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Are Local Economic Development Incentives Promoting Job Growth?

An Empirical Case Study

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Executive Summary

This report provides the first systematic and comprehensive analysis of datasets on economic development incentives in New York City over the last fifteen years. Some of the key findings are:

- Looking at Local Law 69 data over time reveals that the use of economic development incentives has increased both in terms of firms receiving them and their total value.
- The evidence on job retention and creation is mixed and mostly ambiguous. Although many companies do not meet their agreed-upon job targets in absolute terms, the evidence suggests that companies receiving subsidies outperform their respective industries in terms of employment growth, that is, they grow more, or decline less.
- Their above-average performance may, however, simply reflect the fact that the Economic Development Corporation selects economically promising companies within manufacturing (or other industries) when granting incentives. At the same time, it is also possible that receiving incentives helps these companies to become stronger.
- A trend toward larger incentive packages is apparent. While the average incentive package (current nominal prices) totaled \$15.3 million dollars in 1997, it climbed to \$28.6 million in 2003.
- During the same period, average job retention targets per incentive deal remained stable, but the average number of jobs to be created increased from 97 jobs per case in 1997 to 245 in 2003. This trend probably reflects both increasing size of incentives packages and a conscious intent, particularly during the Bloomberg administration, to shift the program's focus from retaining jobs to creating new ones.
- Some industries clearly obtained a disproportionate share of the incentives. Transportation, Communications, and Public Utilities (TCPU) and Finance, Insurance, and Real Estate (FIRE) account for 70 percent of the incentives but only 23 percent of employment in New York City.
- Closer examination of the four-digit industry groups within these broader categories reveals that firms in industry groups 48 (Communications) and 62 (Security and Commodity Brokers, Dealers, Exchanges, and Services) received most of these incentives.
- Since 1997, particularly after the Bloomberg administration took office in 2001, the share flowing to the securities industry declined, while that of manufacturing companies more than doubled.
- Lease and straight lease mechanisms increased dramatically in recent years. Overall, IDA (a collective term for a number of programs administered by the Industrial Development Agency) and lease/straight lease account for most of the incentives.
- Looking at aggregate job figures, those companies whose incentive agreements closed between 1995 and 1998 had largely fulfilled their targets in 2003, while companies whose agreements closed after 1998 did not reach the aggregate job retention targets except in 2003. In other words, companies with older agreement were better able to fulfill the job requirements than companies with more recent deals.
- Despite the downward trend in the manufacturing sector as a whole, industrial firms receiving incentives showed a net job expansion. All other industry divisions also have positive annual job creation, although it is not possible to determine whether the final job creation targets will be met.
- The share of businesses that are in compliance with job targets declined steadily from 1996 through 2003. A number of caveats must be kept in mind when interpreting this remarkable trend. First, the quality of reporting under Local Law 69 clearly evolved over this period, becoming more stringent. The latter figures thus reflect 'truer' values. Another potential problem is the difference in numbers of cases reporting data from year to year, a factor that affects the entire data set.
- Mapping of where incentive-receiving companies are located reveals that they are heavily concentrated in Downtown and Midtown Manhattan and a few other locations. While some residents of lower-income neighborhoods might benefit from the help given to these firms because they commute into these areas, they might benefit more if the city granted incentives to firms located near their neighborhoods.
- If job growth is the primary goal, the performance of economic development incentives over the past seven years did not produce that outcome. If, on the other hand, the goal was to increase the competitiveness of some firms by reducing their tax burden, there is more evidence they have done so, though the firms selected to receive these benefits may already have enjoyed efficiency advantages over their competitors. This limited result also needs to be compared to alternative ways to deploy the resources used for discretionary incentives, such as improving infrastructure or providing more training to the workforce.
- Without compromising the confidentiality of individual companies, the city should develop a more transparent and better-validated reporting system so that it can undertake a more precise firm-level analysis of the impact of economic development incentives.

At a time when cities are competing fiercely with one another to attract or retain jobs within a globalizing economy, city governments are providing an array of financial incentives to stimulate job growth and retain existing jobs, particularly in high cost locations. Despite the many different ways these incentive programs are carried out, they generally fall into two broad categories. First, cities can help defray the cost of a specific capital investment, for instance by providing help with land acquisition, construction costs, or the cost of business equipment. They devise these discrete monetary incentives either to attract a company from outside of a city's jurisdiction or to support the relocation or modernization of a company within the city. Second, a city can disburse incentives continuously over a long period to reduce the general cost of doing business within its boundaries. This second category of incentives, which may or may not be restricted to a designated zone, includes tax abatements, such as reduced or waived property and commercial rent taxes, expedited or simplified regulatory requirements, accelerated depreciation benefits, employee tax credits, workforce training, the provision of infrastructure, or low interest or tax-exempt loans.

