

MAINE STATE LEGISLATURE

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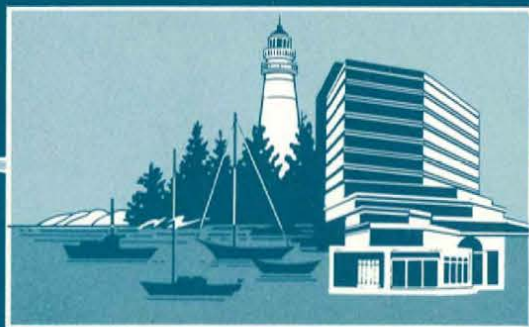
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State Planning

Maine's Economic Heritage

May 1989

Prepared for
**The Commission
on Maine's Future**



by Lloyd C. Irland
The Irland Group

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MAINE'S ECONOMIC HERITAGE

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INTRODUCTION

For some four centuries, Europeans have visited and occupied Maine to take advantage of its natural resources. Over these centuries, men and women created a society and an economy that has regularly rebuilt its modes of getting a living and has increasingly modified the enduring land, lakes, rivers, islands and sea. This essay is the story -- a brief, selective and personal interpretation -- of that society. It is a prologue to a more detailed and thoroughly considered economic history of Maine.

Purpose and Approach

This essay was prepared to assist the Commission on Maine's Future in understanding broad currents of the state's economic history that may have value in identifying critical future issues. It is an expansion of notes used in a presentation to the Commission May 11, 1988. Economic history is far from the only perspective that is useful in interpreting Maine's evolution as a society, but it does provide a useful framework for thinking about the future.

Maine's economic history has never been comprehensively written in any authoritative manner, though the articles in Thomas College Business Review Fall 1975 are a good start. Major reviews of periods are excellent introductions (Clark, 1970 and also his 1977 overview; North, 1961; Pease and Richard, 1983). Many useful sectoral studies concerned with agriculture, shipping, lumbering or land titles, all of which are, of course, essential ingredients (e.g. Smith, 1972; Carroll, 1973; Wilson, 1935). But gaps in coverage of significant sectors remain and there is no general overview.

Because many key Maine industries have never been well treated in monographs and primary literature, many fascinating questions cannot be answered. The initial periodization and interpretations offered here should be seen as hypotheses to be revised in time.

Periods Considered

The state's history can be analyzed in terms of several distinct periods, corresponding to different driving forces of the state's economy. The boundaries of the periods are indistinct and are subject to debate. The forces work themselves out in different sectors at differing rates and many important trends occupy more than one period.

The first period is that of Insecure Settlement and Early Growth, lasting until statehood in 1820. During the early part of this period, Maine as a geographic unit can hardly be said to have had an economy of its own at all. Its small subsistence communities and fishing stations were outposts of other economies, acquiring many of their essentials from outside and interacting little with one another. Still, its population grew rapidly, if from a small base.

The second period is the Extension of 19th Century Agriculture, Industry and Commerce. This period can be dated roughly from statehood to about 1880.

In the third period, Industrial Transition, new major industries came to dominate the economy based on electricity and new technologies such as wood pulp papermaking. Textiles and other previously established labor intensive industries grew. At the same time, traditional 19th century industries such as wood shipbuilding and subsistence general farming dwindled. This period endured from the 1880's to about the Great Depression.

During the fourth period, Social Stability and Industrial Change marked the state's economic landscape as a series of leading industries based largely on cheap labor came to dominate the state's manufacturing sector, but the overall society grew slowly and changed little. This period was clearly ending during the 1974-75 recession which forms as convenient a marking point as any.

Finally, the Post 1975 Recovery has carried the state into entirely new economic territory with new industries, a new level of prosperity and novel, unfamiliar social, economic, environmental and political problems.

The challenge in analyzing these periods is to sort out what was stable from what was changing and to interpret the sources and the significance of these changes. Each period was influenced by a different mix of changes in technology, transportation,

interregional competition for major industries, participation in foreign trade, and demographic trends. I have avoided the temptation to date periods from wars, as is often done, but clearly they all had major effects which are considered in the text.

In this essay, political or other major social developments affecting the economy are not fully developed. The Native American economy is not considered. Further, many specific links between Maine, Canada, New England and the world are not developed in detail.

Several readers of early drafts observed that this essay offers no overall analytical framework explaining Maine's economic growth. There are a number of frameworks available, including export base and staples theories, Turner/Webb Frontier models, the Rostow Take-Off model and Long Waves, Leading Sectors, or Dual Economy models. At different periods, one or another of these models probably has some explanatory power. For the moment, however, I offer this essay as an initial descriptive overview, leaving for another time a more fully analytical review.

Enduring Themes

While a formal model lies in the future, we can identify from the trends studied a set of profound enduring themes which undergird the differing forces from period to period. These themes are:

A Natural Resource Based Economy. The state's base remains land, water and resources, though the uses and values attached to them have changed dramatically. The smaller proportion of economic activity directly related to resources simply means that more superstructure has been erected upon this foundation.

A Strong Role of Manufacturing. The items manufactured have changed, but the dependence on making things certainly has remained since earliest times.

Out-of-State Ownership and Capital Provision. From earliest times, Maine has been developed with outside capital. It is striking how little historical and economic analysis has been done to document this fact and to analyze its changing social and political significance for how land is owned and managed and how political decisions are made.

Resilience in the Face of Challenges. The state's people have had to rebuild the economic base of communities repeatedly as their basic industries were challenged and often eliminated by global competitive forces. The capacity to bounce back and find new work has been evidenced again and again, though in particular places it has worked with long lags and accompanying hardship.

INSECURE SETTLEMENT AND EARLY GROWTH 1600-1820

Maine was first settled during the Elizabethan burst of energetic exploration, conquest and colonization that brought England to a position of economic and naval supremacy in the North Atlantic and North America. Social relations, farming and settlement practices, and technology imported to the New World were substantially of a late medieval character. Religious, political and imperial upheavals underway for a century or more shaped economic motives for settlement and colonization, and provided repeated waves of immigrants. Wealthy and prominent Englishmen were eager to invest private capital in settlement ventures.

Maine's coast was an early location for fishing stations (Conkling, 1981). The islands and peninsulas, at first occupied seasonally, were made to order for observation and for defense against Indians, pirates and foreign powers. These locations combined the resources of fish, seawater for salt, and wood which supported the transatlantic salt fish trade. There are good indications that this trade long preceded Columbus (Marriner, 1975). There are speculative suggestions of Viking visits but these were of no economic importance, if indeed they ever occurred (Wahlgren, 1986). Was Vinland on a branch of Passamaquoddy Bay?

Maine's 17th century economy was thus primarily a series of outposts serving distant markets with readily harvested natural primary products -- fish, fur and timber. Fish and timber were harvested by minimally skilled seasonal laborers who established only seasonal communities or remote work camps. Much of the fur was obtained by trade with the Indians. The few permanent settlements supported themselves by subsistence farming, fishing and sheep husbandry. These conditions prevailed until a measure of stability promoted inland settlement and farm-making after the Revolution. During this period, interaction between communities was limited and many key items continued to be supplied from outside rather than locally manufactured (Table 1). The state's enduring dependence on resources was established at the outset in these tiny hamlets and camps. So was the dependence on outside capital for development.

Table 1.
ECONOMIC MILESTONES:
Period of Insecure Settlement, 1600-1820

1524	Verrazano visits Penobscot Bay
1604	Champlain visits St. Croix
1607	Pinnacle Virginia built at Popham
1629	Pilgrims receive Kennebec land grant & establish trading post at Augusta
1675-78	Indian wars
1689	Maine coast pillaged: King William's War
1691	District of Maine joined to Massachusetts; First of Broad Arrow Acts
1713	Treaty of Utrecht ends Queen Anne's War
1735	Samuel Waldo builds paper mill at Brunswick
1753	Samuel Waldo establishes lime kiln at Thomaston
1755-63	Seven Years' War
1777	Eastern Maine occupied by British forces
1784	Massachusetts land lottery
1799	First bank established in Portland
1809	Early textile mill established
1812-14	Eastern Maine occupied by British forces
1820	Population reaches 300,000
1820	Maine becomes a state

Northern New England was a military frontier and battleground through several phases of imperial conflict originating in longstanding Continental rivalries. Maine's coastal outposts were vulnerable to attack by hostile nations and tribes. Up to and including the Revolution, the Coast was periodically swept by invading forces, which left behind charred ruins and grieving survivors. The result was that a stable social climate for breaking farms and making large capital investments was lacking until the 1780s, limiting population growth and development accordingly. Still worse, accumulations of capital in farms and buildings occasionally were totally lost in the various raids and bombardments.

With its dependence on distant capital and markets, Maine's early outpost economy was integrated into world trade to an extraordinary degree. Ships, the elemental raw

material for trade, became an early export. Plainly, shipbuilding relied on available wood raw material. But more important was the fact that the industry was heavily capital intensive and that ship building and operation embodied a considerable element of skilled industrial labor. Shipbuilding was thus an early precursor of Maine's later industrial economy.

Table 2.
MAINE POPULATION, 1772-1820

Year	Population
1772	29,080
1784	56,321
1790	96,308
1800	150,939
1810	228,767
1820	298,335

Source: Moses Greenleaf, Statistical View of the State of Maine, various editions.

Very early, as exemplified by the land grants and ambitions of Sir Ferdinando Gorges in the 1620s and after, land speculation became a hallmark of Maine's coast as it often does in any new frontier. Barristers argued land titles before officials and courts; subsequent grants generated a patchwork of claims and counterclaims. Absentee speculators assembled empires of mythic proportions only to see them evaporate in their turn. The Commonwealth of Massachusetts, seeking revenue after the Revolution, even sold land by lottery, turning land into the ultimate gambling instrument. Some speculative buyers were stranded by later developments and became unwilling longterm landowners.

Because of its tiny population and rural nature, Maine during this period depended heavily on nonresident capital, as did the nation as a whole. Maine simply could not develop industry and infrastructure with its own savings. Because the state had vast areas of land and a small population, it quickly established a pattern of widespread nonresident ownership.

Following the Treaty of Paris, the state became a magnet for settlers from the southern New England states, where established communities were becoming overpopulated relative to available farmland. After generations of slow growth, the state's population grew almost fivefold between 1784 and 1820 (Table 2). The rapidity of growth after the Revolution indicates the strong restraining effect the previous instability had had on settlement.

At the close of this period, commodity prices were high and the instability of the Napoleonic Wars and the War of 1812 had created a temporary period of reduced import competition for manufacturers. The stage was set for a postwar shakeout, so that this period closed with a measure of economic uncertainty in the air.

II

EXTENSION OF 19TH CENTURY AGRICULTURE, INDUSTRY AND COMMERCE 1820-1880

As Maine attained statehood, the close of the Napoleonic Wars heralded an unprecedented period of peace. During this period, major new technologies -- the widespread application of steam power in factories, the rapid advancement in textile and farm technology and the railroad -- revolutionized the world economy, affecting Maine likewise in myriad ways. During this period, oceanic and land transport costs fell dramatically, enabling a continental nation to take shape as a unified economy and to trade with the world. The volume of world trade rose tenfold during these decades (this and other world data from Rostow, 1978). Strikingly, by 1880, the US accounted for 10% of world trade -- essentially the same ratio as it did a hundred years later.

