

Economic and Social Impact of the Connecticut Turnpike

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● ALMOST EVERY variety of social form and social process directly or indirectly feels the impact of highway development. The colonial toll roads made of planks helped to shape early America just as modern super highways cast in concrete are influencing contemporary America. A highway program of the scale envisioned in the United States Highway Act of 1956 will undoubtedly initiate many changes in the economy. Any attempt to measure the variations or modifications in the society that stem from highway development requires an understanding of what is meant by "change." Five characteristics of change make it a most nebulous and evanescent concept.

First, change in itself is amoral. Its consequences may be considered good or bad, partly both or neither. A particular bypass, for example, may result in changes that are beneficial, or changes that are harmful. The same effect could be considered either favorable or detrimental depending on who is making the observation or when the observation is made. Change *per se* is neutral and the researcher who forgets this or chooses to ignore it violates one of the essential elements of the concept.

Second, change has both immediate and future relevance. Some changes are temporary, transitory and impermanent. Others may be of lasting importance. A new turnpike that temporarily disrupts a number of local services may in the long run add to the permanence of the services that are available. Land values in one locality may begin to shrink when a new highway creates place utility elsewhere and then eventually may rise when the full effects of the road are realized.

Third, change may take place gradually or it may occur quickly. Lightning fast changes may be more impressive than transformations that develop more slowly, even though the latter have far greater social import. For example, in certain locations the highway may bring a rapid shift in land use, and land values in such places may rise almost immediately to astronomical levels. A gradual appreciation of land values throughout a much larger area may remain unnoticed even if the latter is more significant by far to the region as a whole.

Fourth, change may be direct or it may be diffuse. In some instances the succession of events occurs so repeatedly and so closely that the process of change is readily observed. More often, however, the process of change is blurred by the impact of a large number of events occurring simultaneously or so close together in sequence that their individual effects are indistinguishable. In general, change is pluralistic in origin and multidirectional in destination. If a new marketing pattern follows the opening of a highway it may be partly the result of the highway and partly the result of many other economic and social factors.

Finally, in an industrial society such as ours most social change receives its impetus from technological advances. Material changes usually precede non-material changes. Under some circumstances this "cultural lag," as W. F. Ogburn (1) has named it, will lead to maladjustment and disorganization. Thus, a new highway may expose the rural population to the materialistic culture of the city. Changes in their material way of living can result in social problems if changes in their values and attitudes do not keep pace.

Previous Research

Despite the limitations inherent in the meaning of change, to understand what has happened and to forecast what will happen require the use of change as a research concept. Social scientists, particularly rural sociologists and land economists, have recognized highways as a powerful force for social change in the past. They saw how road programs made new resources available and thus raised the level of living of the population. They saw how highways extended community boundaries, broadened trading centers and caused villages to appear and disappear like magic. School and church

consolidations were hastened by highway development. Labor markets were widened as good roads and good automobiles made it possible for persons to live in one area and work in another. Suburbanization was another by-product of highway improvement. In Connecticut, for example, the growth of suburbs in the 1930's followed the "Get Connecticut Out of the Mud" road program of the 1920's. Roadways, these social scientists found, are the parents as well as the children of social change.

Most research dealing with the social and economic effects of highways has been of necessity ex post facto. Highway programs heretofore were often relatively unplanned on a nationwide basis, being authorized sporadically by vast numbers of local and state highway departments in response to a multitude of various pressures. Social scientists in many instances lacked the imagination or the funds to engage in speculative research of this type. Under such conditions, change was more easily observed after the fact.

The current United States highway program furnishes an opportunity to observe change in the making. Social legislation permits social research. Since information regarding various parts of the highway system will be known in advance, sounding lines concerning social and economic phenomena in these areas can be lowered. After the highway has been completed, any changes that begin to unfold can be measured against the original soundings. The United States Highway Act of 1956 makes possible the method of projected experimental design (2).

The Connecticut Turnpike

This method is the one being used in determining the impact of the Connecticut Turnpike in eastern Connecticut. The Connecticut Turnpike extends from Greenwich to Killingly and serves the area between New York City and Boston. It is a limited access highway with provision for 90 interchanges. It will have eight toll stations. Much of the traffic along this 129 mile expressway will be local in nature although considerable through traffic is also expected.

The Storrs Agricultural Experiment Station has undertaken a survey of the impact of the Connecticut Turnpike upon two counties in eastern Connecticut. For many years eastern Connecticut has been one of the less favored sections of the state with respect to both manufacturing and agricultural activities. It has been the home of a gradually declining textile industry and there has been a tradition of part-time farming. The turnpike, it is believed, will accelerate the trend toward a more diversified industry and will greatly strengthen manufacturing communities and summer resort towns in the area.

This project is a cooperative one including the University of Connecticut, the Connecticut State Highway Department and the United States Bureau of Public Roads. It was undertaken early in 1956, almost two years before the opening of the turnpike on January 2, 1958. According to present plans the social and economic effects of the turnpike will be charted annually for a period of at least five years. Benchmarks of data have already been established covering a number of years before the highway was opened for traffic.