The use of these incentives has become so widespread that corporations, real estate developers, and manufacturers routinely approach city governments to ask for them. In some cases, they say they might move their planned investment to a competing location with lower operating costs and/or more attractive incentive packages. In areas facing efforts by other locations to attract away their economic base, such as New York City, it has become common to offer economic development incentives to counter such

packages. The City typically targets them at large corporations with many employees and negotiates them on a case-by-case basis with few preset standards or regulations (so-called discretionary incentives). In exchange for the incentive package, the company typically agrees to maintain a certain level of jobs at its facilities in New York City or create a specified number of new jobs. In New York City, the packages offered by the Industrial Development Agency (IDA) include tax exempt financing coordinated with property tax reductions and other tax relief. These packages are typically set up as monetary benefits (tax abatements etc) flowing continuously over a fixed period (five to 30 years depending on the terms of the individual deal). Such packages have received widespread criticism both in academic studies and media reports. The next section will outline the most important arguments for and against monetary incentives as a local economic development tool and reviews previous studies on the efficiency of transferring public funds to private businesses for this purpose.

Since IDA's incentive packages typically have a nominal value of several million dollars, the City should carefully consider whether their potential benefits outweigh those of alternative investments. At a time of great stress on public funds, local governments must regularly provide an accurate and transparent account of the direct and indirect employment and public revenue benefits to justify forgoing millions of dollars of revenues that might fund infrastructure, workforce training, or other purposes. In spite of being legally required to do so, local reporting in New York City has been found to have a number of practical and methodological problems (IBO 2001, Good Jobs New York 2004). In response to demands for more transparency and accountability, EDC has

recently made more specific data available on its economic development incentive packages. This report uses that data to provide the first systematic and comprehensive analysis of economic development incentives in New York City over the last fifteen years.

The first section of this report reviews studies that evaluate the concept of economic development incentives. The second section describes the newly available EDC data, how other complementary data sources can be used to evaluate that data, and the methodology to be employed in this evaluation. The third section presents the results of the analysis, while the fourth section discusses some of its implications. The conclusion suggests ways to make the monitoring system more transparent and provides directions for future research. Definitions of incentive programs operated by New York City and a discussion of the data used in the study are contained in the appendix.

1 REVIEW OF EXISTING STUDIES

The economic literature provides no consensus on the efficiency of local economic development incentives. Opponents of providing such incentives argue that they mainly benefit corporations that do not need financial assistance, that the benefits do not outweigh returns that would be derived from investing foregone taxes in creating generally more attractive economic conditions, and that the decision-making process on incentive-packages generally lacks transparency. This position assumes that many or most private investments would have been undertaken even in the absence of incentives.) In addition, critics point out that incentive-receiving companies sometimes

do not meet the projected job figures that are part of their agreement, but rarely face penalties for falling short.

Critics also contend that the proliferation of economic development incentives has contributed to the shift from corporate taxes towards higher taxation of individual incomes. Leroy (1995) reports that individual federal tax payments rose 115 percent between 1979 and 1991, while corporate income tax payments rose just 49 percent. This shift was even more pronounced at the state level, where individual taxes rose 204 percent while corporate taxes increased by only 68 percent. Corporate taxes have traditionally been low in the United States, contributing merely two to three percent of state revenues. It is also possible that the various Federal, state, and city incentive programs cancel each other out in some cases.

Moreover, if New York is compelled to grant economic development incentives in order to remain competitive against its neighbors when they are seeking to motivate a large corporation to relocate, the result may be a vicious circle of communities trying to outbid one another without generating additional economic benefits while simultaneously losing benefits that might have been achieved through alternative investments of the foregone revenues. In the worst case, economic development incentives have no net effect on the regional economy, while distorting the market conditions for competitors in the respective industry.

To prevent such negative effects, critics have repeatedly called for measures to

increase the transparency of decision-making on economic development incentives, including stricter disclosure rules, more compliance monitoring, a more democratic decision process, and 'clawbacks' when companies do not meet job retention targets or other aspects of the subsidy agreement. While these measures seem to be indispensable aspects of a well run economic development incentive program, some critics argue that they require considerably stronger oversight mechanisms than local governments are capable of undertaking and suggest that the better way to solve the problems of lack of transparency and excessive bureaucratic overhead is simply to abolish local economic development incentives.

