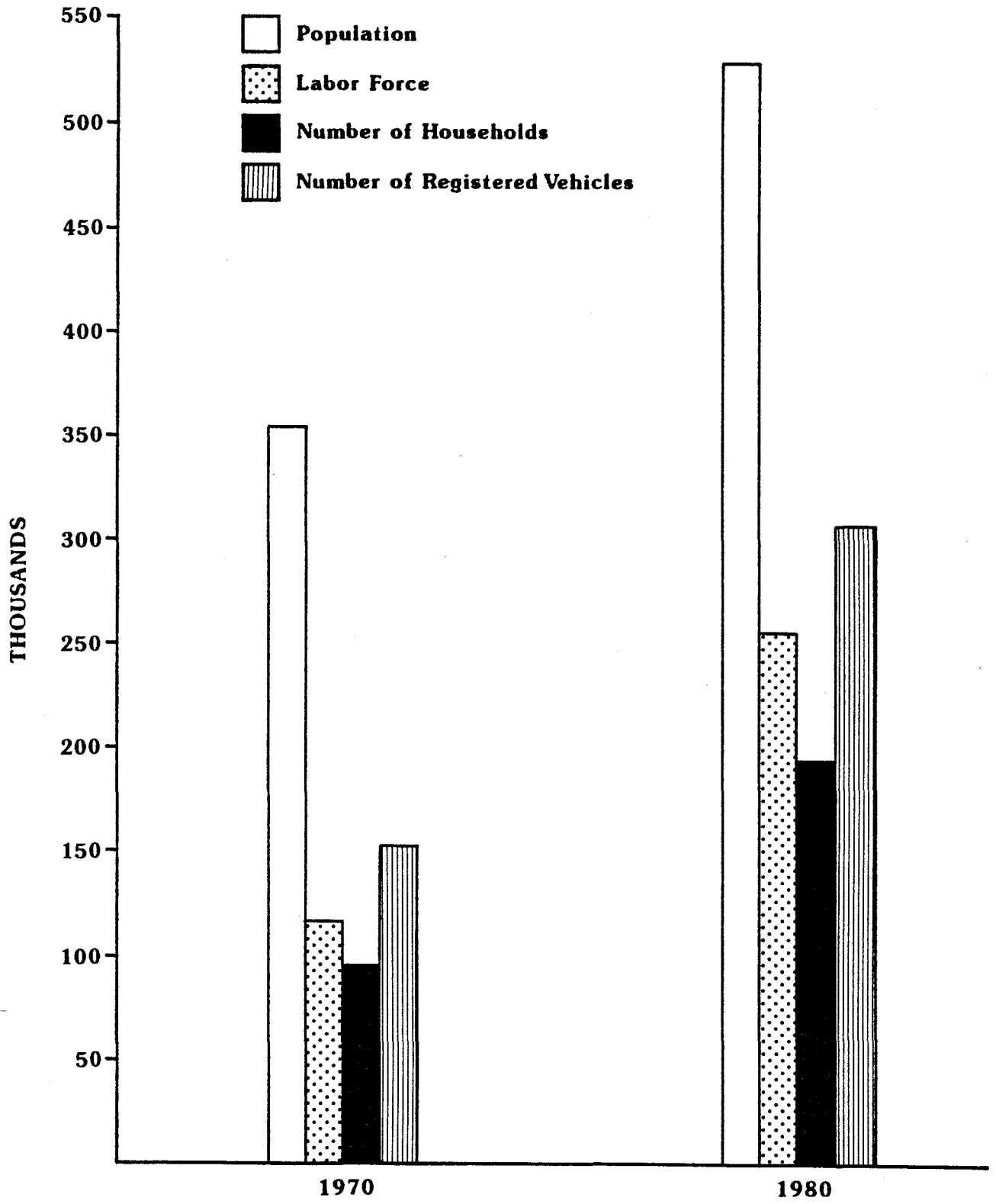
ABILENE



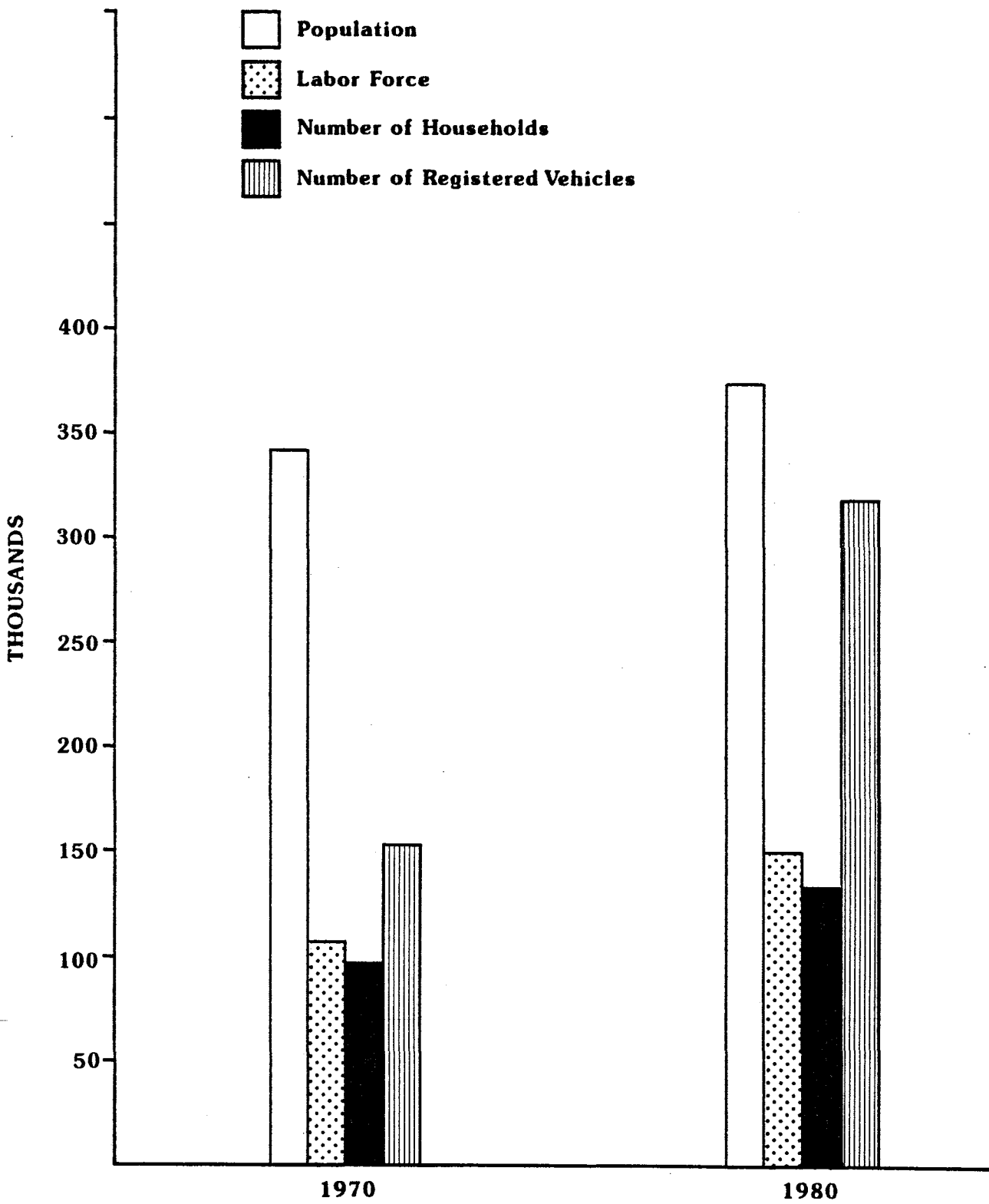
AMARILLO



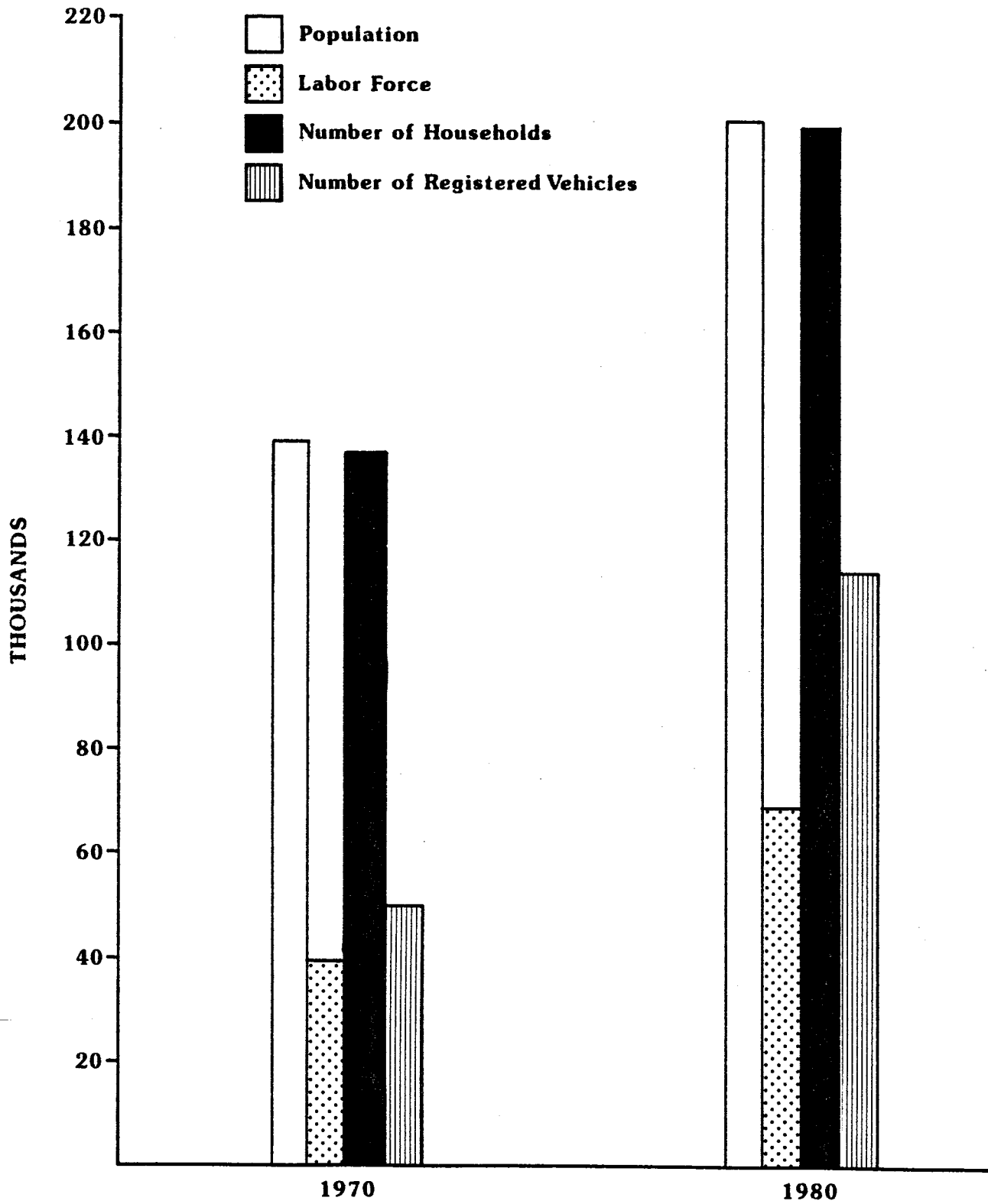
AUSTIN



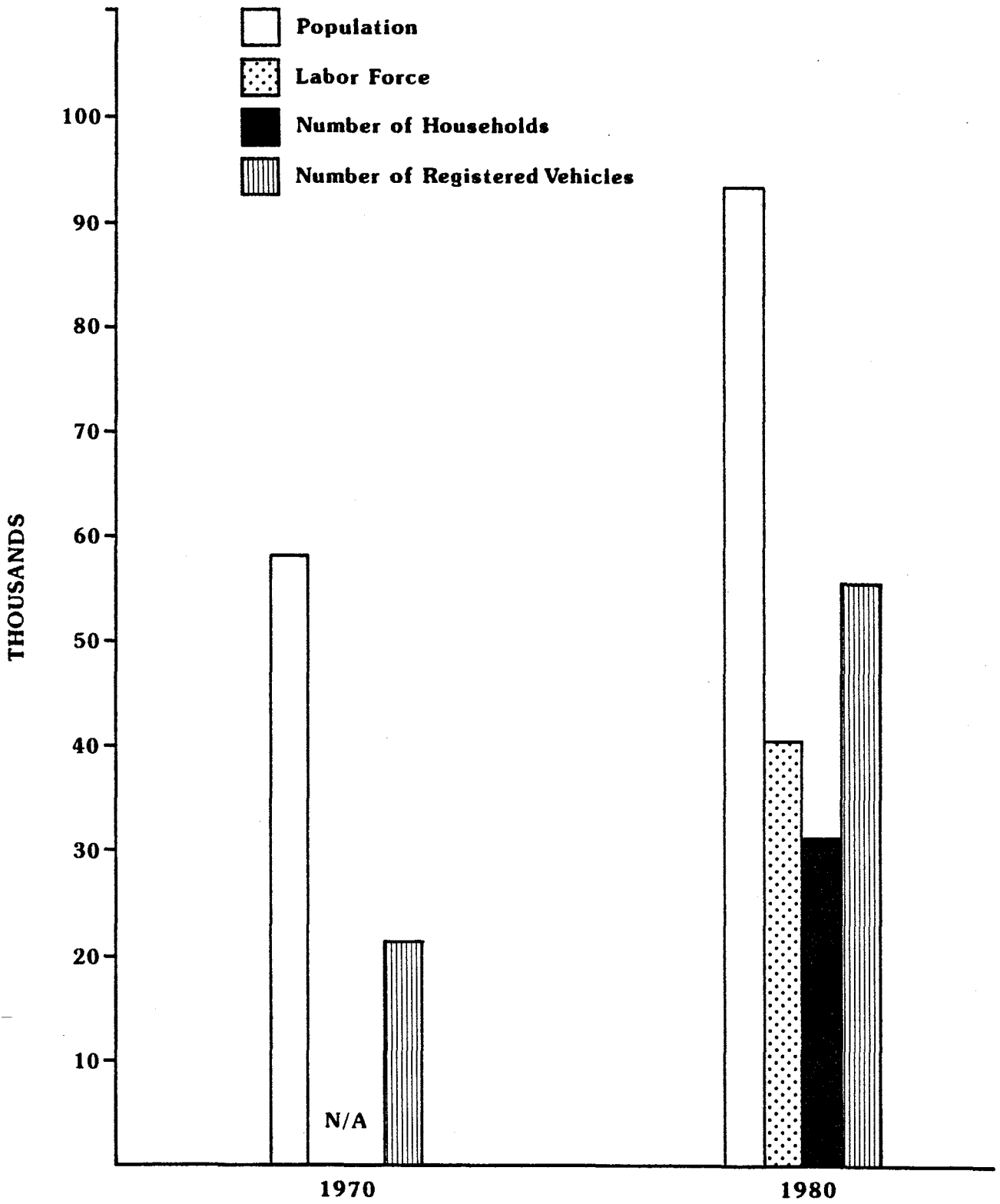
BEAUMONT - PORT ARTHUR - ORANGE



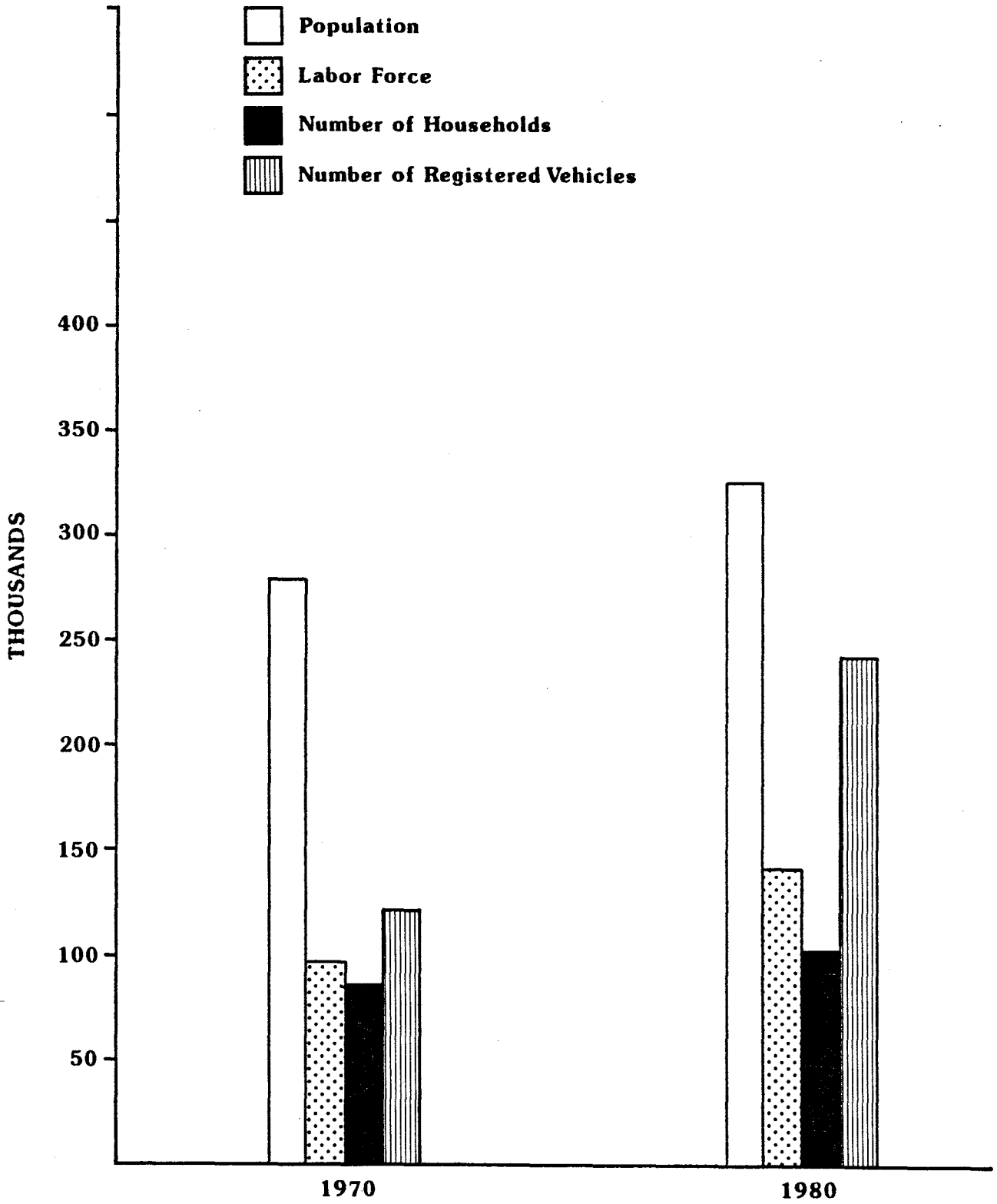
BROWNSVILLE - HARLINGEN - SAN BENITO



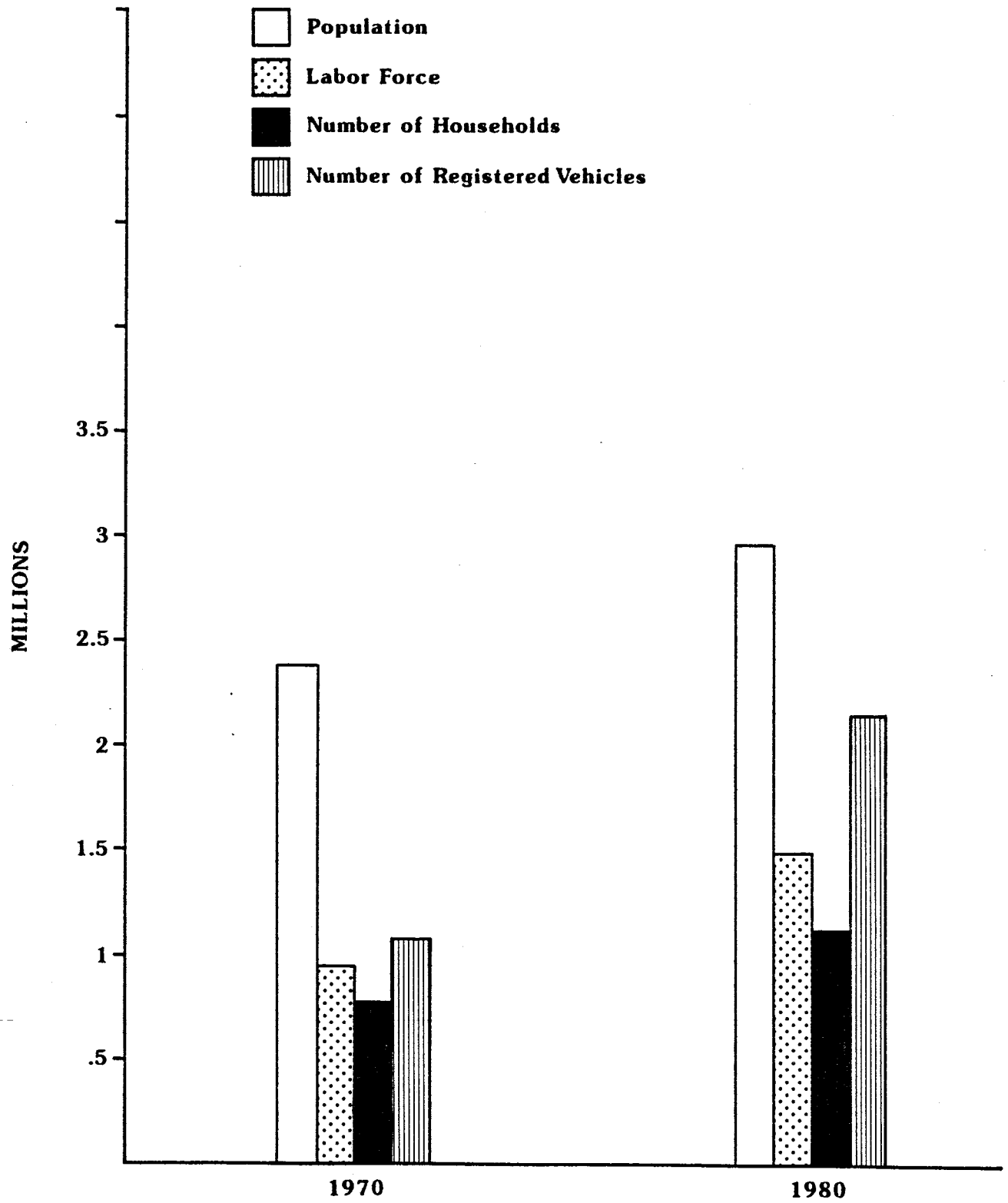
BRYAN - COLLEGE STATION



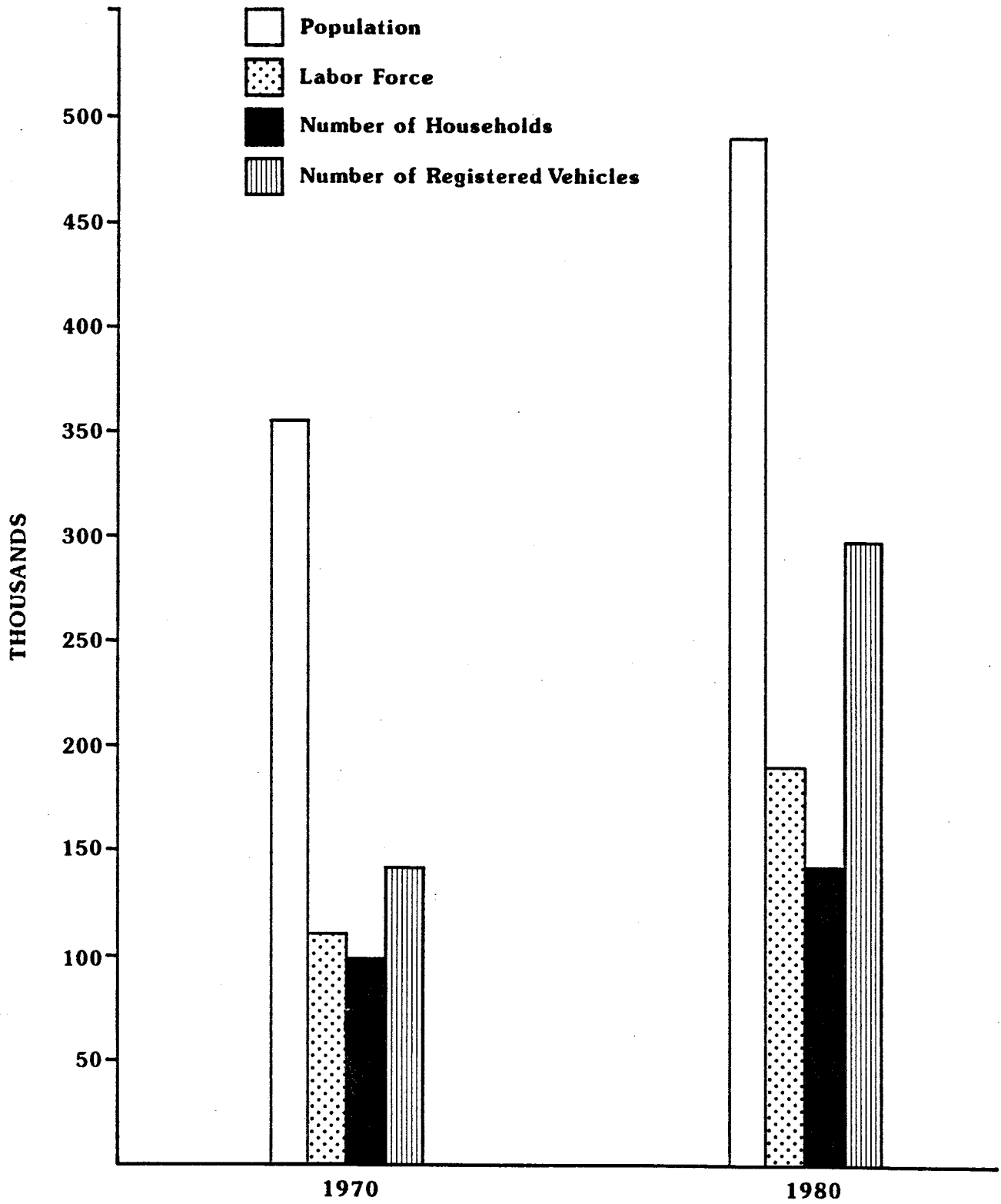
CORPUS CHRISTI



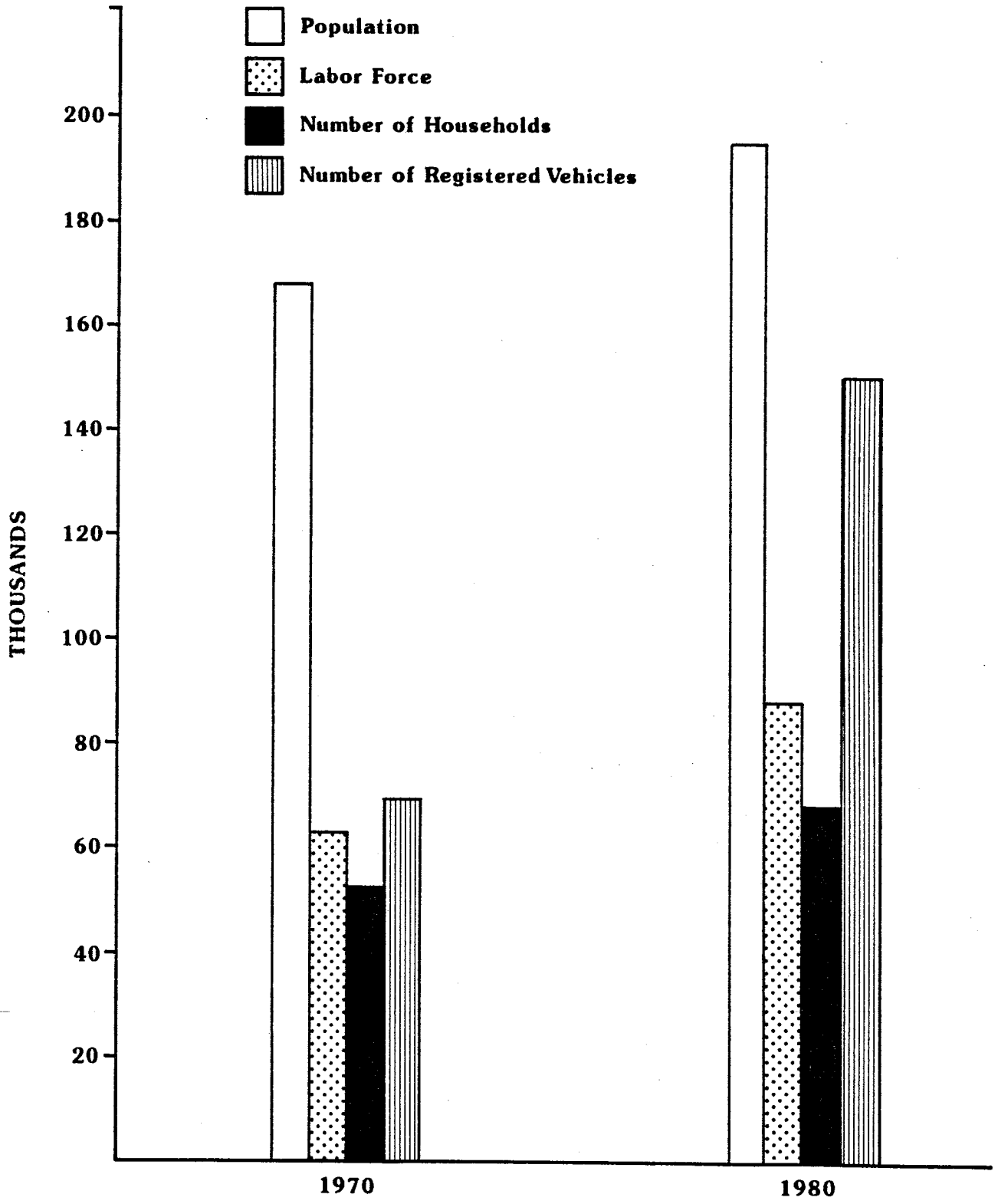
DALLAS - FORT WORTH



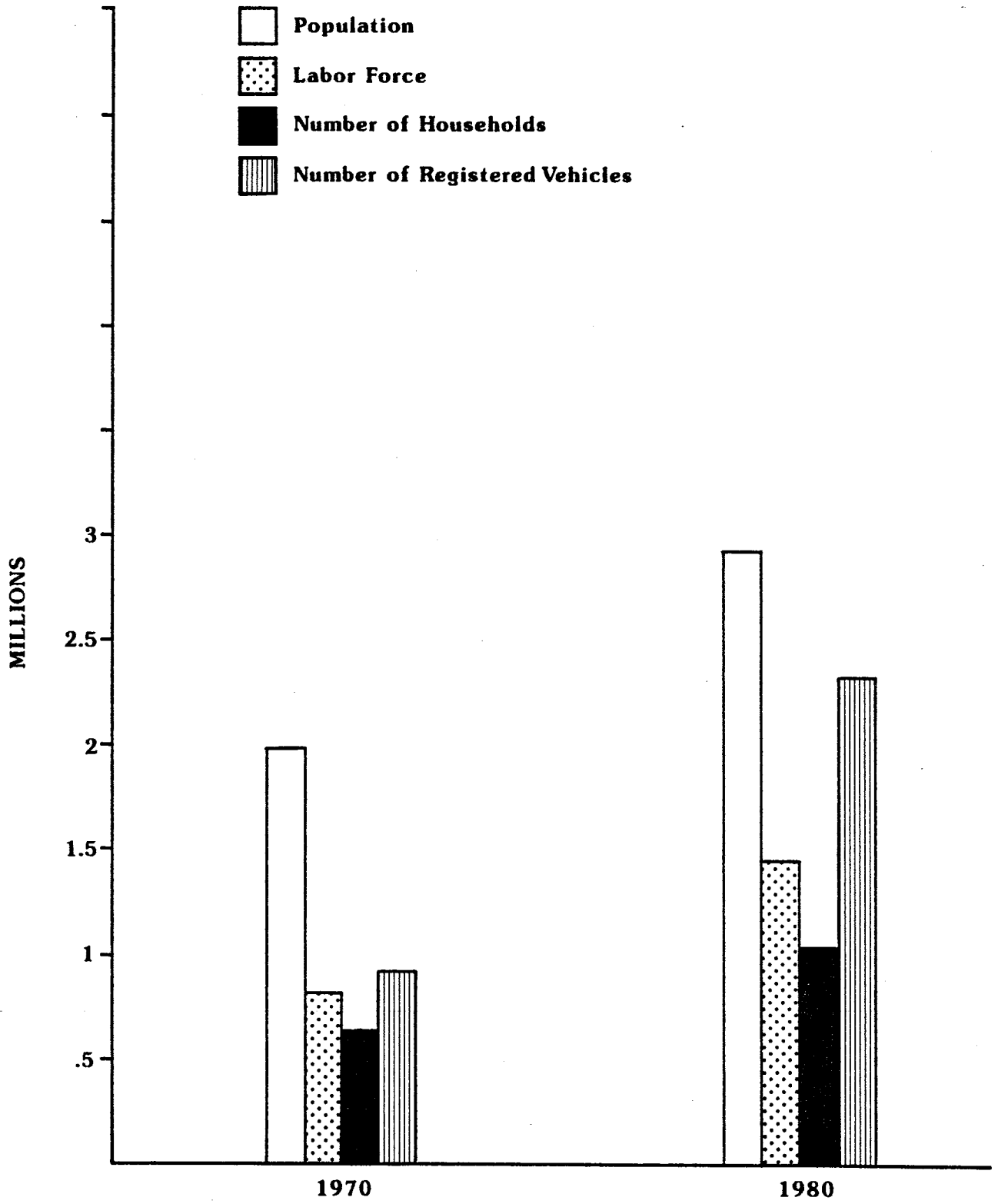
EL PASO



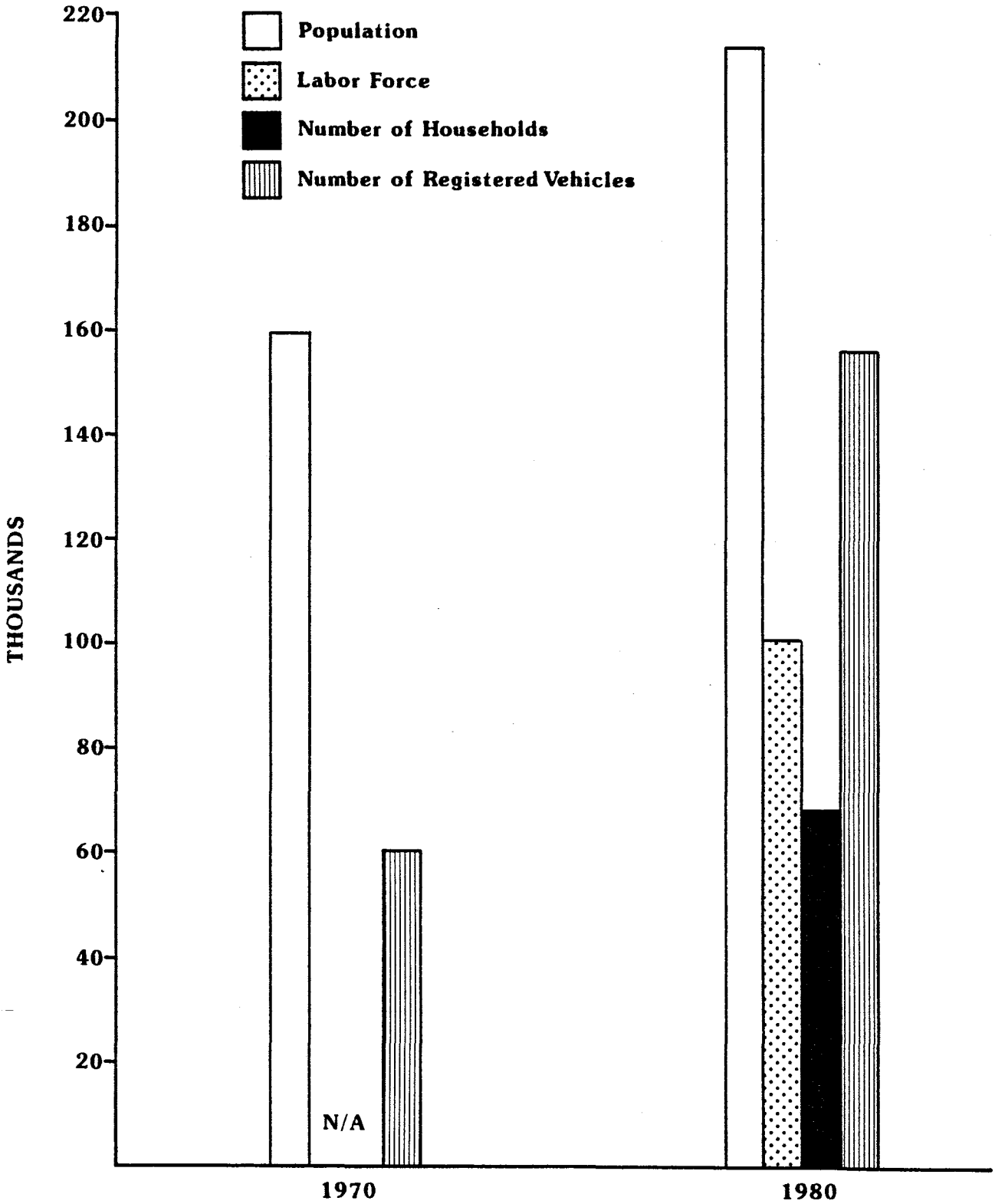
GALVESTON - TEXAS CITY



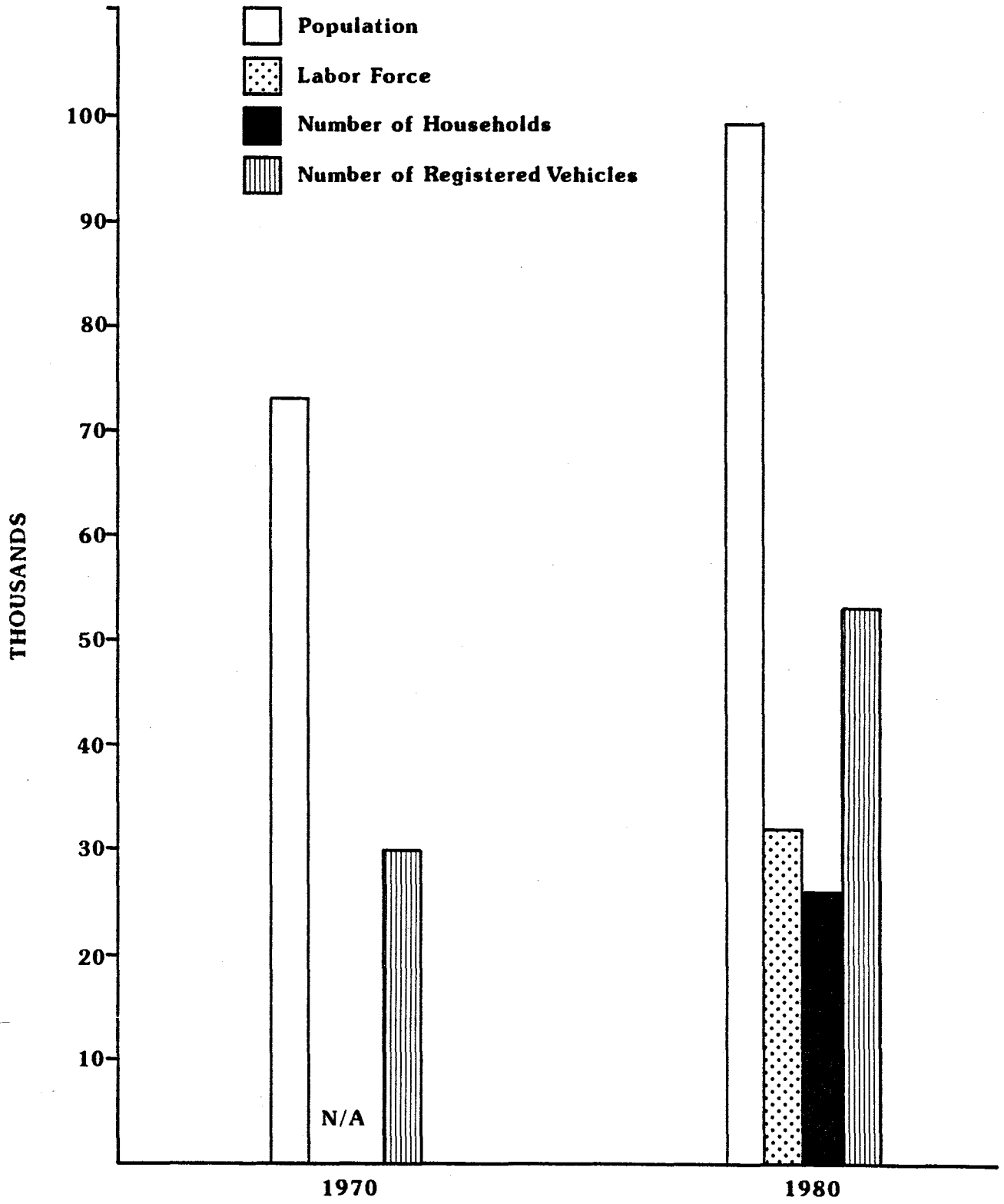
HOUSTON



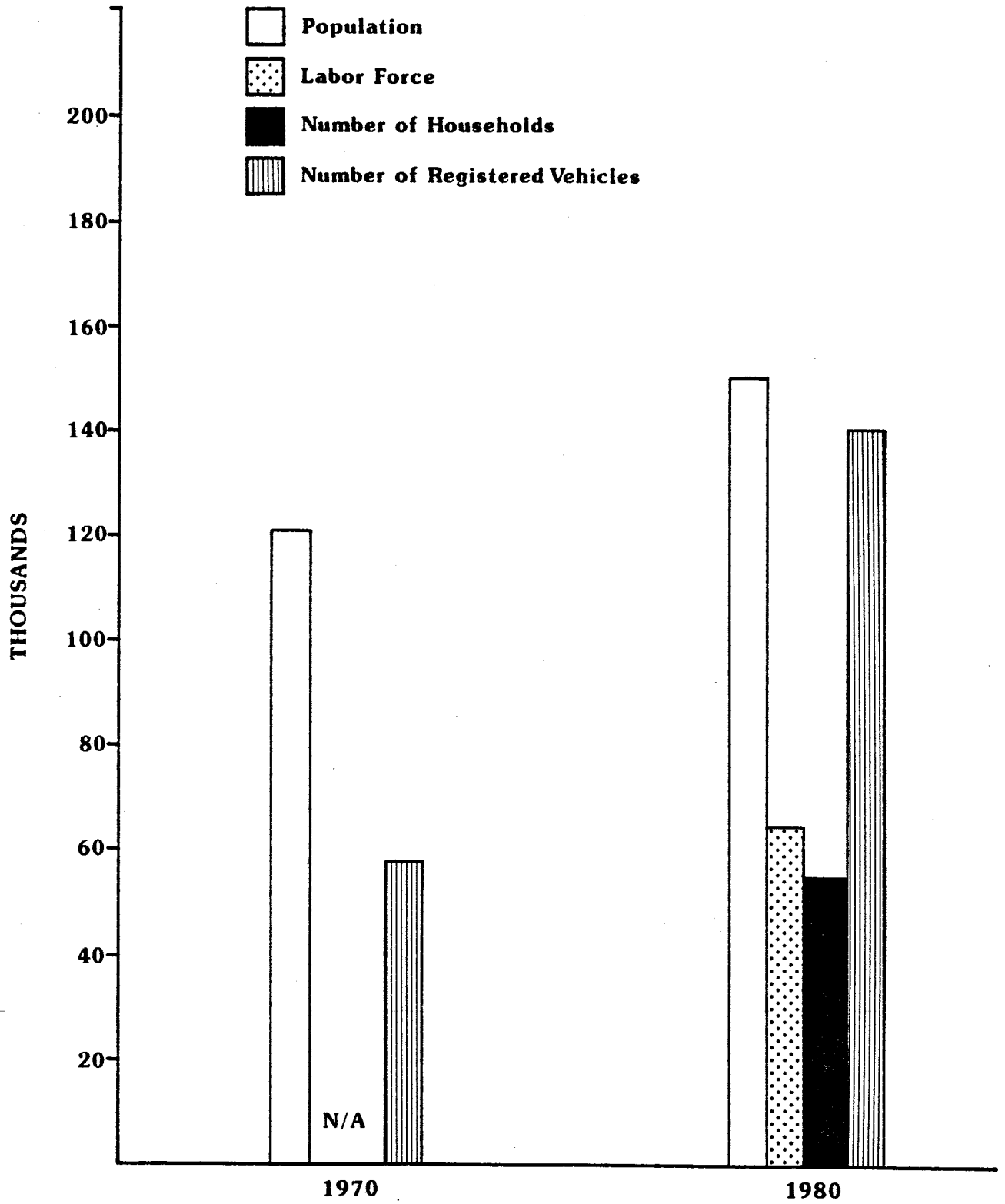
KILLEEN - TEMPLE



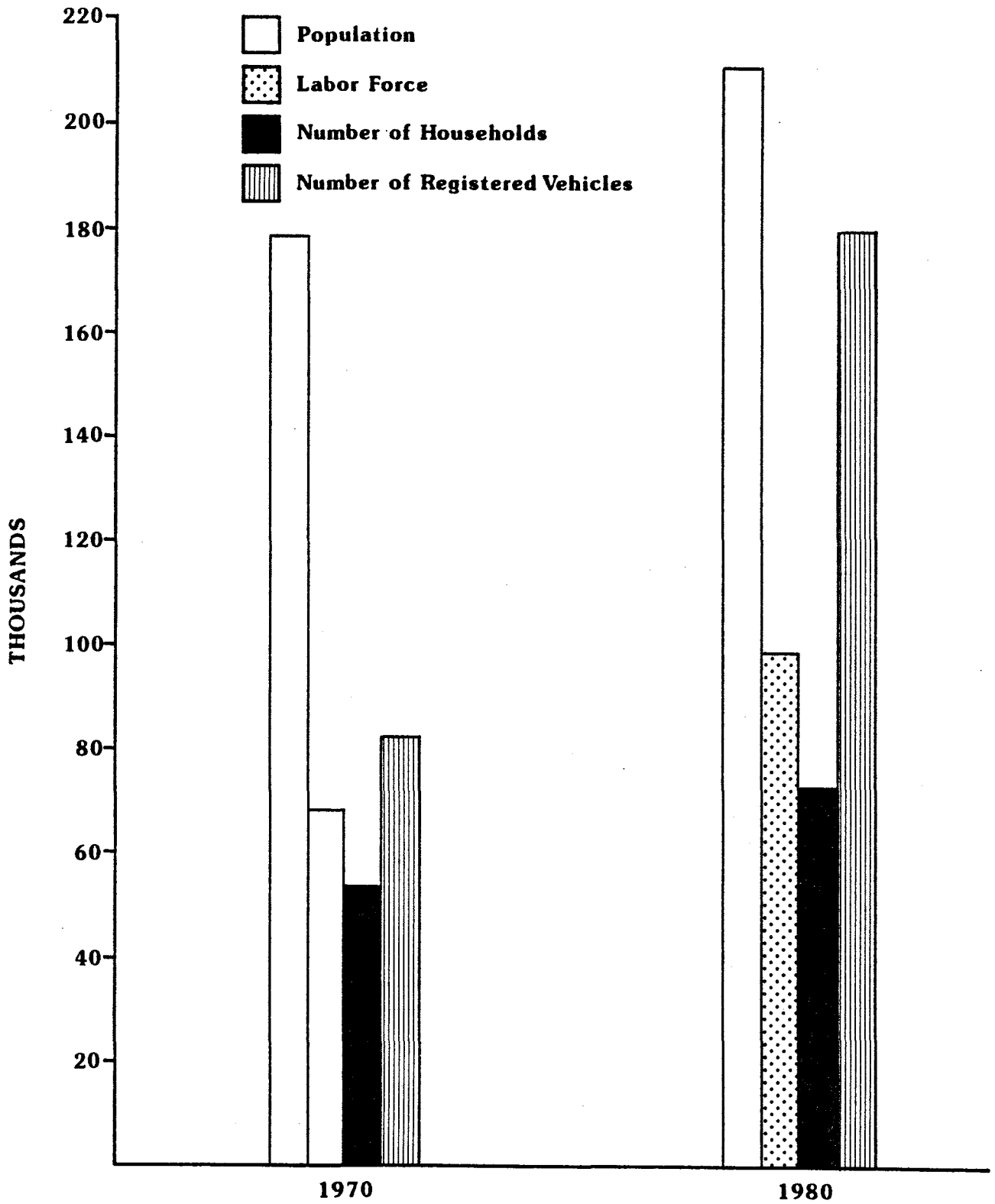
LAREDO



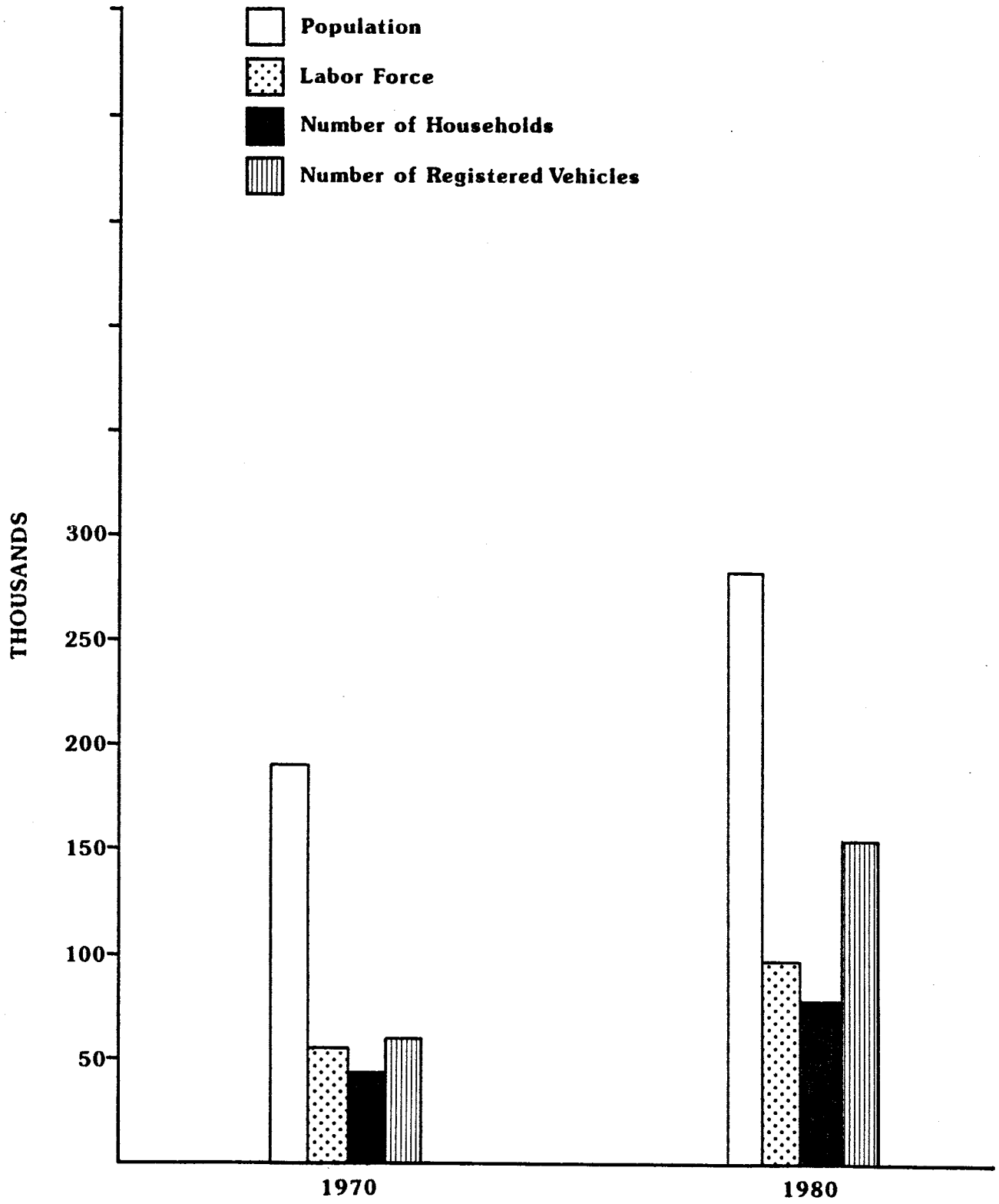
LONGVIEW - MARSHALL



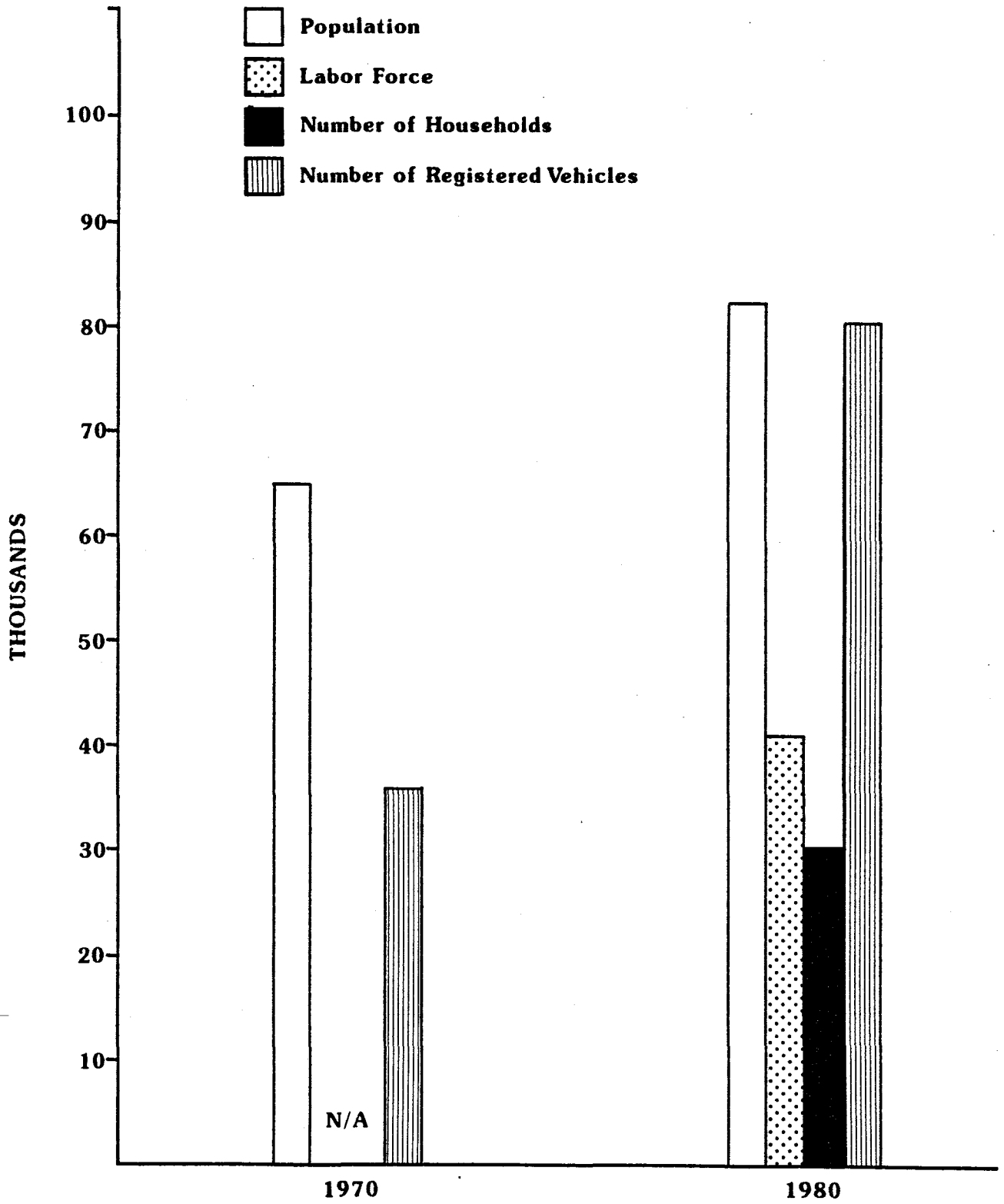
LUBBOCK



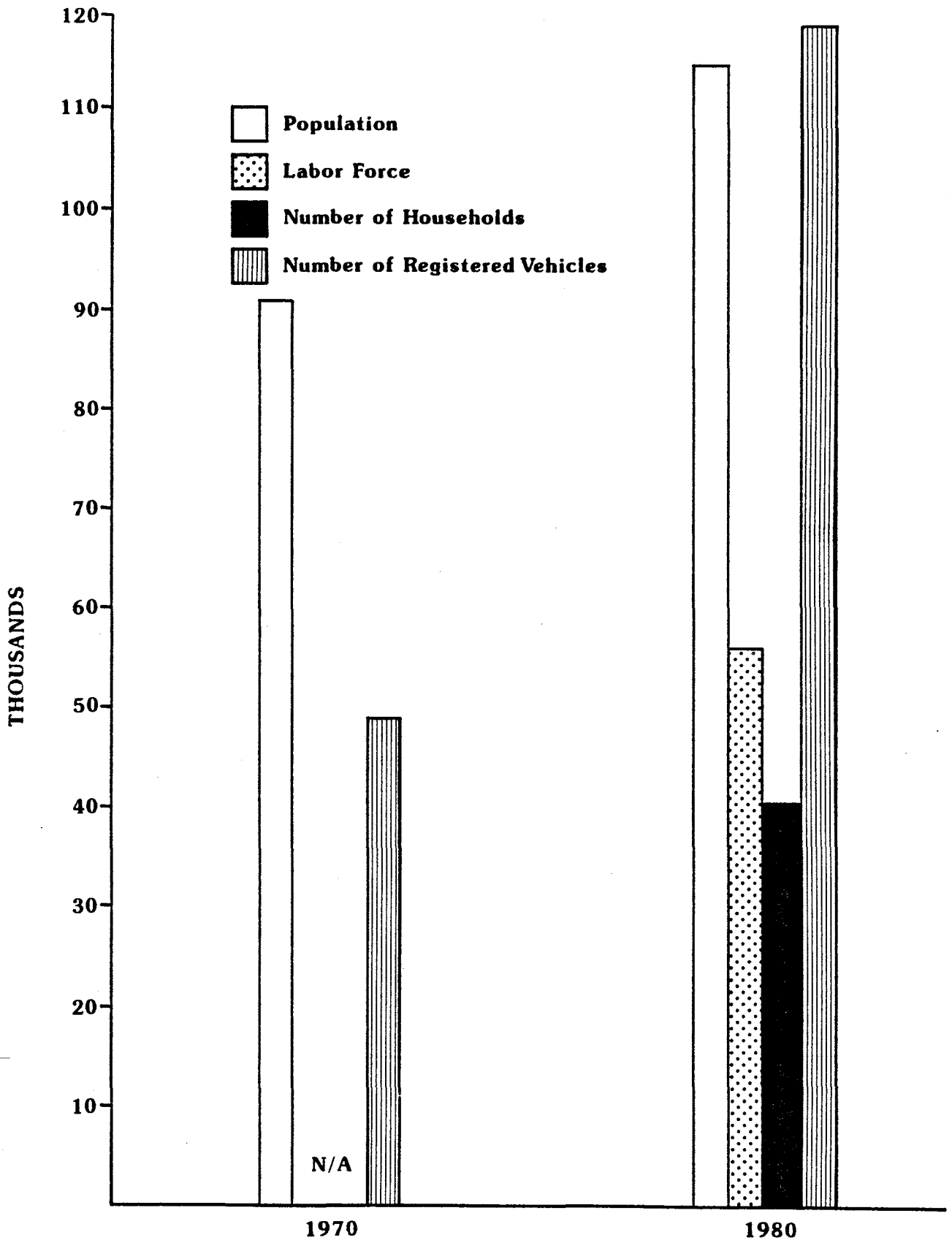
MCALLEN - PHARR - EDINBURG



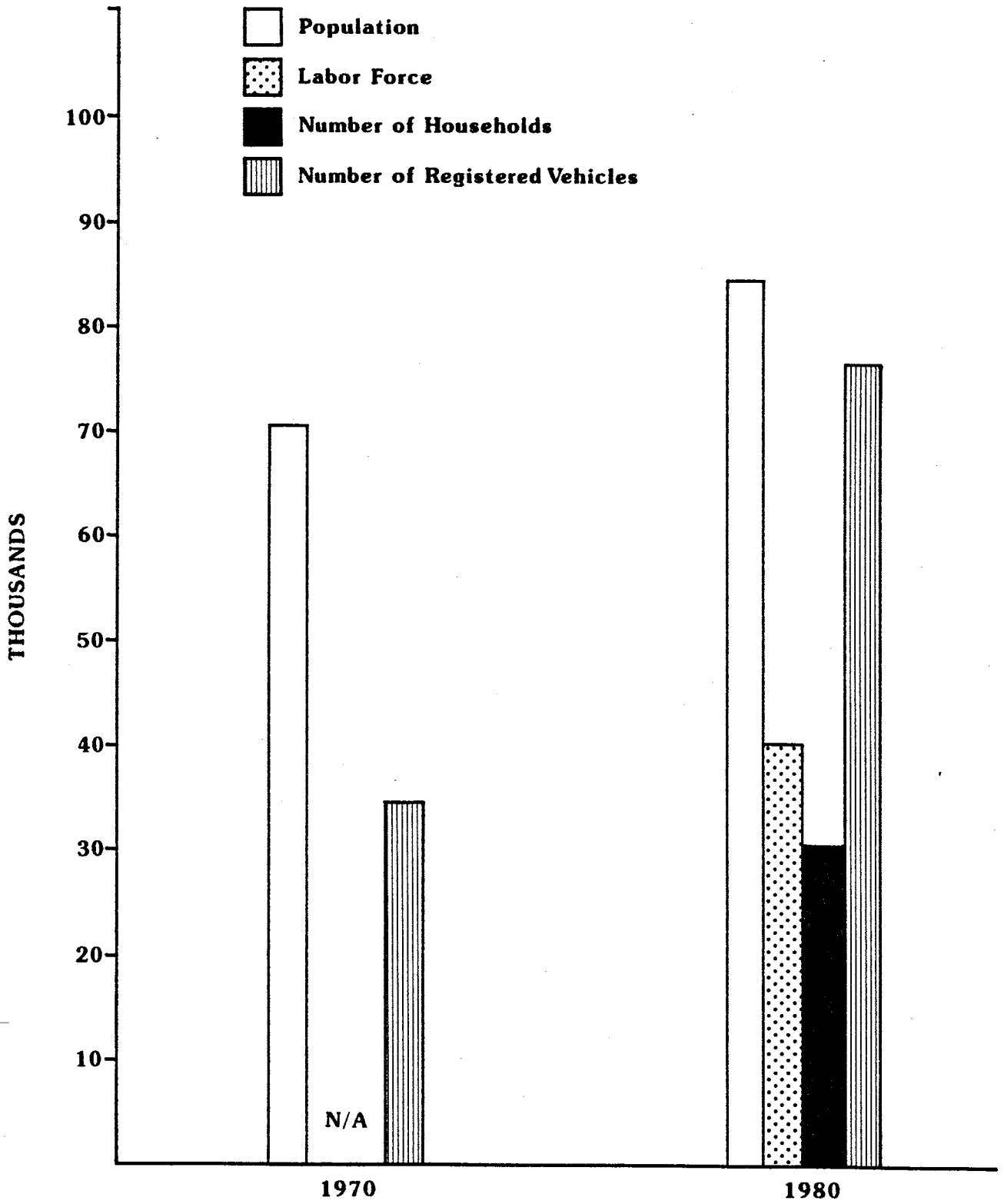
MIDLAND



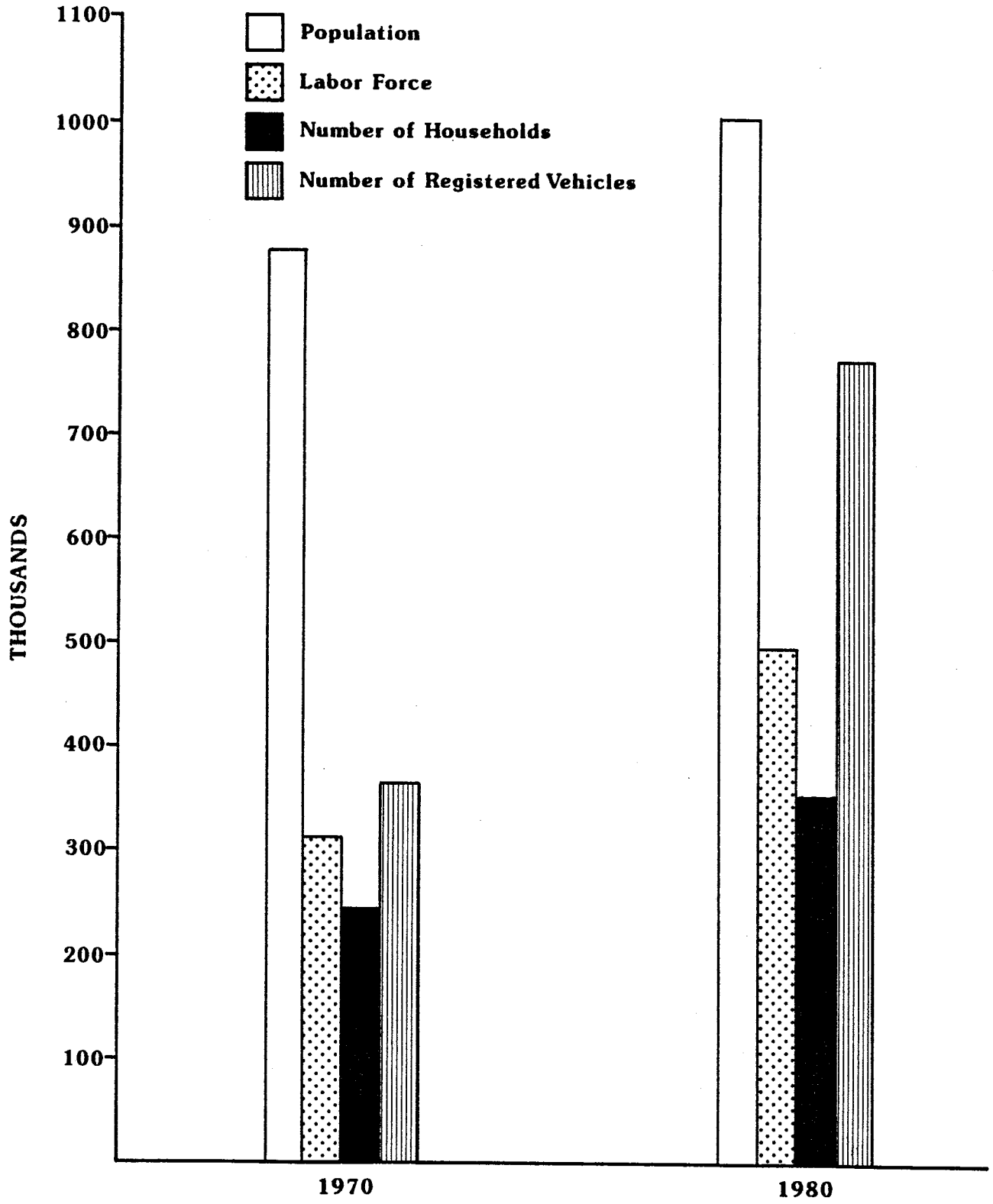
ODESSA



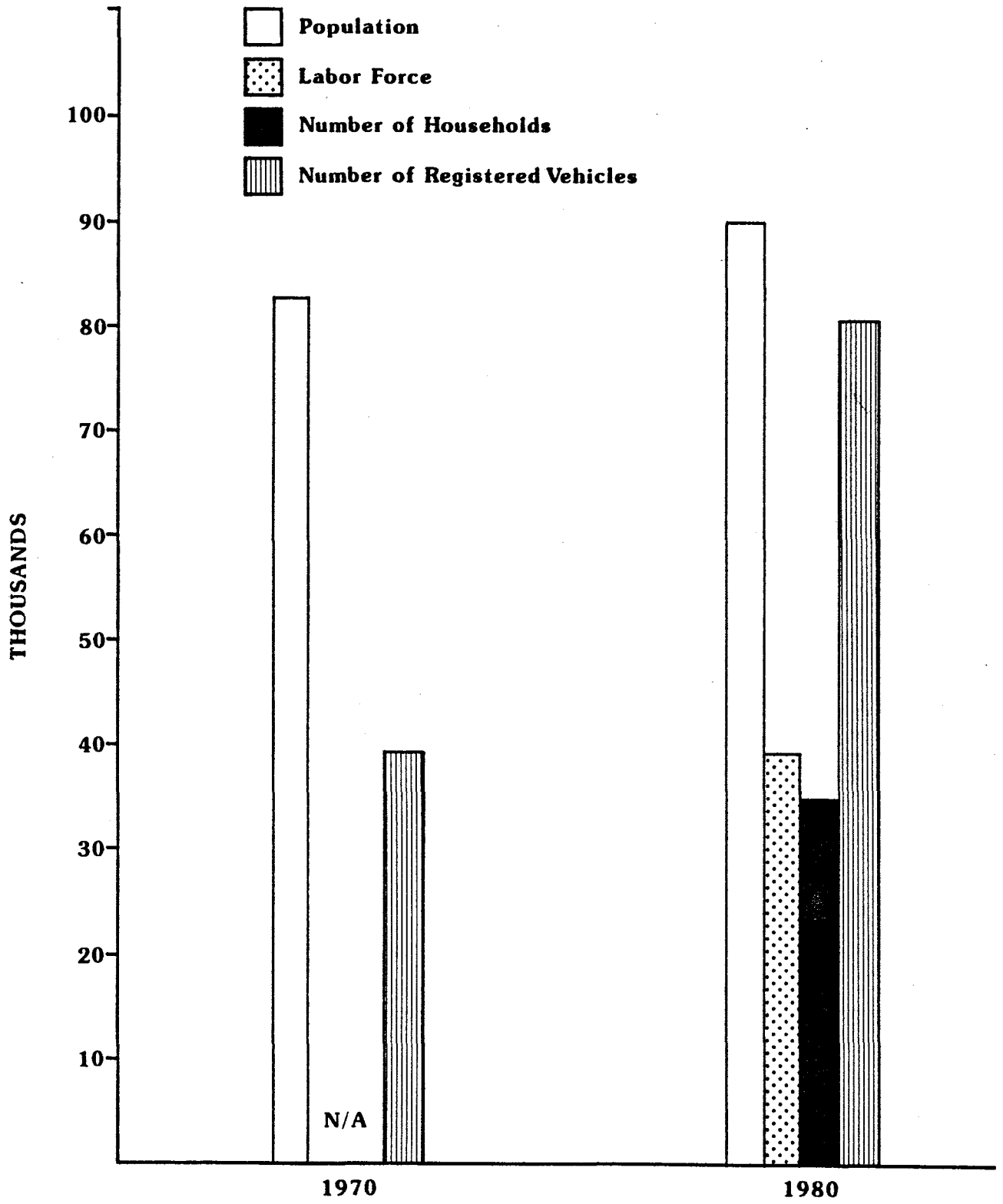
SAN ANGELO



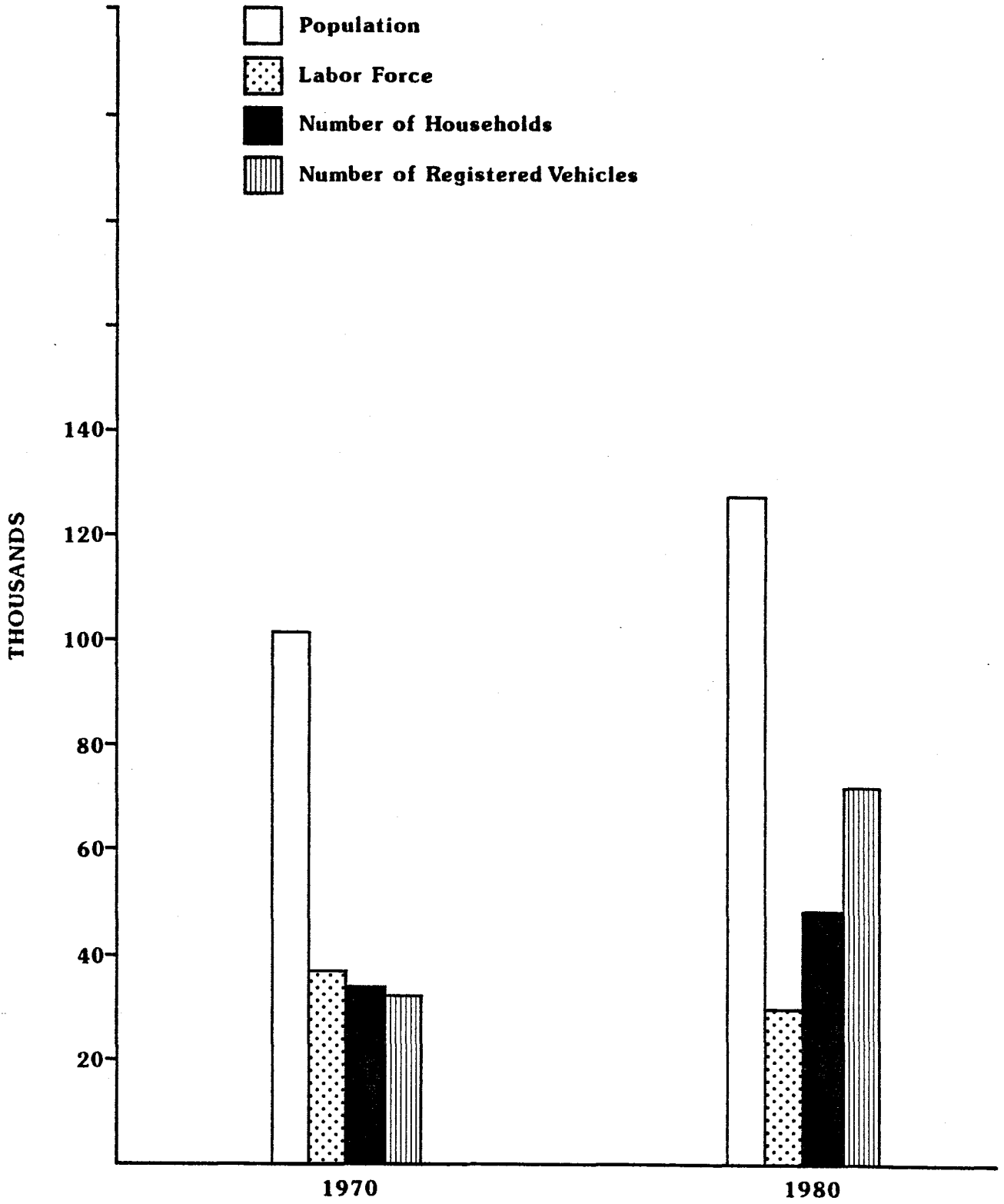
SAN ANTONIO



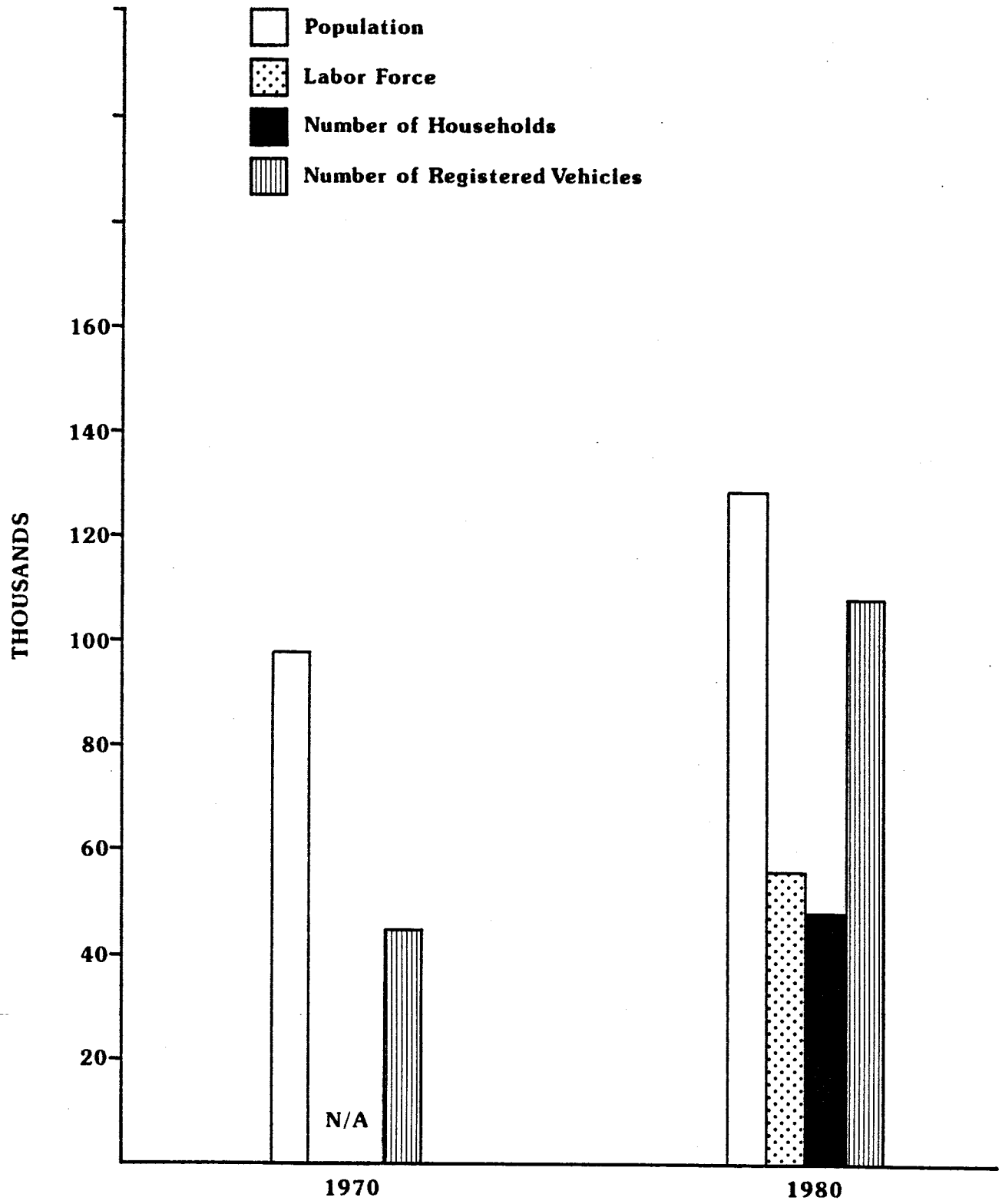
SHERMAN - DENISON



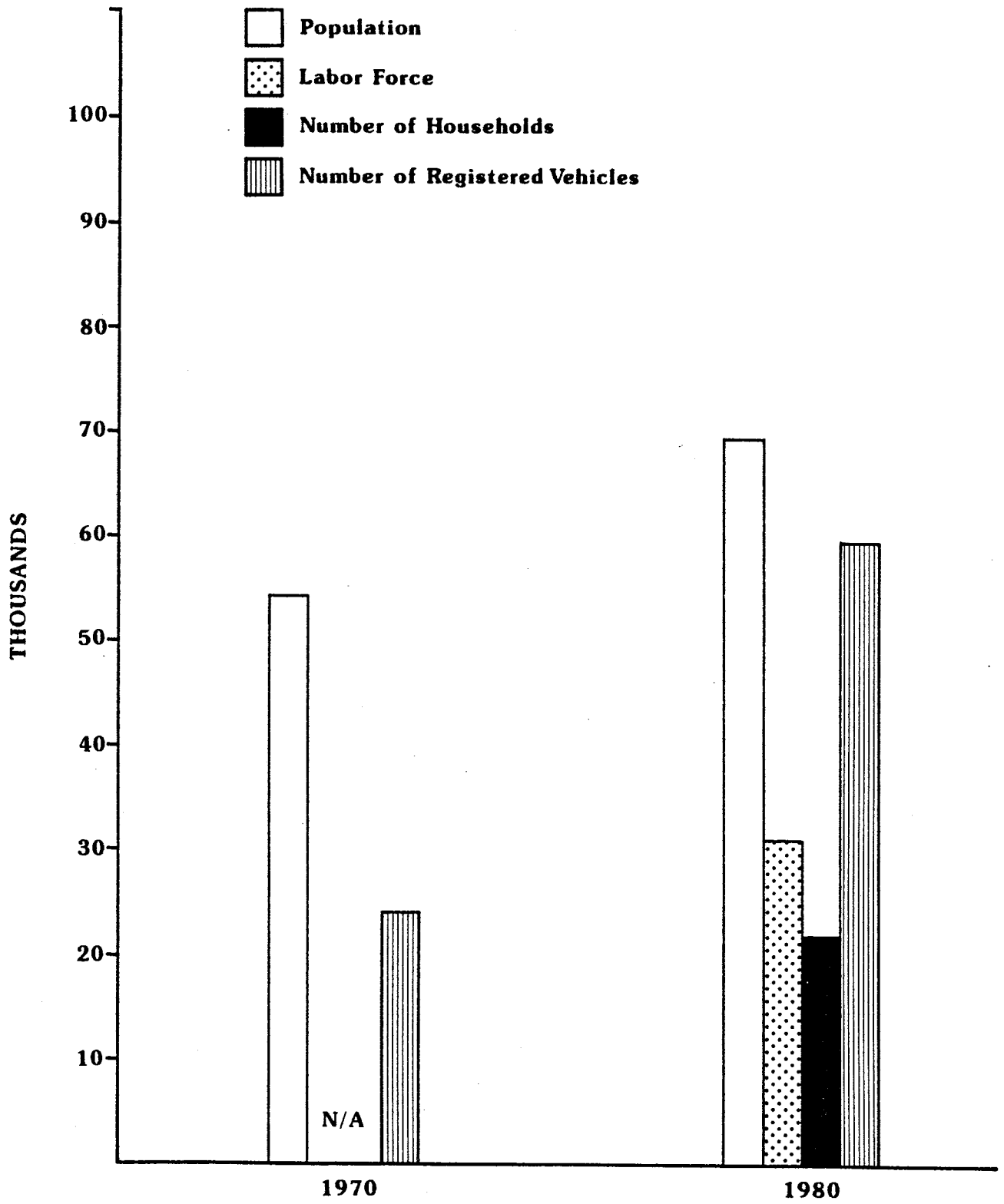
TEXARKANA



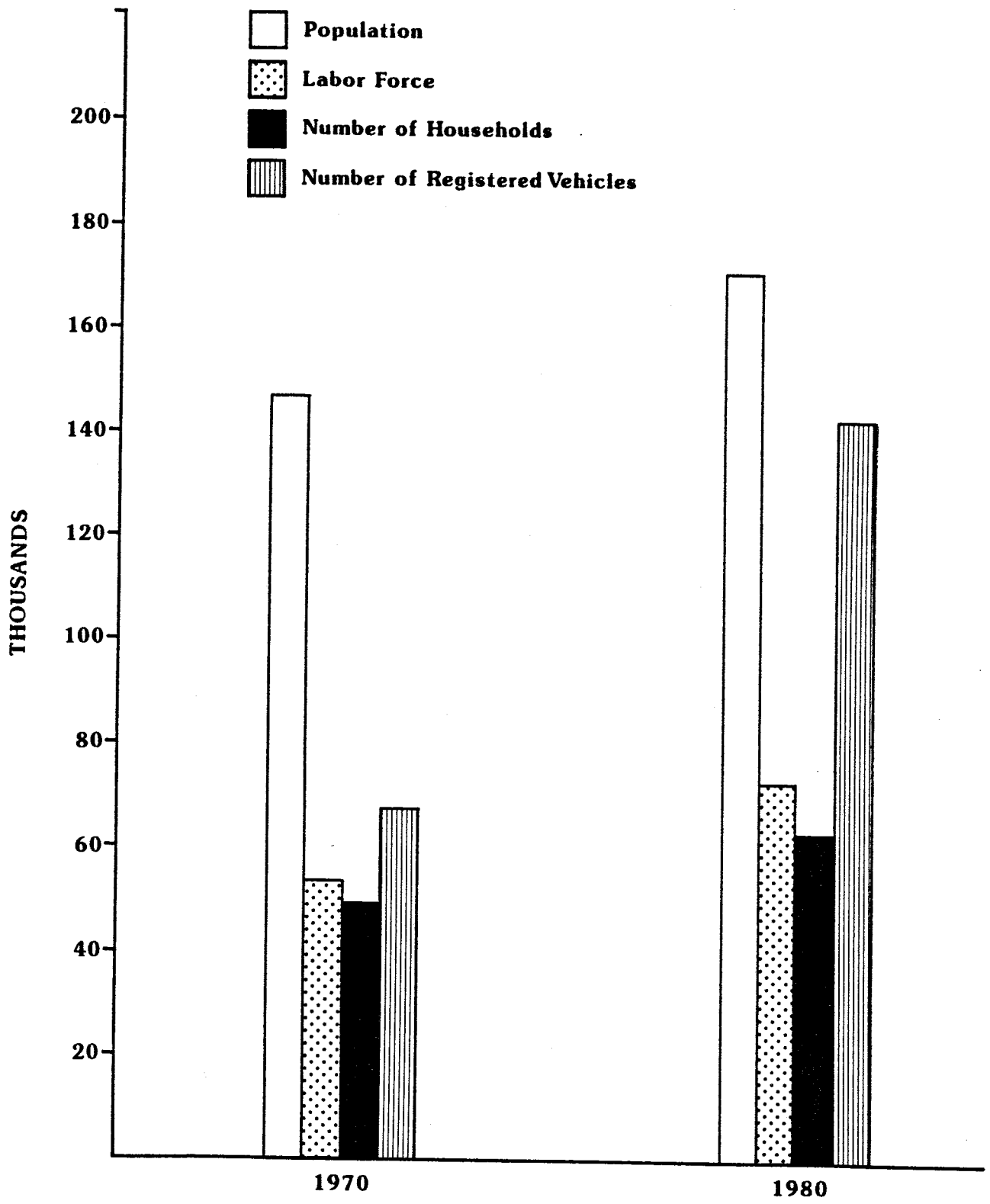
TYLER



VICTORIA



WACO



WICHITA FALLS

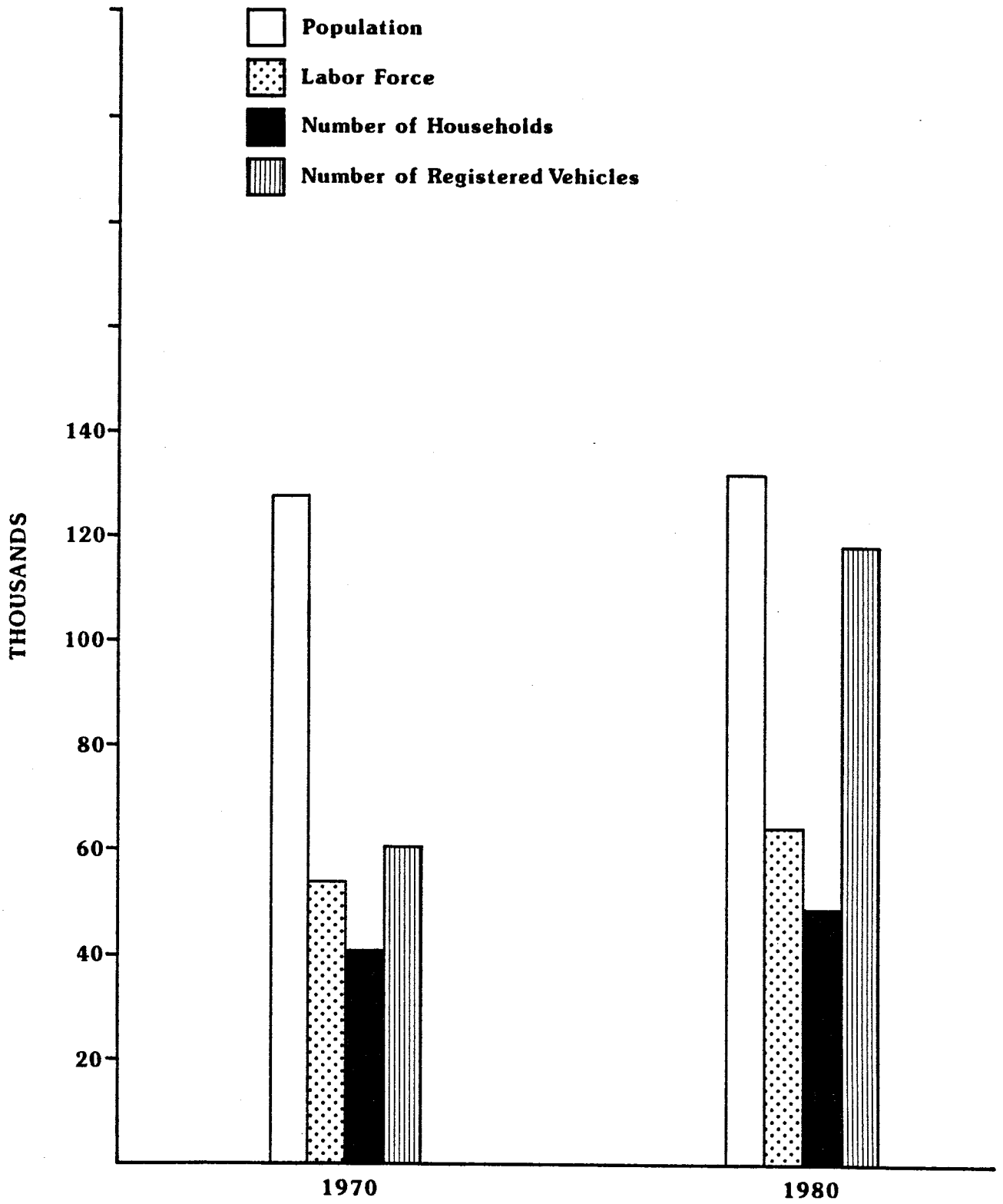


Table A-11. Worker Responses Census by Residence Location, 1980

Metropolitan Area	Total Workers (Thousands)	No Workplace Reported (Thousands)	Available for Flows Analysis (Thousands)
Abilene			
Inside Metropolitan Areas	63	6	57
In Central Cities	46	5	41
In Suburbs	17	1	16
Amarillo			
Inside Metropolitan Areas	82	7	75
In Central Cities	70	6	64
In Suburbs	12	1	11
Austin			
Inside Metropolitan Areas	260	21	239
In Central Cities	174	14	160
In Suburbs	86	7	79
Beaumont-Port Arthur-Orange			
Inside Metropolitan Areas	150	15	135
In Central Cities	80	8	72
In Suburbs	70	7	63
Brownsville-Harlingen-San Benito			
Inside Metropolitan Areas	69	10	59
In Central Cities	49	7	42
In Suburbs	20	3	17
Bryan-College Station			
Inside Metropolitan Areas	39	3	36
In Central Cities	36	3	33
In Suburbs	3	0	3
Corpus Christi			
Inside Metropolitan Areas	137	17	120
In Central Cities	102	13	89
In Suburbs	35	4	31
Dallas-Ft. Worth			
Inside Metropolitan Areas	1,469	133	1,336
In Central Cities	635	63	572
In Suburbs	835	71	764
El Paso			
Inside Metropolitan Areas	182	13	169
In Central Cities	160	11	149
In Suburbs	22	2	20
Galveston-Texas City			
Inside Metropolitan Areas	89	11	78
In Central Cities	47	6	41
In Suburbs	42	5	37

Table A-11. Worker Responses Census by Residence Location, 1980 (cont'd.)

Metropolitan Area	Total Workers (Thousands)	No Workplace Reported (Thousands)	Available for Flows Analysis (Thousands)
Houston			
Inside Metropolitan Areas	1,419	173	1,246
In Central Cities	810	107	703
In Suburbs	609	66	543
Killeen-Temple			
Inside Metropolitan Areas	103	10	93
In Central Cities	40	4	36
In Suburbs	63	6	57
Laredo			
Inside Metropolitan Areas	32	3	29
In Central Cities	30	3	27
In Suburbs	2	0	2
Longview-Marshall			
Inside Metropolitan Areas	66	11	55
In Central Cities	40	7	33
In Suburbs	26	4	22
Lubbock			
Inside Metropolitan Areas	99	8	91
In Central Cities	83	6	77
In Suburbs	16	2	14
McAllen-Pharr-Edinburg			
Inside Metropolitan Areas	92	11	81
In Central Cities	40	5	35
In Suburbs	52	6	46
Midland			
Inside Metropolitan Areas	41	4	37
In Central Cities	35	4	31
In Suburbs	6	0	6
Odessa			
Inside Metropolitan Areas	56	7	49
In Central Cities	45	6	39
In Suburbs	11	1	10
San Angelo			
Inside Metropolitan Areas	40	3	37
In Central Cities	35	3	32
In Suburbs	5	0	5
San Antonio			
Inside Metropolitan Areas	449	36	413
In Central Cities	314	23	291
In Suburbs	135	13	122

Table A-11. Worker Responses Census by Residence Location, 1980 (cont'd.)

Metropolitan Area	Total Workers (Thousands)	No Workplace Reported (Thousands)	Available for Flows Analysis (Thousands)
Sherman-Denison			
Inside Metropolitan Areas	39	4	35
In Central Cities	24	2	22
In Suburbs	15	2	13
Texarkana			
Inside Metropolitan Areas	30	5	25
In Central Cities	12	2	10
In Suburbs	18	3	15
Tyler			
Inside Metropolitan Areas	56	5	51
In Central Cities	31	2	29
In Suburbs	25	3	22
Victoria			
Inside Metropolitan Areas	31	3	28
In Central Cities	23	2	21
In Suburbs	8	1	7
Waco			
Inside Metropolitan Areas	72	7	65
In Central Cities	41	4	37
In Suburbs	31	3	28
Wichita Falls			
Inside Metropolitan Areas	63	5	58
In Central Cities	47	4	43
In Suburbs	16	1	15

APPENDIX B

COMMUTER FLOWS AND PATTERNS

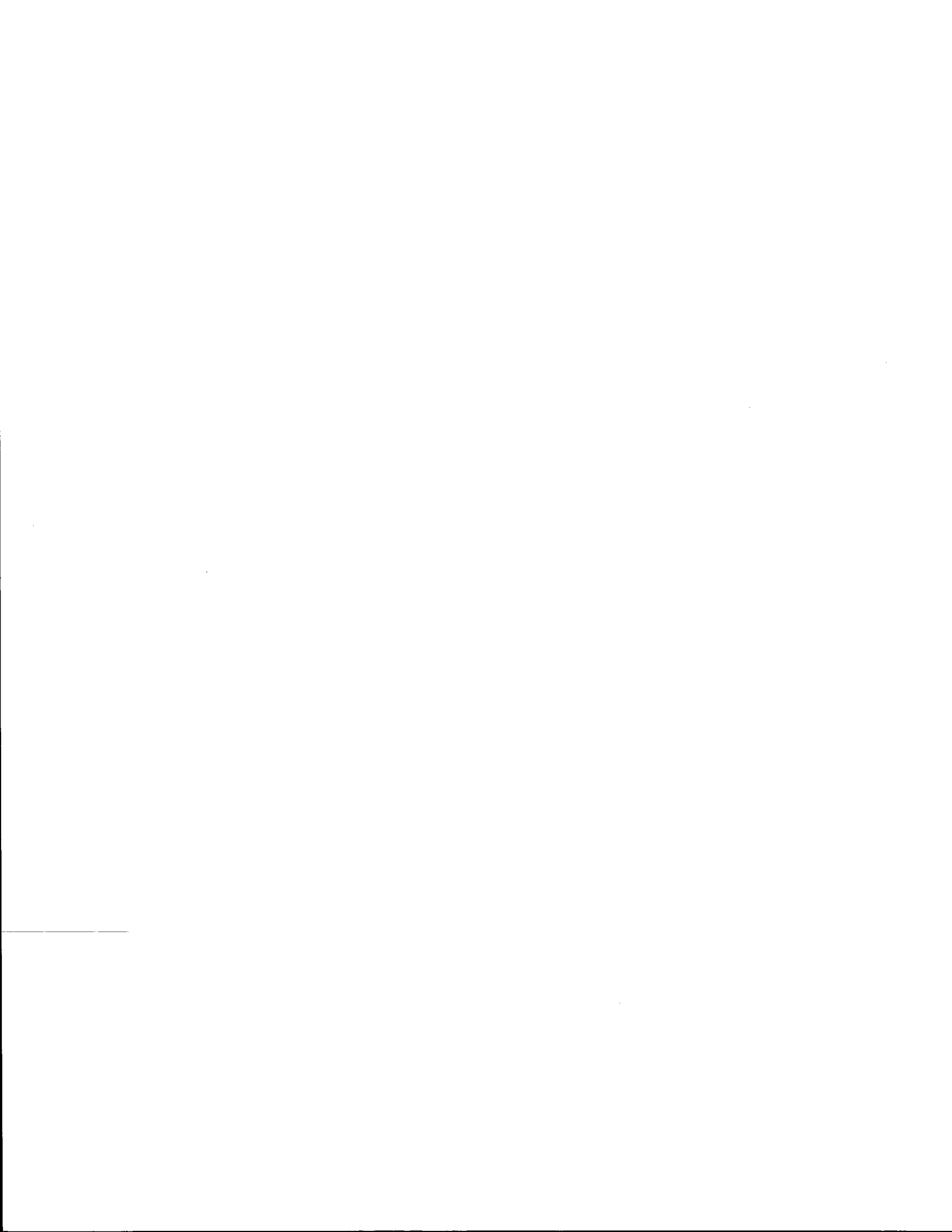


Table B-1. Commuting Flows by Metropolitan Area, 1980

Classification	Total Workers (1000s)	Central City to Central City (1000s)	Central City to Suburbs (1000s)	Central City to Out (1000s)	Suburbs to Central City (1000s)	Suburbs to Suburbs (1000s)	Suburbs to Out (1000s)
U.S. Metropolitan	68,000	20,900	4,200	1,200	12,700	25,300	3,700
Texas Metropolitan	5,230	2,378	282	65	909	977	83
Small Texas MSAs	801	424	49	27	107	76	32
Medium Texas MSAs	1,092	586	53	20	140	168	18
Large Texas MSAs	3,337	1,368	180	19	663	733	33
<u>Metropolitan Area</u>							
Abilene	63	38	2	1	6	8	1
Amarillo	82	55	5	4	5	5	5
Austin	260	149	6	2	43	33	4
Beaumont-Port Arthur- Orange	149	59	10	2	30	28	4
Brownsville-Harlingen- San Benito	69	37	4	2	9	7	1
Bryan-College Station	39	28	1	2	5	1	1
Corpus Christi	137	80	6	2	10	19	2
Dallas-Ft. Worth	1,469	473	92	6	324	426	14
El Paso	182	140	4	5	16	3	1
Galveston-Texas City	89	34	3	3	11	10	16
Houston	1,419	628	66	8	267	262	14
Killeen-Temple	103	22	13	1	11	44	3
Laredo	32	23	2	1	2	1	0
Longview-Marshall	66	26	4	2	10	10	3
Lubbock	99	69	5	3	8	5	1
McAllen-Pharr-Edinburg	92	28	5	1	14	29	3
Midland	41	27	2	2	4	1	1
Odessa	56	29	6	4	5	4	1
San Angelo	40	29	2	1	3	1	0
San Antonio	449	266	21	4	72	45	5
Sherman-Denison	39	20	1	1	7	4	2
Texarkana	30	9	1	0	10	4	1
Tyler	56	22	5	3	12	8	2
Victoria	31	16	2	3	3	2	1
Waco	72	33	3	1	18	8	2
Wichita Falls	63	32	10	1	6	8	1

Table B-2. Percent Change in Commuting Flows by Metropolitan Area 1960-1980.

Classification	Total Workers	Central City to Central City	Central City to Suburbs	Central City to Out	Workers Living in Central City	Suburbs to Central City	Suburbs to Suburbs	Suburbs to Out	Workers Living in Suburbs
Texas Metropolitan	151	80	156	80	98	405	208	206	302
Small Texas MSAs	203	134	281	369	171	428	131	774	315
Medium Texas MSAs	134	92	56	76	100	529	129	410	255
Large Texas MSAs	147	64	184	-4	81	381	248	66	312
<u>Metropolitan Area</u>									
Abilene	38	29	-28	0	33	230	7	24	56
Amarillo	33	8	74	80	22	443	57	252	176
Austin	228	140	144	82	148	909	691	1065	853
Beaumont-Port Arthur-Orange	43	25	-28	80	22	300	-3	350	79
Brownsville-Harlingen-San Benito	51	36	-7	142	53	162	-26	180	47
Bryan-College Station	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Corpus Christi	91	83	-7	-6	82	201	67	186	120
Dallas-Ft. Worth	126	29	367	-42	51	310	241	-13	265
El Paso	66	71	-15	53	73	551	-75	-12	30
Galveston-Texas City	78	9	119	304	29	72	93	840	205
Houston	207	99	357	33	127	491	402	392	480
Killeen-Temple	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Laredo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Longview-Marshall	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lubbock	75	63	87	74	73	428	-21	130	84
McAllen-Pharr-Edinburg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Midland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Odessa	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
San Angelo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
San Antonio	85	73	-29	51	62	430	33	455	176
Sherman-Denison	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Texarkana	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tyler	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Victoria	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waco	30	9	-33	23	14	131	-19	170	61
