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To: Mr. Kobayashi, Mr. Machida, Mr. Yamabe, Office of the Consulate-General of Japan in Boston
 From: Adam Langley, Research Assistant; Robert Tannenwald, Director
 Re: Business Regulations in New England
 Date: July 24, 2007 (Revised October 1, 2007)

This memo addresses your request for information regarding business regulations in New England and discusses several indicators of the regulatory environment. While these indicators are useful for evaluating the regulatory burden, it is difficult to accurately measure a state's regulatory climate for at least two reasons. First, it is hard to quantify the cost of many regulations. Second, differences in implementation and enforcement can greatly affect the cost of regulations faced by businesses. More broadly, measuring the overall effect of regulations is difficult since they normally have both negative and positive effects on economic development—raising the costs of production but also making an area a more attractive place to live and work. To allow for easy comparisons across states, this memo ranks states from one to 50, with a ranking of one representing the least costly or least regulated state.

Labor market regulations

Table 1 shows that most New England states have relatively expensive workers' compensation premiums. Massachusetts is an exception, with the fifth lowest premiums in the country in 2006, while Vermont (44) and Maine (43) were among the most expensive. Because of year-to-year variation in these rankings, workers' compensation premiums are reported for the three most recent years. The index was created by the Oregon Department of Consumer and Business Services and controls for differences in state industry distributions, because states with a disproportionate share of workers in more dangerous industries will have higher workers' compensation premiums regardless of whether they have more stringent regulations. However, their weights are based on Oregon payroll and they only include 50 out of approximately 450 occupational classifications in their index.

Table 1: Workers' compensation premiums, Index rate per \$100 of payroll, 2002-2006

	2006		2004		2002	
	Rank	Index rate	Rank	Index rate	Rank	Index rate
Connecticut	37	\$2.90	41	\$3.23	38	\$2.90
Maine	43	\$3.21	39	\$3.08	43	\$3.19
Massachusetts	5	\$1.70	7	\$1.70	15	\$1.98
New Hampshire	33	\$2.75	40	\$3.19	34	\$2.85
Rhode Island	30	\$2.68	36	\$3.01	45	\$3.29
Vermont	44	\$3.24	35	\$2.99	27	\$2.45

Source: Oregon Workers' Compensation Premium Rate Ranking Summary.

Table 2 shows that Connecticut (48), Vermont (47), Massachusetts (46), and Rhode Island (43) have some of the highest minimum wage rates in the country. New Hampshire recently enacted legislation to raise its minimum wage, but this increase will soon be superseded by federal legislation signed in May that will increase the federal minimum wage in three steps through July 2009. After these phased increases, Connecticut, Vermont, Massachusetts, and Rhode Island will be four of the nine states with minimum wages above the federal minimum wage, although the difference between these states and the national minimum will be much smaller than it is currently.

Table 2: State minimum wage, July 2007

	Rank	Min. wage
Connecticut	48	\$7.65
Maine	35	\$6.75
Massachusetts	46	\$7.50
New Hampshire	29	\$6.50
Rhode Island	43	\$7.40
Vermont	47	\$7.53

Source: "Minimum Wage Laws in the States," U.S. Department of Labor.

Another important labor regulation is the existence of right-to-work laws, which exist in 22 states and prohibit making union membership a requirement for employment. None of the states in New England or neighboring Mid-Atlantic states have right-to-work laws. Most research has found that state right-to-work laws have a positive impact on employment and business formation, although this effect might be caused more by underlying attitudes towards unions in these states.¹

Environmental regulations

Finding reliable indicators of states' environmental regulations is particularly difficult. One frequently cited proxy for the costs of environmental regulations is the Census Bureau's Pollution Abatement Costs and Expenditures (PACE) survey. However, there are at least three problems with this survey. First, the study does not account for differences in state industrial composition, and thus states with a disproportionate share of polluting industries will have higher environmental costs regardless of whether they have more stringent regulations. Second, there is substantial year-to-year variation among less populated states due to sampling error. Third, it is eight years old—the most recent data are from 1999, and it is reasonable to speculate that these rankings have changed since federal enforcement of environmental regulations has weakened while states' efforts have increased in some areas. For example, all six New England states are members of the Regional Greenhouse Gas Initiative, which seeks to reduce carbon dioxide emissions among states in the Northeast.

Table 3 shows that in 1999 Rhode Island (1), Massachusetts (11), and Connecticut (14) all had low environmental compliance costs relative to other states, while Maine (25) and Vermont (27) ranked in the middle, and New Hampshire (46) is one of the most expensive. However, these findings are subject to all three problems discussed above.

Table 3: Costs of environmental regulations, not industry-adjusted, 1999

	Rank	Per capita cost
Connecticut	14	\$43.58
Maine	25	\$84.64
Massachusetts	11	\$40.98
New Hampshire	46	\$210.55
Rhode Island	1	\$17.36
Vermont	27	\$85.90

Note: Combined spending on pollution abatement, waste disposal, and recycling.
 Source: *Pollution Abatement Costs and Expenditures: 1999*, U.S. Census Bureau

Table 4 shows rankings for environmental compliance costs according to a study by Arik Levinson that was based on the PACE survey. This study addresses two problems with the PACE survey, because it controls for differences in states' industrial makeup and allows multi-year averages to reduce year-to-year fluctuations in the survey. However, the study uses even older data. When taking an average for the entire period of the study (1977-94), five of the New England states were among the top ten least costly states, while Maine was one of the most expensive (45). Connecticut, New Hampshire, and Rhode Island all experienced notable increases in environmental compliance costs compared to other states in the final period of the survey, while relative costs declined greatly in Vermont. Still, these averages conceal substantial fluctuations. For example, from 1993 to 1994, Rhode Island's ranking jumped from 5 to 40.

