



The Economics of a Higher Minimum Wage in Massachusetts

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Executive Summary

A bill introduced by Representative J. James Marzilli would raise the Massachusetts minimum wage in two stages from \$6.75 per hour to \$8.25 per hour. The bill would also index the minimum wage to consumer prices and provide for a commission to consider further increases in the minimum wage to “reflect existing economic conditions in the commonwealth.”

Supporters of the bill have distributed an “Economists’ Statement Supporting an Increase in the Massachusetts Minimum Wage.” This statement claims that the increase would yield benefits to labor and business alike and downplays any worry about job losses that the increase might bring about. But, while some of the 50 signatories are among the state’s leading economists, the statement ignores a consensus among labor economists that increases in the minimum wage do, in fact, destroy jobs. Indeed, one of the signatories, Professor Karl E. Case of Wellesley University, has coauthored a textbook in which he describes exactly how the job losses come about.

The Beacon Hill Institute estimates, conservatively, that the proposed increase in the Massachusetts minimum wage would cost the state 26,970 jobs. The preponderance of this loss would be among low wage workers, women workers and workers 20 years old and older.

Most workers affected by the increase would, to be sure, keep their jobs and, in doing so, enjoy higher wages. The wage gain for these fortunate workers would be about \$405 million. But that gain would be largely offset by \$371 million in wages lost by the workers who, as a result of the higher minimum wage, ended up unemployed.

A headline in the June 5, 2005 issue of the *Boston Sunday Globe* reads, “Number crunchers agree: Mass. is no bargain for employers.” An increased minimum wage would make Massachusetts even less of a bargain, especially for employers deciding whether to set up shop in Massachusetts or in New Hampshire. At \$6.75 per hour, the Massachusetts minimum wage is 31% greater than the New Hampshire minimum wage of \$5.15 per hour. Under the time-and-a-half requirement of the state “blue laws,” the Massachusetts rate rises to \$10.13 on Sundays, almost double the New Hampshire rate.

This helps explain why, in recent years, annual employment growth in the Massachusetts leisure and hospitality sector has been only 1.9%, compared to 2.6% for New Hampshire. Employment in Massachusetts retail trade has *decreased* annually by 0.03% while *growing* annually at 1.2% in New Hampshire. Both sectors are highly sensitive to labor costs.

High labor costs are one reason that Massachusetts is losing population while other states are gaining. Massachusetts suffered a net loss of 3,852 residents over the course of fiscal year 2004, the only state in the nation to record a population decline. Over the same period, New Hampshire underwent a net gain of 10,795 residents.

The Marzilli bill would further weaken Massachusetts' ability to compete with New Hampshire. Under the proposed legislation, the wage gap between Massachusetts and New Hampshire would increase, so that the lowest Massachusetts wage rate would be 60% greater than the lowest New Hampshire wage rate on weekdays and 140% greater on Sundays. This differential, in addition to the 5% Massachusetts sales tax, would cause Massachusetts retailers located in Lawrence, Lowell and Haverhill to suffer further losses in sales to their competitors in Salem and other New Hampshire locations.

The Marzilli bill would also have the effect of putting small business, which competes more on service than on price, at a further disadvantage relative to big business, which utilizes scale economies and buying power to attract customers. The boutique that prides itself on service would close on Sunday or let customers fend for themselves, rather than try to compete with the chains or with similar stores just over the border.

The increased minimum wage would, to be sure, raise wage rates for some workers. It would, at the same time, cause other workers to lose their jobs, further dull the state's competitiveness, encourage service-oriented retail firms to leave the state, and lead to higher prices and reduced service for Massachusetts consumers. Contrary to the willingness of some economists to pretend otherwise, the minimum wage is no free lunch.

Introduction

A Bill before the Massachusetts legislature provides for increases in the state minimum wage. House Bill, No. 3782, filed by Representative J. James Marzilli, would boost the state minimum wage to \$7.50 per hour in 2006 and to \$8.25 in 2007, representing, when fully implemented, a 22% increase above the current rate. The bill would, in addition, establish a commission charged with making recommendations for further minimum wage increases to the Joint Committee on Commerce and Labor every three years beginning in 2010. It would increase the minimum wage annually by the percentage increase in the consumer price index, thus “indexing,” the minimum wage to the CPI.¹

Background

The idea that workers should receive at least some minimum wage has a long history. Australia and New Zealand imposed a minimum wage in the 19th century.² Massachusetts pioneered minimum wage legislation in the United States, when in 1912 it enacted the country’s first minimum wage for women and children. The federal government imposed a national minimum wage of \$0.25 per hour under the Federal Labor Standards Act in 1938. The law initially applied only to workers engaged in interstate commerce or in the production of goods for interstate commerce, but it has been amended several times to expand coverage to most workers. Congress has approved almost 20 increases to the minimum wage rate, the last increase coming in 1997 when it raised the rate to \$5.15 per hour.³

Advocates continue to push for further increases in the minimum wage rate at both the state and the national level. On May 20, 2005, Senator Edward M. Kennedy, the senior senator from Massachusetts, introduced the Fair Minimum Wage Act of 2005, which would raise the national minimum wage to \$7.25. The increase would come in three steps over a two-year period, starting with an immediate hike to \$5.85 upon the bill’s enactment, then to \$6.55 one year later and finally to \$7.25 two years after passage of the bill.⁴ The bill follows the failed attempts to secure passage of the Fair Minimum Wage Acts of 2003 and 2004.