Wichita Falls	23	-15	471	-11	13	106	24	150	67

N/A = Not available. City did not become MSA until after 1960.

Table B-3. Basic Commuter Flow, 1980

Metropolitan Area	Total Workers (Thousands)
Abilene	
Total Workers Living in Central City	46.5
Commuting:	
Within Central City	38.3
To Suburbs	2.2
Total Workers Living in Suburbs	16.8
Commuting:	
To Central City	6.3
Within Suburbs	8.4
Amarillo	
Total Workers Living in Central City	70.7
Commuting:	
Within Central City	55.4
To Suburbs	5.1
Total Workers Living in Suburbs	11.8
Commuting:	
To Central City	5.4
Within Suburbs	4.6
Austin	
Total Workers Living in Central City	173.8
Commuting:	
Within Central City	149.9
To Suburbs	6.9
Total Workers Living in Suburbs	86.4
Commuting:	
To Central City	43.1
Within Suburbs	32.5
Beaumont-Port Arthur-Orange	
Total Workers Living in Central City	80.4
Commuting:	
Within Central City	59.7
To Suburbs	10.1
Total Workers Living in Suburbs	69.2
Commuting:	
To Central City	30.2
Within Suburbs	28.2
Brownsville-Harlingen-San Benito	
Total Workers Living in Central City	49.8
Commuting:	
Within Central City	37.1
To Suburbs	3.5
Total Workers Living in Suburbs	19.7
Commuting:	
To Central City	8.6
Within Suburbs	6.9

Table B-3. Basic Commuter Flow, 1980 (cont.)

Metropolitan Area	Total Workers (Thousands)
Bryan-College Station	
Total Workers Living in Central City	34.3
Commuting:	
Within Central City	28.4
To Suburbs	1.4
Total Workers Living in Suburbs	6.2
Commuting:	
To Central City	4.5
Within Suburbs	.8
Corpus Christi	
Total Workers Living in Central City	101.5
Commuting:	
Within Central City	80.3
To Suburbs	5.7
Total Workers Living in Suburbs	35.5
Commuting:	
To Central City	9.6
Within Suburbs	19.1
Dallas-Ft. Worth	
Total Workers Living in Central City	634.6
Commuting:	
Within Central City	473.8
To Suburbs	92.5
Total Workers Living in Suburbs	834.5
Commuting:	
To Central City	323.7
Within Suburbs	425.8
El Paso	
Total Workers Living in Central City	160.2
Commuting:	
Within Central City	139.7
To Suburbs	4.0
Total Workers Living in Suburbs	21.3
Commuting:	
To Central City	15.6
Within Suburbs	3.2
Galveston-Texas City	
Total Workers Living in Central City	46.9
Commuting:	
Within Central City	35.0
To Suburbs	2.7
Total Workers Living in Suburbs	42.3
Commuting:	
To Central City	11.0
Within Suburbs	10.3

Table B-3. Basic Commuter Flow, 1980 (cont.)

Metropolitan Area	Total Workers (Thousands)
Houston	
Total Workers Living in Central City	809.7
Commuting:	
Within Central City	627.8
To Suburbs	66.5
Total Workers Living in Suburbs	609.3
Commuting:	
To Central City	266.9
Within Suburbs	262.1
Killeen-Temple	
Total Workers Living in Central City	40.0
Commuting:	
Within Central City	21.8
To Suburbs	12.8
Total Workers Living in Suburbs	63.2
Commuting:	
To Central City	10.8
Within Suburbs	44.0
Laredo	
Total Workers Living in Central City	29.8
Commuting:	
Within Central City	23.4
To Suburbs	2.3
Total Workers Living in Suburbs	2.7
Commuting:	
To Central City	1.6
Within Suburbs	.8
Longview-Marshall	
Total Workers Living in Central City	39.2
Commuting:	
Within Central City	26.2
To Suburbs	4.3
Total Workers Living in Suburbs	26.3
Commuting:	
To Central City	9.6
Within Suburbs	10.2
Lubbock	
Total Workers Living in Central City	82.8
Commuting:	
Within Central City	68.6
To Suburbs	5.0
Total Workers Living in Suburbs	16.2
Commuting:	
To Central City	8.3
Within Suburbs	5.3

Table B-3. Basic Commuter Flow, 1980 (cont.)

Metropolitan Area	Total Workers (Thousands)
McAllen-Pharr-Edinburg	
Total Workers Living in Central City	40.4
Commuting:	
Within Central City	29.0
To Suburbs	5.1
Total Workers Living in Suburbs	52.0
Commuting:	
To Central City	13.7
Within Suburbs	29.0
Midland	
Total Workers Living in Central City	34.9
Commuting:	
Within Central City	27.5
To Suburbs	1.7
Total Workers Living in Suburbs	6.0
Commuting:	
To Central City	3.7
Within Suburbs	1.0
Odessa	
Total Workers Living in Central City	44.6
Commuting:	
Within Central City	28.8
To Suburbs	5.8
Total Workers Living in Suburbs	11.3
Commuting:	
To Central City	5.1
Within Suburbs	3.6
San Angelo	
Total Workers Living in Central City	35.4
Commuting:	
Within Central City	29.3
To Suburbs	2.2
Total Workers Living in Suburbs	5.1
Commuting:	
To Central City	3.0
Within Suburbs	1.4
San Antonio	
Total Workers Living In Central City	314.3
Commuting:	
Within Central City	266.8
To Suburbs	20.6
Total Workers Living in Suburbs	134.8
Commuting:	
To Central City	72.3
Within Suburbs	44.7

Table B-3. Basic Commuter Flow, 1980 (cont.)

Metropolitan Area	Total Workers (Thousands)
Sherman-Denison	
Total Workers Living in Central City	24.2
Commuting:	
Within Central City	19.7
To Suburbs	1.2
Total Workers Living in Suburbs	15.0
Commuting:	
To Central City	6.7
Within Suburbs	4.5
Texarkana	
Total Workers Living in Central City	12.3
Commuting:	
Within Central City	9.0
To Suburbs	.8
Total Workers Living in Suburbs	17.3
Commuting:	
To Central City	10.0
Within Suburbs	3.9
Tyler	
Total Workers Living in Central City	31.7
Commuting:	
Within Central City	22.5
To Suburbs	4.7
Total Workers Living in Suburbs	24.6
Commuting:	
To Central City	12.0
Within Suburbs	7.7
Victoria	
Total Workers Living in Central City	23.0
Commuting:	
Within Central City	15.6
To Suburbs	2.5
Total Workers Living in Suburbs	7.6
Commuting:	
To Central City	3.4
Within Suburbs	2.3
Waco	
Total Workers Living in Central City	41.4
Commuting:	
Within Central City	33.3
To Suburbs	2.7
Total Workers Living in Suburbs	30.6
Commuting:	
To Central City	17.9
Within Suburbs	8.3

Table B-3. Basic Commuter Flow, 1980 (cont.)

Metropolitan Area	Total Workers (Thousands)
Wichita Falls	
Total Workers Living in Central City	46.6
Commuting:	
Within Central City	32.2
To Suburbs	9.7
Total Workers Living in Suburbs	16.6
Commuting:	
To Central City	6.4
Within Suburbs	7.8

Table B-4. Internal Flow Patterns Within Central Cities

Classification	Destination	
	CBD (1000s of commuters)	Central City Remainder (1000s of commuters)
Total Metropolitan		
From Central City	298	2,080
From Suburbs	111	799
Small Texas MSAs		
From Central City	68	357
From Suburbs	18	89
Medium Texas MSAs		
From Central City	68	518
From Suburbs	13	127
Large Texas MSAs		
From Central City	162	1,206
From Suburbs	80	583
<u>Metropolitan Area</u>		
Abilene		
From Central City	6	32
From Suburbs	1	5
Amarillo		
From Central City	8	48
From Suburbs	1	5
Austin		
From Central City	17	133
From Suburbs	4	39
Beaumont-Port Arthur-Orange		
From Central City	6	53
From Suburbs	2	28
Brownsville-Harlingen-San Benito		
From Central City	7	30
From Suburbs	1	8
Bryan-College Station		
From Central City	1	27
From Suburbs	0	4
Corpus Christi		
From Central City	8	72
From Suburbs	1	8
Dallas-Ft. Worth		
From Central City	61	413
From Suburbs	41	283
El Paso		
From Central City	13	126
From Suburbs	1	15
Galveston-Texas City		
From Central City	5	30
From Suburbs	2	10

Table B-4. Internal Flow Patterns Within Central Cities (cont.)

Classification	Destination	
	CBD (1000s of commuters)	Central City Remainder (1000s of commuters)
Houston		
From Central City	70	558
From Suburbs	32	235
Killeen-Temple		
From Central City	5	16
From Suburbs	2	8
Laredo		
From Central City	4	20
From Suburbs	0	1
Longview-Marshall		
From Central City	3	24
From Suburbs	1	9
Lubbock		
From Central City	11	58
From Suburbs	1	7
McAllen-Pharr-Edinburg		
From Central City	0	29
From Suburbs	0	14
Midland		
From Central City	9	19
From Suburbs	1	3
Odessa		
From Central City	5	23
From Suburbs	1	4
San Angelo		
From Central City	6	24
From Suburbs	1	2
San Antonio		
From Central City	31	236
From Suburbs	7	66
Sherman-Denison		
From Central City	4	16
From Suburbs	1	6
Texarkana		
From Central City	2	7
From Suburbs	4	6
Tyler		
From Central City	4	18
From Suburbs	2	10
Victoria		
From Central City	0	16
From Suburbs	0	3
Waco		
From Central City	6	28
From Suburbs	3	15

Table B-4. Internal Flow Patterns Within Central Cities (cont.)

