

The Importance of Maine's Economic Ties with Canada: Some Thoughts Related to the East-West Highway

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Whether to build an east-west highway across Central Maine has been widely debated in recent months and, regardless of where one stands on the issue, all agree it is important to study the idea further. In this article, Richard Mueller addresses Maine's economic linkages with Canada and assesses how an east-west highway would affect them. In particular, he focuses on cross-border traffic flows, inter-provincial truck activity, Canadian-American trade, and tourism. He concludes there is little doubt an east-west highway would bring economic benefits to Northern and Central Maine. Yet he cautions policy makers to consider the investment carefully. Highways are two-way streets where economic benefits can enter as well as leave the state, and determining the magnitude of the costs and benefits requires further study. In the future, MPR intends to feature more articles on this topic.

INTRODUCTION

In his recent State of the State address, Governor King recognized the economic disparity between northern and southern Maine when he pursued the theme of "One Maine." Part of his program to minimize the economic differences between the two Maines is an upgrading of existing east-west highways through Central Maine, with the construction of a new highway through the region possible at some time in the future. An east-west highway would travel through some of the poorest counties in the state. Not only are these counties poor by Maine standards, but they are amongst the poorest counties in the entire nation. Franklin, Penobscot, Oxford, Somerset and Washington counties all have per capita incomes below the state average, while poverty and unemployment rates are above the state average ([Chart 1](#), [Chart 2](#), [Chart 3](#) on pages 58-59). The lack of such a highway has been blamed, at least in part, for the lack of economic development in Northern Maine. The Maine Turnpike is often credited with contributing to the economic development of Southern Maine, and it is hoped that an east-west highway to the north will bring similar economic benefits to this region.¹ Similarly, the proposed southern leg of the highway would link Maine with New Hampshire and Vermont following the existing Route 2 that crosses all three states. Both of these states have recently expressed interest in the highway since it is hoped that it too would likely travel through, and bring economic benefits to, some of the poorest counties in these states.

Although such a highway has been proposed and studied numerous times in the past, economic conditions have changed markedly in the past few years, making reopening the case for consideration of such a project seem highly warranted. Previous studies were largely conducted before the increase in trade that has occurred as a result of the Canada-United States Free Trade Agreement in 1989. Furthermore, the share of this trade using trucks as the mode of

transportation has risen. As a result, increased traffic flows between Canada and the United States, in general, and Eastern Canada and Maine, in particular, have occurred and will likely continue well into the next century.

Previous analyses of such a highway also have tended to focus almost exclusively on the costs of the project with limited discussion of the positive economic spin-offs that such highways bring. Given the expense of such projects, it is not surprising that these costs have been paramount in the minds of policymakers. Cost estimates have been relatively easy to quantify and are often large and intimidating. By contrast, economic benefits are much less tangible, tend to be dispersed throughout the state, and are difficult to estimate without complex modeling and somewhat liberal and often imprecise assumptions.

Unlike any other state in the union, Maine is in a geographically unique situation. Surrounded on two sides by a foreign country, the success or failure of the project is inextricably linked to Canada. With economic growth on both sides of the border - along with the increased trade between the two economies - Maine has closer economic ties with its neighbor today than at any other time in history. The provinces of Ontario, Quebec and New Brunswick, Maine's most important Canadian trading partners, have a combined population of almost twenty million with per capita incomes rivaling those of the United States (see [Map](#) on page 60).

An efficient east-west highway would be used extensively by Canadian automobile and truck traffic, since it would offer the shortest distance between the populated areas of Quebec and New Brunswick. This fact was not lost on the Canadian Pacific Railway when they laid track through Northern Maine in the last century. Depending on the final routing of the highway, it could reduce the mileage of a trip from Saint John, N.B. to Montreal by about one hundred fifty miles, compared to a route entirely through Canada. Similarly a trip between Sussex, N.B. and Montreal could be shortened by over one hundred miles. If the road were to be built to interstate highway standards, the time savings could be significant versus any existing route. This is especially important for trucking companies whose travel routing is very sensitive to operating costs.

This article addresses those economic linkages with Canada that likely would be the most significant if an east-west highway were to traverse the state. This article does that first by looking at existing and projected traffic flows between Canada and the United States; second, by addressing inter-provincial truck traffic in Canada (since a significant amount of this would likely traverse Maine with a modern highway); third, by examining existing and projected trade flows between Maine and Canada; and, finally, by discussing the potential for increased intermodal linkages and increased tourism that could occur with a new highway. It is worth noting that this article concentrates on the state's economic linkages with Canada. In essence, it focuses on the economic implications for Maine that might stem from the northern leg of the proposed highway. The southern leg, which would link Maine with New Hampshire and Vermont, is beyond the scope of the present analysis, although any lessons learned could also be applied at least in kind if not in degree to the southern routing of the highway. The present work also has little to say about the magnitude of economic benefits that could accrue to various

counties within Maine if the highway were to be built. Determination of such benefits requires a much more comprehensive work. Rather, the purpose of this article is to focus on some of the state's economic ties with Canada and how these might be enhanced with an east-west highway.