Agriculture, Industry and Transportation

Maine was obviously well positioned to benefit from this world revolution in maritime trade. The growth that followed the War of 1812 brought rapid change. Between that time and the Civil War, its population grew as rapidly as it ever has for any sustained period. Economists distinguish between extensive growth, which applies similar techniques over larger areas of land, from intensive growth, in which output is increased by fertilization and other steps to increase per acre yields. Overall, this period was one of extensive growth -- that is, it was based on spreading a given system of economy over wider spaces provided by the state's abundant land (Fig. 1). But the exceptions, the beginnings of new capital intensive industries, were important as well (Table 3).

Farming was far from static during this period, but its land and labor using character were evident. A significant orchard industry arose and the early beginnings of specialty vegetable growing and food and fish processing emerged later in the period. The acreage in Maine farms peaked about 1880 and has declined ever since (Figs. 2, 3).

Table 3.
ECONOMIC MILESTONES
Period of Extensive Growth, 1820-1880

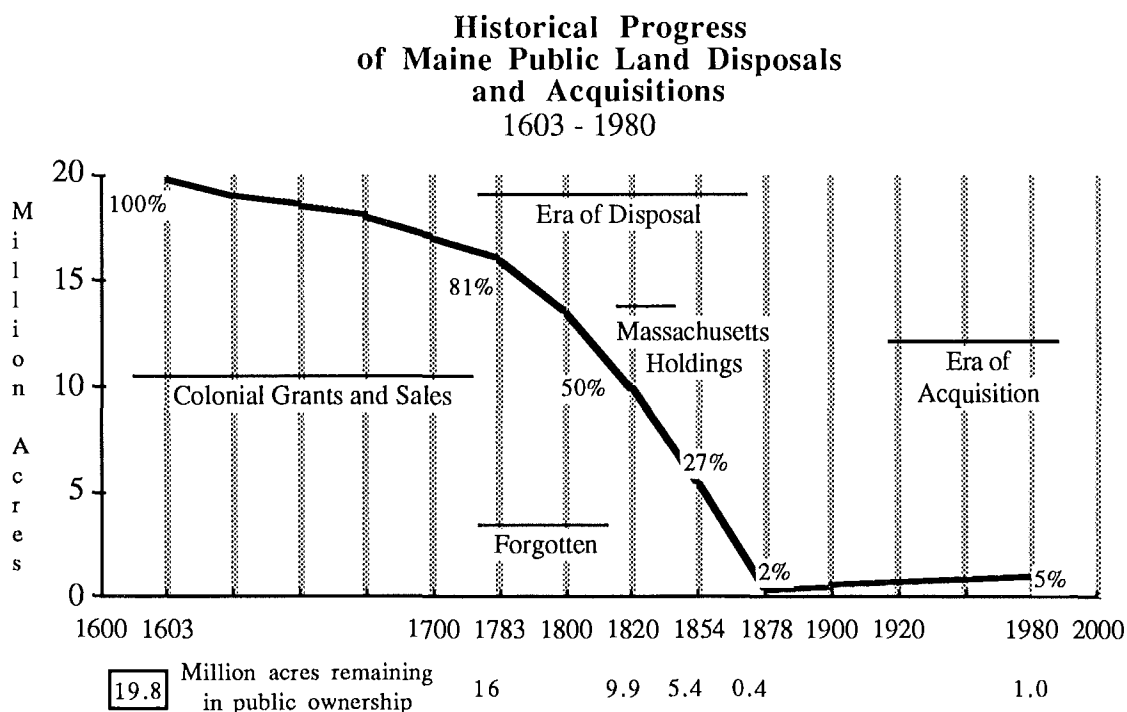
1820	Statehood
1822	Early steamer service on Casco Bay
1828	Largest cotton mill in the world at Saco
1830s	Land boom
1835	Regular steamer service to Boston
1837	Financial panic
1842	First railroad reaches Portland
1842	Webster-Ashburton Treaty
1842	First seafood cannery in US at Eastport
1855	Maine builds a third of US shipping tonnage
1857	Financial panic
1859	Shipbuilding off 80% from 1855
1869	Federal cod bounty halted
1870	Census shows decline in state's population
1872	Peak year for log drive on Penobscot at Bangor
1878	Frontier closes: Maine public lands sold out
1880	Peak year for farmland acreage in Maine
1880	S. D. Warren mill at Westbrook claimed to be largest paper mill in the world

This extensive character was its vulnerability. Even as this period of growth was beginning, Southern New Englanders heard the beckoning promise of the Northwest and the Cornbelt, recently opened up by the Erie Canal and later by the railways. Much of Maine remained a forest because Illinois sod broke so much easier and yielded so much better. As Maine's 1880 economy was in the building, then, its very foundations -- low cost land, labor and hydropower -- were simultaneously being undermined by newly opened regions.

Major streams of immigration into the US, therefore, largely passed Maine by. Swedes, Italians, Portuguese, Slavs, Germans, tended to move to the larger industrial and mining cities and to the opening regions of midwestern free land. The exceptions tended to

be local ones, as with Finns and Italians moving to particular quarrying or logging communities. So Maine retained a degree of ethnic uniformity longer than did other Northeastern states, until the waves of Quebec immigration late in the 19th and through the 20th centuries. But as the state's current ethnic diversity shows, this was a matter of degree only.

Fig 1



Source: Irland, L.C. "Rufus Putnam's ghost: an essay on Maine's public lands, 1783-1820." *Forest History*, April 1986.

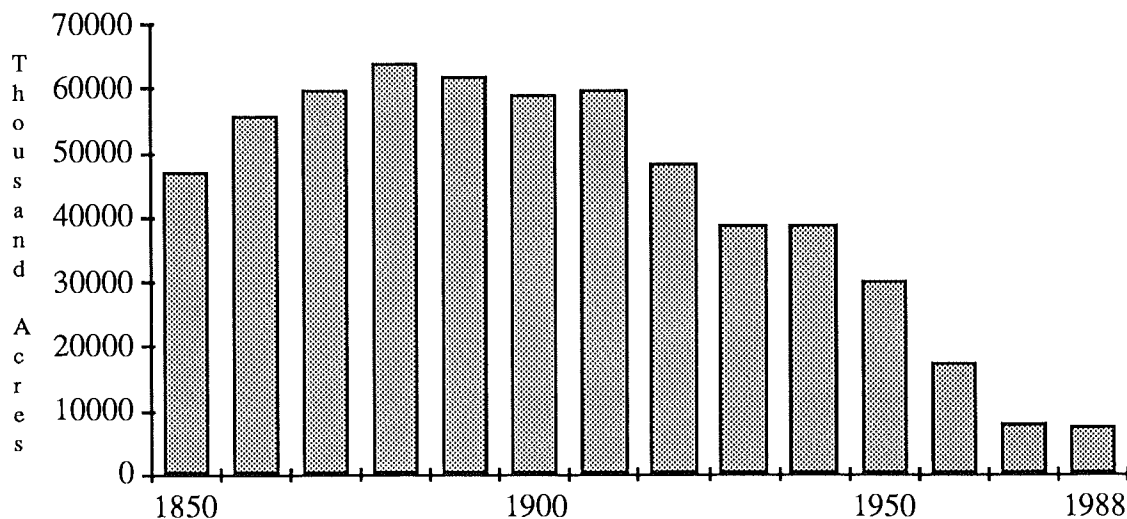
War affected growth. The Revolution showed Massachusetts youth, raised on crowded farmsteads, new frontiers in Northern New England and New York. It brought some of them land grants in Maine. Likewise, the service in Civil War gave many Maine men a far wider experience of the world; many never returned home. Wartime demand for food and industrial goods boosted local industries. But in the Revolution, many coastal towns suffered severe property damage.

Hydropower development was a more capital intensive matter. Industries based on waterpower became the base for growing towns at tidewater and on major falls like

Calais, Brunswick and Augusta. Saco claimed the world's largest textile mill in 1828. Again, Massachusetts and other outside capital was essential for their development. These new industrial towns then set the routes for later rail and highway routes which persist today. *Maine's major cities today literally reflect the implications of 19th century technology.*

Fig 2

**Maine Land in Farms:
1850 - 1988**

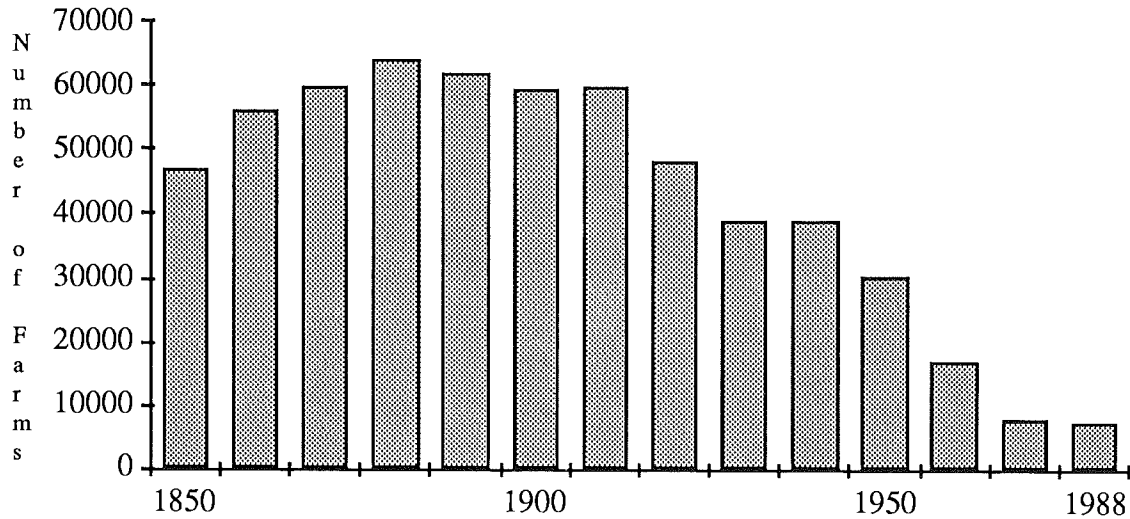


Source: Maine Department of Agriculture; Historical Statistics of the U.S.

During these years, northern New England supported a diversified base of tiny, often home-based local plants turning out shoes, processed food and other articles. As the national economy came ever more linked together by rail and dominated by energy-intensive technology, these local plants waned away, replaced by large scale factories elsewhere. This was already happening toward the end of this period.

A strong base was being built in textiles, shoes, wood products, canning and metalworking industries that involved larger factories, urban workforces and more capital-intensive processes. The early fish and vegetable canning plants were in fact pioneers of a national industry. The growth in factory industry during this time prepared the way for rapid developments later in the century. Tidewater locations were ideal for importing, as well as for exporting, lumber sawn from river-driven logs, stone, farm products and

Fig 3
Number of Farms in Maine:
1850 - 1988



Source: Maine Department of Agriculture; Historical Statistics of the U.S.

ice (Boorstin, 1965, p. 10). They became minor centers of farm marketing, finance and commerce as well as of shipbuilding.

By the Civil War, the bulk of the accessible pine was already cut out of the Maine woods. Spruce took over as the lead species and was already dominating the log booms Thoreau saw when he first visited Bangor in 1846. After the Civil War, the canals and railroads opened up the vast pineries first of New York and Pennsylvania and later of the Lake States and the South. River log drive volumes peaked between 1870 and 1900 on most streams -- in 1872 on the Penobscot at Bangor. Logging by this time was already heavily dependent on seasonal and foreign labor and relied heavily on export markets for logs. The capital embodied in the virgin forest was liquidated ... it has never been determined how much of the value realized was reinvested in Maine and how much was taken out for ventures elsewhere.