Some Methodological Considerations

Because, as has been pointed out, the study of change involves so much more than simple "before and after" comparisons, a number of variables will be analyzed at the same time. This procedure will yield a better understanding of their interdependence and at the same time permit a closer scrutiny of the exact time sequence of events. "Before and after" analysis becomes more meaningful when the individual elements in the situation can be traced longitudinally and related to other elements, both before and after the introduction of the independent event, (in this case before and after the opening of the Connecticut Turnpike). For example, an analysis of changes that take place in the volume of retail sales could be made preceding and subsequent to the opening of the turnpike. This rather static approach would have limited value in assessing the effects of the turnpike upon retail sales. However, if this were combined with an analysis of new manufacturing plants and resulting population shifts the significant

relationship between the turnpike and retail sales would fall into its proper place.

Controlled comparisons of this type may be designed on an area basis as well as with a time dimension. If the effects of the turnpike are more pronounced in the area immediately adjacent to it and become less noticeable as the distance from the turnpike increases, an analysis of the changes that occur in areas at varying distances from the highway will provide useful comparisons. The influence of the turnpike may not follow this pattern and the relation between distance and effect may vary between one kind of influence and another. (For example, population growth may be greatest at a point somewhat removed from the turnpike.) These zonal gradients will then be useful in demonstrating the kind of relation that does apply, provided that the step by step development of the elements can be determined.

Five major areas have been designated for intensive analysis. These are: (1) the area immediately surrounding the interchanges (the most dramatic land use changes frequently occur here), (2) a five-mile strip on each side of the highway, (3) towns traversed by the turnpike, (4) towns not traversed by the turnpike but lying wholly or partly within the 5-mile strip, and (5) towns in the two counties lying wholly outside the strip. Other areas, especially those near new industrial sites, those where suburban real estate developments may occur and those along alternate routes may be added to the list. These areas of influence are not mutually exclusive and control groups have been set up for the various categories.

Property Values

A new highway, of course, can influence any or all aspects of an area's economy. A single event theoretically affects all parts of the society. In the analysis of the effects of the Connecticut Turnpike, six major areas of change will be considered. The first of these relates to changes that may occur in real property values.

Most changes in property value resulting from highway development mirror changes in land use. A record of land use is being maintained for the area surrounding each interchange. In addition, for each of the 36 towns in the two counties data are available on the number of new homes, new retail establishments, new factories and other items which will provide evidences of change in land use. The valuations placed on these properties by local assessors are being recorded and comparisons can be made each year. Even the prospect of a new highway stimulates real estate activity in the surrounding area as shifts in land use are made or contemplated. Between 1954 and 1956 the number of real estate transactions excluding the purchase of rights-of-way increased 18 percent in the towns traversed by the turnpike. During this same period the number of real estate brokers in this area increased 32 percent compared with an increase of 8 percent for the state as a whole.

Research has demonstrated that where an expressway effects changes in land use, the value of property usually rises. Sometimes the gains in property values are spectacular, especially at interchanges where motels, restaurants, filling stations and other businesses directly related to highway traffic compete for a limited number of economic sites. Although changes of this type will be recorded, another item of equal interest consists of changes that occur in the value of property held by the average home owner in the area. His individual gain or loss may not be large but, in the aggregate, changes in the value of this type of real estate may greatly exceed the more sensational shifts in property values that accrue to the few owners of property in favored locations. If the turnpike stimulates industrial activity and promotes an immigration of families, real estate values, in general, will rise. In the area under study, a 10 percent appreciation in this type of property would represent a \$40,000,000 increase in property values. Nearly one half of the value of all assessed property in the two counties consists of the value placed on dwellings. The demonstration of non-user benefits for such a large segment of property owners should be of particular interest to highway planners and highway sponsors.

Manufacturing Activity

A second kind of change concerns manufacturing activity. An expressway may

encourage the growth of manufacturing in the area it serves in a number of ways. Transportation costs and time may be lowered and translated directly into more efficient production. In eastern Connecticut over 90 percent of the manufacturing companies use trucks both for importing raw materials and for shipping out part or all of their finished products. The expressway also widens the labor market area. This is particularly important in eastern Connecticut where workers are accustomed to commuting fairly long distances. Finally a new turnpike may set in motion a general feeling of growth and progress that may encourage companies that are settling where the climate of public opinion is optimistic.

In this survey seven time series related to the manufacturing industry have been established. These are (1) the number of plants, (2) the number of workers employed, (3) the trend toward diversified manufacturing, (4) the commuting patterns of the labor force, (5) the scale of manufacturing plants as measured by the number of workers each employs, (6) the seasonality of employment, and (7) the wages of employees.

A new highway may tend in three ways to reduce the number of workers who are adversely affected by seasonal employment. In the first place new companies attracted to the area may not have a seasonal lag. Second, if they have a slack season it may dovetail with the employment pattern of existing companies. Third, the presence of more employment opportunities and the commuting advantages afforded by the new highway may serve to provide a greater year around employment potential.