TRAFFIC FLOWS BETWEEN CANADA AND MAINE

Traffic flows between regions are difficult to obtain using existing published data. Although we have a good idea how many vehicles cross the border, and even what the growth of cross-border traffic has been, we know little about the origin and destination of automobile and commercial truck traffic. Detailed surveys are necessary to arrive at good estimates of traffic flows along various routes, especially as we move further away from border crossings. This is especially true of Maine-New Brunswick border crossings where same-day trips dominate. Accurate counts are also important to make reasonable projections of future traffic flows along various corridors. To the best of our knowledge, recent traffic estimates and projections do not exist for flows through the proposed corridor.

We do know that Maine has some of the busiest border crossings along the Canada-U.S. border. In 1995, the border crossing at Calais admitted a total of 1.8 million westbound vehicles. Of the one hundred twenty border crossings between the two countries, Calais ranked as the eighth most-used entry port for vehicles entering the United States from Canada. The crossing at Madawaska ranked thirteenth in the same year with some one million vehicle entries. In addition, the border crossings at Calais, Jackman and Houlton ranked tenth, eleventh and twelfth, respectively in total truck crossings from Canada in 1995. Only entry points in the states of New York, Washington, and Michigan had larger volumes (PBQ&D, 1997).²

Both automobile and truck traffic volumes have been increasing. In the period 1984-95, bidirectional traffic flows in the border area from Quebec to New Brunswick in Canada, and Vermont to Maine in the United States, increased dramatically: automobile crossings by 25% and truck crossings by 61.9% (PBQ&D, 1997). Activity at Maine border crossings has also risen markedly, although to a lesser degree than the national average. Total crossings between Canada and Maine increased by 11% through 1986-96, with truck crossings increasing by over 40% during the same period. Comparable totals for all border crossings between the United States and Canada are 32.8% and 59%, respectively.³ Thus, traffic flows through Maine border crossings have not increased to the same degree as the national average. This factor could be due to New England's prolonged recession in the early 1990s, the availability of other modes of transportation for freight, and better alternative routings for both automobile and truck traffic. In fact, there is some anecdotal evidence that suggests that this latter consideration may be important. Apparently road atlases used by truckers for assistance in trip planning do not have a recommended east-west route through Maine. Similarly popular trip-planning sites on the Internet do not generally recommend traveling through Maine when traveling westbound from points in Atlantic Canada or points eastbound from Quebec.

What these data do reflect, however, is the general increase in the use of trucks in the shipment of goods. This has been due to the deregulation of the motor carrier industry and the development of "just-in-time" delivery systems. This growth has come almost exclusively at the expense of railway transportation and is expected to continue throughout North America, the

result of the competitiveness of the trucking industry and also a movement toward a greater proportion of high-value, low-bulk shipments which normally favor truck transport over rail and marine transport.

INTER-PROVINCIAL AND CROSS-BORDER TRUCKING ACTIVITY

In addition to the likelihood that an east-west highway would generate additional traffic because of cost reductions for in-state shippers as well as the increased traffic owing to a general increase in economic activity in the state, additional traffic is likely to be diverted from Canada. As mentioned above, a highway through the state could reduce the distance traveled between Montreal and Saint John by one hundred fifty miles. Compared to automobile traffic, truck traffic is very sensitive to costs and normally will take the routing that results in the lowest cost, in terms of both direct operating costs and in terms of time savings. These latter savings are increasingly important as competition in the trucking industry increases, and drivers are under more pressure to meet delivery deadline. Thus, freight shipments that currently use trucking companies for moving goods between provinces would now elect to use a highway through Maine.

As a starting point, it is useful to have some idea of the existing traffic volumes between provinces in Canada. [Table 1](#) shows the number of shipments of freight transported inter-provincially in 1993. In particular, the shaded areas show the volume of truck traffic that could potentially have traveled through Maine as the state lies between the province of origin and the province of destination. Adding these amounts gives us the total number of shipments that could have traversed Maine if all relevant inter-provincial traffic were to be diverted through Maine. Thus, we have about one million shipments that could have come through the state in 1993. Still, the data on border crossing presented above, combined with additional data on cross-border shipments, suggest that little of this inter-provincial truck traffic is currently moving through Maine.

In addition to interregional trucking activity within Canada, there has been an increasing number of Canadian trucks crossing the border into the United States. This is the result of the deregulation of the trucking industry in Canada in 1987 (the National Transportation Act), as well as the implementation of the Free Trade Agreement between Canada and the United States beginning in 1989. Furthermore, the North American Free Trade Agreement (NAFTA) has spawned alliances between Canadian and American firms so as to better serve Canadian, U.S. and Mexican markets.