Maine loggers and lumbermen went west, bringing with them placenames like Ashland and Presque Isle (Portland, Oregon gained that name in a coin toss, prevailing over New Boston). Their departure was a loss of human capital to the state's communities.

By the end of the period, loggers had extensively dammed and channelized northern Maine streams and lakes to accommodate log driving. Many of these modifications persist, having been adapted to purposes of power generation and recreation.

The full history of 19th century tourism remains to be written in an industrial sense, but Maine's most famous tourist, Thoreau, found a well-developed infrastructure for his travels that certainly qualifies as an embryonic tourist industry. Thoreau could manage his entire visit to the West Branch and back by public transportation from Boston. This would be quite an ordeal today. As early as the 1830s, minor summer colonies appeared on the southern coast and by the 1860s and 70s present resort destinations like Bar Harbor and Rangeley were well established (see Judd, 1988a).

The very symbol of progress in the 19th century was the railroad. Because so many of the places north and east were better reached by sea, the national boom of railroad building had not yet touched northern and eastern Maine by 1880. Railroads built new supplier industries -- locomotives were built in Waterville. They created new outlets for products, as they rendered the timber of the mountainous areas accessible. And they opened new possibilities for tourism, making the large inland lakes for the first time as readily reached as the seashore steamer ports. The soldiers went off to war by train. The railroad stations were often grand edifices, fitting symbols of the railroads' power and significance to the age.

Fishing, Shipbuilding and the Sea

The activity in Maine coastal and Grand Banks fisheries was extraordinary. At midcentury, Portland had 300 boats in the nearshore mackerel fishery; Castine had 500 vessels on the Grand Banks. By the end of the period, saltwater fish harvests had seen major expansion; key resource stocks were showing the pressure, of course, to differing degrees depending on species.

The end of the federal cod bounty in 1869 was a blow to the offshore fishery. Because of dambuilding and pollution, salmon were already in decline. This was a significant economic blow, because of the strong backward linkages of the fishing industry, which hired a good deal of onshore labor and acquired many services and materials locally. The effects were temporarily overcome by development of the lobster

and herring fisheries and associated canning activities, which did not peak until after the close of this period (See, e.g Judd, 1988b). In 1880, 23 canneries dotted the Maine coast.

During these years, Maine coastal communities prospered based on extensive networks of shipbuilding and ship ownership, drawing on trading networks reaching around the world. The white frame houses and brick mansions of coastal towns date from this period. These towns stood at the edge of a vast world market, beckoning with many opportunities, which they were well fitted to pursue.

Shipping became a source of local capital accumulation by lucky ships masters, owners and crew. For the widows and heirs of shipowners, ownership of vessel shares provided a rudimentary social security system. Well before the Civil War, the average Maine teenage boy in one of these towns had probably travelled at least halfway around the world. The sea captains were in the carrying trade largely for the goods of other ports -- guano, grain and other items -- not primarily for exporting Maine produced goods.

Of no small importance was the less glamorous schooner fleet engaged in the regional coasting trade, carrying hay, lumber, fuelwood, granite, lime and other low value bulk products to Massachusetts Bay and Long Island Sound markets. The local hauling trade made intensive use of local materials and labor in coastal towns.

End of an Age

By 1880, then, a 19th century economy had spread as far over Maine as soils, resources and competing pressures would allow. Maine was already established as a prominent exporter of people. The state's economy was slipping from a position on the edge of a world market to a second place at "the end of the line" in a new 20th century. But this fact was barely visible at the time. The vulnerability of Maine's economy based on extensive growth was that its assets were not after all location-specific -- they were quickly outclassed by the superior farmland of the Priaries and Cornbelt once railroads and canals brought those new lands in touch with world markets.

By the end of this period, steam power, the screw propeller and steel shipbuilding were gaining in application and were about to demolish the economic base of many Maine

coastal towns. Ironically, early steel schooners and steam-powered vessels were built at Bath.

As of the nation's centennial, indications of this troubling trend were already visible and are frequently commented on in the many town and county histories written between 1876 and 1890.

Not least of the heritages of this period is a set of images of Maine ... images of sea captains trading with China; of lumbermen and river drivers taming the wilds; of sturdy fishermen living in quaint coastal hamlets. As is true today, the images outlast the reality and can blur our perceptions of the world. In fact, by 1880, these images no longer reflected the real structure of the state's economy.

In *Country of the Pointed Firs*, the old sea captain laments the loss to Maine coastal towns occasioned by the loss of the shipping trade. His lament applied to a far wider area of Maine life than he realized.

III

INDUSTRIAL TRANSITION 1880-1930

The world economy after about 1880 absorbed the effects of lower transportation costs and expanded farm and natural resource production in a prolonged period of declining prices. This continued until the prewar "Golden Age" of American agriculture of 1910-14 and the wartime inflation. After 1920, farm and commodity prices broke, but new industries surrounding the automobile-steel complex gained ascendancy and began remaking America's landscape once again. During these years of "the second industrial revolution", world industrial output rose fivefold and US exports of manufactures increased dramatically.

Agriculture and Established Industry

From about 1880 to the Great Depression, a major industrial transition occurred in Maine. A new set of modern industries arose, taking advantage of the state's assets (Table 4).

The most obvious changes were the things that disappeared. Farming declined dramatically, responding to falling farm prices and in tune with the general retrogression of 19th century farming across the Northeast. This was a severe blow to a state with a rural self-image; the pastures "going back" and the decaying barns cast a feeling of decline over much of the settled landscape that must have been every bit as powerful as the decaying mills of a later time. The surviving farms expanded, modernized, adopted new crops like chickens and became integrated into regional markets.

Early on in this period, fish processing capacity shrank due to deteriorating stocks and competition from abroad (Fig. 4). Production was sustained for a time by lobster and herring packing. The wooden shipbuilding industry virtually vanished, as did the extensive carrying trade that had been so closely associated with it. The demand for granite

Table 4.
ECONOMIC MILESTONES:
Industrial Transition, 1880-1930

1894	Bangor and Aroostook reaches Caribou
1898-1900	Great Northern Paper, Millinocket
1905	Log drive at Bangor no longer tallied
1910	Ripogenus Dam, reputed to be world's largest hydro dam
1913	Highway Commission formed
1914	Panama Canal opens
1914	Textiles are 1/4 of Maine industrial jobs
1916	Federal aid highway program begins
1923	Gas tax established-- one cent/gal.
1924	Peak of rail mileage in Maine Late
1920s	Depression in housing and lumber
1928	Wyman Dam, Kennebec River
1929	Stock market crash

evaporated in the early 20s as concrete replaced it (Fig. 5). Following the decline of these basic industries was the slow decay of the retail and craft support shops and the very piers and wharves themselves.

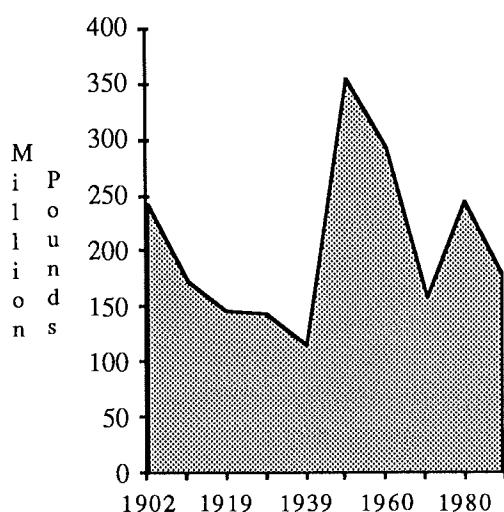
As long as steamers plied the coast, coastal towns had a ready market for produce and fish in Boston and Portland. When the railroads and highways drove out the steamers, these villages were stranded. Coastal hamlets, one after another, became museums looking to the past instead of the vibrant centers of commerce and commercial hustle they had once been.

As traditional industries were shrinking, several major established industries expanded further and new ones appeared (Fig. 6, 7). In contrast to the largely extensive character of previous development, major developments of this period were capital intensive. Hydro dams, larger textile mills, paper mills and major public works improvements drew upon huge pools of capital, which could only be raised outside of the state.

The bustling urban factory economy based largely on textile and shoe industries remained important. Abundant supplies of hemlock bark originally helped attract tanning and shoemaking to Maine; the limited livestock industry could not have supplied sufficient hides. It was primarily abundant power and cheap labor that attracted cotton textile mills. Both of these industries were strongly influenced by Massachusetts capitalists seeking lower cost labor and cheap power as labor costs rose in urbanizing eastern Massachusetts despite a continuing inflow of immigrants.

Fig. 4

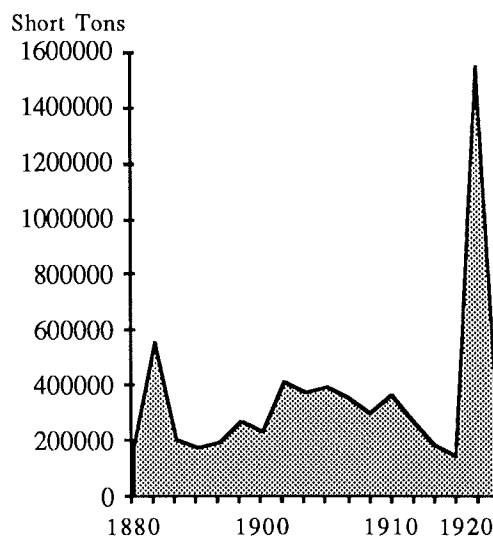
**Total Fish Catch:
1902 - 1985**



Source: *Historical Abstract of the U.S.;
Maine Department of Marine Resources*

Fig 5

**Granite Produced:
1880 - 1921**



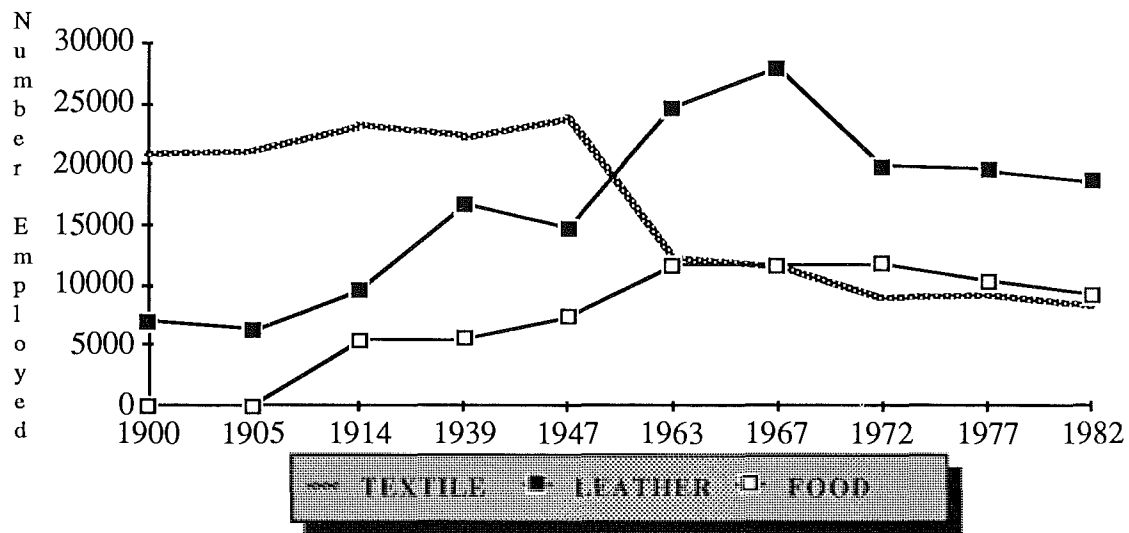
Source: *T. Nelson Dale,
"Commercial Granites of New England"*

These industries built the huge mills that give many Maine towns the visual landscape that still dominates them. They played a vital role in fostering the urbanization of Maine's rural society. Because of their maintenance and supply requirements, they fostered spinoff industries that helped form the base of Maine's urban industrial economy in later years.