The main argument in favor of economic development incentives, however, is derived from export-base theory, which holds that incentives will generate a multiplier effect for local service industries by helping export-oriented industries to increase their revenues and jobs. This multiplier effect arises because exporting firms have local suppliers and, most importantly, their workers are local consumers who spend part of their income in the incentive-granting jurisdiction. This argument assumes, however, that workers spend a significant portion of their incomes locally, which normally requires that they live within the city that grants the incentives. It also assumes that export sectors would not invest in new facilities except for the granting of the incentives.

Glaeser (1999) argues that place-based business incentives do not reduce local poverty and unemployment since incoming developers and companies capture most of the benefits; they in turn drive up rents, which is detrimental to local residents and small

businesses already there. Studies on tax abatements (Ladd 1998, Tannenwald 1996) have found that they have a significant effect on firms' location decisions *within* a city or region but little or none at the *interregional* level. Bartik's study (1991) also finds that tax differences within metropolitan areas have more impact on corporate location decisions than differences between metropolitan areas. Implicit in these findings is the notion that firms can respond to marginal differences in rent within a region because the transaction costs of moving are relatively low, but they are much less likely to respond to interregional differentials because the transaction costs and other costs of moving from one region to another are substantially higher. The findings also suggest that locations across various regions are not close substitutes for each other and therefore do not form a single "locational market." Examining the Nebraska tax incentive program with a multivariate regression framework, Goss and Phillips (1999) found, however, that the incentives have a significant and positive impact on employment, but only in low-unemployment counties. They did not find a statistically significant impact for counties with above-average unemployment rates and conclude that the tax incentive program potentially exacerbates disparities in economic performance across counties.

Rubin (1990) finds that the benefits (job creation, economic activity) outweighed the initial costs of providing the subsidies. Fainstein and Stokes (1998) assess the impact of the incentives provided for the development of the Jacob Javits Convention Center and the 42nd Street/ Times Square redevelopment project and conclude that the Javits Center yielded a positive effect for New York City, mainly because the State carries the

operating expenses, while Times Square turned into a success story because key incentives were given to the Disney Corporation, which in turn triggered further development in the area.

Good Jobs New York (2004), a watchdog organization promoting accountability and transparency in local government subsidy spending in New York City, analyzed corporate retention contracts and actual job performance data and found that the ten large corporations for which complete data was available shed 3,000 jobs as of June 2002. The study's authors were unable to document any cases where the city collected penalties in excess of the original amount of tax benefit allocated. One of the investigated companies returned its benefits after moving its headquarters out of the city and drastically reducing its workforce. The city sought additional penalty fees that it apparently did not succeed in collecting, according to available documentation. In a number of cases, subsidy contracts did not contain job retention targets or allowed a certain percentage of 'penalty-free layoffs.' The study reports that other contracts contain job retention or job creation targets that are below the actual number of jobs the company had when signing the contract. Since some contracts contain incentives for exceeding the job retention targets, these companies were in principle able to claim additional credits by simply maintaining the status quo.

Another shortcoming of current incentive practices in New York identified in various studies (Independent Budget Office 2001, Center for an Urban Future 2001, Good Jobs New York 2004) is the lack of transparency regarding company employment records

and the methodology for calculating the economic benefits of incentive packages.

These studies found that Annual Report on Tax Expenditures and the Local Law 69 reports issued by the City both provided inadequate information for assessing the impact and opportunity costs of economic development incentives. Moreover, the City has not commissioned any independent studies to examine the adequacy and accuracy of the input-output model that the Economic Development Corporation uses to calculate the costs and benefits of individual deals. In particular, no analysis has been undertaken to gauge their effects on the different population groups and neighborhoods in the city.

In sum, these empirical studies do not consistently support the conclusion that subsidizing individual firms produces positive net effects, though some individual deals may have done so. They are more consistent in suggesting that any jobs created have a high cost in incentives. Some economic development experts argue that it is not possible to reach an overall finding about their efficacy because incentives take such varied forms, involve such a large constellation of interests, and are implemented in such different circumstances (Weber 2004). Instead, they argue that we must assess the cost-benefit ratio, level of uncertainty, and bargaining leverage of each case individually.

2 OVERVIEW OF LOCAL INCENTIVE PROGRAMS IN NEW YORK CITY

A basic distinction can be made when categorizing economic development incentives between as-of-right and discretionary incentives. The latter are granted to an individual

company by a local government institution on a case-by-case basis, while the former denotes incentives to which a company is entitled by fulfilling certain predefined criteria such as being located in a designated area and/or pertaining to a specific size or industry group. This study focuses on discretionary incentives to the extent that these incentives can be distinguished from as-of-right incentives in the empirical data. The following categories of local incentive programs are currently in use in New York City.