As a result of these policy and regulatory changes there has been a 34% increase in the cross-border tonnage shipped by Canadian-based, for-hire trucking firms from 1990 to 1993 (Statistics Canada, 1995a). Of the 32.6 million metric tonnes (mmt) that crossed the border in 1993, about 20 mmt were southbound. About 1.8 mmt were shipped from the Atlantic provinces, with an additional .6 mmt destined for these provinces. These shipments represented some 70,000 outgoing and 37,000 incoming trips from the Northeast region in the United States, and these data are only for a limited number of Canadian-based trucking firms. If we added smaller trucking firms and private trucking firms based in Canada, as well as shipments by American-based trucking firms, and included traffic from the Northeast into and out of Quebec, these totals would be much larger. Indeed, they would likely account for almost all truck border crossings.

Thus, although these data are far from ideal, they do further underline the point made above that very little inter-provincial trucking activity appears to traverse Maine, but rather travels exclusively within Canada.

TRADE FLOWS BETWEEN MAINE AND CANADA

International trade is an important component of the Maine economy and is increasing in importance. Trade with Canada has historically been and continues to be the state's most important trading relationship and most of this trade has been with only three provinces. For example, in 1996 New Brunswick, Quebec and Ontario accounted for almost all of Maine's total imports from and exports to Canada (Industry Canada, 1998).

Aggregate import and export data for the years 1988 and 1992-96 (the most recent year for which data are available) for all border states including Maine, as well as aggregate data for Canada and the United States, show that exports from Maine to Canada increased by 94.8% in nominal terms between 1988 and 1996 (a greater percentage change in exports compared to both the average for all border states and for all of the United States). The proportion of exports shipped by road also increased marginally between 1988 and 1993, from 91.2% to 94.4% (Statistics Canada (various), and Industry Canada, 1998).

Imports from Canada to Maine increased by only 55.1% between 1988 and 1996, but 75.4% from 1992 to 1996. These data at least partially reflect the recession of the early 1990s in New England. Compared to all border states, Maine's imports from Canada gained ground by increasing by a greater percentage over the 1992-96 period. Imports to Maine from Canada, however; are much less dependent on truck transportation than exports to Canada, although these too have increased in importance from 46.9% of imports in 1988, to 54% in 1993. This lower utilization of truck transport for imports reflects the volume of petroleum and petroleum product imports from Canada which are largely transported by other modes. Although these trade data do not suggest that Maine has lagged behind other regions in trade growth with Canada as we might expect in the absence of appropriate transportation links, they do suggest that deficiencies in infrastructure may have limited recent trade flows and could stifle future trade growth. A recent study commissioned by the Eastern Border Transportation Coalition notes that total trade between Canada and the United States is projected to rise from CDN (Canadian) \$347 billion in 1995 to CDN\$652 billion in 2015 (PBQ&D, 1997). As a result, eastern border vehicle crossings (those from Michigan east), which currently account for 70% of all crossings between the two countries, are expected to increase further, from 8 million trucks and 57 million cars in 1995, to 16 million trucks and 66 million cars in 2015. The report notes that congestion along trade corridors and at border crossings is likely to increase as well.

The same study also identifies a number of corridors between Canada and the United States that are of "substantial regional economic importance and whose crossing points carry high annual truck volumes..." These include the three routes from Calais, Houlton and Jackman to Portland in Maine, as well as St. Stephen to Saint John and Woodstock to Fredericton in New Brunswick. These corridors, however; are significant mainly in terms of truck traffic originating in either Canada or the United States, and destined for the other country. These do not include the

importance of inter-provincial travel between New Brunswick and Quebec. The study also includes the Calais/St. Stephen border crossing as one with crossing deficiencies caused by the narrow streets through which international traffic is funneled.

In short, trade between Canada and Maine has grown and this growth is likely to continue into the future. The proportion of goods being shipped by truck also has increased. Although highway deficiencies do not appear to have inhibited trade to date, the growth in goods shipped by truck could quickly overwhelm existing highways and border crossings. This would increase the costs of shipping goods on either side of the border and restrict future trade growth.

INTERMODAL TRANSPORTATION LINKAGES

Another intuitively appealing linkage with Canada that could prove economically beneficial to Maine is intermodal traffic linkages in the state. Rail, marine, trucking and air transport are playing more complementary roles in freight transportation. Traditionally, rail and marine have been the preferred carriers of bulk, low-value commodities that are transported over long distance. By contrast, trucking is for short-distance, high-value manufactured goods. However, recent developments in containerization and trailer on flat-car (or trailer on rail-car, TORC) service have strengthened the ties between these modes. Air transport also has become more important, with intermodal linkages being developed throughout North America.

The development of an east-west highway could facilitate the development of these intermodal linkages in Maine. Currently, plans are underway to revitalize the port facilities at Mack Point, which are to tie-in to the Bangor & Aroostook Railroad. The new port, which could include container as well as the usual bulk cargo facilities, could be serviced by both existing railways as well as by truck traffic. There are also containerized port facilities at both Portland and Eastport. Intermodal truck/rail facilities exist in Auburn and Waterville, while Bangor and Hermon have added a third site for intermodal traffic. The airports at both Portland and Bangor (and possibly Brunswick) could complete these linkages.