Textile-making was hardly new to Maine, which claimed the world's largest cotton mill as early as 1828. By 1914, textile employment in the state reached about 22,000

Fig 6

**Employment by Sector:
1900 - 1982**



Source: U.S. Census of Manufacturers

workers -- about one in four manufacturing jobs. This industry in particular employed large numbers of women.

These growing urban industries were so successful that they outgrew their original labor force. An imported one had to be created. Right at hand were the overpopulated Quebec and New Brunswick Townships which had long been a ready source of workers neighborhoods near the mills, with a lasting impact on the culture, politics and social patterns of most southern and central Maine towns. Less well known has been a significant flow of English-speaking Canadians into Maine.

Growing New Industries and Technologies

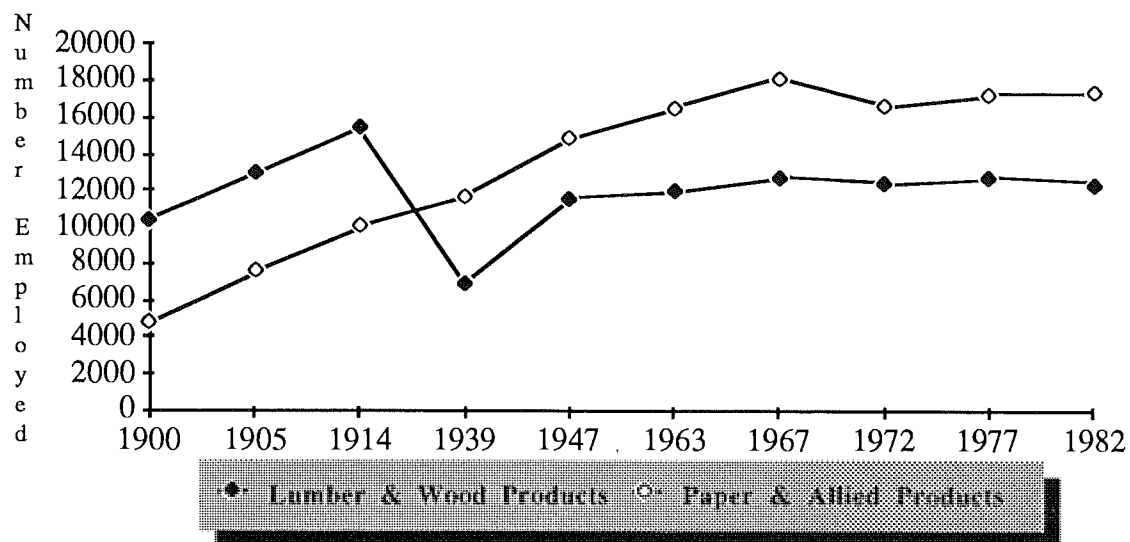
An entirely new industry now began to shape the Maine economy. This was the wellspring of the late 19th century's Second Industrial Revolution -- electricity. While direct drive hydromechanical power remained important, electric power generation assumed the lead at existing damsites and provided the incentive for still grander developments at Wyman dam on the Kennebec, at Ripogenus on the West Branch, at Brunswick and

Lewiston. From the late 90s, electric power generation became a new force modifying Maine's rivers.

Paper had long been manufactured in Maine in small plants. But the new technology of electricity vastly expanded the potential scope of new wood-based papermaking technologies developed in Europe during the 1870s. Attracted by damsites and by the opportunity to secure abundant supplies of low-cost wood, industrialists built a new paper industry, at times creating new small cities like Millinocket to support the mills. They were able to take huge forest properties off the hands of departing sawmill men who were bound for the pineries of Michigan and the Big Timber country of Oregon and Washington. (Rail connections over the Cascades to the Northwest Coast were not opened until 1885).

Fig. 7

**Employment by Sector:
1900 - 1982**



Source: U.S. Census of Manufacturers

The paper industry spawned a number of supplier industries like the limestone quarries and more specialized construction and metalworking firms. The paper industry also supplied a new customer for the railroads. The railroad, the symbol of industrial progress in the 19th Century, did not reach its peak mileage in Maine until 1924.

Significance of the Period

By the close of World War One, then, a new economy had been built. The permanent reduction of 19th century farming was clear though perhaps little understood.

New and apparently permanent and powerful industries -- embodied in the solid brick mills -- stood beside the state's major rivers and dominated her towns. At the apex of these new industries, however, it was less than clear to observers at the time that the prime advantages of Maine as a location for most of them -- cheap labor and power -- would prove to be temporary. Nonetheless, by this time, an enduring pattern of rural and small-town one-factory towns and of substantially one-industry cities had been established, with profound social and economic implications.

In this period, out-of-state land ownership and capital provision remained important. But the industrial transition decisively shifted Maine's market focus from a worldwide scene to a domestic one. And experience would soon show that the state's ability to compete domestically in its newly powerful industries was only temporary. At the close of the period, Maine depended heavily on manufacturing, a fact which continues to this day.

IV

SOCIAL STABILITY AND INDUSTRIAL CHANGE 1930-1975

This period opens with the deflation and social crisis of the Great Depression. The collapse of world trade completed the virtual elimination of shipping and shipbuilding on the coast and the state's withdrawal from the world scene that had so prominently occupied it before. Following World War II, a brief period of rising prices helped farm and resource producers, but there seemed to be a cessation of general advance across large areas of Maine industry. The state as a whole seemed to change little in most areas over this period, though there was considerable movement in individual industries. Still, the state's economy as of 1975 was strikingly similar in broad outline to the economy of the 1930s.

Agriculture and Industry

During the Depression, there was a national movement returning to the farm and to small rural towns as urban jobs vanished. This trend gave an illusion of surface vitality to rural areas, but was in fact a response to the nation's industrial crisis.

The growth and change of the period was primarily based on one decisive fact -- cheap labor. Cheaper labor elsewhere was a major cause of declining fortunes first in textiles and later in shoes. Cheap labor in Maine helped attract the industries that replaced them (Table 5).

A major new industry was the egg and poultry business, which was attracted not to markets where the product is shipped, nor to the Cornbelt states where the raw material is grown. It was attracted to cheap labor for feeding and maintaining the flocks and processing the product. A decentralized production system devised by the large feed companies and supported by federal financing, enabled many families to remain on the farm. The packing plants employed many workers displaced by the decline of farming and

Table 5.
ECONOMIC MILESTONES
Industrial Growth and Change, 1930-1975

1930s	Growth of poultry industry
	Brief return of people to farms
1941-44	Wartime resurgence of shipbuilding
1947	Peak of potato acreage
1947	Maine Turnpike begun
1956	Interstate highway system authorized
1950s	Wave of SAC base construction
1963	Allagash waterway acquisition
1968	Peak of leather employment
1970	Earth Day
1970s	Wave of base closings
1970s	BIW resurgence as military shipbuilder
1972	Water Pollution Control Act Amendments
1973	Oil price revolution
1974	Maine bond rating downgraded
1974	Severe recession
	Period of rail branchline abandonment

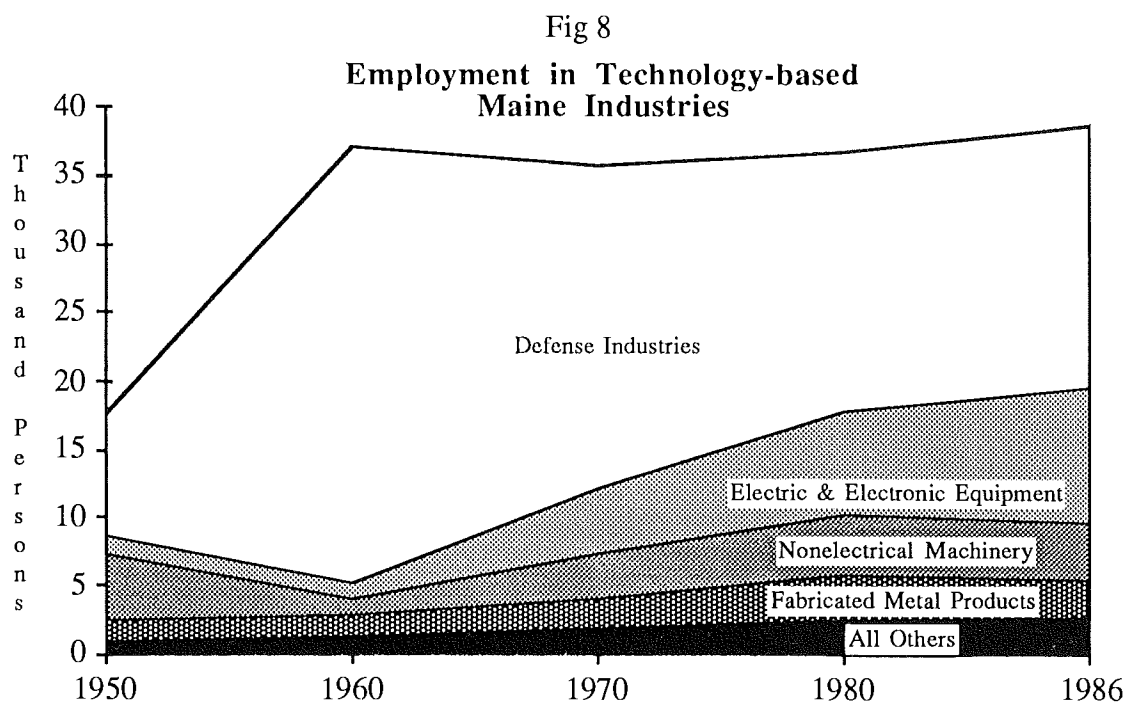
textiles. A major Maine industry, dependent on an imported raw material -- grain -- was born.

Other aspects of farming continued the regional pattern of decline with a modest amount of specialization into nursery and truck gardening. Dairy output held up as farm numbers dwindled in the face of rising productivity. Potatoes peaked in acreage in the late 1940s and then declined. The loss of small local processing plants, one after the other, cost farmers their markets for vegetables and helped push farms to specialization in single crops, with lost opportunities for crop rotation and more sustainable farm management, not to mention the added risk of single-crop dependence.

The major impact of the Depression on Maine farming was the creation of a vast sprawl of federal and state programs designed to help farmers stay in business and to

improve their living standards. Price controls, publicly subsidized technical assistance and expanded research and development, as well as extensive financing programs, helped determine the course of farming in the state for decades.

The footwear industry continued to be important to Maine and even in 1980, the leather and footwear industry was the state's leading manufacturing employer. In that year, Maine was a leading shoe producing state. Shoe companies often made use of mills left behind by the textile companies.