Table 4: Costs of environmental regulations, industry-adjusted, 1977-94 averages

	1977-94 Average	1977-82 Average	1983-88 Average	1989-94 Average
Connecticut	5	4	4	11
Maine	45	43	45	47
Massachusetts	6	5	6	7
New Hampshire	10	13	3	14
Rhode Island	8	2	12	25
Vermont	4	7	18	3

Note: This ranking only includes the 48 continental states.
 Source: "An Industry-Adjusted Index of State Environmental Compliance Costs."
 Arik Levinson. NBER Working Paper 7297, August 1997

While most New England states have low compliance costs, they are also ranked among the cleanest states according to indices released by environmental organizations. In fact, Levinson's study also found that an increase in a state's environmental quality is actually associated with a *decrease* in compliance costs. There are several reasons for this counterintuitive finding. First, federal law mandates stricter regulations for plants in counties that have not met federal standards for particulate emissions, and thus the country's most polluted areas also have the highest compliance costs. Second, most states have stricter environmental standards for new sources of pollution, so that states with recent industrial growth will have more costly regulations. The result is that New England states have both high environmental quality, and in most cases, low costs for environmental regulations.

Housing regulations

The high cost of housing in New England has become a growing concern among policymakers in the past decade, and may have an impact on businesses in the region by affecting their ability to attract and retain workers and contributing to the need to increase wages to offset the high cost of living. In a recent New England Public Policy Center working paper, “The Lack of Affordable Housing in New England,” the authors draw a distinction between the moderate growth of rents versus the rapid growth in prices for owner-occupied housing. Whereas the median gross rent in New England was only 14 percent higher than the national median in 2005, the median price for single-family homes exceeded the national median in eight of nine metropolitan areas in New England. Empirical studies show that government regulations can have a large effect on housing prices by restricting growth in the housing supply. This research shows that land use regulations, such as exclusionary zoning, limits on building permits, historical preservation requirements, and subdivision regulations, have a particularly large impact on prices. One recent study created an index of housing supply regulations for 82 metropolitan areas, and the three New England metro areas in the study all ranked in the top 40 percent—Boston (65), Providence (53), and New Haven (52).²

The overall business climate in New England

Although there are some notable exceptions, the typical New England state has expensive workers’ compensation premiums, a high minimum wage, no right-to-work law, low compliance costs for environmental regulations, and fairly heavy housing regulations. As discussed in the introduction, it is difficult to accurately measure a state’s overall regulatory climate, and thus relying on a few specific indicators could be misleading. Table 5 shows 2007 rankings from *Forbes* magazine’s annual “Best States for Business” report.

Table 5: *Forbes* “Best States for Business” report, 2007

	Overall rank	Cost of business rank	Regulatory environment rank
Connecticut	31	44	40
Maine	48	43	46
Massachusetts	36	49	29
New Hampshire	14	39	42
Rhode Island	45	42	49
Vermont	32	45	35

Source: “The Best States for Business.” *Forbes*. July 2007.

The overall rank is based on six indices: business costs, labor, regulatory environment, economic climate, growth prospects, and quality of life. Unfortunately, *Forbes* does not release the weights used for each index or the overall ranking, which makes it impossible to determine if these rankings actually reflect what research suggests are the most important determinants of the business climate. With that said, it may provide useful information about a state’s overall business climate, because it is broader than any specific indicator and includes many factors that are excluded from other business climate indices that focus primarily on taxes. Fisher (2005) provides further information about the

variables used in the *Forbes* index as well as a good critique of other indices measuring states' business climate.³ Overall, *Forbes* rates New Hampshire as one of the better states for business, while Maine and Rhode Island are towards the bottom.

The cost of business index is published by Economy.com and is based on three components: unit labor costs (75 percent weight), energy cost index (15 percent), and tax index (10 percent). The labor costs measure is adjusted so that it is not affected by a state's mix of industries, and also accounts for productivity differences between states. The energy cost index is a weighted average of the average commercial and industrial electricity cost. The tax index includes all state and local taxes, unemployment and worker's compensation premiums, and most user charges. Although there is no indication that the assigned weights are based on a statistical analysis or literature review, the heavy weighting of labor costs is reflective of the emphasis that business executives normally place on labor costs. All New England states are ranked as having high business costs, with Massachusetts being particularly expensive.

Forbes' regulatory environment index has four components: regulatory and tort climate, incentives, transportation, and bond ratings. The weights are not disclosed by the magazine. According to this index, most New England states have relatively burdensome regulatory climates, although Massachusetts (29) and Vermont (35) are ranked towards the middle. These rankings are generally consistent with the rankings for specific labor and housing regulations discussed in this memo, although they do not reflect the low compliance costs for environmental regulations in most New England states.

Please let us know if the New England Public Policy Center can be of further assistance.

¹ Tannenwald, Robert. March/April 1997. "State Regulatory Policy and Economic Development." *New England Economic Review*. This literature review provides a comprehensive overview of research on the impact of state regulations on economic development, although there has been a great deal of research on the impact of specific regulations in the past decade. A copy of the article is attached to the memo.

² Saks, Raven. September 2005. "Job Creation and Housing Construction: Constraints on Employment Growth in Metropolitan Areas." Federal Reserve Board of Governors, Finance and Economics Discussion Series.

³ Fisher, Peter. 2005. *Grading Places: What Do the Business Climate Rankings Really Tell Us?* Economic Policy Institute.