The extent to which such facilities would be utilized would again likely depend on the amount of freight traffic originating in Canada. In 1995, 361 mmt of marine freight originated in or were destined for Canada. About 260 mmt were the result of trade between Canada and other countries. The remaining 101 mmt were traded within Canada. Ports in Eastern Canada (mainly those along the St. Lawrence and those in Atlantic Canada) accounted for about half of this tonnage, with the remaining ports-of-call in the Great Lakes area or along the Pacific Coast (Transport Canada, 1997).

The obvious question for Maine is whether significant amounts of this tonnage may ultimately be shipped through Maine ports. To phrase this differently can Maine ports be competitive with Canadian facilities and expect to benefit as the result of the diverted shipments via an east-west highway? That 175 mmt of goods were shipped through Eastern Canadian ports in 1995 means that some of this tonnage could be directed towards Maine if a highway were to traverse the state. This appears to be unlikely for a number of reasons.

First, as with rail transport, marine transportation has a comparative advantage in shipping products with a low-value bulk ratio. This means that very few goods are likely to be shipped to Maine from Canada via truck in order to then be transported out of one of Maine's three major ports. Most of the commodity flows through Eastern Canadian ports have low-value bulk ratios. Goods such as iron ore and grains are routinely shipped via rail to Canadian ports, where facilities exist to off-load this cargo to waiting vessels. It does not appear that it would be cost-effective for these goods to be shipped through Maine.

Second, Maine's largest port, Portland, although only somewhat smaller than those in Eastern Canada, is heavily dependent on petroleum-product imports for the majority of its freight traffic. The same is true of the other ports in Maine. Thus, these ports currently specialize in handling petroleum-product imports, not the bulk and containerized cargo that is common at the Canadian ports. This may explain why the Port of Montreal, which does have these facilities, is currently used by many New England shippers.

Third, the structure of the marine shipping industry makes it unlikely that international shippers would add regularly scheduled service to any Maine ports. Several international shipping companies have scheduled service to a variety of ports-of-call along eastern North America. Several lines, for example, have ships originating in Northern Europe, with scheduled service to Halifax, New York, Wilmington, and Baltimore before returning to Northern Europe. This type of service allows the shipping line to serve major and minor markets, with minor markets being linked to large ports-of-call by surface transportation or marine feeder services. Adding additional ports-of-call can be costly from the point of view of the shipping companies. This is because ships in port do not earn revenue. Increasing the shipping cycle by adding additional stops may make it difficult for the lines to offer an acceptable frequency of service to shippers.

Finally, attracting ships into any of Maine's ports could be a relatively difficult and risky venture. In particular, large container ships are not concentrated in smaller markets. Most companies consider ports such as Halifax to be marginal. Even ports the size of Boston see few container vessels since it is more economical to have goods transported from New England to New York via truck or barge. Furthermore, over the last few years major shipping lines have been very dynamic in modifying their service schedules, with little stability in ports-of-call. This has resulted in intense competition between ports for shipping line clients. Ports have upgraded facilities and offered better linkages with rail and truck terminals, all without any long-term use commitment by shipping lines (Slack, 1995).

In conclusion, it is improbable that the introduction of an east-west highway would result in significantly increased traffic flows at Maine ports, at least as far as diverting traffic from Canadian and other Atlantic ports in the United States. Maine ports are at a locational disadvantage compared to existing North American ports; indeed, they have relatively poor rail linkages, and are specialized in handling oil imports. By contrast, Canadian ports, and those along the Eastern seaboard in the United States are generally larger, have better rail connections, and handle a variety of cargo (especially the containerized cargo which is increasing in importance). Even if port facilities were to be upgraded, these are expensive and there are no guarantees that international shipping companies would utilize these services.

This is not to imply that there would not be any positive benefits for intermodal activity in the state, only that the probability of significant expansion in Maine's ports would appear remote given the existing infrastructure in Canada and the United States. Maine's three major ports have in fact handled increasing cargo volumes over the past few years. According to the Maine Department of Transportation (1998), growth in these ports has averaged 7.6% annually over this period, due in large part to Maine shippers using these facilities rather than out-of-state and Canadian ports. An east-west highway would reduce the costs of shipping goods via truck to and from these facilities. The success of the Portland container feeder service to Halifax gives reason for optimism that smaller shipments originating in and destined for Maine can be successfully linked to larger ports.

A concerted effort to develop intermodal service in the state could also benefit the state in other ways. In particular, Maine could take advantage of its geographical location with the development of an east-west corridor. Maine is geographically central to the population bases in Ontario, Quebec, and Atlantic Canada, and also to southern New England. An east-west corridor, coupled with complementary intermodal, rail, marine and air transportation, along with low land costs, makes the state a logical choice for distributors and manufacturers wanting to service these markets. On balance, however; as favorable as an east-west highway would be for these facilities, it appears unlikely that there would be a large increase in the use of Maine's port and intermodal facilities.

CANADIAN TOURISM

Tourism is an important industry in Maine; it brings in billions of outside dollars annually, contributes millions of dollars to state and local government coffers, and generates tens of thousands of jobs. The most recent consulting report on the subject (Davidson-Peterson Associates, 1992) found that tourists in Maine spent an estimated \$2.75 billion in 1991. These expenditures supported some 78,320 jobs in Maine, generated \$1.25 billion in resident income, and contributed taxes of \$209 million to the state and \$109 million to local governments. Of this \$2.75 billion in tourist expenditures, fully \$1.2 billion was spent on retail shopping.