The Recreation Industry

The Connecticut Turnpike will make the facilities available for recreation in eastern Connecticut more accessible to such large centers of population as the metropolitan areas of New York and Boston. An attempt will be made to assess the effects of the turnpike on the tourist trade and on other parts of the recreation industry. Some of the 50 motels and cabin courts in the two counties may be relocated to tap this new source of revenue. Others may expand their existing accommodations or remain open for the entire year. A few new establishments are already under construction. The quality of the service may improve, particularly as the specialized service of the modern motel replaces the more general service provided by cabin courts. An analysis will be made of other businesses related to the tourist trade including filling stations, restaurants and gift shops.

In addition, there is a second kind of recreation business in eastern Connecticut which in the long run may be deeply affected by the Connecticut Turnpike. This business caters to persons and families who spend several days, a week or two, or even an entire season at a vacation spot in the area. The seashore resort communities with their camping facilities, summer cottages and hotels cater to a large population. The mountain and lake resort areas also attract summer vacationists. Summer boarding homes that began in eastern Connecticut as small farm house ventures are expanding into a business that is heavily capitalized.

If more families begin to see the possibility of vacationing in eastern Connecticut as the result of the turnpike, not only will the recreation business grow but the permanent population of the area will increase as well. There are two reasons why population growth accompanies an expanding summer recreation business. First, more people are needed to service a larger recreation industry and second, many summer visitors eventually become permanent residents. This is particularly true where the summer home is within commuting distance of employment opportunities and when it can be made into an attractive retirement home.

Retail Sales

Economic change in an area is perhaps best reflected by fluctuations in the number of retail stores and in their total sales. These two items not only constitute a measure of general prosperity but when broken down by type of establishment they have value in diagnosing which segments of the economy are growing. Thus, a disproportionate increase in the sale of building materials would suggest the construction of new homes and an increase in gasoline and restaurant sales would suggest the growth of the tourist business.

Data on retail stores and sales have been compiled annually beginning in 1954 for the area immediately surrounding each interchange, for the area within five miles of the turnpike and for each of the towns in the two counties. In the three year period between 1954 and 1956 retail sales increased 42 percent in the interchange areas, 15 percent in the five-mile area and 13 percent for all towns in the area. Changes in total retail sales will be computed annually and changes in sales for the various types of establishments will also be recorded. These include grocery, drug, gasoline, building materials, automobile, clothing and approximately 50 other kinds of retail businesses.

Community Services

The kind of community services that are available will influence industrial development and population growth in an area. At the same time population shifts and the growth of manufacturing plants will influence the community services that are offered. The Connecticut Turnpike may act as a catalytic agent in this situation, first, giving rise to new plants and new families in areas where community services are attractive and second, effecting changes in existing community services.

Several kinds of change in local government are being observed. The extent, quality and cost of services for police protection, public roads, fire protection, education and public health have been examined in each of the governmental units in the two counties. New functions of local governments also will be noted each year. These include among others, zoning and planning, the promotion of industrial development, and the sponsorship and control of recreation areas.

Closely allied to the services offered is the tax base that pays for these services. Assessments and mill rates may change if the Connecticut Turnpike substantially alters either the total taxable property in the town or creates changes in distribution of taxable property among its component parts, namely homes, commercial and manufacturing holdings, farms, and personal property, including automobiles.

Agriculture

A highway that consumes thousands of acres of farm land is certain to affect agriculture in the area. Its influence upon the farmers whose property falls in the right-of-way is harmful in some situations, beneficial in others. The farmer who finds himself with an uneconomic unit must either reorganize his business along different lines or seek a new location. As agriculture is undergoing some sweeping changes on its own at the present time, the highway may actually accelerate and smooth the way for changes that are inevitable. The sale of the right-of-way property by the sub-marginal producer may encourage him to dispose of holdings that he would eventually lose by a slower and more costly process. It may urge him to shift to another type of farming which in the long run he would have adopted in any event. It may enable some farmers to consolidate holdings and thus remain in operation.

Each of the farms that sold land for the Connecticut Turnpike is being analyzed to determine what changes, if any, were made in the operation of the farm business and whether or not these changes represented a loss or a gain to agriculture in the state.

The turnpike may influence agriculture in other ways. Although farmers may not be direct users of the highway, the local market for farm products may increase if population grows, if the seasonal recreation business prospers or if the tourist trade increases. Part-time farming, direct selling, and vertical integration will also be examined to see if the Connecticut Turnpike has changed the direction or scope of these developments.

The investigators believe that the six topics mentioned above, together with population shifts, represent the major areas in which change will occur. Undoubtedly the Connecticut Turnpike will have an impact on eastern Connecticut in ways that have not been considered in the present report. As these unforeseen changes occur they will be included in the analysis.

REFERENCES

1. Ogburn, W. F., "Social Change," New York: The Viking Press (1950).
2. Chapin, F. S., "Experimental Designs in Sociological Research," New York: Harper and Brothers (1955).