Classification	Destination	
	CBD (1000s of commuters)	Central City Remainder (1000s of commuters)
Wichita Falls		
From Central City	5	27
From Suburbs	1	6

Table B-5. Commuting Trips with a Central City Destination, 1980

Classification	Total	All Trips to the Central City (1000s)	
		From the Center City	From the Suburbs
United States	33,600	20,900	12,700
Texas Metropolitan	3,288	2,379	909
Small Texas MSAs	531	424	107
Medium Texas MSAs	726	586	140
Large Texas MSAs	2,031	1,368	663
<u>Metropolitan Area</u>			
Abilene	45	38	
Amarillo	60	55	5
Austin	193	150	43
Beaumont-Port Arthur- Orange	90	60	30
Brownsville-Harlingen- San Benito	46	37	9
Bryan-College Station	33	28	5
Corpus Christi	90	80	10
Dallas-Ft. Worth	798	474	324
El Paso	156	140	16
Galveston-Texas City	46	35	11
Houston	895	628	267
Killeen-Temple	33	22	11
Laredo	25	23	2
Longview-Marshall	36	26	10
Lubbock	77	69	8
McAllen-Pharr- Edinburg	43	29	14
Midland	31	27	4
Odessa	34	29	5
San Angelo	32	29	3
San Antonio	339	267	72
Sherman-Denison	27	20	7
Texarkana	19	9	10
Tyler	34	22	12
Victoria	19	16	3
Waco	51	33	18
Wichita Falls	38	32	6

Table B-6. Commuting Trips with a Suburban Destination, 1980

Classification	Total	All Trips to the Suburbs (1000s)	
		From the Central City	From the Suburbs
United States	29,500	4,200	25,300
Texas Metropolitan	1,259	282	977
Small Texas MSAs	125	49	76
Medium Texas MSAs	221	53	168
Large Texas MSAs	913	180	733
<u>Metropolitan Area</u>			
Abilene	10	2	8
Amarillo	10	5	5
Austin	39	7	32
Beaumont-Port Arthur- Orange	38	10	28
Brownsville-Harlingen- San Benito	10	3	7
Bryan-College Station	2	1	1
Corpus Christi	25	6	19
Dallas-Ft. Worth	518	92	426
El Paso	7	4	3
Galveston-Texas City	13	3	10
Houston	329	67	262
Killeen-Temple	57	13	44
Laredo	3	2	1
Longview-Marshall	14	4	10
Lubbock	10	5	5
McAllen-Pharr- Edinburg	34	5	29
Midland	3	2	1
Odessa	10	6	4
San Angelo	3	2	1
San Antonio	66	21	45
Sherman-Denison	6	1	5
Texarkana	5	1	4
Tyler	13	5	8
Victoria	5	3	2
Waco	11	3	8
Wichita Falls	18	10	8

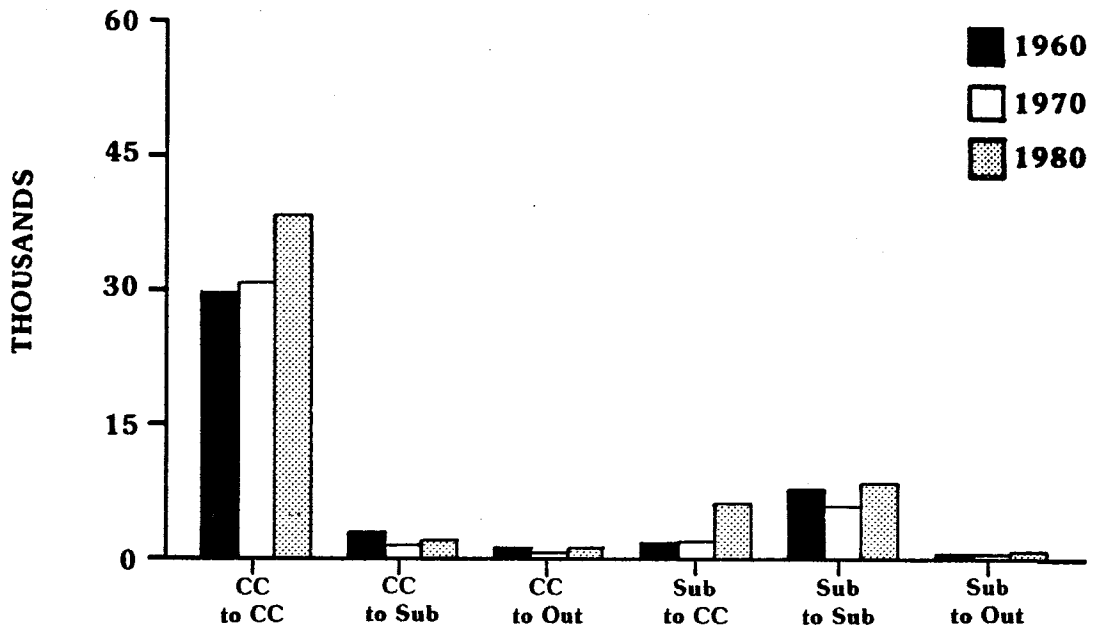
Table B-7. Commuters Leaving Their Home
Metropolitan Area, 1980

Metropolitan Area	Total Leaving, Thousands		Total
	From Central City	From Suburbs	
Abilene	1	1	2
Amarillo	4	1	5
Austin	3	4	7
Beaumont-Port Arthur-Orange	2	4	6
Brownsville-Harlingen-San Benito	2	1	3
Bryan-College Station	2	1	3
Corpus Christi	2	2	4
Dallas-Ft. Worth	6	14	20
El Paso	5	1	6
Galveston-Texas City	3	16	19
Houston	8	14	22
Killeen-Temple	1	3	4
Laredo	1	0	1
Longview-Marshall	2	3	5
Lubbock	3	1	4
McAllen-Pharr-Edinburg	1	3	4
Midland	2	1	3
Odessa	4	1	5
San Angelo	1	0	1
San Antonio	4	5	9
Sherman-Denison	1	2	3
Texarkana	0	1	1
Tyler	1	2	3
Victoria	3	1	4
Waco	1	2	3
Wichita Falls	1	1	2

FIGURE B-1

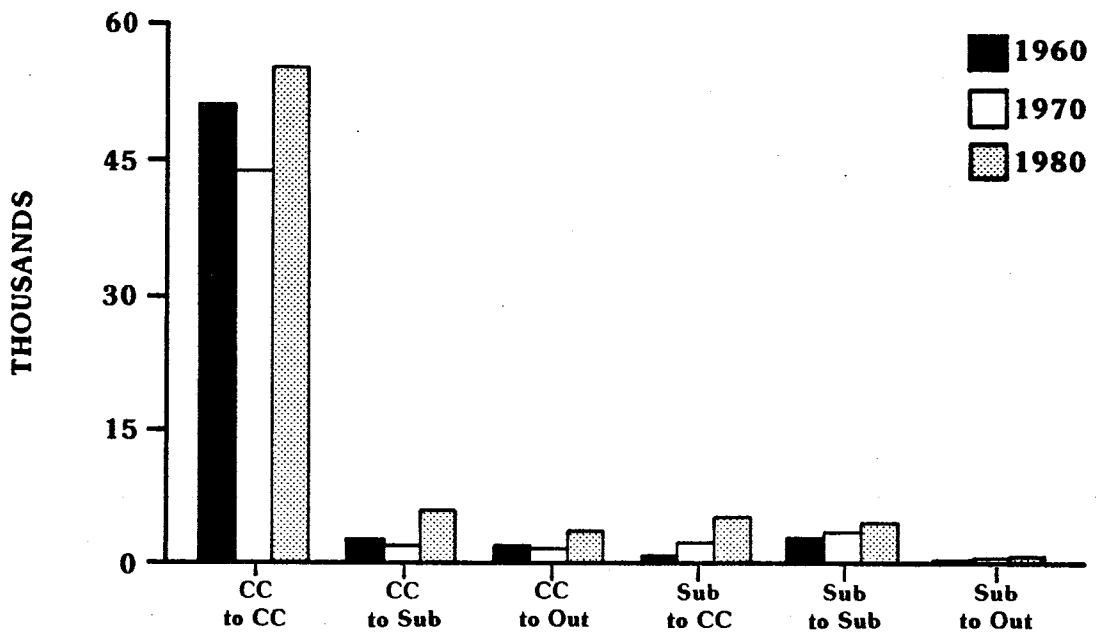
**COMMUTING FLOW VOLUME FOR EACH
METROPOLITAN AREA
1960, 1970 AND 1980**

ABILENE

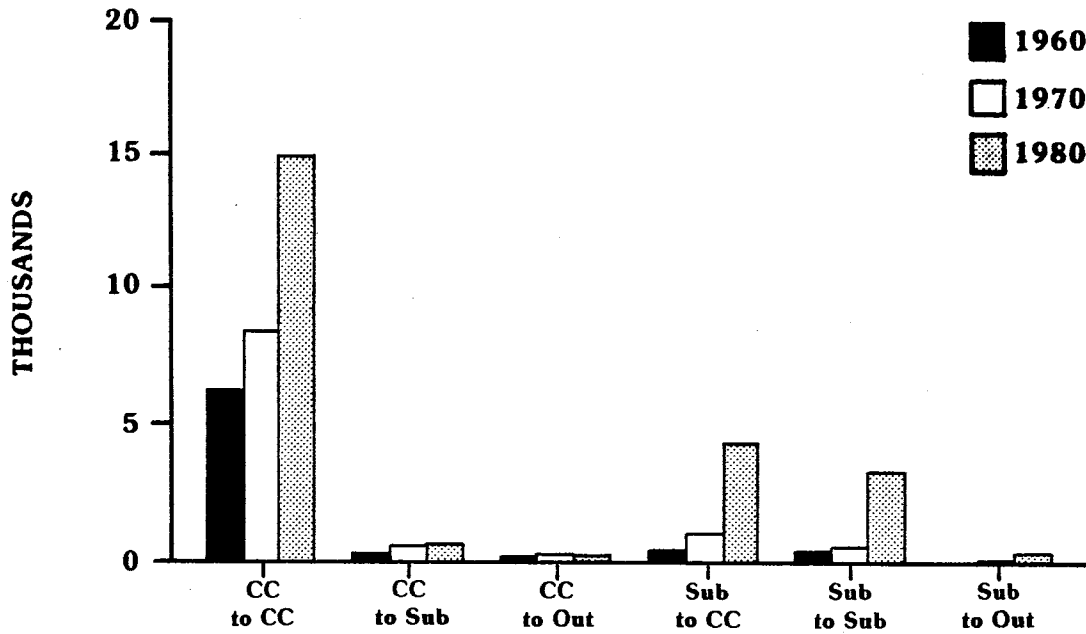


CC = Central City
 Sub = Suburb
 Out = Outside

AMARILLO

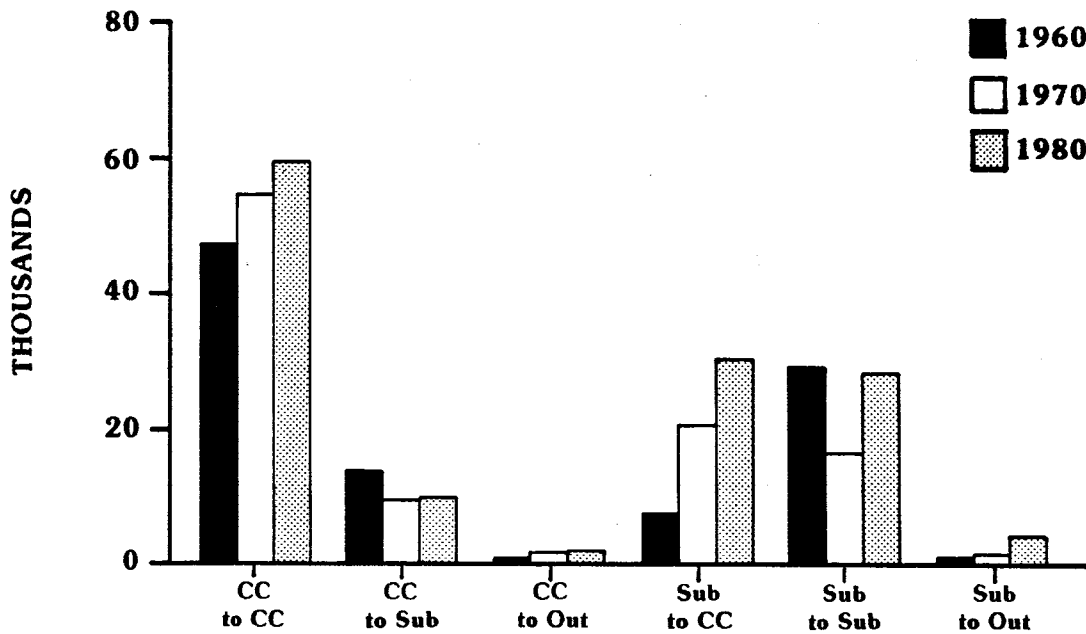


AUSTIN

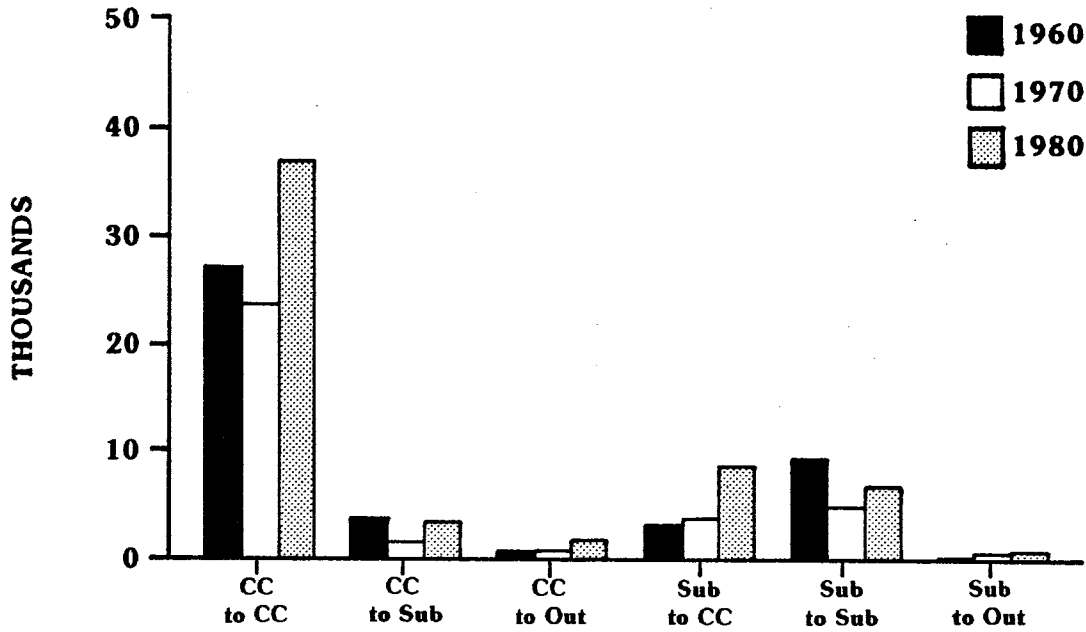


CC = Central City
 Sub = Suburb
 Out = Outside

BEAUMONT-PORT ARTHUR-ORANGE

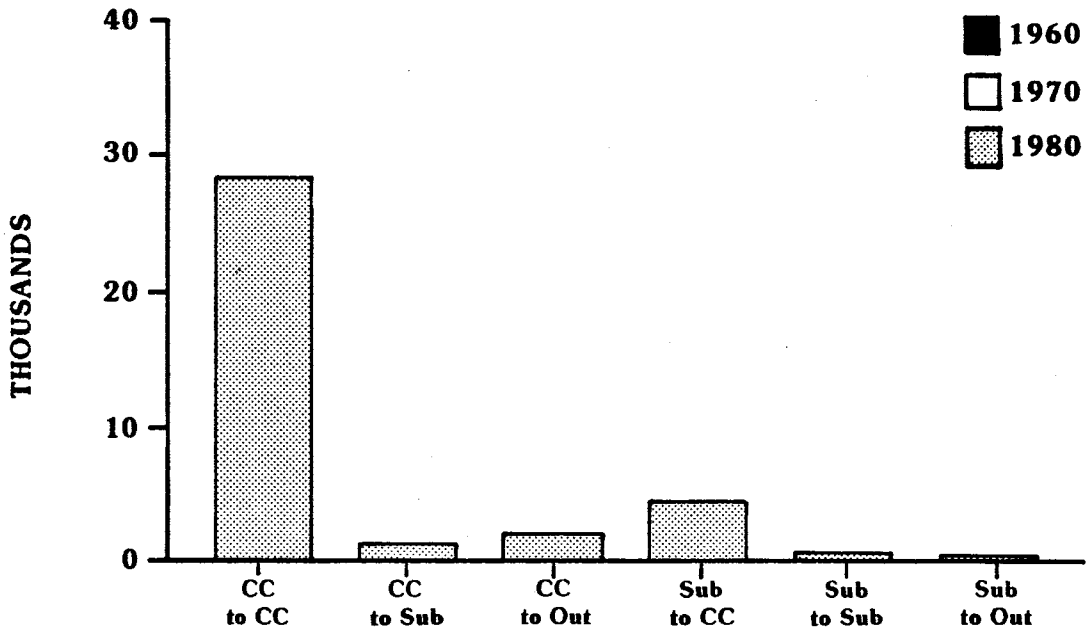


BROWNSVILLE-HARLINGEN-SAN BENITO

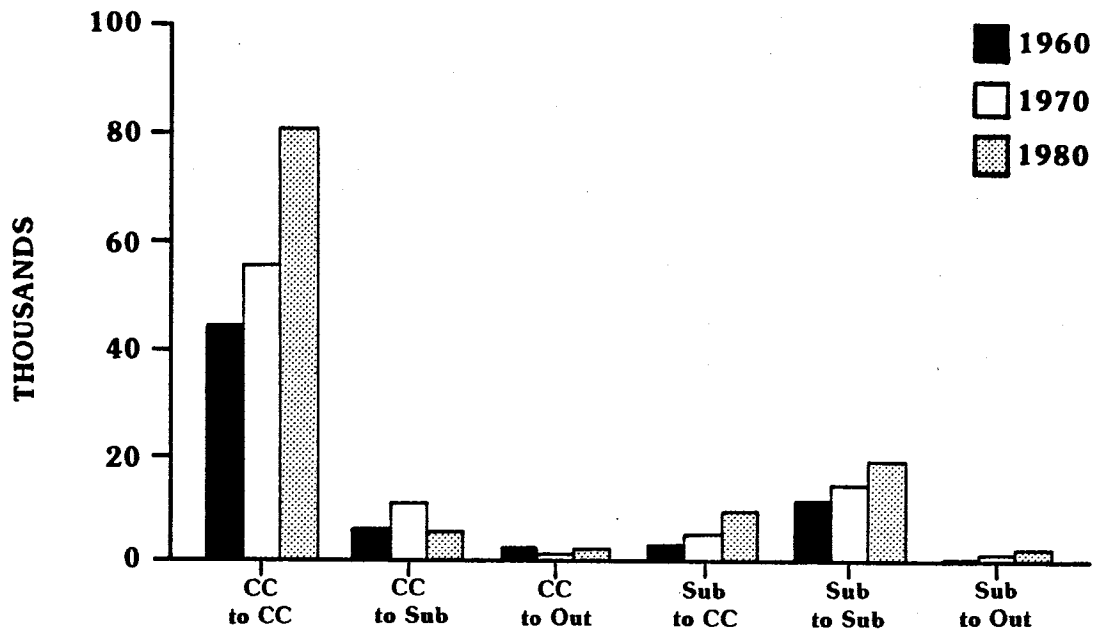


CC = Central City
 Sub = Suburb
 Out = Outside

BRYAN-COLLEGE STATION



CORPUS CHRISTI

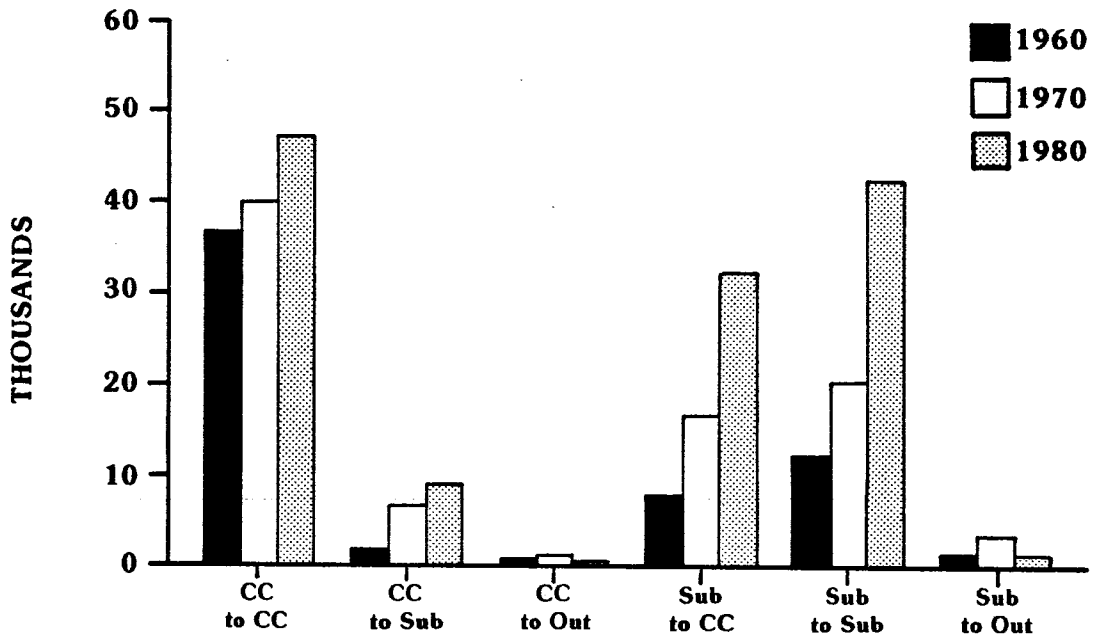


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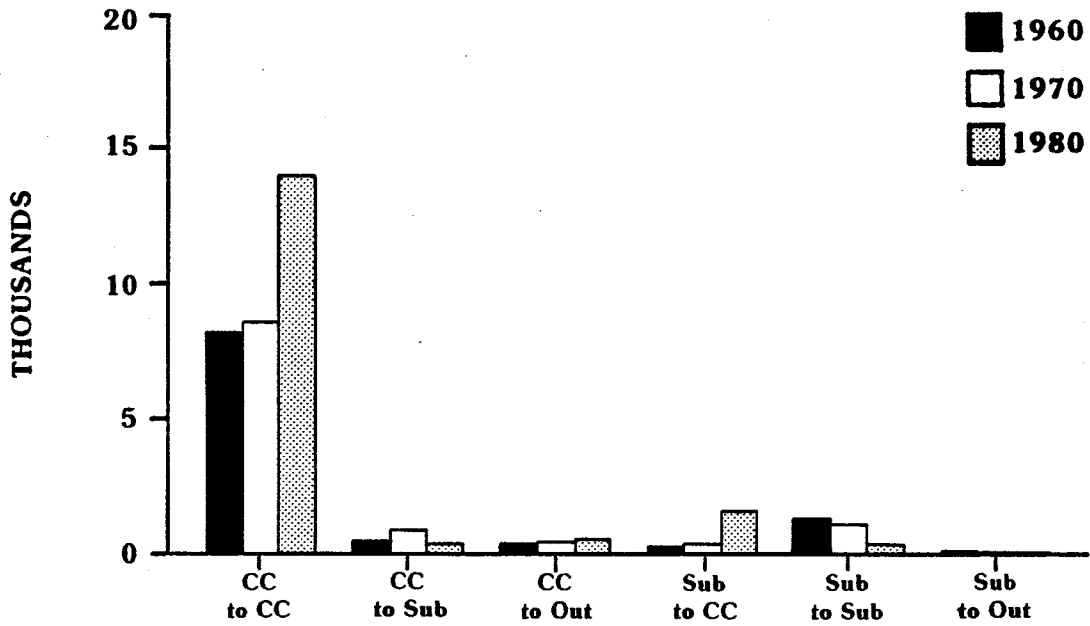
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Out = Outside

DALLAS-FT WORTH

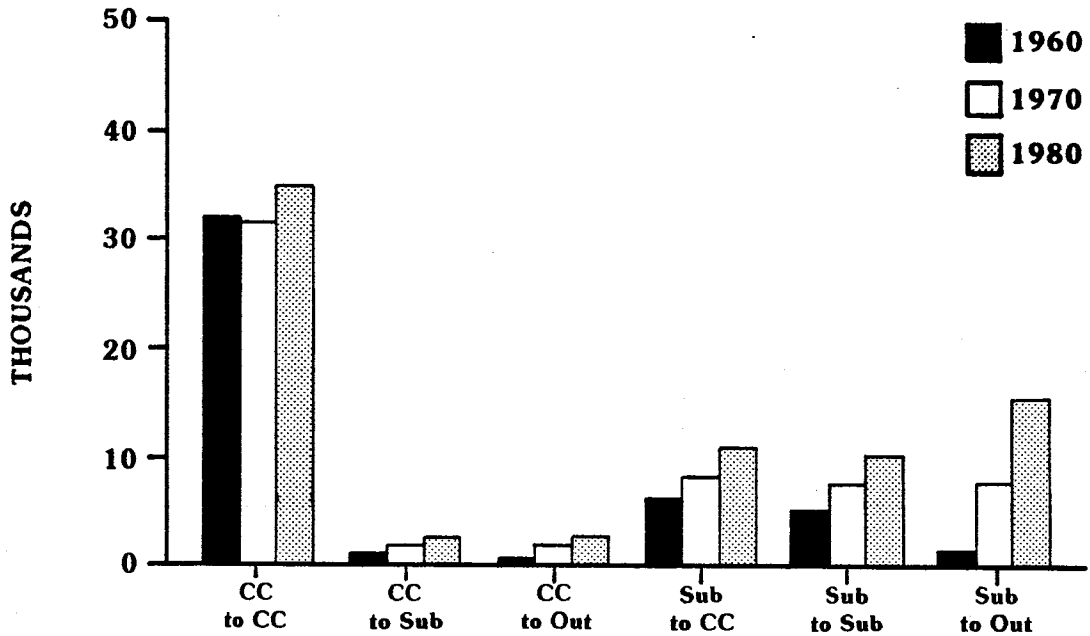


EL PASO

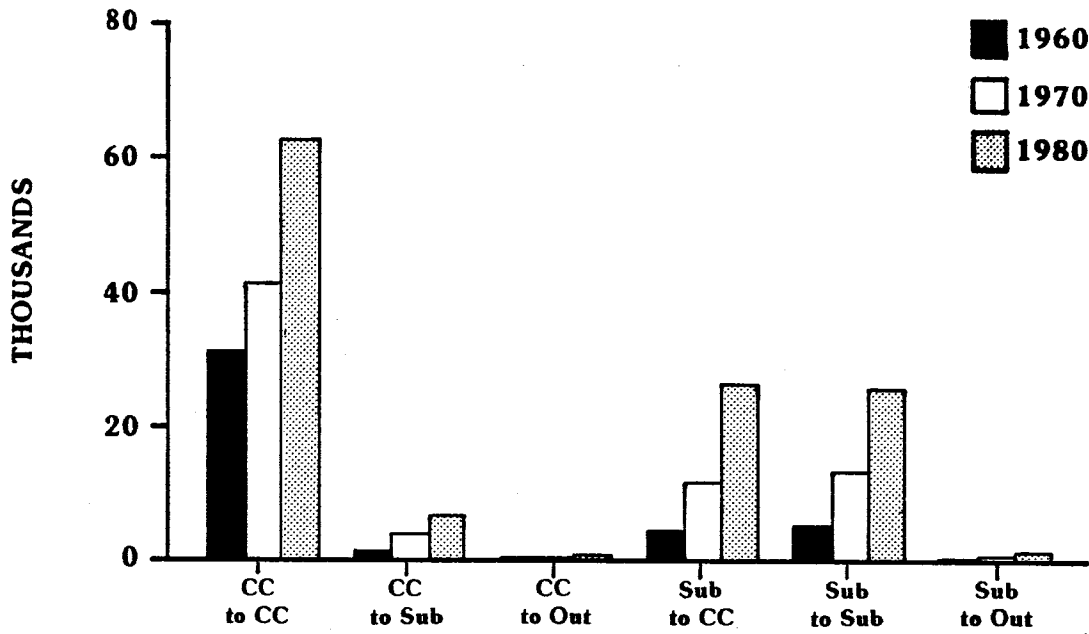


CC = Central City
 Sub = Suburb
 Out = Outside

GAVLESTON-TEXAS CITY

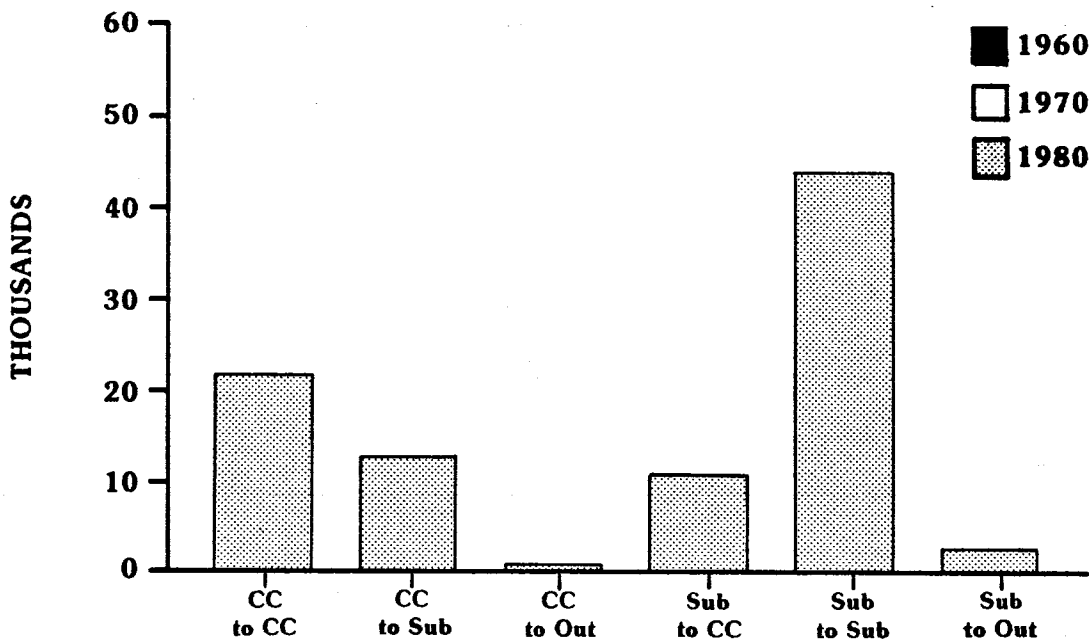


HOUSTON

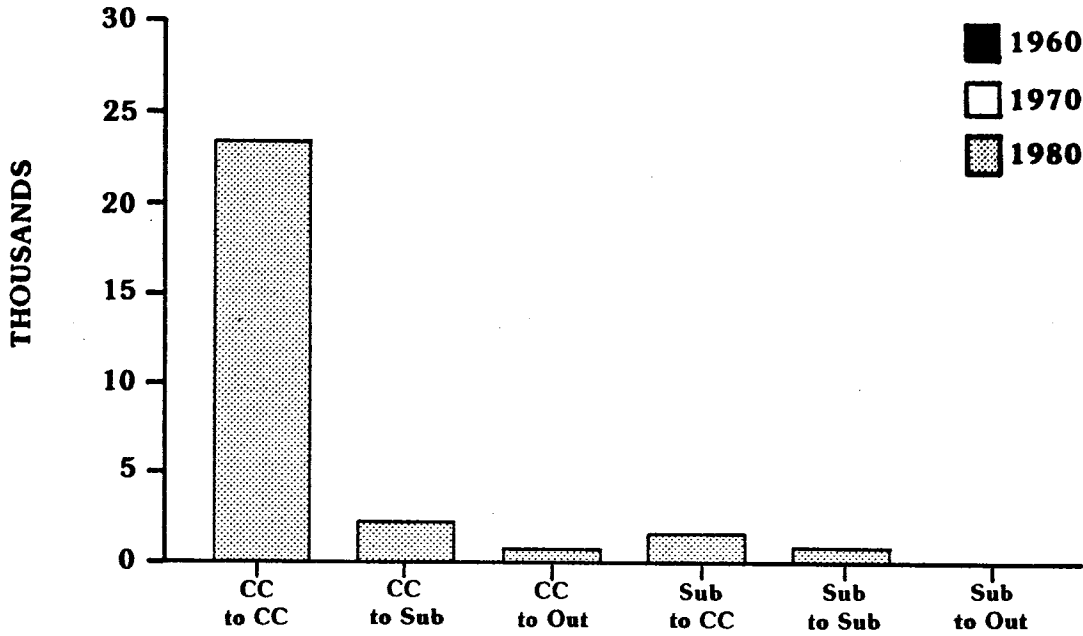


CC = Central City
 Sub = Suburb
 Out = Outside

KILLEEN-TEMPLE

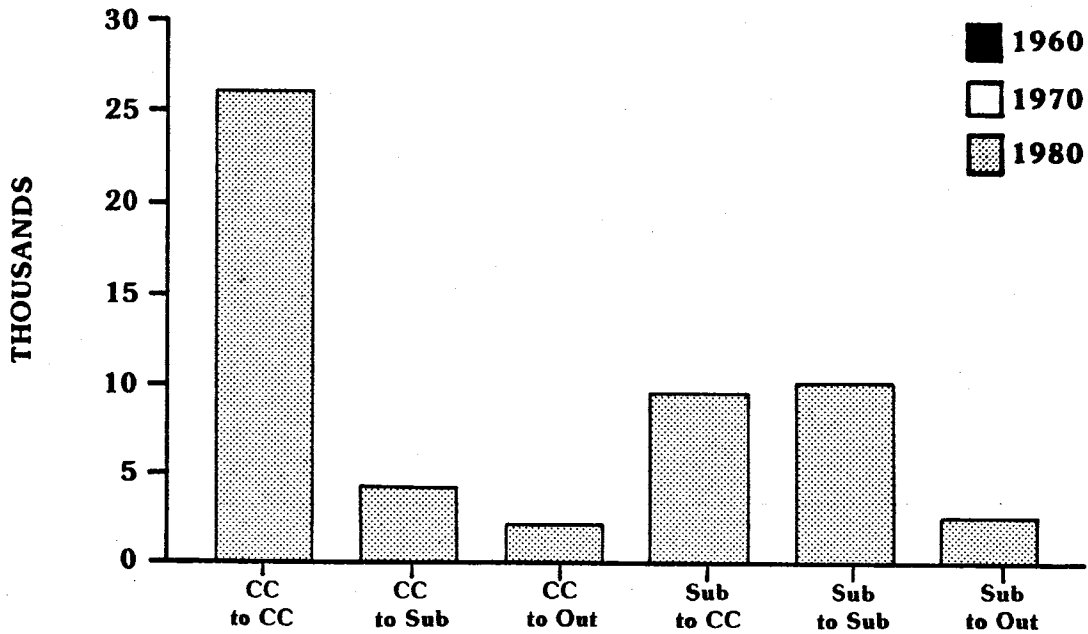


LAREDO

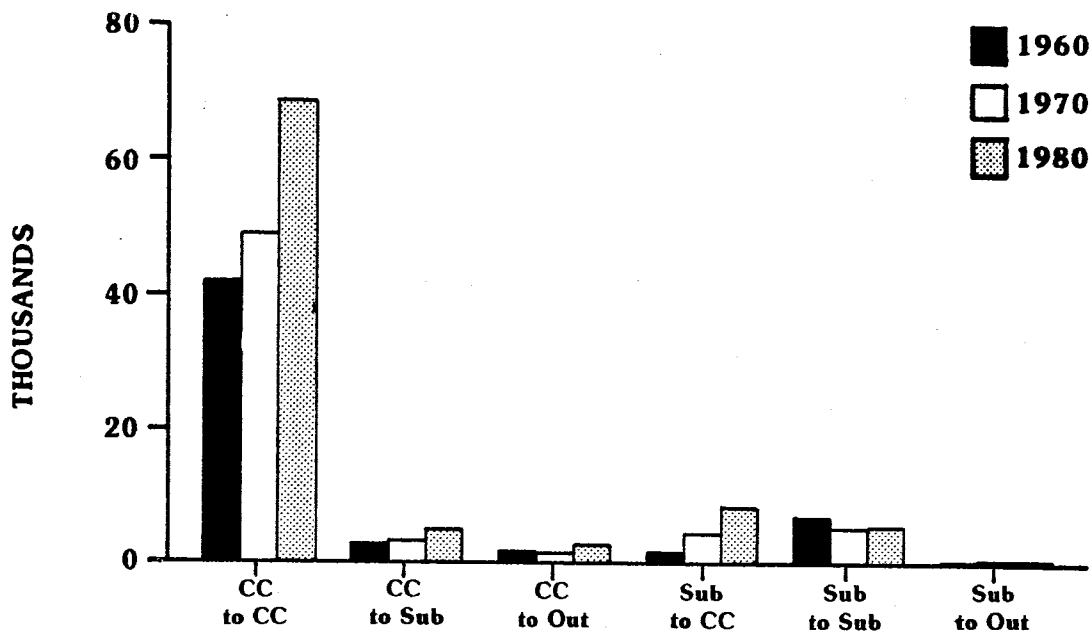


CC = Central City
 Sub = Suburb
 Out = Outside

LONGVIEW-MARSHALL

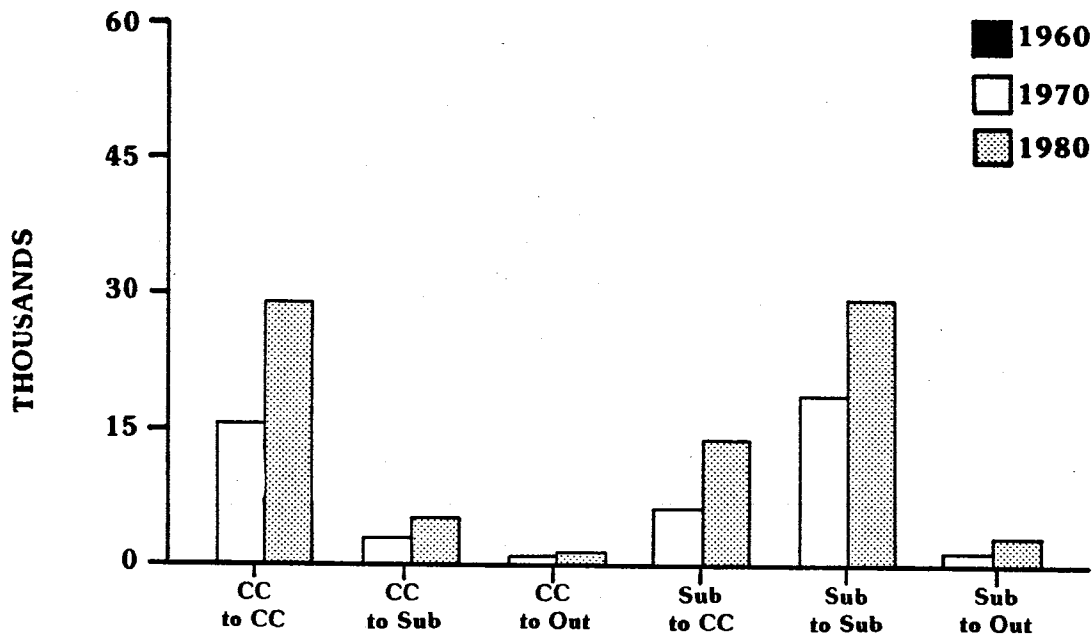


LUBBOCK

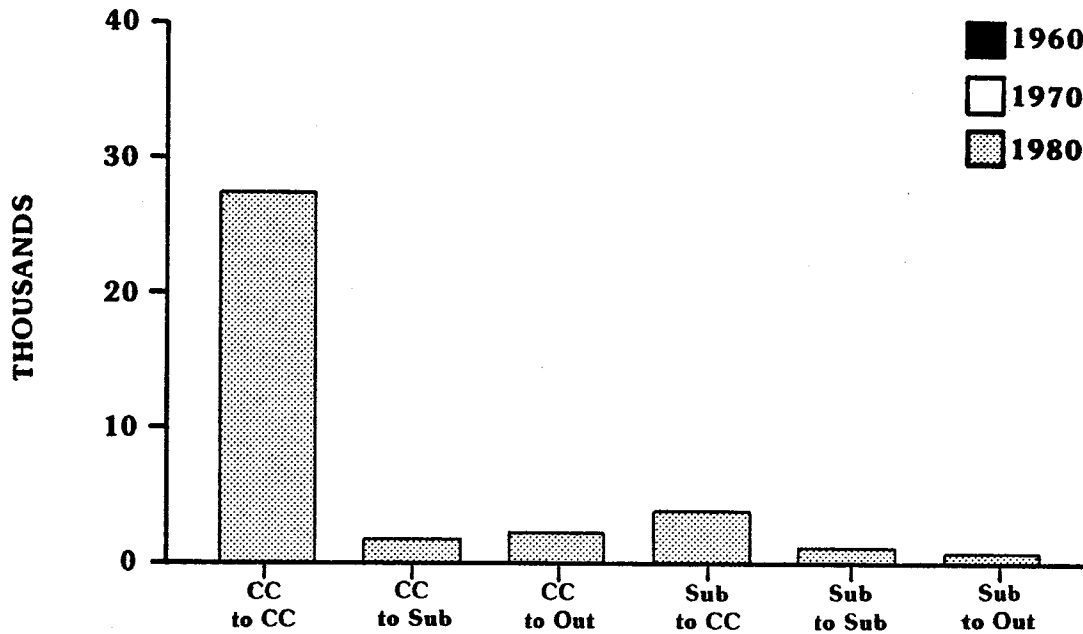


CC = Central City
 Sub = Suburb
 Out = Outside

MCALLEN-PHARR-EDINBURG

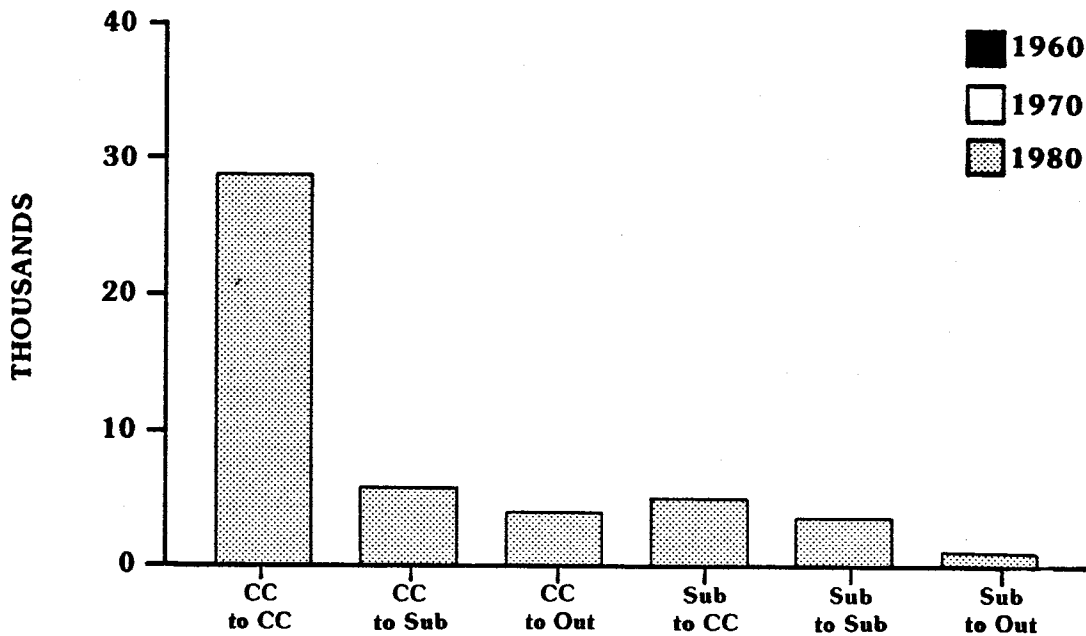


MIDLAND

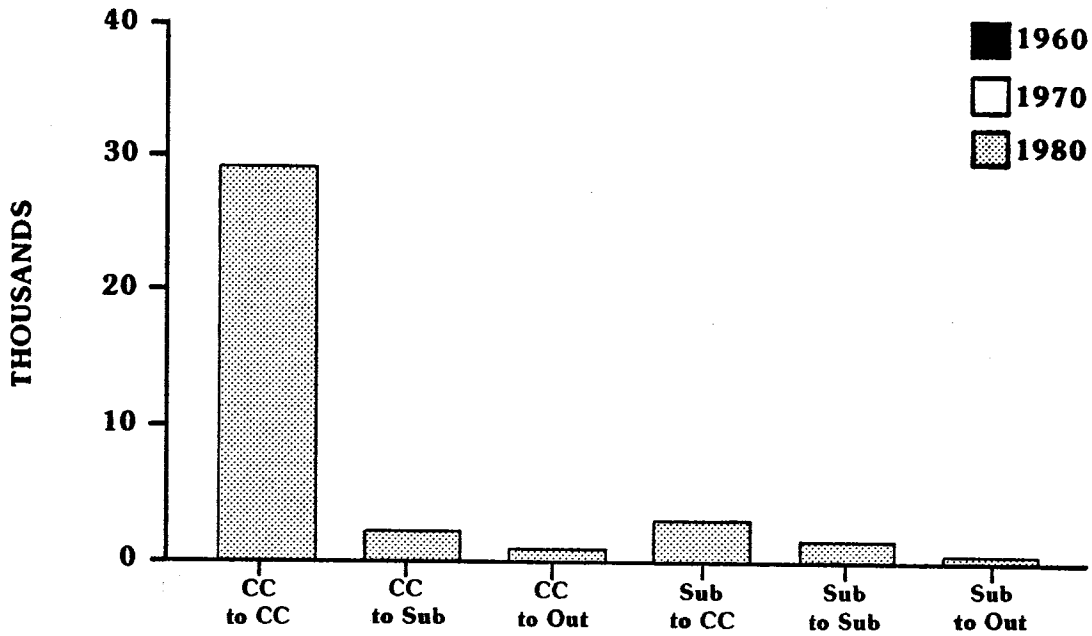


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ODESSA

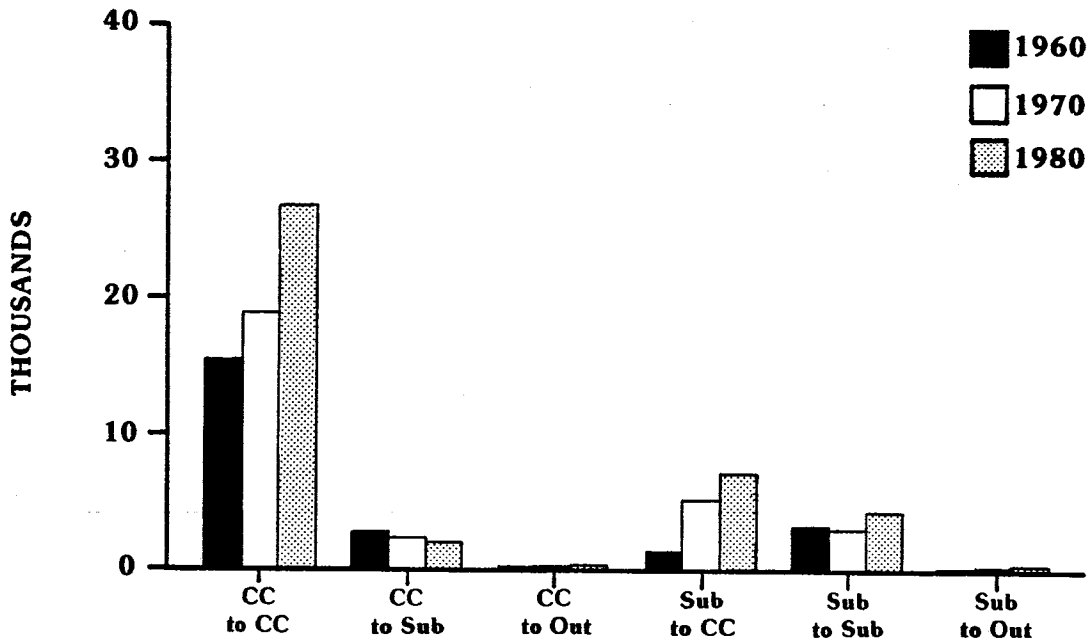


SAN ANGELO

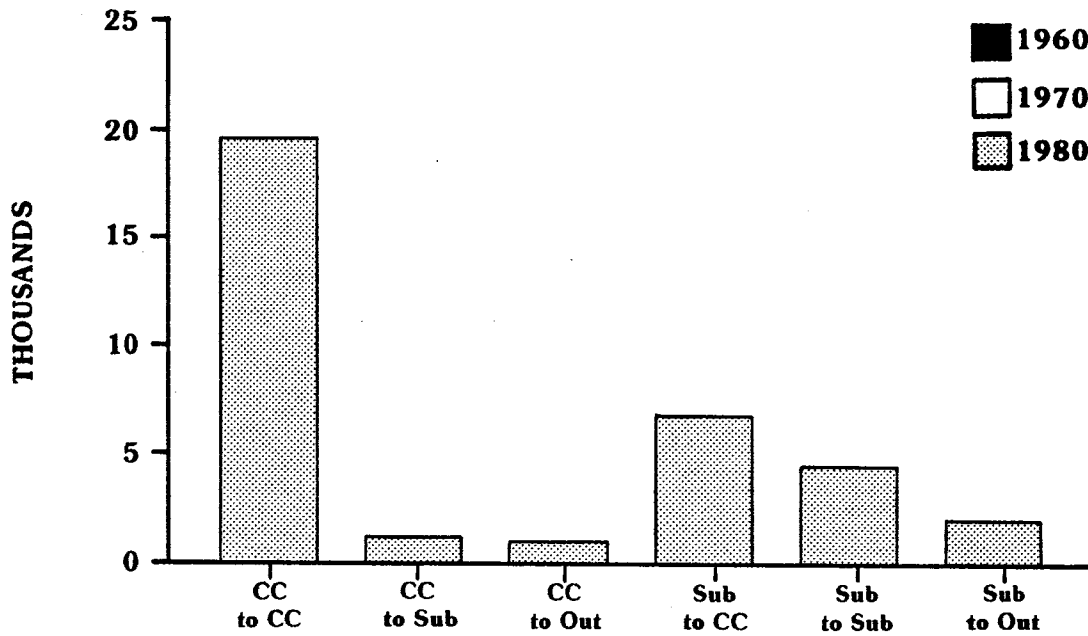


CC = Central City
 Sub = Suburb
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SAN ANTONIO

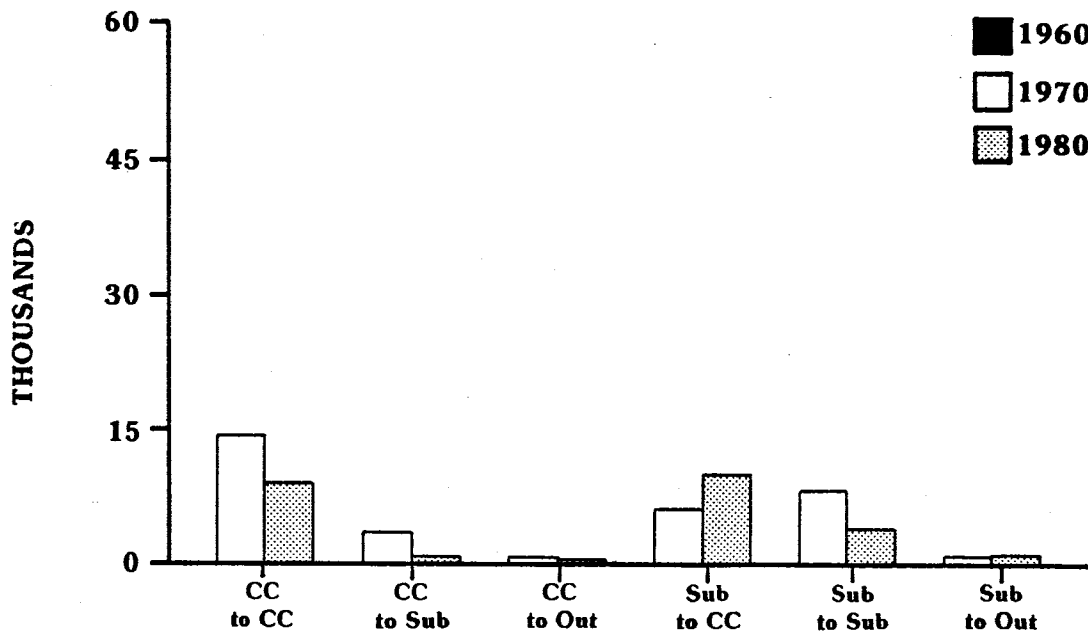


SHERMAN-DENISON

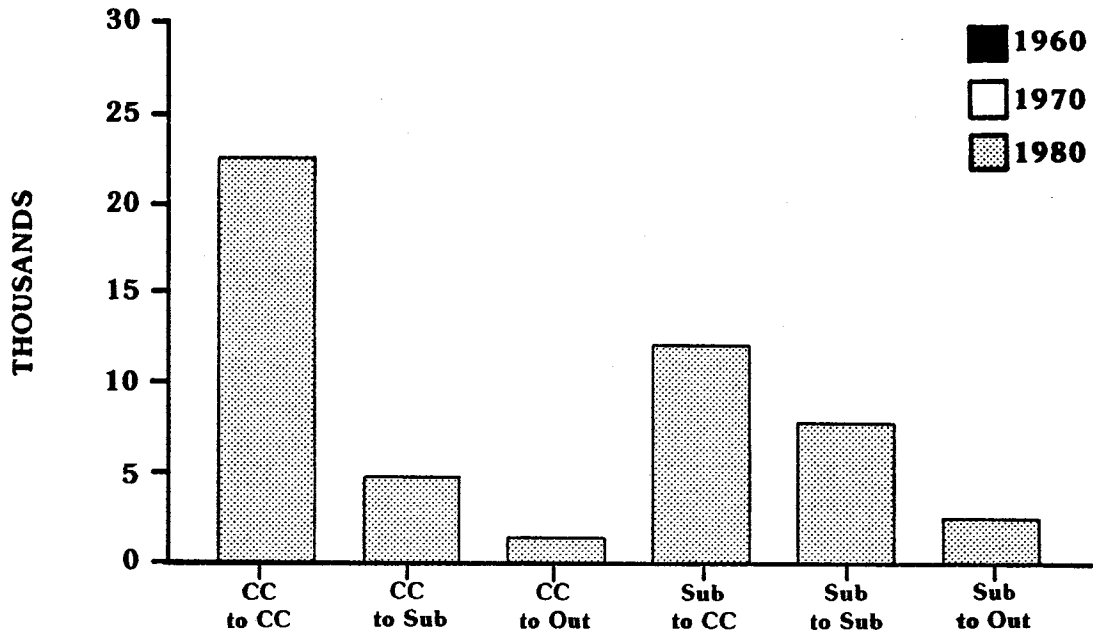


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TEXARKANA

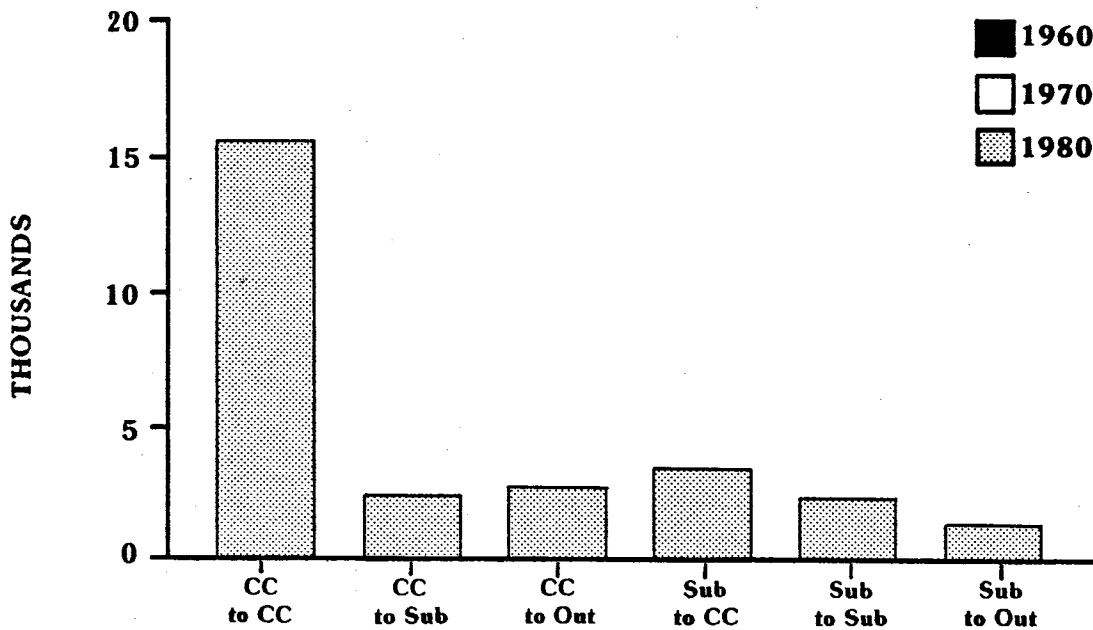


TYLER

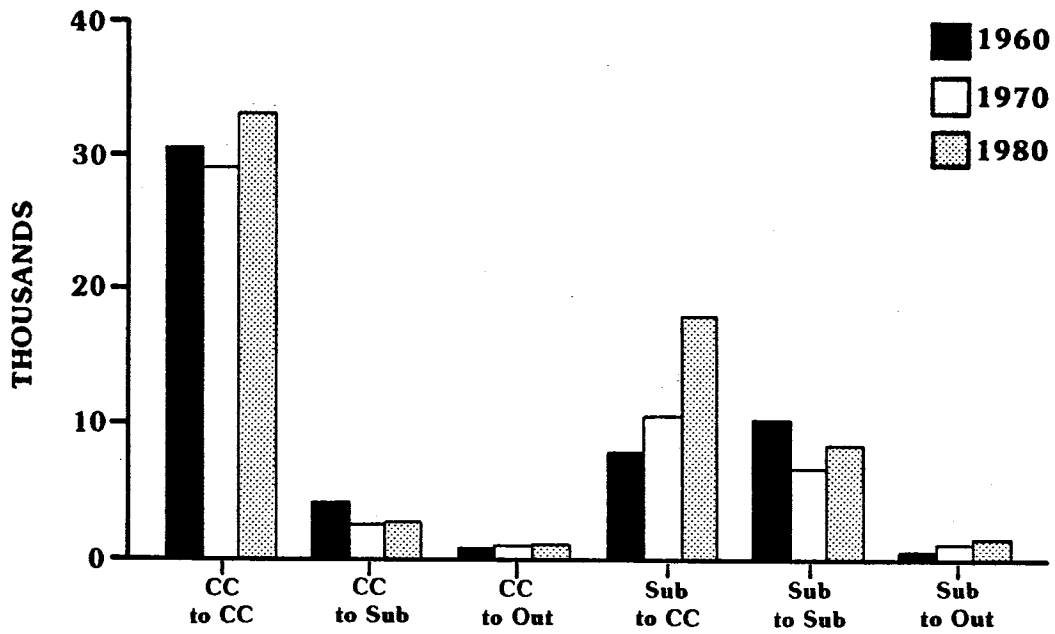


CC = Central City
 Sub = Suburb
 Out = Outside

VICTORIA



WACO



CC = Central City
 Sub = Suburb
 Out = Outside

WICHITA FALLS

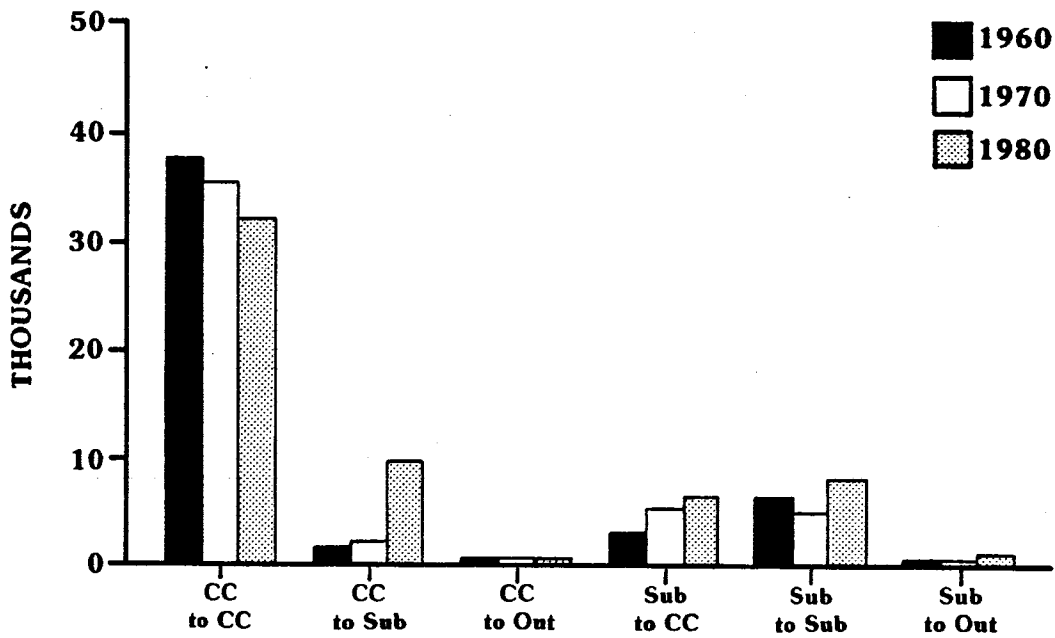
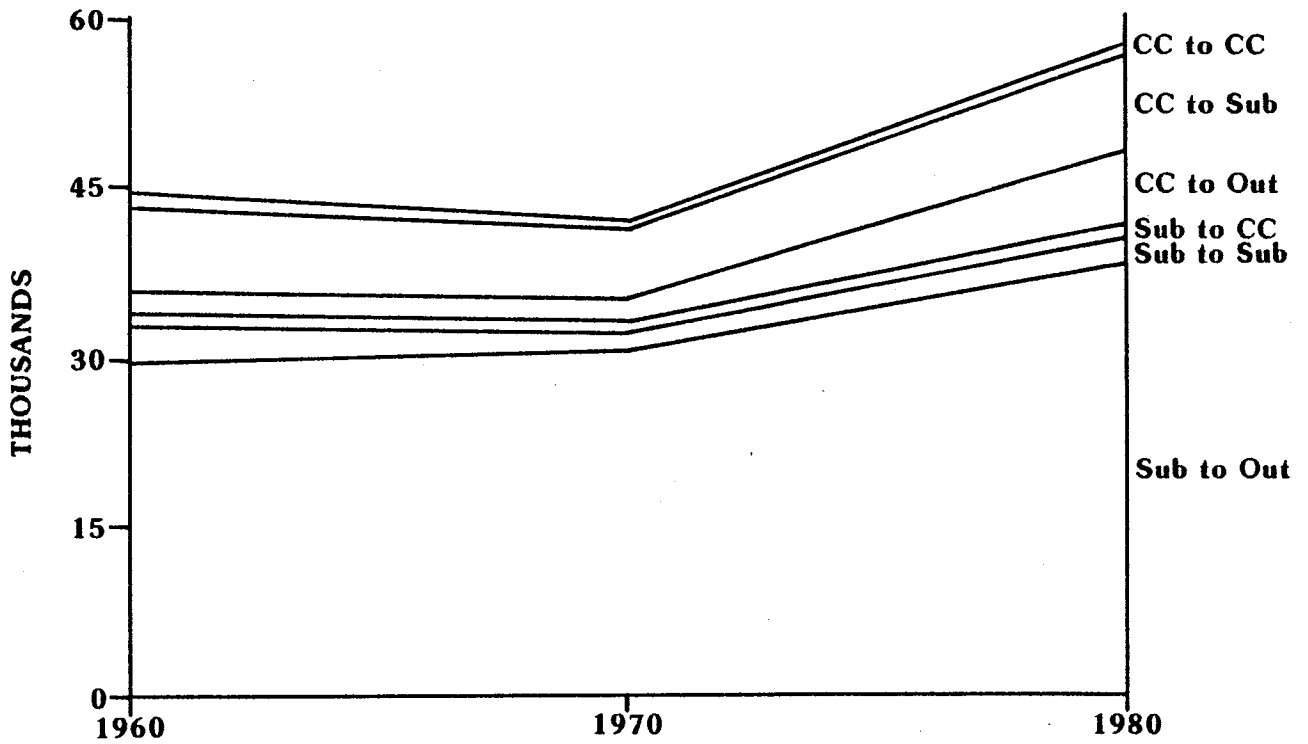