Regionally, however, the benefits of tourism are not divided equally. About \$1.14 billion (or 41.5% of the total) is spent along the state's southern coast, largely the result of the outlet shopping areas at Kittery and Freeport. Visitors spent \$515.8 million in the Downeast/Acadia region with shopping in Bangor a large component of these expenditures.

Similarly, these expenditures were highly concentrated in the summer and autumn months, the traditional tourist season in Maine. Not surprisingly, over one-half (or \$1.42 billion) of these expenditures occurred in the summer season from June through August. The four months between September and December were next with \$771.5 million in tourist expenditures.

To understand the importance of Canadian tourists to the Maine economy we have to look at the numbers from north of the border. In 1994, New England attracted almost 1.8 million overnight visitors from Canada (Statistics Canada, 1995b). Maine is second only to Vermont, both in the number of total visits, and visits of one or more nights. While in Maine, 767,000 overnight Canadian visitors spent CDN\$152 million, an average of almost CDN\$200 per overnight visit.⁴ This is somewhat below the New England average of CDN\$234, but not surprising given the

proximity of Maine to Canada (thus increasing the probability that the average visitor spends less time, and hence less money, in the state). Same-day visitors had 276,000 visits to Maine, spending an average of only CDN\$18 while in the state.⁵

While we have focused on Canadians coming to the United States, flows of individuals from the United States to Canada are also significant. In 1994, a total of almost 1.9 million visitors entered New Brunswick and Nova Scotia by land or ferry from the United States. Each one of these entrants had to enter via Maine. An additional 2.3 million visitors entered Quebec directly from the United States (Statistics Canada, 1995c). Maine residents also spent significant time and money in Canada. In 1996, Statistics Canada recorded 1.7 million person trips to Canada by Maine residents.⁶ These Maine residents spent a total of almost CDN\$93 million while in Canada. Most of these visitors either went to Quebec or New Brunswick, and the majority of these entered by automobile.

One final consideration is inter-provincial travel in Canada. As with the trucking industry, development of an east-west highway would provide a direct route for Canadians traveling between Quebec and New Brunswick. For example, in 1992 there were 396,000 person trips between Quebec and New Brunswick (Statistics Canada, 1994). Potentially this number of Canadians could have traveled through Maine in that year. However; because not all inter-provincial person trips are via automobile and not all would go through Maine, even with an improved road system, this is an overestimate.

Data like these suggest that Canadian tourists are underrepresented in Maine relative to their large population bases within a few hundred miles of the border. Hence, development of the east-west highway would undoubtedly increase the number of Canadians traveling to Maine, not only on an overnight basis, but also as a result of same-day trips.⁷ The highway also would make day trips further into the state more feasible. This could, for example, make the new and larger Bangor Mall only a day trip for residents of New Brunswick, further increasing the importance of the Bangor area as the retail hub of the region. It also opens up the possibility for outlet-type stores along the new highway. The economic importance of these retail outlets in Freeport and Kittery is obvious.

A modern highway would also facilitate the movement of people from New England to Canada, and between points exclusively within Canada. It also makes traveling from Maine to Canada easier for residents of Maine. While the economic impact of those in transit is minimal compared to those who overnight in Maine, it is obvious that these individuals still spend money in the state, if only for gasoline and meals. Tourism is a growth industry and Maine is well-positioned geographically to take advantage of the upcoming boom in tourism. This growth is expected to continue well into the next century as affluent baby boomers continue to reach retirement age. Furthermore, the current trend in vacations is the so-called "mini-vacation," which typically cover a long weekend rather than a one- to two-week stretch. Currently, such mini-vacationers cannot visit many spots in Maine within this brief time. Construction of the highway would make Downeast Maine the closest vantage point on the Atlantic Ocean for the major population centers of Quebec and Ontario. Additionally it would give all tourists better access to many of Maine's attractions-Maine's ski resorts, for example-that currently are not easily accessed by road. Finally the highway would increase the accessibility of Maine's airports that are currently used by a number of Canadians traveling to the United States and internationally.

CONCLUSION

The development of an east-west highway through Maine would undoubtedly bring economic benefits to the region. Whether these benefits would outweigh the costs of such a project is uncertain.

Highways are literally and figuratively two-way streets. As such, an east-west highway would result in injections into the Maine economy but leakages are also a probable outcome. While the development of the highway through Maine would likely be positive in terms of increases in exports from the region to Canada, it is equally likely that imports would increase. Similarly Maine's ports and other transportation facilities may be the beneficiaries of the transportation linkages that would result from a new highway but these same facilities could also be harmed by the new highway. The balance of tourism-dollar flows, however, would likely favor Maine because of the relatively large population centers surrounding the state.