The last change to the Massachusetts minimum wage legislation took place in 1999 when the legislature raised the wage in two stages, from \$5.25 to \$6.00, effective January 2000, and to \$6.75, effective January 2001. The law also mandated that the state minimum wage exceed the federal rate by at least \$0.10. The Massachusetts minimum wage currently exceeds the federal rate by \$1.60 per hour.⁵

The Uneasy Case for Minimum Wages

Arguments for increases in the minimum wage reflect a view that there exists a certain class of struggling workers – “minimum wage workers” – whose well-being depends on the munificence of government. Says Marc R. Pacheco: “It’s time...to talk about what’s happening with the minimum wage workers. These are people doing the right thing, working, trying to make a living.”⁶

While this rhetoric has a certain political appeal, it ignores the reality that minimum wage workers are often young and inexperienced entry-level workers, many working only part-time or on a temporary basis. Such workers are not “trying to make a living” for their families but are supplementing their allowances or family income as they make the transition to high-paying careers.

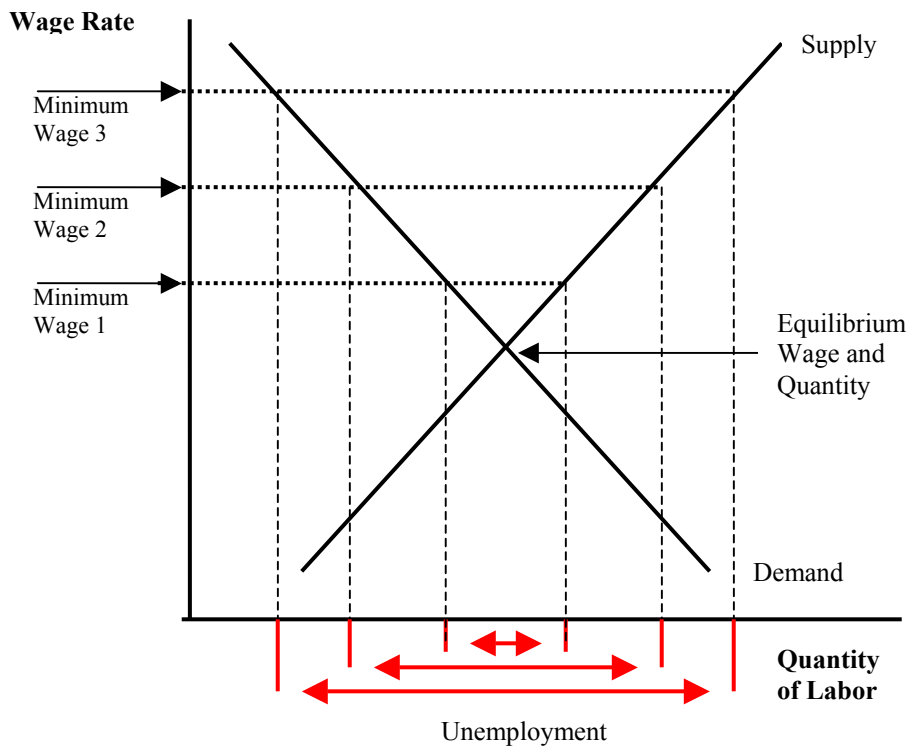
It also ignores the reality that the minimum wage is no free lunch. Someone – the firm, a consumer or a worker who doesn’t benefit from the minimum wage – has to pay. One inevitable and unwanted result would be that some workers would lose their jobs (or end up working fewer hours), as firms adjust to the fact that it is now more costly to hire labor than it was before the minimum wage was imposed.

Proponents of the proposed Massachusetts law deny these realities. They have even produced an “Economists’ Statement Supporting an Increase in the Massachusetts Minimum Wage.” This statement, signed by 50 Massachusetts economists, claims that “an increase in the minimum wage will raise purchasing power and could yield other distinct benefits to Massachusetts business, such as reduced turnover and lower training

costs.” The same economists claim that “raising the minimum wage in stages to \$8.25 per hour is unlikely to affect jobs.”⁷

In fact, the argument that raising the minimum wage will destroy jobs (or reduce hours of work) is a staple of economics textbooks. To see this, one need look no further than to *Principles of Economics*, a textbook coauthored by Karl E. Case, one of the signers of the “Economists’ Statement,” for an example. In the caption for one of his illustrations, Case writes that “if the equilibrium wage in the market for unskilled labor is below the legislated minimum wage, the result is likely to be unemployment. The higher wage will attract new entrants to the labor force ... but firms will hire fewer workers.”⁸ Case makes his point by drawing a graph similar to Figure 1.

Figure 1: Supply-Demand Analysis of the Minimum Wage



Absent a minimum wage, as Case explains, the wage rate is free to adjust to some “equilibrium” level at which the quantity of labor demanded equals the quantity supplied. The imposition of a minimum wage above this equilibrium wage rate will cause the

quantity of labor demanded to fall and the quantity of labor supplied to rise, creating a gap between supply and demand.

Figure 1 illustrates the gap created by successive increases in the minimum wage. As the minimum wage rises, the gap widens and total employment falls. Workers fortunate enough to keep their jobs enjoy a higher wage but those who lose their jobs receive no wage at all.

The job losses caused by the minimum wage depend on how sensitive (or “elastic,” in economic terms) the demand for labor is to changes in the wage rate. The more sensitive the demand for labor to changes in the wage rate (the greater the elasticity of demand), the greater the reduction in employment with each successive increase in the minimum wage.

While, as Case acknowledges, this job-destroying effect is inherent to any increase in the minimum wage, the reality is likely to be more subtle than Figure 1 suggests. The minimum wage might rise during a period of economic expansion, with the result that observed employment would rise, only not as rapidly as it would have but for the rise in the minimum wage. Or it may turn out that the equilibrium wage is already above the minimum wage for almost all workers so that only a few workers gain or lose.

The unemployment-inducing effect of a rise in the minimum wage may therefore be difficult to detect, and the effect may be small because the rise in the minimum wage is quite “modest,” because it affects very few workers or because the sensitivity of demand for affected workers is small. The workers fortunate enough to keep their jobs would therefore benefit while only a “few” workers lose theirs. Yet, any increase in the minimum wage that has the desired effect of raising wages for some workers would destroy jobs that would otherwise be open to other workers.

