NEW YORK STATE
ECONOMIC DEVELOPMENT COUNCIL, INC

SPECIAL REPORT

INDUSTRIAL REVENUE BONDS: ESTIMATES OF EMPLOYMENT EFFECTS AND SIZE OF BENEFITTING COMPANIES

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NORMAN B. TURE
Economic Consultant

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Summary

The use of tax-exempt financing for private capital projects has been confined primarily to small companies and has added significantly to total employment. These conclusions are strongly indicated by data compiled for New York State. Over the thirteen years of the State's industrial revenue bond program, 123,541 jobs were added or saved in companies operating facilities financed by industrial revenue bonds (IRBs).

Support for this finding is provided by data from a survey by the New York Job Development Authority (JDA) of companies undertaking capital projects with tax-exempt second mortgage loans made by JDA. This survey shows that in the 855 responding companies, the actual number of employees at the end of 1982 totaled 75,845, a gain of 21,023 or 38 percent over the 54,822 employees in these companies at the time of their application for JDA loans.

Particularly impressive were the employment gains in companies with JDA loans during the years 1979 through 1982. These four years were marked by poor economic performance nationwide; real GNP see-sawed within a very narrow range from the fourth quarter of 1978 through the last quarter of 1982. But the aggregate employment of companies obtaining JDA loans during these four years increased by 2,154 or 21 percent over the number on the job as of the time the JDA loan applications were made.

All but a handful of companies receiving JDA funding for capital projects were quite small, as measured by number of employees. Only 15 of the 855 reporting firms had more than 500 employees. Four-fifths of the companies had 100 or fewer workers. Similar results are indicated with respect to IRB financing; less than 14 percent of the cases of IRB financing in New York involved Fortune 500 companies over the programs life.

Introduction: The Policy Issues

The increasing volume of IRBs issued during the late 1970s and so far in this decade has generated renewed concern about the tax treatment of these debt instruments. The criticism of IRBs focuses on a number of issues, some of which are of long standing, associated with the tax exemption of interest on general obligation state and local debt issues in general. Prominent among these issues are the alleged inefficiency of tax exemption, the upward pressure on state and local government general obligation debt interest rates, hence on the cost to states and localities for financing government in their respective jurisdictions, the consequent effects in raising interest rates for virtually all debt issues, the loss of tax revenues suffered by the Federal Government, and the violation of the standards of tax fairness, by virtue of the fact that tax-exempts are presumed to be held primarily by upper-bracket individuals and financial institutions. In the case of small-issue IRBs, this list of complaints is elaborated to include the allegation that those instruments fail to serve the objectives sought by the statutes which authorize their tax exemption. Specifically, it is alleged that the incentives for capital formation afforded by exempting the interest on these issues from tax are not confined to appropriate industrial enterprises, that the IRB issues are not limited to financing investments by small businesses, and that the use of these instruments does not result in any increase in total capital formation and employment.

This discussion focuses only on the last two of the issues suggested by the preceding listing of criticisms, i.e., is small-issue IRB financing confined primarily to small companies, and does the use of IRBs contribute to increasing employment?

IRBs and Employment

The use of IRBs reduces the cost of capital to firms on whose behalf the IRBs are issued by reducing an important element in their financing costs. Because bondholders --- the suppliers of the capital obtained through this financing --- are exempt from Federal taxes on the interest on the bonds, they are willing to accept a lower yield on any given amount of saving committed to these bonds than if the bond interest were taxable. By the same token, unless one assumes that people are entirely unresponsive to the net-of-tax return they obtain for the use of their saving, the response is both an increase in the proportion of their saving channeled into these investments and an increase in total saving. Because the tax exemption serves to reduce the coupon rate on the obligations, the amount which the companies using the facilities financed by IRBs must pay to provide the revenues to the issuing authorities for the service of the bonds is, obviously, less than if the bonds were taxable. This reduction in financing cost increases the number of investment projects which can meet the companies' minimum rate of return requirements.

For some companies, the availability of IRB financing makes the difference between undertaking a project or foregoing it altogether. In other cases, IRB financing results in a somewhat larger capital project or a greater number of projects than would otherwise be undertaken. In any event, the lower cost of capital afforded by IRB financing results in an increase in the optimum amount of capital firms want to use, leading to an increase in the business demand for capital facilities.