There is little doubt that a modern east-west highway would result in a general increase in economic activity in and around the highway corridor. The construction of any highway reduces the operating costs of those who use the highway thus saving resources that can then be employed for other purposes. This increases general economic activity, which enriches the economies on either side of the border. Whether Maine's share of this increased economic activity would outweigh the costs of the project is not certain. It should also be realized that transportation improvement is only one of a number of factors that contribute to economic development of a region. Other factors such as labor costs, resource endowments (including a skilled workforce), taxation rates, quality of life, energy costs, time delays at border crossings, etc., are also important in determining whether firms will choose to locate in Maine.

What we can conclude with a greater degree of confidence is that Maine has a locational comparative advantage, and an east-west highway would only increase this advantage. It is probable that any highway would be used extensively by Canadians. Maine is placed at the center point between large markets in Eastern Canada and New England, opening up the probability that the state would be at a comparative advantage for manufacturers and distributors that seek to service Eastern Canadian and Northeastern American markets.

In conclusion, this article has examined only several of the factors related to whether Maine should pursue the development of an east-west highway; of course, the larger issue is whether such a major investment would stimulate the economic revitalization of the Northern Maine regional economy, and to what extent. There is little doubt that such a highway would bring economic benefits to Central and Northern Maine; the policy question then becomes whether this is a wise investment. To adequately answer this question a much more comprehensive study is necessary before such conclusions can be drawn. Thinking of Maine as the geographical center of Quebec and the Maritimes is a beginning, but such a project is unlikely to succeed by counting on Canadian traffic flows alone.

Still, the costs of such a project are daunting, while the economic benefits are much less tangible. This article has focused exclusively on Maine's economic links to Canada and how they might be enhanced with the construction of an east-west highway. A well-informed policy, however, would have to address the following questions:

- What would be the economic benefits and costs to the counties through which the highway travels? What would be the effects on the counties where the road does not travel?
- How would these costs and benefits compare to alternative state government investments (such as the expansion of the University of Maine System, for example)?
- What types of complementary policies would be needed to ensure the economic success of the project? What are the costs of these policies?
- What types and amounts of federal money can the state tap to underwrite the cost of the project?
- Similarly, to what extent can toll revenues be expected to contribute to the construction and maintenance of the road?
- Could the private sector become involved in the financing of the project, thus lessening the financial stake and risk of the state government?
- On the western end of the highway, should the Canadian spur, the Northern New England spur, or both, be pursued?

Concrete answers to these important questions will take a great deal of time, effort, and resources. But this will be money well-spent. If the project is deemed to be worthwhile, an initial investment by the state today to answer these questions will ensure that an east-west highway becomes reality sooner rather than later. Similarly, if the project can be determined to be too costly, then proper study today will ensure that future generations of Maine taxpayers are not burdened with having to pay for a four-lane white elephant.

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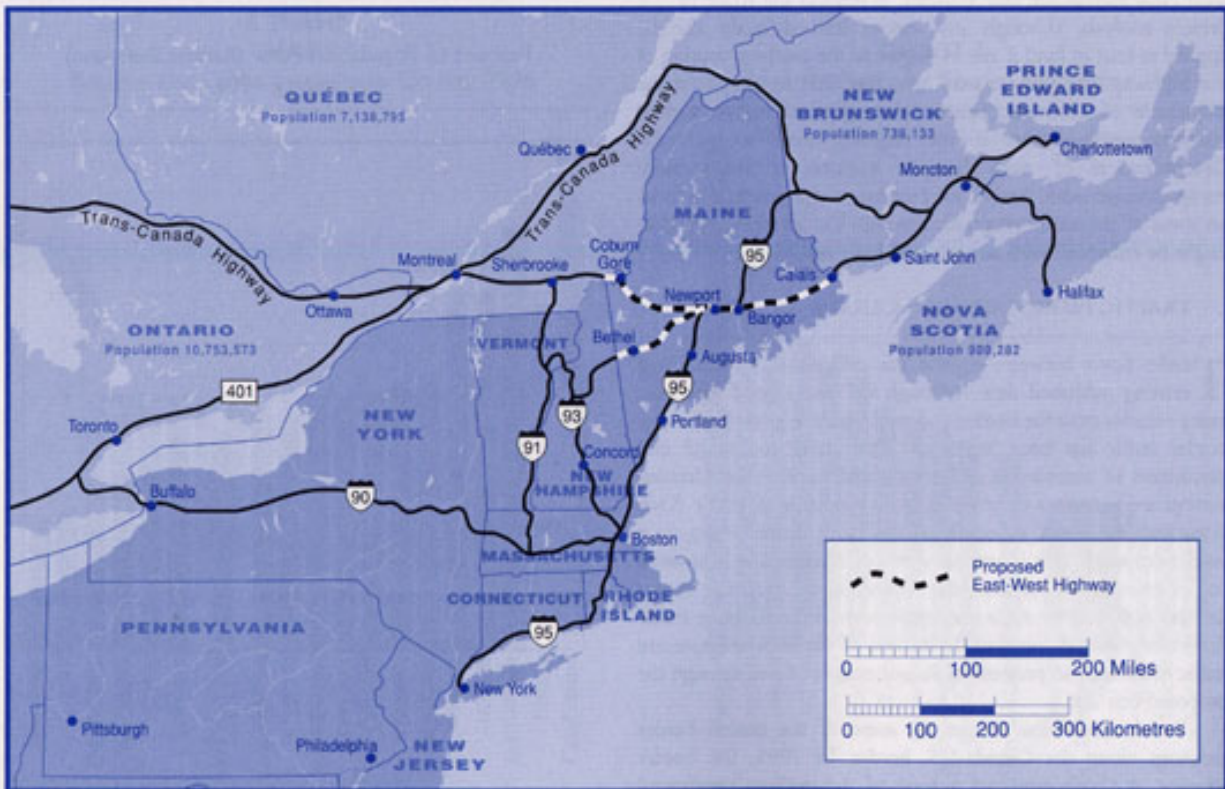
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ENDNOTES:

