MIDSTATE
regional planning agency

report 4

study of the ECONOMY

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study of the ECONOMY

The study of the economy was prepared with the valuable assistance of John M. Thompson, Jr., and guidance of Raymond and May Associates.

Sincere appreciation is expressed for the assistance of J. Paul Littell, and the many manufacturers whose conscientious efforts during the survey provided extremely important insights into the Region's industrial characteristics.

MIDSTATE REGIONAL PLANNING AGENCY

CROMWELL DURHAM EAST HAMPTON HADDAM MIDDLEFIELD MIDDLETOWN PORTLAND

P.O. BOX 139 MIDDLETOWN, CONNECTICUT 06458 203 347-6180

September 6, 1966.

The Midstate Regional Planning Agency is pleased to submit to its member communities this Study of the Economy.

It is the purpose of the report to present and analyze the economic pattern from several points of view so as to be of use for a variety of purposes. It is hoped that the information and insights contained in this report will provide valuable guidance to the individuals, businesses and municipalities concerned with the many aspects of the Region's economic well-being.

Very truly yours,

John Lyman, Jr.

John Lyman, Jr.
Chairman
JL:mlc

IRWIN MOSS KAPLAN, DIRECTOR

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From its self-sufficient agricultural origins to its present complex economic structure, Midstate has grown increasingly sensitive to external influences and intensifying competition. The Region's progress is historically reflected in its ability to adapt to an ever changing role.

As the emphasis shifted from Middletown as a major Connecticut port, it assumed an industrial lead in 1810, when one of the first factories in the United States to be powered by steam and to use standardized production techniques was built here. By the mid-1800's however, the City relinquished its position when inertia yielded to obsolescence, and the rapidly changing demands of the industrial revolution were being met more effectively elsewhere.

In the face of change, the area's well developed turnpike and steamship line stood in opposition to the rail system of the future. In resisting progress, the Region stepped aside as the railroad between Hartford and New Haven was built through Meriden.

Connecticut continued to industrialize and Midstate prospered, but since the Region was not as well endowed with resources as many parts of the State, growth lagged. As the automobile came into its own and new roads were constructed, the differences between regions began to diminish. Midstate's opportunities thereby increased, and the pattern of development grew more complex. Less and less could the growth of the Region be attributed primarily to circumstances within it. It became more difficult to isolate Midstate's progress from the progress of areas around it.

As the textiles industry in New England gave way to the lower labor costs of the South after World War II, a new pattern emerged within the Region. With the decline of nondurables manufacturing, the durables sector proceeded to dominate the industrial scene and, although manufacturing employment declined, a postwar pattern of small industries and diversification replaced Midstate's traditional pattern of large but fewer manufacturers. Despite the closing of Andover-Kent in 1949, diversification in the manufacture of electrical and transportation equipment

bolstered manufacturing activity in the Region.

Manufacturing employment registered moderate gains in the State and the Nation while it declined in the Region, but Midstate's population continued to increase rapidly during the postwar period. This gain in population symbolizes Midstate's most significant departure from the relative isolationism of its past.

This new interdependence has affected all aspects of community existence. Our increasing reliance upon resources outside our borders has developed new problems which will not readily yield to conventional solutions. The economies afforded by the regional scale has created an imbalance within our communities. The Region has assumed somewhat of a dormitory function as more than a quarter of Midstate's residents commute to jobs outside the Region. At the same time, approximately one quarter of the retail purchases made by Midstate residents are also made outside the Region. As might be expected, it is primarily the Hartford area which is attracting these resources, with the New Haven and New Britain areas playing secondary roles.

In recent years, the major emphasis of jobs held by Midstate's residents has shifted from manufacturing to the service industries. This has been more pronounced for Midstate than for the State as a whole, and accounts for a substantial portion of the Region's population growth. This in part reflects the ease of commuting and the declining role of manufacturing as the major stimulus to the Region's development. Recently however, the pattern has been complicated by a new wave of production employment as production rises in non-automotive transportation equipment and allied fields.

CONFLICTS OF THE NEW URBANIZATION

The increased employment opportunity in Connecticut has in turn stimulated new patterns of urbanization. The rate this influx of population pressing outward from the urban corridor continues to settle in Midstate depends upon continuing economic opportunities within easy access, and the availability of residential opportunities.

Stimulated by the growth of population is the development of new highways, which increase the effective radius of operation of the population. This mobility is reflected in many facets of our economy. For example, while Midstate's rate of unemployment is somewhat greater than that of the State, there has been a steady convergence between unemployment rates within the State.

The problem therefore no longer is one of job opportunity for isolated portions of the State: but the mere availability of adequate employment opportunity throughout the State is in itself no assurance of economically balanced communities. It becomes evident that employment opportunities for Connecticut's residents can also create economic hardships for its municipalities.

Job opportunity for small areas within the State loses its significance, as long as job opportunities and population throughout the State as a whole are in balance.

Mobility and flexibility increase the individual's opportunities. One may choose a job type, job location, place of residence and so on, which extend well beyond the limits of a single community.

This flexibility creates problems in related sectors of the economy, the gravity of which depends on the adaptability of these sectors.

Local industries find that wage scales are being dictated by employment centers, which traditionally have paid higher wages, but were previously considered too distant to influence local policies. Also, traditionally noncompetitive industries are competing for labor because extensive training programs create transferability of skills across industrial lines.

Many of Connecticut's large high-wage industries need not reflect competitive market considerations in establishing their wage scales in the same way as other industries. As a result, these larger industries which have been hiring at a rapid rate, have set the pace in wage levels, benefits and training programs. This accelerates the rate of labor turnover in the employment pattern of other industries which were formerly not subject to these pressures.

As labor is drawn off, industry must align its wage scale in order to remain competitive and to maintain its labor supply. This has resulted in a pattern of converging salary scales among the regions of the State during this period of short labor supply.

The labor vacuum has also caused a large labor supply to be drawn into Connecticut, but because of the rate at which labor needs have increased, there is still a lag between supply and unmet demand. As the rate of growth stabilizes, the continued influx of labor from outside the State, and the increase in young people within the Region entering the labor force, will serve to close this gap.

This problem in turn affects the relocation or expansion programs of industry. Local industry with expansion plans may seriously reconsider the wisdom of expansion either at the present time or within the area, while industries considering relocation into Connecticut consequently look somewhat less favorably upon the area.

As greater numbers of people can easily traverse greater distances, the needs of more people are served within fewer areas. The balance of homes, jobs, shops and recreation which not too long ago was found in each town now requires entire regions. The town was formerly a relatively self-sufficient entity which provided services mainly for the people who lived and worked there. The balance was inherent in its makeup, but it became increasingly difficult for the town to efficiently serve the needs of its residents. Unfortunately the town was not structured so as to adapt to the problems created by the mobility of its residents.

It is axiomatic that services need to be geared to people not places. As regional land use patterns continue to crystallize and major areas become devoted to single purposes, such as dormitory communities, it becomes increasingly inequitable to expect the taxation of property within a community's borders to provide support for the community service needs of all its people. With respect to community boundaries, the sectors which require services and the sectors which produce revenue bear less and less relationship to each other.

As communities feel the squeeze, there are only a few avenues of compensation open to them. The most prevalent approach is intertown competition for industry. Although this is necessary, it is frequently indiscriminately practiced and often tends to be economically unrealistic.

Not all communities are equally endowed with the natural assets, facilities, or administrative structure to attract industry. Not all communities sincerely want industry and attempt to be unreasonably restrictive, often to the detriment of their own programs.

Industrial location patterns do not necessarily conform to the needs of each Connecticut community. It is futile, expensive and discouraging to court industry by fragmenting our resources and competing with each other. Also, on a small area basis, the effectiveness of a program is further reduced by reliance upon the efforts and limited authority and resources of part-time, non-professional municipal commissions.

All this leads to some fundamental observations which arise out of the attempts of our communities to maintain their self-sufficiency.

1. In the face of this new scale of urbanization, it is becoming increasingly difficult for individual communities to achieve a social and economic balance which will provide and equitable means to support adequate community services and facilities without undue financial burden.

2. Alternative methods need to be developed which will more accurately reflect our changing needs.

The first observation recognizes the growing competitive pressures placed upon communities as a result of the existing economic framework. It implies the need for more aggressive and realistic programs to control community development and strengthen the tax base.

The second observation reflects the extent to which the current financial structure of our communities lacks adaptability, and highlights the need to determine how the structure may be modified to function within the emerging economic patterns.

Industrial development programs offer partial solutions, but in themselves perpetuate the problems of urbanization which challenge the financial structure of our communities.

To supplement industrial promotion at the local level, a concurrent program to reevaluate and recommend alternate methods of taxation and finance should be pursued at the State level. This program, utilizing the resources and perspective of the State as a whole, can effectively stress the need for flexibility, and emphasize program implementation. Inroads have already been made into this multi-faceted question, particularly in the work of the Commission to Study the Necessity and Feasibility of Metropolitan Government, which has been analyzing the problem of economic development and taxation on a broad scale.

In summary, the quest for new industry may be interpreted as a need to find a practical method of financing community services which equitably reflects service needs rather than taxable property. In order to achieve orderly community growth and stability, it is necessary to finance community activities in a manner consistent with, rather than at the expense of the community's long range plans and objectives.

OPPORTUNITY WITHIN THE EXISTING FRAMEWORK

Within the existing economic framework, the need for provision of an expanded and diversified industrial base commands the most serious attention. The dynamic Connecticut economy offers substantial opportunities, and it is this expansion which provides the key to successful programs.

Expansion among Connecticut's larger industries has brought with it an increase in small, functionally related industries, while existing manufacturers have continued to expand and diversify. The needs of the growing population which has been drawn into the area as a result of employment opportunity, coupled with the national trend towards increased services has resulted in even greater growth among the service industries.

As the broad range of development pressures continue to intensify, the long term benefits which accrue will depend upon the Region's ability to consolidate its resources to successfully channel the opportunities which arise.

THE INDUSTRIAL PATTERN

The characteristics of industry which typify the current wave of industrial growth represent a major departure from the Region's pre-war pattern of larger industries with widespread markets and an emphasis on nondurables. There is a greater interdependence among Connecticut industry, and the expansion pattern of small industries for specialized parts fabrication and research and development, reflects the influence of expanding production within non-automotive transportation equipment. As this has brought people to the area to fill employment needs, (including for non-residential construction to build the necessary facilities) new markets are erected for local products. These are the industries which should command a greater share of our efforts despite their relatively small individual sizes. Together, they broaden the Region's industrial base, and depending upon their ability to meet changing market orientations and consumer demands, will play an increasingly important role in our economy.

It is important to note, that due to Connecticut's heavy commitment to defense type production and the extent to which the smaller industries are directly and indirectly involved, much of the continued success and stability of the industrial pattern will also depend upon the degree of flexibility of industry to serve both defense needs and commercial markets as circumstances dictate.

THE DEVELOPMENT PROGRAM

The industrial buildings of the Region's early periods of industrial growth have played an important role in the growth of new industry. Many new industrial ventures have spent their formulative years incubating in quarters such as these. Although they frequently lacked parking and loading facilities and were

in obsolescent multi-story buildings with no capacity for expansion, they offered readily available and adequate space at moderate rentals, requiring few commitments.

Those which survived the period of incubation were then in a position to think of more suitable quarters. By that time their needs were more clearly defined and they were in a better position to make commitments. While this pattern may characterize an industry wishing to relocate into theRegion as well, an existing incubator industry already has a certain commitment to the area, and may prefer to remain. The commitment may be the wishes of top management to continue living in the area, or a linkage with suppliers or markets, or the skills of its labor force.

In order to remain, a suitable site should be available to serve their existing and anticipated needs as soon as the industry can reach a decision concerning its future.

Two things need to be borne in mind. First, the decision to relocate is not a primary objective, but only a means to enhance an industry's competitive position; and second, small industry is able to analyze its own problems and needs, but generally not as well equipped to translate these into architectural, site or cost considerations.

This means that the more time management has to spend searching, learning, evaluating and negotiating the problems of relocation, the less time is available for its primary concern, a successful business operation. Consequently, the resources should be available to ease the transition to new facilities. This means the existence of a responsible centralized source with both the technical information and the administrative capacity to make firm commitments for a diversity of situations.

The predominant current practice which attempts to coordinate the efforts of individual landowners, realtors, lawyers, industrial development commissions, planning and zoning commissions and other municipal officials, produces little results for the energy expended. The method is too often characterized by a lack of complete information, lack of centralized responsibility, valuable time lost, piecemeal zone changes, stepped-on toes, inadequate parcel assemblage, unrealistic or unfulfilled promises, and an overinflated sense of industrial land values.

A meaningful industrial development program must be initiated with a plan for the development of the community as a whole. In order to be effective, zoning reflects careful community planning. Industrial zones are then established in the context of overall community needs and are zoned in anticipation of

industrial needs rather than as isolated responses to industrial demands or speculation. A community cannot afford in the long run, to establish a precedent or pattern of yielding to the pressures of the moment, as this piecemeal approach becomes the personality and future problems of the community.

Careful planning and zoning also insures that time need not be wasted in attempting to rezone an area for industry at such time as a decision is imminent to purchase it for industrial use.

Fortunately, the communities of the Midstate Planning Region are all involved in various stages of comprehensive planning, and are reflecting their plans through more realistic zoning.

In the final analysis, the groundwork must be prepared in advance of the need rather than in response to it. A successful industrial promotion program depends upon the ready availability of suitable land in adequate quantity at a realistic and firm price. The land should already be properly zoned within the context of an overall community plan, with the facilities and utilities available to the extent necessary to insure its marketability.

COMMUNITY ATTITUDE

An integral element in a strong promotional program is the general impression created by the area itself. This is not a simple checklist item, but a reflection of a community's spirit and personality.

It is a combination of tangible and intangible factors through which community attitude becomes apparent.

Such elements as community leadership, quality of the educational system, the level of community services, the strength of planning and implementation programs, the cultural environment, all reflect the degree of citizen concern, and are in the final measure a gauge of how seriously a community views itself.

A positive community attitude is a promise of cooperation, and the sense of responsibility to fulfill its promises. It carries with it the implicit ability to improve the cultural as well as industrial, esthetic as well as educational, recreational as well as residential qualities of the environment. It assures the stability of high standards and well-being essential for a successful long term investment into an area.

The Midstate Region is wealthy in the elements which contribute to a dynamic and positive personality. It takes time and effort

however, to develop these elements into an atmosphere which pervades the community. The strength of such an endeavor is not merely in the existence of these elements, but in the extent to which they are developed. An area of great potential is offered by the Connecticut River which runs the length of the Region. In addition to the visual relief and recreational facilities it provides for many of the Region's built-up areas, it can easily be functionally integrated with other key facilities to their mutual advantage. Development of Middletown's riverfront recreation facilities in conjunction with revitalization of the business district is an opportunity unique to the Region.

Other opportunities center about the abundance of existing and potential public and private year-round cultural and recreational activities available to the Region's residents and readily accessible to the urban centers of Connecticut. Equally attractive is the wide variation in character of residential environments which can effectively be provided within a relatively small geographic area.

There are many such opportunities which through foresight can be extracted from the Region's resources while they are still readily available.

RETAIL TRADE

The markets for products created by the increased population has stimulated new areas of commercial growth within the Region. Although the new highways strengthen the competitive position of Hartford and New Haven for the Region's shoppers goods, increased population concentrations within the Region have raised product consumption and continually upgrade the Region's ability to support a greater variety of retail outlets.

The Region's pattern of population distribution is illustrated by the development of virtually duplicate facilities at either end of Middletown, along Washington Street Extension to the west and South Main Street Extension to the south. Both these centers provide parking and access and are located so as to draw from the urban core as well as intercept the growing suburban population. A similar set of circumstances is increasingly evident in the Portland-East Hampton area as well. While neither center has the drawing power or variety and quality of Middletown's central business district, they disrupt the trade area of the Region's fundamental retail core. The existence of these centers is in part predicated upon Middletown's traditional drawing power and is testimony to the increasing vulnerability of Middletown's retail center. This pattern dramatically illustrates the immediacy of the need for a dynamic commercial renewal of downtown, coupled with improved central business access to the east, west and south.

RESULTS OF SURVEY OF MANUFACTURERS

MIDSTATE PLANNING REGION

1965

Scope of Survey

146 Manufacturing firms were estimated to exist in the Midstate Region as of May, 1965. The sources for this were:

1. Connecticut Manufacturing Director
2. A list from the Industrial division of the Greater Middletown Chamber of Commerce
3. Staff knowledge of the firms through field work

Ninety firms (61.1% of the estimated total) replied to the questionnaire. The reply to the questionnaire was generally strongest among the types of industries which are gaining in significance in the Region. This is particularly important in providing guidance to programs designed to bolster the industrial future of the Region.

Since there are relatively few large firms in the Region, it is not accurate to evaluate the returns as being "representative" of the larger firms.

Number of firms not replying to questionnaire	Employment Class
35	0-9
12	10-49
9	50-249
1*	250+

* No longer in operation.
NOTE: Pratt and Whitney (CANEL site) not in operation at time of survey.

QUESTION	PERCENT OF TOTAL REPLIES	REPLY

1. Present location of establishment — 100

TOWN	No.	%
Cromwell	5	5.7
Durham	5	5.7
E.Hampton	10	11.1
Haddam	6	6.8
Middlefield	7	7.8
Middletown	43	47.8
Portland	14	15.1
TOTAL:	90	100.0

2. 1947 Status of establishment — 96.6

STATUS	No.	%
Independent	53	61.0
Branch	2	3.1
Subsidiary	1	1.5
Nonexistent	31	35.6
TOTAL:	87	100.0

3. 1964 Status of establishment — 98.9

STATUS	No.	%
Independent	82	91.0
Branch	5	5.5
Subsidiary	2	3.5

4. Establishments which own: — 91.0

	No.	%
Land	47	57.2
Buildings	48	53.3
Equipment	84	97.6

5. Establishments which rent: — 91.0

	No.	%
Land	35	42.8
Buildings	42	46.7
Equipment	2	2.4

6. Average floor area for buildings leased — 91.0 — 21,061 square feet

7. Average floor area for buildings owned — 91.0 — 21,146 square feet

8. Average number of parking spaces per leased building — 89.0 — 43.5 spaces per building

9. Average number of parking spaces per owned buildings — 89.0 — 57.5 spaces per building

10. Year firm located at present site by type of tenure — 89.0

	NUMBER OF FIRMS	
YEAR	OWN	RENT
before 1915	10	2
1915-1939	9	2
1940-1946	11	3
1947-1956	6	11
1957-1964	7	19

11. Establishments considering plant relocation by current type of tenure — 93.4

	CONSIDERING PLANT MOVE	
	Yes	No
currently OWN	1	44
currently RENT	8	31

QUESTION	PERCENT OF TOTAL REPLIES	REPLY

12. Age of buildings — 86.5

Age	No. of Buildings	%
0-7	14	12.4
8-17	20	17.7
18-25	16	14.1
26-50	37	32.7
50+	25	21.1
TOTAL:	113	100.0

13. Year located at present site — 89.0

YEAR	No. of FIRMS	%
before 1915	12	15.0
1915-1939	11	13.7
1940-1946	14	17.5
1947-1956	17	21.1
1957-1964	26	32.7
TOTAL:	80	100.0

14. Zoning changes made for establishment — 90.0

	No. of FIRMS	%
YES	8	9.9
NO	73	90.1
TOTAL:	81	100.0

15. Utilization of building space by firm — 99.0

UTILIZATION OF BUILDING	No. OF FIRMS	%
ALL	62	69.6
MOST	17	19.1
SMALL PART	10	11.3
TOTAL:	89	100.0

16. Number of square feet of floor area in use — 91.0

SQ.FT. IN USE	No. OF FIRMS	%
0-2,499	14	17.1
2,500-9,999	22	27.6
10,000-24,999	21	25.6
25,000-39,999	8	9.8
40,000-79,999	12	24.2
80,000-199,999	2	2.4
200,000-399,999	2	2.4
400,000+	-	-
TOTAL:	82	100.0

17. Allocation of floor area by function

	No. OF FIRMS SQ. FEET IN USE		
	Storage	Mfg.	Other
0-2,499	38	18	55
2,500-9,999	11	42	9
10,000-24,999	13	4	4
25,000-39,999	5	4	1
40,000+	1	7	2

18. Number of stories of buildings

No. OF STORIES	No. OF BUILDINGS	%
1	71	58.5
2	40	33.0
3	7	5.8
3+	3	2.7
TOTAL:	121	100.0

19. Multiple uses of industrial buildings. Is building shared with: — 94.5

IS BUILDING SHARED WITH:	No. OF FIRMS	%
-Other mfg. firms & bus.	20	23.5
-Institutional and Residential	2	2.3
-No other use	63	74.1
-Vacancies	1	1.1
	85	100.0

QUESTION	PERCENT OF TOTAL REPLIES	REPLY		
20. Past expansions and modernization	57.0*	BETWEEN 1947-1956	No. OF FIRMS	%
		Yes	26	46.4
		No	30	53.6
		TOTAL:	56	100.0
	95.0	BETWEEN 1956-1964	No.Of FIRMS	%
		Yes	47	55.5
		No	38	44.5
		TOTAL:	85	100.0

(* 1/3 of total respondents were not in existence in 1947.)