FIGURE B-2

**TRENDS IN COMMUTER FLOW FOR EACH
METROPOLITAN AREA
1960, 1970 AND 1980**

ABILENE

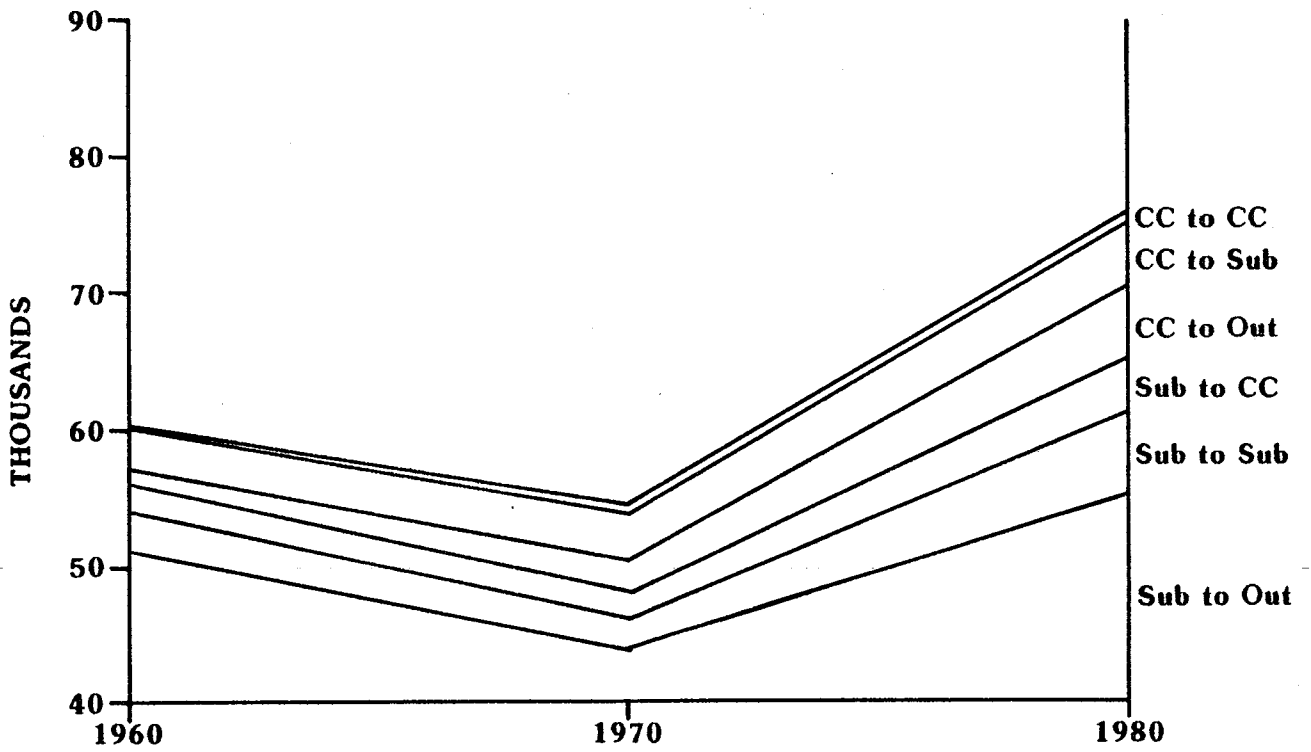


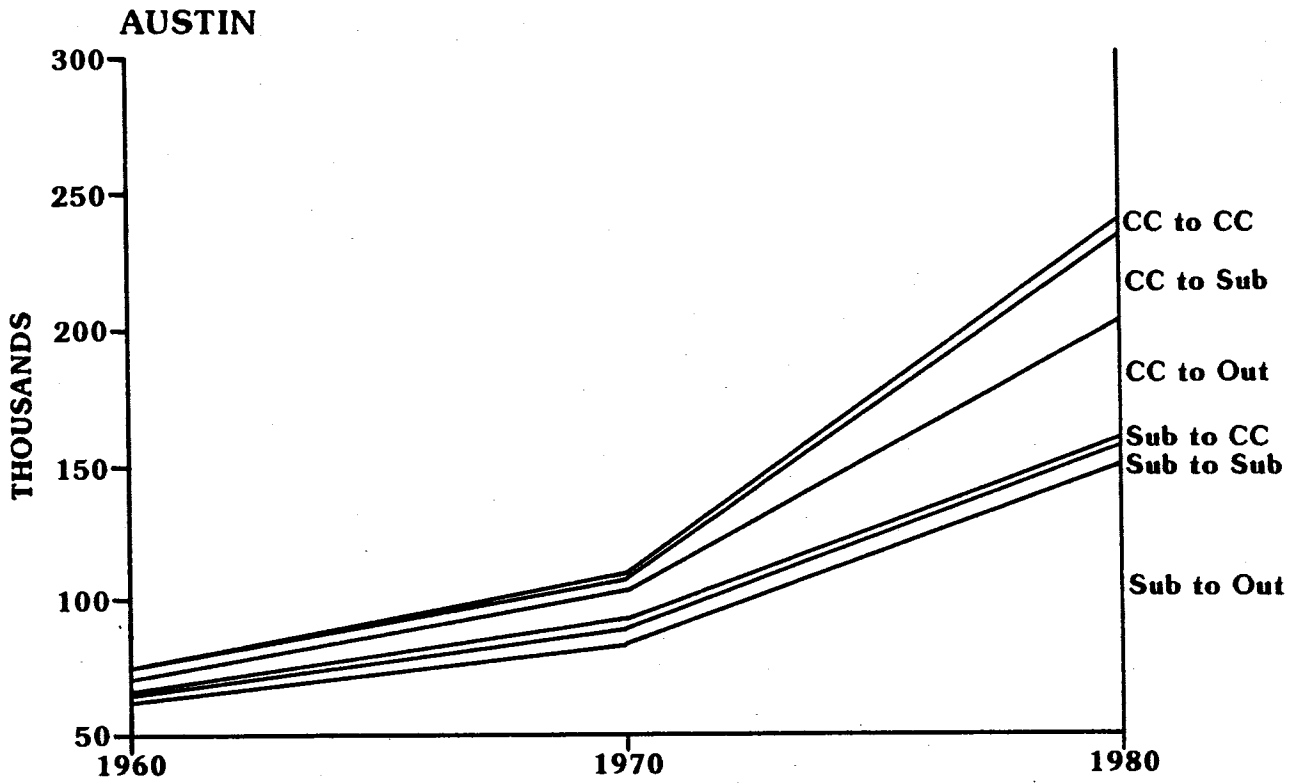
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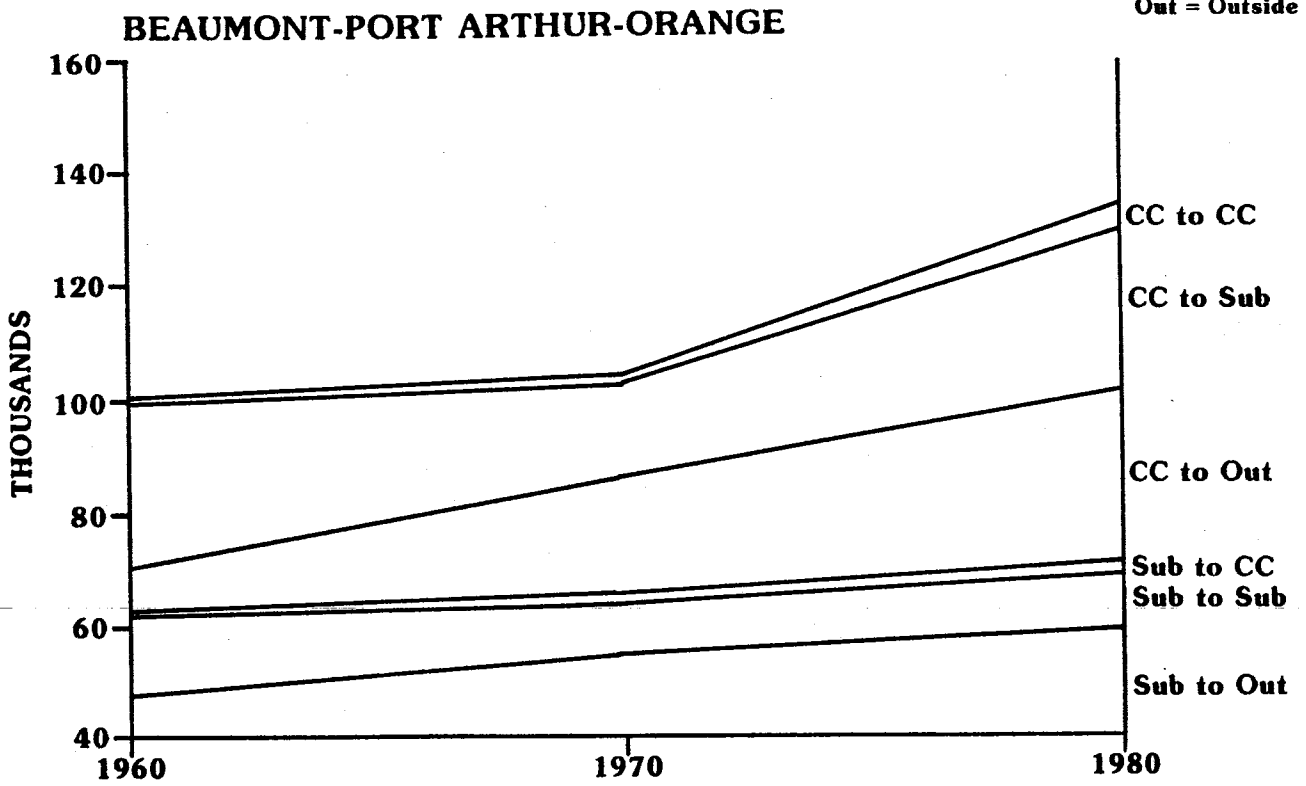
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AMARILLO

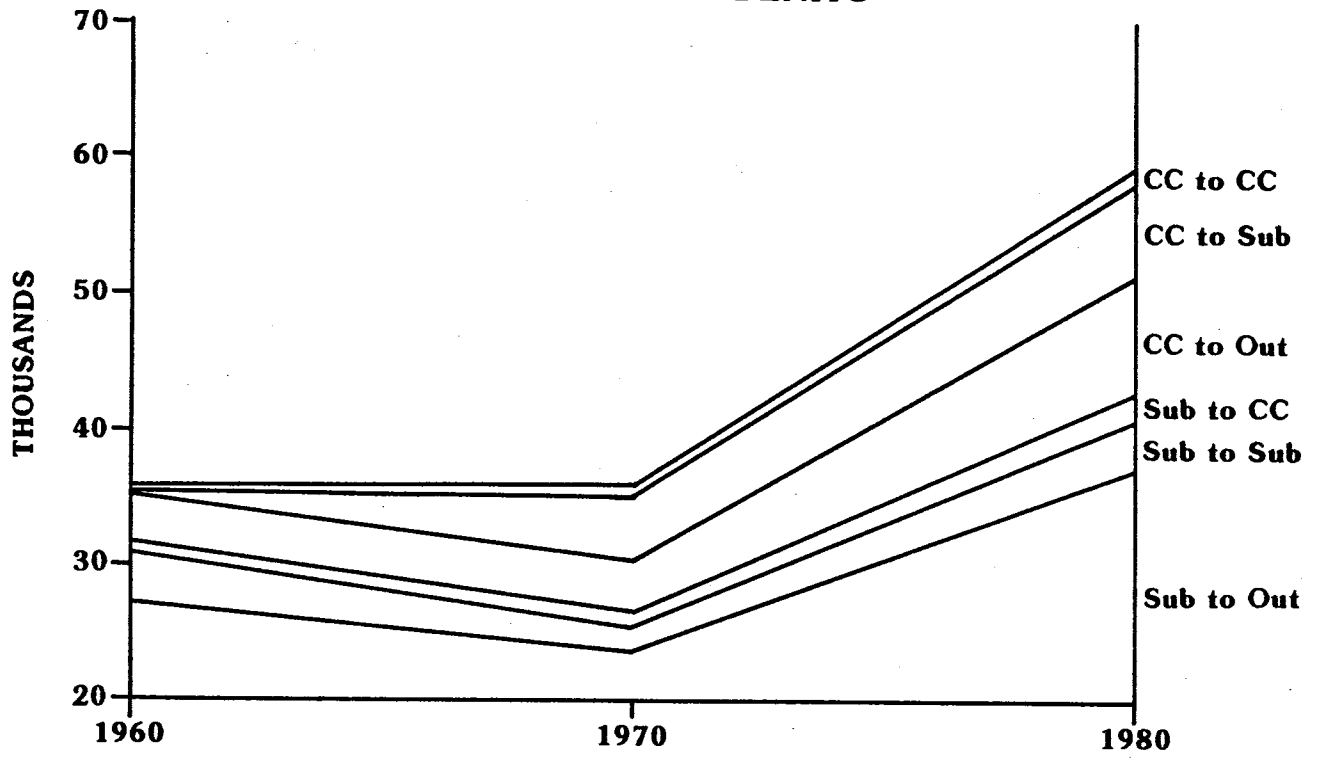




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Sub = Suburb
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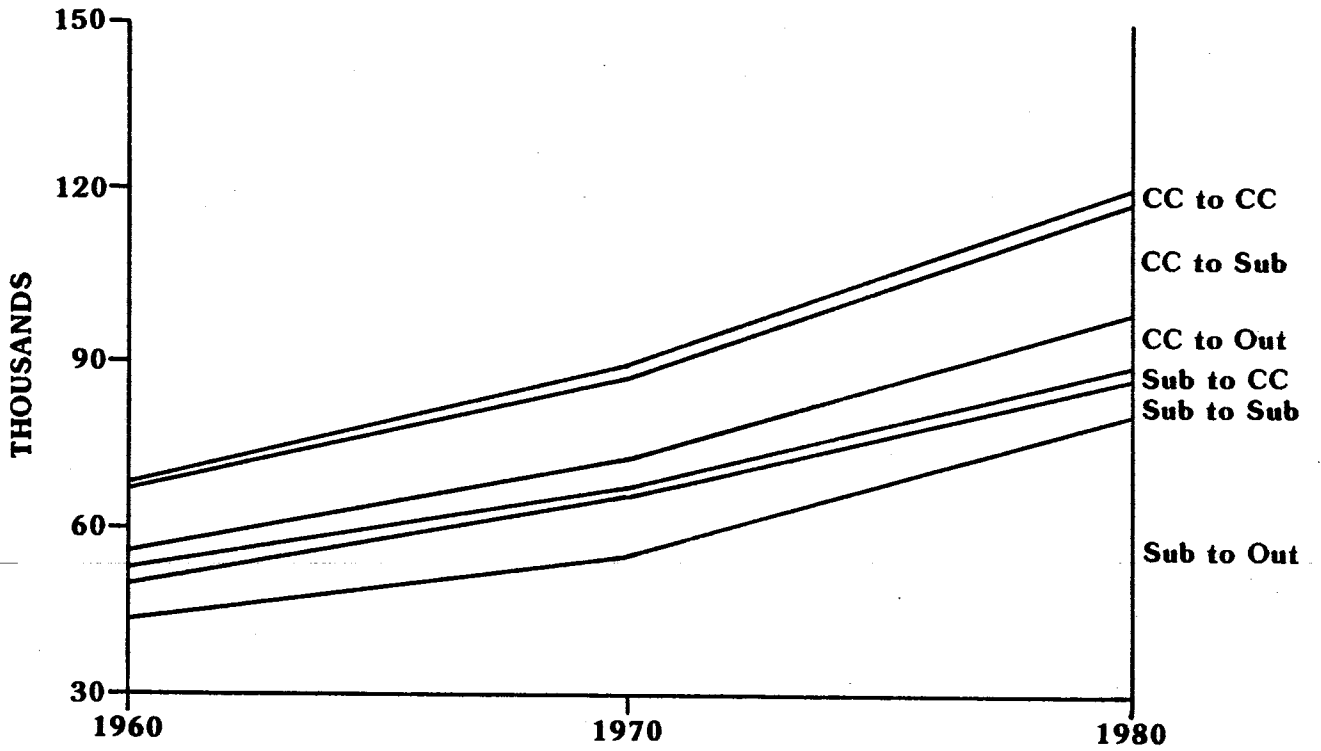


BROWNSVILLE-HARLINGEN-SAN BENITO

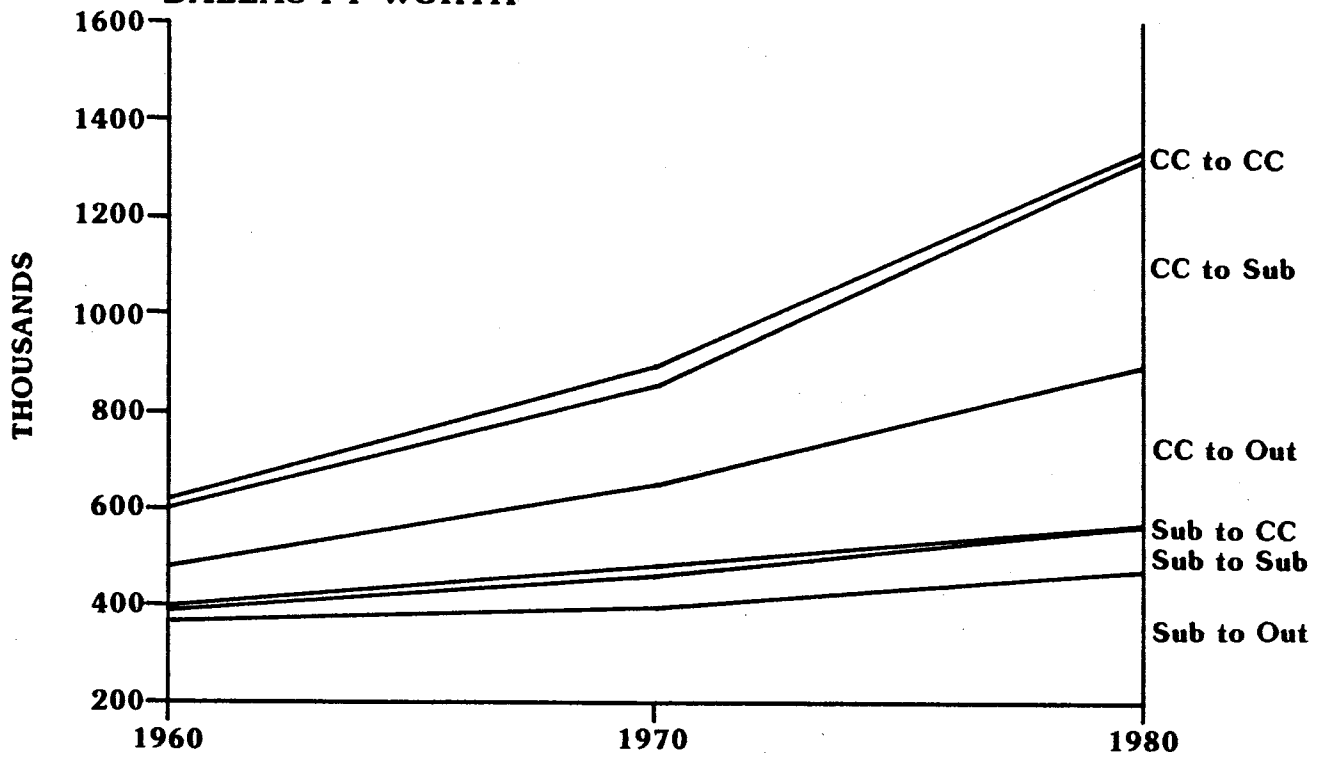


CC = Central City
 Sub = Suburb
 Out = Outside

CORPUS CHRISTI

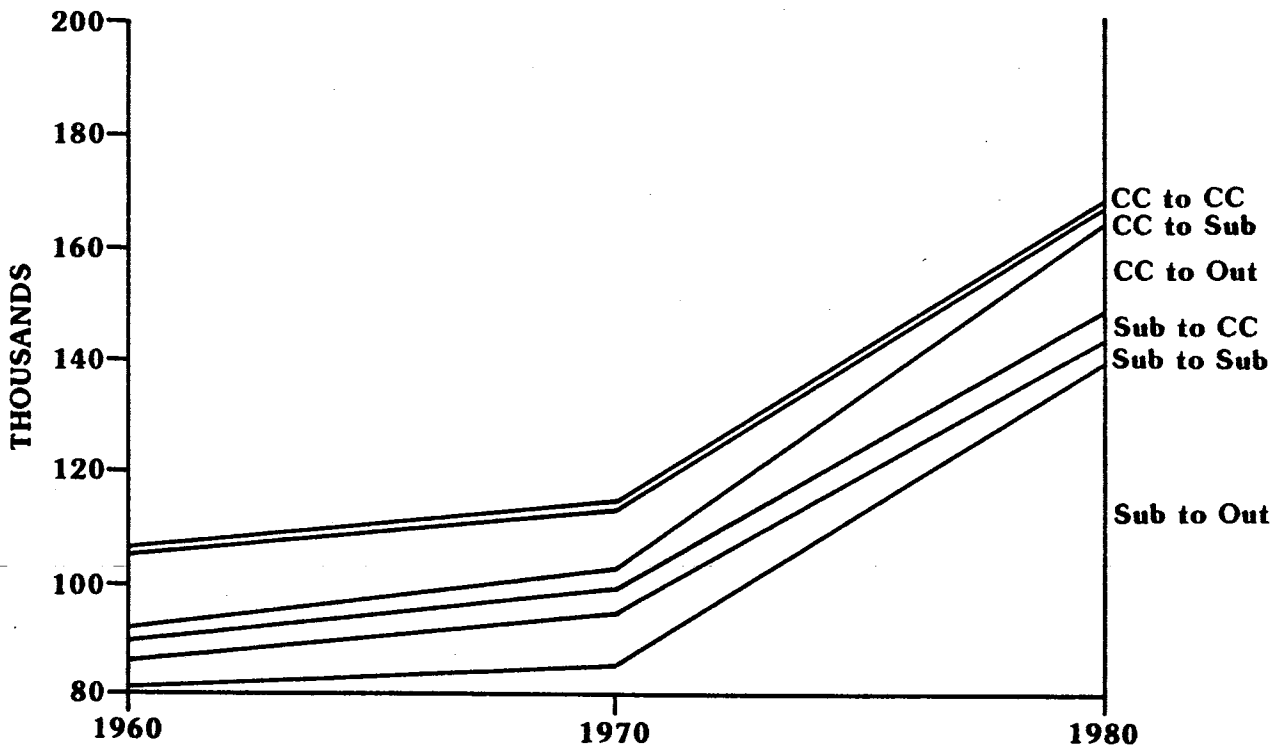


DALLAS-FT WORTH

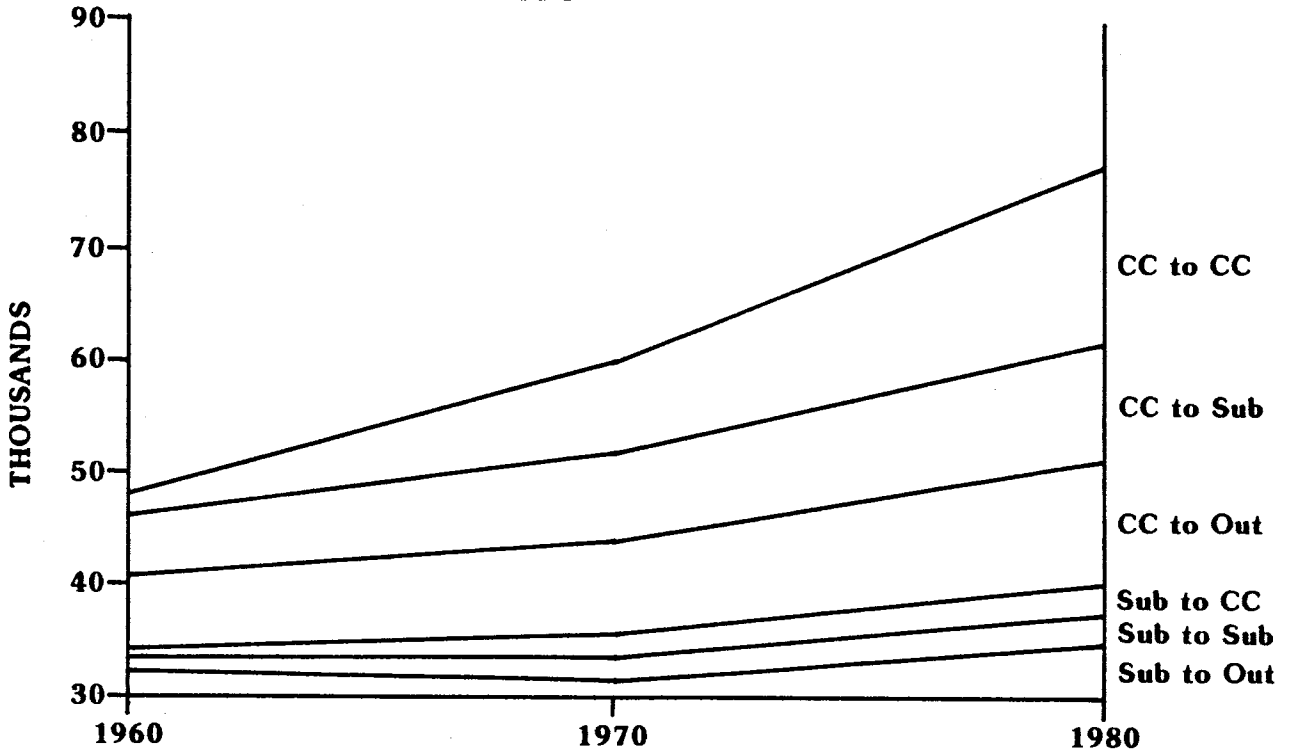


CC = Central City
 Sub = Suburb
 Out = Outside

EL PASO

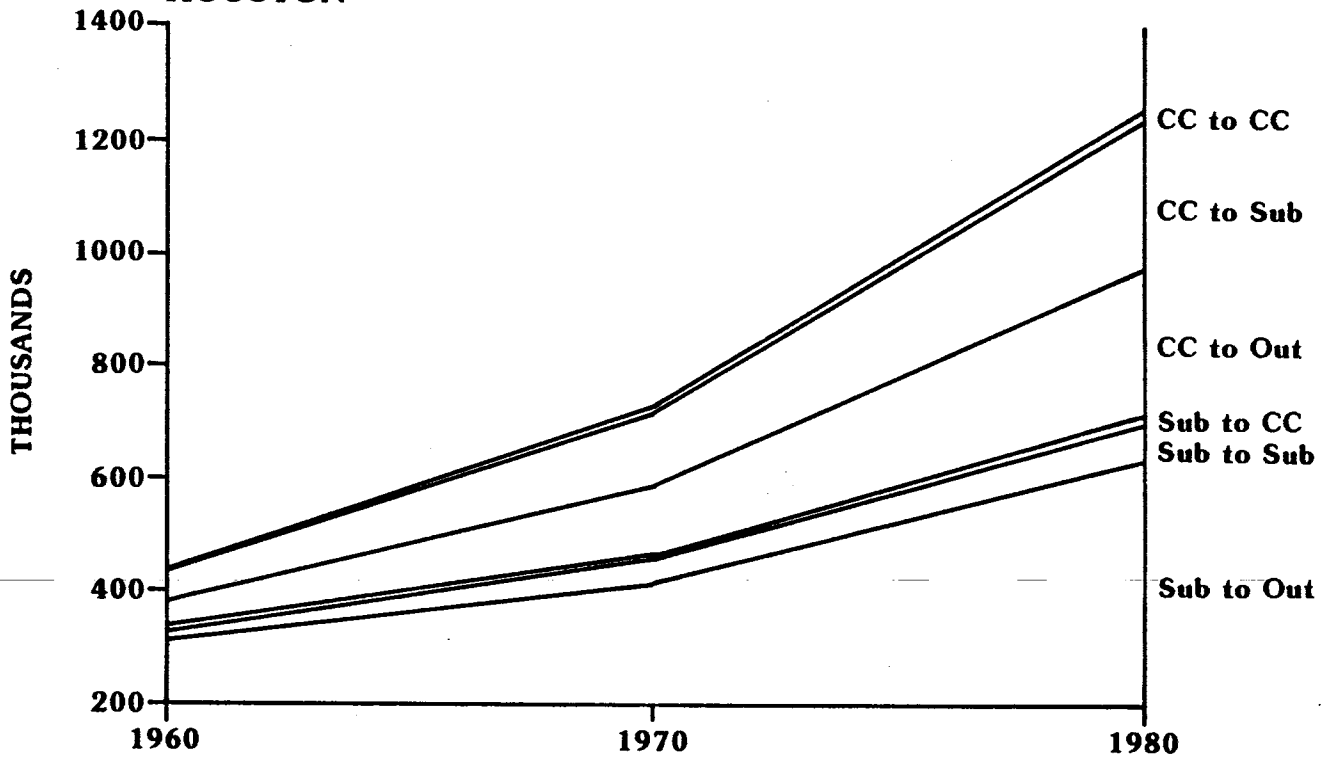


GAVLESTON-TEXAS CITY

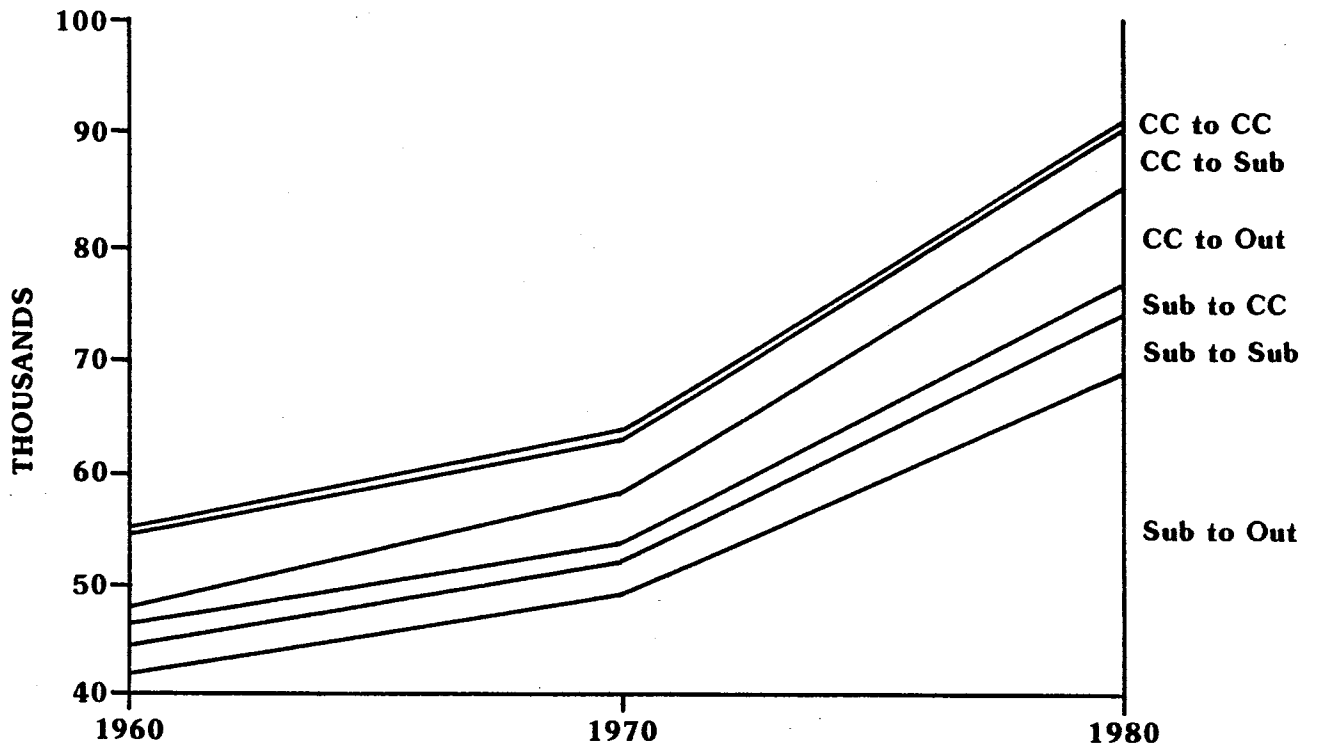


CC = Central City
 Sub = Suburb
 Out = Outside

HOUSTON

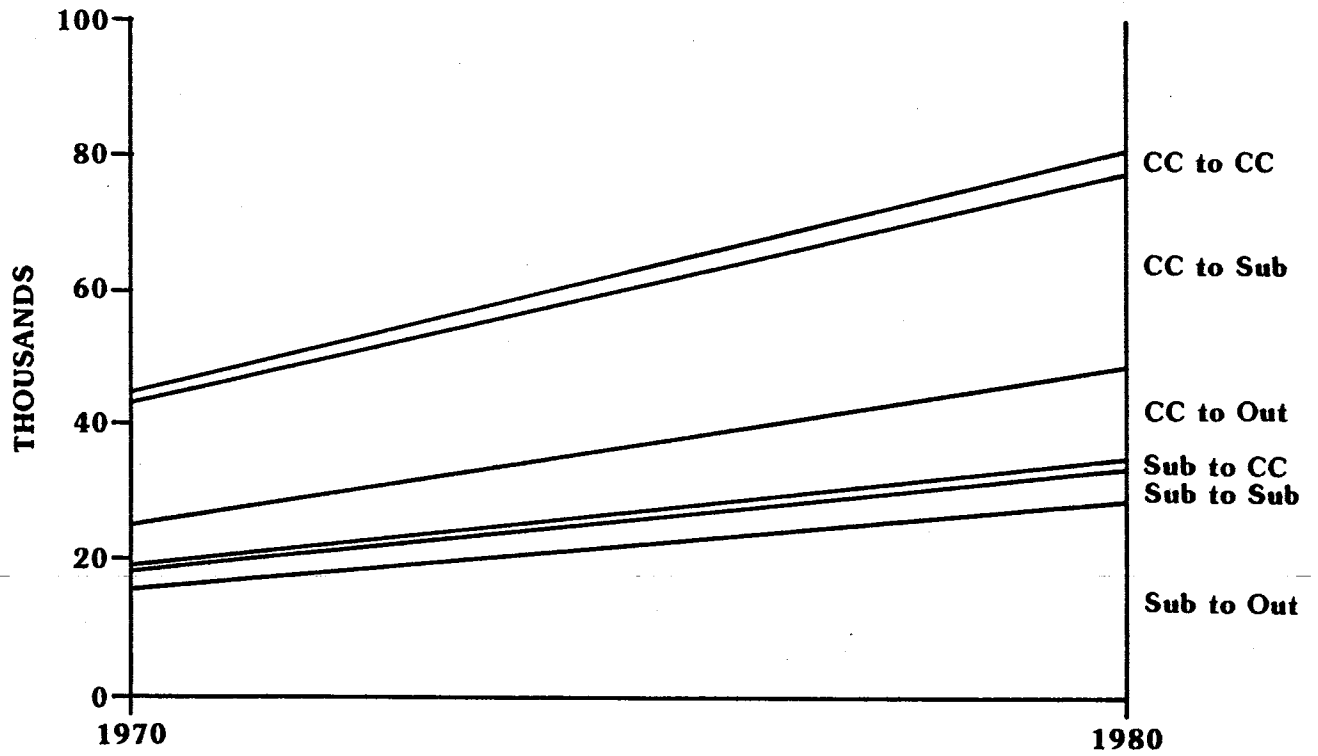


LUBBOCK

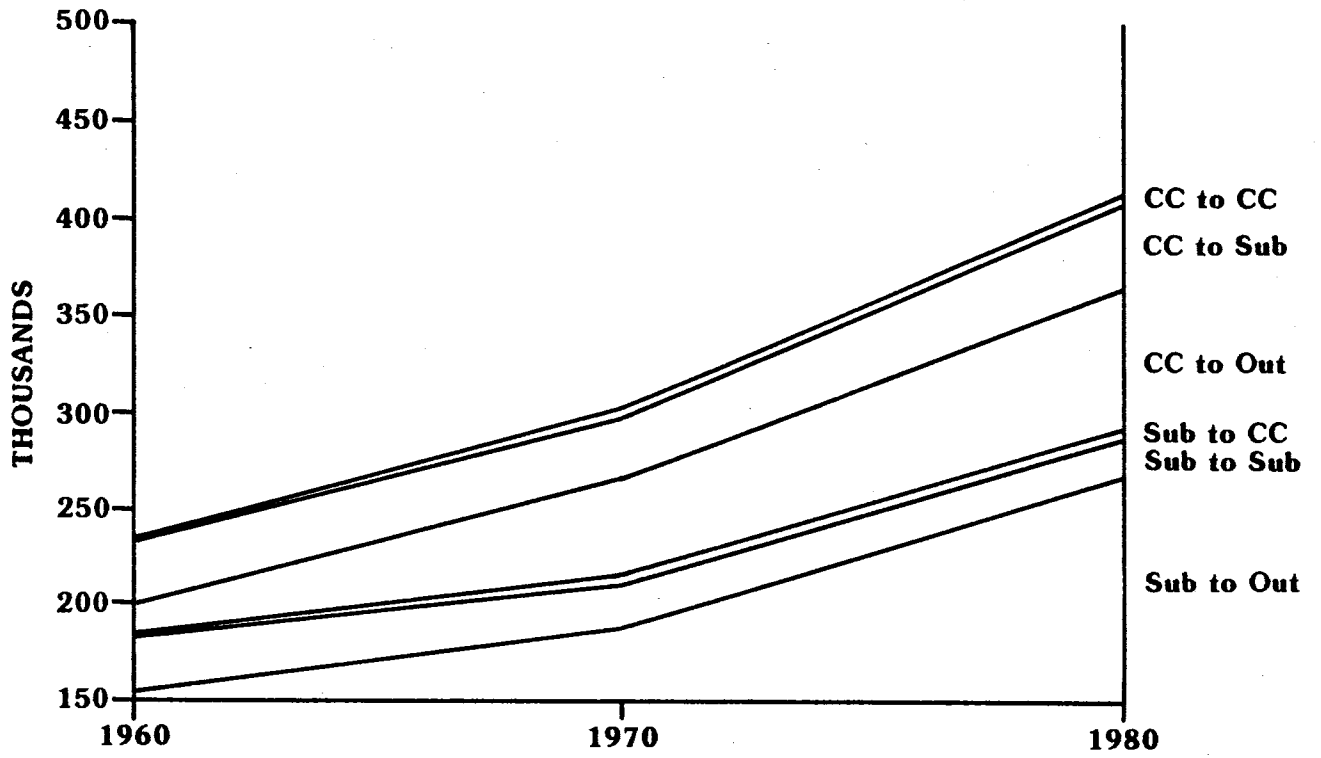


CC = Central City
Sub = Suburb
Out = Outside

MCALLEN-PHARR-EDINBURG

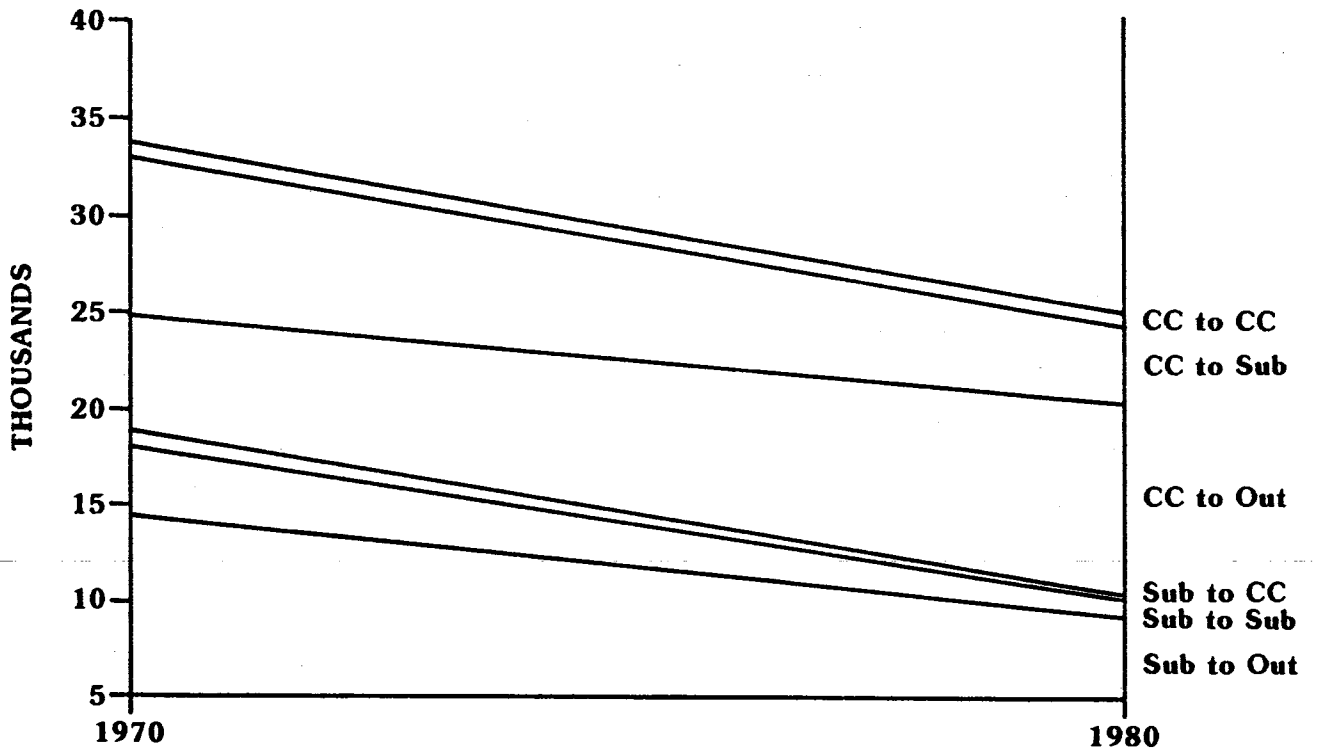


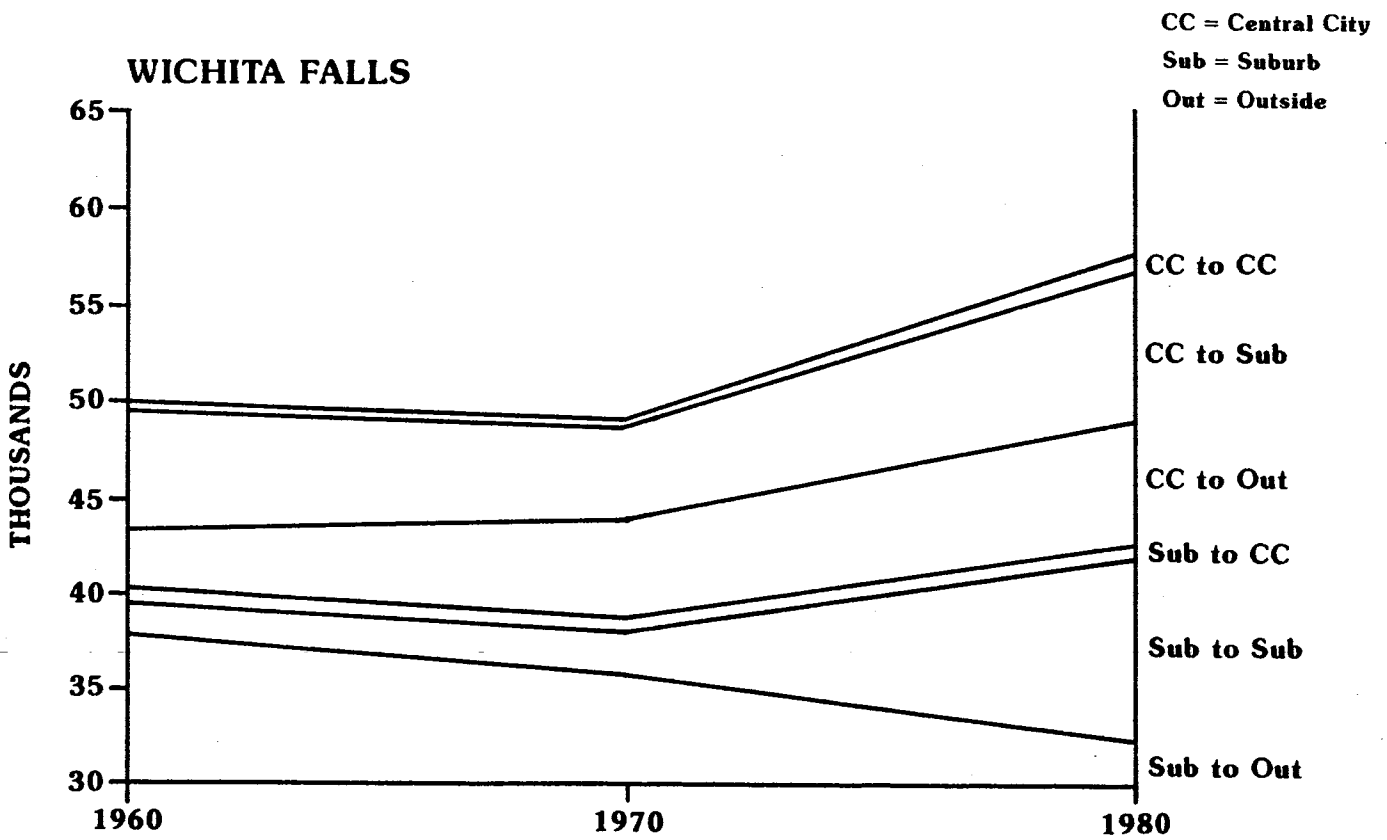
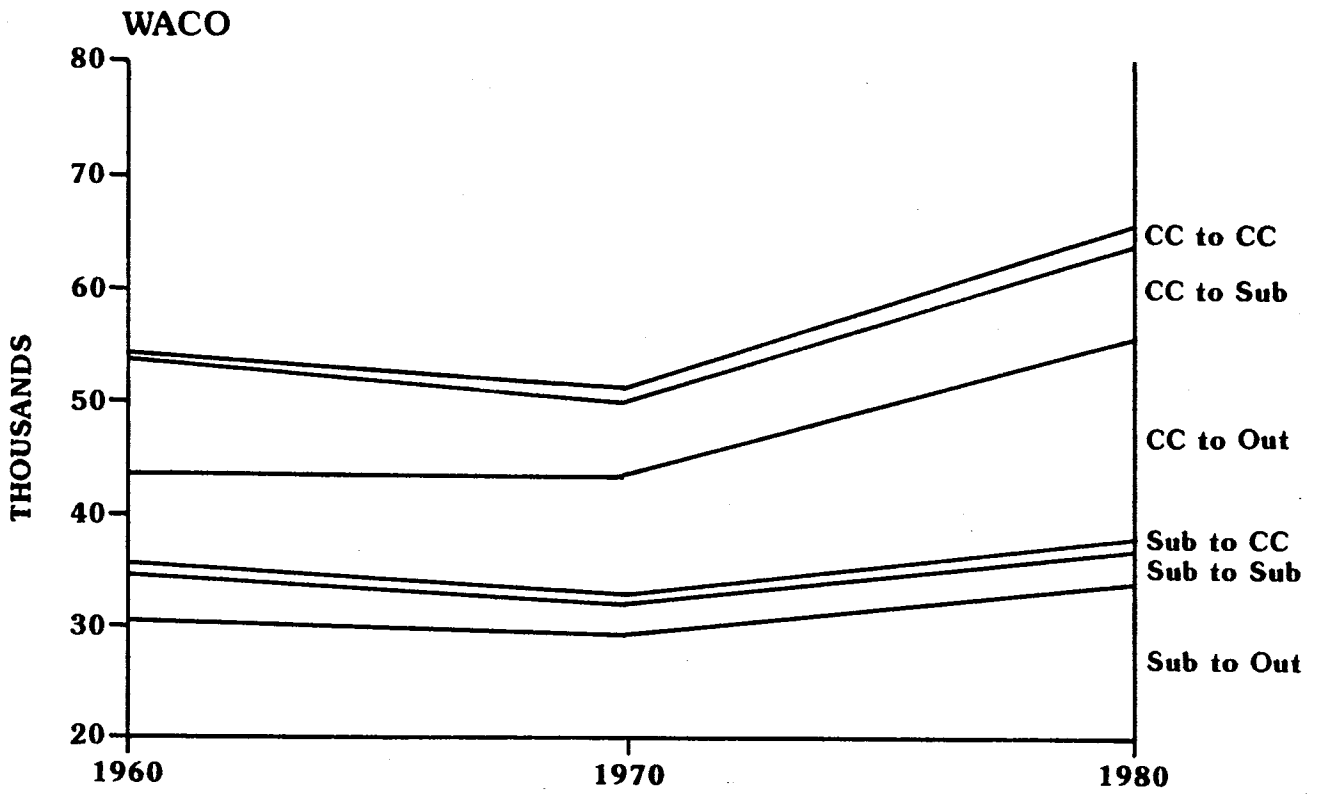
SAN ANTONIO



CC = Central City
 Sub = Suburb
 Out = Outside

TEXARKANA





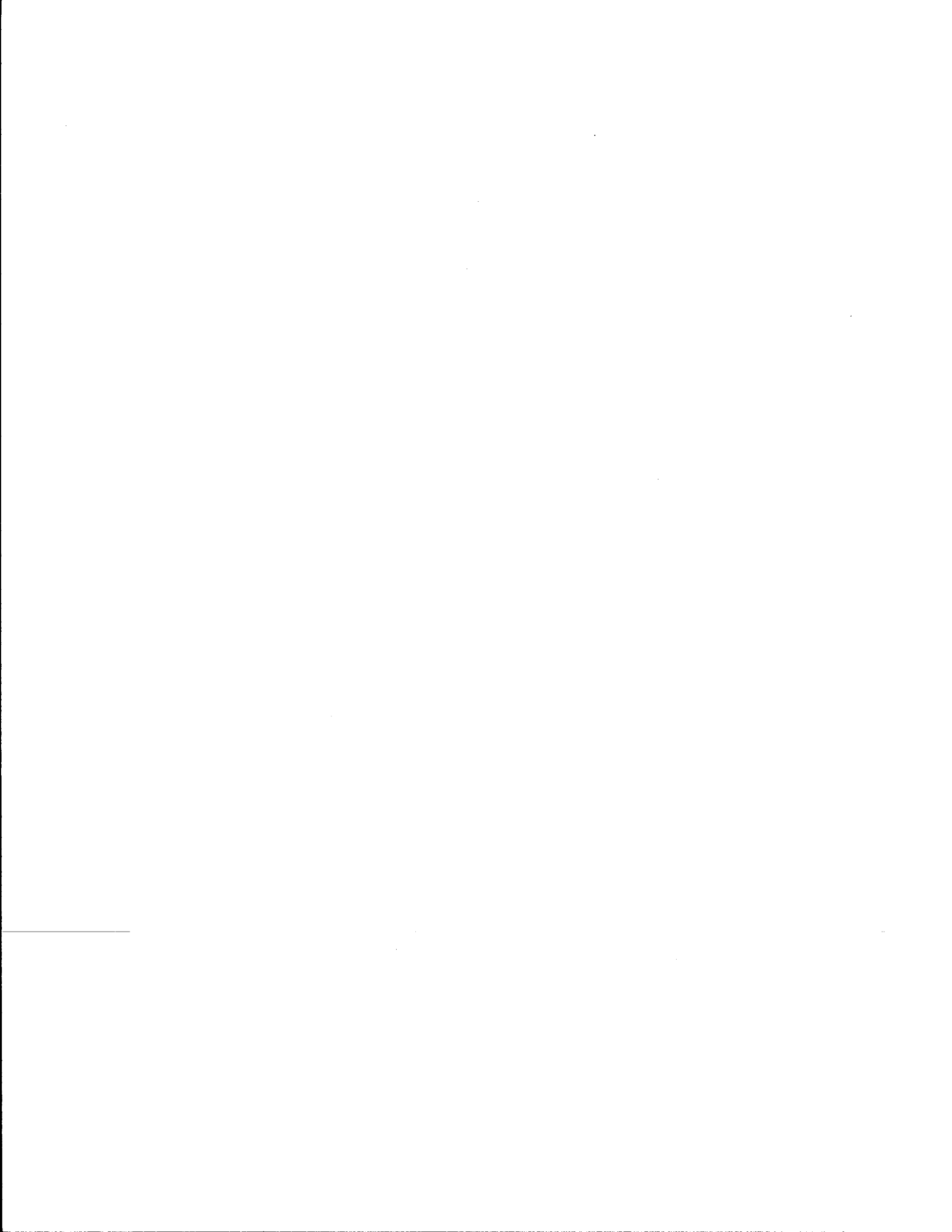


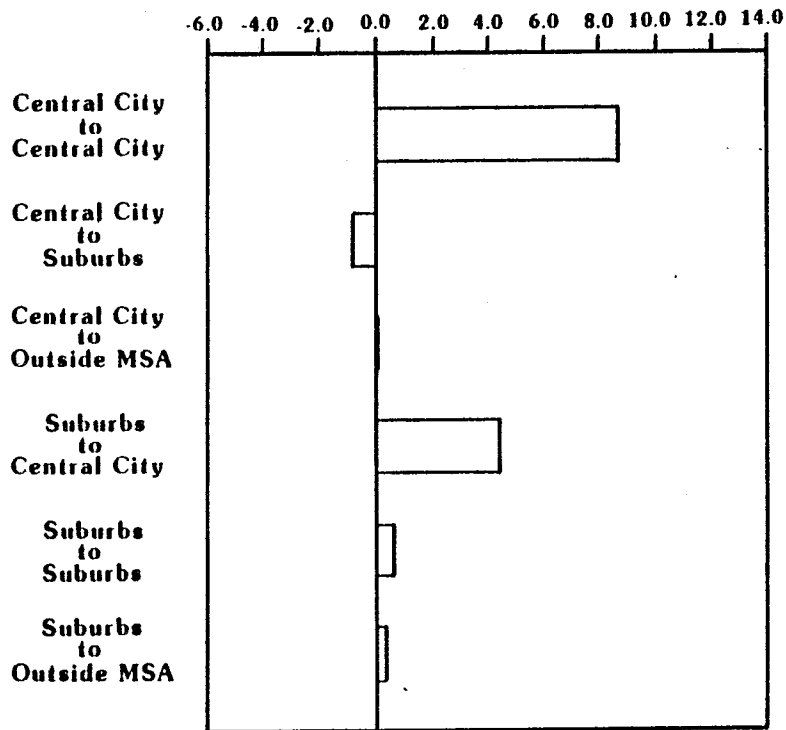
FIGURE B-3

**COMMUTER GROWTH, 1960-1980
FOR METROPOLITAN AREAS IN 1960**

COMMUTER GROWTH (1960 - 1980)