1. An often-cited statistic is that 90% of the new job creation in Maine has occurred within ten miles on either side of the I-95 Turnpike corridor. However, in a number of discussions with various individuals, no one has been able to ascertain the source of this statistic.
2. Data are from PCQ&D (1997). No Maine crossing ranks in the top fifteen among traffic leaving the United States. This is a result of exiting U.S. traffic being dominated by flows to Mexico.
3. These figures are unpublished data from Statistics Canada, International Travel Section, and were provided by the Canadian Consulate General, Boston, MA.
4. Same-day trips exclude leaving and returning by automobile on the same day. The same-day figures would thus include Canadians traveling through Maine, likely on their way to another state. It should also be noted that these figures do not include non-Canadian residents who also come to the United States by way of Canada.
5. In 1994, CDN\$1.00=US\$.7322.
6. Statistics Canada data provided by the Canadian Consulate General, Boston, MA.
7. It should be noted that Canadian border crossings into Maine are highly dependent on the value of the Canadian dollar. As of the time of writing (August 1998), the Canadian dollar has plunged to historic lows and Maine businesses have been noticing the dramatic drop in tourists and retail traffic as a result.

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EAST-WEST HIGHWAY PROPOSAL

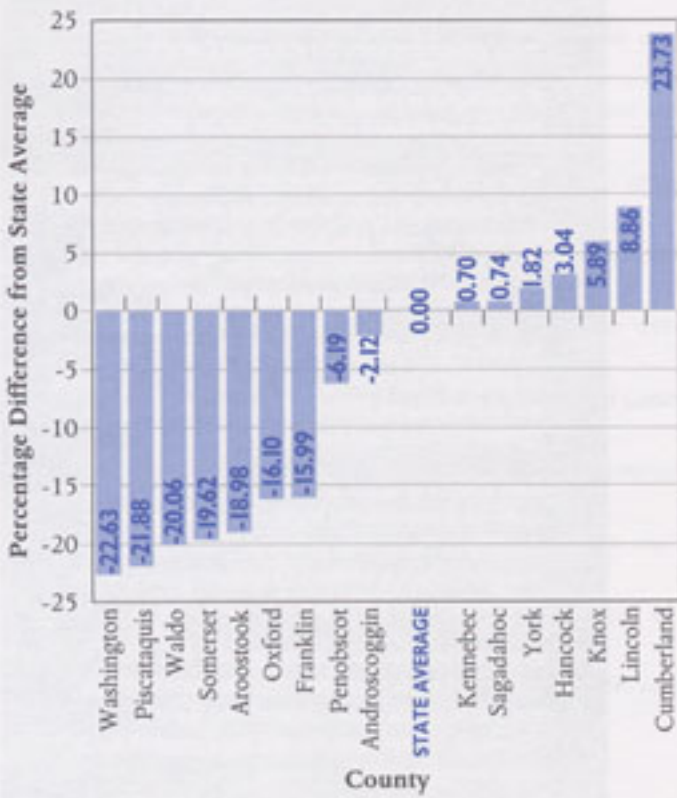


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CHART I

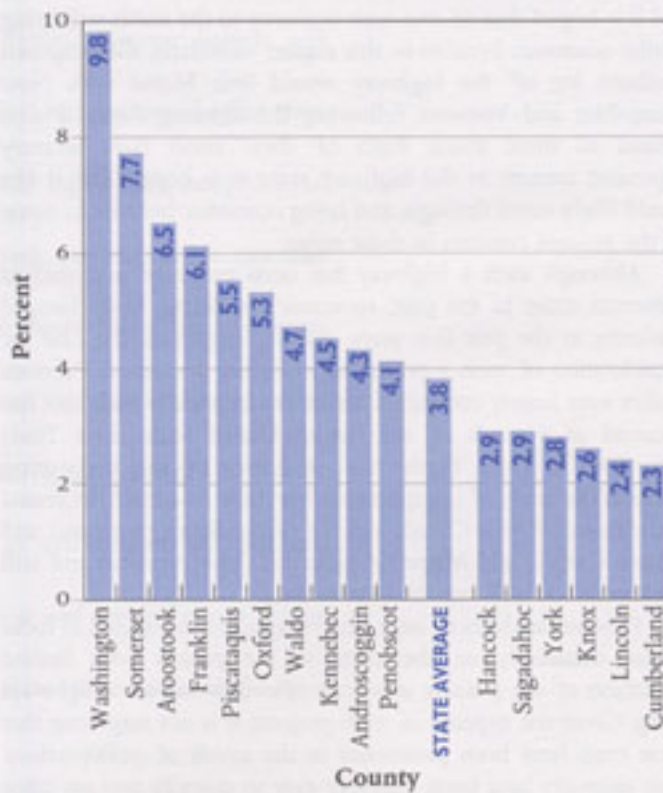
Relative Per Capita Incomes by County, 1994