Source: University of Southern Maine, Chartbook for Institute on Maine Economy.

From the late 1940s, Maine maintained a level of manufacturing jobs between about 100,000 and 110,000 until the mid 1980s. By 1975, however, the composition of this sector had shifted only slowly. Despite growth and change in individual sectors, the overall importance of leading fields was little changed. The forest based industries, paper and lumber, changed little in terms of employment, with a rising harvest level of timber being offset by increased mechanization of processes. Footwear, though still very important, declined from its eminence reached in the late 1960s and textiles diminished. Apparel remained significant in local areas. The metals and electronics sector grew, but was driven largely by the extraordinary growth of Bath Iron Works, an efficient defense

contractor building light and medium ships for the Navy (Fig. 8). By the late 60s, other small firms began to benefit from the defense and electronics boom of postwar southern New England. Branch plants appeared for assembly work in southern Maine towns.

Shipbuilding, that ancient Maine trade, was revived by military and merchant marine contracts for two wars and then fell again into decline. The huge South Portland yards that had built so many Liberty ships were later converted to factories and then to marinas. Bath Iron Works management found the formula to revive an industry in a single company that remains a principal contributor to the Midcoast economy, a company literally founded on the ruins of a long-vanished shipbuilding center.

The state's fish catch peaked in 1950, based on largescale menhaden trawling for industrial markets. Following that peak, the catch went into another sustained decline.

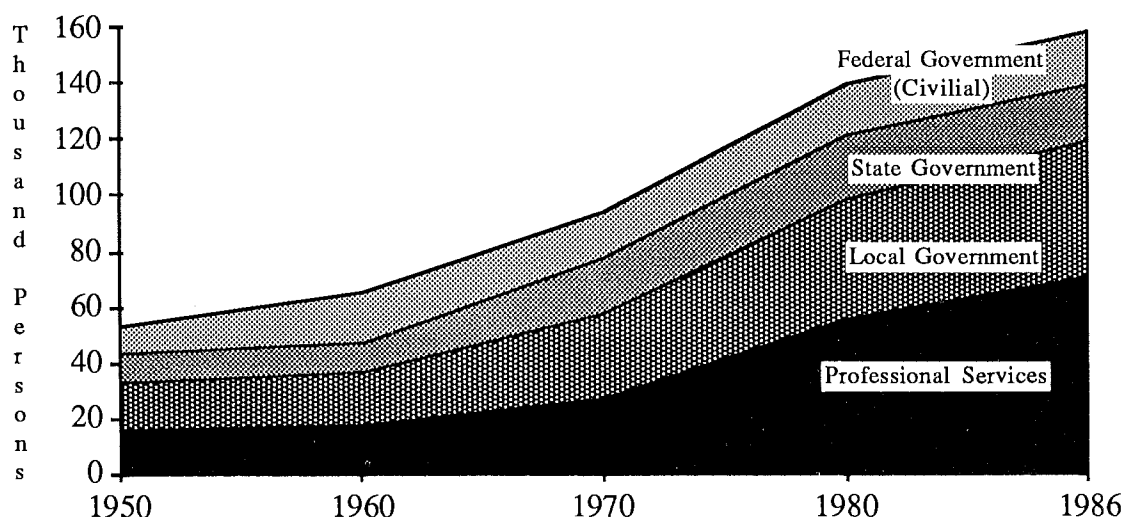
The decline in old labor intensive industries occurred at differing rates in different product lines and in different towns. Small family firms were often ill-equipped to find the capital and management to overcome labor cost advantages and modern marketing methods of competitors, first from North Carolina and later from Taiwan. The changing nature of American marketing helped doom the small firms. Discount retail chains like Zayre and K-Mart obtained product by the shipload through huge Oriental trading companies. They even refused to carry certain American goods. They essentially became US marketing outlets for low-cost imports. Low cost and massive volume carried the day in these chains.

As traditional low-wage industries contracted, they left behind poverty, hopelessness and dislocation. But they also left an industrial infrastructure, a workforce accustomed to industrial discipline in a machine society and large buildings. In time, these assets became attractors for new industries, though not quickly enough to avoid at least a generation of young people growing up in the shadow of empty mills -- looming symbols of the minimal future their hometowns held for them. Maine's industrial flexibility was illustrated by the fact that some 30,000 jobs vanished during this period, but surviving industries, especially metals and electronics, grew enough to sustain total manufacturing employment.

Ironically, Maine's overall manufacturing economy remained stable, but since so many communities were one-factory or one-industry towns, individual towns suffered dislocation when plants closed.

Fig. 9

Maine Employment in Government and Professional Services



Source: University of Southern Maine, Chartbook for Institute on Maine Economy.

Government, Services and Social Changes

This period saw the earliest growth of two powerful new trends -- government as a major employer and the emergence of a service and retail society (Fig. 9). These developments coincided with the maturing of the 50s baby boom babies, with new public ambitions for clean air and water and with new patterns of family life which saw rapidly increasing female participation in the workforce.

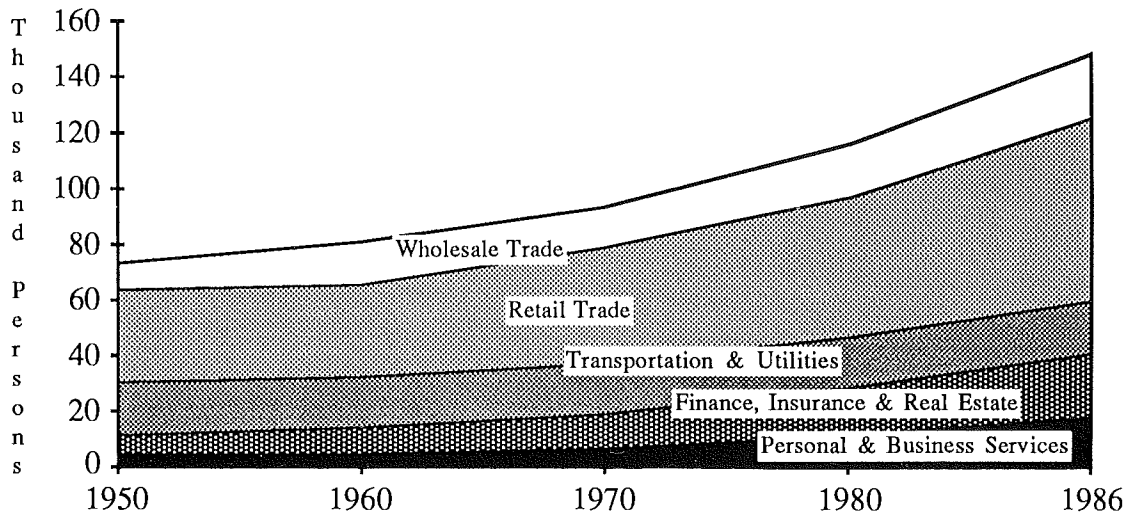
The schooling and other needs of the baby boom generation led to a growing education establishment and a wave of interest in vocational education. Planning for and paying for education was a major concern of the state's towns and cities during this period.

A major development was the rapid growth in employment and activity in the health care sector, which continues to confound forecasters. Still, major differences in access to care between urban areas and more rural areas persisted, as they do today.

More women began working after the Korean War. Nationally, the labor force participation rate for women rose from 28 % in 1940 to 53 % in 1982. A growing work

Fig. 10

**Employment by Maine Service
and Commercial Industries**



Source: University of Southern Maine, *Chartbook for Institute on Maine Economy*.

force of young people sought jobs, first after school hours, then fulltime. More and more college students sought part time work. New patterns emerged in food service and in retailing. New needs appeared for health care. These and other forces promoted the growth and diversification of a vast retail and service sector.

By the mid 70s, services and retailing proved to be a major new job generator and a dominant form of doing business and getting a living in a formerly industrially and agriculturally oriented state (Fig. 10). The implications are still being sought. Since a considerable proportion of retail and service employment is part-time and part-year, care must be taken in interpreting employment trends in this sector. At the same time, new cliches about "service economies" and "post-industrial societies" were heard, diverting attention from important underlying realities that had changed little.

One of government's most important impacts on the economy during this period was through improvements in transportation. Gradually, small rural airfields were upgraded and major facilities at Portland and Bangor began to attract tourist and business traffic, with Bangor beginning to emerge as a major stopover for transatlantic charter flights.

The highway rebuilt Maine labor markets, enabling a lifestyle of long-distance commuting to the better-paid jobs in services, government, papermills and shipyards. By that time, rail passenger service was a distant memory and the coastal steamers were museum pieces. The wartime bus routes of the 1940s brought workers from distant counties to shipyards. The completion of I-95 from Portland to Brunswick, Augusta and Houlton in the mid 70s represented the capstone of a new transport net half a century in the making. It created the "I-95 Corridor" along which a major new axis of economic growth from Kittery to Bangor was created (Coupe, 1988). During these years there began a new wave of abandonments of marginal rail branchlines as federal regulators eased the requirements for closing lines.

Finally, as symbolized by the 1972 Water Pollution Control Act Amendments, the federal and state governments, prodded constantly by activist environmental groups, finally began the business of cleaning up the nation's air and water. A new generation of citizens and industrialists learned that pollution was not a natural condition. Ever so slowly, benefits of cleanup appeared, as salmon returned and waters became swimmable again.

Economic Conditions at the End of the Period

The 60s and early 70s were marked by conferences and discussions of Maine's stagnant economy, an economy not generating economic opportunity sufficient to keep young people at home. Poverty rates and unemployment were high, as employment growth failed to keep up with the workforce being released from declining industries, plus the relatively high natural increase characteristic of rural communities. This was all too reminiscent of the atmosphere of the late 19th century, when thoughtful civic leaders wondered what to do about the decline of farming and the emigration of young people. During the late 60s and early 70s, a series of military base closings added to the sense of decline, bringing short term dislocation to Bangor and Presque Isle in particular.

The federal government created an array of programs during the 60s and 70s to foster growth in lagging regions. Under these programs, many industrial parks, speculative buildings and other facilities were built in Maine in attempts to attract jobs. The state created its own set of programs to provide financial support to new businesses and to improve training assistance to new plants (See, e.g. Maine Development Foundation, 1984, 1987).

Maine entered the 1970s, then, with an industrial base whose underpinnings were fast slipping away and with a declining agriculture. A tourism industry was gaining in importance, but still was little more than a seasonal supplement in all but a few major tourist towns. Its economy was fast being dominated by government and services, an unfamiliar and poorly understood trend.

Surface images from a distant past, promoted by a growing tourist industry, provided cliches that shaped thought, often unconsciously: the rugged fishermen and loggers, the self-sufficient coastal hamlets, the gritty milltowns, the sense of stability and a bit of rural backwardness; the sense that the able young had to emigrate to make it. These images shaped awareness of Maine's economy, even as they were increasingly obsolete in describing reality.

The recession of 1974-75 shook the New England economy. What it destroyed and what it laid foundations for helped shape our time today.

POST 1974 RECOVERY

During the 1970s, the world economy was shaken by a major revolution in energy prices which affected every aspect of economic life. During this period, the US began to reawaken as a world trader, but remained much less involved in trade than most of its trading partners. Nationally, productivity growth and wage growth slowed down, but the effects on family incomes were obscured by growth in two-earner households and to a lesser extent by interest income and capital gains in houses. The US financed a long spending spree on defense and personal consumption by borrowing from foreigners, a trend which toward the late 1980s began to seriously worry many experts and political leaders.