Job losses are not the only negative effects to consider. Employers may choose to reduce the number of hours their employees work, as an alternative to layoffs. The result is a kind of stealth unemployment, in which the losses attributed to labor are spread across

many workers instead of a few. Additionally, firms might lay off (or reduce the hours of) low-skilled, inexperienced entry-level workers in favor of hiring (or expanding the hours of) high-skilled, experienced and seasoned workers who are more nearly worth the cost mandated by the higher wage. Then the minimum wage has the effect of redistributing job opportunities to the more fortunate “more valuable” workers from the less fortunate “less valuable” workers.

A portion of the burden of the increased minimum wage would fall on profits. But profits are not just some surplus that government can redistribute to workers without concern for the economic consequences. When the increase in the minimum wage takes place at the state level – and particularly when the state, like Massachusetts, is small in size and surrounded by other states – firms might simply pick up and leave for other states where lower labor costs permit them to earn a higher profit.

Another portion of the burden would fall on consumers, which is to say, workers whose wages are above the minimum wage. Consumers may detect a deterioration in service, as firms affected by the minimum wage lay off workers to economize on labor costs. Rising living costs and declining service drive consumers to other states where they can live and shop more cheaply and where the service is better. Along with these disappearing consumers, go the firms and the workers whom they employ.

The minimum wage discriminates against small firms that compete on service rather than price. Consider the small boutique firm located in Lowell, Massachusetts, which has to pay top dollar for labor and that has to compete with a chain store located in tax-free Salem, New Hampshire. The Marzilli bill would put that store at a further competitive disadvantage.

That the minimum wage is not an economic free lunch can be easily seen by asking a simple question: Why, if the minimum wage is so helpful to workers, doesn't government just set it at some truly respectable level, say \$20 per hour, or, for that matter, \$100 per hour? That no one proposes so high a minimum wage is proof enough that higher minimum wages reduce employment. Indeed, it is worth noting that the “50

economists” themselves concede this point when they cite a statement by the U.S Council of Economic Advisors that “modest increases in the minimum wage have had very little or no effect on employment.”⁹

This is another way of saying that, if the increase in the minimum wage is kept small enough, the negative effects on employment would likewise be so small as to get lost in the noise of the economic data and thus pose no serious political obstacle. The question is whether the proposal at hand is sufficiently “modest” that the job losses it would inevitably bring about are so small as to be undetectable using the statistical methods available to economists. It is to that question that we turn next.

Indexing: Putting Job Losses on Automatic Pilot

With the support of Governor Mitt Romney, Representative Marzilli wants to “index” the minimum wage by causing it to rise automatically with increases in consumer prices. By thus putting the minimum wage on automatic pilot, the proponents of indexing increase the risk of job losses.

Indexing is especially problematic during times of high inflation, high unemployment and low productivity growth. The expression “stagflation” was coined to describe the economic circumstances of the early 1970s. Some observers have hinted at the possibility of a recurrence of stagflation. Under such conditions, the higher rates of inflation would trigger increases in the minimum wage that simply lead to further job losses.

Indexing can also lead to a cost-push inflationary spiral, in which wage and price increases feed on each other. The cycle begins with an increase in producers’ wage costs due to the initial minimum wage increase. Producers increase their prices to cover their increased salary costs; the price increase boosts inflation readings, which triggers the indexing mechanism of the minimum wage and causes an additional wage increase and corresponding increase in the price level. The inflationary spiral continues with minimum wage and price increases feeding on each other, pushing the wage rate ever

higher, resulting in increasing levels of unemployment and soaring prices for everyone. The inflationary spiral can push the economy into a recession that deepens with each new wage and price hike, as seen in Figure 1.

The inflationary spiral can feed on itself especially in states with high costs of living such as Massachusetts. Massachusetts policy makers see the need for higher wages for workers to help them cope with the high cost of living, especially those at the bottom of the wage scale. A higher minimum wage is approved, which in turn forces employers to raise their prices to cover the wage increases, causing the cost of living in Massachusetts to rise even higher, prompting a need for higher wages. This cycle becomes self sustaining especially in the presence of an indexing mechanism that places minimum wage increases on autopilot regardless of labor market conditions.

The persistent escalation of the cost of living in Massachusetts has contributed to the recent net population emigration from the state. According to the United States Census Bureau, Massachusetts suffered a net loss of 3,852 residents over fiscal year 2004, the only state in the nation to record a population decline.¹⁰ New Hampshire gained 10,795 residents over the same period. People are protesting the high cost of living in Massachusetts by escaping Massachusetts for lower cost states.

Minimum wage indexation adds additional rigidity to labor markets and further reduces the flexibility necessary for the labor markets to adjust to changing economic conditions, especially during times of economic weakness.

Comparisons with Other States

Massachusetts is one of only 14 states and the District of Columbia to mandate a minimum wage that exceeds the federal rate. Table 1 contains the federal hourly minimum wage rate, the states with rates that exceed the federal level and the rates of all the New England states (in bold).¹¹ Currently, Massachusetts ties California and Rhode

Island for the sixth-highest minimum wage among the states, just behind Illinois, Oregon, Connecticut, Alaska, and Washington, currently the highest in the nation.

Table 1: State Minimum Wages that Exceed the Federal Rate

State	Hourly Wage (\$)
Washington	7.35
Alaska	7.15
Connecticut	7.10
Illinois	7.05
Oregon	7.05
California	6.75
Massachusetts	6.75
Rhode Island	6.75
District of Columbia	6.60
Hawaii	6.25
Maine	6.25
Vermont	6.25
Delaware	6.15
Florida	6.15
New York*	6.00
Federal	5.15
New Hampshire	5.15

* Rising to \$6.75 on January 1, 2006, and to \$7.15 on January 1, 2007.