Industrial Development Revenue Bonds (IDRBs) or IDA Bonds are tax-exempt debt obligations issued by a local government body on behalf of a private business, typically in the manufacturing sector, for acquiring or constructing capital facilities. IDRBs can be compared to regular note or mortgage financing. The resulting facilities provide security for the bonds, but the financial institution may also require additional guarantees and collateral before it will agree to purchase the IDRBs. The interest they receive is tax free, so they are willing to accept a lower interest rate than regular financing would require. Although the public agency issues the bonds, it does not actually lend the money to the developer. The developer negotiates the terms and conditions of the loan with the lender independently of the agency. It remains the sole responsibility of the developer to repay the bonds and the public agency issues no guarantees to alleviate the financial risk of the loan. In general, IDA bonds are attractive for private lenders because the interest earned is not subject to federal or state taxation.

Additionally, the IDA operates incentive programs based on *Lease and Straight Lease (Sale-Leaseback or Lease-Leaseback)* transactions, thus granting exemption to eligible

companies for real property, sales and use, and mortgage recording taxes. It generally provides this relief through a transaction in which the IDA acquires title or has a leasehold interest in the property, thereby allowing the property to be partially or fully tax-exempt. It then leases this property back to the firm. The IDA may also simply lease the property and then sublease it back to the firm. The main advantage of straight-lease transactions over bond financing is that it provides most of the same benefits while being a less complex transaction to conclude and easier to manage.

A further possibility is the direct *sale of public land*. The rationale for selling public land below market price is that high initial land costs in high-priced urban areas can seriously erode project feasibility in many cases where new development is deemed desirable by the city government. Careful consideration of cost-benefit relations of the industrial activity in questions is important, however, for determining the maximum discount given to a company and/or developer.

The EDC's largest as-of-right program, the *Industrial and Commercial Incentive Program (ICIP)* reduces property taxes on newly constructed, expanded, modernized, rehabilitated or otherwise physically improved industrial or commercial buildings. ICIP benefits are granted "as-of-right" to all applicants whose projects qualify under the provisions of the legislation. The program is specifically designed to deliver benefits to companies that build or expand in the outer boroughs and north of 96th Street in Manhattan. (For the most part, this report excludes ICIP recipients since its focus is on discretionary rather than as-of-right incentive programs.)

3 DATA AND METHODOLOGY

As mentioned above, data on the detailed characteristics of New York City's economic development incentives have been scarce until recently. Local Law 69 stipulates that EDC present an annual report to the City Council containing

- _ data describing the last seven years of economic development incentive projects;
- _ a calculation of the specific amount that the City provided to each business
- _ an estimate of the amount of retained or additional tax revenues each project generated.

Despite this requirement, the IDA has not previously provided readily accessible data that could be analyzed by outside observers. Due to continuous pressure by non-profit watchdog organizations, however, the EDC decided to make electronic versions of the data selectively available in at least one case. This dataset which contains information derived from the reports for the years 1997 through 2003 in spreadsheet format forms the basis of our analysis. Besides data on the respective years, the spreadsheets also contain information on earlier incentive deals that were still active in 1997. This study links each of these annual reports into a panel data set that permits us to undertake the first systematic and comprehensive analysis of economic development incentives in New York City over the last decade.

This data set contains information on the company name, location, and industry of each project, the targeted number of jobs to be retained and/or created, and the

number of jobs actually created or retained as reported by the firm, an EDC estimate of the monetary cost and yield of the benefits, and some other variables not used in this study. The data on actual jobs are reported for each year of an arbitrarily defined eight-year time window, a fact which somewhat limits the longer-term validity of the cost-benefit analysis presented in this report. At this point, it is also difficult to assess the reliability of these job data. The cost-benefit model which EDC uses to generate its estimates of each deal's economic benefits is based on reported employment levels. Since Local Law 69 does not require EDC to verify company job reports figures against a reliable source such as the state unemployment insurance tax records (ES-202), we have to accept them at face value. In previous years, EDC used estimates of employment levels when companies failed to report. The EDC data sets do not indicate, however, when the numbers were estimated or reported. To calibrate the extent of possible reporting error in the EDC data base, we linked each firm's record to the time series of employment in its standard industrial classification as provided by the ES-202 employment data for the zip code in which the incentive-receiving establishment was located. Additionally, we checked all records for consistency (addresses, industry codes, longitudinal consistency etc.) and corrected where necessary.