21. Plant expansions correlated with durable vs:non-durable mfg.	DURABLES	EXPANSION 1947-1956	1957-1964
	Employment	1,222	1,934
	No. of firms	17	37
	NON-DURABLES		
	Employment	237	212
	No. of firms	9	10

22. Utilization of rail siding facilities	100.0		No. OF FIRMS	%
		Located on RR	15	16.6
		Not located on RR	75	83.4
		TOTAL:	90	100.0
		RR used by firm	6	40.0
		RR not used by firm	9	60.0
		TOTAL:	15	100.0
		RR used in past	5	55.5
		RR never used	4	44.5
		TOTAL:	9	100.0

23. Size of plant site	83.0	SITE SIZE	No. OF FIRMS	%
		less than 1 acre	31	41.5
		1 acre-2acre	11	14.6
		3-5 acres	13	17.3
		6-10 acres	12	16.0
		11-20 acres	4	5.3
		21-50 acres	3	4.0
		51-100 acres	1	1.3
		100+ acres	-	-
		TOTAL:	75	100.0

24. Off-street parking	88.8	NUMBER OF SPACES	No.OF FIRMS	%
		0	3	3.7
		1-9	18	22.5
		10-24	21	26.2
		25-49	10	12.5
		50-99	14	17.5
		100-300	13	16.2
		300+	1	1.4

25. Off-street loading berths	85.5	No.OF BERTHS	No.OF FIRMS	%
		0	14	18.1
		1-2	45	58.4
		3-5	14	18.1
		6-10	3	3.8
		11+	1	1.6
		TOTAL:	77	100.0

26. Number of shifts	95.5	No.OF SHIFTS	No.OF FIRMS	%
		1	74	86.0
		2	11	12.7
		3	1	1.3
		TOTAL:	86	100.0

QUESTION	PERCENT OF TOTAL REPLIES	REPLY		
27. Seasonal employment	96.6		No. OF FIRMS	%
		Employment seasonal	18	20.6
		No seasonal employment	69	79.4
		TOTAL:	87	100.0

28. Peak season of firms with seasonal characteristics

SEASON	No.OF FIRMS	%
Fall	6	16.3
Winter	7	18.9
Spring	14	37.8
Summer	10	27.0
TOTAL:	37	100.0

		NUMBER OF EMPLOYEES
29. Estimated number of production employees	100.0	3,499
30. MALE	92.2	1,223
31. FEMALE	93.3	2,102
32. Estimated number of production employees who reside outside of the Midstate Planning Region	68.8	322
33. Number of production employees engaged in defense contract work	65.5	403

34. Previous location of plants which have moved since 1947 — 25.5

PREVIOUS LOCATION	No.OF FIRMS	%	EMPLOYEES
Midstate Region	17	73.9	469
Capitol Region	1	4.3	25
S. Central Conn.	1	4.4	50
New Britian-Bristol	1	4.3	135
Ansonia-Derby	-	-	-
Greater Bridgeport	1	4.4	150
Eastern Conn.	1	4.3	7
Western Conn.	-	-	-
Outside Conn.	1	4.4	20
TOTAL:	23	100.0	856

35. Preferred location of a plant if plant move were contemplated

LOCATION	No.OF FIRMS	%
Midstate Region	39	75.7
Cromwell	2	4.4
Durham	2	4.4
E.Hampton	3	6.8
Haddam	1	2.2
Middlefield	1	2.2
Middletown	25	55.5
Maromas	-	-
Laurel Brook	2	4.4
Newfield Area	7	15.8
I-91	2	4.4
Central Area	10	22.2
Other	4	8.9
Portland	5	11.1
Elsewhere in Conn.	2	4.4
Elsewhere in N.England	1	2.2
Middle Atlantic States	1	2.2
Southern States	2	4.4

QUESTION	PERCENT OF TOTAL REPLIES	REPLY

36. Firms considering relocation — 93.3

	No. OF FIRMS	%
Considering a move	9	10.8
Not considering a move	75	89.2
TOTAL:	84	100.0

37. Predominant mode utilized to ship products to and from plant — 95.5

MODE	SHIPPED TO: No.	%	SHIPPED FROM: No.	%
Rail	8	8.4	7	7.2
Road	79	83.1	85	88.5
Water	1	1.2	1	1.1
Air	7	7.3	3	3.2
TOTAL:	95	100.0	96	100.0

38. Mode of transportation for material shipped to and from plant, correlated with durable vs: non-durable mfg. and employment

		SHIPPED TO PLANT Rail	Road	Water	Air	SHIPPED FROM PLANT Rail	Road	Water	Air
DURABLES	Employment	905	2,764	-	115	467	2,724	9	389
	No. of Firms	4	63	-	3	6	60	1	7
NON-DURABLES	Employment	93	723	10	-	50	721	-	-
	No. of Firms	3	26	1	-	2	60	-	-

39. Asset of an airport to the operation of the existing firms in the Midstate Region — 91.1

	No. OF FIRMS	%
Airport would be an asset	16	19.6
Airport would not be an asset	66	80.4
TOTAL:	82	100.0

40. Value of land, buildings, and equipment — 62.2

VALUE	No. OF FIRMS	%
Up to $50,000	25	44.6
$50,000-$100,000	12	21.5
$100,000-$500,000	13	23.5
$500,000+	6	9.9
TOTAL:	56	100.0

41. Most significant operating cost — 91.1

ITEM	FREQUENCY ITEM CITED	%
Labor	73	25.9
Material for mfg.	68	24.3
Fuels	15	5.3
Power	24	8.6
Transportation	21	7.6
Maintenance and Replacement of Equipment	28	9.9
Taxes	44	15.6
Other	8	2.8

CHARACTERISTICS OF SITE AND FACILITY NEEDS BY FREQUENCY CITED FOR EACH ITEM*		UTILITIES				ACCESSIBILITY OF:					PARKING		OVERHEAD					PHYSICAL - PLANT						
	PERCENT OF REPLIES	Gas	Water Supply	Sewage Disposal	Refuse Disposal	Circulation pattern	Labor	Markets	Source of supply	General location	Parking	Loading	Insurance rates	Rent	Moving costs	Taxes	Labor costs	Zoning	Room for expansion	Compatibility of environment	Flooding	Obsolesence	Inefficiency	Other
Most significant advantages of present location	65.5	-	2	-	-	9	6	4	4	27	4	2	-	4	-	2	-	2	7	1	-	-	-	8
Most significant disadvantages of present location	51.1	-	5	5	1	4	5	4	1	2	7	4	2	-	-	2	-	3	7	1	2	1	4	7
ADVANTAGES OF PRESENT LOCATION																								
Firms which own present building	65.6	-	2	1	-	5	2	3	2	20	-	-	-	-	-	4	-	1	3	-	-	-	-	5
Firms which rent present building		-	-	1	-	4	4	1	2	7	4	2	-	4	-	-	-	1	4	1	-	-	-	3
DISADVANTAGES OF PRESENT LOCATION	51.0																							
Firms which own present building		-	4	3	-	2	3	2	-	1	5	1	-	-	-	-	-	-	-	-	1	-	2	-
Firms which rent present building		-	1	2	1	2	2	2	1	1	2	3	-	-	-	-	-	-	7	-	1	1	2	7
Major disadvantages of previous location for firms which have moved since 1947	26.6	-	-	-	-	1	-	-	-	-	3	3	-	1	-	-	-	-	16	2	-	2	1	1
Most important factors for the determination of a new site	34	-	1	1	1	2	4	1	1	2	1	2	-	1	-	1	1	-	3	1	-	4	1	6

* Frequency listing indicates total number of responses for each item.

STANDARD INDUSTRIAL CLASSIFICATION (SIC) * / SURVEY QUESTION	PERCENT OF REPLIES	FOOD		TEXTILE		APPAREL		STONE, CLAY GLASS		FABRICATED METALS		MACHINERY		ELECTRICAL EQUIPMENT		TRANSPORTATION EQUIPMENT		MISCELLANEOUS MANUFACTURING		OTHER*		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Manufacturing establishments in the Region	100.0	6	6.7	5	5.6	4	4.4	9	10.0	22	24.4	10	11.1	8	8.9	5	5.6	5	5.6	16	17.6	90	100.0
Number of establishments currently in operation which were in existence in 1947	100.0	6	6.7	4	4.4	2	2.2	7	7.8	14	15.5	4	4.4	4	4.4	3	3.3	3	3.3	9	10.0	59	64.4
Number of establishments which have come into operation since 1947	100.0	-	-	1	1.1	2	2.2	2	2.2	8	8.8	6	6.7	4	4.4	2	2.2	2	2.2	4	4.4	31	35.6
Number of establishments which own buildings	100.0	3	3.3	4	4.4	0	0	5	5.6	13	14.4	6	6.7	5	5.6	0	0	1	1.1	11	12.2	48	53.3
Number of establishments which rent buildings		3	3.3	1	1.1	4	4.4	4	4.4	9	10.0	4	4.4	3	3.3	5	5.6	4	4.4	5	5.6	42	46.7
Number of establishments which are original tenants of building	99.0	5	5.6	3	3.3	1	1.1	5	5.6	12	13.5	7	7.8	2	2.2	3	3.3	1	1.1	2	2.2	41	46.0
Number of establishments which are not the original tenants of the building		1	1.1	2	2.2	3	3.3	4	4.4	9	10.0	3	3.3	1	1.1	2	2.2	4	4.4	11	12.2	48	54.0
Approximate number of square feet of floor area in use - number of firms by SIC	91.0																						
Square feet in use:																							
0-2,499		-		-		-		-		3	3.7	8	9.8	-		-		1	1.1	2	2.2	14	17.1
2,500-9,999		2	2.4	1	1.2	2	2.4	4	4.9	6	7.3	-	-	2	2.4	1	1.2	2	2.4	4	4.9	22	27.6
10,000-24,999		2	2.4	2	2.4	2	2.4	1	1.2	4	4.9	-	-	4	4.9	1	1.2	-	-	3	3.7	21	25.6
25,000+		1	1.2	1	1.2	-	-	3	3.7	4	4.9	2	2.4	2	2.4	3	3.6	1	1.2	3	3.6	20	24.4

* SIC with 3 or less firms are included in "other" category.
NOTE: Totals of percentages may not add due to rounding.

STANDARD INDUSTRIAL CLASSIFICATION (SIC) * / SURVEY QUESTION	PERCENT OF REPLIE	FOOD		TEXTILE		APPAREL		STONE, CLAY GLASS		FABRICATED METALS		MACHINERY		ELECTRICAL EQUIPMENT		TRANSPORTATION EQUIPMENT		MISCELLANEOUS MANUFACTURING		OTHER		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Major plant expansion 1947-1956:**	57.0																						
Number of plants which expanded:		3	5.4	2	3.6	0	0	4	7.1	6	10.1	1	1.8	1	1.8	2	3.6	1	1.8	6	10.1	26	46.4
Number of plants which did not expand:		3	5.4	1	1.8	3	5.4	5	8.9	11	19.7	6	10.1	4	7.1	1	1.8	1	1.8	4	7.1	30	53.6
Major plant expansion 1956-1964:	95.0																						
Number of plants which expanded:		4	4.7	1	1.2	1	1.2	4	4.7	15	17.7	4	4.7	5	5.9	4	4.7	1	1.2	8	9.4	47	55.5
Number of plants which did not expand:		2	2.4	3	3.5	3	3.5	5	5.9	7	8.2	6	7.1	3	3.5	1	1.2	4	4.7	4	4.7	38	44.5
Number of establishments located on a railroad siding:		1	1.1	0	0	0	0	2	2.2	1	1.1	2	2.2	1	1.1	2	2.2	1	1.1	5	5.6	15	16.6
Number which use siding:	100.0	1	16.7	0	0	0	0	1	16.7	0	0	0	0	0	0	1	16.6	1	16.6	2	33.4	6	6.6
Number of establishments not located on railroad siding:		5	5.6	5	5.6	4	4.4	7	7.8	21	23.4	8	8.8	7	7.8	3	3.3	4	4.4	11	12.2	75	83.4
Number of skilled employees (Number of firms by SIC)	90.0																						
Number of skilled employees 0-9		4	4.9	2	2.5	2	2.5	7	8.6	10	12.3	9	11.1	3	3.7	1	1.2	2	2.5	7	8.6	47	58.2
10-49		0	0	2	2.5	2	2.5	2	2.5	9	11.1	0	0	4	4.9	1	1.2	3	3.7	8	9.8	31	38.2
50+		1	1.2	0	0	0	0	0	0	0	0	1	1.2	1	1.2	1	1.2	0	0	0	0	4	4.9
Number of unskilled and semi-skilled employees (Number of firms by SIC)	84.4																						
Number of employees 0-9		4	5.3	2	2.6	2	2.6	6	7.9	9	11.8	4	5.3	3	3.9	0	0	2	2.6	7	9.2	41	53.9
10-49		2	2.6	3	3.9	1	1.3	1	1.3	7	9.2	0	0	6	7.9	2	2.6	1	1.3	5	6.5	26	34.2
50+		0	0	0	0.	1	1.3	1	1.3	2	2.6	1	1.3	0	0	1	1.3	1	1.3	2	2.6	9	11.9
Number of firms which feel a municipal airport	91.1																						
Would be an asset to firms operation		2	2.4	1	1.2	1	1.2	0	0	2	2.4	2	2.4	3	3.7	2	2.4	0	0	3	3.7	16	19.6
Would not be an asset to firms operation		4	4.9	4	4.9	3	3.7	8	9.8	16	19.5	7	8.5	5	6.1	3	3.7	4	4.9	12	14.6	66	80.4

* SIC with 3 or less firms are included in "other" category.
** 1/3 of total respondents were not in existence in 1947.
NOTE: Totals of percentages may not add due to rounding.

MIDSTATE
regional planning agency

report 4

study of the ECONOMY

THE ECONOMY PRIOR TO 1945

The origin and development of economic activity in the seven towns which now comprise the Midstate Planning Region is a complex series of events, frequently only loosely related to each other in function. The purpose of this report is to reconstruct the salient patterns of development as they occurred and interacted and were superimposed on each other. By telescoping the region's economic history, the significant patterns are highlighted, thus providing a valuable perspective with which to evaluate present trends. The account begins with the establishment of Middletown, the first and largest settlement in the area, founded in 1650, fifteen years after the arrival of the first English colonists in Connecticut.

Throughout the colonial period, the principal economic activity of the area's inhabitants was farming. Less favorable conditions for farming caused the region to grow more slowly than other more open areas of Connecticut, well into the middle of the 18th Century. The early colonists produced most of their necessities in the home, spinning and weaving the cloth for their homespun apparel, tanning hides for leather articles, and making their own furniture, candles and similar household items. Relatively early, small grist-mills, saw-mills and tinsmithies were erected, generally by streams to utilize water power. The importation of necessities and luxuries was a rare event and the area remained a small, fairly closed and self-supporting economy of less than 2,000 inhabitants until after 1720.

In time, however, Middletown's location at a suitable landing on the banks of the Connecticut River, which could be easily reached by the ocean-going ships of the time, encouraged its development as a port of entry and a shipbuilding center. As early as 1670, a ship of 70 tons was built by the town for trade with other colonial ports and the West Indies, but well into the 18th Century, the town registered no more than two ships. However, the industry of the area's home handicrafters and small mills began to turn out a surplus of goods such as flour, dried meats, hides and lumber. A network of primitive roads permitted the traders in Middletown to tap an area wider than the region for such goods, which were exported to the West Indies and even Europe. By 1750, the town ranked fifth among the towns of Connecticut, and its trading activity flourished well into the 19th Century, except for a curtailment during the Revolutionary War. On the occasion of his visit to Middletown in 1791, when it numbered over 5,000 inhabitants, Washington noted in his diary that it boasted a fleet of 20 sailing vessels.

By the end of the century, the population of the region totaled about 11,000, nine tenths of whom were still dependent on farming as their principal means of livelihood.

Until about 1800, the roads throughout the new nation had remained quite primitive and an obstacle to the movement of goods overland in any quantity. The first company to build a turnpike in Connecticut was chartered in 1801 and by 1810, Middletown was the hub of five turnpikes. The growth of turnpikes throughout the nation spelled the end of Middletown's maritime trade, now diverted to larger ports with easier access to the interior, but widened the area of potential markets for the region's incipient new industries.

The "Industrial Revolution" is generally interpreted to mean the profound change brought about in the manufacture of goods through the introduction of the factory system. The essence of the factory system was and is the rapid production of a large quantity of goods in a relatively short time. The discovery of the use of steam as a source of power made such production runs possible but it also entailed recruiting large numbers of reasonably skilled workers, raising capital and finding a market.

One of the first factories in the United States to utilize steam was the Middletown Woolen Manufacturing Company, founded in 1810, although it ceased operations at the end of the War of 1812. Other textile factories which followed, partly in response to conditions imposed by the war, continued to use water power for a time but eventually converted to steam when its use was perfected. Another innovator in introducing the factory system to the Midstate region was Simeon North who was among the first to standardize production methods in the making of firearms. The early years of the 19th century also witnessed the beginnings in the region of small factories producing hardware, such as locks, and notions, which were hawked throughout the interior by "Yankee peddlars" traveling the turnpikes. Development of the steamboat was to provide for a time, easier access for the region's textiles to large markets such as New York, and a new market for its incipient marine hardware industry.

The steamboat also provided cheap transportation for another new industry, the extensive quarrying of brownstone in Portland. This building material was now in great demand in the major cities of the Northeast seaboard and an allocation of a portion of the quarry earnings was a decisive factor in the founding of Wesleyan University at Middletown in 1831. For over a century,

quarrying remained a major activity in Portland.

Middletown's and most of Connecticut's monied interests were so heavily committed to the turnpike and steam shipping companies that the development of railroads in both the region and the state was considerably delayed. The consequences of this delay are being felt even today. In 1830, the first railroad in the state was inaugurated between Hartford and New Haven but it passed through Meriden to the west, instead of Middletown. Not until 1850 did Middletown have a link to this line in Berlin. The shipping interests blocked the building of rail bridges over the lower Connecticut until 1870, when the Shore Line bridge was built, and 1872, when that at Middletown was erected. It was only in 1888, that Connecticut's rail system enjoyed a link across the Hudson River and even that was over trackage belonging to a company not serving the state.

Deprived of fast rail freight service, the region's incipient manufacturing industries could look only to nearby markets reached by turnpike or boat. There the competition was most intense. None of the raw materials, cotton and woolen fibers for textiles, and iron and copper for hardware, were available locally, nor were its inhabitants more exceptionally endowed than elsewhere in Connecticut. With the switch to coal as the fuel for generating steam, the region's power costs rose. This combination of adverse factors resulted in very little growth of the region's manufacturing and only moderate growth in its population. By 1860, the state's population was almost twice that in 1790, an increase of 222,000 while Midstate had grown by only 8,000 in the seventy years. Middletown accounted for about 3,500 of this population growth, with 8,600 of the region's 19,000 inhabitants at the beginning of the Civil War. About 10 percent of the region's population were then engaged in all types of manufacturing, including occupations known as hand trades, i.e., repair activities, tailoring, etc. Textiles accounted for over 500, hardware and iron castings for 800 and shoes and leather products for 200. Another 600 were employed in the quarries, principally in Portland. Shipbuilding had declined considerably but two of the service industries, insurance companies (started as early as 1803) and higher education were contributing to the region's economy.

The Civil War decade witnessed a considerable growth in the region's manufacturing and population and the last two decades of the 19th Century, even more. It was during this latter period that Middletown became the hub of five rail lines and the only stop for the through passenger service

of the Airline Railroad from New York to Boston. The region's rail freight service, however, was never more than local, requiring connections in Hartford or with the Shoreline. It was also during the last two decades of the century that the region's rubber industry assumed relative importance. Notable additions to the service industries during this period were the Connecticut State Hospital, Long Lane Farm and a manufactured gas company. Although still the dominant economic activity in the region, farming began to suffer a relative decline.