Source: Maine State Planning Office, U.S. Census Bureau

CHART 2

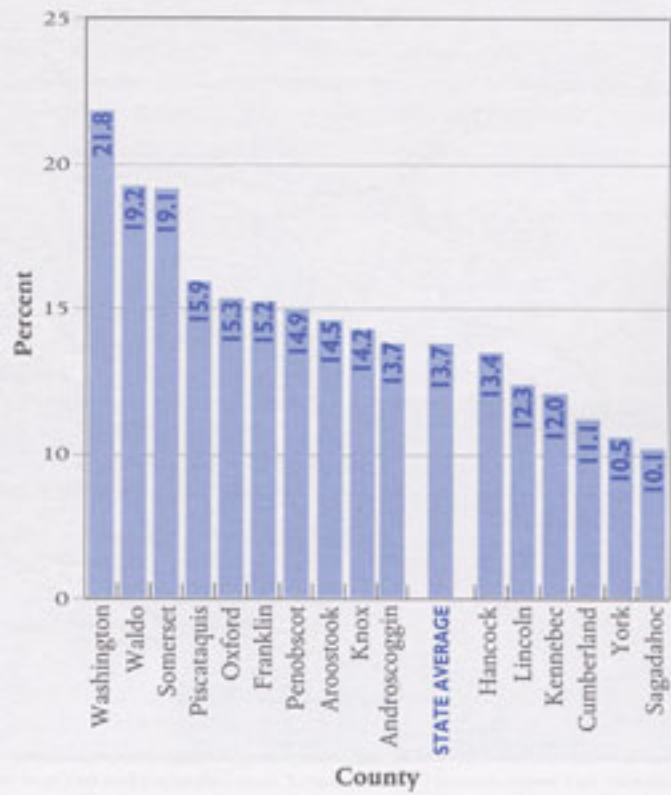
Unemployment Rates by County, September 1997



Source: Maine State Planning Office, U.S. Census Bureau

CHART 3

Percent of Population Poor (Relative Definition)
by County, 1993



Source: Maine State Planning Office, U.S. Census Bureau

TABLE I
For-Hire Truck Shipments by Province of Origin and Province of Destination, 1993
(Estimated Number of Shipments in Thousands)

Destination:	NFLD	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Yukon	NWT	Total	Potential
Origin:														
Newfoundland	159.7	...	7.7	6.4	6.1	6.3	...	...	...	...	...	...	187.0	12.4
Prince Edward Island	...	...	9.3	12.6	10.0	7.4	...	...	...	...	...	...	47.3	17.4
Nova Scotia	30.2	42.6	411.5	168.3	27.6	28.3	...	...	1.6	1.7	...	...	714.5	59.2
New Brunswick	38.7	60.0	206.7	532.7	59.0	40.7	...	0.2	1.5	1.3	...	...	943.1	102.7
Quebec	39.2	16.1	116.2	153.4	2,706.5	1,378.0	41.7	25.6	74.8	67.3	0.2	...	4,619.8	324.9
Ontario	73.1	26.3	211.4	185.2	1,462.1	7,118.4	174.2	86.7	235.1	237.0	...	4.3	9,817.3	496.0
Manitoba	...	...	3.0	...	19.1	219.8	468.0	194.6	91.4	52.0	...	...	1,051.8	3.0
Saskatchewan	...	...	...	...	5.9	19.5	59.9	496.2	95.1	15.7	...	...	695.4	0.0
Alberta	...	...	...	...	17.6	64.4	93.5	213.9	1,173.0	544.2	...	78.3	2,828.5	0.0
British Columbia	...	...	3.9	...	22.3	71.9	52.5	51.6	333.4	2,233.3	25.0	5.7	2,802.9	3.9
Yukon Territory	...	...	...	...	...	0.1	...	...	2.7	2.8	13.2	...	20.1	0.0
Northwest Territories	...	...	...	...	...	...	...	...	10.9	...	...	4.1	16.7	0.0
Total	344.5	152.5	973.5	1,066.1	4,336.4	8,954.9	894.4	1,069.5	2,619.9	3,156.3	80.2	96.1	23,744.3	
Max. potential through Maine	112.3	42.4	334.5	338.6	102.7	82.7	0.0	0.2	3.1	3.0	0.0	0.0		1,019.5

Note: "..." means figures not applicable or not appropriate.

Source: Statistics Canada (1995a).