A comparison of states within New England finds the southern New England states mandating higher minimum wage rates compared to their northern neighbors, with Connecticut having the highest rate, \$7.10 per hour, and “tax free” New Hampshire the lowest at \$5.15 per hour. Thus businesses in southern Massachusetts face similar minimum wage restrictions as those located just across the border in Connecticut and Rhode Island, making for a fairly level competitive landscape. However, under the proposed minimum wage increase to \$8.25, Rhode Island and Connecticut would have minimum wage rates that are 22% and 16% lower than Massachusetts, respectively, and thus giving them a competitive advantage. Moreover, with a current minimum wage rate that is a full \$1.60 or 31% higher than New Hampshire, Bay State companies face a significant competitive disadvantage in the minimum wage rate they must pay workers compared to those located in New Hampshire.

These establishments encounter competitive pressure from their New Hampshire rivals on three fronts. First, they face a state sales tax on qualifying purchases that effectively pushes up the prices consumers pay for their goods, while those in New Hampshire do not. Second, if House Bill, No. 3782 becomes law, in 2007 the Massachusetts minimum wage, at \$8.25 per hour, would become a full \$3.10 or 60% above the New Hampshire rate, representing a huge cost disadvantage to Massachusetts firms.

Third, the Sunday “blue laws” push the wage bill for Massachusetts retailers even further out of balance with New Hampshire. These laws require retail establishments with eight or more employees (seven for liquor stores) to pay workers one and one-half times their regular rate.

The blue laws push the minimum wage paid by Massachusetts retailers to \$10.13 per hour, or 97% above the rate paid by those in New Hampshire. The proposed increase would push the Sunday minimum wage to \$12.38 per hour by 2007, more than 140% above the Sunday rate in New Hampshire. This differential would give New Hampshire firms a further advantage over those in Massachusetts and would lead to an increase in cross-border sales.

New Hampshire retailers have enjoyed substantially lower minimum wage requirements than their Bay State counterparts since January 2000, when the latest round of increases in the Massachusetts minimum wage began. Economic theory suggests that New Hampshire would have experienced significantly higher employment growth, especially in the leisure and hospitality sector and in the retail sector. These sectors traditionally employ a large number of low-wage workers.

Table 2, illustrated by Figures 2 and 3, provides the employment growth in these sectors from 2000 to 2005 for each state.¹² The time frame covers a full business cycle that experienced a period of strong economic growth, a mild recession and then a recovery.

**Table 2: Employment Growth in Selected Industries
March-March Percentage Change**

Sector	2000	2001	2002	2003	2004	2005	CAGR*
MA Leisure and Hospitality	2.1	3.0	0.5	1.1	1.3	3.3	1.9
NH Leisure and Hospitality	1.8	2.4	2.0	0.5	4.0	4.8	2.6
MA Retail Trade	2.3	-1.2	-0.9	-1.5	1.0	0.2	-0.03
NH Retail Trade	3.5	0.0	0.7	0.2	1.6	1.5	1.2

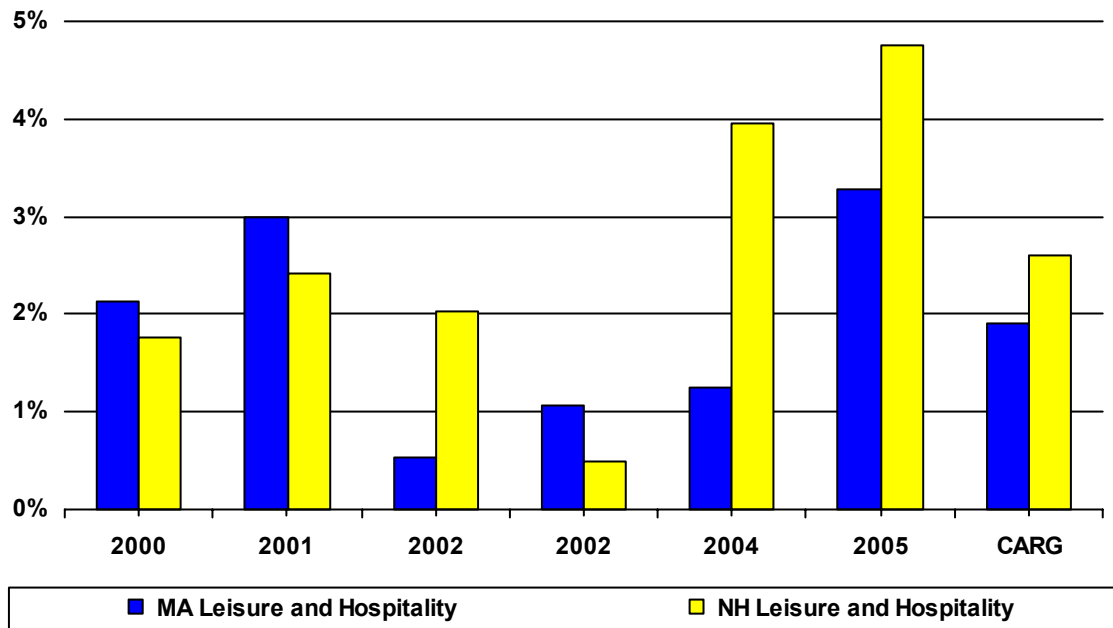
*Compound annual growth rate, 2000-2005

For the hospitality and leisure sector, New Hampshire employment growth now substantially exceeds Massachusetts employment growth. For the entire time frame the difference in the compound annual growth rate is 0.7 percentage points.

Employment growth in the retail sector provides an even more dramatic contrast between the performance of Massachusetts and New Hampshire. During this period, the compound annual growth rate for retail employment in Massachusetts remained flat, while over the same period the New Hampshire sector experienced growth of over one percent. The higher Massachusetts minimum wage, combined with the Massachusetts blue laws, has contributed to this state of affairs.