By 1900, the region's population had increased to 29,000, a 50% increase over that in 1860, and manufacturing employment had doubled to 4,000, or about 13.5% of the population. Middletown with about 60% of the region's population had declined from the 7th largest town in 1860, to 10th place in the state but accounted for 90% of the region's growth in the four decades. The region was still considerably behind the state ratio of 18.6% of the population employed in manufacturing and exceeded only Southwestern Connecticut Region (the Norwalk-Stamford-Greenwich area), Connecticut River Estuary (the balance of Middlesex County) and Northwestern Connecticut (most of the rural portion of Litchfield County) in this respect. The value added by manufacturing in the region, $2.7 million, represented just under $7,000 per employee, compared to the state average of $8,400 in 1899.

On top of an exceptional growth in population, doubling since 1860, and in manufacturing employment, over $2\frac{1}{2}$ times as great by 1899, the state experienced even greater growth during the first two decades of the present century. In the twenty-year span, the population increase, 473,000, was greater than that in the previous forty years, while manufacturing employment again doubled. Midstate, however, registered a population increase of only 5,000, and the addition of only one significant new industry when a former bicycle maker was converted to the making of typewriters. At the height of prosperity in the Twenties, the region's value added by manufactures, $19.3 million, amounted to 1.5% of the state total, down from 1.9% in 1899. By the end of the Depression decade, Midstate's value added, $9.5 million represented only 1.3% of the state total. Manufacturing employment in 1939, was 5,300, an increase of 1,300 in forty years, or barely 1.1% of the state's increase during the period. The two decades between wars witnessed a moderate population increase of 7,000, but Middletown which now accounted for 64% of the region's 41,000 population, ranked only 17th among the state's towns.

World War II stimulated a population increase in Midstate in one decade greater than that occurring between 1910 and 1940, and 2,800 additional manufacturing jobs, more than double the increase during the first four decades of this century. Value added by manufacturing rose to $30.8 million, 1.6% of the state total in 1947, when much of the war-time growth was still in evidence. The proportion of the population engaged in manufacturing in the region, 15.7%, represented an all-time high in the region. Although textiles and apparel, with just under 2,000 out of 8,100 manufacturing employees, still were dominant, growth in fabricated metals, non-electrical machinery and rubber and plastic products had introduced greater diversification in the region's manufacturing. At the same time, the service industries now provided employment for 14.6% of the population, relatively close to the state ratio of 16.8%. Farming had declined to a minor role, with a trend toward specialization in such lines as growing fruits, vegetables and horticultural products. Quarrying consisted of relatively minor feldspar and sand and gravel operations.

In summary, the development of Midstate's economy through 1945, may be characterized as having lagged behind the state except for an occasional, brief period of vigorous growth. Not exceptionally favored with natural resources and power sources, and to one side of major transportation networks, the region remained somewhat insulated from the stream of growth going on around it. The development of the automobile and a far more extensive network of roads since World War I, caught up the region more closely in the growth going on around it. The balance of this report will describe this process of involvement as it has intensified since World War II and point to the major implications for the future.

TRENDS SINCE 1945

The development of Midstate's economy since World War II will be considered under two aspects, that of its labor force and that of its employment. Generally the labor force is viewed as the sum of the employed and the unemployed residing in an area. Post-war developments in the Midstate Region warrant a modified breakdown of the labor force: residents who work in the region, plus the net number commuting to jobs outside the region, plus residents who are unemployed. It must be underlined that this definition of the labor force is not that used by the Connecticut Labor Department, which for the purpose of this report will be designated as the"area labor force", i.e., the sum only of the employed at jobs in the area and the unemployed residents of the area. The relative size of net out-commuting to work by Midstate residents is such that considerable distortion is introduced in the description of the region's economy if the contribution from this source is overlooked.

It would be desirable to have data or reasonable estimates for both the total number of the region's inhabitants who commute to jobs outside the region and the number of residents elsewhere who commute into the region. Only two studies are available which reveal this two-way flow of workers, one done in 1958 by the Connecticut Labor Department, and a less satisfactory sampling done in the 1960 Census. The Labor Department is now making another statewide study of commuting patterns by Connecticut workers, but is not expected to release the study in time to be considered in this report. Therefore, for the present, it will generally be necessary to consider commuting only as a net figure, i.e., total out-commuters less total in-commuters.

In order to present a general outline of the trends in the economy of the Midstate Region since 1945, the figures in Chart I below have been developed from several sources. The U.S. Census of Population for 1950 and 1960 provide the "benchmark" data around which the balance of the time series was developed. The population estimates for other years made by the Connecticut Health Department, have been adjusted to include inmates of state institutions, not distributed by town in their annual estimates. The employment and unemployment estimates have been derived from town or labor market area data on covered employment* from the

* Employment covered by the Connecticut Unemployment Compensation Act; i.e., all workers in establishments employing three or more workers.

Connecticut Labor Department and special estimates of total employment, i.e., covered employment security program, prepared for the years, 1947 and 1961. Resource Industries employment, mainly farming in Midstate, has been estimated from the Census of Population data.

The difficulty of reconciling different definitions, different points of time in a given year, and other obstacles to data comparability requires that these estimates be clearly labeled as approximations. Except for such items as population in 1950 and 1960, labor force in 1960 and covered employment, these are not an actual count. These estimates have been developed with all care possible, however, and can reasonably be accepted to reflect the overall trends in the region's economy. See also Chart 2.

Chart 1: Population, Labor Force and Employment, 1945-1963

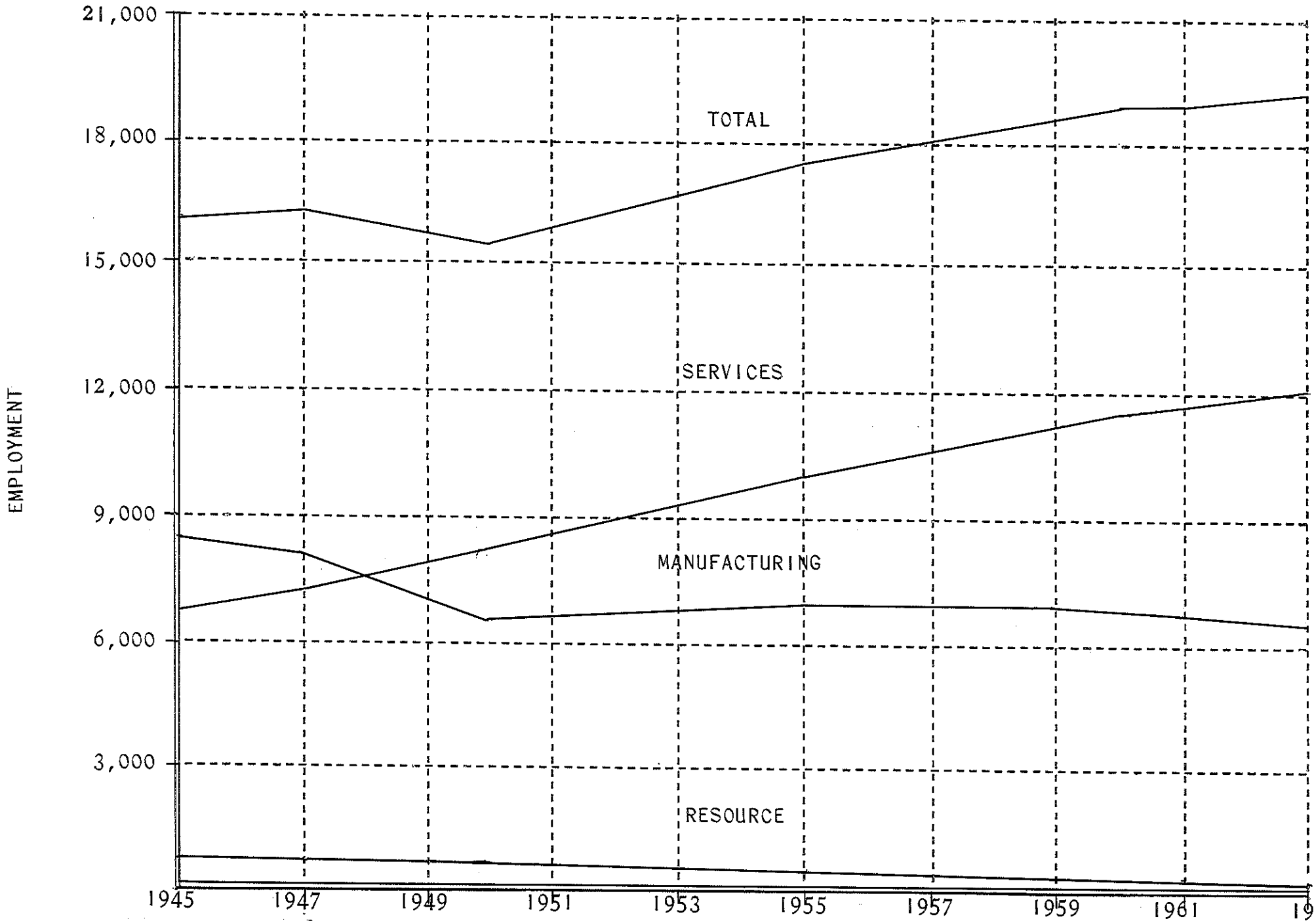
	1945	1947	1950	1955	1960	1961	1963
Population	43,500	45,500	49,606	55,800	62,646	63,800	66,300
Labor Force	18,100	19,130	21,000	23,320	26,075	26,350	27,380
Employment	16,140	16,230	15,600	17,720	19,020	19,000	19,200
Unemployment	725	670	1,300	670	1,175	1,400	1,030
Net Out-Commuters	1,235	2,230	4,100	4,930	5,880	5,950	7,150
Resource Industries	880	850	810	700	640	600	550
Manufacturing	8,510	8,100	6,540	6,970	6,950	6,760	6,550
Services	6,750	7,280	8,250	10,050	11,430	11,640	12,100
Covered Employment	10,300	10,200	10,555	11,500	13,800	13,395	13,700

Source: See Text.

The region's population according to the Census amounted to 2.5% of the state's in both 1950 and 1960. The inter-censal estimates indicate this percentage was 2.3% in 1945, and in recent years has been about 2.4%. On the other hand, the region's labor force as a portion of the state labor force has tended to be one or two tenths of a percent lower than the population ratio. This is due to a relatively high proportion of inmates of institutions and college students, about 7% of the total population in Midstate compared to 3% for the state as a whole. The region's share of employment in the state has declined from around 2.2% in 1945 to 1.9% in 1960, inversely reflecting the growth of out-commuting for work during the period.

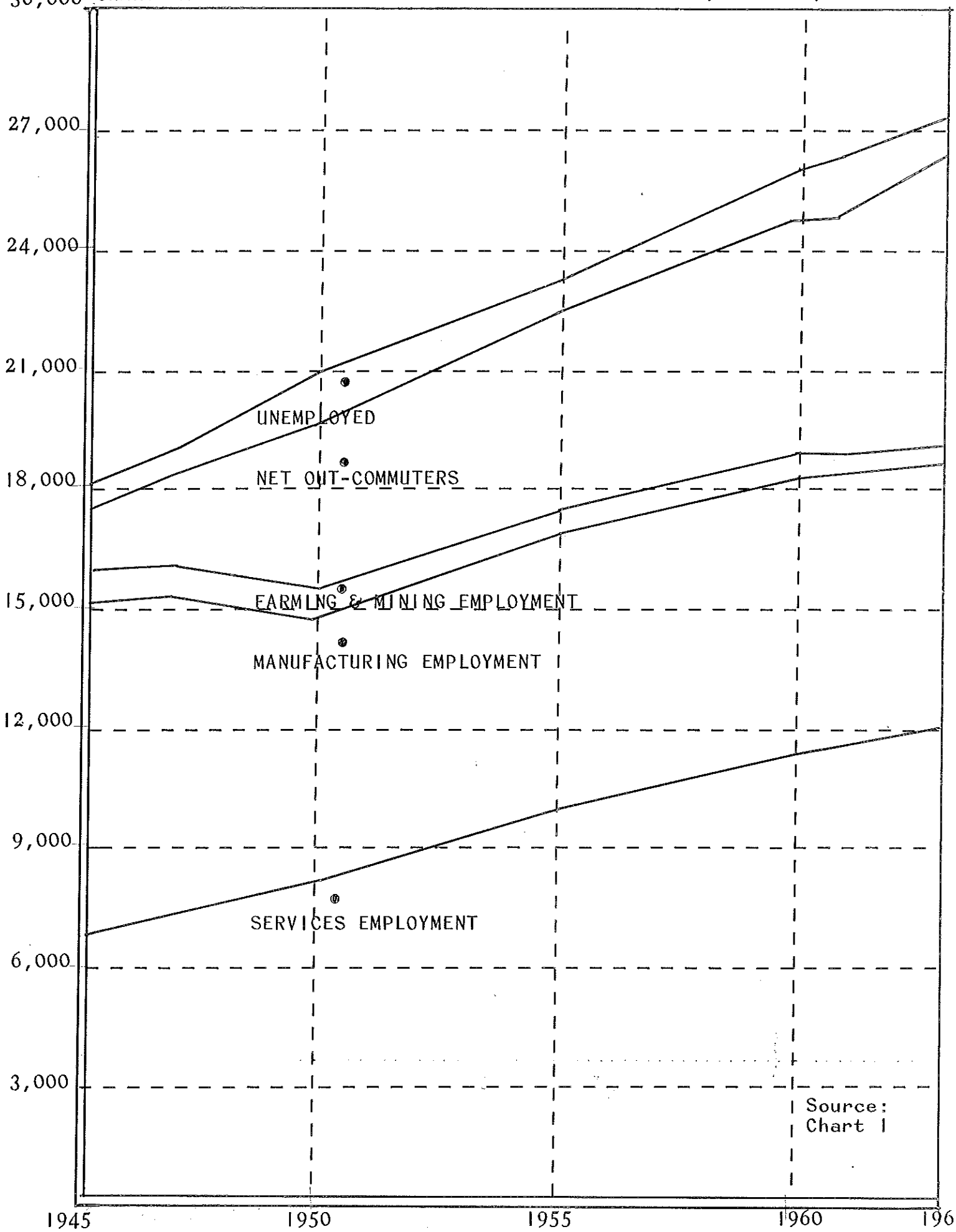
As in the state, the proportion of the population in the labor force has declined from over 42% early in the post-war period to barely 41% in recent years. Again, these ratios are about one percentage point lower than the state ratios due to the relatively high number of persons in institutions and students at Wesleyan University. The general decline in the ratios are not exceptional either in the region or the state. They are due to earlier retirement of older workers and longer schooling for that portion of the labor force between 14 and 34 years, a national phenomenon in spite of the recent wave of concern for "drop-outs."

CHART 2 EMPLOYMENT 1945-1963



Source: Chart 1

CHART 2A. COMPONENTS OF LABOR FORCE AND EMPLOYMENT, MIDSTATE, 1945-1963



The changing composition of the resident labor force of Midstate is revealed in the following percent distribution of its major components for the selected years since 1945. (It may be noted here that one component normally distinguished for larger areas, members of the Armed Forces, is too insignificant in the Midstate Region for separate consideration, amounting to only 200 in 1960.)

Chart 3: Percent Distribution of Labor Force, 1945-1963

	1945	1947	1950	1955	1960	1961	1963
Area Employed	89.2	84.8	74.3	76.0	72.9	72.1	70.1
Net Out-Commuters	6.8	11.7	19.5	21.1	22.6	22.6	26.1
Unemployed	4.0	3.5	6.2	2.9	4.5	5.3	4.1
Unemployed as Percent of Area Labor Force	4.5	4.0	7.9	3.8	6.2	6.9	5.4

Source: Chart I.

The sharp rise in the percent of the region's labor force commuting elsewhere for work in the early years of the post-war period undoubtedly reflects in part the deteriorating job opportunities within the region. It is evident that the increasing number of out-commuters was also due to the in-migration of new residents who continued at their old jobs elsewhere. During the 1940-50 decade, net in-migration of new residents into Midstate (most of which was possible only after the termination of the war in 1945) represented a 9.5% increase in the 1940 population, compared to only 6.5% for the state as a whole. Nevertheless, the termination of war-time activities such as the Andover-Kent Division of Remington Rand, resulting in the high unemployment rate for 1950, appears to have forced many of the region's long-time residents to look further afield for employment.

By 1955, improved conditions within the region had markedly lowered the unemployment rate. Both the number and relative significance of the net out-commuters had increased but at a lower rate than between 1945 and 1950. It can only be surmised, but it would appear that by the mid-decade, the establishment of CANEL had resulted in a sizeable number of in-commuters to offset partially the total number of out-commuters. The 1958 study by the Connecticut Labor Department revealed that for the Middletown Labor Market Area, which comprises all of Middlesex County and the

town of Marlborough, 7,970 persons commuted to work outside the area while 3,070 residents of other labor market areas commuted into the area for work, resulting in a net out-commutation of 4,900. About 57% of the out-commuters worked in the Hartford area while a third of the in-commuters were from that area. For the Midstate Region alone, the Hartford area probably accounted for over two thirds of the out-commuters and over one half of the in-commuters. The 1960 Census data confirms this estimate as to out-commuters in so far as place of work is reported, but includes a high proportion of "unal located" and "not reported." The commuting pattern revealed by the Census data will be considered in greater detail in a subsequent section.

By 1960, the net out-commuters amounted to slightly under one fourth of the region's resident labor force. The increasing significance of this major component appears to be largely due to the many in-migrants who continued to work at their old jobs outside the region. A 21.8% increase in the region's employment during the decade indicates that in general, job opportunities within the region at least kept ahead of the natural growth (births minus deaths) of the population, in spite of a worsening unemployment situation toward the end of the decade. Net in-migration during the decade, which amounted to an increase of 11.6% of the 1950 population, contributed to a total population growth of 26.5% exceeding the region's employment growth while equaling the state's population growth.

Since 1960, net out-commuting has continued to increase and the estimate for 1963 indicates it now amounts to over one fourth of the resident labor force and to almost 11% of the region's population. Some improvement in unemployment conditions in the region would indicate that again, the increasing out-commutation is due to further in-migration of persons employed elsewhere rather than a large scale increase in the extent to which the region's long-time residents are forced to seek wmployment outside the region.

From this discussion of the role of out-commuting in the region's economy, two general conclusions can be drawn. From a relatively minor role it has consistently grown in importance to the region's economy and now exceeds manufacturing employment within the region as a source of livelihood for Midstate residents. Secondly, the growing importance of out-commuting has been the result of the in-migration of persons who continue to hold jobs elsewhere and the seeking of jobs elsewhere by long-time residents of the region, but the former appears to have

been the major cause. It certainly is the sole explanation of the unusually heavy in-migration which the region has experienced since World War II, in spite of an almost uninterrupted decline in its manufacturing employment (to be considered in more detail later). Improvement in the highways connecting Midstate to the major job areas around Hartford to the north and New Haven to the southwest, will probably accelerate the increasing importance of out-commuting to the region's economy.

Developments in the employment within the region since 1945, have merely been alluded to in the description of post-war trends thus far. They will be considered in greater detail in the separate sections devoted to each of the major industrial sectors into which area employment is usually divided. At the present juncture, merely the overall relationship between the three sectors will be noted. The following table reveals the increasing importance of services employment at the expense of that in the resource industries and manufacturing, both of which have experienced an absolute decline in the number of employed since World War II, as shown in Chart I above.

Chart 4: Percent Distribution of Employment, 1945-1963

	1945	1947	1950	1955	1960	1961	1963
Employment	16,140	16,230	15,600	17,720	19,020	19,000	19,200
Percent Employed in:							
Resource Industries	5.5%	5.2%	5.2%	4.0%	3.4%	3.1%	2.9%
Manufacturing	52.7	49.9	41.9	39.3	35.6	35.6	34.1
Services	41.8	44.9	52.9	56.7	61.0	61.3	63.0

Source: Chart I

In both the state and the nation there has been an increase in the relative importance of services employment at the expense of that in the resource industries and manufacturing, but the scale of the shift in Midstate far exceeds that in either the state or the nation. In Connecticut, manufacturing employment declined from 43% of the total in 1950 to 40% in 1960, while services employment rose from 55% to 58% of the total in the same period. In contrast, Midstate's manufacturing employment lost six percentage points during the decade while services gained seven points. It may also be noted that Midstate's losses in manufacturing employment were both absolute and relative while the state

and the nation experienced moderate increases in the absolute level of manufacturing employment. The 1950-60 increase in Midstate services employment, on the other hand, amounted to a 38% growth, considerably in excess of the region's population growth of 26.5% and of the state's 30% growth in services employment.

This brief description of the overall trends in the region's employment since 1945, points up once again the exceptional phenomenon of population and general economic growth depending not on manufacturing growth in the area but on employment opportunities outside the region. This certainly represents a far cry from the relatively self contained, closed economy of the colonial period and the "backwater" manufacturing growth of the 19th Century and the first half of the 20th.