Agriculture and Industry

During this period, agriculture stagnated in the grip of continued cost, freight and marketing disadvantages. The financing system for farming was almost totally federalized. Intense competition from other regions and from subsidized Canadian potato farmers generated heated political debates and trade tensions. In the early 80s, federal efforts to trim dairy surpluses by cutting price supports and buying out herds added to the pressure on that sector. But specialty items like blueberries, broccoli and a few niche products like open range chicken seemed to signal a new potential for vitality in farming and food processing. For a few years, the number of farms in the state actually increased. In all but a few cases, most commercial farms were kept in business by the off-farm income earned by at least one family member.

The 1974-75 national recession saw the beginning of a long debate about the Frostbelt-Rustbelt versus Sunbelt conflict over jobs and government dollars. In retrospect, it set the stage for later debates over the impact of imports on US employment. In these years, plant after plant closed and unemployment rates rose. Layoffs were often

Table 6.

ECONOMIC MILESTONES

Post 1974 Recovery

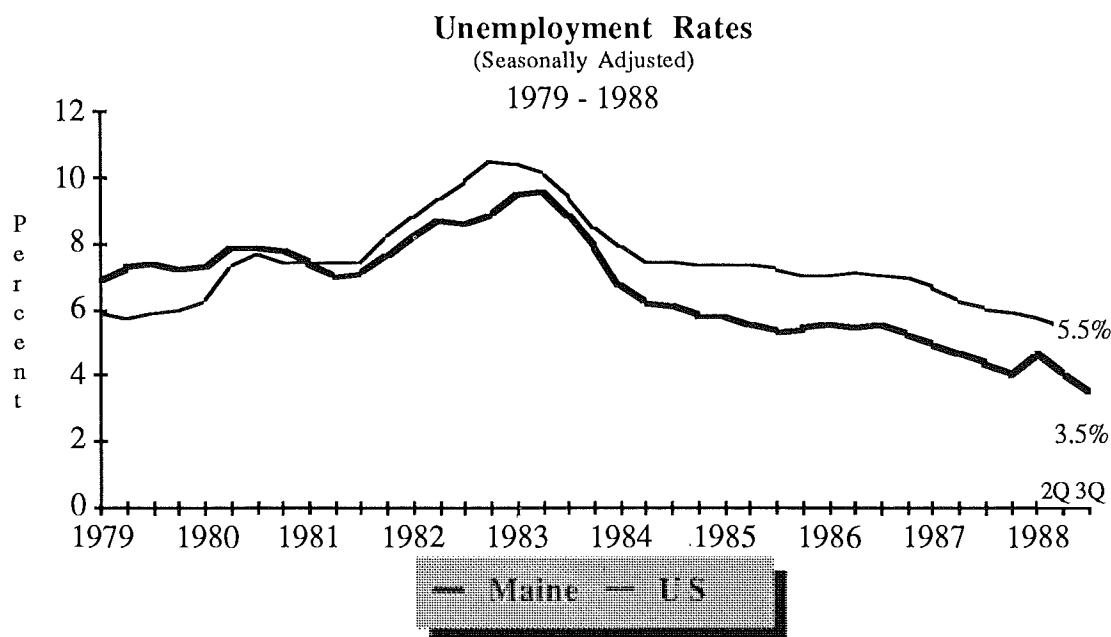
1974-5	Recession: US unemployment rate: 8.5% Maine unemployment rate: 10.3%
1976	200 Mile fishery limit
1975-85	Spruce budworm outbreak
1977	I-95 completed to Augusta
1978	Staggers Deregulation Act
1980	Paper industry investment boom largely completed
1982	Interstate banking
1980-81	Recessions
1982-87	Trade conflicts with Canada
1982	Maine's unemployment rate below US (and remains so)
1983	State budget surplus \$2.5 million
1984	Wave of shoe & chicken plant closings
1985-86	Telecommunications becomes policy issue
1987	Land for Maine Future Bond approved
1987	Portland waterfront referendum
1988	State budget surplus reaches \$100 million Widening of Maine Turnpike authorized Growth management legislation
1988 Oct.	Maine unemployment rate 2.9%

permanent. In city after city, downtown blight spread as plants closed, tax bases eroded and out of town malls drew away retail trade. But the national economy quickly recovered and several underlying shifts in the Maine economy began to become more apparent (Table 6).

The urban rural population turnaround expressed itself in immigration to a state that had virtually forgotten the meaning of the term. Some immigrants were Mainers who had left to pursue business, military or government careers and returned to retire or pursue second careers in their home state. This reversed a traditional brain drain of Maine-educated high school and college graduates, a drain which had long undermined public support for additional spending on schooling in the state.

News about plant closings in the declining industries was supplanted by news of their new occupants -- often companies with high-tech sounding names. While much of the work in these "high-tech" branch plants was actually low-wage assembly, in more and more instances the plants attracted higher-level work over time. Newly founded companies like Ventrex Labs prompted a new feeling of optimism and entrepreneurship in the state. By the mid -80s, several venture capital firms plied their trade in the State. Finance was revolutionized. Financial deregulation led to the regionalization of banking as the small town banks' declining political clout allowed their state-level protectionist barriers to be dismantled. Major Maine banks enthusiastically sold out to out of state regionals in a nationwide thrift and bank merger and privatization boom. According to state figures, these moves helped bring capital into the state.

Fig. 11.

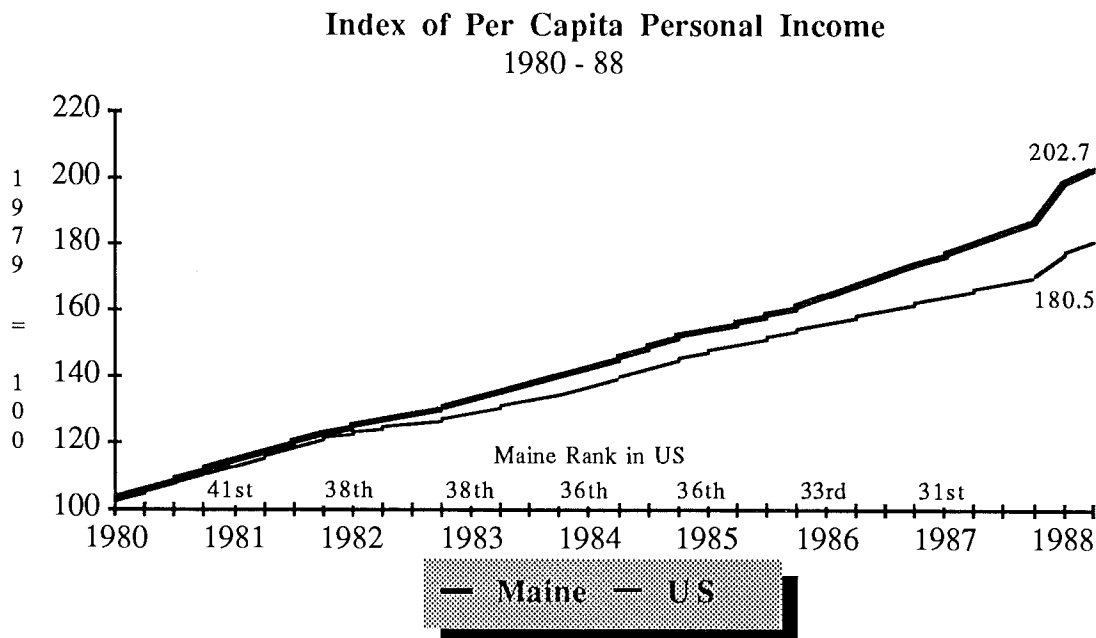


Source: Maine State Planning Office, 1988 Year End Review

The recessions of the early 1980s offered the first well-recognized evidence of the major transformations that had been underway with little comment for so many years. In about 1982, Maine had a lower unemployment rate than the nation for the first time in a generation. It has retained this position since. A full analysis of this situation cannot be offered here, but it can be said that it resulted in part from several fortuitous factors and did not entirely reflect a strong new prosperity. Closely following the improvement in the rate

of unemployment, Maine's ratio of personal income to that of the nation began to rise for the first time in half a century. (Figs 11-13)

Fig. 12.



Source: Maine State Planning Office, 1988 Year End Review

Maine suffered less in the early 80s recession because it had built up a relatively resilient industry mix. Maine had little "heavy industry" and little of the Big Ticket consumer durables like automobiles that are hurt in recessions and periods of high interest rates. At the bottom, US steel mills -- none in Maine -- were operating at 37% of capacity. And capacity was sliding fast. A relatively high component of transfer payment income and the bouyancy of the service economy, tourism and nascent light manufacturing industries helped Maine weather the recession.

The recessions of the early 80s and their aftermath helped complete the remodelling of Maine's industrial base. The footwear and food processing industries in particular lost thousands of jobs. The major bequest from the period of social stability and industrial change was not a series of chicken plants and shoe shops but an industrially trained workforce. The displaced workers either quietly left the labor force on social insurance programs or went to work in the growing service economy. The grim years of poverty that had been seen in the 40s and 50s in the wake of mill closings were not seen this time.

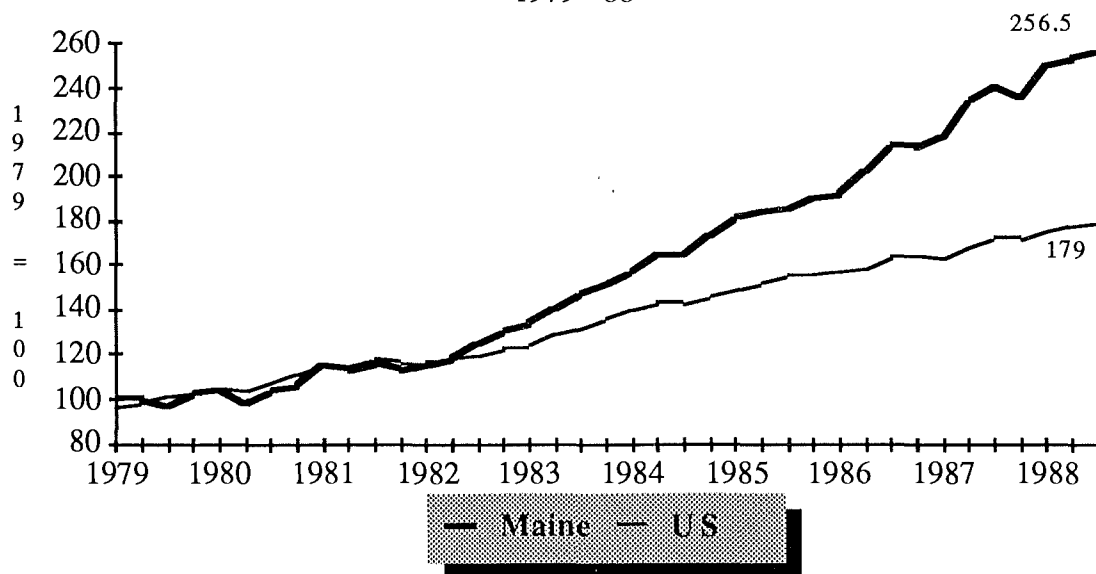
The state's changing industrial sector began to show the effects of severe international competition during the years of the strong dollar from 1979 to 1985. Potatoes, footwear, lumber, apparel, electronics and paper firms were affected. In the case of trade with Canada, bitter disputes arose over Canadian government subsidies of various kinds to eastern Canadian potato, fish and lumber industries (Konrad, et al. 1986).