Our analysis involves several steps. First, we analyze the time series data on all deals in effect from 1989 through 2003 both for aggregate changes in incentive amounts and job retention patterns and broken down by incentive program (IDA,

straight lease etc.). Next, we seek to detect any changes in the composition of the industries receiving benefits and their spatial distribution over time. (We used block and lot identifiers to match all project addresses to specific location with a Geographic Information System). When companies had multiple locations, we geocoded all branch offices independently.

It would be preferable to separate discretionary and as-of-right incentives in the analysis. However, since the data set lumps together various distinct programs under the category 'IDA,' this is not possible. An additional field in the data set denotes property tax abatements, probably granted under the auspices of the ICIP program, but only a handful of cases indicate this abatement in any given year. It seems likely that Local Law 69 reports only include ICIP for firms that are receiving discretionary benefits as well so that the bulk of ICIP incentives probably do not enter the database used in this analysis.

To supplement the analysis of employment data reported to EDC under Local Law 69, we linked it not only to the zip-code level ES-202 data, but to county-level and citywide County Business Pattern data provided by Economy.com. This step was necessary not only to provide an overall check on the reliability of job numbers reported to EDC, but to provide a way of interpolating missing data. Since not every case in the data set has the same number of annual observations, aggregating the dollar amounts of incentives or the numbers of reported jobs may distort the time series analysis. We can mitigate this effect by

including only those cases with valid information for all the years analyzed. The downside to this approach, however, is that it significantly reduces the data set because many cases have missing values for some years. Nesting the firm level data within the universe of firms in its SIC and zip code provides a broader and more consistent data series against which to compare the reported data in the time series analysis. The borough and city totals, from yet another data source, provides a reliability check on these series. We describe these data sets in more detail in the appendix.

4 RESULTS

New York City is among the largest donors of economic development incentives in the United States. The total value of all active incentive programs managed by the Economic Development Corporation (EDC) and its subsidiary the Industry Development Agency (IDA), exceeded \$16 billion in Fiscal Year 2003. The amortized cost of these tax abatements, exemptions, credits, and other tax benefits is about \$2.1 billion per year, or almost 10 percent of city-generated revenues and 5 percent of the City's budget. This sum contains a variety of programs that are subject to documentation under Local Law 69, the most important of which are explained below. In addition to the City incentives, the State administers tax abatements, grants, loans and low cost energy in so-called Empire Zones and other areas.

Looking at Local Law 69 data over time reveals that the use of economic development incentives has increased both in terms of firms receiving them and

their total value. As discussed, LL69 requires EDC to report job totals over an eight-year period (base year plus seven years). Table 1 shows the aggregate trend over time for the number of firms assisted, their aggregate nominal dollar value, the per firm value of those deals, the number of jobs reported retained or created, and the mean number of jobs created per \$100,000 of subsidy expenditure. The firm total increased from 304 in 1997 to 615 in 2003, while the total value of the reported incentives and retained jobs more than tripled in the same period. In 2003, all economic development incentive programs taken together represented a total nominal value of \$16.35 billion. This sum also includes bond amounts and interest-free loans which have to be repaid by the company. While the actual incentive in the case of an interest-free loan is the amount saved by not having to pay market interest rates and related costs, it is not possible to discern them in the database used for this analysis. It is therefore important to keep in mind that, the total amounts reported here also contain loans that are not economic development incentives in the strict definition of the term.

[TABLE 1]

A trend toward larger incentive packages is also apparent. While the average incentive package (current nominal prices) totaled \$15.3 million dollars in 1997, it climbed to \$28.6 million in 2003. During the same period, average job retention targets per incentive deal remained stable, but the average number of jobs to be created increased from 97 jobs per case in 1997 to 245 in 2003. This trend

probably reflects both increasing size of incentives packages and a conscious intent, particularly during the Bloomberg administration, to shift the program's focus from retaining jobs to creating new ones. The ratio of jobs per \$100 thousand in incentives granted demonstrated a significant increase between 1997 and 1999, but has gradually decreased subsequently. This value may move in sync with cyclical phases of New York City's economy rather than reflect a policy change, however.

Which industries benefited most from these incentive packages? Table 2 shows how much each major industry division received in absolute and relative terms compared to its share in New York's total employment. Some industries clearly obtained a disproportionate share of the incentives. Transportation, Communications, and Public Utilities (TCPU) and Finance, Insurance, and Real Estate (FIRE) account for 70 percent of the incentives but only 23 percent of employment in New York City. Closer examination of the four-digit industry groups within these broader categories reveals that firms in industry groups 48 (Communications) and 62 (Security and Commodity Brokers, Dealers, Exchanges, and Services) received most of these incentives. In other words, television broadcasting companies and investment banking and securities firms received the lion's share of the benefits. On the other end of the spectrum, industry divisions that obtained far less incentive support than their share of New York employment, particularly retail and service industries. The lower share of the retail sector is probably due to the fact that retail companies are frequently

ineligible for the purposes of most IDA programs.