ABILENE

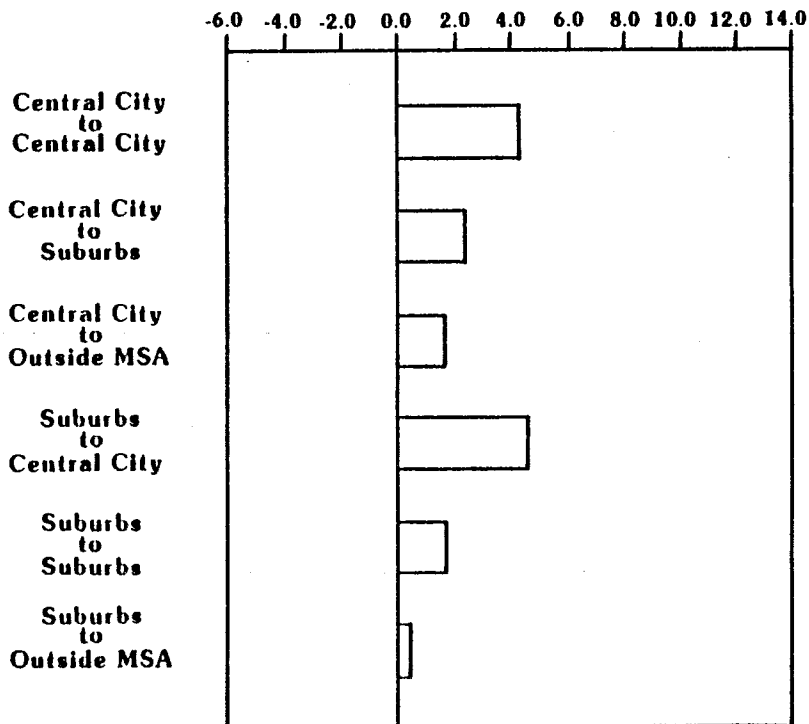
Thousands of Commuters



COMMUTER GROWTH (1960 - 1980)

AMARILLO

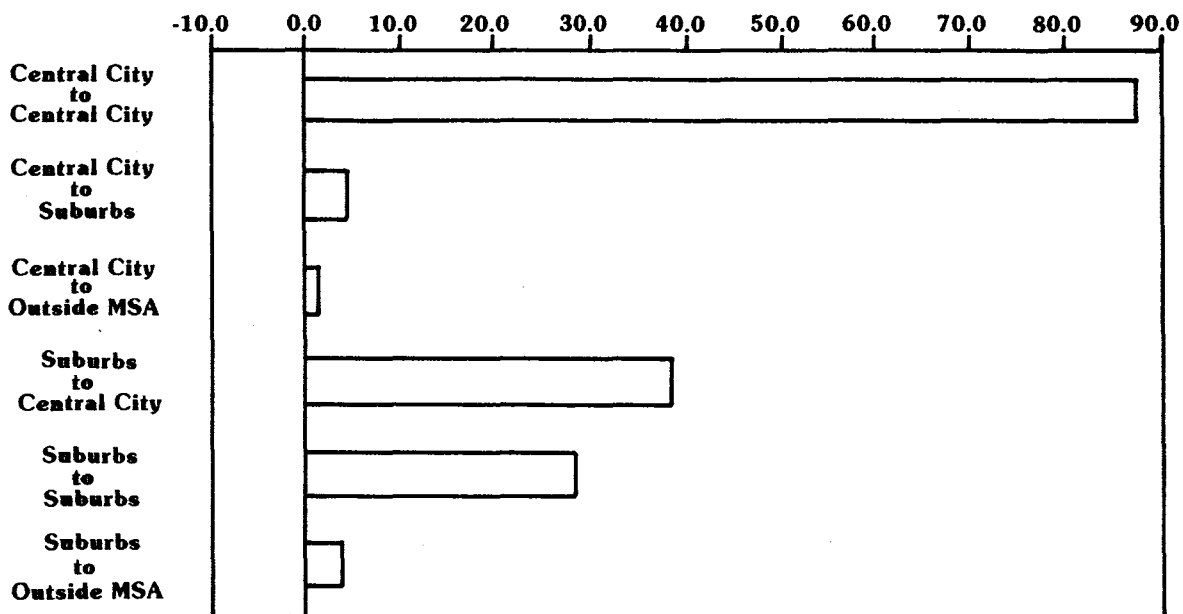
Thousands of Commuters



COMMUTER GROWTH (1960 - 1980)

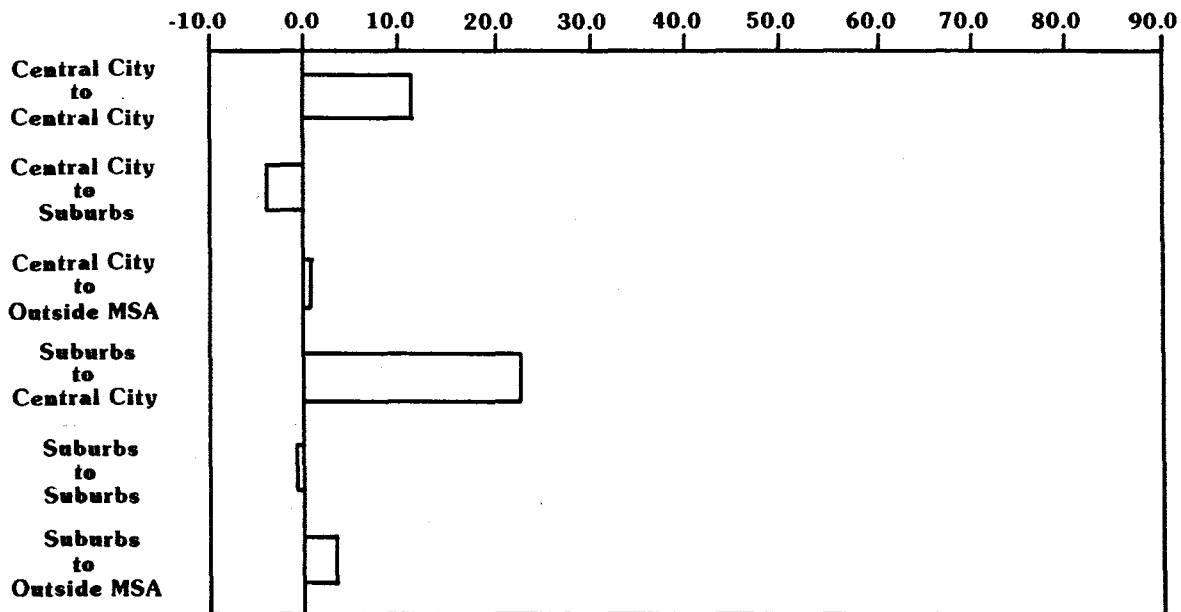
AUSTIN

Thousands of Commuters



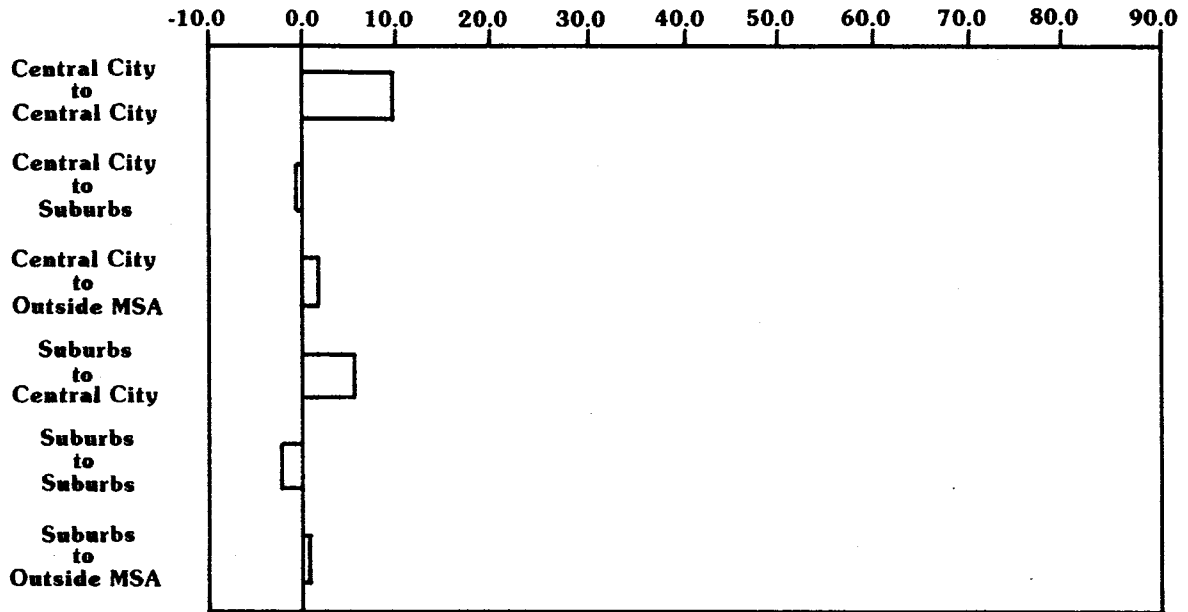
COMMUTER GROWTH (1960 - 1980) BEAUMONT - PORT ARTHUR - ORANGE

Thousands of Commuters



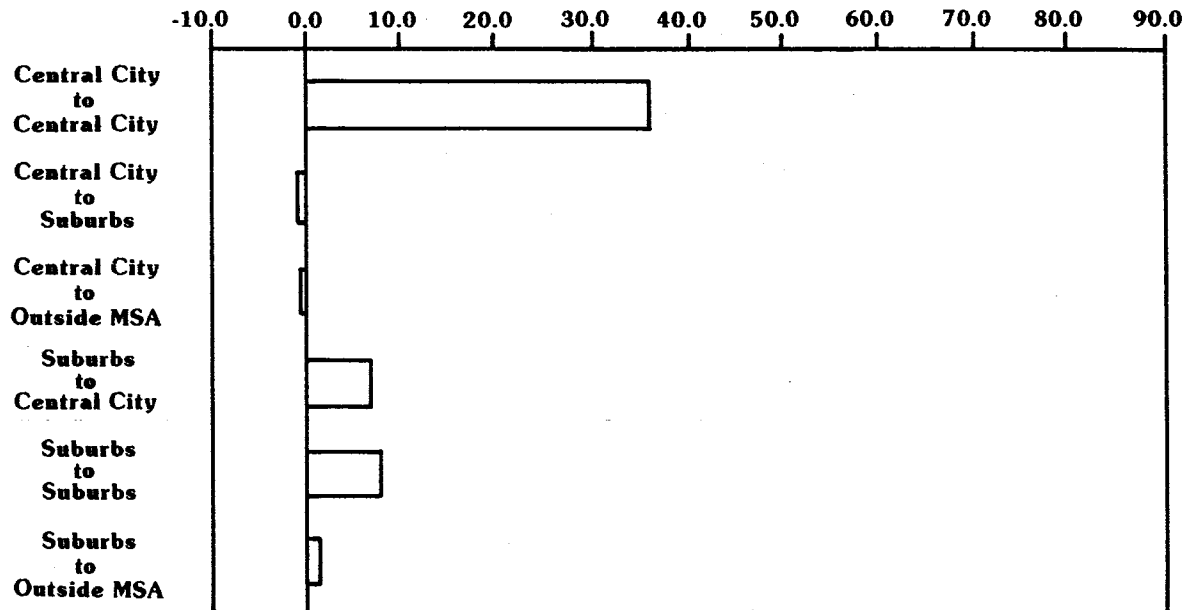
**COMMUTER GROWTH (1960 - 1980)
BROWNSVILLE - HARLINGEN - SAN BENITO**

Thousands of Commuters



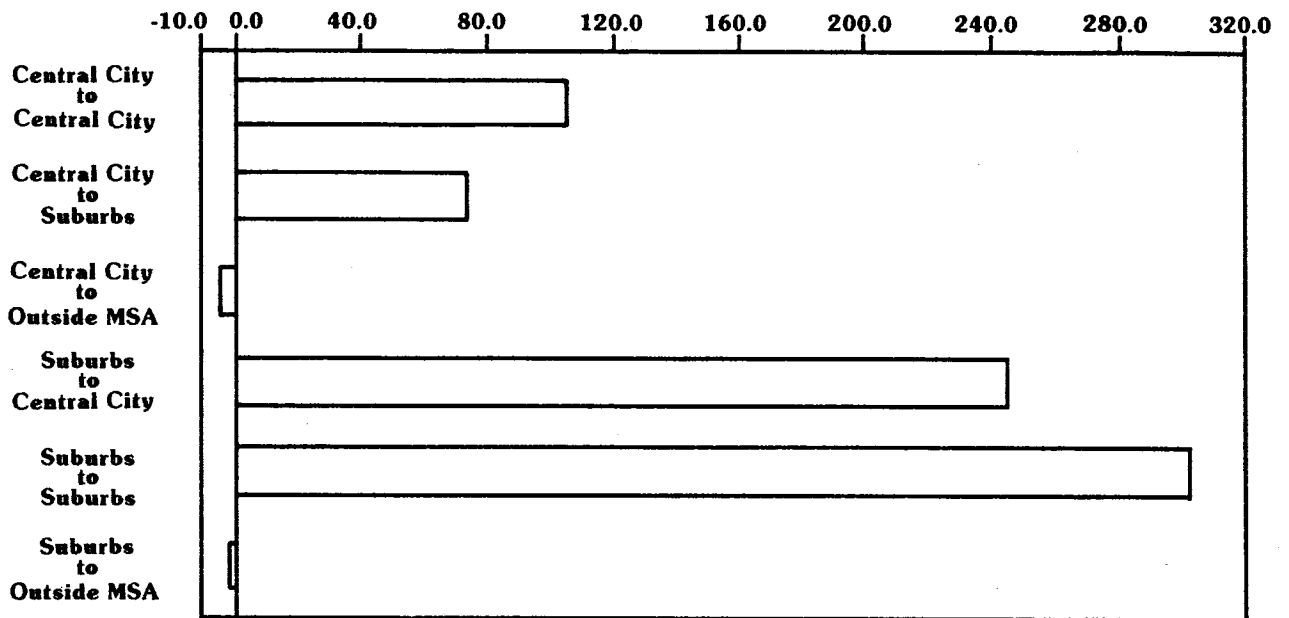
**COMMUTER GROWTH (1960 - 1980)
CORPUS CHRISTI**

Thousands of Commuters



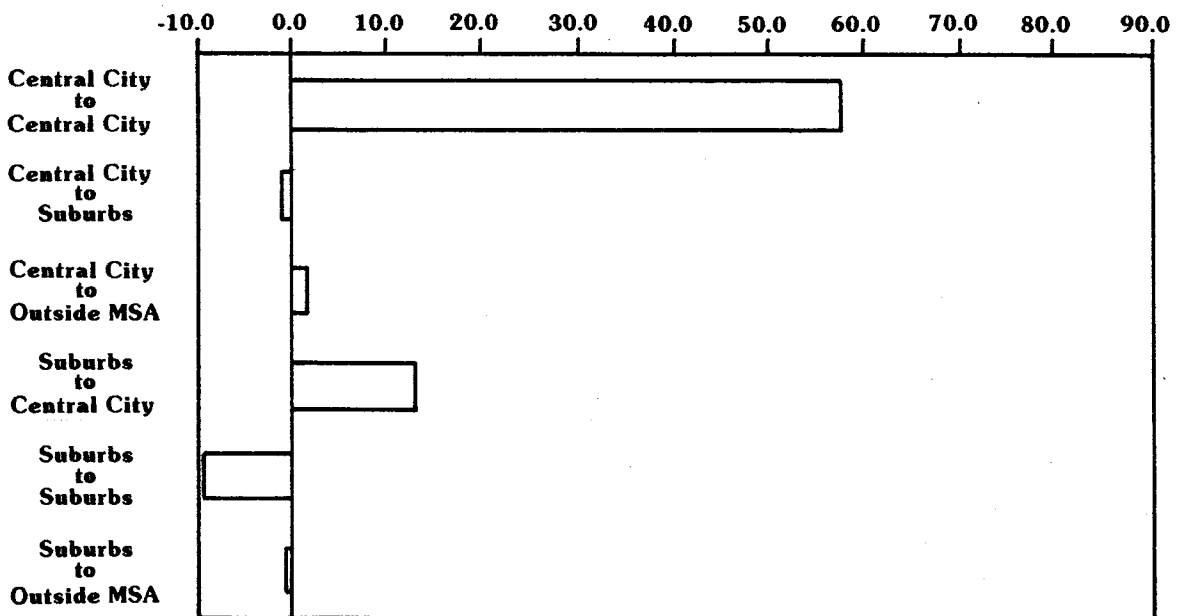
**COMMUTER GROWTH (1960 - 1980)
DALLAS - FORT WORTH**

Thousands of Commuters

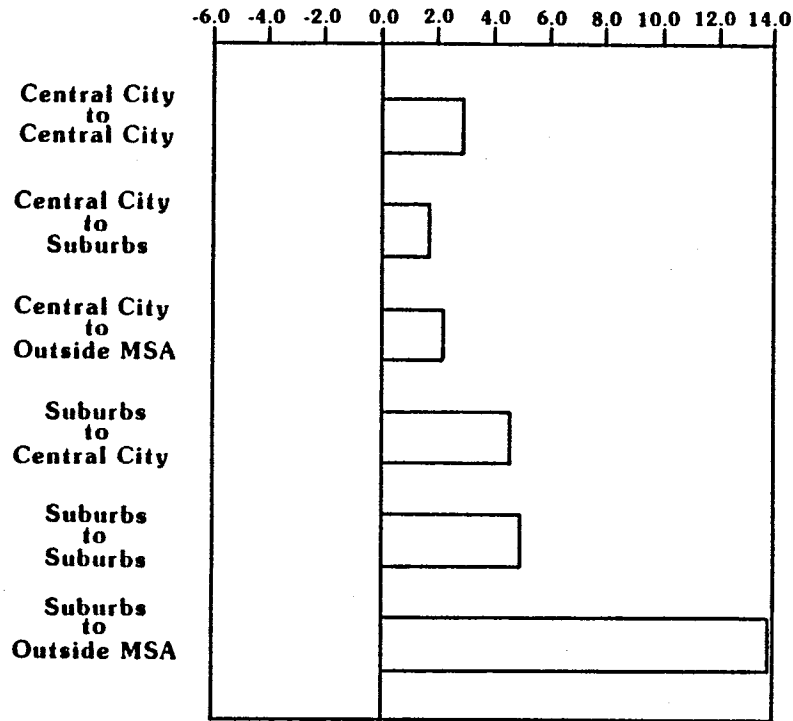


**COMMUTER GROWTH (1960 - 1980)
EL PASO**

Thousands of Commuters

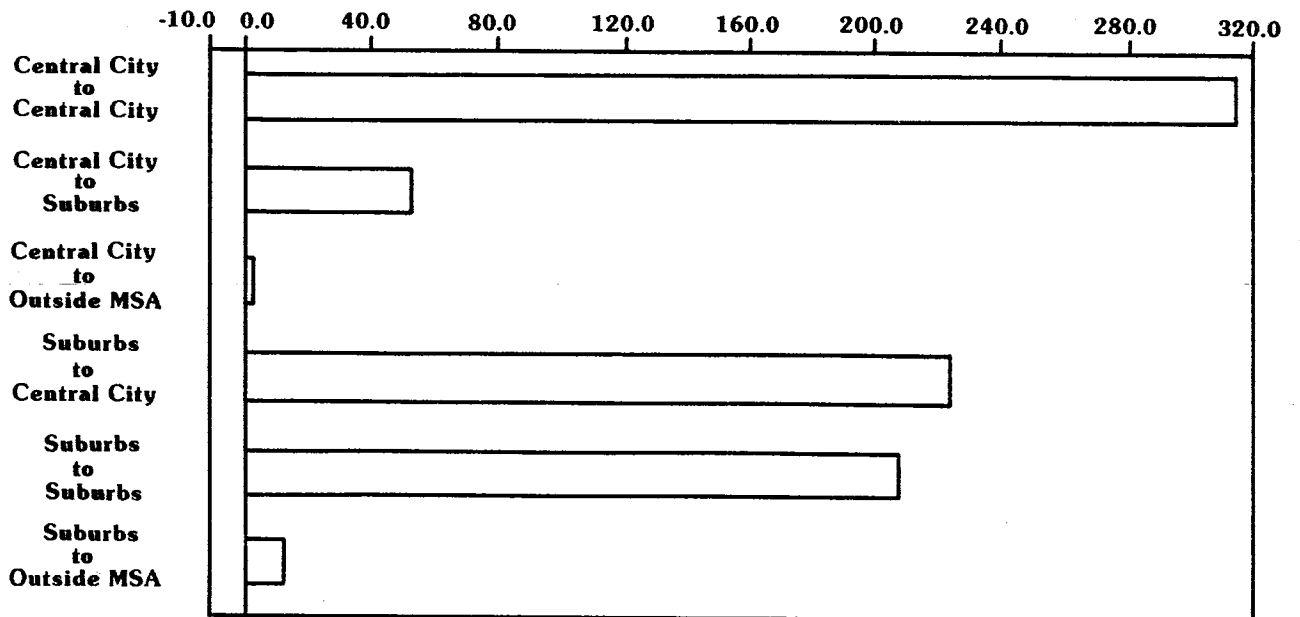


**COMMUTER GROWTH (1960 - 1980)
GALVESTON - TEXAS CITY
Thousands of Commuters**



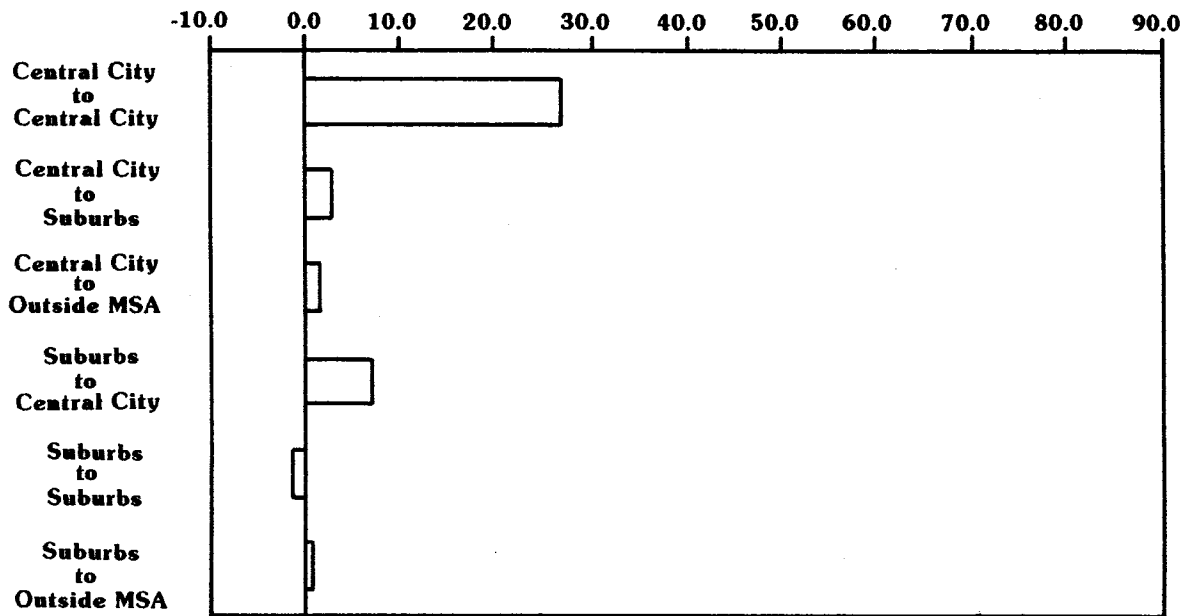
**COMMUTER GROWTH (1960 - 1980)
HOUSTON**

Thousands of Commuters



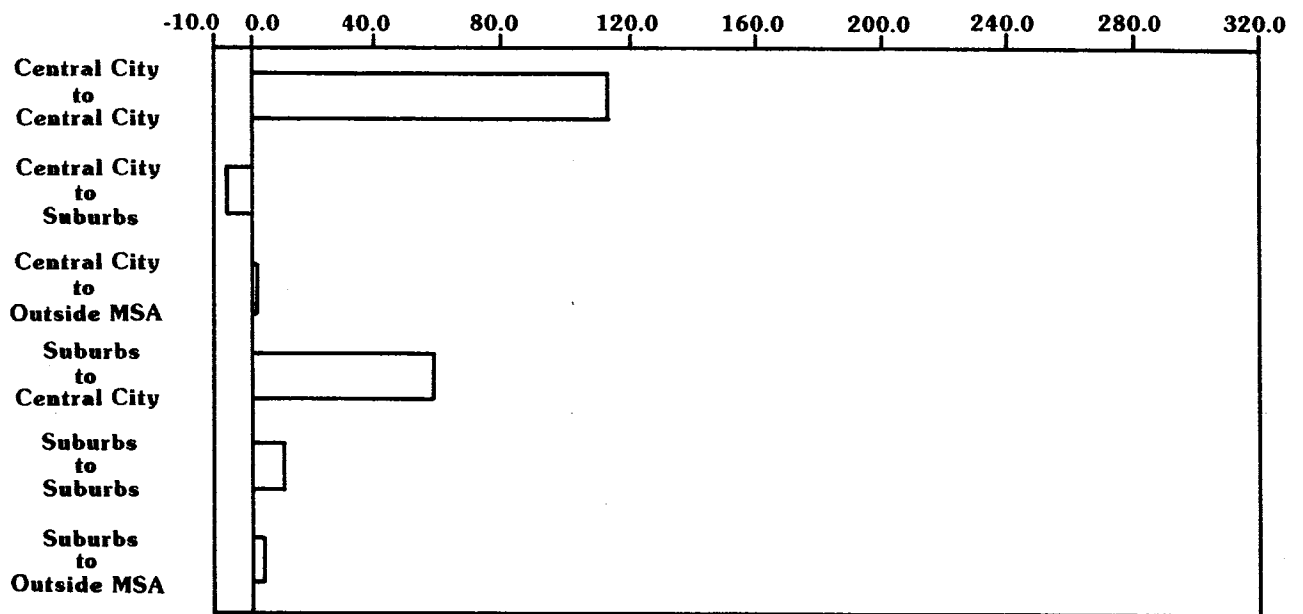
**COMMUTER GROWTH (1960 - 1980)
LUBBOCK**

Thousands of Commuters



**COMMUTER GROWTH (1970* - 1980)
MCALLEN - PHARR - EDINBURG**

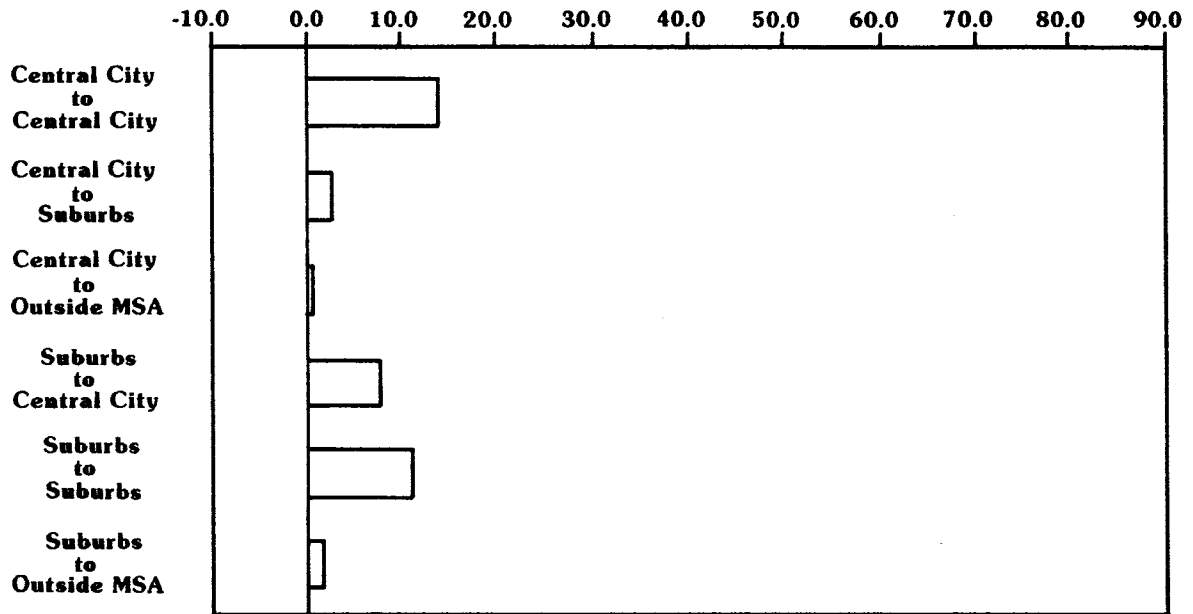
Thousands of Commuters



* 1960 Data Unavailable

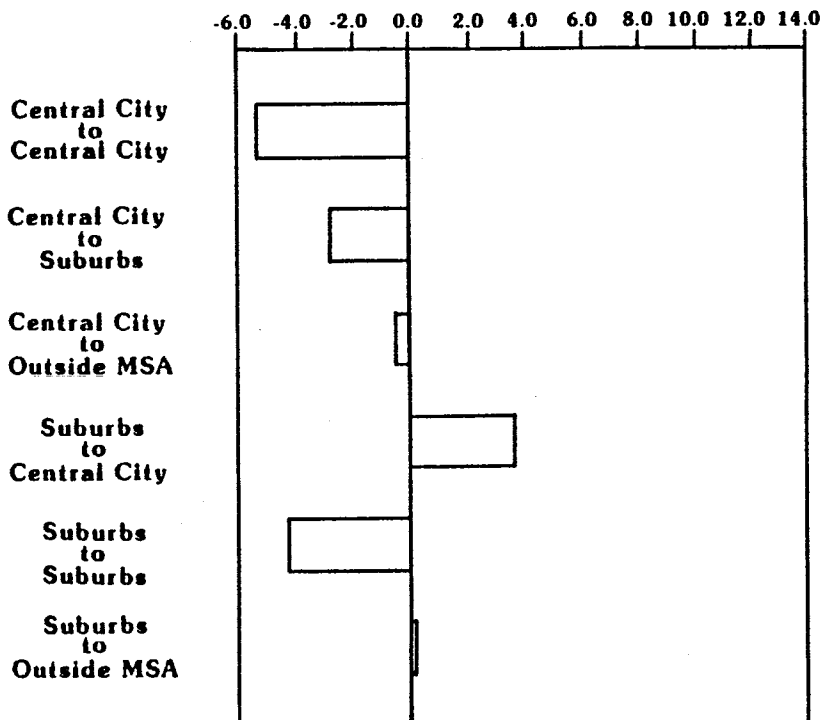
**COMMUTER GROWTH (1960 - 1980)
SAN ANTONIO**

Thousands of Commuters



**COMMUTER GROWTH (1970* - 1980)
TEXARKANA**

Thousands of Commuters

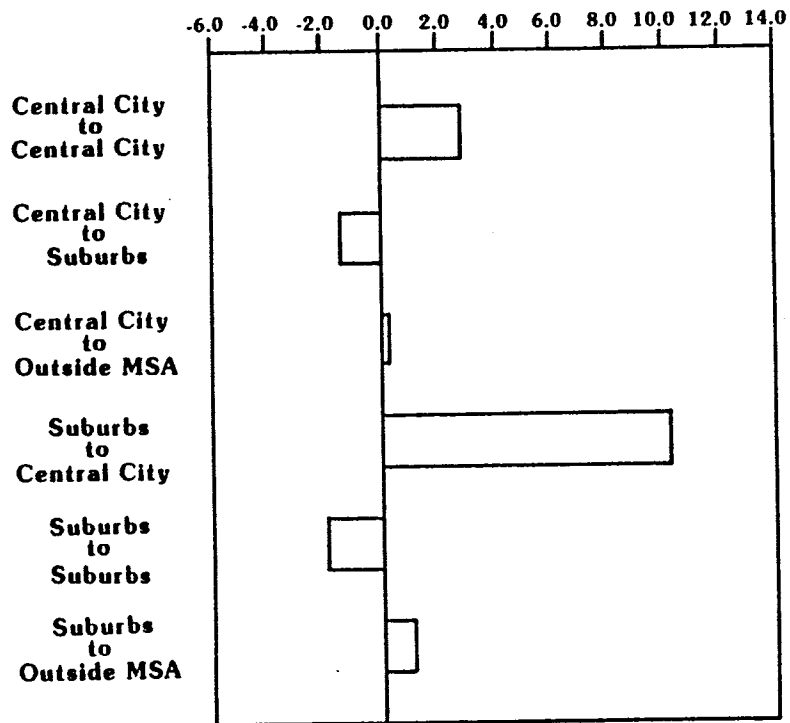


* 1960 Data Unavailable

COMMUTER GROWTH (1960 - 1980)

WACO

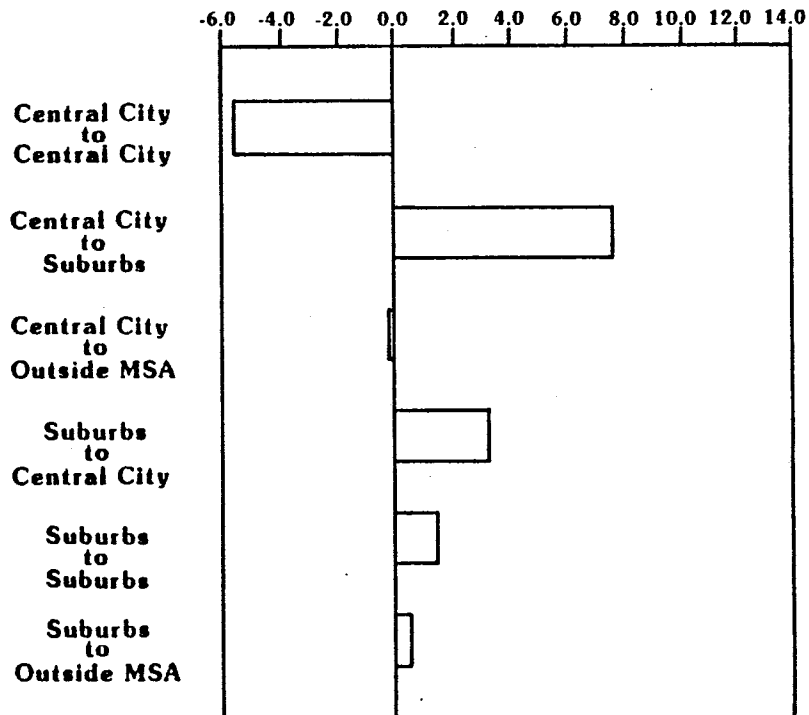
Thousands of Commuters



COMMUTER GROWTH (1960 - 1980)

WICHITA FALLS

Thousands of Commuters



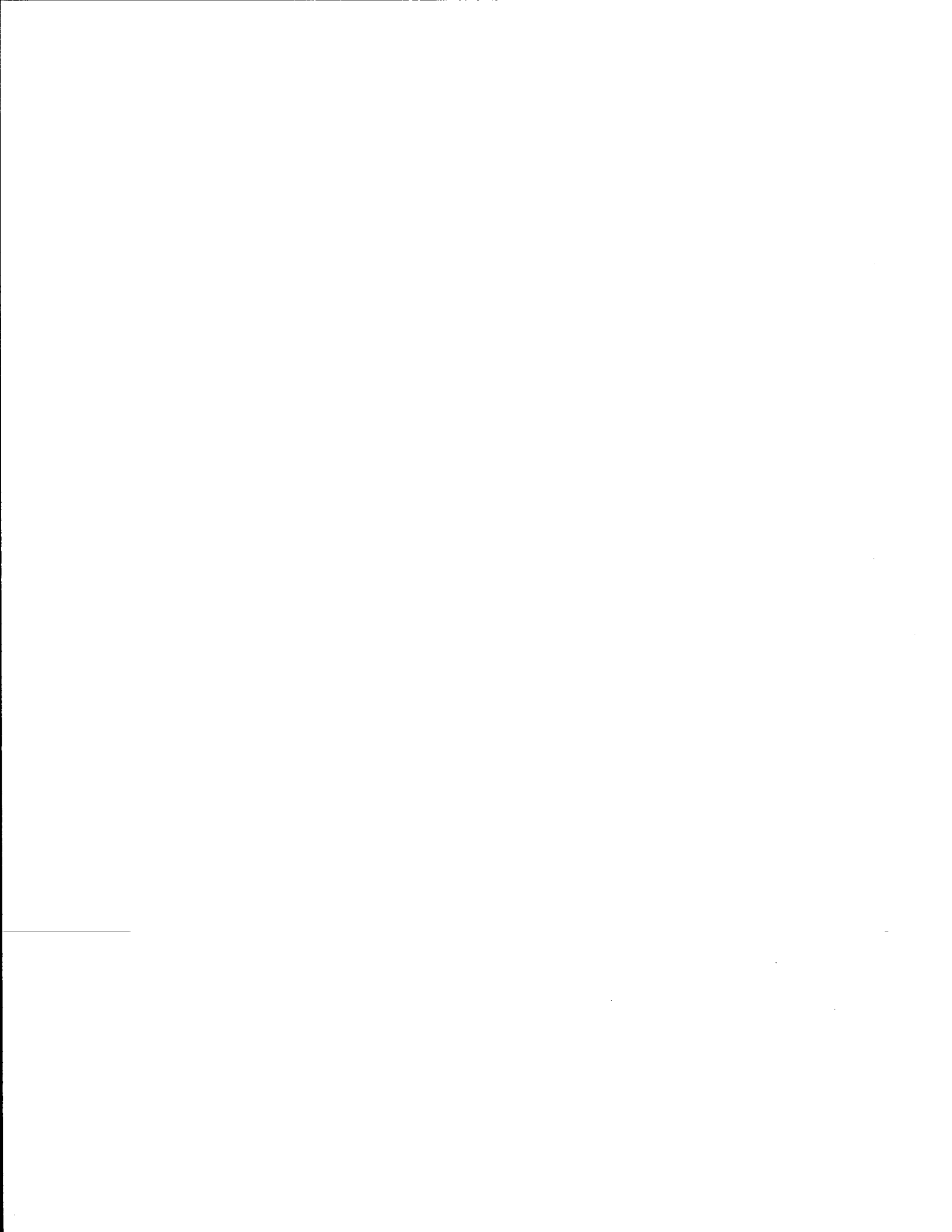


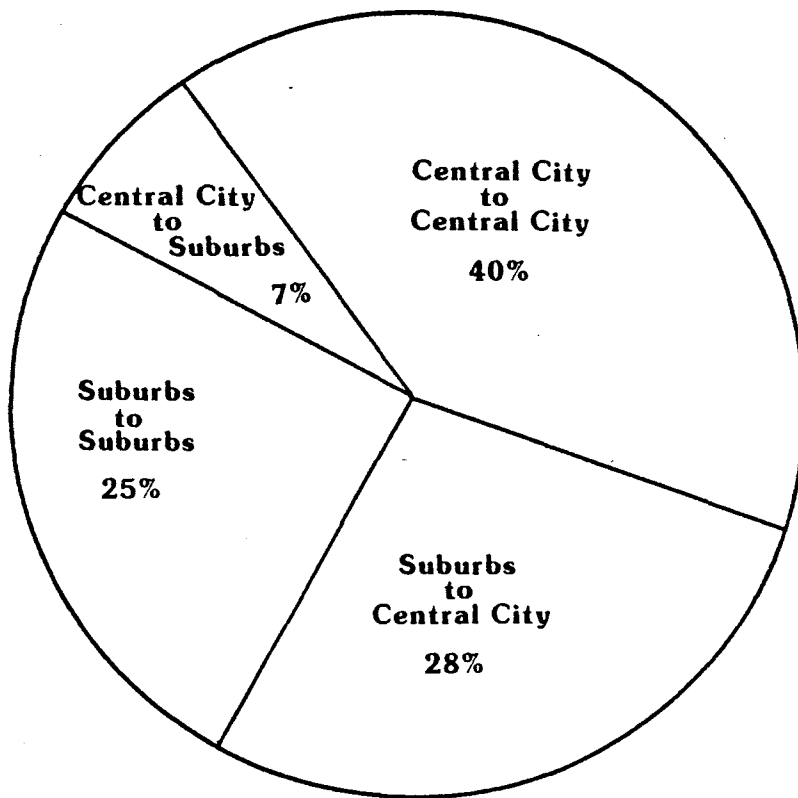
FIGURE B-4

**LOCATION OF COMMUTER GROWTH, 1960 TO 1980
FOR METROPOLITAN AREAS IN 1960**

Shares of the Total Increase in Commuters
by Market, 1960-1980

Texas Metropolitan

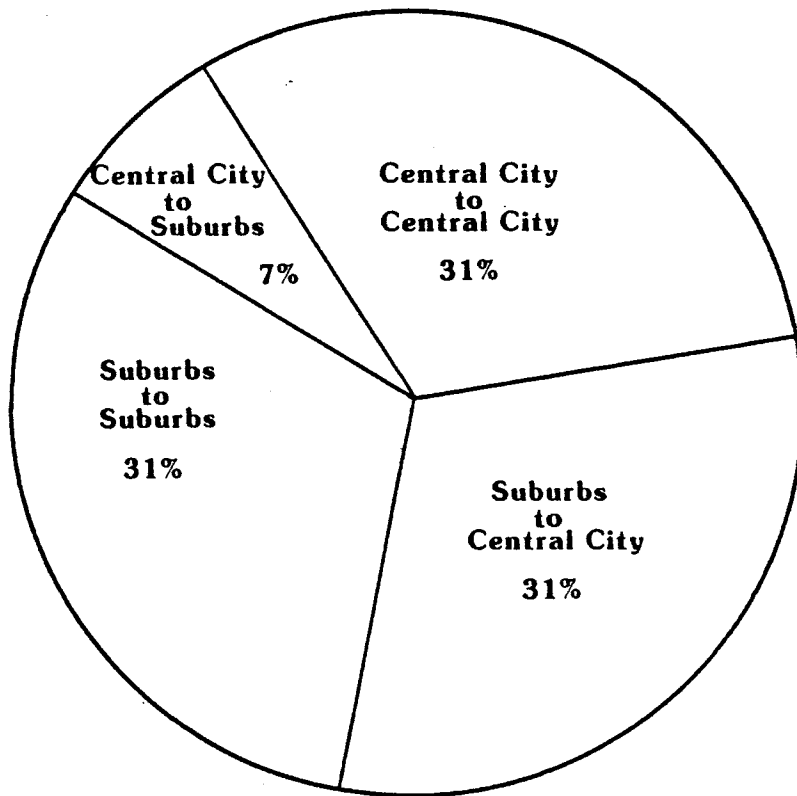
From	To		Total
	Central City	Suburbs	
Central City	40%	7%	47%
Suburbs	28%	25%	53%
Total	68%	32%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Large Texas MSAs

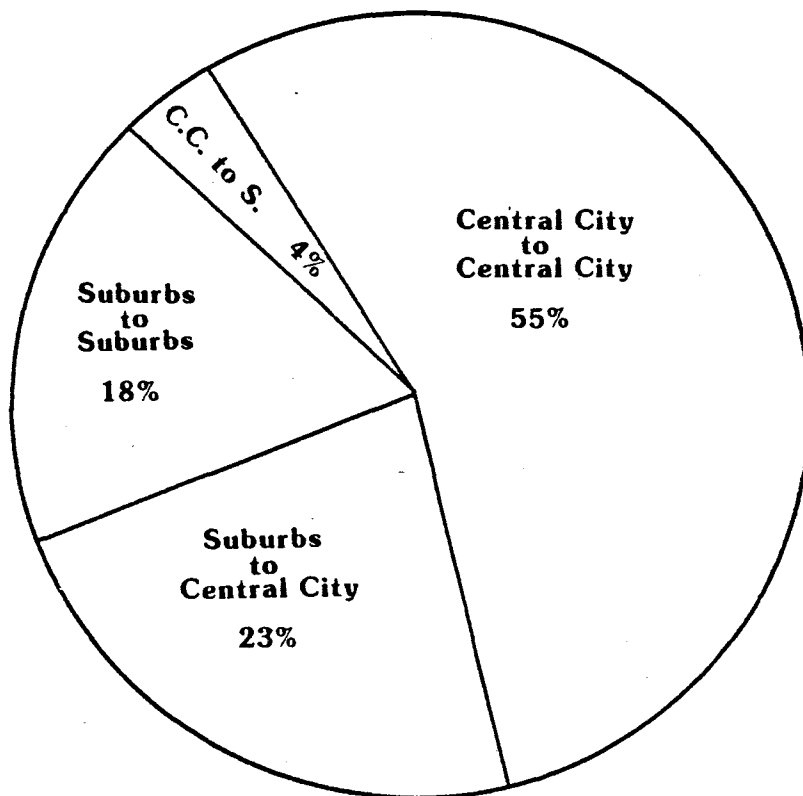
From	To		Total
	Central City	Suburbs	
Central City	31%	7%	38%
Suburbs	31%	31%	62%
Total	62%	38%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Medium Texas MSAs

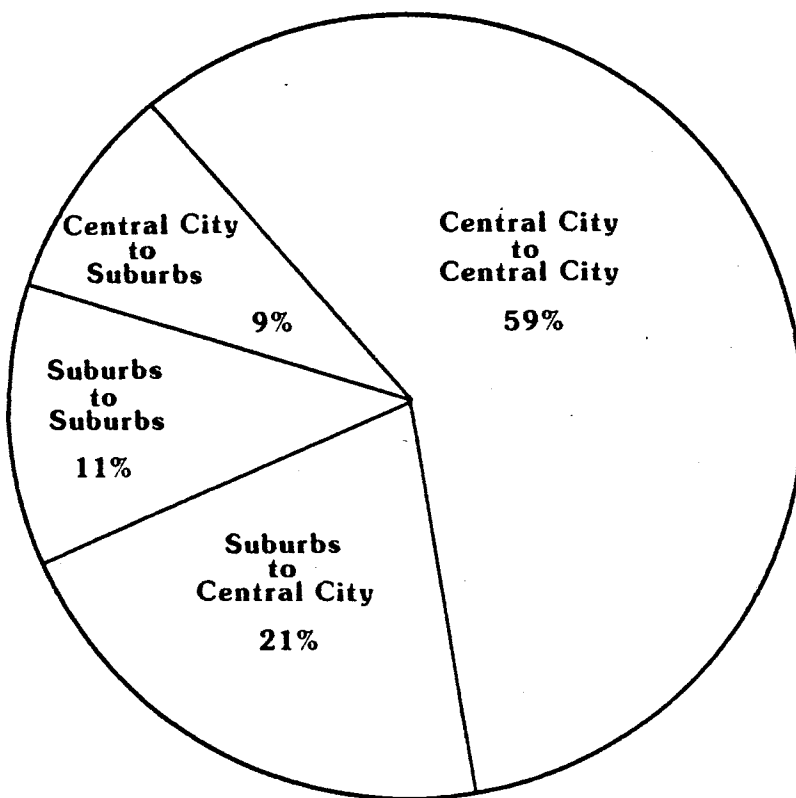
From	To		Total
	Central City	Suburbs	
Central City	55%	4%	59%
Suburbs	23%	18%	41%
Total	78%	22%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Small Texas MSAs

From	To		Total
	Central City	Suburbs	
Central City	59%	9%	68%
Suburbs	21%	11%	32%
Total	80%	20%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Abilene

From	To		Total
	Central City	Suburbs	
Central City	67%	-6%	61%
Suburbs	35%	4%	39%
Total	102%	-2%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

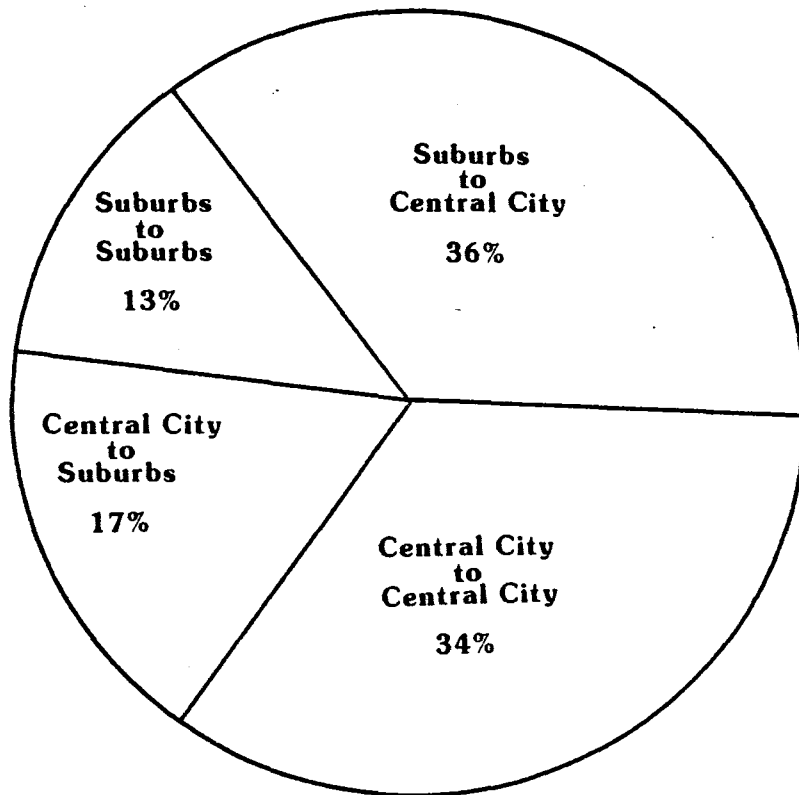
Beaumont-Port Arthur-Orange

From	To		Total
	Central City	Suburbs	
Central City	40%	-13%	27%
Suburbs	76%	-3%	73%
Total	116%	-16%	100%

Shares of the Total Increase in Commuters
By Market, 1960-1980

Amarillo

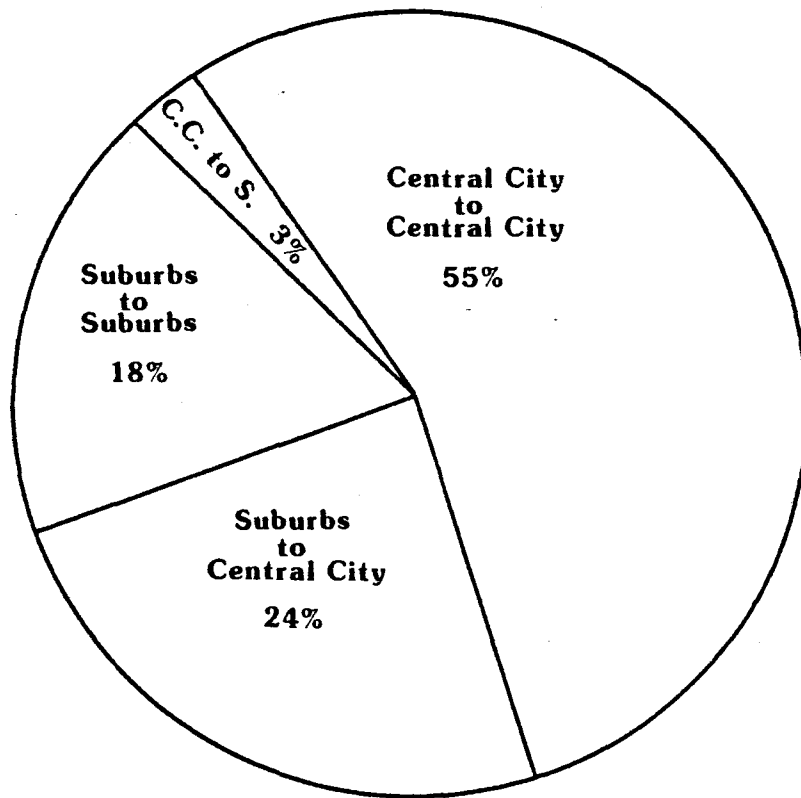
From	To		Total
	Central City	Suburbs	
Central City	34%	17%	51%
Suburbs	36%	13%	49%
Total	70%	30%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Austin

From	To		Total
	Central City	Suburbs	
Central City	55%	3%	58%
Suburbs	24%	18%	42%
Total	79%	21%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Brownsville-Harlingen-San Benito

From	To		Total
	Central City	Suburbs	
Central City	79%	-2%	77%
Suburbs	43%	-20%	23%
Total	122%	-22%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

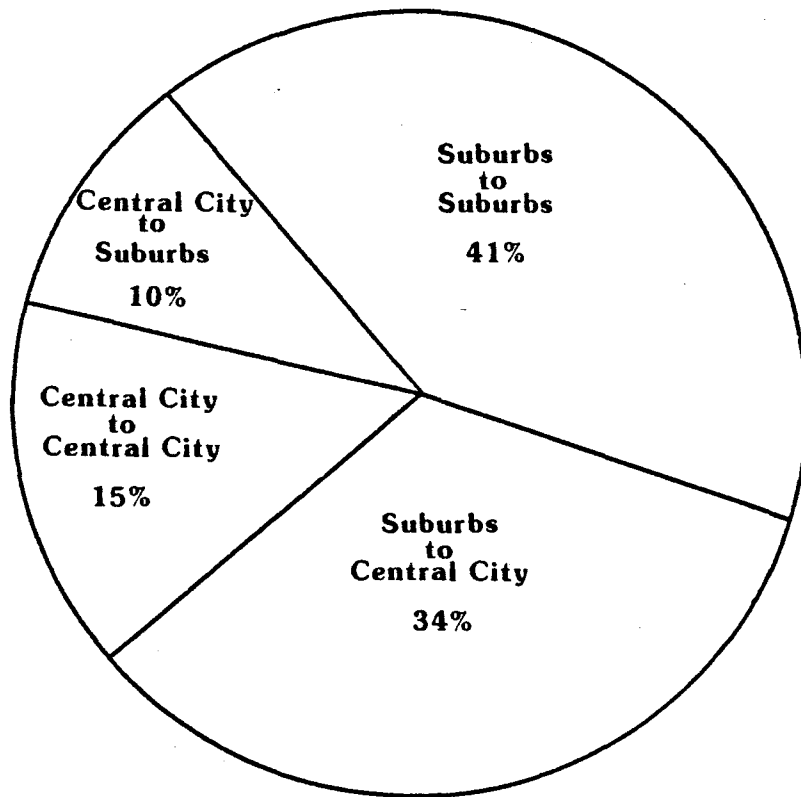
Corpus Christi

From	To		Total
	Central City	Suburbs	
Central City	73%	-1%	72%
Suburbs	13%	15%	28%
Total	86%	14%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

Dallas-Ft. Worth

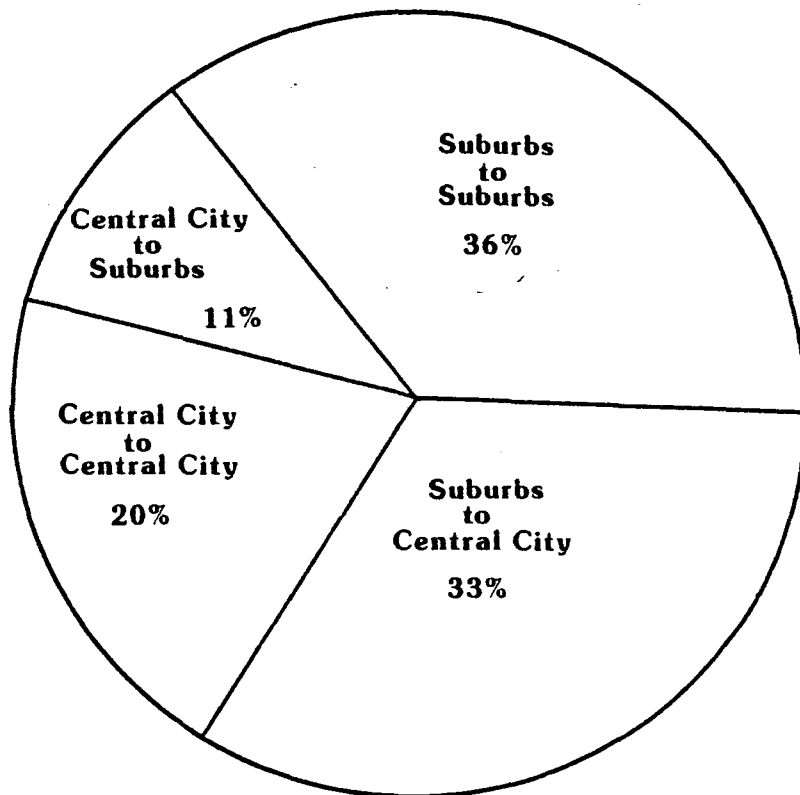
From	To		Total
	Central City	Suburbs	
Central City	15%	10%	25%
Suburbs	34%	41%	75%
Total	49%	51%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

Galveston-Texas City

From	To		Total
	Central City	Suburbs	
Central City	20%	11%	31%
Suburbs	33%	36%	69%
Total	53%	47%	100%



Shares of the Total Increase in Commuters
by Market, 1960-1980

El Paso

From	To		Total
	Central City	Suburbs	
Central City	95%	-1%	94%
Suburbs	22%	-16%	6%
Total	117%	-17%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

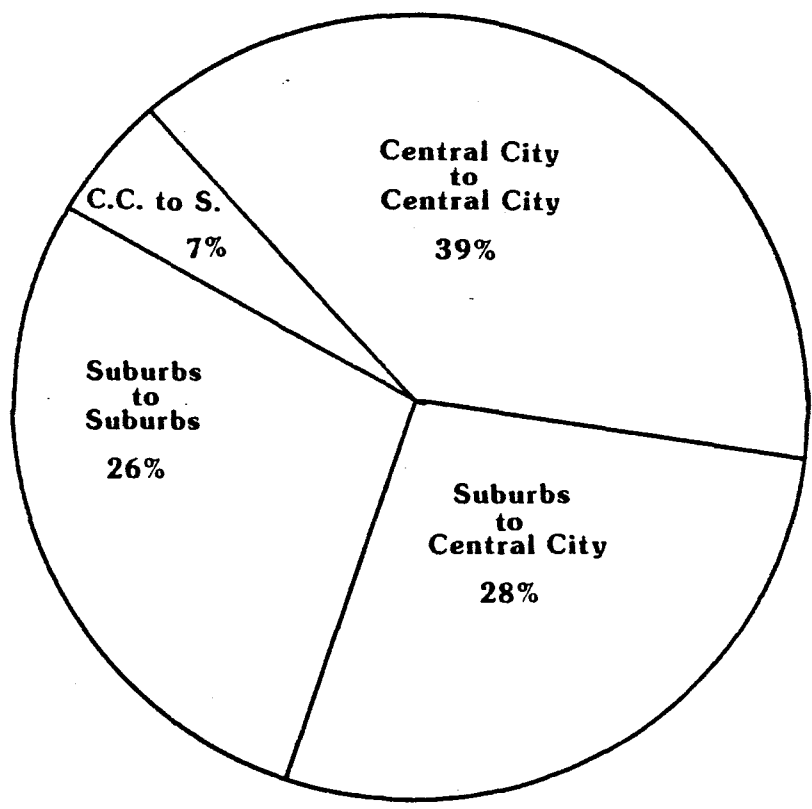
Lubbock

From	To		Total
	Central City	Suburbs	
Central City	78%	7%	85%
Suburbs	20%	-5%	15%
Total	98%	2%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

Houston

From	To		Total
	Central City	Suburbs	
Central City	39%	7%	46%
Suburbs	28%	26%	54%
Total	67%	33%	100%

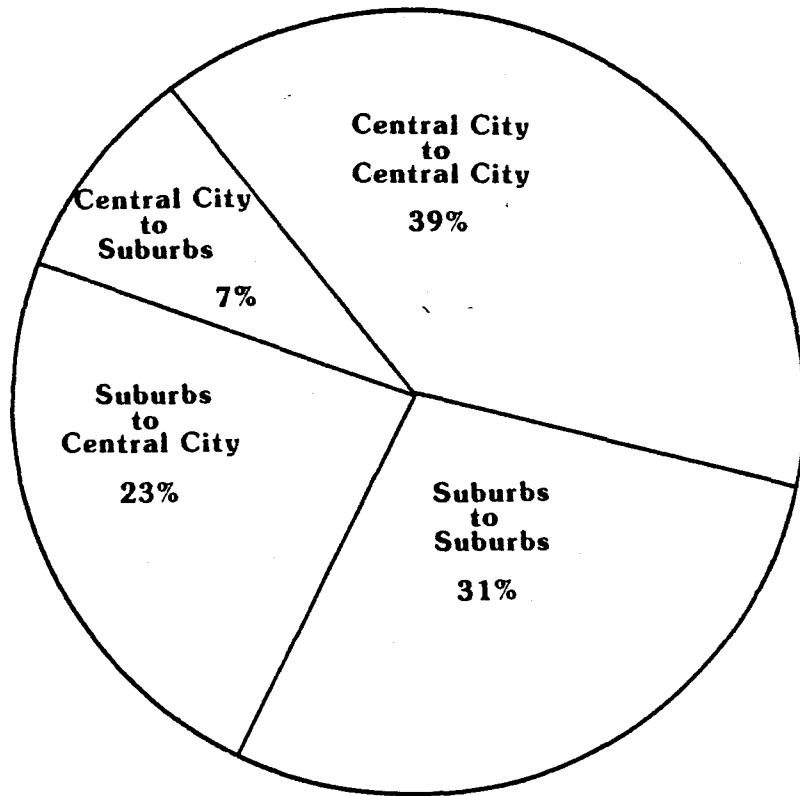


Shares of the Total Increase in Commuters
by Market, 1970-1980*

McAllen-Pharr-Edinburg

From	To		Total
	Central City	Suburbs	
Central City	39%	7%	46%
Suburbs	23%	31%	54%
Total	62%	38%	100%

*1960 Data Not Provided



Shares of the Total Increase in Commuters
by Market, 1960-1980

San Antonio

From	To		Total
	Central City	Suburbs	
Central City	65%	-5%	60%
Suburbs	34%	6%	40%
Total	99%	1%	100%

Shares of the Total Increase in Commuters
by Market, 1970-1980

Texarkana*

From	To		Total
	Central City	Suburbs	
Central City	64%	32%	96%
Suburbs	-45%	49%	4%
Total	19%	81%	100%

*1960 Data Not Provided

Shares of the Total Increase in Commuters
by Market, 1960-1980

Waco

From	To		Total
	Central City	Suburbs	
Central City	28%	-14%	14%
Suburbs	107%	-21%	86%
Total	135%	-35%	100%

Shares of the Total Increase in Commuters
by Market, 1960-1980

Wichita Falls

From	To		Total
	Central City	Suburbs	
Central City	-80%	113%	33%
Suburbs	46%	21%	67%
Total	-34%	134%	100%

The areas of Bryan-College Station, Killeen-Temple, Laredo, Longview-Marshall, Midland, Odessa, San Angelo, Sherman-Denison, Tyler and Victoria were not Metropolitan Statistical Areas in 1960. No commuter market share information was available.