COMMUTING PATTERNS IN 1960

By combining data from the 1960 Census of Population on the employment of Midstate residents and on those who commute to jobs outside of Middlesex County, together with data from the Connecticut Labor Department on the number of jobs in the towns of the region, it is possible to develop a general description of the commuting patterns within and the exchange of workers between the region and elsewhere. This description is deficient in that the Census data do not permit identifying the exchange which probably occurs between Midstate and the southern portion of Middlesex County, nor the taking into account of the possibility of dual job-holding or "moonlighting." The overall pattern is presented in the following Chart.

Chart 5: Labor Force and General Commuting Patterns, By Town, 1960

	Employed Labor Force	Employed in Area	Commuting to Jobs (1) Out of Town	Out of County	Elsewhere in County
Midstate	24,900	18,888	-5,912	-7,435	+1,523
Cromwell	2,858	435	-2,423	- 994	-1,429
Durham	1,130	457	- 673	- 465	- 208
East Hampton	2,271	1,268	-1,003	- 906	- 97
Haddam	1,501	376	-1,125	- 416	- 706
Middlefield	1,303	387	- 916	- 480	- 436
Middletown	12,900	13,994	+1,144	-3,275	+4,319
Portland	2,937	2,031	- 906	- 896	- 10

Source: 1960 Census of Population and Connecticut Labor Department. See Charts 6 and 7 for details.

(1) Minus signifies net out-commuting; plus signifies net in-commuting.

It must be cautioned that these figures still are net amounts since it is possible for example that not all the jobs reported in Cromwell were filled by residents of that town. However, since only 435 jobs were reported for the town while 2,858 of its residents were reported as employed, it is evident that at least 2,423 as a net amount commuted to jobs outside of the town (shown as a minus figure above). The Census reported 994 residents of Cromwell commuting to jobs outside of Middlesex County (see Chart 6 for details). Therefore, the balance, 1,329 (again shown as a minus figure above) is the net amount of Cromwell residents commuting to jobs elsewhere in the county.

In the case of Middletown, employment exceeded labor force by a reported 1,144 jobs (shown as a plus figure above). In addition, the Census reported 3,275 residents of Middletown commuting to jobs outside Middlesex County. Therefore, there must have been at least 4,319 net in-commuting into Middletown (shown as a plus figure above) to account for all the jobs reported in the town. If all the commuters from the surrounding towns shown above as having jobs elsewhere in the county than their home town (amounting to 1,796) went to a job in Middletown, there would still be 1,523 in-commuters to the town to be accounted for. Therefore, since the totals within the region have all been accounted for, it can only be assumed that this represents the net in-commuting into the Midstate Region by residents of places outside the region. This is shown as a plus figure above.

Chart 6 presents in more detail the data from the 1960 Census on commuting from the towns to jobs outside of Middlesex County. The totals for the employed residents shown in this Chart differ from those in Chart 5 because the Census Bureau used different methods in expanding the sample to a full count. Also, since the details for Cromwell, (which is included by the Census Bureau in the Hartford Standard Metropolitan Statistical Area) differ from those for the other towns of the region, it has been necessary to assume that the 1,882 Cromwell residents reported as commuting "elsewhere", commuted elsewhere in Middlesex County. It is evident from both tables that commuting to jobs outside the county is relatively more important in the surrounding towns than in Middletown.

As would be expected, the bulk of out-commuters from Cromwell worked in the Capitol Region, but East Hampton and Portland also supplied relatively high proportions of out-commuters in this direction. While those from Cromwell had jobs principally in Hartford and the Western suburbs, those from East Hampton and Portland were more concentrated in Hartford and to the east. In total number, Middletown was still the largest source of out-commuters to jobs in the Capitol Region, which was also the destination of the largest identified group of out-commuters from Haddam.

The largest number of out-commuters to jobs in the New Britain-Bristol Region were from Cromwell and Middletown, but jobs there were also important to sizeable numbers of out-commuters from Haddam and Middlefield. Major contributors to the flow of out-commuters to jobs in South Central Connecticut Region were Durham, Middlefield, Middletown and Portland. This area was particularly important in providing jobs to out-commuters from Durham.

CHART 6

LABOR FORCE AND PLACE OF WORK, BY TOWN, 1960

	RESIDENTS OF: MIDSTATE,	CROMWELL	DURHAM	E.HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLANI
Worked in:								
Total	24,495	2,876	1,077	2,224	1,439	1,283	12,624	2,972
MIDDLESEX COUNTY (1)	17,060	1,882 (2)	612	1,318	1,020	803	9,349	2,076
Percent of Total	69.6%	65.4%	56.8%	59.8%	70.9%	62.6%	74.1%	69.8%
OTHER COUNTIES	7,435	994	465	906	419	480	3,275	896
Percent of Other Counties total in:								
-Capitol Region	51.7%	81.9%	19.0%	69.0%	38.3%	21.8%	46.6%	58.5%
Hartford	20.8	37.6	5.2	19.7	17.0	10.8	19.2	24.3
E. Metro Belt (3)	18.6	21.7	9.5	41.2	16.3	6.0	13.2	24.9
Balance	12.3	22.6	4.3	8.1	5.0	5.0	14.2	9.3
-New Britain - Bristol	9.3%	15.2%	.9%	7.7%	10.8%	13.3%	9.0%	7.3%
-South Central Connecticut	15.6%	n.a	39.3%	7.6%	4.8%	40.3%	18.0%	11.7%
Meriden	8.3	n.a	10.5	3.2	1.0	26.2	10.8	5.9
New Haven Area	7.3	n.a	28.8	4.4	3.8	14.1	7.2	5.8
Elsewhere and Not Reported	23.4%	2.8 (2)%	40.9%	15.8%	46.4%	24.3%	26.8%	22.8%

1. Except for Cromwell, does not include residents of other towns working in Cromwell.
2. Residents of Cromwell classified as working "elsewhere," have been assumed to work elsewhere in Middlesex County.
3. Includes the towns of Wethersfield, Glastonbury, East Hartford, South Windsor, Windsor, and Bloomfield.

n.a. not available

Source: United States Census of Population, 1960.

CHART 7 NONAGRICULTURAL EMPLOYMENT, EMPLOYED LABOR FORCE, AND COMMUTATION, BY TOWN, 1960

	MIDSTATE	CROMWELL	DURHAM	E.HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLAND
EMPLOYMENT								
Total	18,390	335	360	1,240	320	335	13,845	1,955
Manufacturing	6,950	65	245	650	220	195	4,710	865
Services	11,430	270	115	590	100	140	9,135	1,090
Employed Labor Force (1)								
Total	24,292	2,758	1,033	2,243	1,445	1,251	12,701	2,861
Manufacturing	10,384	1,075	457	1,179	646	589	5,230	1,208
Services	13,876	1,683	567	1,064	795	662	7,460	1,645
Net Commuting (2)								
Total	-5,902	-2,423	-673	-1,003	-1,125	-916	+1,144	-906
Manufacturing	-3,434	-1,010	-212	- 529	- 426	-394	- 520	-343
Services	-2,446	-1,413	-452	- 474	- 695	-522	+1,675	-555

1. Excluding Farming; "Not Reported" assumed to be in services employment.

2. Minus signifies net out-commuting, plus signifies net in-commuting.

Source: 1960 Census of Population and Connecticut Labor Department

and Middlefield. The bulk of "elsewhere" (except for Cromwell) used by the Census Bureau probably consists of the Southeastern Connecticut Region, which apparently accounted for an important work destination for Durham and Haddam out-commuters, and a fairly large number from Middletown.

Chart 7 presents details by industrial sector on the 1960 town commuting patterns. Since no information on farming jobs by town is available from the Connecticut Labor Department, it has been assumed that all residents of a town reported by the Census as employed in agriculture are so employed in their home town. Therefore, this chart refers only to nonagricultural employment and commuting. Also, it is possible to identify employed labor force and jobs only by the broad classification of manufacturing and services industries and to establish net out-commuting by industrial sector only as to out-of-town destinations, i.e., no distinction was possible as to whether the out-of-town job was elsewhere in Middlesex County or outside the county.

The following Chart which translates the commuting patterns shown in Chart 5 and 7 above into percentages, forcefully reveals the importance of commuting in the economy of the several towns of the region.

Chart 8: Commutation as Percent of Employed Labor Force, by Town, 1960

	Commuting to Jobs:				
	Out of Town			Out of	Elsewhere
	Total	Mfg	Services	County	in County
Midstate	23.7%	13.8%	9.9%	30.0%	(1)
Cromwell	84.7	35.3	49.4	34.7	50.0
Durham	59.6	18.8	40.8	41.1	18.5
East Hampton	44.2	23.3	20.9	40.0	4.2
Haddam	75.0	28.4	46.6	27.9	47.1
Middlefield	70.5	30.3	40.2	37.0	33.5
Middletown	(1)	4.0	(1)	25.4	(1)
Portland	30.8	11.6	19.2	30.3	0.5

(1) See Text
Source: Derived from Charts 5 and 7.

As explained above, the percentages for Midstate shown under the "out-of-town" columns represent the approximate net commuting to jobs outside the region and that under "out-of-county", the approximate total commuting to jobs outside the region. This total commuting to jobs outside

the region was offset by an approximate 1,523 residents from elsewhere who commuted to jobs in Midstate and who represented 8.1% of the total jobs in the region.

In the case of Middletown, an approximate total of 4,319 residents from elsewhere commuted to jobs in the town, or 33.4% of the total jobs. Residents of other towns in the region held about 21.6% of the total jobs in Middletown while in-commuters from outside the region accounted for about 11,8%. This influx of commuters was offset by Middletown residents representing 25.4% of the town's employed residents,going to jobs outside Middlesex County. A net of 510, or 4.0% of the town's employed residents, were shown to be commuting to manufacturing jobs outside the county. From this it may be inferred that the balance of out-commuters, 2,765 or 21.4% of the town's employed residents, were employed at services jobs outside Middlesex County. The exchange of commuters which occurred in Middletown, however, resulted in a net in-commuting of only 1,144, or 6.1% of employment in the town.

For the surrounding towns, the incomplete data indicate only net out-commuting. This was particularly heavy in Cromwell, Haddam and Middlefield, which were the principal sources of regional commuters to jobs in Middletown.. The major factors in the commuting patterns of Durham, East Hampton and Portland were jobs outside Middlesex County. It is interesting to note also that only among East Hampton's commuters did manufacturing jobs account for the larger proportion.

Because the region totals as to industry of commuters shown in Chart 7 above, are net amounts, they are misleading in assessing which industrial sector is attracting most of the commuters to jobs outside the region. It appears that most of the offsetting in-commuting of 1,523, was to services jobs. Therefore, to obtain an approximation of total out-commuting to services jobs, it is appropriate to add 1,500 to the net amount, indicating about 4,000 commuters to service jobs outside the region, compared to about 3,450 to manufacturing jobs outside the region.

By combining data on the employment of residents in Middletown and the central part of Portland from the Census with data on jobs from the Connecticut Labor Department, it is possible to estimate the commuting patterns for these two towns and the balance of the region by major nonagricultural sector in 1950. For this purpose, it is necessary that all jobs for Portland reported by the Labor Department were in the central portion of the Town. These estimates are shown in Chart 9 below.

CHART 9 EMPLOYMENT AND COMMUTING, MIDSTATE, MIDDLETOWN, PORTLAND

1950 and 1960

1950 NONAGRICULTURAL EMPLOYMENT	MIDSTATE	MIDDLETOWN	PORTLAND	BALANCE
Total	14,790	10,625	1,585	2,580
Manufacturing	6,540	4,235	895	1,410
Services	8,250	6,390	690	1,170
EMPLOYED LABOR FORCE (Employment of Residents) (1)				
Total	18,990	10,889	1,479	6,622
Manufacturing	n.a.	4,607	651	n.a.
Services	n.a.	6,282	828	n.a.
NET COMMUTING (2)				
Total	-4,200	-264	+106	-4,042
Manufacturing	n.a.	-372	+244	n.a.
Services	n.a.	+108	-138	n.a.
1960 NONAGRICULTURAL EMPLOYMENT				
Total	18,380	13,845	1,955	2,580
Manufacturing	6,950	4,710	865	1,375
Services	11,430	9,135	1,090	1,205
EMPLOYED LABOR FORCE (Employment of Residents) (1)				
Total	24,292	12,701	2,861	8,730
Manufacturing	10,384	5,230	1,208	3,946
Services	13,098	7,471	1,653	4,784
NET COMMUTING (2)				
Total	-5,912	+1,144	-906	-6,150
Manufacturing	-3,434	-520	-343	-2,571
Services	-2,478	+1,664	-563	-3,579

1. Excluding Farming; "Not Reported" assumed to be in Services employment.
2. Minus signifies net out-commuting, plus signifies net in-commuting.

Source: See Text

These estimates indicate that only in Middletown has there been a reversal of net out-commuting to net in-commuting. In the other towns, except Portland, net out-commuting has increased and in Portland, net in-commuting has changed to net out-commuting. The reversal in Middletown appears to be due in large measure to the establishment of CANEL, but some growth in area services employment in response to the region's population growth is also in evidence.

Since full details on the commuting patterns affecting Midstate are not available and net figures can conceal an infinite variety of exchange situations, this description of these patterns is at best an approximation. It does underline, however, the extent to which the economy of the region as a whole is involved in what transpires in the regions on its borders, and the complex interdependence of the several towns within the region. This complex involvement not only within the region but extending over all its borders creates many problems but also is a major contributor to the viability of Midstate's economy. It may be viewed as a significant compensation for the region's shortage of other more classical stimulants to economic growth.

LABOR FORCE

Participation Rates

In general, labor force characteristics by town are available only from the 1960 Census. Some inferences as to these characteristics for the region's labor force in 1950 can be drawn from the 1950 Census details for Middletown, Portland (only part of the town) and Middlesex County. Of necessity, this analysis will be primarily a description of these aspects of the labor force in 1960, with a limited outline of general trends. Chart 10 presents the available social characteristics of the region's labor force in 1960.

It should be noted at the outset that labor force details were based on a 25% sample in 1960 and are subject to sampling errors which tend to be most serious for any figures below 100. Thus, the town details on unemployment for all except Middletown should not be viewed as an accurate count of the unemployed.

In three of the towns in the region, Cromwell, East Hampton and Haddam, the percentage of the population which was in the labor force was higher than the state ratio of 42.2%. Only in Durham and Middlefield was this ratio markedly lower. It is in the male labor force participation rate, however, that the major variation from the state average occurs. In all towns except Middletown, this rate is considerably higher than the state rate of 80.0%, but in Middletown, due to the presence of institutions and Wesleyan University, the rate was over eight percentage points below the state average. Thus, although Middletown accounted for 53.1% of the region's population, its labor force and male labor force represented only 52.0% of the respective regional totals. For all other towns, the variation from the state in the percentage of the population which was in the labor force, is explained by the variation from the state female participation rate of 38.0%.

This variation from the state labor force participation rates is pointed up in the following tabulation, which also permits an inference as to these rates for the region in 1950. It is evident from Chart 11 below that the labor force participation rates for Middletown and the southern portion of Middlesex County were responsible for the county rate for males being two and a half percentage points lower than the state rate in 1960. In sharp contrast, the rate for males in Midstate less Middletown and part of Portland was five percentage

CHART 10

GENERAL CHARACTERISTICS OF THE LABOR FORCE, BY TOWN, 1960

	MIDSTATE	CROMWELL	DURHAM	E.HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLAND
TOTAL LABOR FORCE	26,279	2,978	1,198	2,396	1,545	1,257	13,657	3,148
Percent of Region	100.0%	11.3%	4.6%	9.1%	5.9%	4.8%	52.0%	12.0%
Percent of Population	41.9%	43.9%	38.7%	44.4%	44.7%	38.6%	41.1%	42.0%
MALES IN LABOR FORCE	17,420	1,988	841	1,585	1,050	963	8,858	2,135
Percent of Total	66.3%	66.8%	70.2%	66.2%	68.0%	71.0%	64.9%	67.8%
Participation Rate*	76.4%	84.7%	84.3%	83.6%	83.8%	86.6%	71.6%	83.6%
In Armed Forces	206	78	-	4	-	-	30	94
Civilian Labor Force	17,214	1,910	841	1,581	1,050	963	8,828	2,041
Employed	16,545	1,889	817	1,517	1,022	917	8,421	1,962
Unemployed	669	21	24	64	28	46	407	79
Unemployment Rate*	3.9%	1.1%	2.9%	4.0%	2.7%	4.8%	4.6%	3.9%
FEMALES IN LABOR FORCE	8,859	990	357	811	495	394	4,799	1,013
Participation Rate*	38.0%	41.9%	36.2%	40.1%	38.7%	35.7%	37.1%	38.3%
Employed	8,355	969	313	754	479	386	4,479	975
Unemployed	504	21	44		16	8	320	38
Unemployment Rate*	5.7%	2.1%	12.3%		3.2%	2.0%	6.6%	3.8%

* Participation Rate is the percentage of the population aged 14 years and over which is in the labor force. Unemployment Rate is the percentage of the civilian labor force which is unemployed. For females, the labor force and the civilian labor force were the same, as there were no members of the Armed Forces in the region.

Source: United States Census of Population, 1960.

Chart 11: Labor Force Participation Rates* For Selected Areas, 1950 and 1960.

	Males		Females	
	1950	1960	1950	1960
Connecticut	79.9	80.0	34.8	38.9
Middlesex County	74.1	77.5	32.2	37.7
-less Midstate	n.a.	77.0	n.a.	36.6
-less Middletown and Portland(part)	79.9	81.1	31.9	37.8
Midstate	n.a.	76.4	n.a.	38.0
-less Middletown and Portland(part)	n.a.	85.5	n.a.	39.3
Middletown	66.5	71.6	33.3	37.1
Portland(part)	78.9	83.0	29.3	39.4

n.a. - not available
* Percent of population aged 14 years and over which is in the labor force.
Source: U.S. Census of Population, 1950 and 1960.

points higher than the state, and Portland, seven points higher. From this, it may be inferred that for the balance of the region in 1950, the rate for males was also higher than the state ratio, although that for Middletown was over thirteen percentage points lower. The same observations and inferences as to 1950, hold for the female participation rates although the variations from the state rates were not so sharp.

Occupational Characteristics

Again, town details on the occupations of the region's labor force are available only from the 1960 Census, but some inferences as to post-war developments can be drawn from the occupational changes occurring in Middletown and the balance of Middlesex County. Charts 12 and 13 present the percent distribution of occupations among the resident employed, for males and females respectively, in 1960 (details on the occupations of the unemployed are not available.) The percent of the employed male labor force involved in white-collar occupations was significantly lower than the state percentage and Portland was the only town with a higher percentage. This was due to high percentages of both the professional and manager classes of workers in this town. On the other hand, the region and all towns except Portland had much higher proportions of blue-collar workers than the state, mainly due to relatively large numbers of operatives or semi-skilled workers. The divergence from the state's white-collar-blue-collar pattern was greatest in Haddam and Cromwell.