[TABLE 2]

Which neighborhoods of New York benefited most from incentives packages? The visual impression conveyed by Figure 1 is that the majority of incentive recipients are clustered in very few areas with above-average median household income. A more precise analysis shows that incentive packages have indeed been heavily focused on Manhattan (Table 3). This partly reflects the fact that Manhattan contains two thirds of all New York City jobs, but Manhattan's share of total incentives increased to 78 percent in the most recent reporting period while its share of all city jobs declined slightly in the same period. The shares of Staten Island and the Bronx also grew, while those of Queens and especially Brooklyn declined. In absolute terms, the number of jobs to be retained and created increased significantly in all boroughs over the last seven years.

[PLACE FIGURE 1 ABOUT HERE]

[TABLE 3]

Looking at the aggregate value of incentive packages in Table 4 yields a similar picture but with a sharper decline of Brooklyn's share and a lower share for

Manhattan over all years. The shift towards using incentives for job creation rather than retention is particularly evident in Manhattan, where job retention figures doubled while job creation goals grew almost tenfold.

[TABLE 4]

The main objective of local economic development incentives is to stimulate job growth in various industries and neighborhoods. Although there is no strict contractual obligation for a company to maintain a fixed number of jobs under the terms of incentive agreements, the creation of new jobs has become the main *raison d'être* of economic development incentives and a cornerstone of their political justification. Therefore, it is essential to monitor the success of these efforts by comparing the job targets made by firms in return for incentives with the jobs they actually report subsequently. As described in more detail in the appendix, shortcomings in the data available either from EDC or ES202 do not permit to us to examine these questions in full detail. Nevertheless, these data sources are robust enough to show some important trends.

In order to compare overall job targets, our analysis includes companies that have job retention goals but not job creation targets and compared the total sums (Table 5). Manufacturing fails to meet its aggregate job target, along with most other industry groups, notably services and the finance, insurance and real estate (FIRE) industries. These results have to be interpreted with great caution,

however. Firstly, job performance was measured in 2003, a year with a relatively poor economic environment preceded by substantial job losses in the previous two years. Secondly, firms are still executing their agreements, so they still have time to overcome the mismatch.

[TABLE 5]

A more fine-grained analysis at the two-digit SIC level (Table 6) also demonstrates that almost every industry reported actual job numbers that were well below their total job targets. Again, of the industries with a substantial number of jobs promised, only communications and business services substantially exceeded their targets. Table 12 reports the difference between the mean number of jobs to be created or retained for a given year and the mean actual number of jobs reported. To account for the fact that different numbers of deals were in force in every year, this table uses an average for all companies rather than totals. Job target fulfillment was on average positive in most years except in 2002 and 2003, most likely due to the economic downturn after 2001. Nevertheless, the caveat regarding the interpretation of these findings mentioned for the one-digit SIC level in the previous paragraph also applies to the analysis of the two-digit level. Further investigation and better datasets are necessary to explain why the analysis of job retention and creation targets yielded different results depending on the methodology used.

[TABLE 6]

Table 7 reports how many firms had complied with their job retention goals from 1996 through 2003. We do not consider job creation goals in this table since reaching them was not a strict requirement during the active period of the agreement. It shows a steady decline in the share of businesses that are in compliance with job targets. A number of caveats must be kept in mind when interpreting this remarkable trend. First, the quality of reporting under Local Law 69 clearly evolved over this period, becoming more stringent. The latter figures thus reflect 'truer' values. Another potential problem is the difference in numbers of cases reporting data from year to year, a factor that affects the entire data set. Nevertheless, it is evident that a sizable share of businesses tend to be not in compliance with the terms of the incentive agreement.

[TABLE 7]

In the absence of a full panel of accurate data from all incentive-receiving companies, we sought to use an independent data source, employment by establishment as recorded by the state's ES202 unemployment system, to track the movements of the entire industry segments in which incentive-receiving firms are located. Figure 2 shows the trends in overall employment for two-digit SIC

industries in the zip codes in New York City containing incentive-receiving firms in those industries. Despite absolute employment declines, the incentive-receiving firms in all the industry sectors except for retail and services outperformed their respective industries. An interesting case is manufacturing, where the incentive-receiving firms followed a significantly more positive path than overall manufacturing employment (which decreased by about one third from 1989 to 2001.)