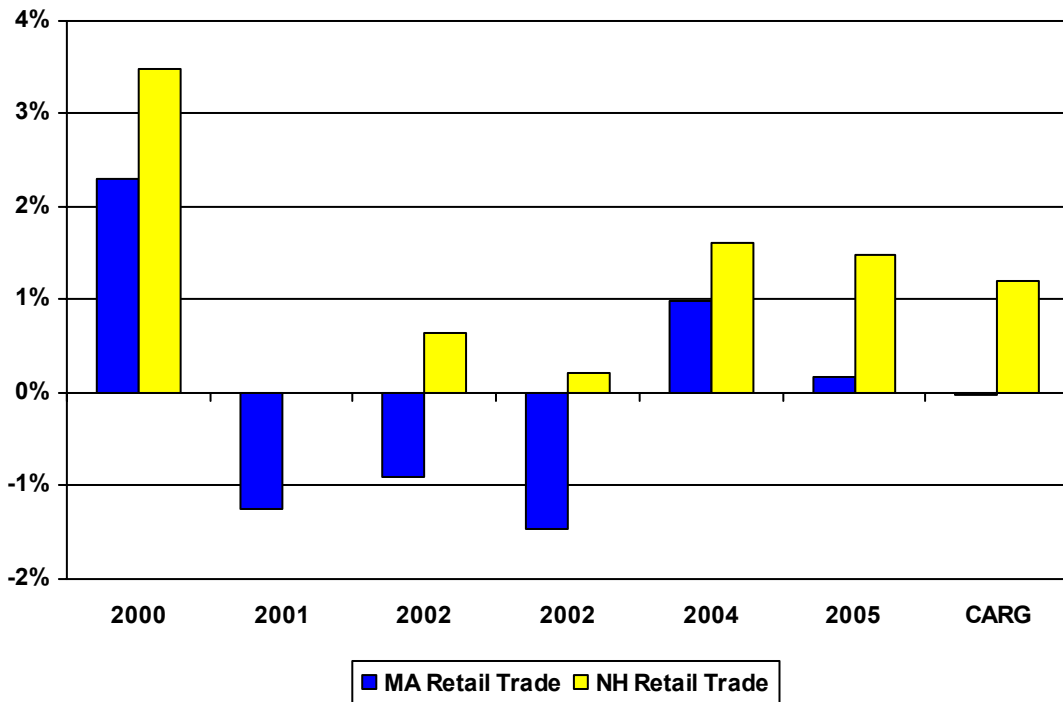
Raising the minimum wage rate in Massachusetts would tilt the competitive playing field not only to New Hampshire firms but also toward larger firms, whether located in Massachusetts or New Hampshire. Larger firms, by exploiting economies of scale, would be better equipped to absorb the burden of increased labor costs. Wal-Mart pays its hourly employees a national average of nearly \$10 per hour, well above both the current and proposed minimum wage levels in Massachusetts, and thus would not be much affected by a rise in the state minimum wage.¹³ Massachusetts' small employers, lacking the buying power of Wal-Mart, would not be so well positioned.

Figure 2: Employment Growth for Leisure and Hospitality Industry: MA & NH



*Calculated by BHI using BLS data.

Figure 3: Employment Growth for Retail Industry: MA & NH



*Calculated by BHI using BLS data.

Larger businesses that enjoy economies of scale are better equipped than small businesses to absorb the costs associated with minimum wage increases. Larger businesses, through their ability to purchase items such as uniforms, software and healthcare in bulk, are able to secure significant price reductions over small competitors.

The Evidence from Empirical Studies

For the past 20 years, economists have produced a substantial volume of research measuring the effects of minimum wages on employment levels. Most of the work focused on those industries and demographic groups that are most likely to be affected by minimum wage laws: the retail and food service industries and young people, especially teenagers, with little or no experience, few skills and low educational attainment. The studies utilized major increases in federal and state minimum wage rates to capture the effect these changes have had on employment levels. By the early 1980s, a consensus developed among economists that minimum wage rate increases induce negative impacts on employment.¹⁴

In the 1990s, economists David Card, Lawrence F. Katz and Alan B. Krueger (CKK) conducted several studies that temporarily challenged this consensus. They found that, contrary to conventional economic theory, increases in the minimum wage had no significant effects on employment and attributed the earlier empirical results to model specification. In studies of the effects of minimum wage increases on fast-food restaurants in New Jersey, Pennsylvania and Texas, the authors found a positive relationship between state minimum wage increases and employment in the industry.¹⁵

Numerous studies have since challenged the CKK findings.¹⁶ Some found weaknesses in the data, obtained from surveys of restaurant owners in the fast-food papers, or argued that the findings were based on inappropriate variables that effectively obfuscated the minimum wage effect.¹⁷ Critics replicated the CKK work, utilizing more reliable data sources and different model specifications, and obtained results that nullified or

contradicted the original conclusions. The evidence from recent empirical studies once again reinforces the conventional economic theory of minimum wages.

As Alan Greenspan says, “the reason I object to the minimum wage is I think it destroys jobs, and I think the evidence on that, in my judgment, is overwhelming.”¹⁸ Labor economists appear to agree: In one survey, labor economists were asked to provide their “quantitative best estimates” of the effect of increasing the minimum wage by 10%. The mean estimate of the 63 economists queried in the survey was that a 10% increase in the minimum wage would be associated with a 2% decrease in teenage employment.¹⁹

Effects on Employment and Wages

Table 3 provides a list of studies and the “minimum wage” elasticity either reported by the authors or implied from their results.²⁰ The mean minimum wage elasticity from

Table 3: Minimum Wage Elasticities

Study	Workers studied	Elasticity
Deere, Murphy, and Welch(1995)	Teenagers(15-19)	-0.27(males), -0.42(females) -0.37(blacks)
Currie and Fallick(1996)	Youths	-0.09
Neumark and Wascher(2000)	Fast-food workers	-0.1 to -0.3
Fuchs, Poterba, and Krueger (1998)	Teenagers	-0.21(survey of economists)
Burkhauser, Couch, and Wittenberg(2000)	Teenagers	-0.2 (employment) -0.6 (hours worked)
Aaronson and French (2003)	Food service workers	-0.25 to -0.35
Campolieti, Fang, and Gunderson (2005)	Teenagers	-0.3 to -0.5

this list is -0.31, meaning that a 1% increase in the minimum wage would bring about a .31% decrease in employment for a group of workers (teenagers, retail workers, etc.),

within which a substantial number of workers are likely to be affected by a rise in the minimum wage.