In this context, the assertion often advanced by opponents of IRB tax exemption that the use of IRBs contributes little if anything to increasing aggregate capital formation is without foundation. To assert that business generally would undertake the same volume of capital additions in any given period of time with or without the benefits of such financing is equivalent to asserting that businesses' investment plans are completely insensitive to the cost of capital. Similarly, to assert that IRBs' tax exemption has no effect on the total volume of private saving is equivalent to asserting that people will save the same amount irrespective of how much consumption they must give up for any given return or irrespective of how well rewarded they are for saving.

The increase in capital inputs (resulting from business response to IRB financing) raises the capital:labor ratio, which increases the productivity of labor compared to levels that would otherwise prevail. This increase in productivity increases the demand for labor services and raises real wage rates; higher real wage rates induce increases in the amount of labor services supplied. The increases in the supply of and demand for the services of labor result in gains in the employment level. This higher level of employment brings about an increase in total labor compensation. And the increases in labor and capital inputs in production results in expansion of total output compared to the levels that would otherwise be realized. The higher levels of real output, hence total real income, in turn generate higher levels of both consumption and saving and capital formation.

Critics of IRB tax exemption assert that the use of these instruments contributes little, if anything, to total employment, analogous to their claim that IRBs afford no effective incentive for additional saving and investment. The argument is that the use of IRBs may well result in a shift in jobs from one location or employer to another, but no increase in overall employment results. Hence, it is argued, the policy objective sought by tax exemption of IRBs --- to provide net gains in employment --- is not served.

No evidence is provided by IRB critics to support their claims that IRBs result in no net increases in capital formation and employment. In view of the fact that without question the use of IRBs reduce the cost of saving and the cost of capital, one would think the burden of proof would rest on IRB critics to show that saving and capital formation are unresponsive to these incentives. Similarly, one would think that the IRB critics would bear the onus for showing that no increases in employment are associated with the additional industrial, commercial, and service facilities which result because IRBs reduce the cost of saving and capital.

Any empirical demonstration of the effectiveness or ineffectiveness of any tax provision in contributing to additional saving, capital formation, and/or employment of course requires showing what these would amount to in the absence of the tax provision. Because there is seldom if ever the opportunity to undertake the kind of controlled social experiment which would be needed for this purpose, providing evidence as to these "what if" conditions is generally not possible. One must rely on other types of information on the basis of which one may draw reasonable inferences.

In this connection, some extremely useful and indicative data are available pertaining to experience in the State of New York with tax-exempt second mortgage loans made by the New York Job Development Authority to companies locating or expanding in New York. Applicants for this financing submit a variety of information to the JDA, including the number of additional jobs which they believe will result from the proposed capital projects to be undertaken with the tax-exempt financing. To be sure, one might well regard the applicant's estimates with some skepticism, in view of their obvious self-serving aspect. But the JDA also compiles information showing the number of employees the applicant firm had at the location for which the tax-exempt financing is sought at the time of the application and the number of employees actually on the job at that location at subsequent reporting dates. Comparison of these employment data provide substantial indication as to the effectiveness of the tax-exempt financing in adding to employment. Although these bond issues are not identical to IRBs, the results they produce must be quite similar to those afforded by IRB financing.

As of December 1982, these employment data were available from 855 companies for whom tax-exempt financing through JDA had been undertaken since the early 1960's. Based on reports received as of September 30, 1982, reporting companies were 80.9 percent of all companies actually obtaining such financing. On this basis, then, about 1.057 companies had actually undertaken projects with the tax-exempt financing.

The 855 responding companies had reported employment of 54.822 as of the time of their loan applications. They projected employment of 82.479 when the projects for which the loan application were filed were to be in operation. As of December 1982, the actual number of employees totaled 75.845. Although this number is 6,634 short of the projected employment level, it represents a gain of 21,023, or 38 percent, over the original 54,822 employees of the applying companies.

In a dynamic business environment, the results of capital formation projects often differ from those anticipated when the project plans are formulated and the financing is undertaken. Changes in the demand for the product(s) in the production of which the new capital is to contribute may result in better performance than expected, reflected in greater gains in employment than originally anticipated. Demand changes, on the other hand, may also lead to disappointing results. The very substantial gains in employment of the companies using the JDA loans, therefore, cannot be ascribed in full to the response to the tax-exempt financing itself. By the same token, neither can the modest shortfall of actual employment from that anticipated when the loans were applied for be construed as measures of the ineffectiveness of the tax-exempt financing. A conservative assessment would be that over the years company growth assisted by the tax-exempt financing had contributed importantly to expansion of employment.