APPENDIX C
COMMUTER MODE AND TRAVEL TIME

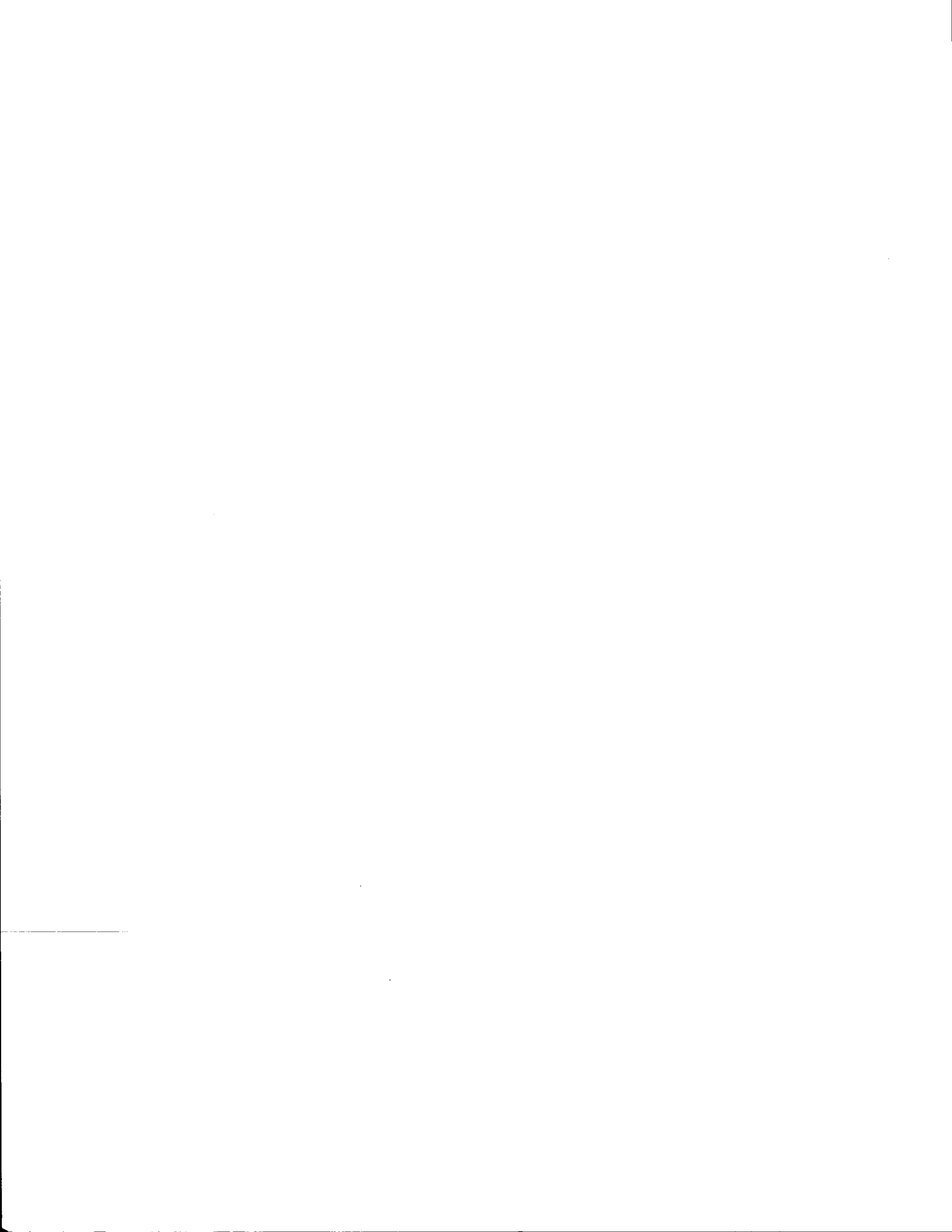


Table C-1. Metropolitan Modal Shares, 1980

Classification	Total Workers (1000s)	-----Private Vehicle-----			Public	Other
		Total	Drive Alone	Group		
Texas Metropolitan	4,696	91	70	21	3	6
Small Texas MSAs	715	92	73	19	1	7
Medium Texas MSAs	986	89	68	21	2	9
Large Texas MSAs	2,995	91	70	21	3	6
<u>Metropolitan Area</u>						
Abilene	63	91	75	16	0	9
Amarillo	82	93	73	20	1	6
Austin	260	89	69	20	3	8
Beaumont-Port Arthur-Orange	149	94	72	22	1	5
Brownsville-Harlingen-San Benito	69	90	68	22	1	9
Bryan-College Station	41	85	63	22	2	13
Corpus Christi	137	93	71	22	1	6
Dallas-Ft. Worth	1,469	92	72	20	3	5
El Paso	182	87	66	21	4	9
Galveston-Texas City	89	91	67	24	1	8
Houston	1,419	92	70	22	3	5
Killeen-Temple	103	78	58	20	1	21
Laredo	32	86	65	22	5	9
Longview-Marshall	66	94	76	18	0	6
Lubbock	91	92	74	18	1	7
McAllen-Pharr-Edinburg	92	91	67	24	1	8
Midland	41	93	75	18	1	6
Odessa	56	95	77	18	0	5
San Angelo	40	89	70	19	1	10
San Antonio	449	87	67	20	4	9
Sherman-Denison	39	94	74	20	0	6
Texarkana	30	95	69	26	0	5
Tyler	56	95	78	17	0	5
Victoria	31	94	69	25	1	5
Waco	72	93	75	18	1	6
Wichita Falls	63	87	70	17	1	12

Table C-2. Trends in Modal Shares
(Percent)

Classification	1960	1970	1980
United States			
Private	69	81	86
Public	13	8	6
Other	18	11	8
Texas Metropolitan			
Private	77	85	91
Public	11	7	3
Other	12	8	6
Small Texas MSAs			
Private	77	86	92
Public	5	3	1
Other	18	11	7
Medium Texas MSAs			
Private	77	86	89
Public	9	5	2
Other	14	12	9
Large Texas MSAs			
Private	77	86	91
Public	14	8	3
Other	9	7	6
<u>Metropolitan Area</u>			
Abilene			
Private	82	85	91
Public	3	1	0
Other	15	14	9
Amarillo			
Private	77	92	93
Public	4	2	1
Other	19	6	6
Austin			
Private	78	86	89
Public	8	4	3
Other	14	10	8
Beaumont-Port Arthur- Orange			
Private	78	87	94
Public	8	4	1
Other	14	9	5
Brownsville-Harlingen- San Benito			
Private	65	85	90
Public	6	4	1
Other	29	11	9
Bryan-College Station			
Private	N/A	N/A	85
Public	N/A	N/A	2
Other	N/A	N/A	13

N/A - Not Available

Table C-2. Trends in Modal Shares (cont.)
(Percent)

Classification	1960	1970	1980
Corpus Christi			
Private	82	87	93
Public	6	3	1
Other	12	10	6
Dallas-Ft. Worth			
Private	78	85	92
Public	15	9	3
Other	8	6	5
El Paso			
Private	71	83	87
Public	14	9	4
Other	15	8	9
Galveston-Texas City			
Private	71	82	91
Public	11	7	1
Other	18	11	8
Houston			
Private	77	85	92
Public	13	8	3
Other	11	7	5
Killeen-Temple			
Private	N/A	N/A	78
Public	N/A	N/A	1
Other	N/A	N/A	21
Laredo			
Private	N/A	N/A	86
Public	N/A	N/A	5
Other	N/A	N/A	9
Longview-Marshall			
Private	N/A	N/A	94
Public	N/A	N/A	0
Other	N/A	N/A	6
Lubbock			
Private	85	91	92
Public	3	1	1
Other	12	8	7
McAllen-Pharr-Edinburg			
Private	N/A	86	91
Public	N/A	1	1
Other	N/A	13	8
Midland			
Private	N/A	N/A	93
Public	N/A	N/A	1
Other	N/A	N/A	6
Odessa			
Private	N/A	N/A	95
Public	N/A	N/A	0
Other	N/A	N/A	5
San Angelo			
Private	N/A	N/A	89
Public	N/A	N/A	1
Other	N/A	N/A	10

N/A - Not Available

Table C-2. Trends in Modal Shares (cont.)
(Percent)

Classification	1960	1970	1980
San Antonio			
Private	76	85	87
Public	13	8	4
Other	11	7	9
Sherman-Denison			
Private	N/A	N/A	94
Public	N/A	N/A	0
Other	N/A	N/A	6
Texarkana			
Private	N/A	87	95
Public	N/A	3	0
Other	N/A	10	5
Tyler			
Private	N/A	N/A	95
Public	N/A	N/A	0
Other	N/A	N/A	5
Victoria			
Private	N/A	N/A	94
Public	N/A	N/A	1
Other	N/A	N/A	5
Waco			
Private	80	87	93
Public	6	3	1
Other	14	10	6
Wichita Falls			
Private	74	80	87
Public	3	2	1
Other	23	18	12

N/A - Not Available

Table C-3. Shift in Modal Choices

Classification	Actual Users, 1980 (1000s)	Difference 1960-1980 (1000s)	Percent Change (%)
United States			
Total Workers	96,600	32,000	49
Private Vehicle	83,000	40,000	93
Public Transit	6,000	-1,800	-23
Other	7,600	-3,400	-31
Texas Metropolitan			
Total Workers	5,230	3,145	151
Private Vehicle	4,752	3,214	209
Public Transit	137	-38	-22
Other	341	-31	-8
Small Texas MSAs			
Total Workers	801	536	202
Private Vehicle	736	538	272
Public Transit	6	-4	-40
Other	59	3	5
Medium Texas MSAs			
Total Workers	1,092	625	134
Private Vehicle	974	638	190
Public Transit	20	-11	-35
Other	98	-2	-2
Large Texas MSAs			
Total Workers	3,337	1,984	147
Private Vehicle	3,042	2,038	203
Public Transit	111	-23	-17
Other	184	-32	-15
<u>Metropolitan Area</u>			
Abilene			
Total Workers	63	17	37
Private Vehicle	58	22	48
Public Transit	0	-1	-100
Other	5	-4	-44
Amarillo			
Total Workers	82	20	32
Private Vehicle	77	31	67
Public Transit	1	-1	-50
Other	4	-9	-69
Austin			
Total Workers	260	181	229
Private Vehicle	231	173	298
Public Transit	7	2	40
Other	22	6	38
Beaumont-Port Arthur-Orange			
Total Workers	149	45	43
Private Vehicle	140	59	73
Public Transit	1	-4	-80
Other	8	-10	-56

*N/A = Not available. City did not become MSA until after 1960

Table C-3. Shift in Modal Choices (cont.)

Metropolitan Area	Actual Users, 1980 (1000s)	Difference 1960-1980 (1000s)	Percent Change (%)
Brownsville-Harlingen-			
San Benito			
Total Workers	69	23	50
Private Vehicle	62	33	114
Public Transit	1	-1	-50
Other	6	-8	-57
Bryan-College Station			
Total Workers	39	N/A*	N/A
Private Vehicle	33	N/A	N/A
Public Transit	1	N/A	N/A
Other	5	N/A	N/A
Corpus Christi			
Total Workers	137	65	90
Private Vehicle	127	74	140
Public Transit	1	-2	-67
Other	9	-7	-44
Dallas-Ft. Worth			
Total Workers	1,469	820	126
Private Vehicle	1,349	852	171
Public Transit	48	-14	-23
Other	72	-18	-20
El Paso			
Total Workers	182	73	67
Private Vehicle	158	87	122
Public Transit	7	-6	-46
Other	17	-8	-32
Galveston- Texas City			
Total Workers	89	39	78
Private Vehicle	81	45	125
Public Transit	1	-3	-75
Other	7	-2	-22
Houston			
Total Workers	1,419	958	208
Private Vehicle	1,303	957	277
Public Transit	43	-5	-10
Other	73	6	9
Killeen-Temple			
Total Workers	103	N/A	N/A
Private Vehicle	81	N/A	N/A
Public Transit	1	N/A	N/A
Other	21	N/A	N/A
Laredo			
Total Workers	32	N/A	N/A
Private Vehicle	28	N/A	N/A
Public Transit	1	N/A	N/A
Other	3	N/A	N/A

*N/A = Not available. City did not become MSA until after 1960

Table C-3. Shift in Modal Choices (cont.)

Metropolitan Area	Actual Users, 1980 (1000s)	Difference 1960-1980 (1000s)	Percent Change (%)
Longview-Marshall			
Total Workers	66	N/A	N/A
Private Vehicle	62	N/A	N/A
Public Transit	0	N/A	N/A
Other	4	N/A	N/A
Lubbock			
Total Workers	99	42	74
Private Vehicle	91	46	102
Public Transit	1	-1	-50
Other	7	-4	-36
McAllen-Pharr- Edinburg			
Total Workers	92	30	59
Private Vehicle	84	18	100
Public Transit	0	0	-2
Other	8	1	20
Midland			
Total Workers	41	N/A	N/A
Private Vehicle	38	N/A	N/A
Public Transit	1	N/A	N/A
Other	2	N/A	N/A
Odessa			
Total Workers	56	N/A	N/A
Private Vehicle	53	N/A	N/A
Public Transit	0	N/A	N/A
Other	3	N/A	N/A
San Angelo			
Total Workers	40	N/A	N/A
Private Vehicle	36	N/A	N/A
Public Transit	0	N/A	N/A
Other	4	N/A	N/A
San Antonio			
Total Workers	449	206	85
Private Vehicle	390	230	144
Public Transit	20	-4	-17
Other	39	-20	-34
Sherman-Denison			
Total Workers	39	N/A	N/A
Private Vehicle	37	N/A	N/A
Public Transit	0	N/A	N/A
Other	2	N/A	N/A
Texarkana			
Total Workers	30	N/A	N/A
Private Vehicle	28	N/A	N/A
Public Transit	0	N/A	N/A
Other	2	N/A	N/A

*N/A = Not available. City did not become MSA until after 1960

Table C-3. Shift in Modal Choices (cont.)

Metropolitan Area	Actual Users, 1980 (1000s)	Difference 1960-1980 (1000s)	Percent Change (%)
Tyler			
Total Workers	56	N/A	N/A
Private Vehicle	53	N/A	N/A
Public Transit	0	N/A	N/A
Other	3	N/A	N/A
Victoria			
Total Workers	31	N/A	N/A
Private Vehicle	29	N/A	N/A
Public Transit	0	N/A	N/A
Other	2	N/A	N/A
Waco			
Total Workers	72	17	31
Private Vehicle	67	24	56
Public Transit	1	-1	-50
Other	4	-6	-60
Wichita Falls			
Total Workers	63	12	24
Private Vehicle	55	17	45
Public Transit	0	-1	-100
Other	7	-5	-42

*N/A = Not available. City did not become MSA until after 1960

Table C-4. Distribution of Commuters by Number in Travel Group, Percent

Classification	Central City		Suburbs	
	Drive Alone	2+ Group	Drive Alone	2+ Group
U.S. Metropolitan	77	23	74	26
Texas Metropolitan	77	23	76	24
Small Texas MSAs	79	21	78	22
Medium Texas MSAs	78	22	74	26
Large Texas MSAs	77	23	77	23
<u>Metropolitan Area</u>				
Abilene	82	18	81	19
Amarillo	79	21	78	22
Austin	78	22	76	24
Beaumont-Port Arthur-Orange	78	22	76	24
Brownsville-Harlingen-San Benito	76	24	73	27
Bryan-College Station	76	24	75	25
Corpus Christi	78	22	72	28
Dallas-Ft. Worth	77	23	78	22
El Paso	77	23	68	32
Galveston-Texas City	73	27	74	26
Houston	76	24	76	24
Killeen-Temple	78	22	71	29
Laredo	74	26	83	17
Longview-Marshall	81	19	79	21
Lubbock	80	20	77	23
McAllen-Pharr-Edinburg	76	24	72	28
Midland	80	20	83	17
Odessa	81	19	82	18
San Angelo	79	21	74	26
San Antonio	77	23	77	23
Sherman-Denison	81	19	76	24
Texarkana	76	24	71	29
Tyler	82	18	81	19
Victoria	73	27	72	28
Waco	82	18	80	20
Wichita Falls	80	20	80	20

Table C-5. Public Transit to Work
(Thousands)

Classification	1960	1970	1980	Loss	Loss(%)
U.S. (Over 1 Million)	6,100	5,600	5,100	1,000	17
Texas Metropolitan	175.2	138.4	137.1	38.0	22
Small Texas MSAs	10.6	7.1	6.3	4.3	41
Medium Texas MSAs	31.0	22.1	19.8	11.2	36
Large Texas MSAs	133.6	109.3	111.0	22.6	17
<u>Metropolitan Area</u>					
Abilene	.9	.5	.3	.6	67
Amarillo	2.1	.8	.7	1.4	67
Austin	5.6	4.2	7.4	-1.8	-32
Beaumont-Port Arthur-Orange	4.9	2.7	1.3	3.6	73
Brownsville-Harlingen-San Benito	2.2	1.1	.8	1.4	64
Bryan-College Station	--	--	.6	--	--
Corpus Christi	3.5	2.3	1.5	2.0	57
Dallas-Ft. Worth	61.6	49.1	48.1	13.5	22
El Paso	13.3	10.4	6.9	6.4	48
Galveston-Texas City	4.1	3.0	1.3	2.8	68
Houston	47.9	41.9	42.8	5.1	11
Killeen-Temple	--	--	.6	--	--
Laredo	--	--	1.5	--	--
Longview-Marshall	--	--	.1	--	--
Lubbock	1.5	.6	.8	.7	47
McAllen-Pharr-Edinburg	--	.6	.5	--	--
Midland	--	--	.2	--	--
Odessa	--	--	0	--	--
San Angelo	--	--	.2	--	--
San Antonio	24.1	18.3	20.1	4.0	17
Sherman-Denison	--	--	0	--	--
Texarkana	--	.6	.1	--	--
Tyler	--	--	.1	--	--
Victoria	--	--	.2	--	--
Waco	2.4	1.2	.6	1.8	75
Wichita Falls	1.1	.9	.5	0.6	55

¹Indicates gain in transit trips to work

Table C-6. Public Transit Shares of Commuting by Market, 1980
(Percent)

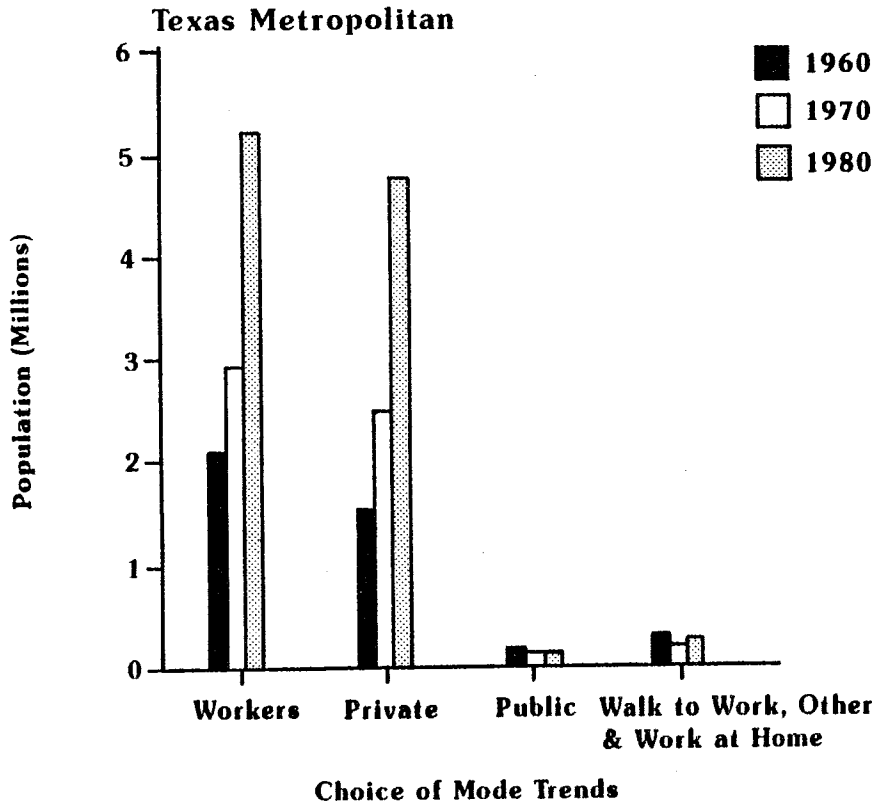
Classification	Place of Residence	Total Transit Share	-----Place of Work-----		
			Central City	Suburbs	Other
U.S. Metropolitan	Central City	14.3	16.1	5.6	7.3
	Suburbs	4.1	8.0	1.6	7.6
Texas Metropolitan	Central City	4.1	4.4	1.3	2.2
	Suburbs	0.6	1.0	0.1	1.0
Small Texas MSAs	Central City	1.1	1.0	0.7	1.4
	Suburbs	0.1	0.1	0.0	0.3
Medium Texas MSAs	Central City	2.6	2.7	1.0	3.1
	Suburbs	0.3	0.3	0.2	1.2
Large Texas MSAs	Central City	5.7	6.2	1.5	2.4
	Suburbs	0.7	1.3	0.1	1.6
<u>Metropolitan Area</u>					
Abilene	Central City	0.6	0.5	0.0	1.9
	Suburbs	0.1	0.0	0.0	1.1
Amarillo	Central City	1.0	0.8	0.2	4.1
	Suburbs	0.1	0.0	0.0	1.5
Austin	Central City	4.2	4.4	1.2	0.9
	Suburbs	0.3	0.1	0.5	1.2
Beaumont-Port Arthur-Orange	Central City	1.6	1.8	0.4	2.7
	Suburbs	*0.0	0.0	0.1	0.0
Brownsville-Harlingen-San Benito	Central City	1.4	1.5	0.3	0.7
	Suburbs	0.3	0.2	0.0	2.5
Bryan-College Station	Central City	1.8	1.7	0.0	0.0
	Suburbs	0.0	0.0	0.0	0.0
Corpus Christi	Central City	1.3	1.4	0.3	1.6
	Suburbs	0.3	0.8	0.2	1.0
Dallas-Ft. Worth	Central City	6.7	7.7	0.1	1.6
	Suburbs	0.7	1.3	0.1	2.9
El Paso	Central City	4.1	3.9	0.4	7.9
	Suburbs	1.4	1.9	0.0	1.2
Galveston-Texas City	Central City	2.5	2.5	0.0	0.6
	Suburbs	0.3	0.7	0.0	0.2
Houston	Central City	4.7	5.1	1.1	2.8
	Suburbs	0.7	1.4	0.1	0.5
Killeen-Temple	Central City	1.0	0.1	2.2	1.4
	Suburbs	0.3	0.1	0.3	1.0
Laredo	Central City	4.9	5.4	1.6	0.0
	Suburbs	0.0	0.0	0.0	0.0
Longview-Marshall	Central City	0.2	0.1	0.0	0.6
	Suburbs	0.2	0.4	0.1	0.0
Lubbock	Central City	1.0	1.1	0.0	1.4
	Suburbs	0.0	0.0	0.0	0.0
McAllen-Pharr-Edinburg	Central City	0.7	1.0	2.2	0.0
	Suburbs	0.4	0.4	0.2	2.8

Table C-6. Public Transit Shares of Commuting by Market, 1980 (cont'd.)
(Percent)

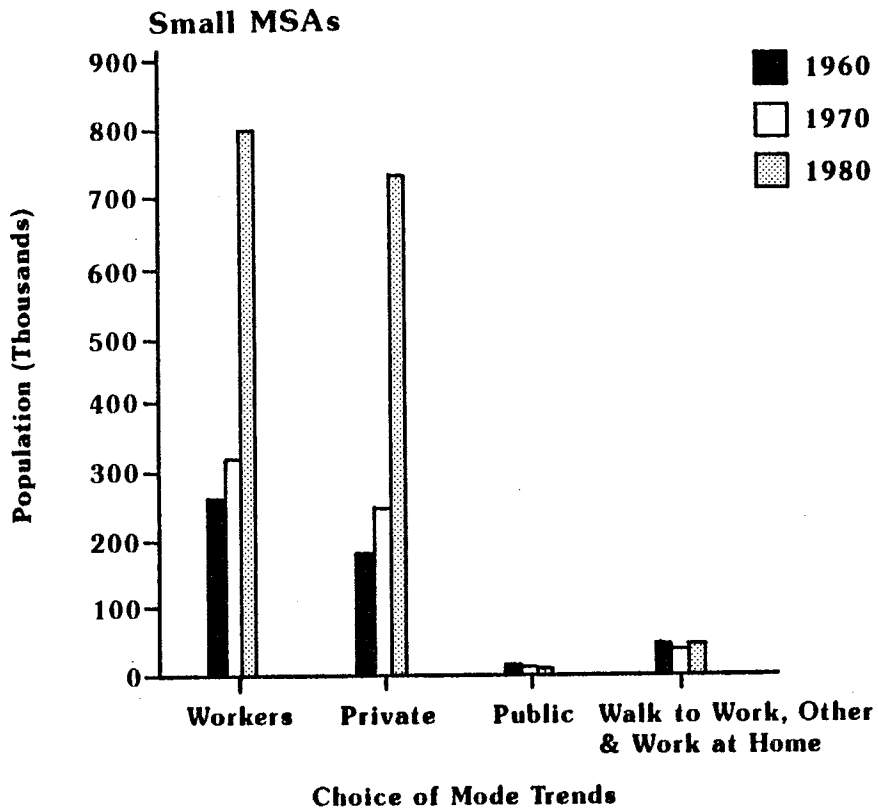
Classification	Place of Residence	Total Transit Share	-----Place of Work-----		
			Central City	Suburbs	Other
Midland	Central City	0.7	0.8	0.0	0.0
	Suburbs	0.0	0.0	0.0	0.0
Odessa	*** No Public Transit				
San Angelo	Central City	0.5	0.4	0.0	1.4
	Suburbs	0.3	0.0	1.0	0.0
San Antonio	Central City	6.0	6.2	3.5	2.7
	Suburbs	1.0	1.3	0.4	1.5
Sherman-Denison	Central City	*0.0	0.0	0.0	1.2
	Suburbs	0.0	0.0	0.0	0.0
Texarkana	Central City	0.1	0.0	1.7	0.0
	Suburbs	0.2	0.2	0.5	0.0
Tyler	Central City	0.2	0.2	0.5	0.1
	Suburbs	0.1	0.0	0.2	0.7
Victoria	Central City	0.6	0.0	0.0	5.1
	Suburbs	0.3	0.0	0.0	1.8
Waco	Central City	1.5	1.5	0.2	1.1
	Suburbs	0.1	*0.0	*0.0	0.5
Wichita Falls	Central City	1.0	0.5	2.8	0.0
	Suburbs	0.0	0.0	0.0	0.0

*-Indicates very small percentages, while others represent exact values of zero

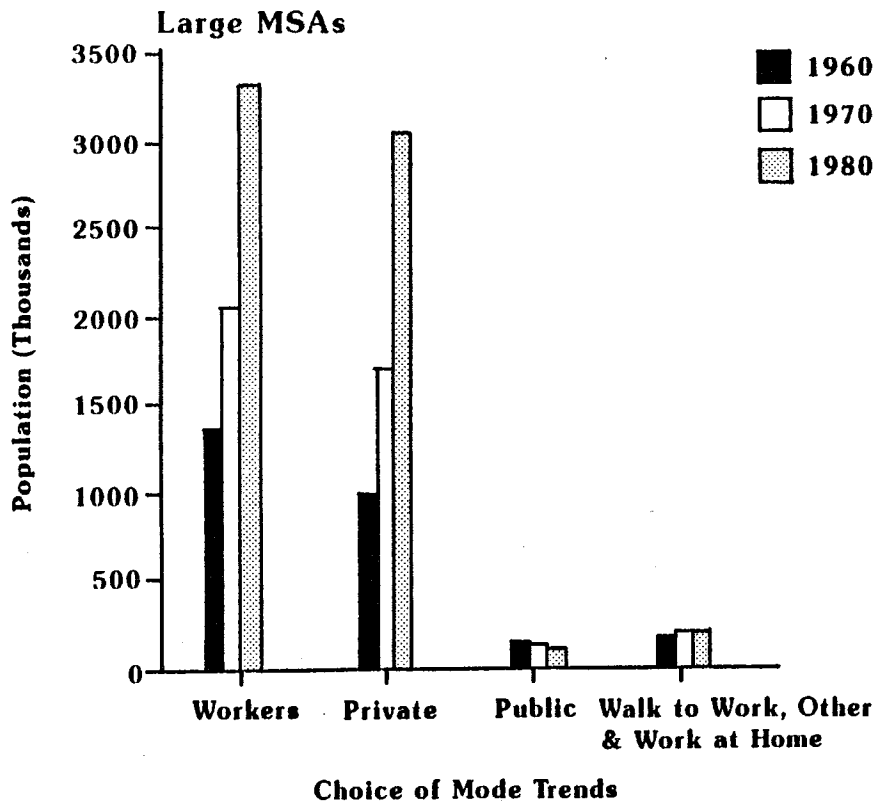
FIGURE C-1
TREND IN MODE CHOICE
1960-1980



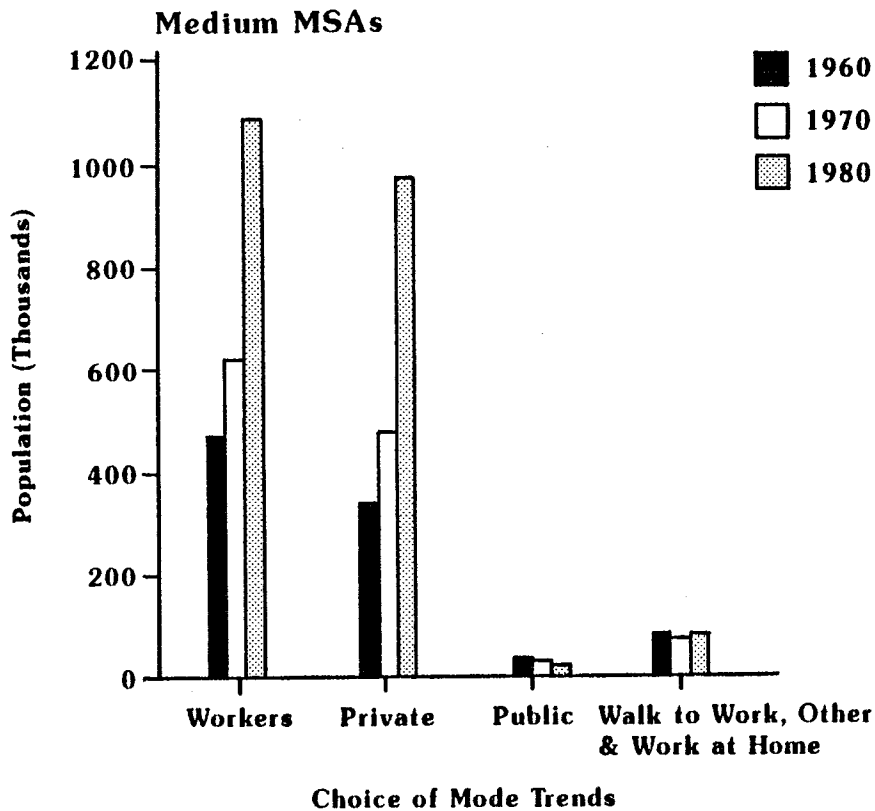
Note: "Walk to Work" Included in "Other" for 1970 and 1980



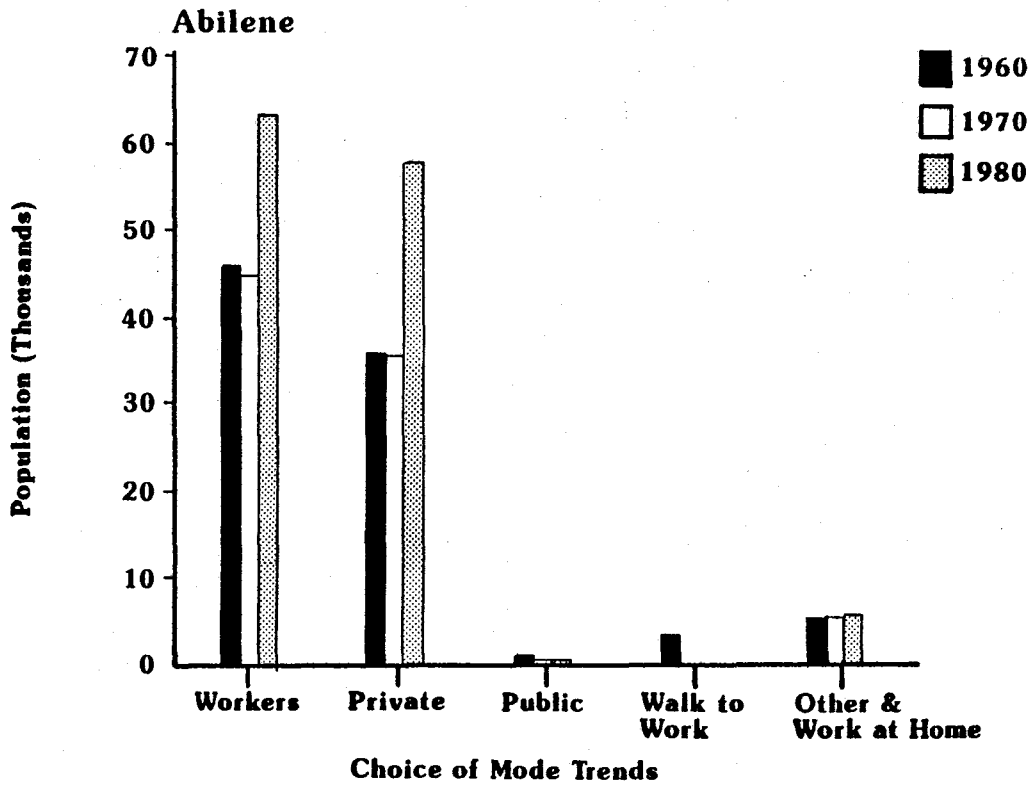
Note: "Walk to Work" Included in "Other" for 1970 and 1980



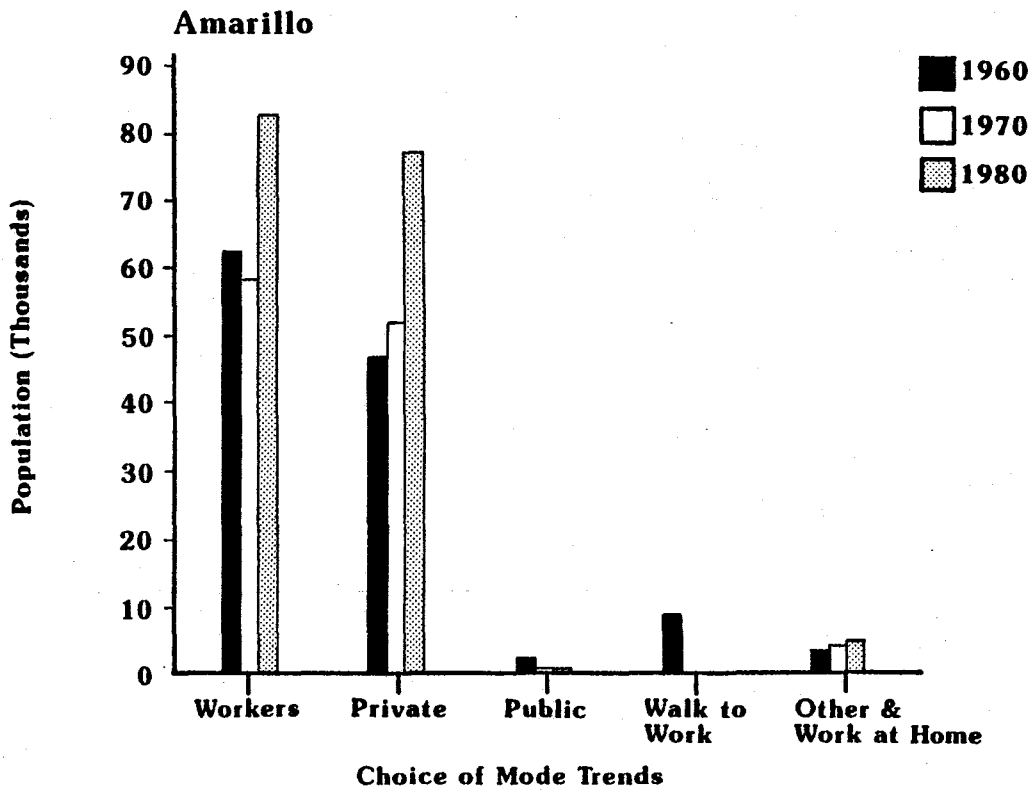
Note: "Walk to Work" Included in "Other" for 1970 and 1980



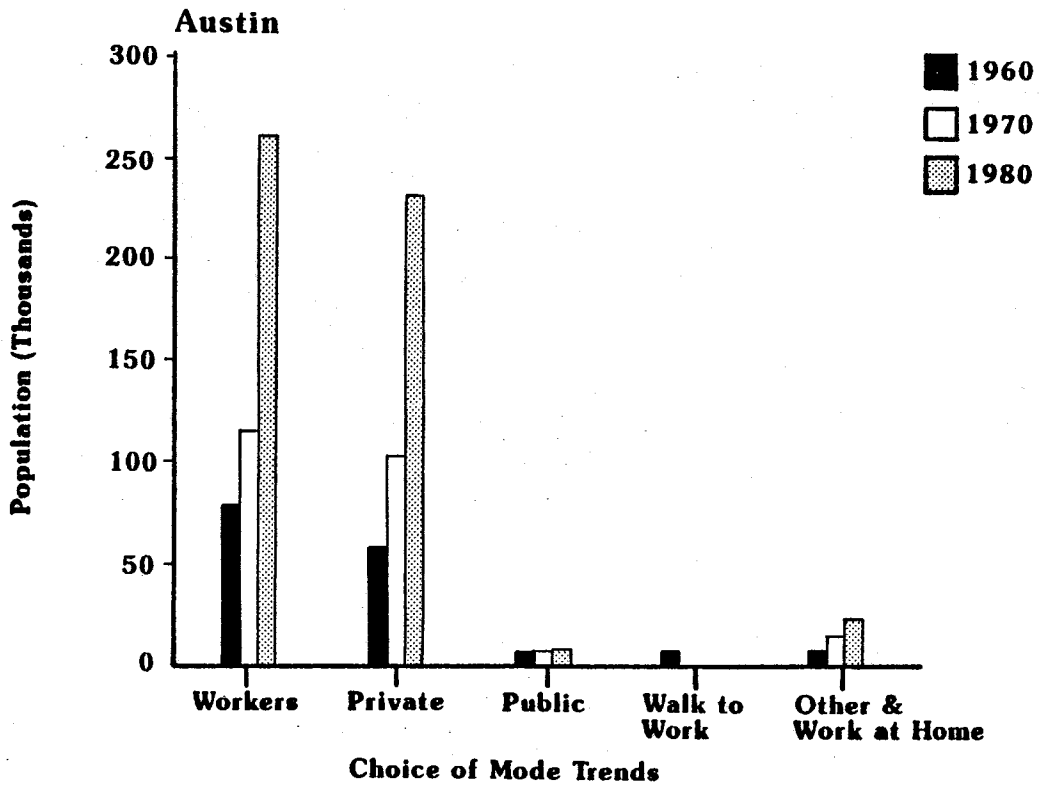
Note: "Walk to Work" Included in "Other" for 1970 and 1980



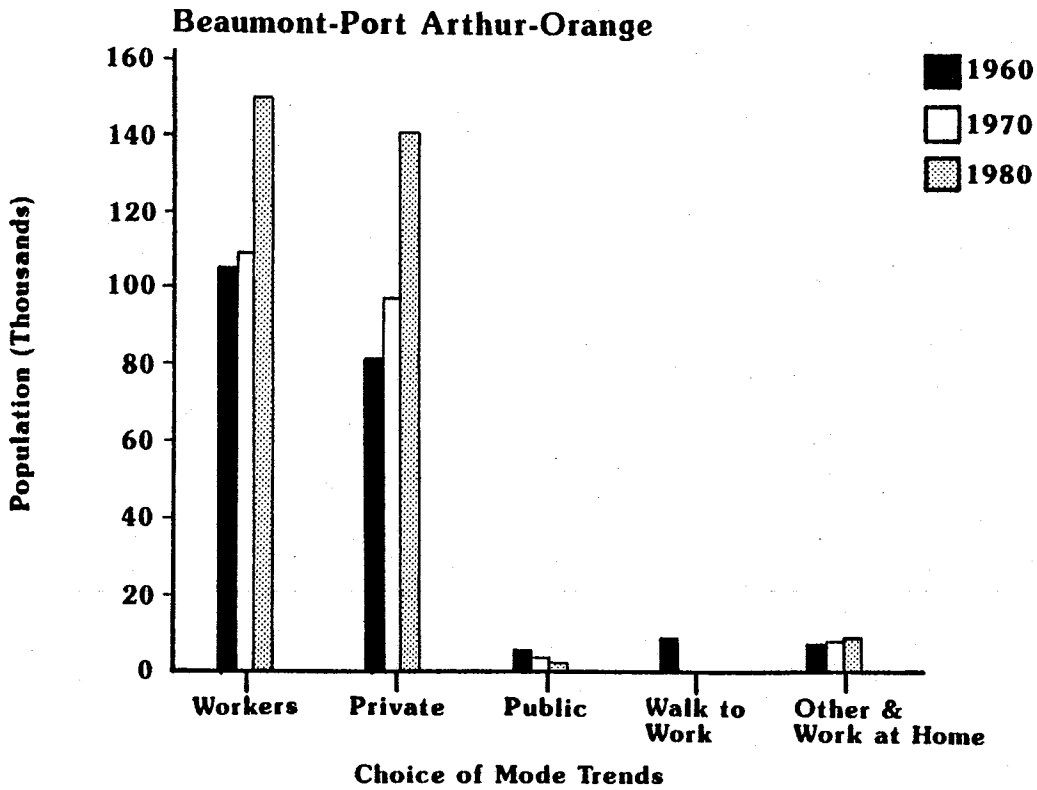
Note: "Walk To Work" Included in "Other" for 1970 and 1980



Note: "Walk to Work" Included in "Other" for 1970 and 1980

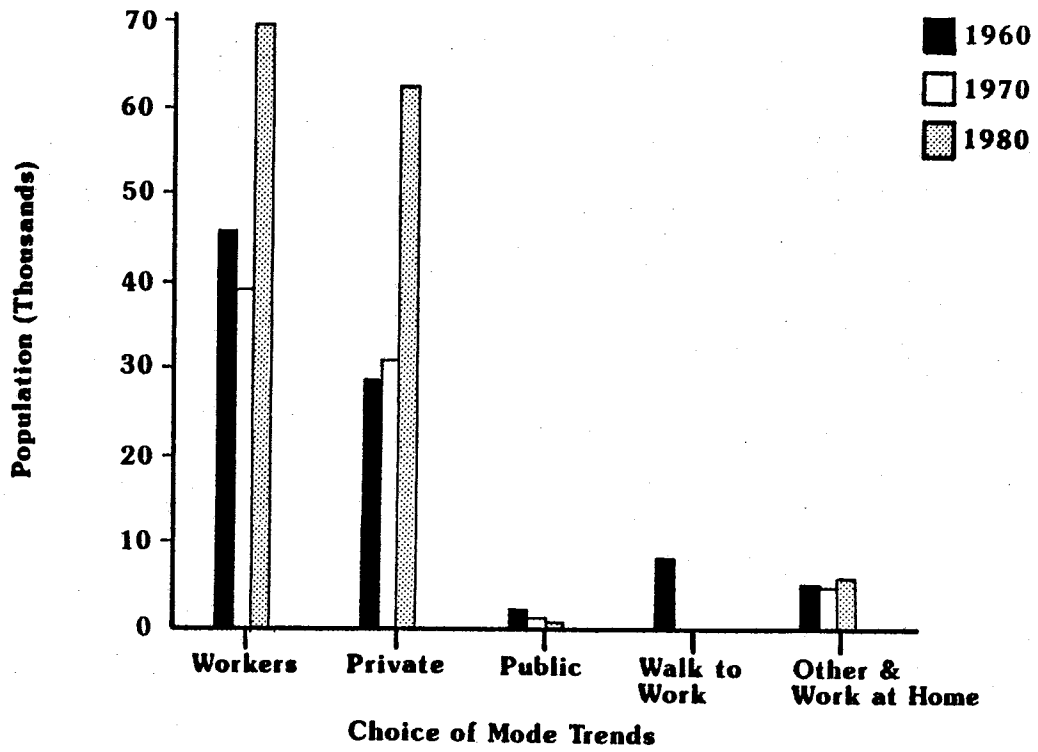


Note: "Walk To Work" Included in "Other" for 1970 and 1980



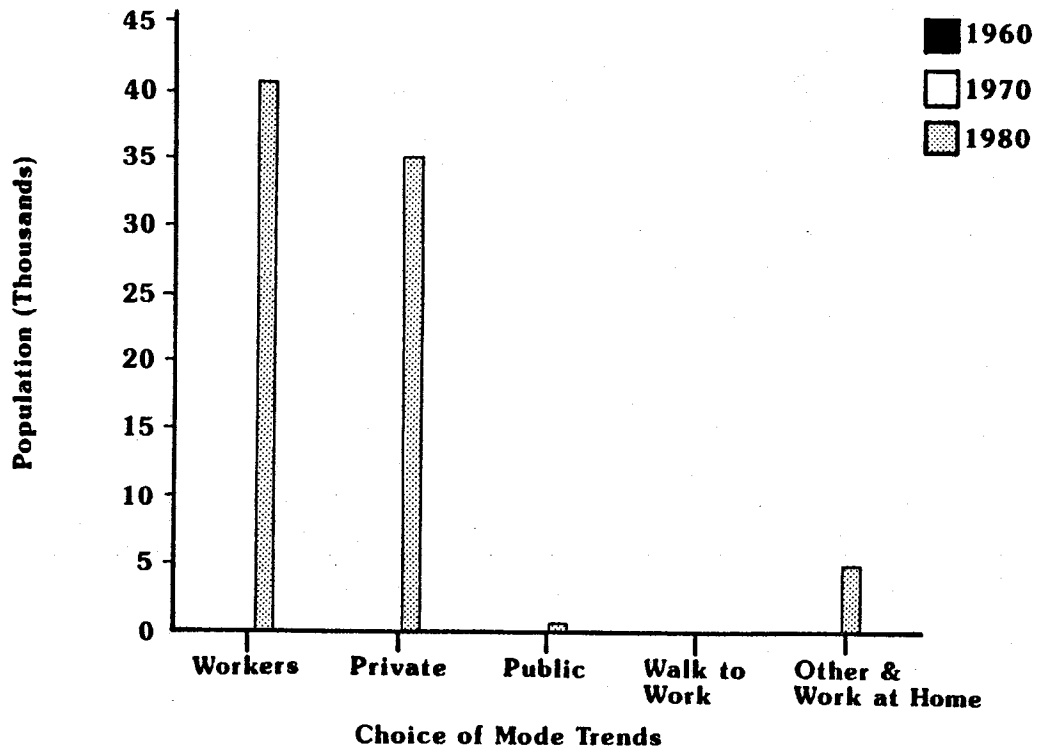
Note: "Walk to Work" Included in "Other" for 1970 and 1980

Brownsville-Harlingen-San Benito



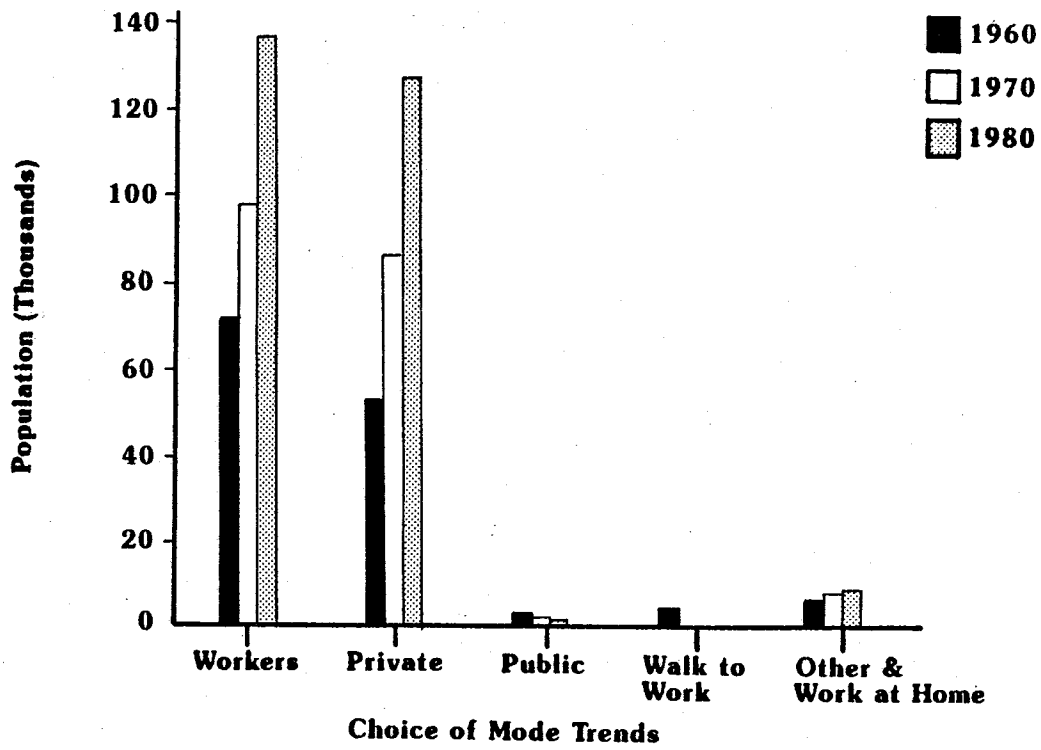
Note: "Walk To Work" Included in "Other" for 1970 and 1980