Estimating the impact on Massachusetts

In estimating the employment effect of Representative Marzilli's proposal, we employ minimum wage elasticities derived from a survey of the labor economics literature. We apply these estimates to the number of Massachusetts employees likely to be affected by the proposal.²¹ The result is a lower-bound estimate of the equivalent job losses due to the increase in labor costs.

The Massachusetts Budget and Policy Center estimates that the wages of 261,000 workers would be directly impacted by an increase in the minimum wage from \$6.75 to \$8.25, and that 153,000 workers be directly impacted by an increase from \$6.75 to \$7.65.²² We use their projections as a proxy for the number of workers affected by the minimum wage increase from \$6.75 to \$7.50 in 2006 and from \$7.50 to \$8.25 in 2007, and we assume that the number of workers that would move out of these ranges as a result of wage increases between today and 2007 would be replaced at the same rate by new entrants to the labor force.

Although the proposal calls for a 22% increase in the minimum wage, the actual increase in wages earned by individual employees would vary. For example, a worker earning \$6.75 per hour prior to the minimum wage increase would receive the entire 22% rate increase (\$6.75 to \$8.25), while a worker currently earning \$7.50 per hour would receive only a 10% increase. Thus, in 2007, when the rate moves from \$7.50 to \$8.25 per hour, all 153,000 workers would receive the entire \$0.75 (or 10%) increase, but the remaining 108,000 workers earning between \$7.50 and \$8.25 would receive varying portions of the increase, depending on their wage prior to the increase. We assign their wage increases based on a rectangular distribution. Thus an equal number of workers are assigned 100%, 90%, 80%, 70%, etc. of the of the \$0.75 increase. This yields an "effective" increase in the minimum wage per affected worker of 8.07%.

Given the costs associated with employee turnover and/or increasing consumer prices (passing the increased labor costs onto consumers), a relatively small increase in the minimum wage is likely to be absorbed by employers. We assume a threshold of \$7.50 for an increase in the minimum wage to induce an employer response; thus the entire increase from \$6.75 to \$7.50, proposed for 2006 would be absorbed by employers. Observing this threshold provides a conservative estimate of the likely employment effects of the legislation.

We calculate the employment effects of the proposal by multiplying the number of affected workers by the “effective” increase in the minimum wage. This yields a net increase in labor costs for Massachusetts employers, and we apply a labor demand elasticity to this increase in labor costs. This elasticity – called the “low wage” elasticity – is obtained by adjusting the minimum wage elasticity to reflect the fact that the number of workers affected by the increase in the minimum wage is smaller than the number of workers that comprise the category of workers for which the minimum wage elasticity was constructed.

Data from the United States Department of Labor, Bureau of Labor Statistics show that teenage workers represent 4.3% of the state labor force, or 143,000 workers.²³ The Massachusetts Budget and Policy Center data show that, of these teenage workers, 34,606 would earn higher wages (assuming they remain employed) as a result of the proposed increase in the minimum wage.²⁴ We therefore multiplied the minimum wage elasticity of -0.31 by $\frac{143,000}{34,606} = 4.13$ to obtain the relevant “low wage” elasticity of -1.28.

A 1% increase in the minimum wage would bring about a 1.28% decrease in employment among workers affected by that increase.

Applying this elasticity to all affected workers, we estimate that the proposed increase in the minimum wage would cause 26,970 (= .0807 X 1.28 X 261,000) workers to lose their jobs.²⁵ This, as mentioned, is a lower-bound estimate. In reality, the job losses could be expected to be substantially greater.

Table 4 displays the impact of Representative Marzilli’s proposal on employment and wages. The job losses due to increasing the minimum wage would result from layoffs and staff reductions; employers may also cut back the hours of existing employees and hire fewer new employees than under the current minimum wage creating “stealth unemployment.”

Table 4: Employment Effects of the Proposed Minimum Wage Increase

Hourly Wage Range (\$)	Workers Affected	Job Losses	Lost Wages (\$)
7.50	153,000	19,584	267,321,600
7.50-8.25	108,000	7,386	103,783,680
Total	261,000	26,970	371,105,280

We project that increasing the minimum wage to \$8.25 per hour in 2007 would destroy 26,970 jobs worth an estimated \$371 million in lost wages. Workers with the lowest wages, earning below \$7.50 per hour prior to the minimum increase, would bear a significantly higher portion of the costs of the proposal, shedding 19,584 jobs and \$267 million dollars in wages, while workers earning more than \$7.50 per hour would suffer the loss of 7,386 jobs and \$104 million dollars in lost wages.

The wage effect of the minimum wage increases is calculated using the same rectangular distribution used in the effective wage increase calculations. We assume that each worker represents a full-time employee working 35 hours per week for 52 weeks per year. The total increase in wages is determined by multiplying the number of affected workers by the wage increase by 35 hours per week times 52 weeks [Wage increase = (number of affected workers) X (wage increase) X (35 hours x 52 weeks)].

Table 5: Wage Effects of the Proposed Minimum Wage Increase

Group	Estimated Wage Increase (\$)
\$6.75-\$7.50	323,709,750
\$7.50-\$8.25	81,081,000
Subtotal*	404,790,750
Layoffs	(371,105,280)
Net Wage Effect	33,685,470

*Total assuming no layoffs.