Economic circumstances over the 20 years for which participating companies reported varied widely from recession to rapid growth, with a significant expansion of capacity and output overall. One might, accordingly, interpret the employment gains reported by the companies receiving JDA loses as reflecting the overall economic expansion rather than response to the incentives conveyed by tax-exempt financing.

To sharpen the focus on the likely effects of the tax-exempt financing, consider the results only for JDA loans extended in the years 1979 through 1982. These were years of poor economic performance nationwide. On a fourth quarter to fourth quarter basis, real GNP increased by only 1.4 percent in 1979. fell by 0.8 percent in 1980, rose by 2.0 percent in 1981, and fell by 1.7 percent in 1982. The fourth quarter 1982 real GNP was only 0.8 percent greater than that of the fourth quarter of 1978. In this period, the aggregate employment of companies obtaining JDA loans, as of the time of their application for the loans, was 10,249. Projected employment was 16,555. Actual employment by these firms as of the end of 1982 was 12,403. While the actual employment results fell short of expectations, they nevertheless represented a gain of 2,154 employees, or 21 percent.

The industrial development bond program has been in existence in New York for 13 years. Over this period local industrial development agencies have floated bonds totaling almost $2.7 billion. During the period, 97 agencies issued bonds for 1,271 projects. Industrial facility bonds, valued at $1.3 billion, account for 49 percent of the dollar total.

Pollution-control and commercial facility bonds amount to $536 million and $835 million, respectively. Although employment data of the sort provided the JDA are not available from the district industrial development agencies, estimates of new or saved jobs are provided by the companies operating facilities for which IRB financing was provided. The reported new or saved jobs attributable to IRB financing aggregate 123,541 over the 13-year period ending December 31, 1982.

The industrial development agency data combined with the JDA survey information strongly urge that the use of tax-exempt financing for industrial, commercial, and service businesses has contributed significantly to expansion of total employment. The view that the employment gains of companies whose capital projects are so financed are merely at the expense of other firms rests on an implicit assumption that there is, at any time, some fixed number of jobs which cannot be expanded irrespective of the incentives for doing so. It is, in fact, absurd to assume that each time a company with IRB or JDA financing increased its employment some other companies lost an equal number of workers. Any such assumption has no more credibility than the assumption that when companies obtaining IRB or JDA financing reduced the number of their employees, other companies necessarily increased their employment in equal numbers. To repeat. the reasonable assumption is that significant net employment gains are reflected in the data provided by the New York industrial development agencies and the JDA.

Size of Companies Obtaining IRB Financing

The information reported by companies obtaining IRB or JDA second mortgage financing does not include detailed data about the companies' size. An examination of the list of companies for whose facilities IRB financing was provided shows that less than 14 percent of the cases involved Fortune 500 companies. To be sure, this does not necessarily demonstrate that all of the remaining cases involved very small companies, but it does strongly indicate that the benefits of IRB financing do not go primarily to large companies.

Substantial confirmation for this conclusion is provided by the survey of companies obtaining JDA financing. According to Mr. Michael F. Woods, Director, Industrial Economic Development, Department of Planning and Marketing of the New York Power Authority, the overwhelming proportion of the 1,035 companies obtaining JDA financing through September 1982 are small companies. This is confirmed by the employment data cited above. The 855 companies responding to the JDA questionnaire employed 75,845 persons as of December 1982, an average of 89 employees per firm. The following table presents a distribution of companies receiving JDA financing by numbers of persons employed at the end of 1982.

Distribution of Companies Receiving JDA Funding
by Number of Employees

Number of Employees	Companies: Number	Companies: Percent of Total
10 or fewer	116	13.6 %
11 to 50	361	42.2
51 to 100	197	23.0
101 to 250	122	14.3
251 to 500	44	5.1
More than 500	15	1.8
Total	855	100.0

Source: New York Job Development Authority

As the table shows, 42.2 percent of the 855 responding companies had from 11 to 50 employees in the reporting month, December 1982. Less than 7 percent of the companies had more than 250 employees at that time. And almost four-fifths of the reporting companies had 100 or fewer employees.

Unless other data sources can be provided to show a contrary result, it is fair to assume that the size distribution of companies obtaining IRB financing is much the same as that of companies with JDA funding. On this assumption, it seems clear that the benefits of tax-exempt financing of businesses are largely confined to small businesses.

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