Bryan-College Station



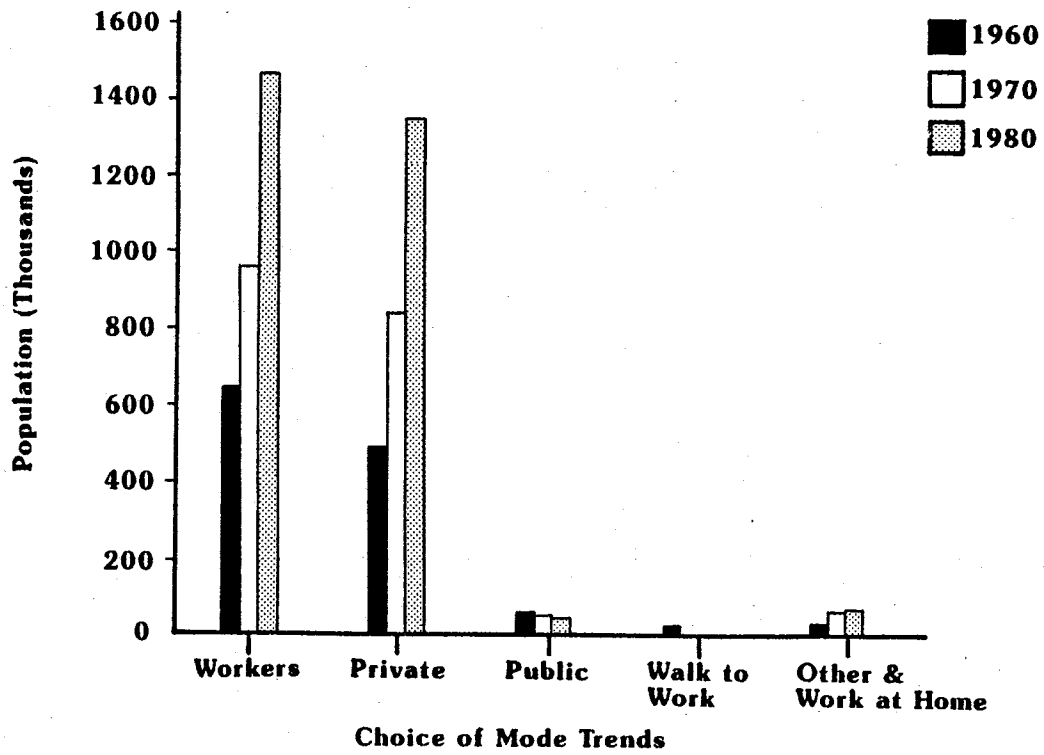
Note: "Walk to Work" Included in "Other" for 1970 and 1980

Corpus Christi

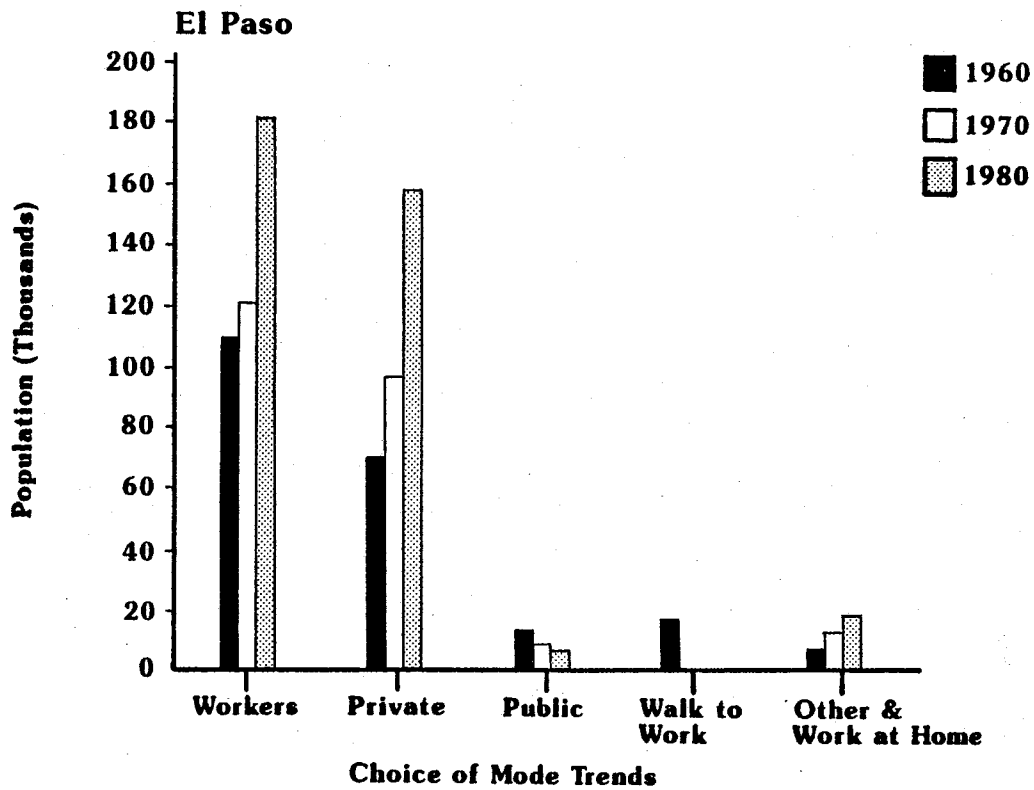


Note: "Walk To Work" Included in "Other" for 1970 and 1980

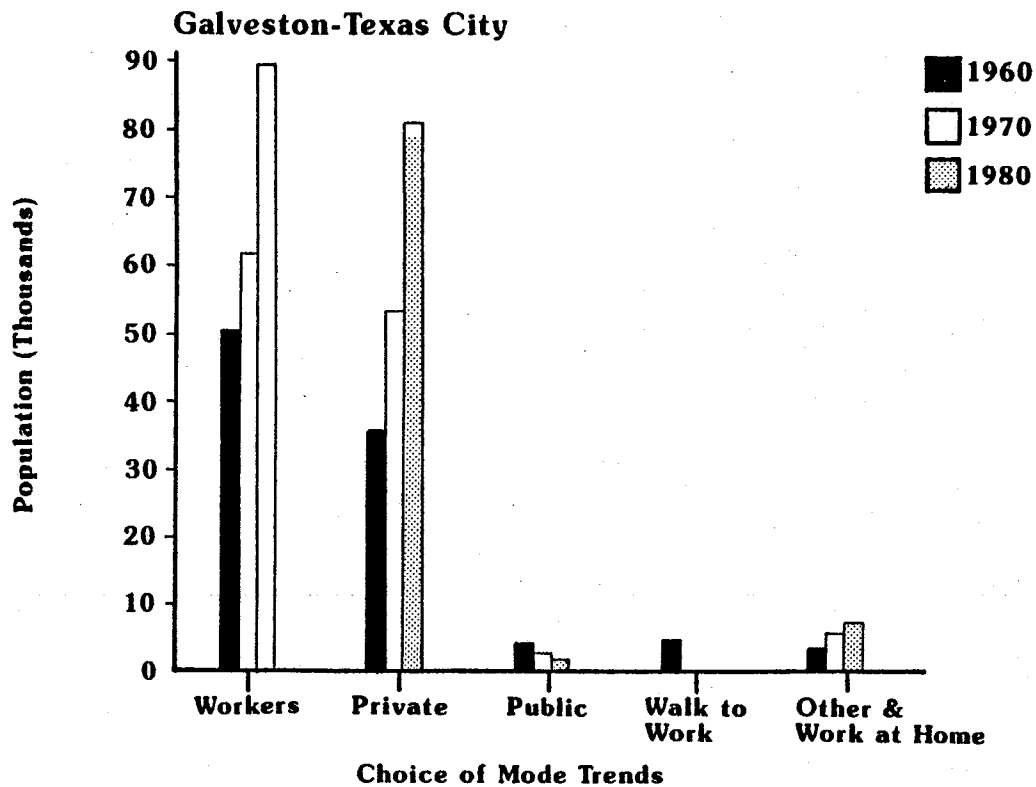
Dallas-Fort Worth



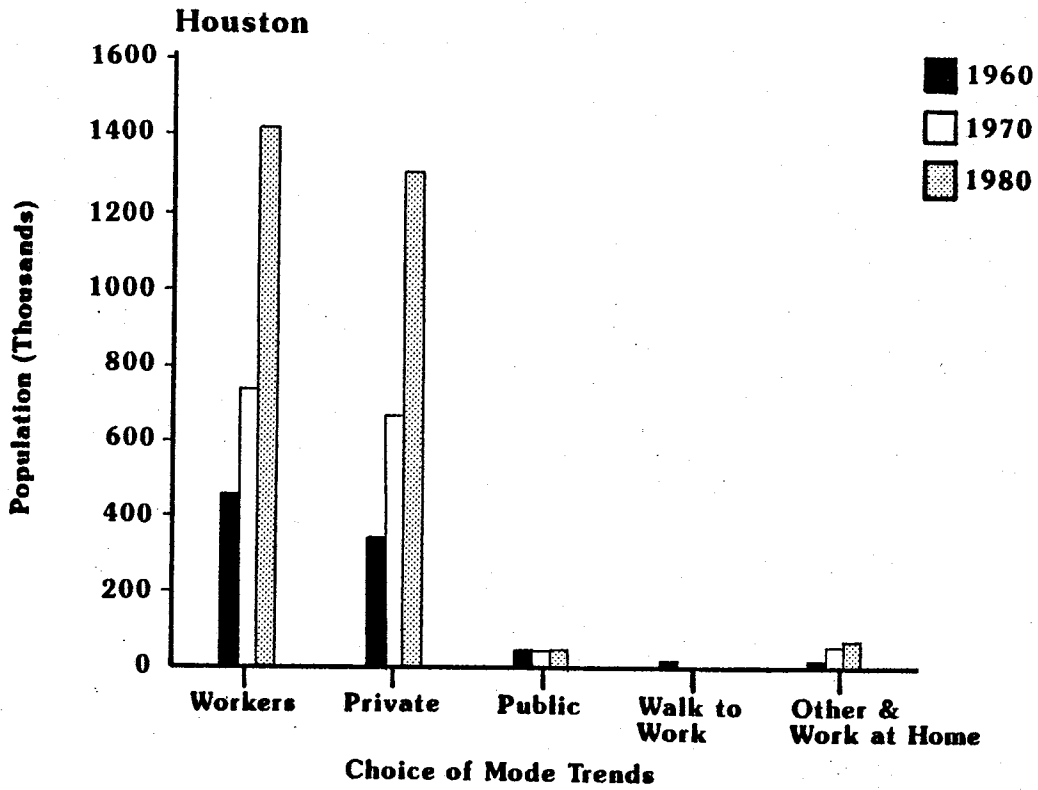
Note: "Walk to Work" Included in "Other" for 1970 and 1980



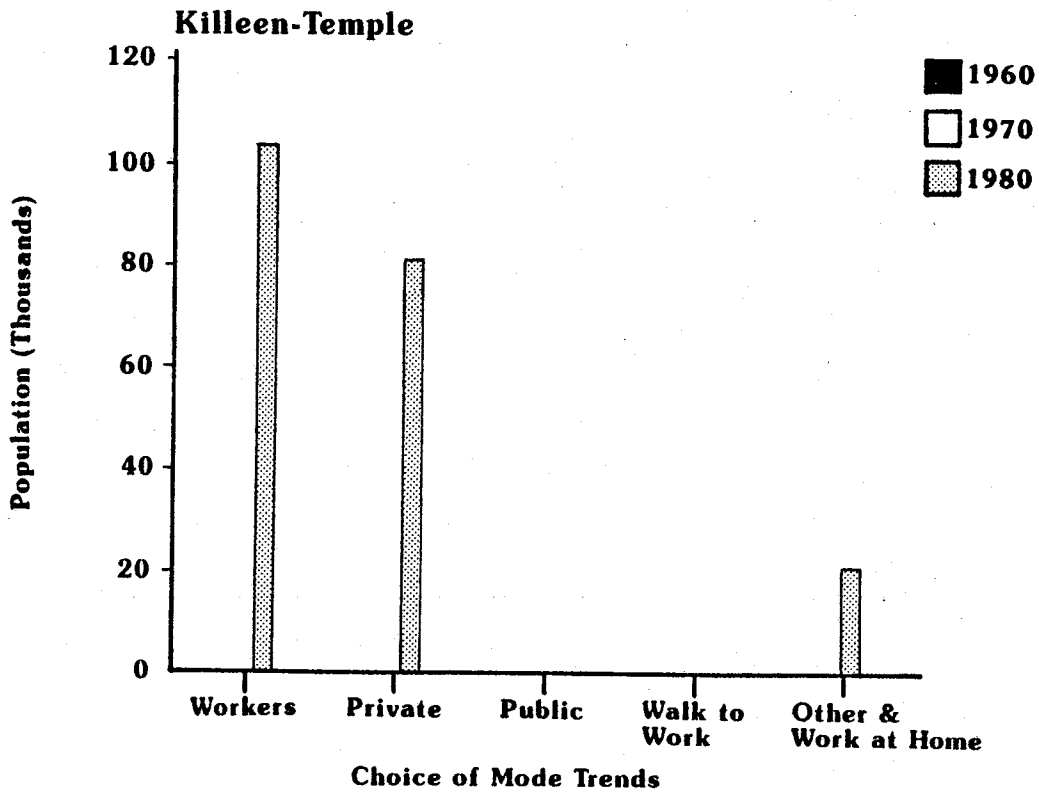
Note: "Walk To Work" Included in "Other" for 1970 and 1980



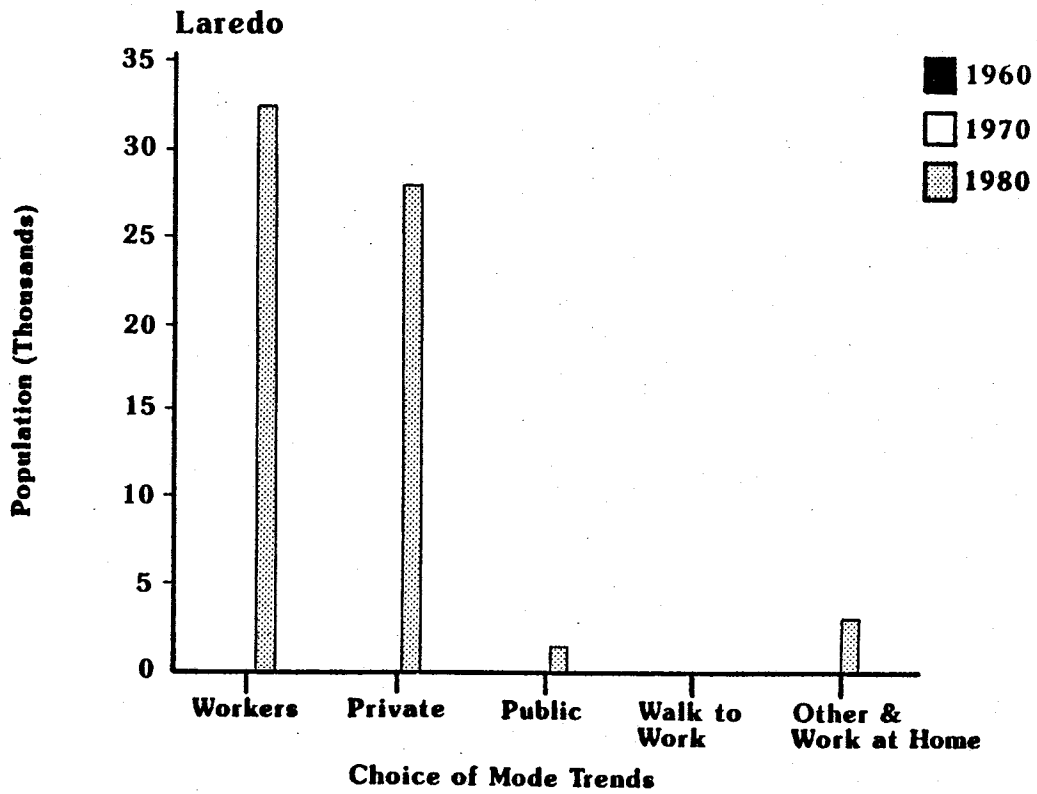
Note: "Walk to Work" Included in "Other" for 1970 and 1980



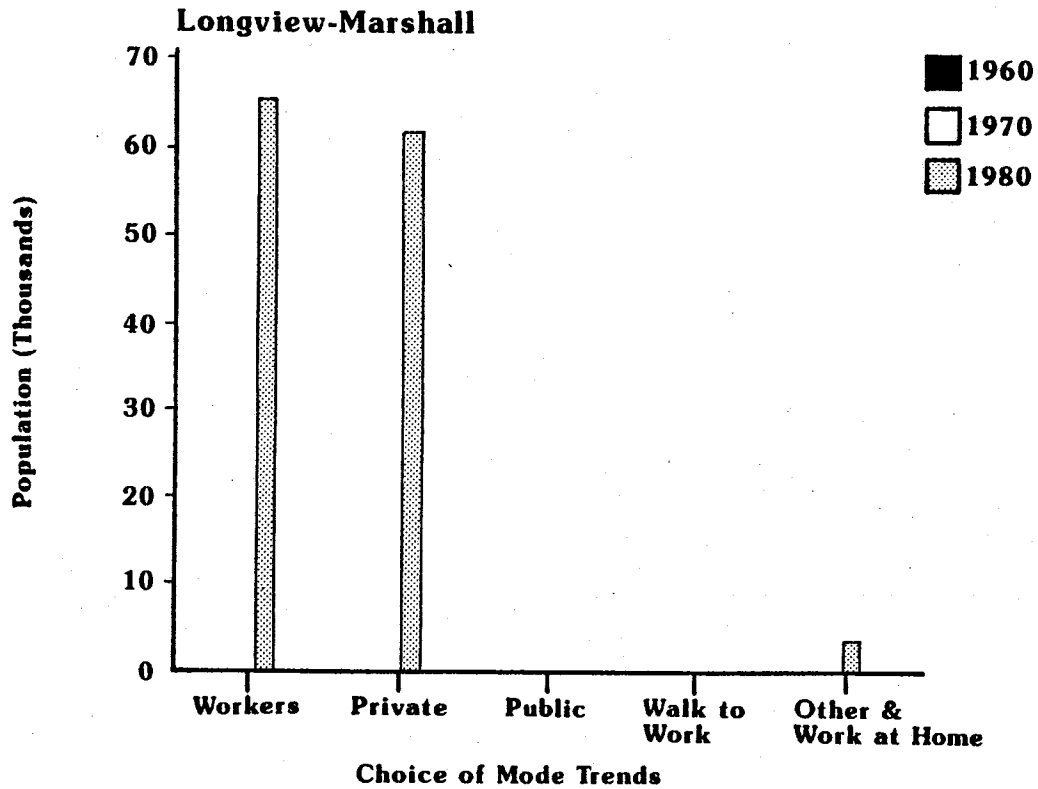
Note: "Walk To Work" Included in "Other" for 1970 and 1980



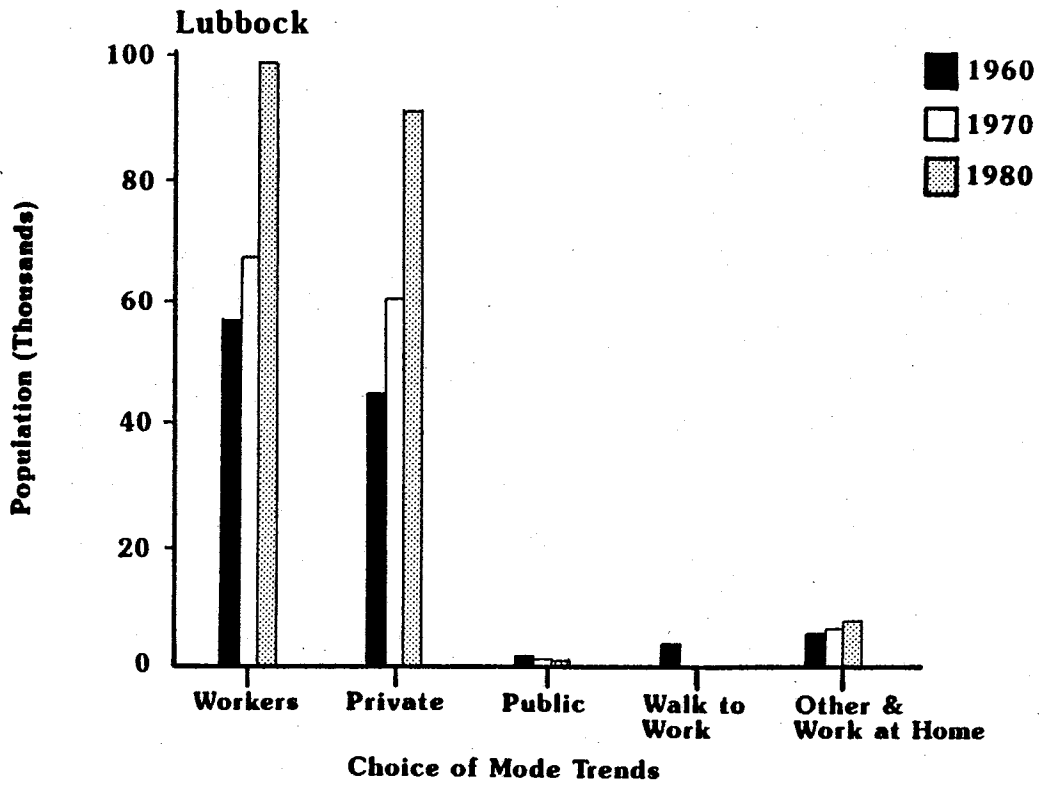
Note: "Walk to Work" Included in "Other" for 1970 and 1980



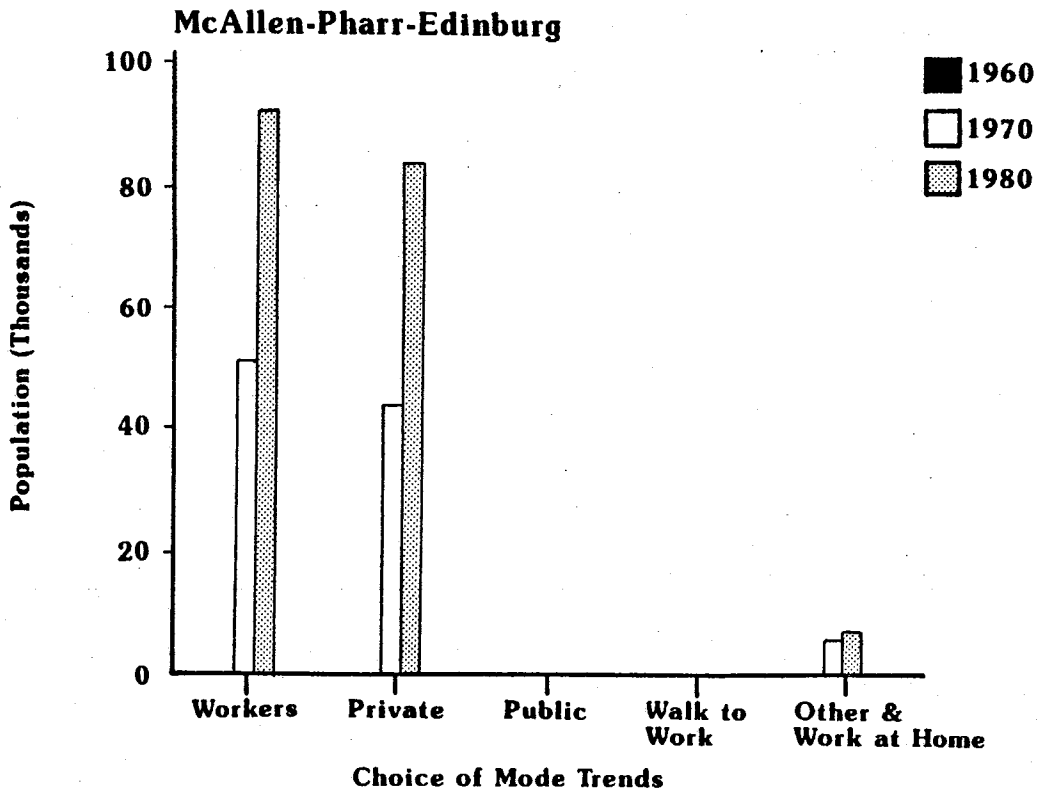
Note: "Walk To Work" Included in "Other" for 1970 and 1980



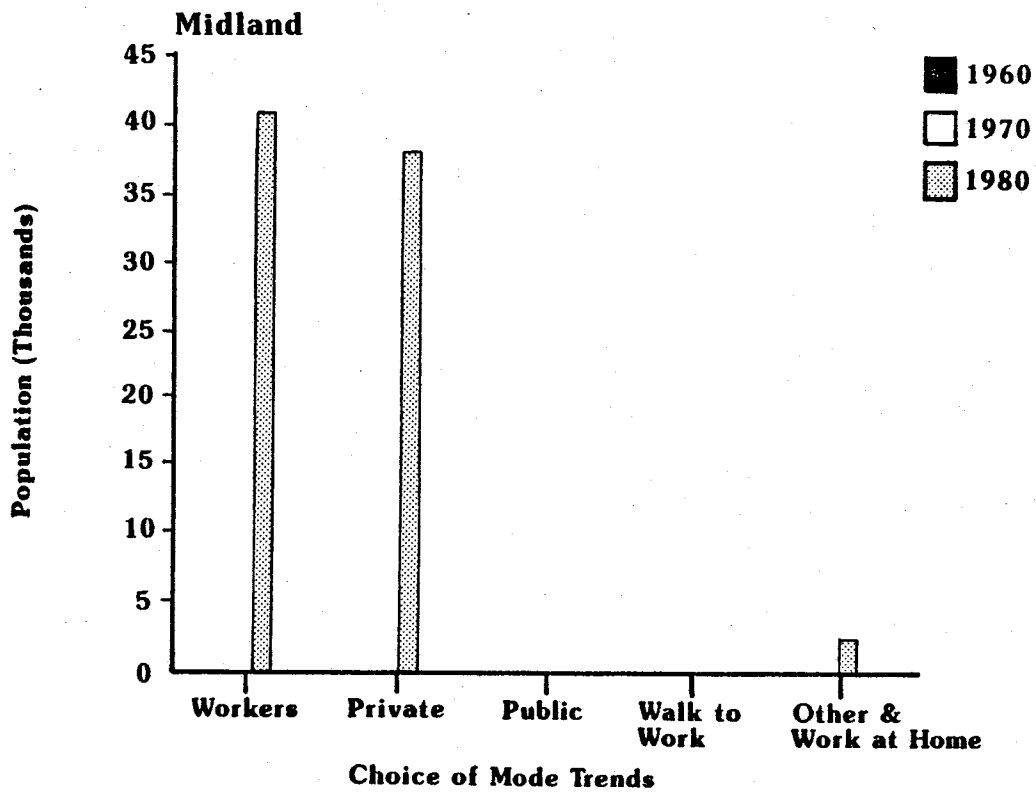
Note: "Walk to Work" Included in "Other" for 1970 and 1980



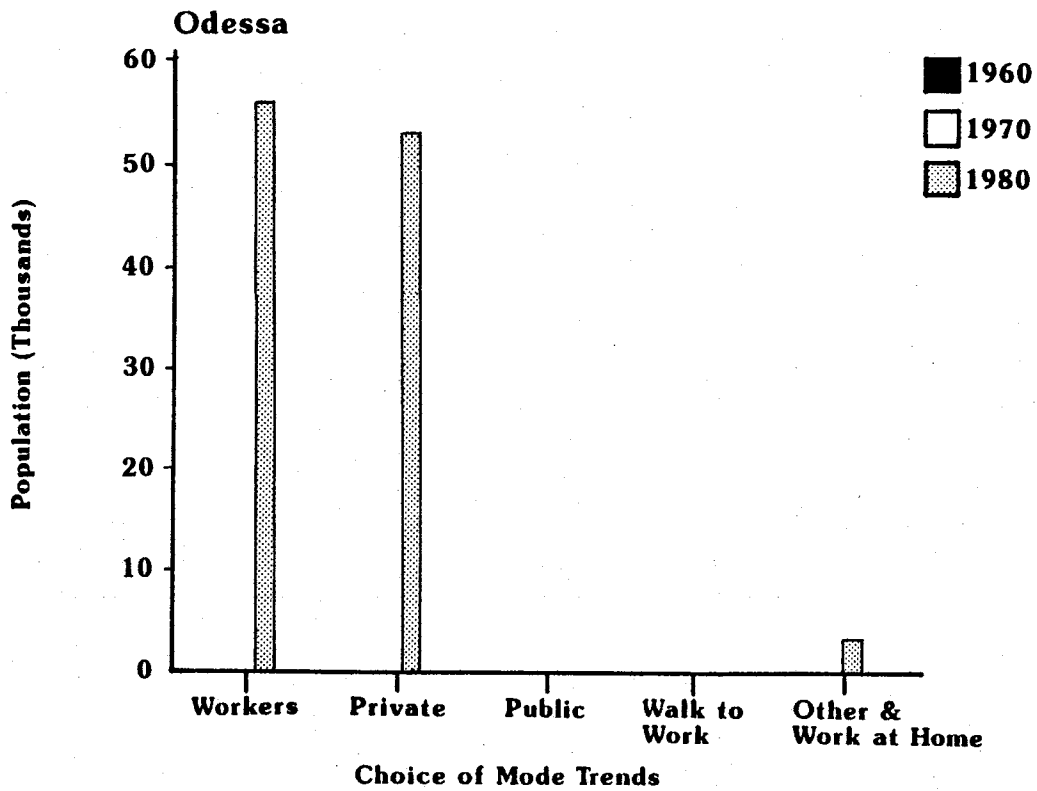
Note: "Walk To Work" Included in "Other" for 1970 and 1980



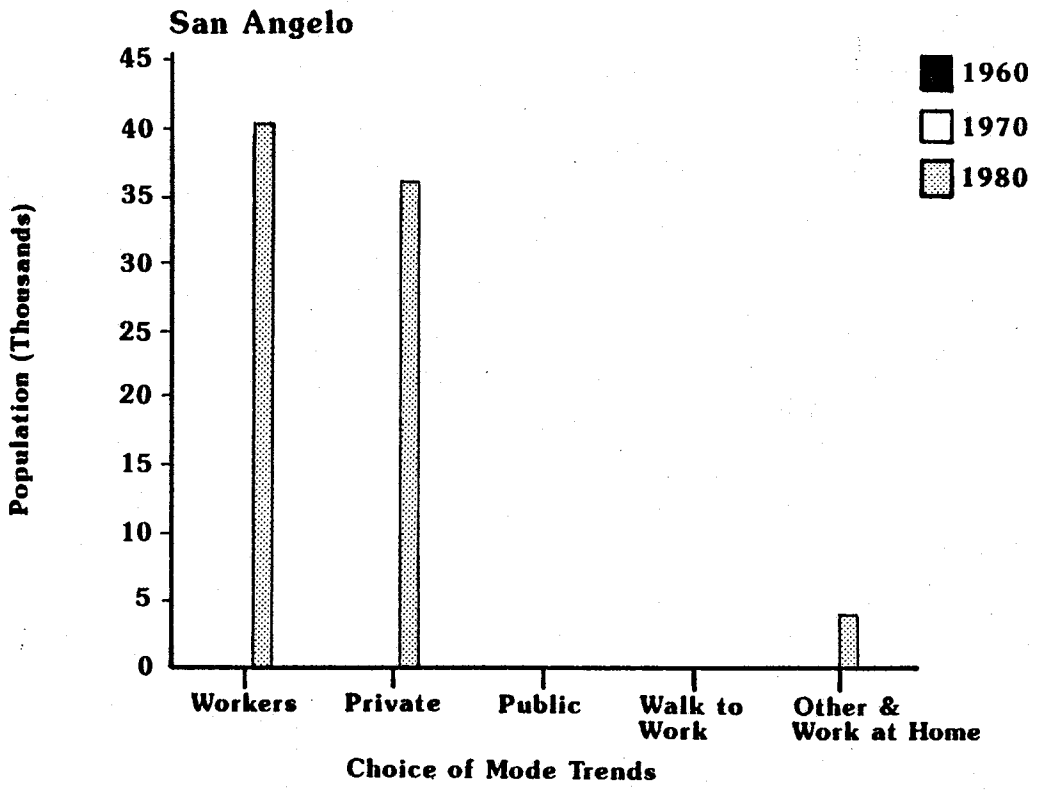
Note: "Walk to Work" Included in "Other" for 1970 and 1980



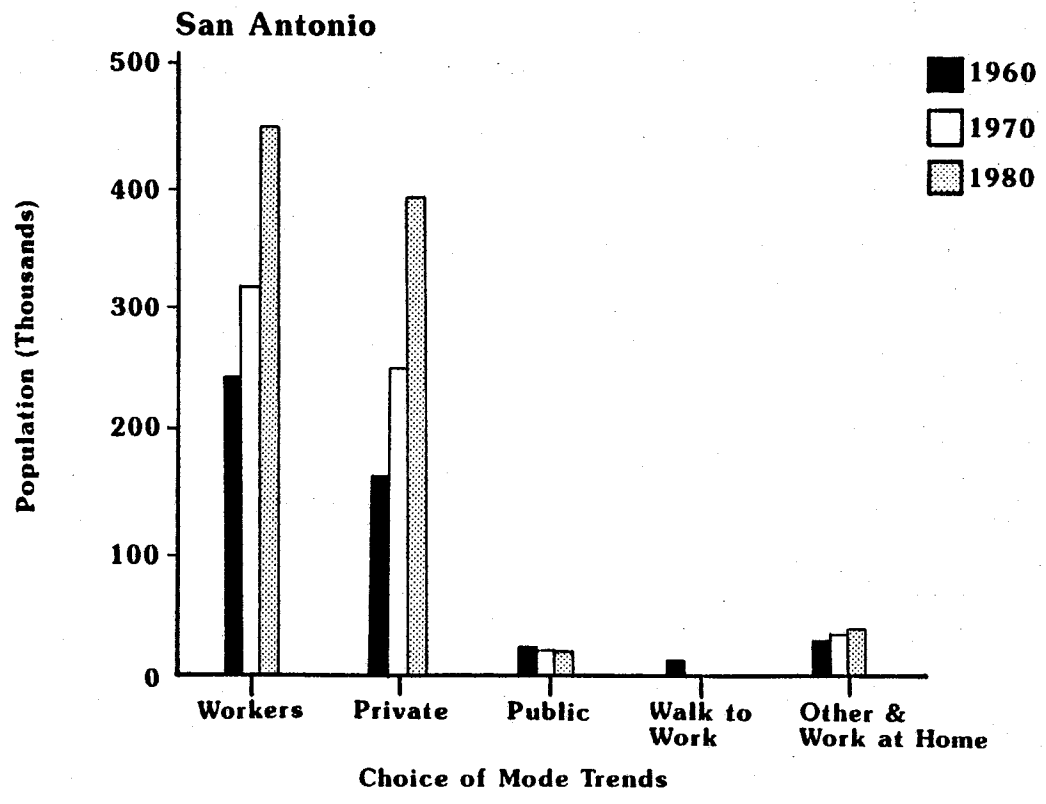
Note: "Walk To Work" Included in "Other" for 1970 and 1980



Note: "Walk to Work" Included in "Other" for 1970 and 1980

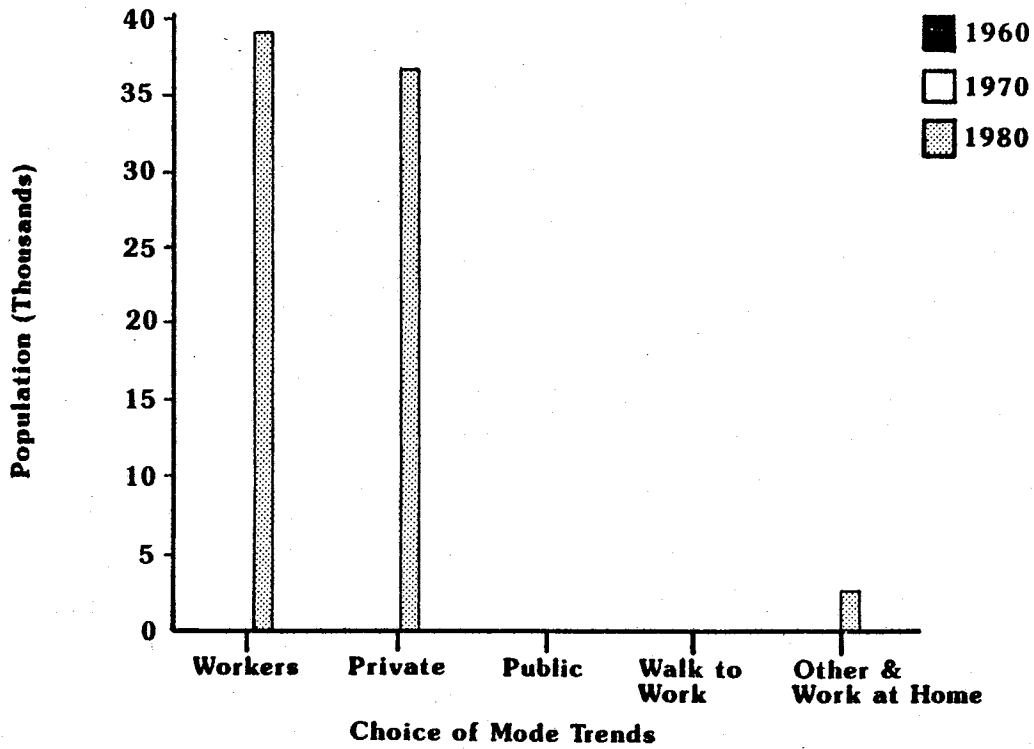


Note: "Walk To Work" Included in "Other" for 1970 and 1980



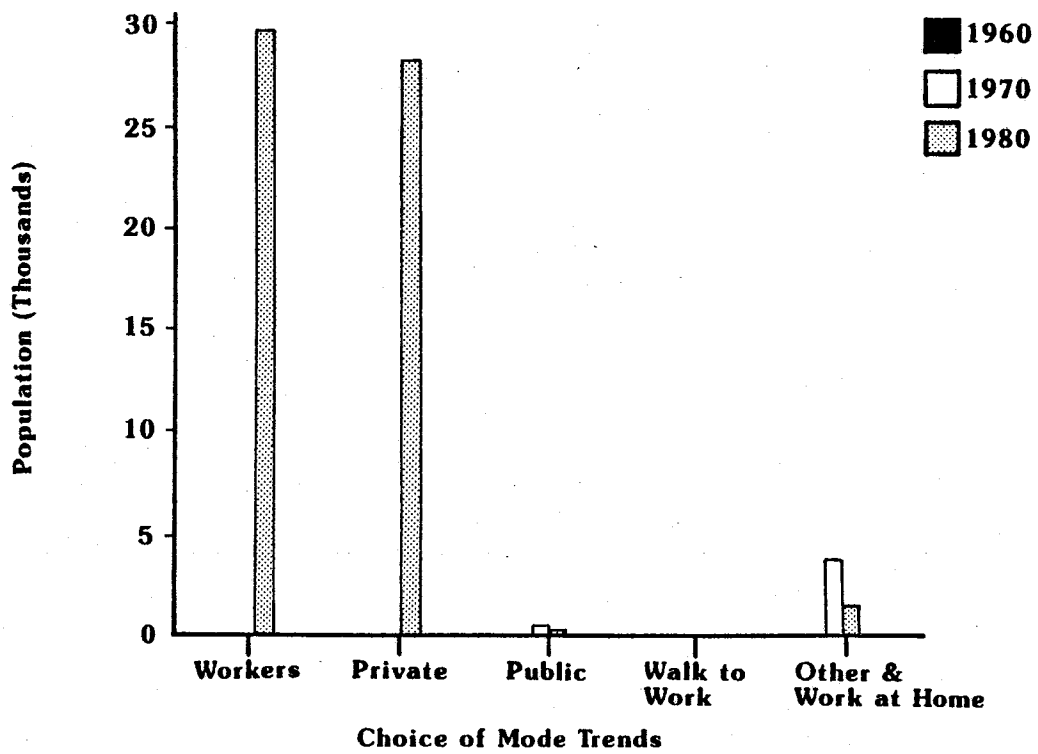
Note: "Walk to Work" Included in "Other" for 1970 and 1980

Sherman-Denison

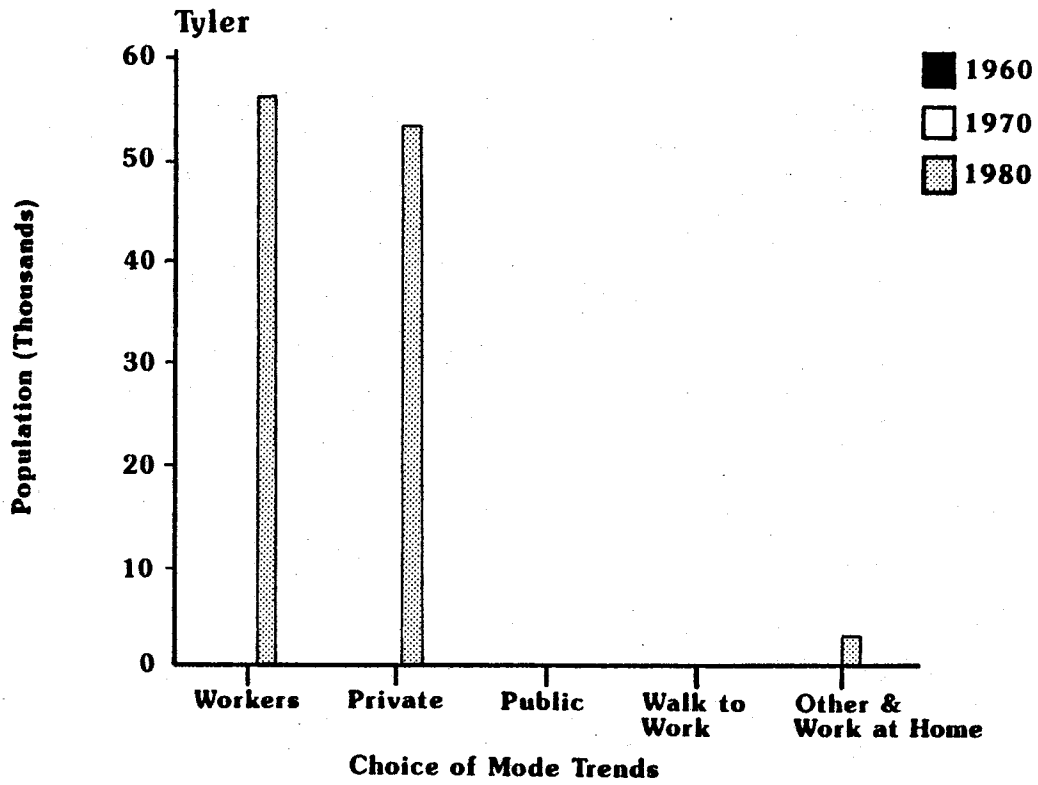


Note: "Walk To Work" Included in "Other" for 1970 and 1980

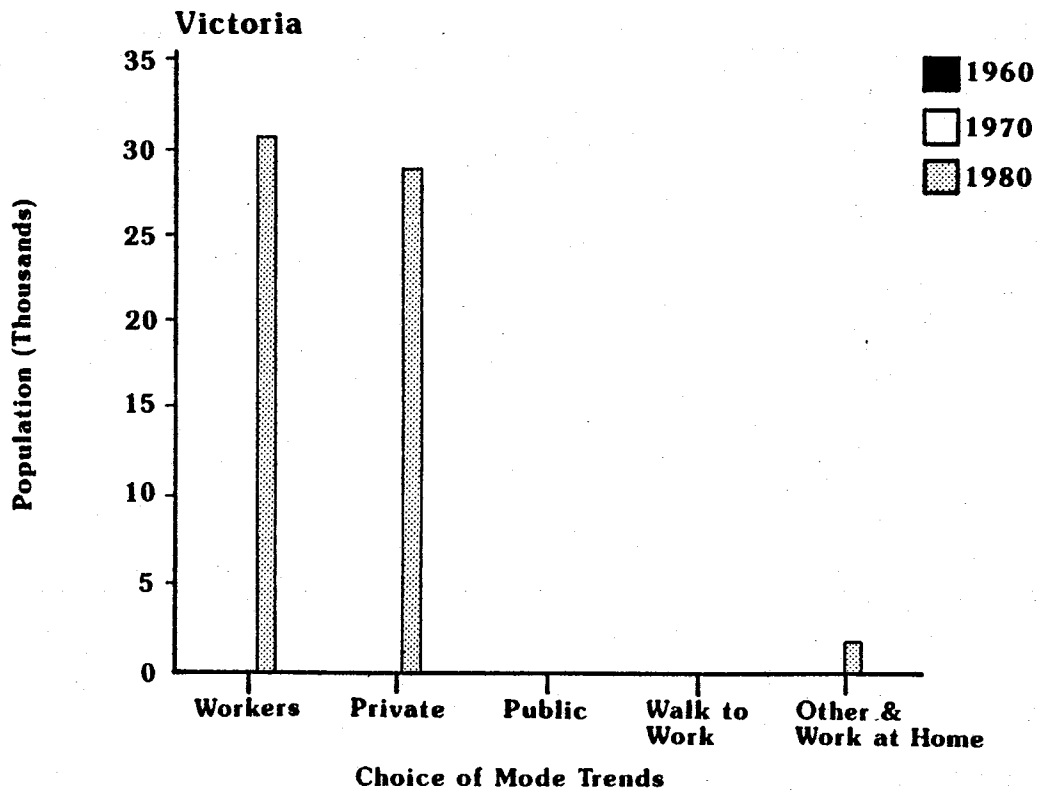
Texarkana



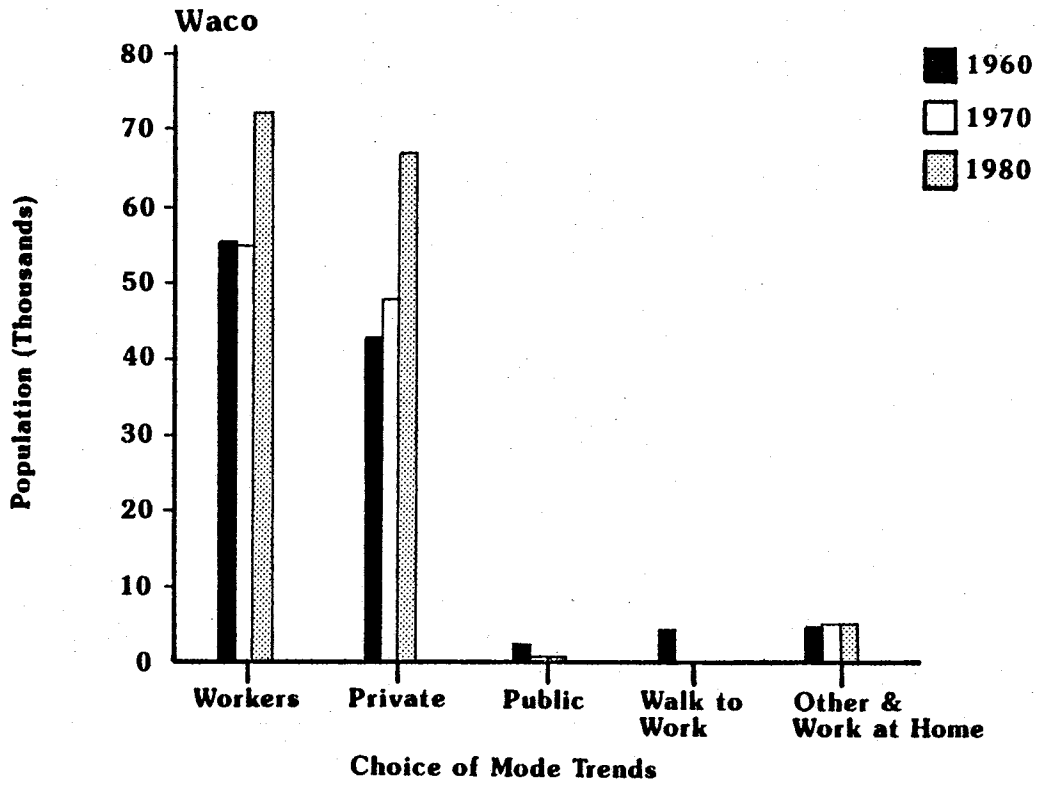
Note: "Walk to Work" Included in "Other" for 1970 and 1980



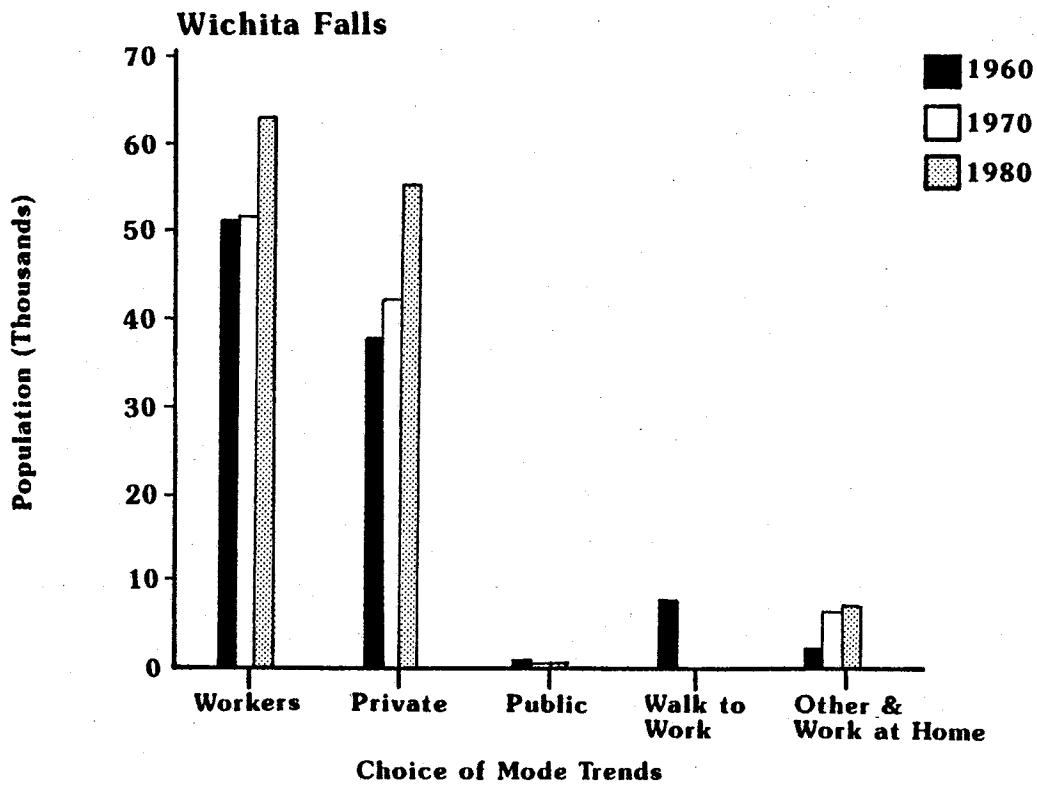
Note: "Walk To Work" Included in "Other" for 1970 and 1980



Note: "Walk to Work" Included in "Other" for 1970 and 1980



Note: "Walk To Work" Included in "Other" for 1970 and 1980

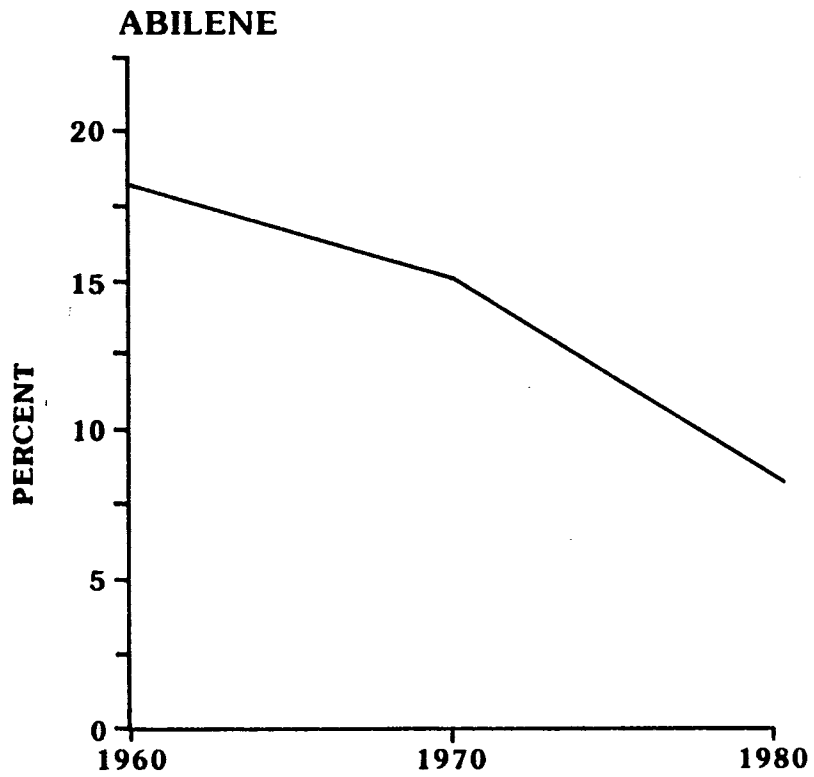


Note: "Walk to Work" Included in "Other" for 1970 and 1980

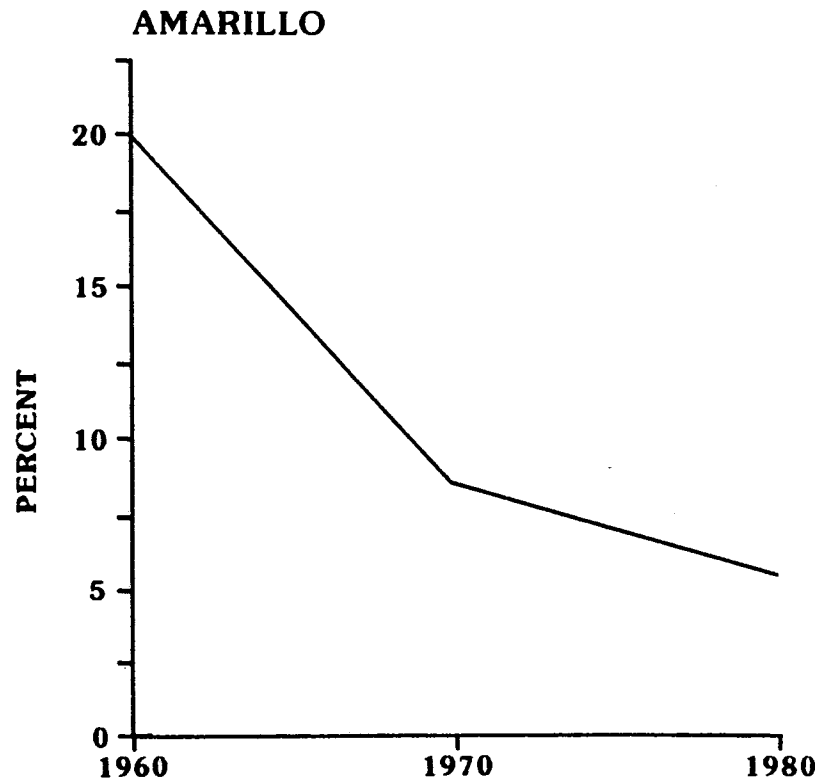
FIGURE C-2

**TRENDS IN PERCENT OF WORK FORCE WHO
BICYCLE OR WALK TO WORK OR WORK AT HOME**

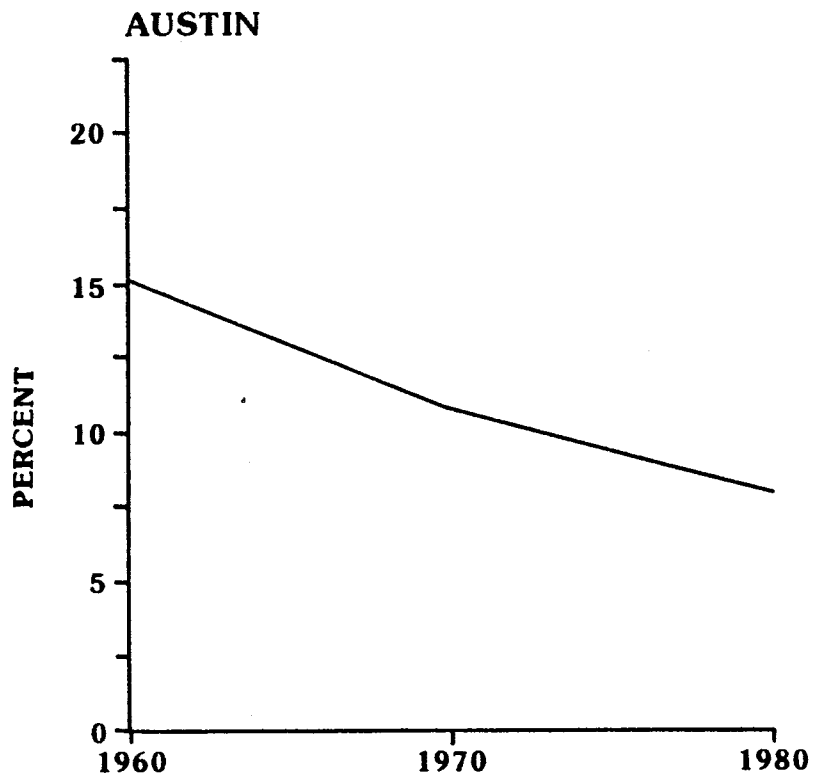
Trends in Bicycling & Walking to Work, and Working at Home