CHART 12 PERCENT DISTRIBUTION OF THE EMPLOYED MALE LABOR FORCE, BY OCCUPATION AND TOWN 1960

	MIDSTATE	CROMWELL	DURHAM	E. HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLAN
Number Employed	16,545	1,889	817	1,517	1,022	917	8,421	1,962
White Collar Workers	33.6%	29.1%	34.1%	33.7%	27.0%	36.7%	33.2%	40.0%
Professional, Technical	12.3%	8.9%	12.9%	12.7%	7.8%	13.2%	12.8%	14.6%
Managers, Officials,Prop.	9.3%	8.6%	5.9%	10.1%	9.6%	10.3%	8.4%	13.3%
Clerical	6.5%	5.6%	6.4%	6.1%	5.6%	6.2%	6.6%	7.3%
Sales	5.5%	6.0%	8.9%	4.8%	4.0%	6.5%	5.4%	4.8%
Blue Collar Workers	52.7%	58.3%	50.1%	56.8%	61.7%	51.7%	50.6%	49.9%
Craftsmen, Foremen	24.8%	32.2%	24.1%	25.0%	28.8%	25.0%	22.5%	25.6%
Operatives	23.7%	22.0%	22.0%	28.6%	28.1%	24.5%	23.4%	21.0%
Laborers, except Farm	4.2%	4.1%	4.0%	3.2%	4.8%	2.2%	4.7%	3.3%
Service Workers	6.7%	4.0%	3.4%	3.8%	5.1%	3.5%	9.1%	4.4%
Private Household Workers	.1%	0	0	0	0	.4%	.1%	0
Other Service	6.6%	4.0%	3.4%	3.8%	5.1%	3.1%	9.0%	4.4%
Farms	2.8%	4.0%	8.9%	1.9%	2.8%	4.3%	2.0%	1.9%
Farm Managers, Farmers	1.2%	1.0%	4.0%	1.1%	2.0%	1.7%	.8%	1.0%
Farm Laborers	1.6%	3.0%	4.9%	.8%	.8%	2.6%	1.2%	.9%
Not Reported	4.3%	4.6%	3.7%	3.5%	3.5%	4.5%	5.1%	2.1%

Source: United States Census of Population, 1960

CHART 13 PERCENT DISTRIBUTION OF THE EMPLOYED FEMALE LABOR FORCE, BY OCCUPATION AND TOWN 1960

	MIDSTATE	CROMWELL	DURHAM	E. HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLAN
Number Employed	8,859	969	313	754	479	386	4,799	1,013
White Collar Workers	53.6%	58.0%	60.4%	49.7%	58.4%	39.1%	53.5%	56.7%
Professional, Technical	12.6	12.6	19.2	9.0	12.8	10.9	13.6	10.7
Managers, Officials, Prop.	2.7	.8	0	4.4	3.3	3.1	2.1	6.5
Clerical	31.8	35.8	31.0	32.2	36.7	19.9	31.5	32.9
Sales	6.5	8.8	10.2	4.1	5.6	5.2	6.3	6.6
Blue Collar Workers	25.4%	22.7%	18.5%	26.5%	15.8%	32.1%	27.2%	23.0%
Craftsmen, Foremen	1.3	1.3	0	.5	.9	4.1	1.2	1.6
Operatives	23.5	20.9	18.5	25.0	14.9	27.0	25.2	21.4
Laborers, except Farm	.6	.5	0	1.0	0	1.0	.8	0
Service Workers	15.6%	13.1%	12.1%	16.9%	21.9%	23.6%	15.2%	13.6%
Private Household Workers	3.5	2.6	1.9	4.9	4.2	5.2	2.8	5.2
Other Service	12.1	10.5	10.2	12.0	17.7	18.4	12.4	8.4
Farm	1.0	2.7	2.5	0	1.8	1.0	.4	1.8
Farm Managers, Farmers	.2	0	2.5	0	.9	0	.1	0
Farm Laborers	.8	2.7	0	0	.9	1.0	.3	1.8
Not reported	4.6%	3.5%	5.1%	6.4%	4.2%	3.1%	4.7%	4.9%

Source: United States Census of Population, 1960

The region's percentages of service and farm workers were reasonably close to the state's but Middletown had a significantly higher percentage of service workers, and Durham, of farm workers. It should be noted here that "service workers" is a far more limited class than "services employment" and refers to only a small, lower skilled portion of the sector, one of the three into which economic activity is divided.

If it is assumed that the state distribution of occupations is the pattern normally expected to meet the requirements of jobs in the Midstate Region, any marked difference in a town's distribution of occupations may be taken as an indication of the principal occupations of its out-commuters. On this assumption, it would appear that Portland's male out-commuters include a sizeable number of white-collar workers, while craftsmen are significant among those from Cromwell, and operatives among those from East Hampton and Haddam. A weaker relationship between out-commuting and male sales workers in Durham and professional and technical workers in Middlefield seems to exist, while Middletown's high percentage of male service workers may be due to its nature as a regional center rather than major out-commuting by this class.

The region's percentage of employed females who were in white-collar occupations, was also lower than the state's but in Cromwell, Durham and Haddam, the percentage was significantly higher, while in Middlefield, it was markedly lower. Clerical and sales workers were responsible for Cromwell's high percentage of female white-collar workers, professional and sales workers for Durham's high percentage, and clerical workers for Haddam's high percentage. Presumably, female out-commuters from these towns tended to be engaged in these respective occupations. Middlefield's low percentage of female white-collar workers was due to its small number of professional and clerical workers.

The region's percentage of female blue-collar workers was reasonably close to that of the state, and only Middlefield showed a markedly high percentage of such workers. An unusually high proportion of female craftsmen and foremen helped to raise this town's percentage of blue-collar workers and may contribute to its pattern of out-commuting. The percentage of female blue-collar workers in Durham and Haddam was quite low, but that in Cromwell was near the state average.

The region was also close to the state average in its percentage of service and farm working women. Haddam and Middlefield had significantly higher percentages of

service workers, and although Cromwell and Durham had somewhat higher percentages of farm workers, it is doubtful that women farmers contributed to the out-commuting from these towns.

As an indication of the post-war trends in the occupations of the region's employed labor force, the following tabulation compares the change in percentage points between the percent distribution of occupations in 1950 and that in 1960 for Middletown, part of Portland and the balance of Middlesex, with that for the state.

Chart 14: Percentage Point Change in the Distribution of Occupations, Selected Areas, 1950 to 1960.

	Conn.	Middletown	Portland(part)	Middlesex, balance
MALES				
White-collar workers	+3.0	+1.9	+6.2	+6.4
Blue-collar workers	-5.3	-4.1	-0.6	-3.1
Service workers	-0.5	+0.7	+1.5	-0.2
Farm workers	-1.7	-2.5	-3.6	-4.9
FEMALES				
White-collar workers	+4.4	+3.7	-5.3	+6.0
Blue-collar workers	-9.8	-7.7	+3.8	-9.7
Service workers	+1.5	0	+5.2	+2.1
Farm workers	-0.2	-0.5	-2.0	-0.7

NOTE: Relative change for an area does not add to zero because "Not Reported" is not shown.
Source: U.S. Census of Population, 1950 and 1960.

The increase in the proportion of male white-collar workers in Middletown lagged behind that in the state, Portland and the balance of Middlesex County because of a rather heavy decline in the town's percentage of managers, officials and proprietors among the male employed, compared to practically no change or moderate increases in the other areas. On the other hand, while the percentages for all three classes of male blue collar workers declined in the state, they increased for craftsmen and foremen in Middletown, Portland and the balance of the county, and for laborers, except farm, in Middletown only. With a relatively heavier commitment to agriculture early in the post-war period, the sharper declines in the percentages of male farm workers indicated above for Midstate are similar to what transpired within the nation's farming.

The occupational changes for the female employed in the region were more in line with those for the state for all classes, as well as can be inferred from those shown above. The apparent no change for service workers in Middletown was due to a large shift from private household workers to other service workers. The shifts in the occupations of females actually amounted to a realignment more in conformity with the state pattern. This greater conformity to the state trends in the occupations of women in the region, coupled with that noted earlier in their labor force participation rates, may indicate that women play an even lesser role in the region's total out-commuting pattern than their one-third share of the labor force would indicate.

Industrial Characteristics

The employment of Midstate residents as between the two major non-agricultural industrial sectors, manufacturing and the services industries, was presented earlier in Chart 1. The 1960 Census identifies the major component industries in the services sector, Construction, Transportation, Communications and Utilities, Trade, Other Services and Government. The percent distribution of employment in these industries as well as Farming and Mining, the principal components of the resource industries sector, and in the manufacturing sector, is shown in Chart 15. This employment refers to all residents of the towns, including commuters, and should not be confused with jobs in the towns.

It is significant to note that in spite of the fact that employment at manufacturing jobs in the region is relatively low compared to the state, in all the towns except Cromwell, the percent of employed residents working at manufacturing jobs was higher than the state ratio of 40.3% in 1960. This is due of course, to the large numbers who commute to manufacturing jobs outside the region. These manufacturing workers commuting outside the region amounted to about one third of the region's residents employed in manufacturing. These percentages indicate that the region is well supplied with qualified manufacturing workers. Presumably with sufficient inducement, a fair number of those who now commute outside the region could be recruited for expansion of manufacturing activity within the region.

As an indication of the post-war trends in the industry employment of Midstate residents, a comparison of those for Middletown and part of Portland reveals that such changes as occurred in the percent distribution between 1950 and 1960, were very similar to those recorded for the state. The only major change, as shown in Chart 16 below, occurred for "Not Reported", throwing doubt on the lesser changes

CHART 15 PERCENT DISTRIBUTION OF LABOR FORCE, BY INDUSTRY AND TOWN, 1960

	MIDSTATE	CROMWELL	DURHAM	E.HAMPTON	HADDAM	MIDDLEFIELD	MIDDLETOWN	PORTLAND
Number Employed	24,900	2,858	1,130	2,271	1,501	1,303	12,900	2,937
Farming and Mining	2.6%	3.5%	9.4%	1.2%	4.0%	4.0%	1.6%	2.9%
Construction	6.5	6.4	5.5	6.3	12.1	6.8	5.7	7.2
Manufacturing	41.7	37.6	40.4	51.9	43.0	45.2	40.5	41.1
Transportation and Utilities	3.2	4.0	5.0	4.0	3.6	2.2	2.7	4.0
Trade	14.9	21.1	13.1	13.0	9.4	15.0	14.3	16.6
Other Services	11.6	7.3	8.7	9.0	6.8	12.2	14.0	10.1
Government	12.1	10.8	11.0	7.6	14.9	9.4	13.7	10.4
Not Reported	7.4	9.4	6.4	7.0	6.1	5.3	7.3	7.7

Source: United States Census of Population, 1960

indicated for the identified employment.

Chart 16: Percent Distribution of Employment of Residents by Industry, Middletown and Portland, 1950 and 1960.

	Middletown		Portland (part)	
	1950	1960	1950	1960
Number Employed	11,306	12,900	1,566	2,264
Farming & Mining	3.7%	1.6%	5.5%	1.8%
Construction	5.1	5.7	7.7	7.0
Manufacturing	40.7	40.5	41.6	43.5
Transportation and Utilities	3.3	2.7	3.0	4.0
Trade	17.2	14.3	14.2	15.3
Other Services and Government	29.2	27.7	26.8	28.4
Not Reported	0.8	7.3	3.7	7.4

Source: U.S. Census of Population, 1950 and 1960.

Again, the large increase in the proportion of "Not Reported" confuses the trend pattern to some extent, but it is noteworthy that manufacturing employment of Middletown residents has not significantly declined in relative importance, while that of Portland's residents increased. Presumably the high proportions of manufacturing employment registered in 1960 for residents of East Hampton and Middlefield represented an increasing importance over that in 1950. These trends indicate a valuable reservoir of manufacturing skills which could be exploited by expanded manufacturing within the region.

RESOURCE INDUSTRIES

The 1960 Census identifies in Midstate only 510 working in agriculture, forestry and fishing and 30 in mining, the four industries which constitute the resource industries. These figures do not include any such employment for Cromwell but the Census does identify 100 as engaged in farming occupations there. Thus, total employment in the resource industries amounted to about 640, or 2.5% of the labor force and 3.4% of employment within the region in 1960. Resource employment in Midstate is estimated to have declined from around 880 at the end of World War II, and appears from recent state trends to be not much more than 500 now. The bulk of this small employment is principally in farming and the balance of this section will be devoted mainly to a brief description of farming activity in the region.

On an occupational basis, four fifths of the farmers in Middlesex County reside in Midstate. Except possibly for a few farm workers, it is not likely that these farmers commute outside the region. This indicates that a high proportion of the county data reported in the 1959 Census of Agriculture refers to the Midstate Region. The average farm in the county was 87.0 acres in size, up slightly from 84.7 acres in 1954, compared to the state average of 106.7 acres in 1959 and 89.2 acres in 1954. Farm acreage in the county amounted to 23.9% of total land area, compared to 28.2% for the state as a whole. Whereas 80% of the acreage in farms in the state was in commercial farms, only 77% was in commercial farms in Middlesex County. The following chart shows the value of farm products sold in the County and indicates the nature of farming activity in Midstate.

Chart 17: Value of Farm Products Sold, Middlesex County, 1954 and 1959

	Amount in Millions		Percent of Total	
	1954	1959	1954	1959
Total	$8.32	$9.45	100.0%	100.0%
Crops	3.50	4.15	42.1	43.9
Horticultural	3.18	3.53	38.2	37.4
Other	.32	.62	3.8	6.6
Livestock	4.82	5.30	57.9	56.1
Poultry	2.51	2.61	30.2	27.6
Dairy Products	2.06	2.41	24.8	25.5
Other	.25	.28	3.0	3.0

Source: Census of Agriculture

Based on the distribution of farmers in the county, it is estimated that the value of farm products sold in Midstate in 1959, amounted to $7.56 million. The region undoubtedly accounted for all but an insignificant portion of the county's horticultural products, approximately $3.50 million, leaving $4.06 in other products, principally dairy products and poultry. This farm output in the region amounted to about 5.0% of the region's personal income in 1959, and to 6.3% of the value of farm products sold in the state. It is interesting to note that the value of cut flowers and potted plants sold by Middlesex County farms, principally in Midstate, amounting to $2.75 million in 1959, has been the highest of any county in the state since 1954. Sales of nursery products by Hartford County farms, however, were over twice those by Middlesex County farms in 1959, but whereas the former have been declining since 1954, the latter increased almost 56%. The value of horticultural products sold in Middlesex County represented 29% of the state total, while that of dairy and poultry products, only 6% and 7% respectively.

According to a timber resource survey by the U.S. Department of Agriculture in 1953, 71% of the total land area in Middlesex County was devoted to commercial forests, a percentage equalled only in New London and Tolland Counties. The value of forest products sold in the county in 1959, $30,536, amounted to 14% of the state total. Just under two fifths of this output was in standing timber, about one fifth in Christmas trees and the balance principally in firewood and fence posts. These sales represented a 27% decline from 1954 forest product sales in the county, compared to a decline of only 8% in the state.

Only 30 persons were engaged in mining in Midstate in 1960, a far cry from the busy output of the Portland quarries a century earlier. The value of mineral products in Middlesex County as reported by the U.S. Department of the Interior, amounted to just under $500,000 in 1960, about 3% of the state total. Not even half of this was produced in Midstate, and apparently consisted principally of sand and gravel and crushed rock for road construction.

Thus, among the resource industries in Midstate, only farming has shown any growth in terms of output since World War II, although as a source of employment, this industry too has declined to insignificance. The average age of farm operators in Middlesex County in 1960 was $53\frac{1}{2}$ years, not particularly higher than the state average, but indicating the lack of appeal of farming to younger workers. It should be noted that 51% of the farms in Middlesex County, with 23% of total farm acreage, were not commercial farms in 1960,

compared to only 35% of the farms in the state, with 20% of total farm acreage. Living on a farm but commuting to a job elsewhere appears to be a major attraction of "farming" in Midstate.

MANUFACTURING INDUSTRIES

Trends in the Region since 1945

Manufacturing employment within the region in the post-war period declined from an estimated 8,510 in 1945 to 6,550 in 1963. It is estimated that total manufacturing employment in 1964 was down to 6,290, a loss of 2,220 jobs, or 26% of the 1945 level of manufacturing employment. From representing 53% of total employment in the region, factory jobs now account for only 34%, in contrast to the state ratio which dropped from 43% to 41% of total employment.

Chart 18 shows the changes in manufacturing employment in the region by industry which occurred between 1947 and 1962, the latest year for which full industry details are available. It should be noted that 1962 represented the high point in the general recovery by manufacturing in Midstate from the recessions of 1958 and 1961. Covered manufacturing employment rose from 6,628 in 1958 to 6,771 in 1960, lost about 200 jobs the next year, and peaked at 6,854 in 1962. By 1964, however, in spite of the general business prosperity elsewhere, the region's covered manufacturing employment had fallen to 6,113. Thus, developments through 1962 may be viewed as the region's somewhat labored readjustment to conditions following the end of World War II. An understanding of this period will be helpful in the approach to what appears to be a new set of conditions arising since 1962.

The loss of jobs in textiles and apparel in the region is a phenomenon being experienced not only in Connecticut but throughout New England. The region actually gained one firm with moderate employment in the leather industry, but as it is the only firm in this industry, its employment in 1962 had to be added to that in the apparel industry in order to avoid disclosure. Thus, the loss in the apparel industry was actually greater than shown. About one third of the job loss in textiles was due to the closing of 3 firms, while half the loss in apparel was due to the closing of one firm. These losses were in fact, a resumption of the general decline in textile and apparel manufacturing which New England began to experience even before World War I, due to higher labor costs than those prevailing in the South. In the face of this decline, it is noteworthy that 2 small textile firms were established in the region during this period.

CHART 18 EMPLOYMENT IN MANUFACTURING ESTABLISHMENTS, BY SECTOR

1947 and 1962

	EMPLOYMENT		NET CHANGE	
	1947	1962	Gain	Loss
All Manufacturing	8,100	7,015		
Net Change				-1,085
Sum of Industry Change			2,020	-3,305
Nondurable Goods	3,225	2,600		
Net Change				- 625
Sum of Industry Change			710	-1,335
Food Products	75	135	60	
Textiles	1,550	290		-1,260
Apparel and Leather	460	385		- 75
Paper	160	240	80	
Printing and Publishing	120	190	70	
Chemicals and Petroleum Products	145	210	65	
Rubber and Plastic Products	715	1,150	435	
Durable Goods	4,875	4,415		
Net Change				- 460
Sum of Industry Change			1,525	-1,985
Lumber and Furniture	35	55	20	
Stone, Clay and Glass	175	420	245	
Fabricated Metals	1,100	1,275	175	
Machinery and Primary Metals	2,440	835		-1,605
Electrical Equipment	90	870	780	
Transportation Equipment	240	545	305	
Miscellaneous and Ordnance	795	415		- 380

Source: Estimated from Connecticut Labor Department data.

The moderate growth in the paper, chemicals and petroleum products industries was achieved in spite of the closing of 2 firms each in the paper and chemicals industries, while similar growth in printing and publishing was due principally to the establishment of 2 new firms. The rubber and plastics products industry, witnessed not only significant expansion of employment in existing firms but also the establishment of 4 new firms. Nevertheless, 1962 represented a decline of 150 jobs from the peak for this industry in 1961. In general, the production of nondurable goods in the region experienced a healthy diversification in the 1947-1962 period. The region's portion of total manufacturing employment in the production of nondurable goods in 1962 was 37%. While this was higher than the state percentage of 25%, it represented a decline of four percentage points compared to only a two-point decline in the relative importance of this sector of manufacturing in the state. The severity of the job decline in textiles in the region, down 80% in contrast to a 55% decline in the state, was the principal contributing factor.

The post-war developments in the durable goods sector of Midstate's manufacturing was dominated by the closing of Andover-Kent in 1949, with the loss of about 1,700 jobs. Although, the wartime output of this firm was related to the ordnance industry, by 1947 its production was classified in the nonelectrical machinery industry (more specifically, office machine parts). Thus, its closing was the major factor behind the net loss shown in Chart 18 above for the machinery and primary metals industries (combined because of only one firm in primary metals, which experienced a large employment decline). Actually, the region's machinery industry registered a fairly high resiliency to this loss. Ten new firms in this industry, all but one, custom job shops with employment of less than 10, were established prior to 1962, and four of the existing machinery firms registered employment gains.

The other major job loss among durable goods producers in the region occurred in the miscellaneous manufactures industry in spite of the addition of four new firms. The net loss of 40% of the industry's employment between 1947 and 1962 was due mainly to the closing of eight firms, three of which were sizeable employers.

About 76% of the net losses in the machinery, primary metals and miscellaneous manufactures industries was offset by net gains in the other durable goods industries of the region. Half of these net gains occurred in the electrical equipment industry, which witnessed the establishment of nine new firms of which five were sizeable employers, and

significant employment increases in two existing firms. About a quarter of these net gains were contributed by the transportation industry where two sizeable and two small new firms were established and one of the existing firms experienced the second biggest job expansion of any manufacturing plant in the region. Although the stone, clay and glass industry made a sizeable contribution to the net gains among durable goods producers in the 1947-1962 period, it actually peaked in employment earlier and was on the decline in 1962. The net figure for the fabricated metals industry conceals much internal change, six new firms and fairly large employment expansion in three existing firms offset by the loss to elsewhere in the state of two sizeable employers and severely declining employment in another firm, which finally closed in 1964. These changes among the durable goods industries reflected a trend toward diversification similar to that noted among the nondurable goods producers.

These developments between 1947 and 1962 may be summarized as the loss of 3,300 jobs due to the closing or moving elsewhere of 13 plants and severe employment reduction in two others, offset by job gains amounting to over 2,000 resulting from the establishment of 45 new firms providing about 725 new jobs, and from expanding job opportunities at 12 or more existing plants. Thus, from the point of view of the number of establishments there was also diversification in the net increase of 32 plants.

Obviously, the average size of manufacturing firms in Midstate declined, from 65 employees to 45, but the advantage from wider ownership resulting from this aspect of diversification should not be overlooked. The conclusion is inescapable that through 1962, the region's manufacturing activity showed a strong, if somewhat slow, recovery power to surmount the setback from the closing of a major war-associated facility and from the general decline in textiles and apparel manufacturing experienced throughout New England.