The workers that retain their jobs after the minimum wage increase would see their wages increase. See Table 5. The distribution of wage increases mirrors that of the employment losses, those earning the lowest wage, below \$7.50, before the increase would receive a larger wage boost than workers earning above the \$7.50 rate. Specifically, the workers earning under \$7.50 per hour would see their aggregate wages grow by \$324 million, and those people earning above \$7.50 would see their aggregate pay grow by \$81 million for combined total increase of \$405 million. However, these gains would be almost completely offset by the \$371 million in lost wages from those workers suffering job losses. Therefore, the minimum wage increase would transfer wages from those workers that experience unemployment or “stealth unemployment” to those workers that are unaffected by the increase. We estimate a net wage increase of \$33.7 million.

Table 6 shows the changes in employment and wages broken out by demographic group and industry.²⁶ Women and workers over 20 years old would suffer more job and wage losses than males and teenagers; while those that retain their jobs would experience a pay increase, again at the expense of the workers suffering unemployment.

Thus, the brunt of the employment losses would fall on those demographic groups – low wage workers, women workers and workers 20 and older – who would suffer most from losing their jobs.

Table 6: Minimum Wage Effects on Selected Groups

Group	Job Losses	Lost Wages (\$)	Net Increased Wages (\$)
Gender			
Male	10,572	145,473,270	13,204,704
Female	16,398	225,632,010	20,480,766
Age			
Teenagers	6,527	89,807,478	8,151,884
Other	20,443	281,297,802	25,533,586
Industry			
Retail	7,012	96,487,372	8,758,222
Leisure and Hospitality	6,823	93,889,636	8,522,424

Under the proposed minimum wage increase the retail and leisure and hospitality industries combined would cut 13,835 jobs, about half the total, and \$190 million in pay. Furthermore, the industries would face a wage bill that increases by \$17 million after accounting for the savings from reductions in employment. This burden, while mild, would place additional strain on businesses and their ability to compete. Businesses would be forced to make additional adjustments, either by raising prices, relocating out of state or, for some, simply closing their doors.

Despite the temptation to conclude that the minimum wage increase would provide a significant income benefit to the “working poor,” one must remember that the \$33.7 million wage increase has not created any new wealth. This proposal simply transfers wealth from consumers, employers and other employees to a portion of current low wage earners. Indeed, while our goal is to provide a lower-bound estimate, in reality the transfer could be much larger. For instance, if an increase in the minimum wage creates pressure on employers to increase wages to other employees to preserve current wage differentials, the overall impact would be much larger. In effect, the proposal would result in increased compensation for a much broader segment than intended. This would magnify any unintended consequences. This is precisely the problem with using such blunt policy tools as the minimum wage.

Other Impacts

While much of the analysis of minimum wage impacts focuses on employment levels and employee welfare analysis, little attention has generally been paid to the welfare of consumers. Given that a large share of employees earning the minimum wage are in retail and food-related industries, many of the increased labor costs due to minimum wage hikes are passed along to consumers in the form of higher retail prices. Lee, Schluter and O’Roark (2000) of the United States Department of Agriculture’s Economic Research Service traced the effect of minimum wage hikes on prices in food-related industries and found the largest impact on eating and drinking establishments.²⁷ Their model showed that a 19.4 percent increase in the minimum wage (similar to the Massachusetts proposal) increases prices at eating and drinking establishments by 2.27%.²⁸ Similarly, Aaronson (2001), using data on restaurant prices in Canada and the United States, found that increased labor costs due to minimum wage hikes are generally passed along to customers very quickly – usually within the quarter.²⁹

While it is likely that employers would absorb some of the costs, consumers could expect to pay some portion of the \$33.7 million in the form of the higher prices that business owners would charge to offset the wage increase. Consumers, particularly those living in the northern part of the state, could avoid any price increase by shopping in states like New Hampshire that match the federal minimum wage of \$5.15.

Business owners would assume the portion of the wage increase that they could not successfully pass on to consumers. Some would move their business out of state.

Conclusion

Massachusetts lawmakers are considering legislation to implement the nation’s highest minimum wage rate at \$8.25 per hour by 2007, and index it to inflation thereafter. Supporters view the policy as a means to help the “working poor” and lower state poverty rates; yet the minimum wage is a blunt tool with an economic dark side touching all citizens of the commonwealth. The most inexperienced and lowest skilled workers affected by the minimum wage increase would likely lose their jobs as their wages are

transferred through the increase to those that remain employed. Business owners, especially small retailers, would experience a profits squeeze and an increasing competitive disadvantage compared to their larger and out-of-state competitors. All Massachusetts citizens would experience an even higher cost-of-living as prices rise to absorb the wage increases, particularly under the proposed minimum wage indexation scheme. Policymakers need to be conscious of the longer-term, far-reaching harmful effects that this legislation would have on workers, companies and the economy.