[FIGURE 2]

There are two different ways to interpret these trends. One is that receiving economic development incentives may have helped these firms outperform their peers. In this view, the absence of incentives may have led to even worse performance of their industry segments. Alternatively, it is clear in many cases that granting incentives did not help their entire industries to post robust job growth. Indeed, it may be that granting incentives to some firms in an industry will help them drive competitors out of the marketplace, causing industry job totals to decline.

5 CONCLUSIONS AND FUTURE RESEARCH

The results presented in these tables and figures do not give us a clear answer to the question of whether economic development incentives help the New York City economy to grow. The evidence on job retention and creation is mixed and mostly ambiguous. Although many companies do not meet their agreed-upon job targets in absolute terms, the evidence suggests that companies receiving subsidies outperform their respective industries in terms of employment growth, that is, they grow more, or decline less. A notable case is manufacturing, in which incentive-receiving companies perform in a manner that is distinctly superior to that of the industry as a whole. We emphasize that this finding is difficult to interpret, since firms receiving incentives may not be representative of the industry as a whole. In other words, their above-average performance may simply reflect the fact that the EDC selects economically promising companies within manufacturing (or other industries) when granting incentives. At the same time, it is also possible that receiving incentives helps these companies to become stronger. More research is required to clarify this question.

Future research should also examine whether granting incentives helps neighborhoods as well as firms. Our mapping of where incentive-receiving companies are located reveals that they are heavily concentrated in Downtown and Midtown Manhattan and a few other locations. While some residents of lower-income neighborhoods might benefit from the help given to these firms because they commute into these areas, they might benefit more if the city

granted incentives to firms located near their neighborhoods. They might also benefit more if, instead of making tax expenditures to private firms, government invested more tax revenues in rehabilitating roads, transit, and other infrastructure relevant to business operations. In recent years, EDC has supported more projects located outside Manhattan, but no one has studied the impact of these investments on neighborhood development.

On the other hand, it may be argued that since a majority of the most productive and competitive industries are located in Manhattan, it makes more sense (following the export-base theory) to support them rather than declining industries in non-competitive locations.

More research therefore must be undertaken to not only to evaluate the effectiveness of incentive programs at the firm level, but to link the performance of these firms to employment trends by industry and by the neighborhoods in which their employees reside. A more thorough analysis would attempt to follow the links in this chain to determine whether and how the benefits of incentives given to certain companies filter out into various population groups and neighborhoods. This is indispensable for allocating scarce public funds in ways that achieve the more efficient and socially equitable results.

Most importantly, future studies should give close scrutiny to the cost-benefit analysis that informs the decision whether to grant discretionary incentives. The

EDC uses an input-output model resembling the national model used by the United States Commerce Department to calculate potential losses and benefits. It routinely uses this model to investigate scenarios assuming that companies would have delayed or abandoned plans to expand, open in, or relocate to New York City or, worse, would have closed down or moved elsewhere if not for EDC's incentives. It would be highly desirable if the EDC made these model calculations accessible to independent researchers to scrutinize whether their assumptions were justified.

Overall, this analysis suggests that the EDC is currently allocating economic development incentives to some of the most productive sectors in the New York City economy and to some of the most productive firms in those sectors. It is backing winners, not losers. While this may appear to make sense, this strategy deserves closer scrutiny, particularly if helping strong firms turns out to undermine weaker ones with little overall positive impact on industry employment. In other words, the granting of economic development incentives does not appear to have led to overall job growth in the industries containing the firms receiving incentives. If job growth is the primary goal, the performance of economic development incentives over the past seven years did not produce that outcome. If, on the other hand, the goal was to increase the competitiveness of some firms by reducing their tax burden and alleviating the cost of capital investment, there is more evidence they have done so, though the firms selected to receive these benefits may already have enjoyed efficiency advantages over

their competitors. While most of the public discourse is focused on the use of economic development incentives to foster job growth, the incentive programs appear more apt to assist capital investment, such as construction, renovation and expansion of production facilities and offices. If this is case, the economic value of redistributing public funds to promote investments in the private capital stock would need to be discussed in greater detail. This limited result also needs to be compared to alternative ways to deploy the resources used for discretionary incentives, such as improving infrastructure or providing more training to the workforce. Finally, without compromising the confidentiality of individual companies, the city should develop a more transparent and better-validated reporting system so that it can undertake a more precise firm-level analysis of the impact of economic development incentives.