Several Maine industries followed a national trend of closing marginal capacity and of pushing unions for givebacks and a new era of bitter labor relations unfolded. Making matters worse was the need to address a workers compensation system that had become a national model of excessive cost, poor case management and runaway insurance rates. Several bouts of legislative and courtroom confrontation between employers, insurance companies and organized labor made headlines and embittered labor-management relations.

The tourism industry began to become more visible as its real estate component strengthened in the early 1980s. An expanded promotion program was one result of the industry's growing importance and assertiveness. In the more congested beach, ski and resort towns, however, a skeptical mood began to emerge that began questioning whether the public benefit/cost arithmetic of this industry had been thoroughly done.

Fig. 13

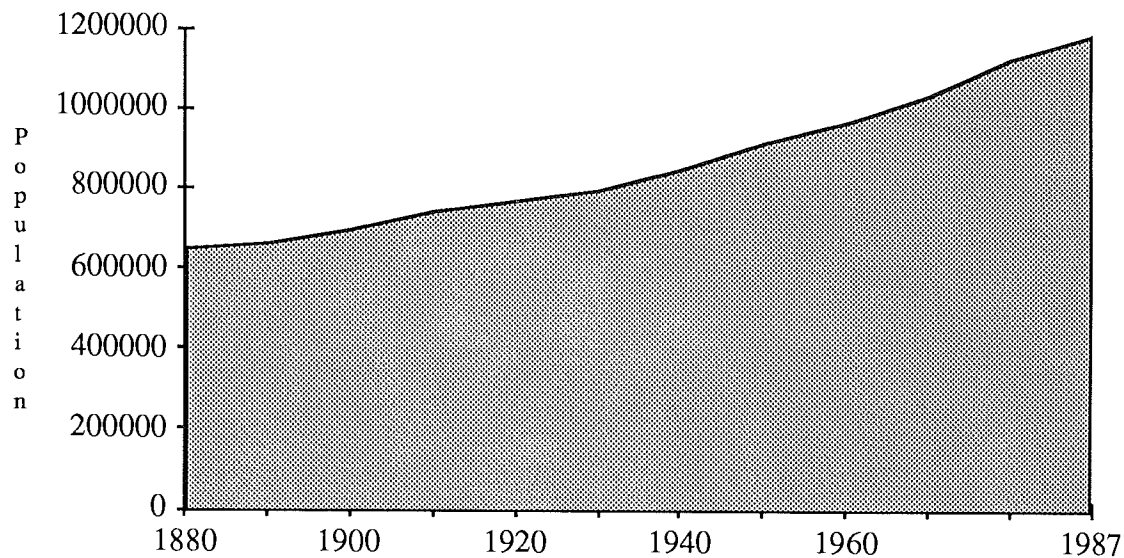
Index of Retail Sales
1979 - 88



Source: Maine State Planning Office, 1988 Year End Review

Fig. 14

TOTAL MAINE POPULATION
1880 - 1987



Source: Maine Department of Human Services

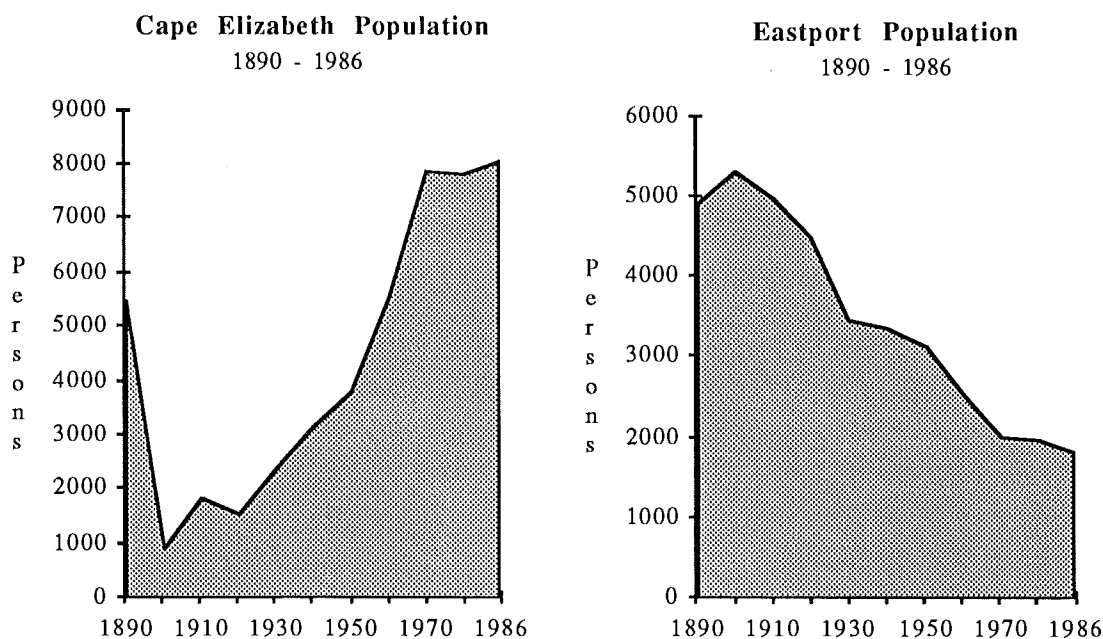
The state's slow population growth since World War II had helped it cope with public facilities and educational problems, though the major blue-ribbon bodies reviewing education and the University in the early 1980s found much in need of improvement. And detailed reviews of the state's infrastructure called for increased reinvestment in facilities as diverse as sewers and local bridges (Veazie, 1984; Irland, 1986). In the late 1970s, state and federal funds were channeled into a major effort to rebuild decaying fish piers and other waterfront facilities, including the controversial Bath Iron Works facility at Portland. The proposal to build a major cargo terminal on Sears Island was stalled for years by litigation.

A recent highly visible indicator of prosperity has been the state government fiscal surplus, resulting from revenue growth and federal tax changes. The government sector, largely because of the stabilization of school populations and the topping out of federal transfers to state and local governments, stabilized in terms of employment in the late 1970s.

The early 80s saw a new awareness of geographic disparities within Maine's prosperity -- the term "Two Maines" came to be more widely used. In the worst recession

days of 1981-82, unemployment rates of 14% in the worst labor markets contrasted with rates of 4 and 5% in the most prosperous ones. But by the mid-eighties, these disparities, at least on published statistics, had markedly diminished. These differences can be illustrated by the differing trends in population in a sample of communities (Figs. 14 -16).

Fig 15



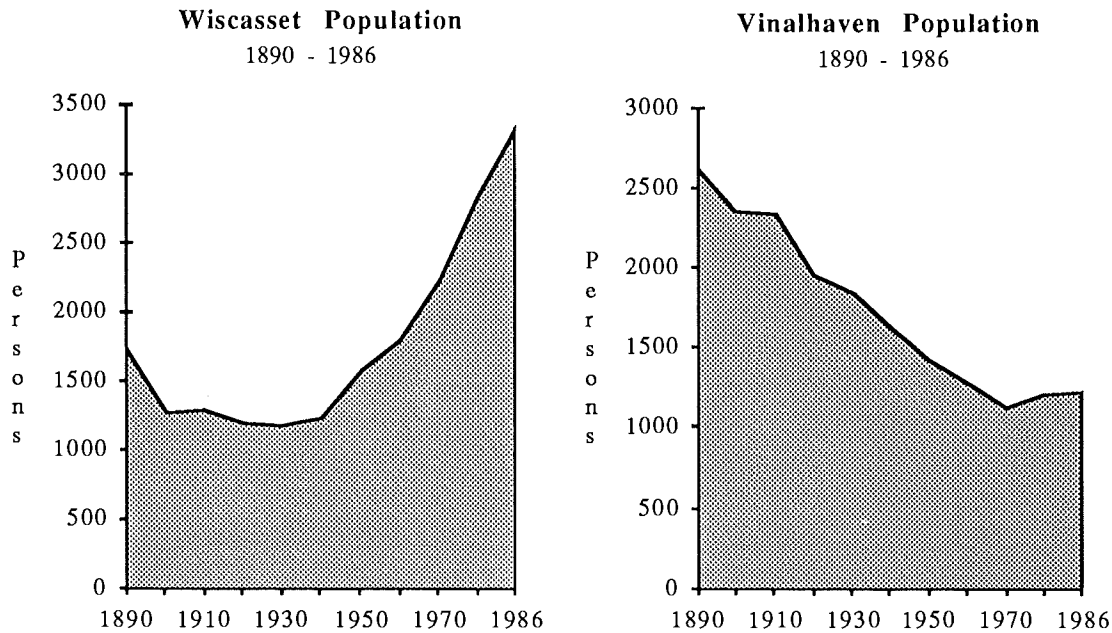
Source: Maine Department of Human Services

Cities and Landscape

By the early 80s, with the help of federal funds, more and more downtowns were receiving facelifts. The growing retail and service economy began to reoccupy previously derelict downtown space and to gentrify blighted neighborhoods. New social strains arose and a successful referendum campaign was waged to slow the condoization of Portland's waterfront. This was by no means the only example.

This period was one in which the former dependence of many communities, large and small, on a single plant or industry was finally ended with significant diversification of employment bases in town after town.

Fig. 16



Source: Maine Department of Human Services

This period saw significant urban improvements in the form of new marks of prosperity -- major Civic Centers, art museums and theaters. These added to the bustle of convention business and helped revitalize evening and weekend life. In pleasing contrast to dreary suburban malls and tacky commercial strips, many downtowns saw fine brick buildings restored with new tuckpointing and paint. If this revitalization was a bit too dependent on federal dollars and a bit too overdone in expensive restaurants and boutiques, nonetheless it radiated a new vibrancy and optimism in Maine's urban life. The effects on those pushed aside has received only occasional and muted attention, but affordable housing and the problems of the homeless were the subject of a special study (Task Force on Affordable Housing, 1988).

The construction industry added 10,000 jobs between the late 1970s and 1987, due to downtown office and gentrification projects, to a boom in discount malls, to suburban large-lot homebuilding and to a rural, coastal and resort area condo, second home and subdividing boom. A new sector of entrepreneurial firms arose -- firms of skilled developers, savvy in marketing and finance, who began rebuilding not only Maine's downtowns but its lakefronts, mountains and shores. Real estate, its supplier and financing industries, became a growth sector. This has had a positive effect on many

downtown streetscapes which have been rescued from decay and have added to urban tax bases. The pace of improvement in some downtowns has been startling.

Condominium complexes in Old Orchard Beach, on the Portland wharves and around ski areas vividly illustrated the land boom sweeping over the state. The boom had its roots in the speculative mini-boom of the early 70s, quickly snuffed out by the 74-75 recession and gasoline shortages.

Evidence of the depth and sweep of the rural and wildland landboom came as the shores of Moosehead Lake and Campobello Island were subdivided and sold to wealthy buyers. Negative publicity about the ubiquitous subdividers prompted uneasy responses among citizens concerned with the state's traditional rural landscape which had so long been taken for granted. Protests over paper company leases of lots to sportsmen's clubs and court action over public use of Moody Beach in Wells brought additional publicity. Finally, several major sales of forest industry lands generated widespread concern that the traditional ownership pattern and public access system in the Maine woods was in danger of unravelling. A Governor's Commission on Outdoor Recreation recommended Maine's first large-scale, general purpose land acquisition bond issue; it was resoundingly passed.