In the past two years however, as remarked earlier, another decline in total manufacturing employment in Midstate has set in during a time when the state and the nation have been experiencing unprecedented expansion. In fact, some of the declines in the rubber and plastics, stone, clay and glass, and fabricated metals industries began prior to 1962. The timing of the overall decline suggests it is of quite a different nature than that occasioned by the changed conditions following World War II. Three closings and employment contraction in one of the region's major manufacturing plants have contributed to a decline of over 800 jobs in just two years. This net loss occurred in

spite of the establishment of 6 new firms providing slightly over 100 jobs. It is not clear that this recent job loss is due to some basic economic liability within the region which is subject to correction by local action, but the possibility must not be overlooked.

Trends in the Towns

Thus far, the description of post-war trends in manufacturing activity in Midstate has been in terms of the region as a whole. Further light can be thrown on the overall regional developments by considering those in each of the towns to the extent that detailed data are available. Chart 19 presents estimates of manufacturing employment in the seven towns of the region in 1947 and 1962. Since the employment data in the Labor Department directories from which these estimates were derived, are in the form of size classes, i.e., 0-9 employees, etc., estimates for only the two major sectors of manufacturing are shown.

In three of the least industrial towns, Durham, Haddam and Middlefield, there has been a net increase in total manufacturing employment, due in all instances to expansion or new firms in the durable goods sector. In Durham, 2 new firms were established, employing 80 persons while the balance of the employment was accounted for by expansion of existing firms. Five new firms in Haddam contributed about 70 jobs to its manufacturing growth but the closing of 2 nondurable goods producers added to job losses in that sector. The moderate growth in Middlefield was contributed by 2 new firms. In the other least industrial town, Cromwell, the addition of 4 new firms with 55 employees in nondurable goods production was not sufficient to offset losses in the durable goods sector, due in part to two closings.

East Hampton, until recent years, was a relatively highly industrial town. As recently as 1958, covered manufacturing employment in the town represented 13% of the population, close to the state ratio of 15%. Total manufacturing employment was about 200 jobs higher than in 1947. During the 1947-1962 period, the town saw 9 new manufacturing plants established but they represented the addition of only around 50 jobs. During the same period, two plants closed and after 1958, a marked decline in employment in the remaining plants began, resulting in a loss of 300 jobs by 1962.

In the two principal industrial towns of the region, Portland witnessed only a small job loss as a result of gains in the nondurable goods sector which offset losses in

CHART 19

MANUFACTURING EMPLOYMENT BY TOWN, 1947 AND 1962

	1947			1962			NET CHANGE		
	TOTAL	NONDURABLE GOODS	DURABLE GOODS	TOTAL	NONDURABLE GOODS	DURABLE GOODS	TOTAL	NONDURABLE GOODS	DURABLE GOODS
Midstate	8,100	3,330	4,770	7,015	2,600	4,415	-1,085	-730	-355
Cromwell	130	-	130	105	55	50	- 25	+ 55	- 80
Durham	105	-	105	240	-	240	+ 135	-	+135
E. Hampton	500	100	400	400	100	300	- 100	0	-100
Haddam	210	40	170	260	5	255	+ 50	- 35	+ 85
Middlefield	200	-	200	220	-	220	+ 20	-	+ 20
Middletown	6,065	2,995	3,070	4,910	2,110	2,800	-1,155	-895	-270
Portland	890	195	695	880	340	540	- 10	+145	-155

Source: Derived from Connecticut Labor Department Directory of Manufacturing and Mechanical Establishments

durable goods employment, while Middletown experienced particularly heavy losses in nondurable goods employment, principally textiles. In that the 1,700 job loss due to the closing of Andover-Kent affected the town's durable goods sector, the net loss of 270 jobs for this sector during the 1947-1962 period, indicates and expansion of about 1,400 among other durable goods producers. Over 300 jobs were contributed by 10 new firms in both sectors of manufacturing in Middletown, while in Portland, 9 new firms added about 140 jobs.

The degree of industrialization in the seven towns in 1962, which as noted above marked a turning point in the region's manufacturing development, is indicated by the following ratios showing manufacturing employment as a percent of population.

Midstate -	10.8%
Cromwell -	1.5
Durham -	7.3
East Hampton -	6.9
Haddam -	7.2
Middlefield -	6.3
Middletown-	14.4
Portland -	11.3

The following data on covered employment only indicates where the new turn in manufacturing in the region has been most heavily felt. Employment declines in the durable goods sector were responsible for the losses shown for East Hampton and Haddam, while declines in both sectors caused the losses in Middletown.

Chart 20: Covered Manufacturing Employment by Town, 1962 and 1964

	1962	1964	Net Change
Midstate	6,854	6,113	-741
Cromwell	70	83	+ 13
Durham	240	279	+ 39
East Hampton	335	213	-122
Haddam	220	177	- 43
Middlefield	217	266	+ 49
Middletown	4,901	4,270	-631
Portland	871	846	- 25

Source: Connecticut Labor Department

Other Characteristics

Thus far the description of the post-war developments in the region's manufacturing activity has been primarily in terms of employment and location. Attention will now be devoted to other characteristics in order to throw additional light on a situation which requires serious reevaluation. These characteristics have to do principally with the physical plant in which the region's manufacturing activity is conducted. For past trends, the major sources of information were the files of the Connecticut Labor Department and the Development Commission, while for the current situation, a survey conducted by the Midstate Regional Planning Agency earlier in 1965, has been the major source of information.

The first characteristic to be considered is the size of manufacturing establishments as measured by the number of employees. It has been mentioned earlier that the average size of the region's factories has declined from 65 employees in 1947 to 45 in 1962. Among nondurable goods producers, average employment declined from 62 to 49 employees, and among durable goods producers from 68 to 42 employees. This decline in average employment occurred while the total number of plants increased by 28 which is comprised of a net increase of 29 in the durable goods sector offset by a net decline of 1 in the nondurable goods sector. (NOTE: This net change in the number of establishments derived from information on employee size of plants is not strictly comparable to that reported earlier, based on industry details.)

This decline in average employment was due mainly to the changes resulting from the closing or moving of existing plants and the establishment of new firms. About 90% of the net decline in total manufacturing employment between 1947 and 1962 was caused by this relocation of plants and only 10% of the total represented a net decline in the employment of firms in operation in Midstate throughout this period. As of 1961, an analysis by the Connecticut Labor Department indicates that 10 plants employing about 2,500 in 1947 had closed or moved out of the region. Eight of these ceased operations altogether and one alone of these accounted for 68% of this employment loss. Of the 7 others which closed, 3 employed over 50 persons in 1947 and represented an average employment of 167. Both firms which moved employed over 50 persons.

In contrast to the heavy attrition not only in terms of total employment but also average size of plant caused by these 10 closings and moves, only 5 of the 32

new firms reported by the Labor Department as of 1961 employed over 50, and their average size was only 137. Of the 27 other new firms, 8 were in the nondurable goods sector and on the average employed 24 persons, while the 19 in the durable goods sector employed an average of only 20 persons.

Half of the plants which closed or moved out of the region, including the one representing the major job loss, were located in Middletown. The other 4 all employed less than 50 in 1947 and averaged 32 employees each. Of the 32 new firms as of 1961, 20 were in Middletown: 3 employed over 50 persons, while average employment in the other 17 new firms in the town was 22 persons. The five plants in the surrounding towns which closed or moved out of the region had an average employment of 136 persons in 1947. Average employment of the 12 new firms established in the surrounding towns was 30 persons in 1961, but this included 2 employing over 50.

Thus, for the region as a whole and for Middletown, the excess of new plants over closings failed to compensate for much more than half the job loss caused by the closing of Andover-Kent. Aside from this loss, only in Middletown did the size of new plants tend to exceed the size of those closed or moved elsewhere. This favorable increase in the average size of new plants was accompanied, however, by a slight decline in the average employment of plants in operation throughout the period in Middletown, from 73 down to 69 persons. In the surrounding towns, on the other hand, although the size of new plants tended to be much smaller than that of plants which closed, the average size of plants in operation throughout the period rose from 17 to 23 persons.

The recent survey conducted by the Regional Planning Agency provides additional information on the new manufacturing firms in the region, as well as for a substantial portion of the older firms. The replies from 90 firms represents 58% of the total number of manufacturing establishments in Midstate and their reported employment accounted for the same proportion of the region's manufacturing employment. A very high percentage of the firms new since 1947 replied, 41 out of the 48 reported by the Connecticut Development Commission as of 1964. Average employment in these new firms amounts to 30 which was somewhat lower than the average of 39 production workers for all firms replying to the survey. (It should be noted that the survey requested information on production workers only, but

the figures reported may also include other workers.)

Six of these new firms are relocated operations from elsewhere in Connecticut and New England (one from out of state) and reported the significantly high average employment of 64 workers. The average employment for the remaining 35 firms which are new ventures without any previous location, amounted to 21 workers in 1964. Over half of these new ventures were established in Middletown.

In addition to the relocation from outside the region, 17 Midstate frims replying to the questionnaire had relocated within the region since 1947. In contrast to those from outside the region, their average employment was only 28 workers. Most of the relocations within the region were from Middletown to the surrounding towns and 4 of the newcomers from outside, including the largest employers, were attracted to sites outside of Middletown. There were a small number of relocations from the central section of Middletown to the outer portion of town.

A series of questions was included in the survey questionnaire designed to reveal the factors influencing the decision to relocate. In all respects, the various physical aspects of a plant site were by far the most overriding factors cited. Among the respondents who had relocated since 1947, over half stated that lack of room for expansion was the major disadvantage at their previous location and that the most significant advantage of their present location was general accessibility. Lack of adequate parking and loading facilities, and other physical limitations at the previous location were the next most frequently mentioned factors influencing the decision to relocate. Various physical attractions of their present site were the next most frequently cited reasons for its selection. Among respondents who had thought about relocation, the same emphasis on physical characteristics was reported as the most important factor in selecting a new site. It may be noted, however, that only about one third of the respondents indicated that if they were to expand they would relocate.

It is interesting to note that just under one third of the firms which had relocated or were new ventures, were in plants built since 1947. Among the producers of nondurable goods in new factories, the average number of workers was only 15, and among the durable goods producers, only 19. This is in sharp contrast with the average employment of 31 for both old and new firms

producing nondurable goods in pre-1947 plants, and of 51 for the durable goods producers in such plants. A majority of these older plants have undergone a major expansion or modernization since 1947, and relatively more so among those occupied by durable goods producers.

It may be concluded, in general, that the expansions among these larger and older manufacturers reflect the restricted mobility due to their investment in their present plant and equipment. There is a greater tendency among the smaller and younger firms to lease the buildings which they occupy, and with a relatively low investment in plant and equipment, to be more open to relocation. Nevertheless, a few of the new manufacturing firms in new plants in Midstate are fairly sizeable employers.

Another feature of manufacturing activity with a significant influence on its location is the availability of transportation facilities. The survey revealed that all firms which replied to the question used trucks to bring in raw materials and fuels and only 8% used rail in spite of the fact that about 20% of the plants are located on a rail siding. Rail users, however, accounted for about one quarter of total employment reported, due principally to large employers among the durable goods producers, who receive goods and fuels by rail. About one fifth of the manufacturers replying indicated the major source of the materials received came from Midstate suppliers, and slightly less sent their finished products to customers in the region. The Capitol Region was reported as the source of materials by the highest percentage of firms, 27%, but only 24% said their output was principally sent to that region. While South Central Connecticut Region was cited by 24% of the firms as the main source of materials received, it was the major area of customers for 16% of the firms replying. Information was not obtained on shipments to and from out of state.

Floor and land area characteristics of 62 of the firms replying to the questionnaire are shown in Chart 21. These are reported in terms of both average manufacturing floor space and land area per establishment, and of floor space per employee. The land/floor ratio which indicates how many times the land area is larger than the manufacturing floor space, is also shown, as is average employment per establishment. The contrast is very sharp between the size of firms in buildings constructed since 1947 between Middletown and those in Cromwell, Durham, Haddam and Middlefield, as to employment, floor space and land area. On the other hand, the firms in these new buildings are still far smaller than the average

firm in the pre-1947 buildings of central Middletown. These continue to represent the core of manufacturing activity in the region. This is particularly reflected in the high average employment, large average floor space and high ratio of floor space per employee for the durable goods producers occupying an older building in central Middletown. Although the average land area for such firms is relatively high, a low land/floor ratio indicates these firms are hard pressed for parking area and other extensive land use facilities associated with today's high ownership of automobiles. The averages for the outer Middletown area are somewhat deceptive, due to the small number of firms located there which replied to the questionnaire. Aside from indicating the potential of the area, comparison of the averages for all firms (the total column) with those in older buildings (the Pre-1947 column) suggest the higher floor space and land area ratios for firms in newer buildings (the Post-1947 column) which could not be shown for outer Middletown because of only 2 replies.

CHART 21 AVERAGE EMPLOYMENT, LAND AREA, FLOOR SPACE, AND RELATED RATIOS, FOR MANUFACTURING FIRMS, 19

	ALL MANUFACTURING			NONDURABLE GOODS			DURABLE GOODS		
	TOTAL	PRE-1947	POST-1947	TOTAL	PRE-1947	POST-1947	TOTAL	PRE-1947	POST-194
MIDSTATE									
Av. Employment	36	37	19	25	27	19	40	46	19
Av. Floor Space	15,700	17,975	7,270	9,950	9,540	10,600	17,600	21,100	6,550
Floor Space/Employee	435	442	378	384	355	548	445	460	337
Av. Land Area	6.8	6.2	9.3	9.7	4.2	31.8	6.0	6.9	3.2
Land/Floor Ratio	18.8	14.9	56.0	*	19.0	*	15.0	14.3	22.2
CENTRAL MIDDLETOWN									
Av. Employment	48	60	4	-	32	-	51	68	4
Av. Floor Space	22,180	28,100	1,525	-	11,000	-	24,420	32,750	1,525
Floor Space/Employee	470	465	451	-	347	-	478	480	407
Av. Land Area	3.2	3.9	.8	-	2.9	-	3.3	4.2	.8
Land/Floor Ratio	6.3	6.0	2.2	-	11.4	-	6.0	5.5	22.1
OUTER MIDDLETOWN									
Av. Employment	32	36	*	*	27	*	*	41	*
Av. Floor Space	15,570	15,340	*	*	6,670	*	*	20,540	*
Floor Space/Employee	485	427	*	*	250	*	*	497	*
Av. Land Area	20.8	13.0	*	*	6.5	*	*	16.9	*
Land/Floor Ratio	58.2	37.0	*	*	42.7	*	*	35.8	*
PORTLAND									
Av. Employment	47	59	*	*	*	*	59	58	*
Av. Floor Space	17,240	21,730	*	*	*	*	21,730	21,350	*
Floor Space/Employee	365	371	*	*	*	*	371	366	*
Av. Land Area	4.1	3.6	*	*	*	*	3.6	3.0	*
Land/Floor Ratio	7.6	7.6	*	*	*	*	4.4	6.1	*

Floor space in square feet: Land area in acres.

(Chart continued on next page)

CHART 21 (continued)

	ALL MANUFACTURING			NONDURABLE GOODS			DURABLE GOODS		
	TOTAL	PRE-1947	POST-1947	TOTAL	PRE-1947	POST-1947	TOTAL	PRE-1947	POST-194
EAST HAMPTON									
Av. Employment	-	18	-	-	21	-	-	*	-
Av. Floor Space	-	9,370	-	-	9,100	-	-	*	-
Floor Space/Employeent	-	511	-	-	424	-	-	*	-
Av. Land Area	-	2.7	-	-	3.4	-	-	*	-
Land/Floor Ratio	-	12.6	-	-	16.47	-	-	*	-
BALANCE OF MIDSTATE									
Av. Employment	28	25	34	*	*	*	28	31	2
Av. Floor Space	10,970	11,360	9,960	*	*	*	6,850	7,950	12,30
Floor Space/Employeent	358	464	290	*	*	*	395	465	25
Av. Land Area	6.4	7.6	3.7	*	*	*	6.9	3.6	8.
Land/Floor Ratio	28.1	29.1	16.0	*	*	*	27.1	29.0	19.

* Indicates less than three firms reporting or extreme distortion in average where only three firms reported. Dashes in a period indicate no firms reporting with building dating from that period. Data for the other period in these instances are not repeated for the sector totals.

Source: MIDSTATE REGIONAL PLANNING AGENCY SURVEY, 1965

SERVICE INDUSTRIES

Trends in the Region

As noted earlier, in contrast to manufacturing employment in the Midstate Planning Region, employment in the services industries rose from an estimated 6,750 in 1945 to 12,100 in 1963. While the region's population increased 52% during this period, employment in the services industries increased 79%, and from representing 42% of total employment in the region, rose to accounting for 63% of the total by 1963. This growth of the services industries in Midstate was relatively much greater than in the state where such employment had not yet reached 60% of total employment by 1963. The following chart presents this growth by industry between 1947 and 1961, the only years for which industry details are available.

Chart 22: Services Industries Employment, 1947 and 1961

	1947	1961	Percent Change	
			Midstate	Conn.
Total Services	7,280	11,640	60.0%	46.7%
Construction	500	700	40.0	47.1
Transportation	180	160	-11.1	-11.5
Communications & Utilities	300	430	43.3	20.9
Trade	2,450	3,140	28.2	41.6
Wholesale	350	490	40.0	36.5
Retail	2,100	2,650	26.2	43.0
Finance, Insurance and Real Estate	250	430	72.0	60.5
Other Services	1,680	3,690	119.6	63.0
Government	1,920	3,090	60.9	60.9

Source: Connecticut Labor Department.

This chart reveals that the unusual growth in the region's services industries has been due primarily to the Communications and Utilities industry and the Other Services industry, and to a lesser degree, to the Finance, Insurance and Real Estate and Wholesale Trade. In Construction and the Retail sector of Trade, the region's employment growth was less than the relative growth of these industries in the state. The region's experience in Transportation (carriers) and Government was relatively the same as for the State.

The exceptional growth in Communications and Utilities and Other Services was due to two developments not related to the region's population. A major contribution to increased employment in Communications and Utilities was made by the establishment of the Hartford Electric Light Company's power station in Middletown, which although it serves most of the region's power needs, is more important as a facility in the company's entire power network throughout much of the northwest quarter of the state. Of the 2,010 jobs added to the Other Services industry, over 1,500 were due to the establishment of CANEL in the region, without which, growth in this industry would have amounted to only about a 22% increase for the 1947-1961 period. It is not possible to confirm the surmise that the growth in the region's Finance, Insurance and Real Estate industry was due to outside influences but it appears that one of the major employers in this industry, an insurance company with business relations far beyond the limits of the region, was a significant contributor to this employment growth.

Thus, those portions of the services industries more strictly related to meeting the service demands of the region's population, have not kept pace with population growth. Removing the influence of the establishment of CANEL, indicates that services industries employment increased only about 37% during the 1947-1961 period, compared to a 40% population growth during the period, and the former figure still includes the HELCO and insurance company contribution to employment growth. This raises the question whether many of the new residents of the region are still looking to the area of their previous residence for a major portion of their service needs. Some light on the answer to this question will be developed when data from the U.S. Census of Business is considered later in more detail. However, the following chart provides some interesting insights into this question.

Chart 23: Services Industries Employment by Sector as Percent of Population, Connecticut and Midstate, 1947 and 1961

	1947		1961	
Total Service	Midstate 16.0%	Conn. 18.4%	Midstate 18.2%	Conn. 19.8%
Construction	1.1	1.5	1.1	1.7
Transportation	.4	1.4	.3	.9
Communications and Utilities	.7	.9	.7	.8
Trade	5.5	6.0	5.0	6.3
Wholesale	.8	1.3	.8	1.3
Retail	4.7	4.7	4.2	5.0
Finance, Real Estate and Insurance	.6	1.8	.7	2.1
Other Services	3.7	3.7	5.8	4.3
Government	4.2	3.1	4.8	3.7

Source: Connecticut Labor and Health Departments
Note: Population includes inmates of institutions

It would appear that only Other Services and Government employment as a percent of population registered an improvement when compared to the trends in the state ratios for the 1947-1961 period. Actually, if employment at CANEL is disregarded to reflect employment more strictly related to the service demands of the region's households, Other Services employment in 1961 represented slightly over 3% of the region's population which was lower than the 1947 ratio, and Total Services employment registered several tenths of a point below the 1947 ratio (more precise statements of these ratios are limited by the disclosure restrictions). Thus, only Government among the services industries in the region in so far as related to household demand, measures up to the state standard, which is actually exceeded due to the presence of the Connecticut State Hospital, Long Lane Farm and the State Purchasing Agency.

The various service industries are related to household demand in varying degrees. Retail trade is largely dependent on demand from individual consumers, while wholesale trade is only indirectly so dependent and in large part is dependent on demand from other industries and government agencies. Other Services, which includes large sectors of personal and repair services, and private education and medical services, is also in large part dependent on household demand.

Therefore, it is surprising to note that employment in the region's Retail Trade and Other Services industries, when related to population, has shown significant relative declines in spite of the region's population increase in the post-war period.