Endnotes

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- ¹ *An Act Indexing the Minimum Wage*, H 3782, Massachusetts General Court, House, available from <http://www.mass.gov/legis/bills/house/ht03/ht03782.htm>, Internet; accessed May 18, 2005.
- ² Linda Gorman, "Minimum Wages," *Concise Encyclopedia of Economics*, Library of Economic and Liberty; available from <http://www.econlib.org/library/Enc/MinimumWages.html>; Internet: accessed on May 20, 2005.
- ³ United States Labor Department, Bureau of Labor Statistics, "History of Federal Minimum Wage Rates Under the Fair Labor Standards Act, 1938 – 1996"; available from <http://www.dol.gov/esa/minwage/chart.htm>; Internet; accessed May 25, 2005.
- ⁴ *Fair Minimum Wage Act of 2005*, S 1062, 109th Cong. 1st session, Congressional Record 151, no. 66 (May 18, 2005).
- ⁵ Scott S. Greenberger, "Support Builds for Minimum Wage Hike," *Boston Globe*, December 9, 2004, sec A1.
- ⁶ *Ibid.*
- ⁷ Press release from the office of state Representative James Marzilli, "Over 50 Local Economists Support an Increase in the Massachusetts Minimum Wage," issued May 31, 2005.
- ⁸ Karl E. Case and Ray C. Fair, *Principles of Economics* (Upper Saddle River, New Jersey: Pearson/Prentice Hall, 2005), 277. On page 276, the authors cite studies that do and do not support this hypothesis.
- ⁹ The Office of the President of The United States, Council of Economic Advisors, "Economic Report of the President"; 1999; available from http://a257.g.akamaitech.net/7/257/2422/17feb20051700/www.gpoaccess.gov/usbudget/fy00/pdf/1999_erp.pdf; Internet; accessed May 20, 2005.
- ¹⁰ Robert David Sullivan, "Shrinking Pains," *Boston Globe*, available from http://www.boston.com/news/globe/ideas/articles/2005/04/17/shrinking_pains/; Internet; accessed May 26, 2005.
- ¹¹ United States Department of Labor, Bureau of Labor Statistics, "Minimum Wage Laws in the States-January 1, 2005"; available from <http://www.dol.gov/esa/minwage/america.htm>; Internet; accessed May 24, 2004.
- ¹² United States Department of Labor, Bureau of Labor Statistics, "Current Employment Statistics"; available from <http://www.bls.gov/sae/home.htm>; Internet; accessed May 26, 2005.
- ¹³ Timothy Noah, "The Wal-Mart Manifesto." *Slate*; available from <http://slate.msn.com/id/2113954/>; Internet; accessed June 1, 2005.
- ¹⁴ Richard V. Burkhauser, Kenneth A. Couch and David C. Wittenburg, "A Reassessment of the New Economics of the Minimum Wage Literature with Monthly Data from the Current Population Survey", *Journal of Labor Economics* 18 no. 4. (2000).
- ¹⁵ See the following works to review the positive relationship between increases in minimum wages and employment: David Card, "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage," *Industrial and Labor Relations Review* 46, no. 1, October, 1992, 22-37; Card and Alan B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *American Economic Review*, 84, no. 4, (September 1994), 772-793; Card, "Time-Series Minimum-Wage Studies: A Meta-Analysis," *American Economic Review Papers and Proceedings* 85, no. 2, (May, 1995): 238-43; Lawrence F. Katz and Krueger, "The Effect of the Minimum Wage on the Fast-Food Industry," *Industrial and Labor Relations Review* 46, no. 1, (October 1992): 6-21.
- ¹⁶ See the following critiques of works cited above in footnote 15. Janet Carrie and Bruce C. Fallick, "The Minimum Wage and the Employment of Youth: Evidence from the NLSY"; *Journal of Human Resources* 21, no. 2, (Spring 1996): 404-428; Donald Deere, Kevin M. Murphy, and Finis Welch, "Employment and the 1990-1991 Minimum-Wage Hike," *American Economic Review Papers and Proceedings* 85, no. 2, (May 1995): 232-7; Taeil Kim and Lowell J. Taylor, "The Employment Effect in Retail Trade of California's 1988 Minimum Wage Increase," *Journal of Business and Economic Statistics* 13, David Neumark and William Wascher, "Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws." *Industrial and Labor Relations Review* 46, no. 1, (September 1992): 55-81. Also see by Neumark and Wascher, "Employment Effects of Minimum and Subminimum Wages:

Reply to Card, Katz, and Krueger," *Industrial and Labor Relations Review* 47, no. 3, (April 1994): 497-512.

¹⁷ Burkhauser, Couch and Wittenburg. See also Neumark and Wascher, "The New Jersey-Pennsylvania Minimum Wage Experiment: A Re-Evaluation Using Payroll Records," Mimeograph, 1998, Michigan State University.

¹⁸ Congress, House Financial Services Committee, Alan Greenspan testimony before the House Financial Services Committee, July 18, 2001, cited in Graig Garthwaite, "Minimum Wage and Its Effects on Small Business: A Hearing Before the Subcommittee on Workforce, Empowerment, and Government Programs," Employment Policies Institute, April 29, 2004.

¹⁹ Victor R. Fuchs, Alan B. Krueger, and James M. Poterba, "Economists Views about Parameters, Values, and Policies: Survey Results in Labor and Public Economics," *Journal of Economic Literature*, 36 (September 1998): 1387-1425.

²⁰ We excluded the earlier results from Card, Kats, and Krueger (1992, 1994) as well as the earlier work from Neumark and Wascher (1992, 1994) due to the controversy surrounding their results.

²¹ We use the estimate made by the Massachusetts Budget and Policy Center on number of employees affected by the minimum wage proposal.

²² Jeff McLynch, "Keeping it Real: The Effects of Increasing and Indexing the Massachusetts Minimum Wage," The Massachusetts Budget and Policy Center, November 26, 2004; Internet; available from <http://www.massbudget.org/article.php?id=261>; Internet; accessed May 27, 2005, p.13. Note that the scenario used by the author projects and minimum wage increase from \$6.75 to \$7.65 while the Marzilli proposal calls for an increase from \$6.75 to \$7.50. Although they do not match precisely, we use a scenario for 153,000 workers that captures the overall number (261,000) of workers that are affected by minimum wage increase.

²³ United States Department of Labor, Bureau of Labor Statistics, "Geographic Profile of Employment and Unemployment, 2002: Estimates for States"; available from <http://www.bls.gov/opub/gp/gpsec2.htm>; Internet; accessed on May 31, 2005.

²⁴ McLynch, 13.

²⁵ The difference is owed to rounding.

²⁶ McLynch, 13.

²⁷ Chinkook Lee, Gerald Schluter, and Brian O'Roark, "How Much Would Increasing the Minimum Wage Affect Food Prices?" *Agriculture Information Bulletin* 747-02, U.S. Department of Agriculture, Economic Research Service, (May 2000).

²⁸ This particular scenario assumed that an increase in the minimum wage has spillover effects on workers earning slightly more than the minimum wage. This would occur if employers increase total compensation (wages plus supplemental) in order to maintain current wage differentials for more experienced or qualified employees.

²⁹ Daniel Aaronson, "Price Pass-Through and the Minimum Wage," *Review of Economics and Statistics* 83 (1), (February 2001): 158-169.

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