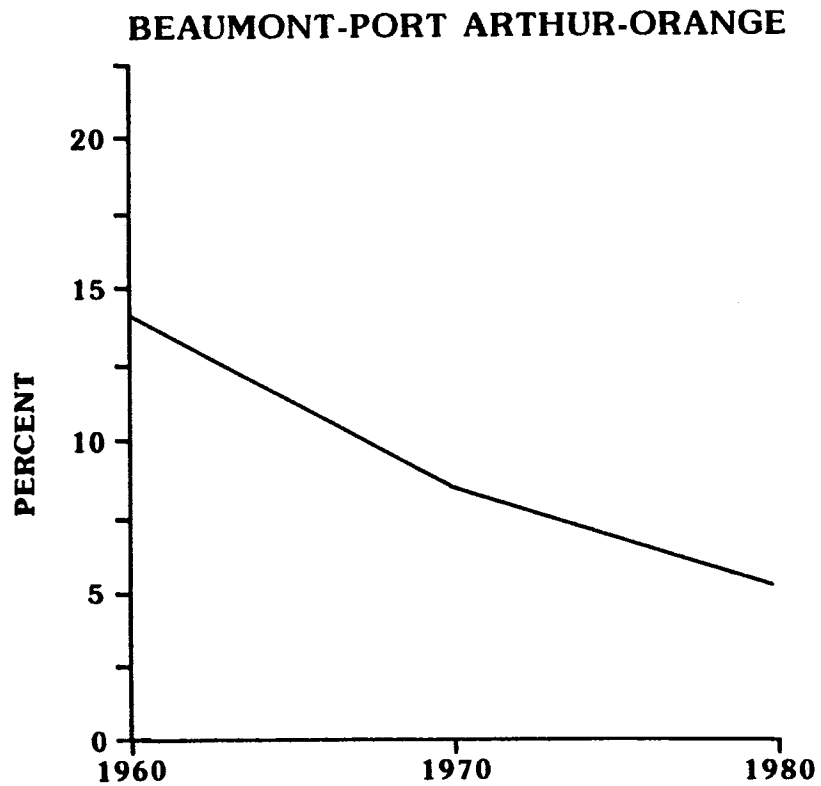
Trends in Bicycling & Walking to Work, and Working at Home



Trends in Bicycling & Walking to Work, and Working at Home

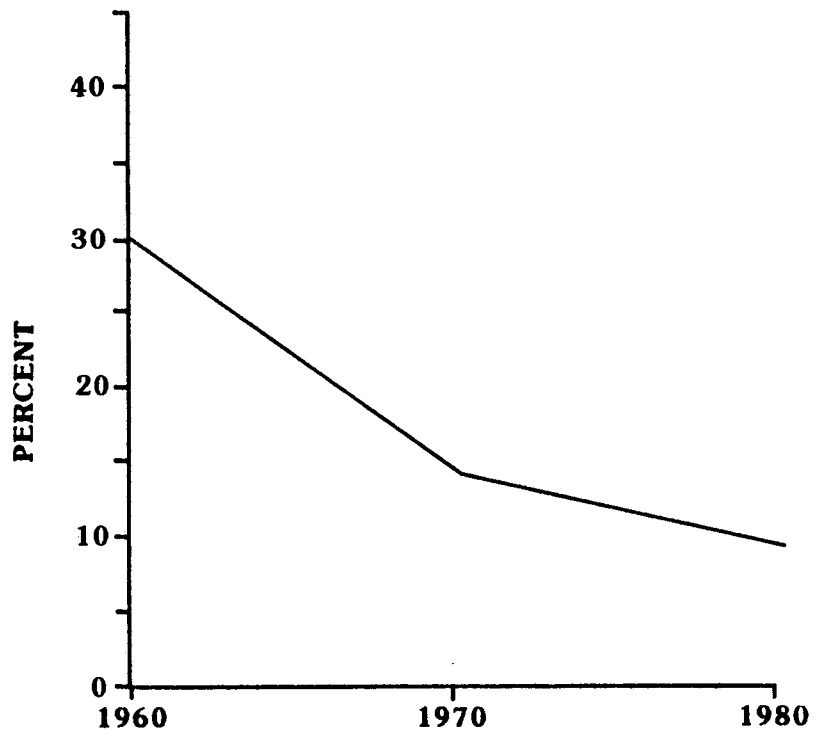


Trends in Bicycling & Walking to Work, and Working at Home



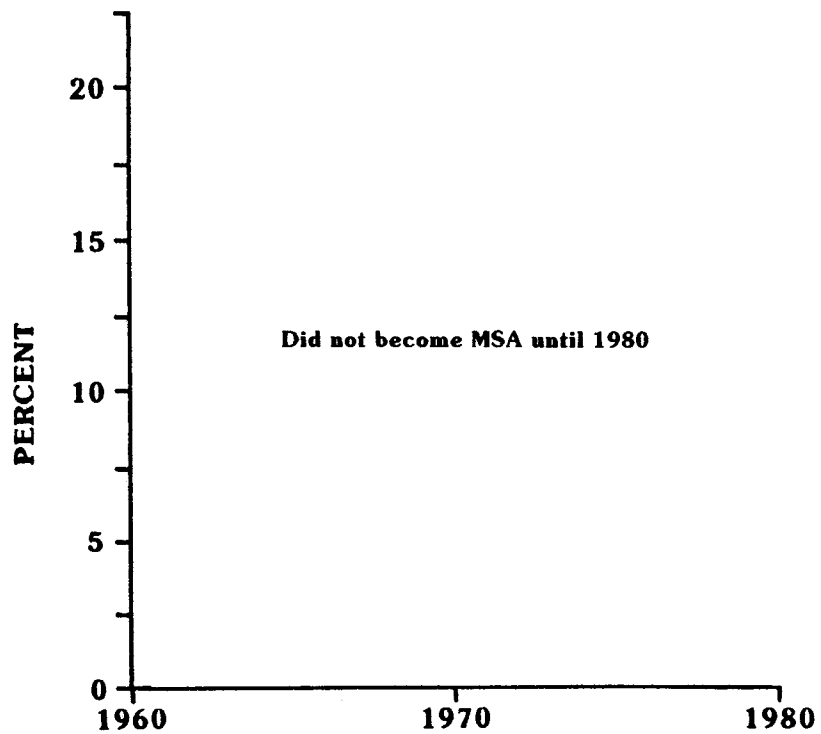
Trends in Bicycling & Walking to Work, and Working at Home

BROWNSVILLE-HARLINGEN-SAN BENITO



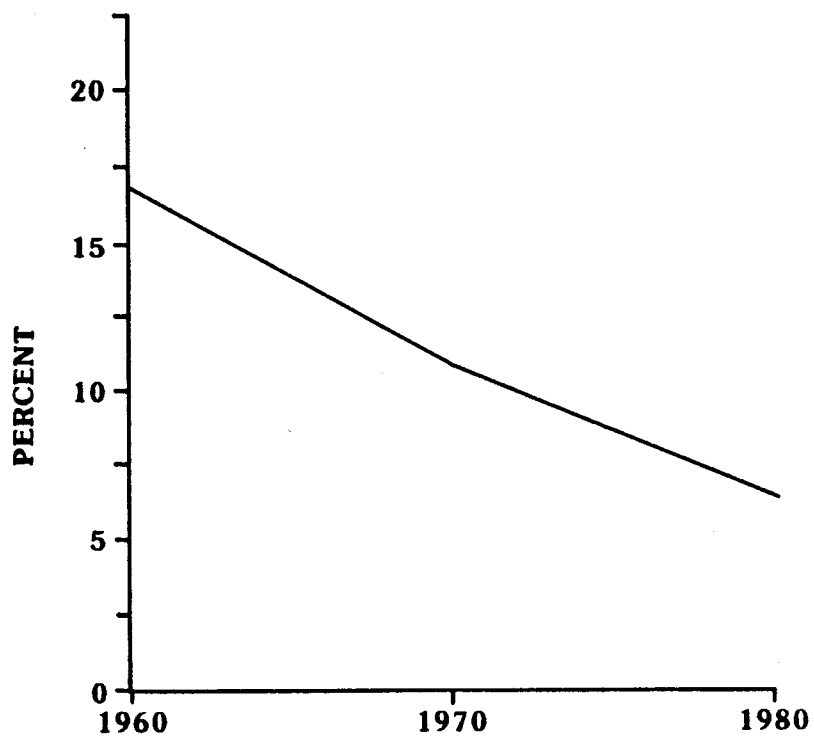
Trends in Bicycling & Walking to Work, and Working at Home

BRYAN-COLLEGE STATION



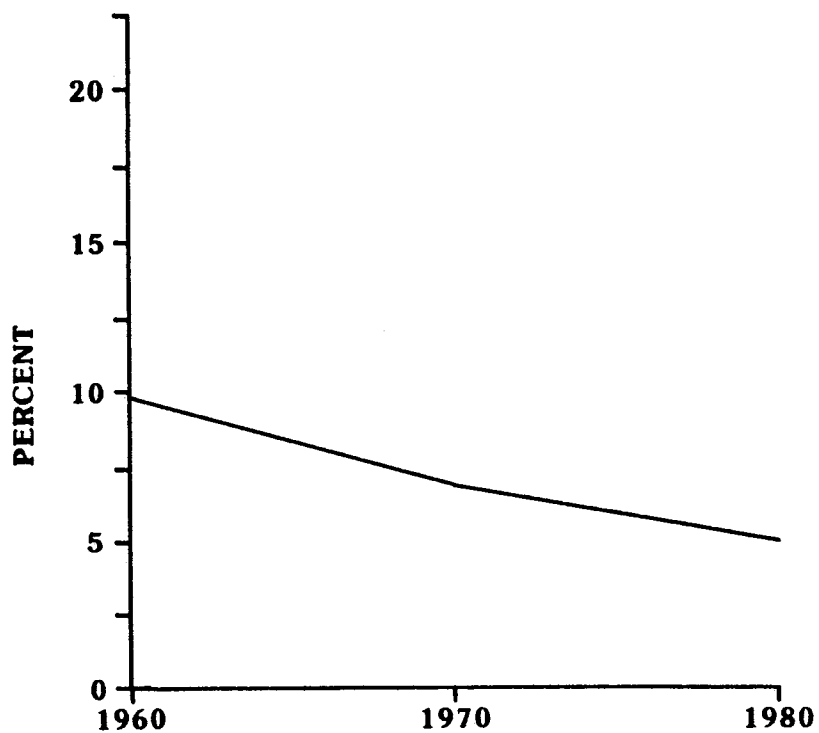
Trends in Bicycling & Walking to Work, and Working at Home

CORPUS CHRISTI

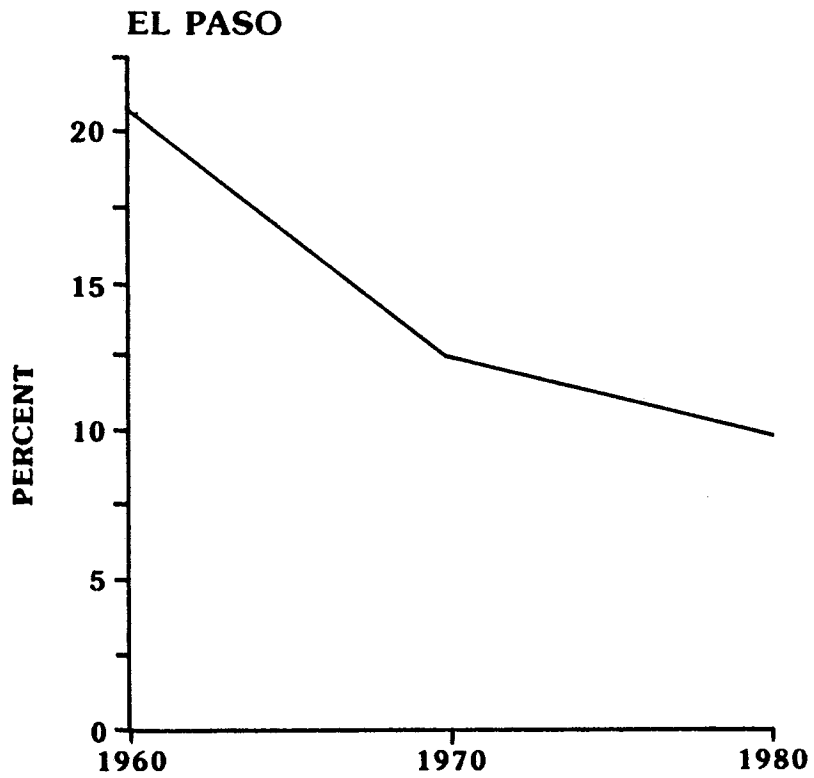


Trends in Bicycling & Walking to Work, and Working at Home

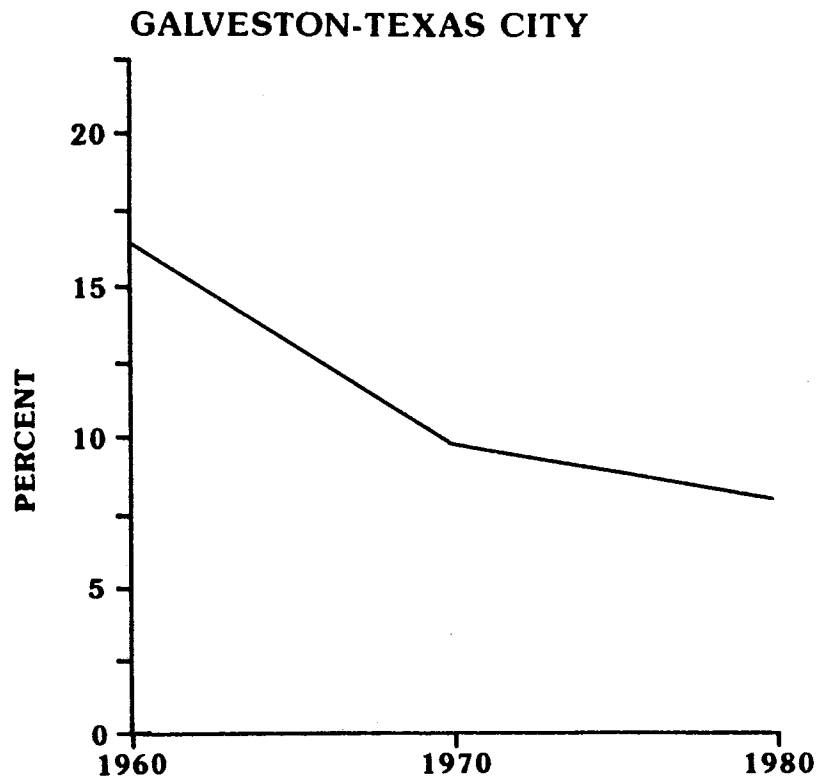
DALLAS-FT. WORTH



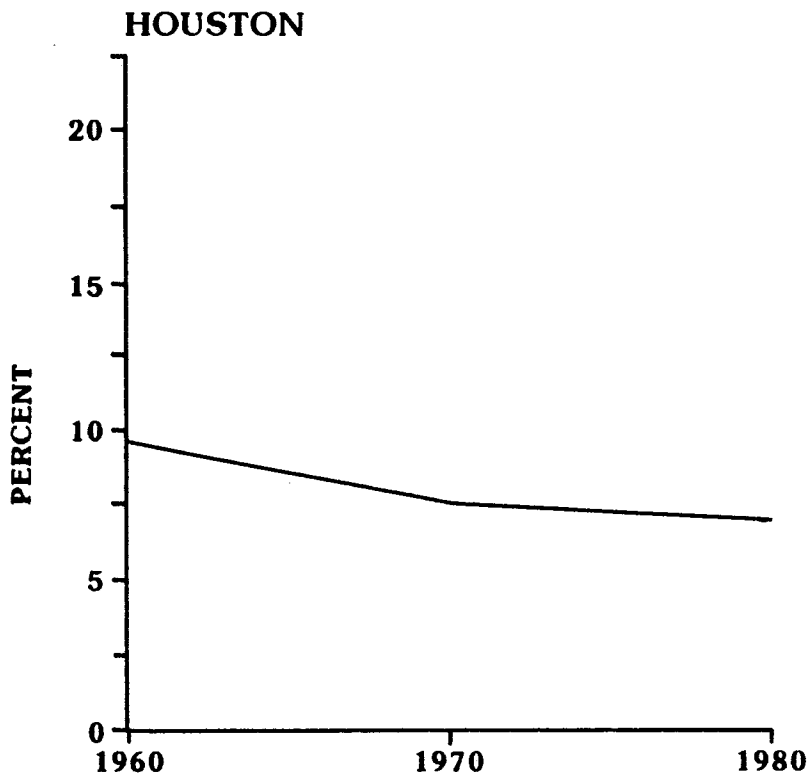
Trends in Bicycling & Walking to Work, and Working at Home



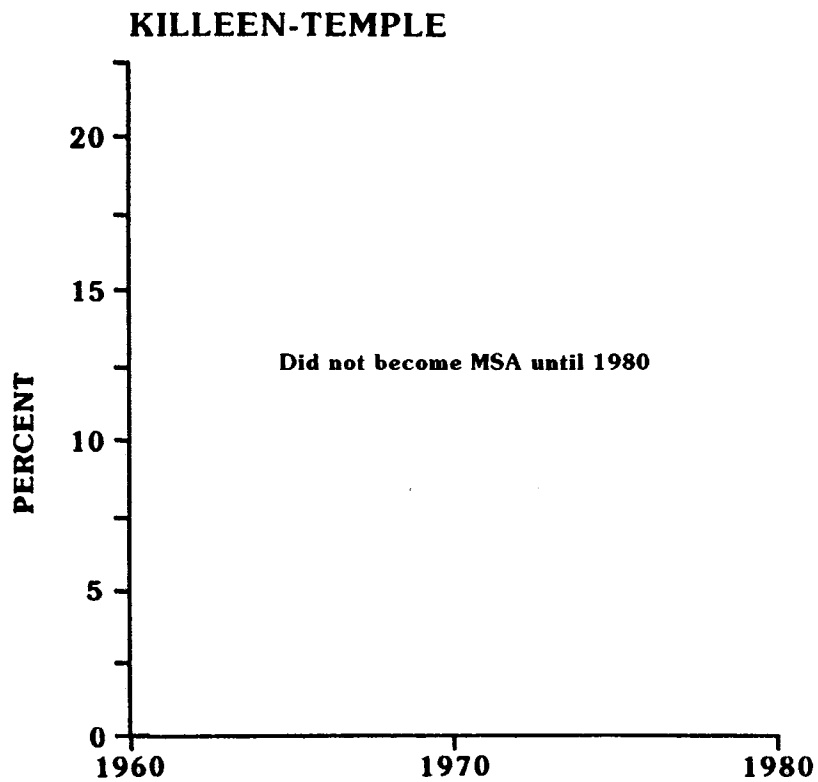
Trends in Bicycling & Walking to Work, and Working at Home



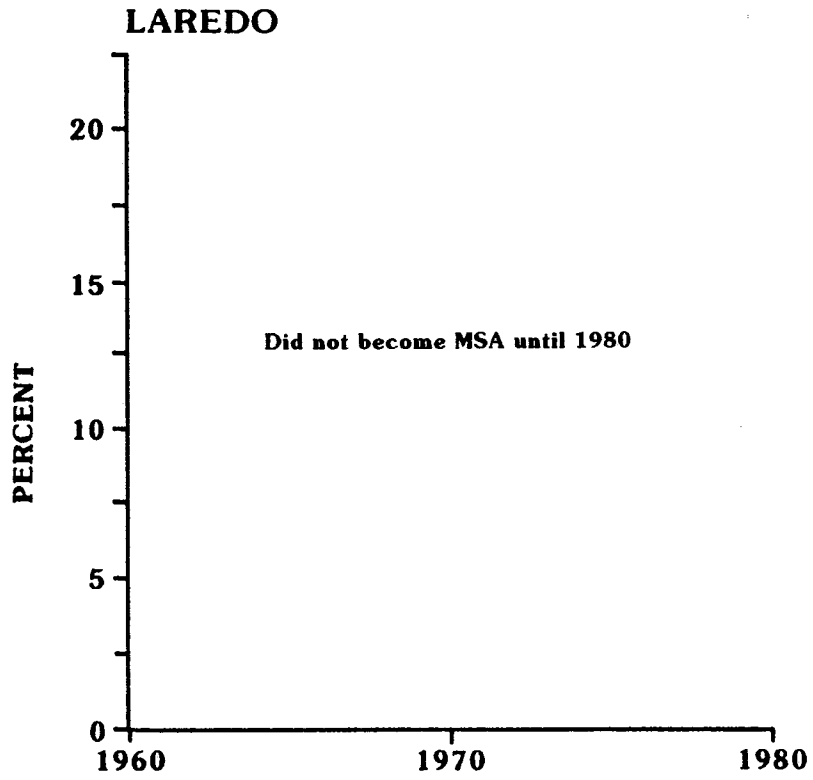
Trends in Bicycling & Walking to Work, and Working at Home



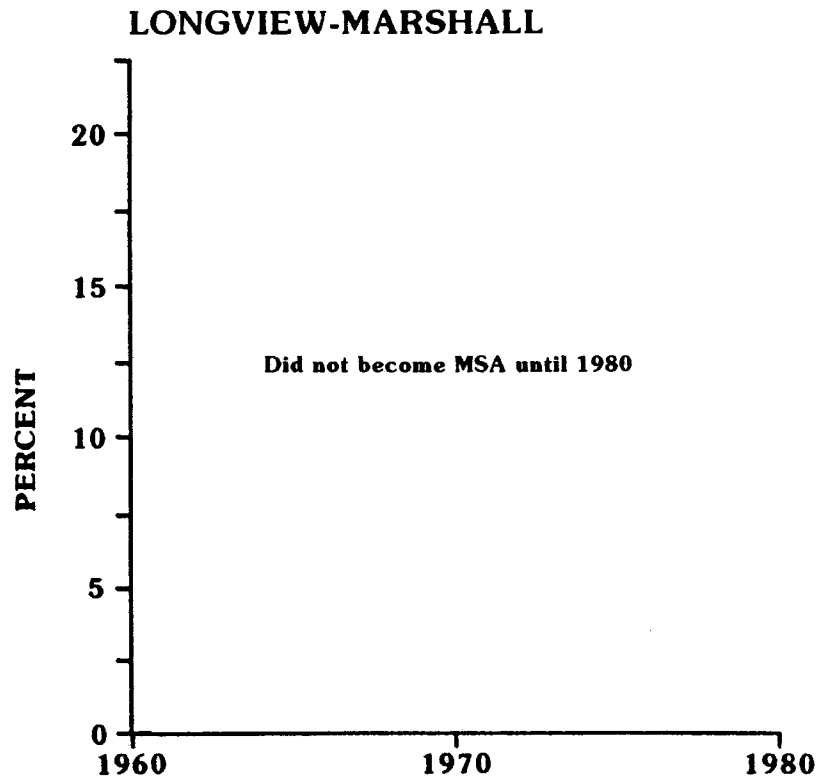
Trends in Bicycling & Walking to Work, and Working at Home



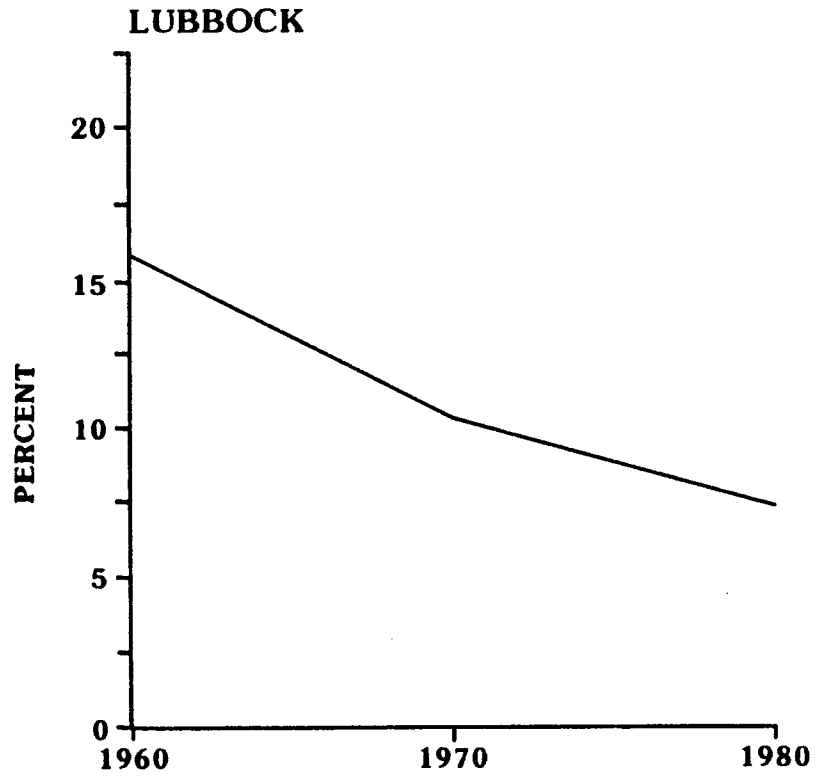
Trends in Bicycling & Walking to Work, and Working at Home



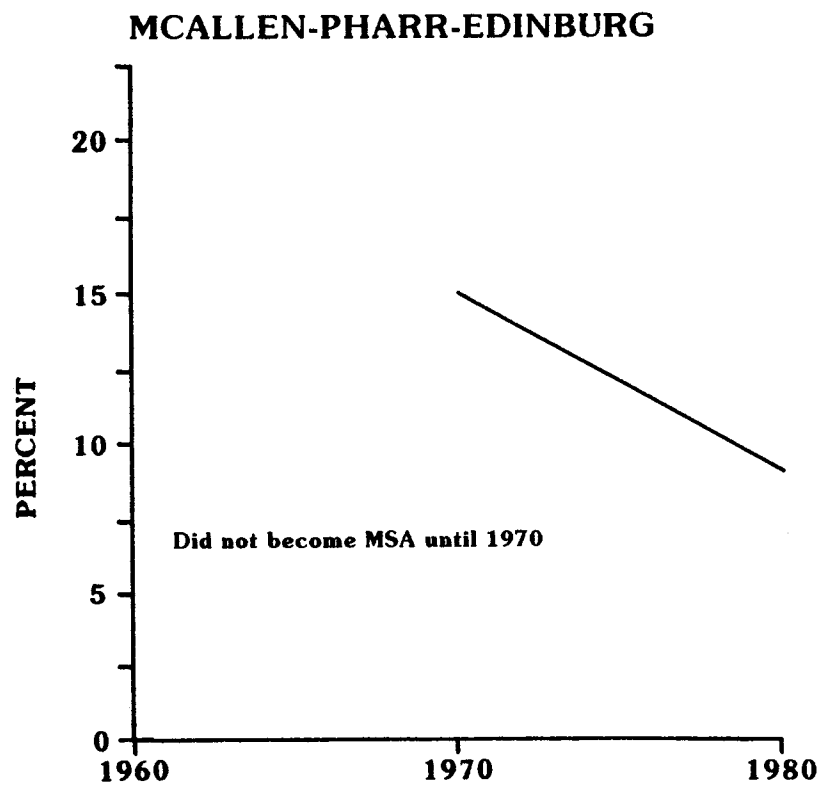
Trends in Bicycling & Walking to Work, and Working at Home



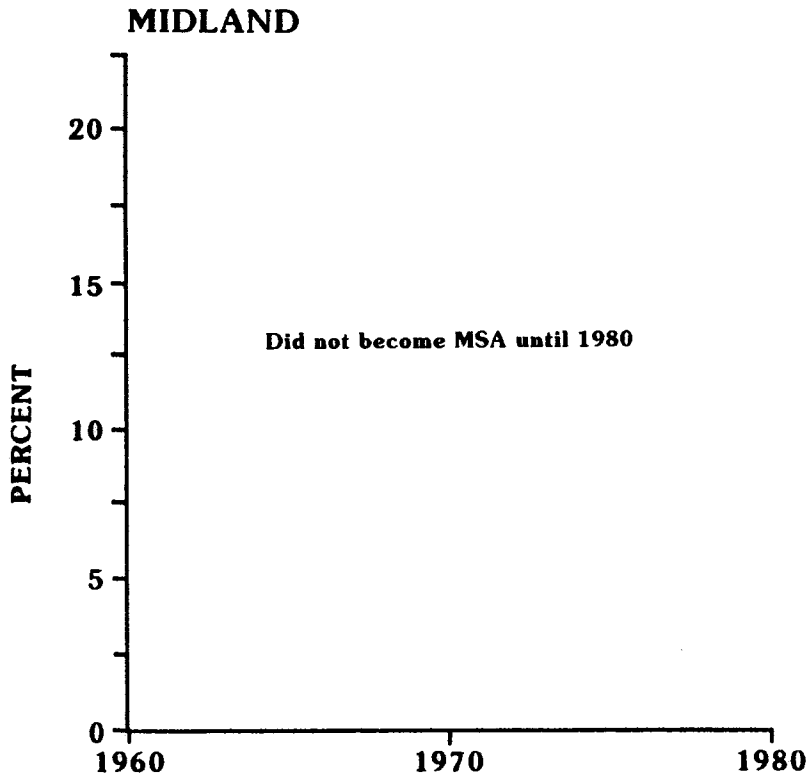
Trends in Bicycling & Walking to Work, and Working at Home



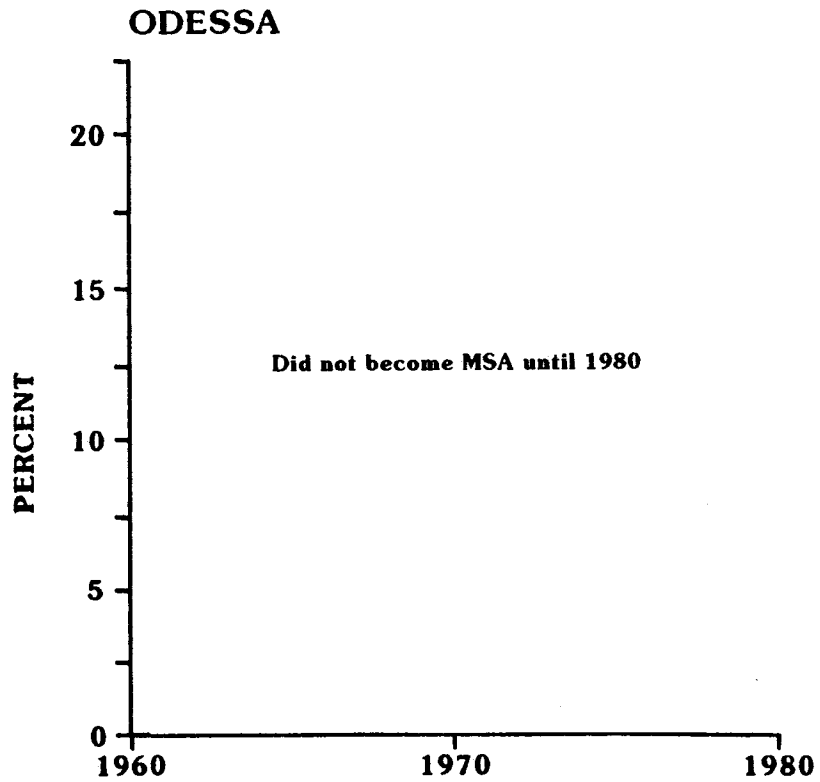
Trends in Bicycling & Walking to Work, and Working at Home



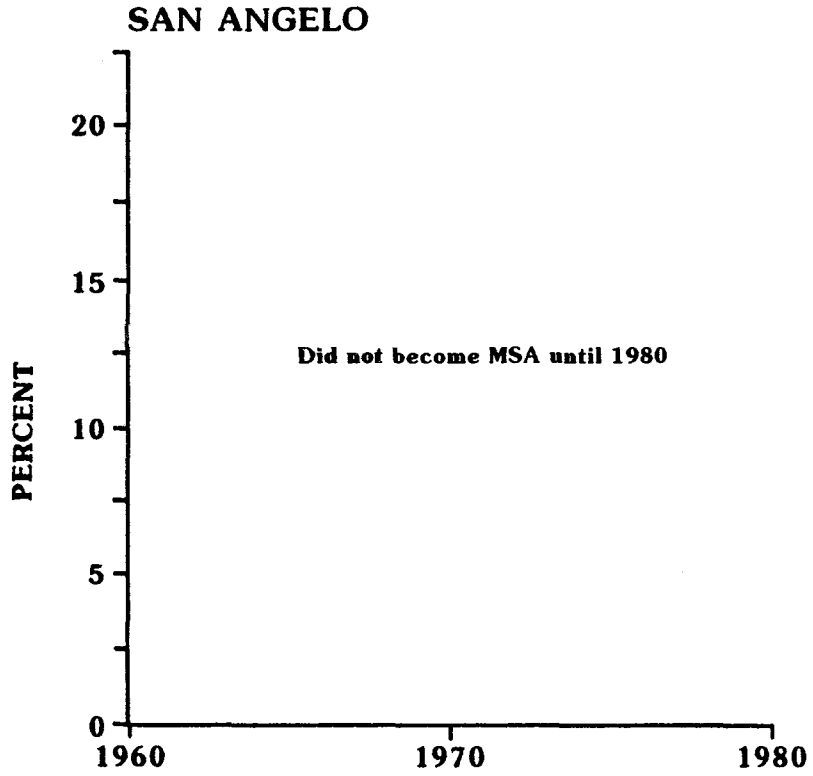
Trends in Bicycling & Walking to Work, and Working at Home



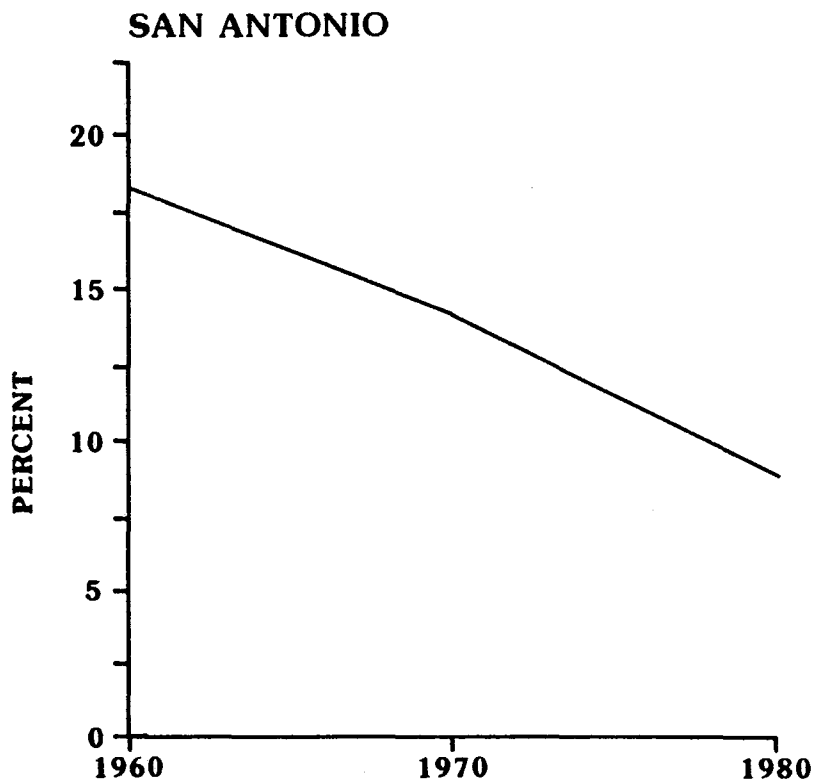
Trends in Bicycling & Walking to Work, and Working at Home



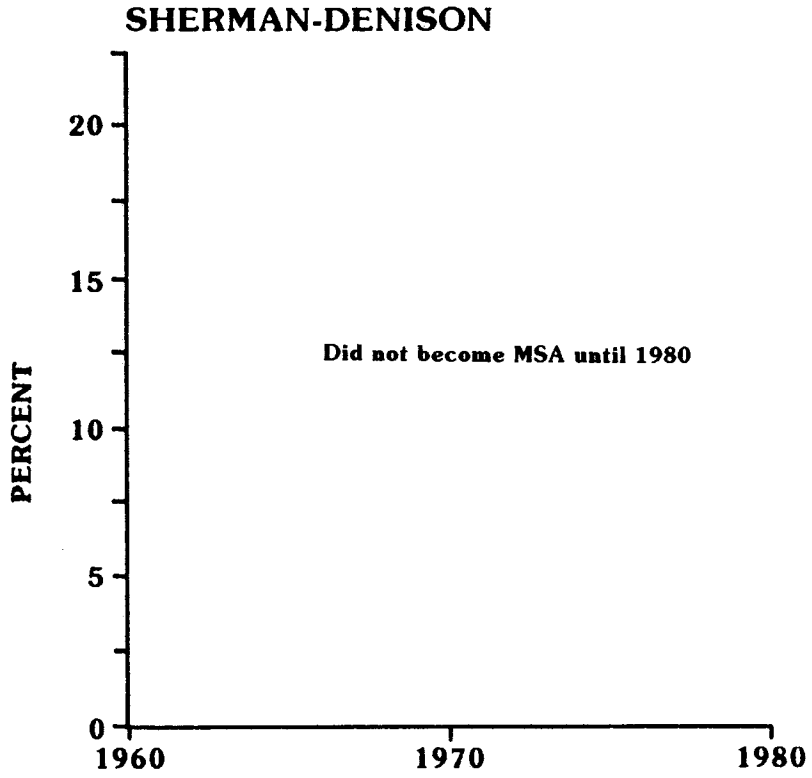
Trends in Bicycling & Walking to Work, and Working at Home



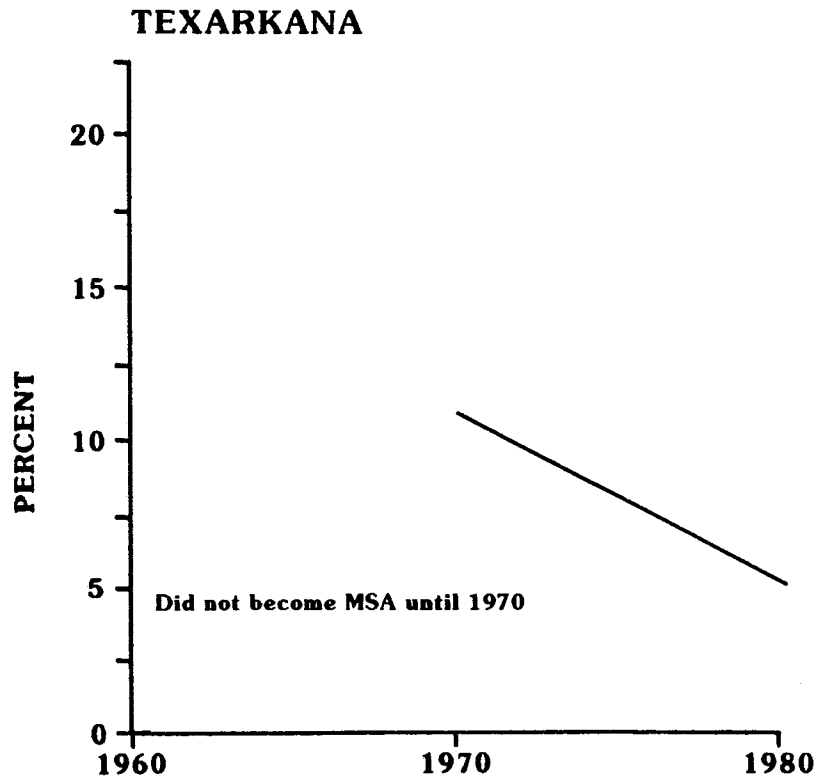
Trends in Bicycling & Walking to Work, and Working at Home



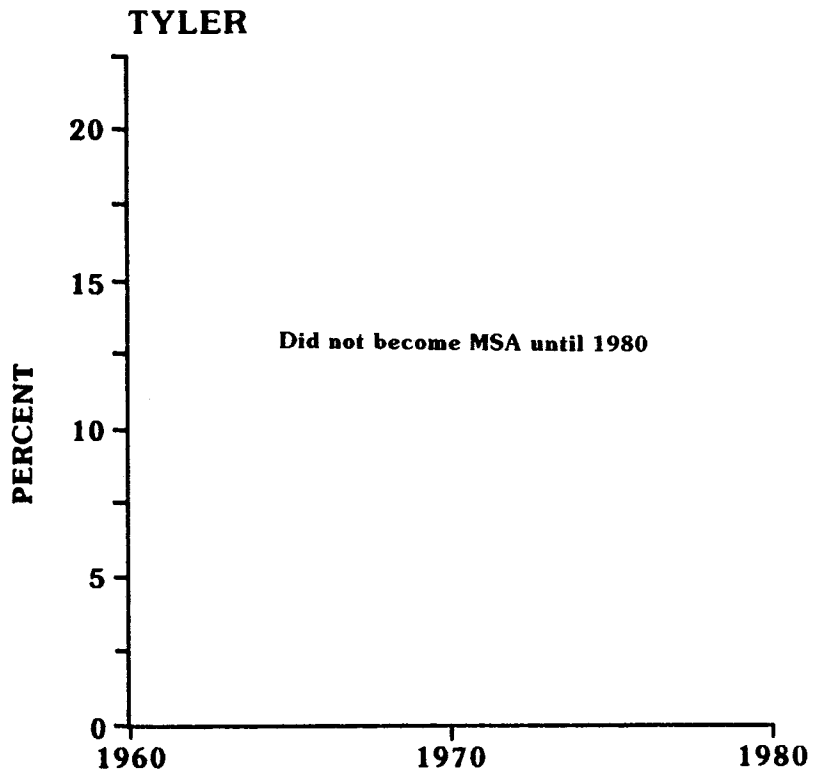
Trends in Bicycling & Walking to Work, and Working at Home



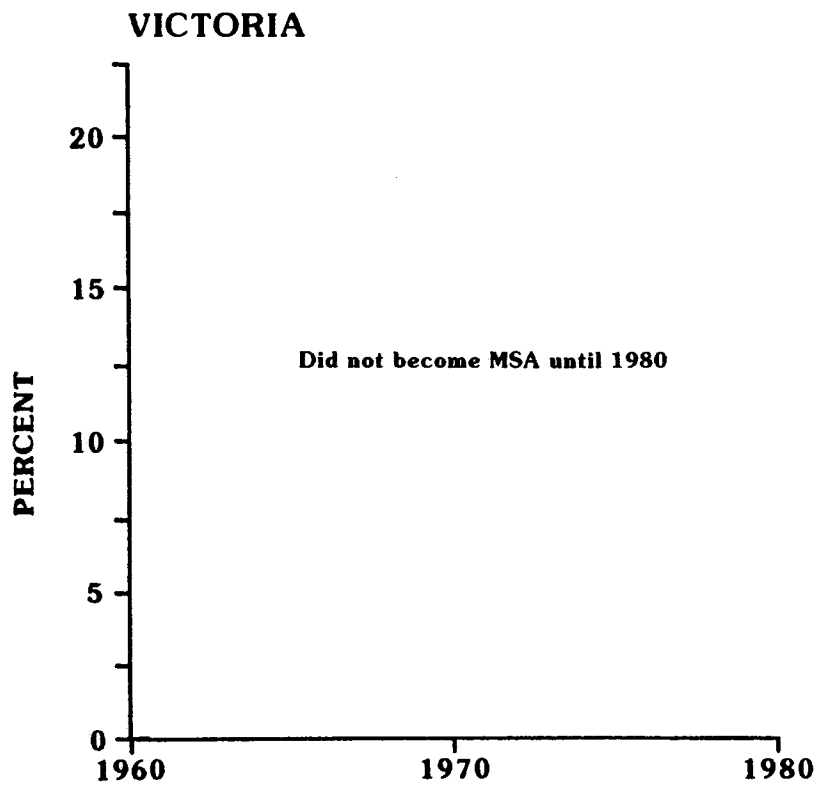
Trends in Bicycling & Walking to Work, and Working at Home



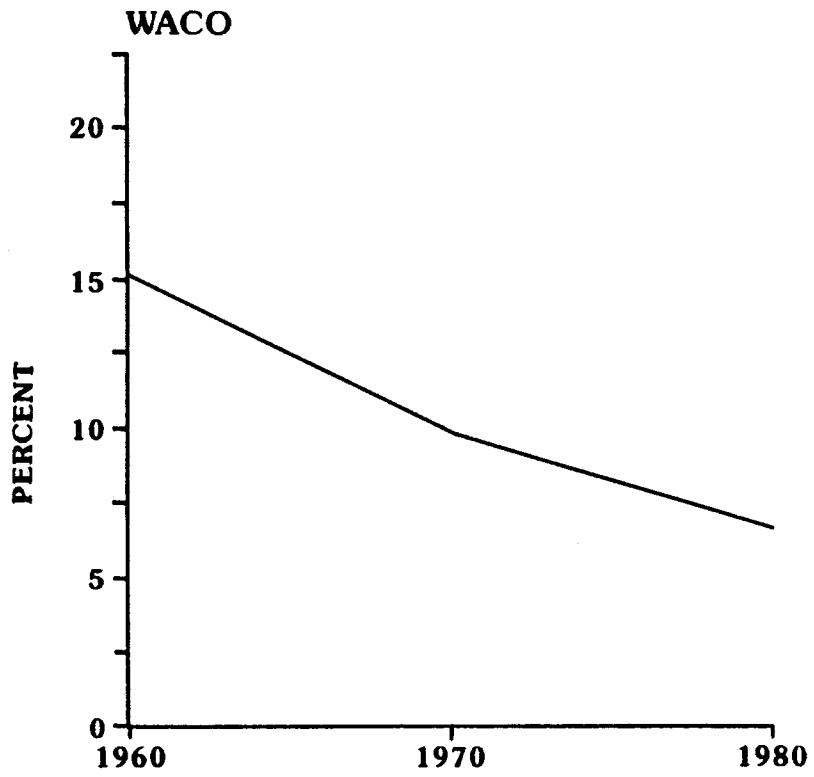
Trends in Bicycling & Walking to Work, and Working at Home



Trends in Bicycling & Walking to Work, and Working at Home



Trends in Bicycling & Walking to Work, and Working at Home



Trends in Bicycling & Walking to Work, and Working at Home

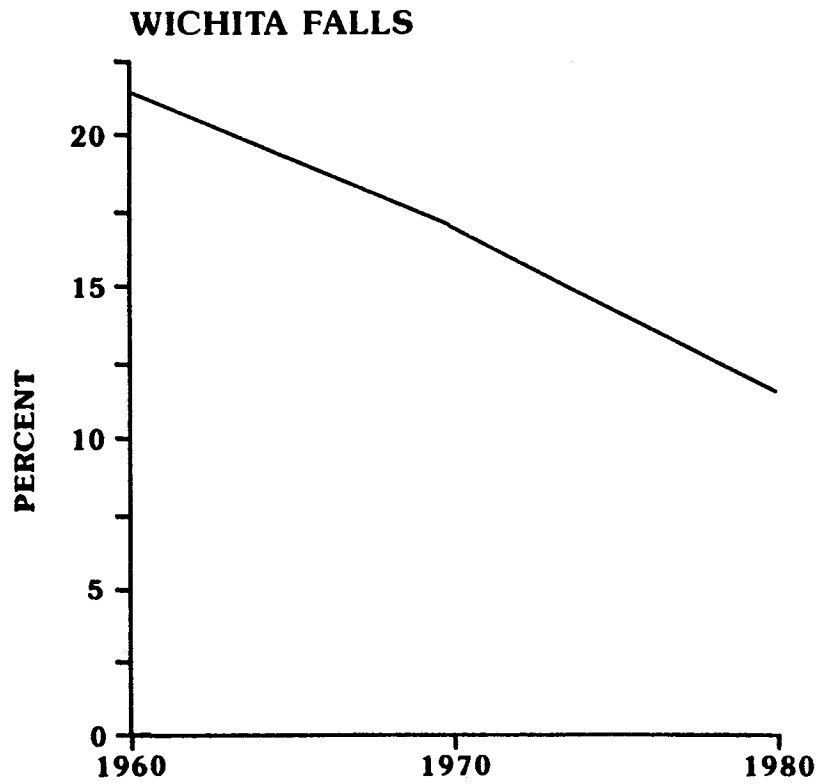


Table C-7. Average Travel Time (Min)
Total Metropolitan Area

<u>Classification</u>	Average	Private	Drive Alone	Car Pool	Public Transportation
<u>Texas Metropolitan</u>	21.6	21.9	20.7	25.8	40.0
Large Texas MSA's	23.8	24.0	22.8	27.7	41.9
Medium Texas MSA's	17.9	18.5	17.4	21.9	32.8
Small Texas MSA's	17.3	17.8	16.4	23.0	29.5
<u>Metropolitan Area</u>					
Abilene	15.5	16.1	15.1	20.7	34.6
Amarillo	16.9	17.2	15.4	23.8	36.9
Austin	18.7	19.2	18.0	22.8	28.8
Beaumont-Port Arthur-Orange	19.1	19.5	18.3	23.5	33.0
Brownsville-Harlingen	16.0	16.4	16.0	17.9	25.8
Bryan-College Station	14.9	15.6	14.3	19.5	16.7
Corpus Christi	18.5	18.8	17.4	23.0	38.8
Dallas-Fort Worth	22.5	22.6	21.5	26.3	38.5
El Paso	19.0	19.2	18.2	22.3	36.9
Galveston-Texas City	20.8	21.4	19.9	25.8	31.1
Houston	26.3	26.5	25.2	30.4	46.9
Killeen-Temple	15.7	17.5	16.3	21.2	28.8
Laredo	16.6	16.8	16.1	18.7	28.7
Longview-Marshall	17.4	17.9	16.8	22.4	34.0
Lubbock	16.1	16.6	16.0	19.0	26.8
McAllen-Pharr-Edinburg	16.8	17.6	16.5	20.6	43.1
Midland	16.0	16.4	15.6	19.8	21.7
Odessa	17.9	18.3	16.2	27.2	--
San Angelo	15.4	16.2	14.9	21.0	32.5
San Antonio	20.1	20.3	19.4	23.0	39.4
Sherman-Denison	18.1	18.8	17.3	24.5	30.0
Texarkana	18.0	18.4	16.3	23.9	11.1
Tyler	18.5	18.8	17.7	23.7	30.2
Victoria	19.9	20.4	16.2	31.4	48.4
Waco	16.4	16.8	15.8	21.0	31.9
Wichita Falls	15.6	16.3	15.6	18.8	23.5

Table C-8. Private Vehicle Travel Times to Work, 1980
(Minutes)

Classification	Central City	Destination Suburbs	Total Metropolitan
Texas Metropolitan			
Central City	19.3	24.2	41.9
Suburbs	28.4	16.7	37.5
Total Metropolitan	21.8	18.4	39.4
Small Texas MSAs			
Central City	13.3	19.7	43.6
Suburbs	20.9	13.1	36.5
Total Metropolitan	14.8	15.7	39.8
Medium Texas MSAs			
Central City	16.1	21.5	41.9
Suburbs	22.8	13.4	36.5
Total Metropolitan	17.4	15.4	40.4
Large Texas MSAs			
Central City	22.5	26.2	39.2
Suburbs	30.7	17.8	37.9
Total Metropolitan	25.2	19.5	38.4
Metropolitan Area			
Abilene			
Central City	12.8	22.1	38.7
Suburbs	25.1	12.3	36.8
Total Metropolitan	14.5	14.3	37.9
Amarillo			
Central City	13.8	23.0	45.7
Suburbs	21.9	11.3	33.0
Total Metropolitan	14.5	17.4	43.7
Austin			
Central City	16.7	23.0	45.0
Suburbs	25.4	12.9	36.8
Total Metropolitan	18.6	14.7	40.4
Beaumont-Port Arthur- Orange			
Central City	15.7	21.0	43.3
Suburbs	23.3	15.1	43.3
Total Metropolitan	18.2	16.7	43.3
Brownsville-Harlingen- San Benito			
Central City	13.4	13.7	33.7
Suburbs	18.4	19.1	33.5
Total Metropolitan	14.3	14.4	33.6
Bryan-College Station			
Central City	11.9	20.4	40.6
Suburbs	17.0	14.4	34.8
Total Metropolitan	12.6	18.3	39.4
Corpus Christi			
Central City	16.4	27.2	45.4
Suburbs	27.4	13.0	38.6
Total Metropolitan	17.6	16.3	42.0

Table C-8. Private Vehicle Travel Times to Work, 1980 (cont.)
(Minutes)

Metropolitan Area	Central City	Destination Suburbs	Total Metropolitan
Dallas-Ft. Worth			
Central City	21.0	26.1	39.6
Suburbs	28.7	17.2	39.6
Total Metropolitan	24.1	18.8	39.6
El Paso			
Central City	18.1	23.8	42.3
Suburbs	18.3	12.1	29.7
Total Metropolitan	18.1	18.6	40.7
Galveston-Texas City			
Central City	14.9	19.5	42.1
Suburbs	25.5	12.4	32.7
Total Metropolitan	17.4	13.9	34.1
Houston			
Central City	24.6	27.8	38.4
Suburbs	32.7	35.6	37.3
Total Metropolitan	27.9	21.1	37.7
Killeen-Temple			
Central City	12.6	17.9	44.4
Suburbs	21.7	12.7	37.6
Total Metropolitan	15.6	13.9	39.6
Laredo			
Central City	15.2	24.2	48.5
Suburbs	14.1	11.4	19.0
Total Metropolitan	15.1	20.9	46.1
Longview-Marshall			
Central City	12.6	20.1	44.6
Suburbs	19.8	13.5	35.9
Total Metropolitan	14.5	15.5	39.9
Lubbock			
Central City	14.3	19.7	37.9
Suburbs	22.1	11.4	33.2
Total Metropolitan	15.2	15.4	37.1
McAllen-Pharr-Edinburg			
Central City	13.3	21.4	43.7
Suburbs	19.6	14.4	41.0
Total Metropolitan	15.3	15.5	41.7
Midland			
Central City	13.1	21.9	39.5
Suburbs	16.4	9.6	29.2
Total Metropolitan	13.5	17.4	37.1
Odessa			
Central City	13.1	19.5	37.7
Suburbs	18.9	16.3	53.8
Total Metropolitan	14.0	18.3	41.3
San Angelo			
Central City	12.4	22.9	56.8
Suburbs	22.4	14.0	39.6
Total Metropolitan	13.3	16.5	52.7

Table C-8. Private Vehicle Travel Times to Work, 1980 (cont.)
(Minutes)

Metropolitan Area	Central City	Destination Suburbs	Total Metropolitan
San Antonio			
Central City	20.0	21.9	40.1
Suburbs	21.8	14.1	34.3
Total Metropolitan	20.4	16.5	37.2
Sherman-Denison			
Central City	12.8	18.9	56.2
Suburbs	22.6	11.0	45.7
Total Metropolitan	15.3	12.7	49.1
Texarkana			
Central City	14.2	24.1	40.5
Suburbs	19.4	13.7	44.0
Total Metropolitan	16.9	15.6	43.0
Tyler			
Central City	13.0	20.0	49.8
Suburbs	21.0	15.8	38.3
Total Metropolitan	15.7	17.4	42.4
Victoria			
Central City	12.2	25.3	47.3
Suburbs	19.2	18.3	43.4
Total Metropolitan	13.5	21.9	46.0
Waco			
Central City	13.6	18.1	42.3
Suburbs	19.1	11.7	39.8
Total Metropolitan	15.5	13.3	40.8
Wichita Falls			
Central City	13.7	13.8	40.1
Suburbs	23.1	12.6	40.8
Total Metropolitan	15.3	13.3	40.5