Employment in the region's services industries covered by the Connecticut Unemployment Compensation Act amounted to just under 60% of total employment in these industries in 1961. This covered employment rose from 6,814 in 1961 to 7,325 in 1963 and then dropped off to 7,146 in 1964. Part of this increase in covered employment was due to additional establishments qualifying under the Unemployment Compensation Act, but at least half of the increase appears to have been due to expanded employment in establishments previously qualified. From these developments in covered services employment it is concluded that total services employment increased about 4% between 1961 and 1963, and declined about 2% the following year. It is too soon to determine whether the dip in 1964 represents a turning point, reflecting two years later the new developments in manufacturing employment in the region, but it should serve as a warning to keep this sector of the region's employment also under close observation.

Trends in the Towns

To indicate the trends in services industries employment in the towns, only data on covered employment are available. No industry details are available due to disclosure problems, while estimates of total services industries employment are not possible because of the probability of a high degree of error in estimating from the small amounts of covered employment in most of the towns of the region. The lowering in 1956 of the number of employees from 4 to 3 as the minimum required for an establishment to come under the provisions of the Unemployment Compensation Act, further complicates the use of covered employment data to indicate post-war trends in services industries employment in the towns. Nevertheless, these data do offer a reasonable town-to-town comparison for any particular point in time. The following chart presents these town services industries employment data for selected years in the post-war period.

Chart 24: Covered Employment in Services Industries by Town, 1950, 1958, and 1963.

	Amount			Percent Distribution		
	1950	1958	1963	1950	1958	1963
Midstate	4,171	6,402	7,325	100.0%	100.0%	100.0%
Cromwell	176	104	273	4.2	1.6	3.7
Durham	23	101	123	.6	1.6	1.7
East Hampton	178	441	415	4.3	6.9	5.7
Haddam	24	70	80	.6	1.1	1.1
Middlefield	194	98	91	4.6	1.5	1.2
Middletown	3,227	4,980	5,689	77.4	77.7	77.7
Portland	349	608	654	8.4	9.5	8.9

Source: Connecticut Labor Department.

It is significant to note that the sizeable increase in absolute numbers between 1950 and 1958, in the covered services employment in Middletown, largely due to the establishment of CANEL there, did not materially change the town's share of the region's covered services employment. In all the surrounding towns except Cromwell and Middlefield, relatively large employment increases occurred by 1958, and since 1958, also in Cromwell. Most of the 1950-1958 increase in the surrounding towns was due to larger numbers of establishments coming under the provisions of the Unemployment Compensation Act. Although there has been a slight increase in covered establishments since 1958, average size of covered establishments in terms of number of employees has also increased in Cromwell, Durham and Middletown between 1963 and 1964, while the other towns registered moderate gains.

Bearing in mind that covered employment in the region as a whole represents only about 60% of total employment in the services industries, the following chart shows such employment by Town in 1964, as a percent of total population.

Chart 25: Covered Employment in Services Industries as Percent of Population, by Town, 1964.

	Amount	Percent of Population
Midstate	7,146	10.4%
Cromwell	297	4.1
Durham	129	3.7
East Hampton	384	6.4
Haddam	104	2.7
Middlefield	101	2.6
Middletown	5,390	15.5
Portland	741	9.1

Source: Connecticut Labor and Health Departments
Note: Population includes inmates of institutions

If employment at CANEL is excluded from the above figures, covered services industries employment in Middletown is reduced to somewhat more than 10% of the town's population and in Midstate, to less than 8% of the region's population, compared to a ratio of 13% for the state as a whole. Thus, even in the region's services center, covered employment data indicate a deficiency in household-oriented services. The services employment deficiency indicated by these data in the surrounding towns might be expected if Middletown showed a stronger center role. It is obvious, however, that not only is a significant portion of the region's resident labor force commuting to jobs outside the region but also a significant portion of its households are seeking their services requirements outside the region.

Retail Trade and Selected Services

Referring back to the discussion of post-war trends in total services industries employment in Midstate, it will be recalled that the Retail Trade and Other Services industries (excluding the influence of CANEL) were primarily responsible for the lag of this sector of the region's economy behind the state's services industries. The U.S. Census of Business is helpful to a degree in identifying which activities within these industries have been responsible for their lagging growth. The Census of Business has a number of serious limitations. Data since 1948 are available only for Middletown. In 1958, data for Portland was reported for the first time, and in the recent publication of the 1963 results, data for Cromwell and East Hampton have

also been reported. The Census reports on only part of the Other Services industry, referred to as Selected Services, which excludes professional and private educational and medical services, and in part, some important business services.

To some extent, trends in the towns not reported in the Census of Business can be established from data available at the Connecticut Tax Department in connection with the state Sales Tax. However, these data have their limitations in that the classification system used by the Tax Department does not conform to that used by the U.S. Bureau of the Census. For one, hotels which are included by the Census Bureau with Selected Services, are treated as a component of the Food Group by the Tax Department. This "group" includes various types of food stores (except chain stores) and eating and drinking places, separate activities in the Census Bureau classification system. A measure of comparability between the two data sources could be achieved by a detailed analysis of the Tax Department's records. For the present, the data as reported by the Tax Department will be used with their classification system to reveal the pattern of post-war trends in the region's Retail Trade industry (plus hotels).

Because of disclosure problems it has been necessary to combine the Tax Department groups as follows:

- Convenience Goods, a combination of:
  - Food Group (No.10), consisting of food stores except chain stores, hotels, eating and drinking places, and liquor stores
  - Chain Store Group (No.70), consisting of not only food chain stores, but all other types, general merchandise, apparel, etc.
- Shopping Goods, a combination of:
  - Apparel Group (No.20), which excludes chain stores
  - General Merchandise Group (No.30), which excludes chain stores
  - Furniture and Fixture Group (No.50).
- Other Goods, a combination of:
  - Automotive Group (No.40), which excludes chain gasoline stations
  - Lumber, Building and Contractors Group (No.60)
  - Miscellaneous Group (No.80), which includes drug stores and other retail establishments not included above.

Retail sales by these three types of goods for the region and each town in selected years are shown in Chart 26. These are expressed in terms of an index

in Chart 27, for which the per capita sales in Midstate in each instance are valued as 100. This index, also known as a location quotient, indicates the extent to which residents of a town make their retail purchases in the town, assuming that per capita purchases are uniform throughout the region. Thus, an index value of less than 100, i.e. 49 for total retail sales in Cromwell in 1954, indicates that residents of Cromwell purchased only about 49% of their retail goods in Cromwell and the rest elsewhere in the region. An index value greater than 100, such as 127 for total retail sales in Middletown, indicates that of the retail purchases made within the region, Middletown served the equivalent of all its residents plus approximately an additional 27% from the surrounding towns. This is a crude index which does not reflect different purchasing patterns due to different levels of income per capita among the towns.

It should also be noted that per capita retail sales in Midstate tend to be lower than in the state. Using estimates derived by the Connecticut Development Commission from the Tax Department data, the region's per capita retail sales in 1963 amounted to only 73% of the state ratio. Again, differences in the level of per capita income explain part of the regional deficiency but a significant part appears to be due to retail purchases outside the region by Midstate residents, not offset to any notable extent by purchases within the region by residents from elsewhere. If the location quotients in Chart 27 were expressed in terms of an index with the state per capita sales valued as 100, they would be about one fourth lower, or possibly only one fifth lower if adjusted to reflect per capita income differences. However, the values in Chart 27 serve to reflect the relative differences in retail sales among the towns within the region.

In general, there has been a marked degree of stability in the relative standing of total retail sales among the towns during the 1954-1963 period, and this in spite of the uneven population and employment growth occurring during this period. Only in Durham and Middlefield was there a marked decline in the relative decline in convenience goods sales. In Portland, on the other hand, a relative increase in other goods sales was reflected in the relative significance of total retail sales. In Cromwell and East Hampton, shifting of emphasis occurred which did not affect the relative standing of total sales. In Middletown, a slight relative increase in all categories occurred, underlining its importance as the retail center of the

CHART 26

RETAIL SALES BY TOWN, 1954, 1958 AND 1963

	1954				1958				1963			
	TOTAL	CONV.	SHOP	OTHER	TOTAL	CONV.	SHOP	OTHER	TOTAL	CONV.	SHOP	OTHER
MIDSTATE	$60.3	$26.8	$10.5	$23.0	$78.7	$37.5	$10.4	$30.8	$90.5	$38.3	$11.5	$40.7
Cromwell	2.5	.8	.1	1.6	4.0	2.5	.1	1.4	4.5	2.4	.2	1.9
Durham	.9	.5	.1	.3	1.3	.6	.1	.6	1.4	.7	.1	.6
East Hampton	3.1	2.0	.2	.9	3.8	2.1	.3	1.4	4.6	2.2	.2	2.2
Haddam	1.3	.6	.2	.4	1.5	.7	.3	.5	2.2	.9	.2	1.1
Middlefield	1.6	1.4	.1	.1	1.7	1.3	.1	.3	2.2	1.6	.1	.5
Middletown	45.2	18.4	9.3	17.5	57.5	24.5	8.8	24.2	65.3	26.6	10.9	27.8
Portland	5.7	2.9	.5	2.3	8.9	5.8	.6	2.5	10.3	4.0	.5	5.8

Dollars in millions
Conv= Convenience Goods Shop= Shopping Goods

Source: Connecticut Tax Department

CHART 27

INDEX OF PER CAPITA RETAIL SALES BY TOWN, 1954, 1958 AND 1963

	1954				1958				1963			
	TOTAL	CONV.	SHOP.	OTHER	TOTAL	CONV.	SHOP	OTHER	TOTAL	CONV.	SHOP	OTHER
Cromwell	49	35	11	77	47	62	9	43	48	60	17	44
Durham	43	53	27	37	36	35	21	42	31	36	17	29
East Hampton	60	98	23	47	56	64	34	53	58	66	20	62
Haddam	42	44	37	34	35	34	53	30	43	42	31	58
Middlefield	62	109	23	10	47	70	20	20	45	77	16	23
Middletown	127	117	151	125	136	122	157	146	136	131	179	129
Portland	86	98	43	91	95	130	49	70	95	87	36	119

Conv.= Convenience Goods Shop= Shopping Goods

Index: per capita sales for the whole of Midstate = 100.

Source: Derived from Chart 23 and Connecticut Health Department population estimates

region.

Before considering the available data from the Census of Business, it is worthy to note that the Connecticut Tax Department data on the number of retail establishments reporting for sales tax purposes show a decline in the region from 1,180 in 1954 to 1,175 in 1963. Heaviest losses of reporting establishments occurred in Middletown (52), but there were also losses in East Hampton (7) and Portland (4). Gains in the number of reporting retail establishments in the other towns were: Cromwell +21, Durham +12, Haddam +10, and Middlefield +15. As to type of establishment, the net change in the region was as follows.

Food Group	-29
Apparel Group	- 7
General Merchandise	- 5
Automotive Group	+18
Furniture Group	+17
Lumber Group	+10
Chain Store Group	-18
Miscellaneous Group	- 1

Most of the losses by group indicated above, occurred in Middletown. In fact, there was also a heavy loss of reporting establishments in the Miscellaneous Group in Middletown, offset by gains in this group in Durham and Middlefield. The major gains in the Automotive Group occurred in Haddam and Middletown, those in the Furniture Group in Cromwell, Durham and Haddam and those in the Lumber Group in Durham and Middletown. The expansion of the Furniture Group in the surrounding towns may point to the establishment of outlying appliance discount houses. The consolidation in the Food and Chain Store Groups appears to reflect the trend toward larger units such as "supermarkets," at the expense of neighborhood grocery stores.

The following chart shows the post-war trends in Trade and the Selected Services in Middletown as reported by the U.S. Bureau of the Census. It is again recalled that these data are not comparable with that reported above from the Connecticut Tax Department.

Chart 28: Trade and Selected Services, Middletown, 1948,1954,1958 and 1963

	Establishments	Employment (1)	Payrolls (1)	Sales
1948				
Total(incomplete)	489	2,678	$4,667	$36,289
Retail Trade	377	2,264	4,114	34,360
Wholesale Trade	n.a.	n.a.	n.a.	n.a.
Selected Services (2)	112	414	553	1,929
1954				
Total	493	2,758	$6,239	$50,047
Retail Trade	341	2,078	4,723	39,653
Wholesale Trade	28	195	794	7,987
Selected Services	124	485	722	2,407
1958				
Total	553	2,980	$7,543	$63,946
Retail Trade	367	2,244	5,587	47,485
Wholesale Trade	30	221	993	13,125
Selected Services	156	515	963	3,336
1963				
Total	542	2,967	$9,073	$74,188
Retail Trade	350	2,085	6,319	53,519
Wholesale Trade	40	354	1,660	16,535
Selected Services	152	528	1,094	4,134

Dollars in Thousands.

1. Employment includes salaried employees and proprietors, while Payrolls does not include withdrawals by proprietors.
2. Excludes one hotel for which data not reported because of disclosure.

Source: Census of Business, 1948,1954,1958,1963.

A detailed analysis of retail sales in Middletown for 1948, 1954, and 1958 is available in the Middletown, Connecticut, Land Utilization and Marketability Study prepared by Raymond and May Associates for the Redevelopment Agency for the City of Middletown. For this present study, the major interest in these Census data lies in the employment and payroll trends revealed. It will be noted that employment in retail trade has declined since 1958 and is now at about the same level as prevailed in 1954. The decline in Middletown's retail establishments noted from the Tax Department data is confirmed by the Census data. On the other

hand, there has been a moderate expansion in both the number of establishments and employment in the town's wholesale trade and selected services. In part, the apparent expansion in selected services is due to increased coverage of service establishments not included in earlier Censuses. The following chart reveals the trends in average pay per employee (excluding proprietors).

Chart 29: Average Pay Per Employee in Trade and Selected Services, Middletown, 1948 to 1963

	Retail Trade	Wholesale Trade	Selected Services
1948	$2,123	n.a.	$1,843
1954	2,643	4,339	1,984
1958	2,940	4,700	2,623
1963	3,510	4,810	2,800

Source: Derived from Census of Business.

The 1948-1963 increase in average retail wages in Middletown amounted to 67%, compared to a 76% increase in per capita income in the state during that period. Average retail wages in Middletown registered a 19% increase during the 1958-1963 period, compared to only a 16% increase in the state's per capita income. Although this represents a considerable improvement, the 1963 average retail wage represented only 65% of the average wage paid in manufacturing. While average wages in wholesale trade have been considerably higher than in retail trade, they increased only 11% in the 1954-1963 period, compared to a 39% increase in the state's per capita income during the period. Average wages in the selected services, the lowest of the three, rose only 52% in the 1948-1963 period, and in 1963, were only 52% of average manufacturing wages in Middletown.

The following chart compares trade and the selected services in Middletown with that in three of the surrounding towns in 1963, the first year these greater details have been published.

Chart 30: Aspects of Trade and Selected Services in Selected Towns, 1963.

	Cromwell	East Hampton	Middletown	Portland
Retail Trade				
Establishments	41	59	350	80
Employment	148	186	2,085	316
Payrolls(000)	$299	$440	$6,319	$904
Average Wages	$2,821	$3,310	$3,510	$3,690
Sales(000)	$4,496	$5,312	$53,519	$9,277
Sales per capita	$633	$900	$1,495	1,146
Wholesale Trade				
Establishments	5	3	40	14
Employment	d.	7	354	196
Payrolls(000)	d.	$9	$1,660	$1,245
Average Wages	d.	$1,800	$4,810	$6,484
Sales(000)	d.	$132	$16,533	$20,969
Sales per capita	d.	$22	$461	$2,590
Selected Services				
Establishments	13	32	152	43
Employment	44	54	528	69
Payrolls(000)	$122	$113	$1,094	$93
Average Wages	$3,389	$5,650	$2,800	$3,323
Receipts(000)	$447	$671	$4,134	$561
Receipts per capita	$63	$114	$116	$70

d.= deleted to avoid disclosure
Source: Census of Business, 1963

The retail sales per capita figures above clearly illustrate Middletown's position as the retail center of the region. It may be noted that this ratio derived from Census data is slightly higher than the state ratio from the same source ($1,449). Retail average wages were higher in 1963 in Portland while wholesale trade there, both in terms of average wages and sales per capita, were significantly higher than elsewhere in the region, due principally to the presence of bulk petroleum depots. Selected per capita services receipts in East Hampton were practically the same as in Middletown, while average wages in Middletown were the lowest in the region. In part, this is due to the fact that employment data are reported in the Census as of November 15, not as an annual average. It is possible that wider seasonal fluctuations in selected services employment in the surrounding towns would result in somewhat lower average wages than shown, if annual average employment was used rather than employment in

a month at the low in seasonal fluctuation.

Assuming the per capita sales ratio for the state is the true index of retail demands by residents of the towns for which details are reported in the Census of Business, the following chart indicates the extent to which these demands are being met by retail trade in these towns. This per capita measure is a less serviceable tool in assessing wholesale trade, which also services such "export" activities as manufacturing. Details on selected services receipts were not reported in the Census.

Chart 31: Per Capita Retail Sales, Connecticut, Selected Towns, 1963.

	Conn.	Cromwell	E.Hampton	Mdltwn	Portland
Total Retail	$1,449	$633	$900	$1,495	$1,146
Convenience Goods	612	n.a.	n.a.	575	697
Food Stores	370	253	271	357	489
Eating & Drinking	102	46	51	84	56
Drug Stores	49	d.	d.	44	44
Gasoline Stations	91	59	94	90	108
Shopping Goods	327	n.a.	n.a.	421	n.a.
Genl. Merchandise	164	d.	d.	216	0
Apparel	94	d.	d.	133	d.
Furniture	69	d.	d.	72	d.
Other Goods	511	n.a.	n.a.	499	n.a.
Auto Dealers	249	133	208	252	260
Lumber, etc.	70	d.	32	71	85
Other Retail	160	48	156	161	46
Non-store Retail	32	30	d.	15	d.

n.a. not available d=deleted to prevent disclosure.
Source: Derived from Census of Business and Connecticut Health Department population estimates.

Among convenience goods, only food store and gasoline station per capita sales in Portland exceed the state ratio. Per capita sales for all three types of shopping establishments in Middletown exceed the state ratio. Among other goods, per capita sales for auto dealers and lumber, building materials and hardware dealers in Portland only, significantly exceed the state ratio. While the high shopping goods ratios for Middletown confirm its position as the retail center of the region, given its relatively large population base, it cannot be inferred from the high ratios for Portland that it

is a regional center for convenience and other goods. Supermarket food stores and relatively large retail automotive and building material businesses in Portland apparently are attracting business from other surrounding towns, but given its population base, the per capita sales ratio would have to be double or more to indicate a "regional center" in these activities.

These per capita ratios, a better gauge than those derived from Tax Department data because of a more uniform classification system, indicate that for convenience goods, which are generally purchased near the home, the region's retail establishments are reasonably close to the state standard. Wherever the ratio is low in a town, i.e. for food stores in Cromwell, special locational factors appear to be at work. For shopping and other goods for which consumers are willing to travel farther, it appears that even though the ratios indicate that Middletown acts as a regional center, much of this type of business is conducted outside the region. From the state ratio for convenience goods, it is estimated that the region's residents purchased over $20 million of such goods in 1963, but only $15 million were accounted for by sales in Middletown, and it is not likely that the sales in the half dozen convenience goods stores of the surrounding towns, for which data were not reported, exceeded $1 million. Thus, about one quarter of potential convenience goods purchases by the region's residents are being made outside the region. This, it will be recalled, is the same proportion of the region's resident labor force which commutes to jobs outside the region.

PERSONAL INCOME

As an indication of post-war trends in personal income in the region, the median family income in Middlesex County rose from being 4.5% below the state median in 1949 to 3.0% below that in 1959, when the median family income in Midstate was only 1.8% below the state median. The increase in the county amounted to 61.3% in terms of constant dollars, compared to a 58.8% increase for the state. Presumably the increase in Midstate was greater than that in the county and could be explained by the increasing importance of commuting to jobs outside the region.

The following chart shows the median family income in the towns of the region and the extent to which they were above or below the state median. For this purpose, an index is used in which 100.0 equals the state median family income.

Chart 32: Median Family Income by Town, 1959.

	Amount	Index
Midstate	$6,763	98.2
Cromwell	7,168	104.1
Durham	7,007	101.7
East Hampton	6,568	95.4
Haddam	6,801	98.7
Middlefield	6,736	97.8
Middletown	6,600	95.8
Portland	7,080	102.8

Source: 1960 Census of Population

From the 1960 Census data on the number of families with an income within given class intervals, it is possible to estimate total income of families in Midstate in 1959, amounting to $116.5 million. Such income in Middletown amounted to $58.6 million, compared to $68.5 million reported as the town's "effective buying income" (when adjusted for an overestimate in the town's population) by Sales Management. Effective buying income amounts to total income of families plus total income of unrelated individuals (for which no details are available) minus taxes paid out of personal income. Using Sales Management's estimate of effective buying income per capita for Middletown and the relationship between that town's median family income and that for each of the surrounding towns, it is possible to develop the following estimates of

effective buying income in the region, compared to the estimates of family income only, derived from the Census data.

