Economic Impacts of the Salem (NH) School Renovation and Expansion Program:
A Report

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Introduction

According to the National Center for Education Statistics, more than 97,000 public elementary and secondary schools in the U.S. are in need of renovation, repair and expansion. The facilities of the Salem (NH) School District are certainly part of that national picture. The three schools that are about to be rehabilitated and expanded in Salem were built in 1967, more than four decades ago. Their only previous renovation came in 1988 when their walls were reconstructed to conserve energy. From a purely educational standpoint, one could argue that these schools are certainly due to be refurbished and modernized. But what about the economic impact of Salem’s plan to renovate and expand three of its public schools?

Although the effectiveness of the federal fiscal stimulus programs of 2008 and 2009 continue to be hotly debated, we believe that the Salem school construction program is an excellent example of fiscal stimulus at the local level of government. As Lawrence Summers, former Harvard University president and a leading economist, testified before the U.S. House Budget Committee in 2008, a fiscal stimulus program should be “timely, targeted and temporary.”

The Salem construction project satisfies all three of these criteria. First, it is timely since it will take place during the early stages of the state’s overall recovery from the recent recession. (See Chart 1 for the state’s unemployment rate during recent years.) The school construction project is also timely because the Salem School District is taking advantage of unusually low interest rates to finance that project. Second, it is targeted because the nation’s construction industry has been especially hard hit by the severe downturn in residential and commercial building activity since 2007. (See Chart 2 for employment in the U.S. construction industry during the past decade.) Third, the program provides a temporary, 12-month boost to the Salem and New Hampshire economies, not a permanent increase in state or local government spending.

1 These are the Barron, Lancaster, and No. Salem Schools.

2 In fact, $14.5 million of the $22 million project cost is being financed at zero interest cost to Salem taxpayers via the federal Qualified School Construction Bond program. Another $7 million will be financed over sixteen years at an average annual rate of only 3.51 percent (Ms. Linda MacDonald, Salem School District business administrator).
In the next section of this report, we discuss our estimates of the direct and indirect impacts of the Salem school construction program on employment, payrolls, economic activity and house prices.

**Economic Impact Estimates**

A technique that is commonly used by economists to forecast the impacts of a public or private investment project is the RIMS II Regional Multiplier methodology. The Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce developed this forecasting tool to take account of both the direct and indirect effects of a project or expenditure on a local or regional economy. For example, if a school district hires teachers, administrators and support staff to educate students, it creates jobs and payroll directly. However, a public school district also creates private jobs and payroll indirectly because its operation creates a demand for electricity, textbooks, computer software, and other goods and services. Many of those indirect impacts are felt within the local economy but others are felt in the rest of the state, the rest of the U.S. or even in the rest of the world.

Because RIMS II Regional Multipliers are not available at the town level, we have used BEA multipliers for Rockingham County (NH) to predict the direct and indirect impacts of the Salem school construction project. As a result, the following estimates pertain to the Town of Salem plus the surrounding communities in the rest of Rockingham County.

**Table 1**

<table>
<thead>
<tr>
<th>Final Demand Multipliers for Construction, Rockingham County, NH</th>
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<tbody>
<tr>
<td><strong>Earnings ($/$)</strong></td>
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<tr>
<td><strong>Employment (Jobs/million 2007$)</strong></td>
</tr>
<tr>
<td><strong>Value added ($/$)</strong></td>
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</tbody>
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Source: Bureau of Economic Analysis, U.S. Department of Commerce.

What Table 1 tells us is that employees earn 39 cents of additional wages and salaries in Rockingham County, directly and indirectly, per extra dollar spent on construction in Salem. This results from an additional 10 ½ jobs (part-time and full-time) created in Rockingham County, directly and indirectly, per million 2007 dollars spent on construction in Salem. Finally, the economic value created
in Rockingham County (earnings, profits, rents, interest, etc.) is almost 97 cents per extra dollar spent on Salem school construction.\(^3\)

Because construction costs have remained roughly the same during recent years, the value of Salem’s forthcoming school construction project is $21.89 million, measured in 2007 dollars. This modest inflation adjustment was made using the R.S. Means Construction Cost Index for Manchester, NH.

Table 2

<table>
<thead>
<tr>
<th>Direct and Indirect Impacts of Salem School Construction Project on Rockingham County (1 Year)</th>
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<tbody>
<tr>
<td>Earnings (2010 $)</td>
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<tr>
<td>Jobs</td>
</tr>
<tr>
<td>Value added (2010$)</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations using Table 1, nominal project cost and inflation-adjusted project cost.

The conclusion that one can reach after inspecting Table 2 is that the Salem school construction project will provide a substantial, but temporary, boost to the local economy of Salem and other Rockingham County communities. It will generate more than $8.5 million of extra pay, not just for construction workers but also for employees in other industries that serve the construction industry. This additional pay will go partly to already employed workers but also to an additional 231 employees who are hired as a result of the project. Finally, the direct and indirect impact on overall economic activity in Rockingham County will exceed $21.3 million.

Although it is more difficult to forecast the impact of a school construction project on the prices of nearby homes, we believe that the Salem school construction project could boost Salem house prices in years to come. This might seem counter-intuitive if one looked only at the extra property taxes required to service the bonds that finance the construction project. However, if the expansion and modernization of school buildings results in higher student achievement, better student health and safety, improved teacher morale and more attractive public buildings within the community, then a debt-financed construction project can actually lead to a net increase in home prices within the

\(^3\) Of course, additional earnings, jobs and value added are created elsewhere in New Hampshire, the United States and the rest of the world.
school district. This outcome is even more likely if the project financing is at a favorable interest rate.

There has been limited scientific research on the net impact of debt-financed school construction projects on home prices. However, in a methodical study of all school bond issues in California from 1987 through 2006, Cellini, Ferreira and Rothstein (2008, p. 20)\(^4\) found that “in districts where bond issues were approved, house prices appear to shift upward by 6 or 7 percentage points by the third year.” These authors caution against generalizing their findings to other states, but let us suppose that the net impact of Salem’s construction project on house prices will average 4 percentage points. Because the median sales prices of Salem houses has been $249,500 during recent months (trulia.com), one could reasonably expect that completion of the school construction project will boost the median house price in Salem by roughly $10,000 after several years.

In conclusion, we believe that the Salem school renovation and expansion project will produce a number of economic impacts that benefit the homeowners and business owners of the town.