The brisk demand for Maine real estate is one of the sources -- in uncertain measure -- of the state's current prosperity. The longrun implications for its economy are unclear and serious analysis is lacking. There is serious question to what extent the wildland subdivision boom is really "development" in contrast to temporary growth by asset liquidation instead of longrun growth by true productive investment. Public unease about the land boom has spawned an initial state program of "growth management" that begins to address longterm planning issues.

Transportation

Transportation remains a key theme in Maine economic history. The dominance of trucking, especially after deregulation, continues to cause the shrinkage of Maine's rail system. Rail line closings are a significant psychological blow to affected communities, though they have rarely proven a serious economic blow. The boom of the early 80s led to escalating peak period congestion on the Maine Turnpike, which in turn generated pressure for a massive widening and interchange program. Several increases in the gasoline tax were needed to begin catching up on the highway and bridge repair backlogs the state

accumulated. Downtown traffic congestion is an escalating concern in many communities, even as more remote communities agitate for better links to the prosperous I-95 corridor.

The growing importance of air travel has been a dramatic example of the overshadowing of old transport modes by the new. The increasing service and traffic levels at the Portland Jetport allow travelers to visit New York and return in single day. Good connections from Bangor to many eastern cities have improved that city's access for business people and thereby improved the city's growth prospects. The success of Maine's major airports has benefitted the entire state economy.

Changing Industrial Structure, 1969-85

We can observe the shifting structure of the Maine economy by examining trends in the sectoral composition of Gross State Product (GSP) from 1969, a year late in the previous period, to 1985 (Table 7). The comparison shows several important points. First, it shows the relatively small contribution of major resource based sectors when compared to the total Maine economy. Second, it illustrates the growing importance of services, while trade remained a stable fraction of GSP. Despite the construction boom, as of 1985, that sector had not in fact increased its GSP share. The slight decline in the share of government after 1975 is noteworthy, as is the steady decline in the proportion of farm product.

Manufacturing diminished as a GSP share from 1969 to 1975, but actually increased a bit after 1975, in clear contradiction of the commonly held view that the recent boom has been entirely service driven and has resulted in a diminished role for manufacturing (see World Bank, 1987, chs. 4, 5 and US Congress, 1988, ch. 5).

The post-1974 recovery is not over yet. It has been fuelled, first by the defense buildup of the early Reagan years and later by the extraordinary prosperity and escalation in real estate values in eastern Massachusetts and southern New Hampshire. Those forces not only created the equity capital driving the Maine land boom but created labor shortages and high rent levels driving many forms of industry to new more rural locations. Housing affordability became an issue (Task Force on Affordable Housing, 1988).

Table 7
CHANGING STRUCTURE OF THE MAINE ECONOMY, 1969-85
Percentage Distribution of Gross State Product

SECTOR	1969	1975	1985	1985/1969 (Growth)
AGR FOR, FISH & MIN	1.3%	1.5%	1.3%	4.22%
CONSTRUCTION	5.2%	5.7%	5.5%	4.37%
MANUFACTURING	29.6%	23.6%	23.9%	3.36 %
TRADE (W,R)	17.2%	18.0%	17.5%	4.24 %
FIN, INS , REAL EST	11.1%	11.0%	11.8%	4.43 %
TRANSPORTATION	3.5%	3.3%	3.4%	4.09%
COMM & PUB UTIL.	4.6%	5.3%	4.9%	4.38%
SERVICES	10.3%	12.2%	15.3%	6.18%
GOVERNMENT	14.2%	16.8%	15.0%	4.40%
FARM	3.3%	2.5%	1.4%	1.78%
TOTAL GSP	100.2%	100.0%	100.0%	4.16%
TOT. REAL GSP \$Bill	8.5%	9.7%	13.2%	1.55%
REAL US GNP \$Tr.	2.4%	2.7%	3.6%	1.50%

Source: Federal Reserve Bank of Boston, Gross State Product, New England, 1969-1985.

The growth of the 1980s helped generate new environmental concerns even as it highlighted the importance of old ones. Social conflict mounted over where and how to dispose of wastes -- toxic and otherwise -- and where to locate treatment plants. With state, federal and local dollars, the easy pollution control problems were solved -- virtually every major community now has its secondary treatment plant. But the costly problems remain: groundwater protection; toxic dump cleanup; solid waste management; the deteriorating condition of Casco Bay. It has proven to be easier to close the open burning dumps than to devise longrun solutions for the growing waste stream.

Shortly after Earth Day (1970), Maine entered the nuclear age as Maine Yankee began generating in 1972. Debates over state energy policy and over nuclear waste disposal have become a steady feature of the state's politics. Debates over dams have been recurring themes in Maine environmental politics, but energy policy and waste disposal have become far more complex and frustrating.

The effects of rising land prices and a somewhat more crowded society have raised a new problem -- public access to land. In a rural society, hunters walked across farmland unhindered. In the northwoods, they hunted where they pleased, taking these opportunities for granted. But the ability to walk over rural land is increasingly obsolete in today's land market, outside of the wildlands. The rapid spread of development and of wildland subdividing has brought to a head the evident inadequacy of the planning and growth management tools of most Maine communities. Rising rural land values and downtown gentrification have spawned a new social problem and barrier to further growth -- a widespread shortage of affordable housing.

The issues that must be faced are not merely technical ones of planning and administration ... they are basic social questions about how decisions will be made, what values will guide the future, how people will get along together and how legitimately conflicting values will be balanced.

VI.

ENDURING THEMES FOR THE FUTURE

This review of Maine's economic history suggests a number of hypotheses regarding new problems and strains that Maine will have to manage in coming decades.

First, the state will increasingly be managing the problems of prosperity rather than those of poverty ... growth management instead of decline management. The strains caused by growth, loss of open space and recreational access and gentrification of downtowns, the coast and lakefronts are symptoms of prosperity in the specific form of a vast new land boom. The extremely low unemployment rates in southern Maine labor markets (New Hampshire has the lowest rate in the nation) create entirely new realities for economic growth and social change. Managing labor shortage is an entirely different matter than managing labor surplus.

The localized nature of this new prosperity creates a need to continue to manage the "Two Maines" problem of regional disparity.

In a context of managing prosperity, a clearer understanding of the role and prospects of the dynamic new service and retail sectors must be reached. Ironically, it is in these growing sectors that the many state and federal economic development programs have had the least impact. In fact, the service sector is even poorly counted in the economic statistics.

Managing and understanding growth in the future will require better economic analysis and better ways to measure accurately how the workforce, employment patterns and industry trends are shifting.

The age structure of the population will change. The implications for all aspects of social life and getting a living in Maine are many and poorly understood. Someone will need to be carefully watching.

Quality and access issues -- in contrast to the quantity issues of the past -- will come increasingly to the fore (See, e.g Barringer, et al. 1988). Quality and availability of health care, education, recreation opportunities, landscape and culture will deserve a higher place on the state's public agenda. The importance of quality of life as a job generator, as a basic strategic asset, is becoming more widely appreciated.

Managing and enhancing the quality of the landscape and environment will become more costly and fraught with conflict. Already rebellions against land use regulation are being mounted. Maine communities have solved many of the easy problems. They have built the sewage treatment plants -- where will they put the resulting flow of sludge? How will the increasing cost of land and the increasing level of out- of-state ownership, affect our ability to resolve these issues?

Finally, an investment gap needs to be filled. In both our public and private lives, we have been consuming capital by failing to reinvest adequately. Crafting policies to redress this imbalance will demand high political leadership and social skill. Failure to fill this investment gap, which appears in our housing stock, our industrial plants, our bridges and our human capital, will cause the state and its citizens to lose the golden and possibly fleeting, opportunity for longterm social improvement that the present boom presents.

VII.

NEW PROBLEMS & STRAINS

The changes reviewed between 1600 and 1988 suggest a number of patterns of stability and change that can be counted on to continue in the future.

First, Maine has slowly returned to a position of being significantly involved in world trade as it was a century ago. The nation as a whole is more affected by trade and Maine companies small and large are becoming more active in exporting. This fact alone is full of implications for the state's private and public life.

Second, changing needs and demands in transportation will be important to future directions of the state's growth as in the past. In particular, adequate maintenance and upkeep of the existing system will be critical. Maine has proved in the past to be adaptable to change in its major transport systems -- steamer services and railroads -- and will do so in the future.

Third, Maine will continue to be seen as a location for low cost labor and land. If Maine people want to enhance the level of living and economic opportunity for future citizens, they must expand the state's base of economic attractiveness beyond that narrow and unsustainable basis.

Maine's economy has demonstrated extraordinary flexibility in responding to hammer blows against its basic industries. To successfully weather future blows will require additional increases in our investments in education and training and devising other ways to promote labor force flexibility and adaptability. Maine's past ability to grow in a climate of a surplus of low-to moderately skilled labor may not suffice in the future.

Maine remains heavily oriented to manufacturing, a fact of its life rooted deeply in its history. Making things well is part of the state's culture. This basic bedrock fact and its cultural roots, cannot be cast aside lightly. The many changes and opportunities presented by the emerging service and trade sectors, however, must be embraced as well. A growing

service sector has much to offer in helping manufacturing and resource industries remain competitive and service firms are attracted to quality of life areas like Maine.

Finally, the state's growth and development will continue to be affected by its dependence upon outside sources of capital for all forms of investment. This, like the previously mentioned regularities, has not changed over the centuries.

The current boom, like all the others, is unsustainable. It is time to be thinking, what will remain for the future; what can be done to make the most of this fleeting moment of prosperity, to secure a more stable future?

Maine's recent growth has been powerfully based on a superior quality of life, expressed in a pleasing, rural and natural landscape, in access to shores, bays and woods and in smaller towns with a slower pace of life. This quality of life directly reflects basic resource values and how people in the past have owned and cared for the land and water.

The side effects of Maine's prosperity since 1975 threaten this basic source of future prosperity. The essentials of quality that are so important are cheap to lose at a quick profit, but exceedingly costly if not impossible to recreate once lost. In this high-tech, service oriented age, Maine has not freed itself from this fundamental dependence on the health of its land, forests, rivers, islands and sea. In this we share the lifeways of the early colonial fishing and farming hamlets. We cannot repeal our history.

The land, lakes, rivers and islands will endure. They have framed the opportunities, choices, lives and deaths of people for these four centuries and will do so for another four. In what condition will our generation pass this priceless heritage to the future?

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Bibliographic Note

In this survey it was not practical to consult and cite the many works that bear on Maine's economic history. Items suggested to me by reviewers and by more own further reflection included: Judd's book on Aroostook forests; MacLane's volumes on the islands; Leamon's book on Lewiston; H. Wilson, the Hill Country Farms of New England; Schriver and Smith and R. Banks's compendia of articles on Maine history; and a number of specialized works on maritime and shipbuilding history as well as politics and labor relations. Generally the abundant town histories are not written with the economy in mind. They are useful when studying local areas and for chronology of important events, firms, and individuals. Histories of individual firms are also useful. There has been little effort to work through and collate economic data from such diverse sources as fisheries commission and customs reports and the social and economic censuses. Because of changes in coverage and definitions, such sources need to be used with care when assembling long time series. Charts shown in this essay should be considered preliminary for this reason.

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