Chart 33: Family Income and Effective Buying Income, 1959.

	Amount in Millions		Percent of Region	
	Family Income	Effective Buying Income	Family Income	Effective Buying Income
Midstate	$116.5	$131.7	100.0%	100.0%
Cromwell	13.4	15.2	11.6	11.5
Durham	5.7	6.7	4.9	5.1
East Hampton	10.7	10.8	9.2	8.2
Haddam	7.4	7.3	6.3	5.6
Middlefield	6.7	6.6	5.7	5.0
Middletown	58.6	68.5	50.3	52.1
Portland	14.0	16.6	12.0	12.6

Totals may not add due to rounding.
Source: Derived from U.S. Census of Population, 1960 and Sales Management Annual Survey of Buying Power, 1960.

Effective buying income, which excludes personal taxes, appears to have been higher than total family income in all towns except Haddam and Middlefield, due to the inclusion of income earned by unrelated individuals. In Haddam and Middlefield, it appears that the amount of income going to taxes was larger than total income earned by unrelated individuals. However, this may be due to an element of error in the estimates rather than a reflection of facts. Nevertheless, these estimates are the best possible under the circumstances and permit the development of a limited time series portraying recent trends in the region, shown in Chart 34 and Chart 35. It may be noted here that according to Sales Management, effective buying income in Middletown rose from $33.5 million in 1945 to $85.0 million in 1963. Converted to constant dollars, i.e., removing the effect of price increases, this amounted to an increase of 49% in the town's real effective buying income. Converting the data in Chart 33 to constant dollars indicates that while real effective buying income in Middletown increased 26% between 1958 and 1963, in the region it increased 32% and in the surrounding towns, as follows;

CHART 34 EFFECTIVE BUYING INCOME, 1958 TO 1963

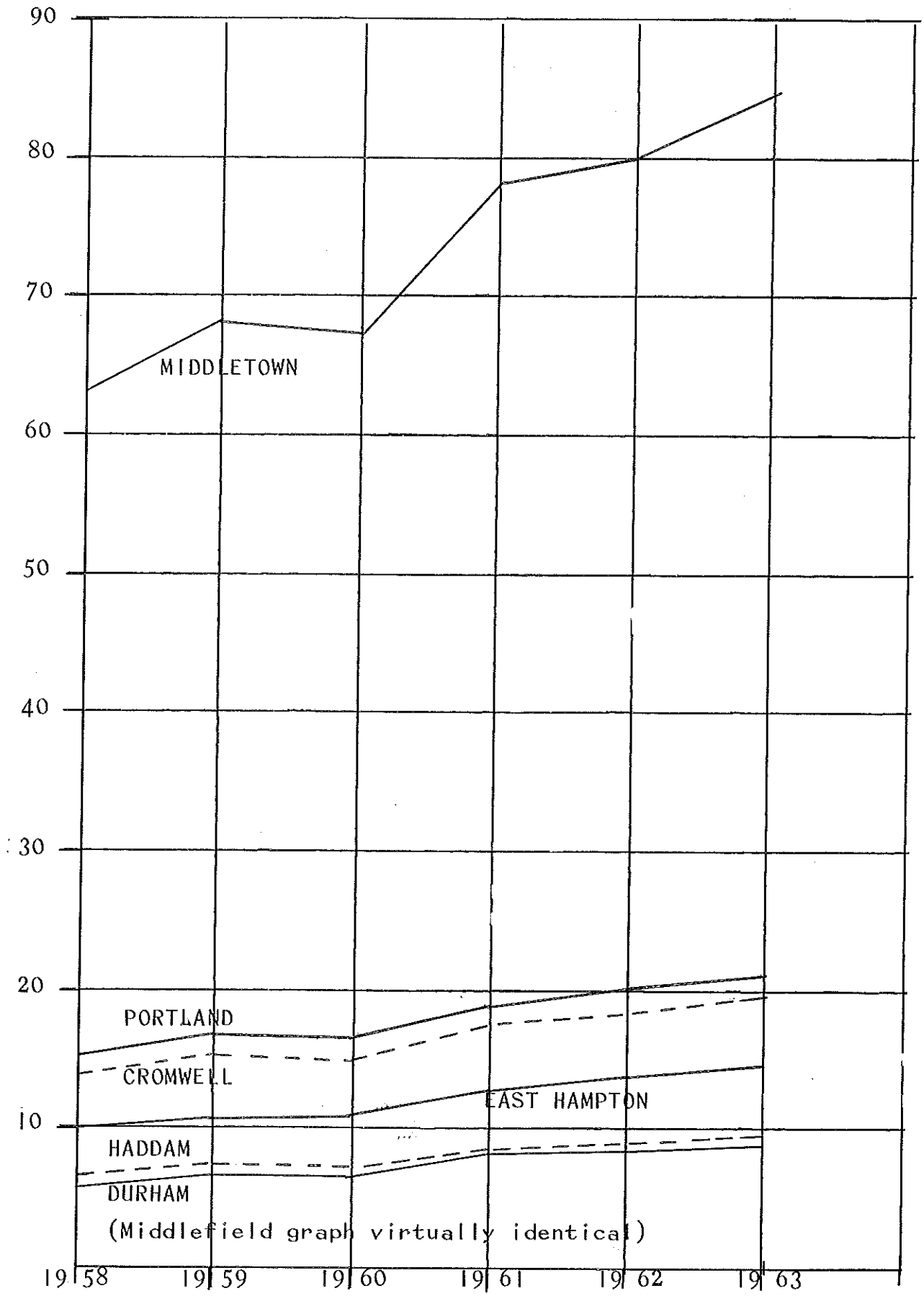
	1958	1959	1960	1961	1962	1963
MIDSTATE	$120.4	$131.7	$136.1	$151.8	$158.1	$168.0
Cromwell	13.8	15.2	14.8	17.5	18.2	19.7
Durham	5.8	6.7	6.6	8.1	8.4	8.9
East Hampton	10.0	10.8	10.9	12.8	13.8	14.6
Haddam	6.6	7.3	7.1	8.5	8.9	9.5
Middlefield	5.9	6.6	6.7	7.8	8.6	9.2
Middletown	63.2	68.5	67.6	78.2	80.3	85.0
Portland	15.0	16.6	16.3	18.9	20.1	21.1

Dollars in millions

Totals may not add due to rounding.

Source: Derived from Sales Management

CHART 35 EFFECTIVE BUYING INCOME, BY TOWN, 1958-1963



Cromwell	35%
Durham	45%
East Hampton	37%
Haddam	35%
Middlefield	46%
Portland	34%

The 1963 estimates of effective buying income indicate that Middletown now accounts for barely half the region's, and Portland's share is the same as that estimated in Chart 33 above for 1959, while all the other towns registered a slight gain in their share of the regional total. Since these estimates of total effective buying income are based on the assumption that the 1959 relationships between median family income and per capita effective buying income in the surrounding towns and that in Middletown have remained constant, the increasing share in the regional total for the surrounding towns, except Portland, is due to greater relative population increases. If the per capita figures in the surrounding towns have also increased, their share of total effective buying income could well be more than half. The conclusion is inescapable that the high proportion of the labor force in these towns which commutes to jobs outside the region is responsible for their relatively greater gains in income. The amount of personal income resulting from this out-commuting may be as high as 50% of the town total in several of the surrounding towns such as Cromwell and Durham. For the region as a whole, however, about three quarters of total income is earned at jobs within the region. Based on the relationship between effective buying income and total personal income, it is estimated the latter was $140.3 million in 1958 for the region as a whole. By 1963, total personal income had risen to about $195.0 million (both estimates in current dollars).

Income From Manufacturing Industries.

Information on the income-producing ability of manufacturing facilities in Midstate is much less plentiful than that on employment and the physical plant. However, by piecing together income data from several sources, a general description of post-war trends is possible. The term, "value added by manufacturing," is generally thought of as a measure of the output of manufacturing, but since output results in income to the producers of that output, value added can also be thought of as a measure of the total income resulting from manufacturing activity.

As reported in the various Censuses of Manufactures by the U.S. Bureau of the Census, the two major components of value added by manufacturing are payrolls, the income earned by manufacturing employees in the form of wages and salaries, and proprietary income, the income earned by land and building (or rent), by equipment (or depreciation) and by capital investment, whether in the form of interest on bonds, dividends on stocks or withdrawals by partners or sole proprietors. Out of the latter are paid various business taxes, such as property taxes, corporate and business income taxes and franchise taxes. As personal income taxes paid by individuals constitute a part of personal income, so these various business taxes constitute a part of proprietary income, although the average businessman is not inclined to carry them on his profit and loss statement as income, or if so, only as "income before taxes." This proprietary income from manufacturing does include a relatively small amount of expenses such as the purchase of advertising services which more properly should be deducted with the cost of goods and services purchased from total sales in arriving at the measure of value added.

Thus, value added and proprietary income data reported in the Census of Manufactures are slightly overstated but not enough to seriously distort their usefulness as measures of income from manufacturing. The purpose of this exposition of the income aspects of the term, "value added by manufacturing," however, is rather to dispel and erroneous impression which has evolved, particularly when the discussion is in terms of "value added per employee" and comparisons are being made between one area and another. The use of the term, "value" in this situation has come to signify to many that in an area with a lower ratio of value added per employee than in another area, the average employee in the first area is not adding as much value per dollar paid, as the average employee in the second area. But"value added" is not intended as a measure of this type of value added, and would be much more descriptive of what it is intended to measure if it were termed "total income earned by manufacturing." Also, since this total income results not only from the inputs by manufacturing employees but also from those arising out of the application of a physical plant, capital and proprietary or managerial skills, it is not meaningful to attempt to measure the productivity of manufacturing employees by the "value added" yard-stick. In the following description of post-war trends in manufacturing income in Midstate, the term "value added," will be used in conformity with general usage,

but its true meaning as a measure of total income from manufacturing, as well as total output, must be kept in mind.

In 1958, the most recent year for which value added figures are available for the region, value added or total income from manufacturing in the region amounted to $58.1 million, composed of $30.2 million of income to individuals in the form of wages and salaries and $27.9 million of proprietary income. This total income represented 41.4% of estimated personal income ($140.3 million) while the income to individuals on manufacturing payrolls amounted to 21.5% of personal income in Midstate. The total income represented by value added is somewhat more inclusive than what is included in personal income, while payrolls exclude several types of income included in personal income. In spite of the fact that these measures of income are not strictly comparable, they do emphasize the importance of manufacturing activity in sustaining economic activity in Midstate. It may be noted, however, that this importance was not as great as in the state where manufacturing payrolls alone represented 30.2% of total personal income in 1958.

The value added by manufacturing in 1958 represented an increase of 89% (in current dollars) over that reported for the region in 1947, contrasted to a 67% increase for the state in this period. Midstate payrolls increased 41% during the period, compared to a 63% increase in the state, while proprietary income in the region increased 197%, contrasted to a 75% increase in the state. It should be recalled that both the region and the state suffered declines in manufacturing employment during this period and the regionl decline was much heavier. Thus, the payroll increase was actually much better for the individual worker, amounting to an 80% rise in average pay for manufacturing employees in the region, compared to a 71% increase in the state. Although average wages and salaries in the region in 1958 ($4,573) were still about 7% below the state average, they evidently are slowly catching up with those in the state. The sharp increase in proprietary income from manufacturing resulted in a marked rise from accounting for 31% of value added in 1947 to 48% in 1958, while in the state, the proportion rose only two percentage points to 42%.

The details from the 1963 Census of Manufactures for Connecticut have not yet been published. The only data available indicating recent trends are those from the Connecticut Labor Department which relate to

payrolls of manufacturing employment covered by the Connecticut Unemployment Compensation Act. In 1959, these covered payrolls represented 91% of the payrolls reported in the Census of Manufactures for the region. These covered payrolls rose from $19.9 million in 1950, to $27.5 million in 1958, $30,5 million in 1959, and $32.3 million in 1963. The 6% increase in covered manufacturing payrolls since 1959, has barely kept abreast of the rise in the cost of living as indicated by the Consumers Price Index. Average pay per covered employee had increased about 11% by 1963, due to smaller total number of employees sharing in total covered manufacturing payrolls. The leveling off of these payrolls in recent years is a further indication of the trend in the region's manufacturing.

The following charts indicate the post-war trends in income earned by individuals engaged in manufacturing in the towns of the region, to the extent revealed by trends in covered manufacturing employment.

Although not total manufacturing employment and payrolls, these data on covered employment are reasonably accurate indicators of the relative magnitudes among the towns. Chart 36 reveals that while the overriding importance of Middletown as the major source of income from manufacturing has remained relatively unchanged, there has been an increasing importance for Portland and a corresponding decrease in importance for East Hampton. Durham, Haddam and Middlefield have also experienced a slight increase in their relative importance in the region's manufacturing income patterns.

Particularly significant is the fact revealed by Chart 37 that average pay in manufacturing in the several towns of the region is tending to converge. The great extreme of 1950 when average pay in Middletown was 70% greater than the region average, but in Cromwell, was 65% lower than the region average, had been reduced to a range of only 13% greater for Portland to 19% lower for Middlefield in 1963. The greater mobility of workers is undoubtedly a major reason for reduction in the differences in average manufacturing pay among the towns of the region. This is but one more justification of the approach to the problems of the area on a regional basis rather than solely by unrelated town efforts.

CHART 36 COVERED MANUFACTURING PAYROLLS, BY TOWN, 1950, 1958 AND 1963

	Amount in Thousands			Percent of Total		
	1950	1958	1963	1950	1958	1963
MIDSTATE	$19,936	$27,465	$32,324	100.0	100.0	100.0
Cromwell	253	176	404	1.2	.6	1.2
Durham	395	743	1,191	2.0	2.7	3.7
East Hampton	1,797	2,596	1,012	9.0	9.4	3.1
Haddam	337	633	959	1.7	2.3	3.0
Middlefield	595	713	1,034	3.0	2.6	3.2
Middletown	13,742	19,117	22,458	68.9	69.6	69.5
Portland	2,833	3,487	5,266	14.2	12.7	16.3

Source: Connecticut Labor Department

CHART 37 AVERAGE PAY OF COVERED MANUFACTURING EMPLOYEES BY TOWN 1950, 1958 AND 1963

	Amount			Index: Midstate=100		
	1950	1958	1963	1950	1958	1963
MIDSTATE	$3,125	$4,399	$5,085	100	100	100
Cromwell	1,089	4,512	4,870	35	103	96
Durham	2,442	4,040	5,112	78	92	101
East Hampton	2,803	3,846	4,750	90	87	93
Haddam	2,427	3,772	5,513	78	86	108
Middlefield	3,492	3,732	4,134	112	85	81
Middletown	5,306	4,463	4,987	170	102	98
Portland	4,414	4,953	5,768	141	113	113

Source: Derived from Chart 36 and Connecticut Labor Department data on covered employment.

Income From Service Industries

Of the estimated $140.3 million personal income of Midstate residents in 1958, it appears that about $60.0 million or 43%, was due to employment in the services industries both within the region and at jobs elsewhere. This estimate of personal income from services employment is based on the state ratio of such income, adjusted to reflect the higher proportion of services industries employment in total employment of Midstate residents. Total wages of the covered employed in the region's services industries amounted to $28.1 million in 1958. Most of the balance of $31.2 million was due to service jobs outside the region but about another $12.0 million appears to have originated in non-covered services employment within the region. Thus, about 28% of total personal income in the region in 1958 was due to services industries employment in Midstate, while 15% was due to such employment elsewhere.

Within the region, the principal source of income from services industries employment has been highly concentrated in Middletown, and even more so, since the establishment of CANEL there. This is shown in the following chart on the distribution of covered services payrolls within the region.

CHART 38. COVERED SERVICES PAYROLLS, BY TOWN, 1950, 1958 AND 1963

	Amount in Thousands			Percent of Total		
	1950	1958	1963	1950	1958	1963
MIDSTATE	$10,802	$28,100	$37,379	100.0%	100.0%	100.0%
Cromwell	973	676	1,085	9.0	2.4	2.9
Durham	44	273	465	.4	1.0	1.2
East Hampton	385	1,058	1,439	3.6	3.8	3.8
Haddam	32	154	310	.3	.6	.8
Middlefield	180	326	295	1.7	1.2	.8
Middletown	8,171	23,029	30,498	75.6	82.0	81.6
Portland	1,016	2,583	3,287	9.4	9.2	8.8

Source: Connecticut Labor Department.

It may be noted that the increased importance of Middletown in the region's covered services employment payrolls was offset by declining importance in Cromwell, Middlefield and Portland only. Moderate relative gains were registered in Durham, East Hampton and Haddam, in terms of total covered services payrolls.

The following chart, however, reveals that in terms of average wages per covered services employee, although all towns but Cromwell witnessed an absolute increase, only Haddam among the surrounding towns experienced a relative improvement. A limited convergence of average wages in services among the towns is evident in that the index range of 92% above to 48% below the regional average in 1950, had been reduced to one of 5% above and 32% below in 1963.

CHART 39 AVERAGE PAY OF COVERED SERVICES EMPLOYEES, BY TOWN 1950, 1958 AND 1963

	Amount			Index: Midstate = 100		
	1950	1958	1963	1950	1958	1963
MIDSTATE	$2,590	$4,389	$5,103	100	100	100
Cromwell	4,963	5,846	3,973	192	133	78
Durham	1,909	2,705	3,779	74	62	74
East Hampton	2,166	2,400	3,468	84	55	68
Haddam	1,345	2,201	3,875	52	50	76
Middlefield	1,873	3,329	3,241	72	76	64
Middletown	2,533	4,624	5,361	98	105	105
Portland	2,911	4,249	5,027	112	97	99

Source: Derived from Chart 38 and Connecticut Labor Department data on Covered employment.

The average wage figures for 1958 and 1963, for the region and Middletown are significantly overstated because of the inclusion of CANEL in covered services industries employment. The average covered services wages in the state in 1958 were only $4,225 and in 1963, $4,857. The latter is almost $500 less than the corresponding Middletown average shown in the Chart above. If CANEL were excluded from these figures, the convergence in average covered services wages in the surrounding towns probably would be much moore marked than the above index series indicates.

It is fruitful to compare average wages for covered services employment with those for covered manufacturing employment. This is done by means of a ratio indicating how many times average manufacturing wages exceed average services wages. It may be noted that in the nation, in 1929, this ratio was quite high, i.e., manufacturing wages per worker were about 1.5 times services wages per worker, but in the post-war period, the national ratio has fallen to around 1.2, revealing that average services wages in the nation are catching up with average manufacturing wages.

In Connecticut, however, the ratio rose from 1.6 in 1929 to 1.20 in 1953 and was 1.28 in 1963. From being relatively close to average manufacturing wages, average services wages in the state have fallen behind during the post-war period.

The following chart reveals that the region's experience has been more like that of the nation than of the state during the post-war period. Among the towns, the trends in this intersectoral ratio has been somewhat erratic but in general, conform to the national pattern.

CHART 40 RATIO OF AVERAGE COVERED MANUFACTURING WAGE TO AVERAGE COVERED SERVICES WAGE, BY TOWN, 1950, 1958 AND 1963.

	1950	1958	1963
CONNECTICUT	1.16	1.22	1.28
MIDSTATE	1.21	1.00	.99
Cromwell	.21	.77	1.22
Durham	1.28	1.49	1.35
East Hampton	1.29	1.60	1.37
Haddam	1.80	1.71	1.42
Middlefield	1.86	1.12	1.28
Middletown	2.10	.96	.93
Portland	1.52	1.12	1.15

Source: Derived from Charts 37 and 39, and Connecticut Labor Department data for the state.

It is evident that average services wages exceeded average manufacturing wages in the region and Middletown in 1963 due to the inclusion of CANEL among covered services industries, and its presence is also noticeable in the 1958 ratios. The extreme situation in Cromwell was due to one or more high-wage manufacturing firm which has closed operations. In Durham and East Hampton, services wages relative to manufacturing wages have lost ground compared to 1950, but have improved relatively since 1958. It is noteworthy, that in addition to Middletown, the intersectoral wage relationship is better than or equal to that in the state, in the towns of Cromwell, Middlefield and Portland.

It may be concluded that in spite of the deficiency in meeting the region's services demands indicated by employment data, existing services activities provide a reasonably favorable means of earning a livelihood, with a promise of continuing to do so. This promise may prove even more fruitful if the region's services industries are able to service to a greater extent the demands of its residents.