Appendix

(B) Definitions and structure of datasets used in the analysis

ES202 Employment Data

This New York State Department of Labor (DOL) Covered Employment and Wages data series (also known as ES202) provides a time series of the number of workers and aggregate wages by detailed industry by zip code of firm location. DOL collects this information from employers covered by New York State's Unemployment Insurance Law. ES202 data cover approximately 97 percent of New York's nonfarm employment, providing a virtual census of employees and their wages as well as the most complete universe of employment and wage data, by industry, at the State, regional, county, and zip code levels. The data used for this study defines industry according to the older Standard Industrial Classification system (SIC) for 1992 through 2001 and the newer North American Industry Classification System (NAICS) for 2000 through 2003. Because the SIC and NAICS are not compatible, we focused only on the years organized according to the SIC system.¹

A known problem with using ES202 data for this type of analysis is that firms do not always report jobs where they are actually located, as the reporting form asks, but instead at the address of the company's headquarters or accounting service. While this may somewhat distort the picture of how jobs are distributed across zip codes, the main trends will nonetheless be visible. Another problem with ES202 data is that it suppresses data for zip codes with fewer than three employers in the SIC for confidentiality reasons. To remedy this problem, we developed a suppression correction algorithm. If observations were available for

¹SIC industries do not have a one-to-one correspondence with NAICS industries; instead, components of each SIC industry are distributed over various NAICS codes.

other years in the series (i.e. years when the number of reporting companies in an SIC rose above two) we calculated employment for the suppressed cases by applying the per-firm average taken from those other years. Where employment information was missing for whole series (because number of firms in zip code was continuously below three), no adjustments were made. The upward adjustment of employment numbers due to suppression correction ranged from 0.04 percent of total employment in 2001 to 0.27 percent in 1992. Further correction of cases with no valid observations would probably increase employment totals at the same order of magnitude.

A final problem is that linking data reported by incentive-receiving firms with totals for all industries in their SICs in their zip codes inevitably includes firms that did not receive any incentives in the analysis as well as those that did. We limit this problem by including only those firms that share a two digit SIC code with subsidy-receiving firms, but we cannot completely eliminate it. An idea of the magnitude of the difference between the two series can be gotten by comparing the aggregate number of jobs in incentive-receiving firms identified in the EDC files for 2001, which is 204,002, with that of all firms in their SICs as reported in the ES202 series, which is 265,147. Thus while clearly cannot equate the two sources, they are also demonstrably not far apart. Since the point of incentive programs is to grow industries, not just firms, the ES202 data may indeed be as relevant as the LL69 data.

County Business Patterns

County Business Patterns (CBP) is an annual federal data series that provides data on employment and wages standardized by industry by county. Researchers use this series to study the economic activity of detailed geographic areas over time and to benchmark time series data between economic censuses. CBP data excludes self-employed individuals, private household workers, railroad employees, agricultural employees, and most government employees. Since 1998, it has classified industry by NAICS. Before 1998, it used the SIC system.

Economy.com, a private data supplier, has attempted to reconcile SIC and NAICS data at the county level and provides a continuous time series of employment at county level from 1984 through 2004 (values for 2002, 2003 and 2004 are forecasts based on an earlier time series and augmented by smaller more recent samples). We use this dataset to benchmark our other findings.

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Table 1 Characteristics of EDC incentives over time

	1997	1998	1999	2000	2001	2002	2003
Number of firms	304	353	435	525	562	613	615
total amount reported (\$)*	4,177,168,312	4,762,630,245	5,114,982,804	9,733,837,015	10,468,748,819	14,353,265,545	16,350,891,362
per case average (\$)	15,357,236	14,654,247	13,115,341	19,864,974	20,252,836	25,449,052	28,635,537
Job retention target	69,799	109,998	137,868	173,135	177,865	220,251	218,542
per case average	565	564	584	562	544	578	541
Job creation target	11,766	34,303	35,646	78,584	81,918	94,897	92,422
per case average	97	190	171	271	263	268	245
jobs retained or created per \$100k	19.64	46.43	58.31	56.16	52.29	42.30	39.13

Source: Economic Development Corporation of NYC (2004)

*total nominal dollar value of all contracts (not payable within same year),

** non-zero values only (i.e. only cases with known job targets are considered)

Table 2 Economic development incentives by industry in 2001

<i>SIC industry division</i>	<i>% of Total NYC (private employment)</i>	<i>% of amount</i>	<i>Total amount (\$)</i>
Construction	3.77	0.11	11,426,417
Manufacturing	7.51	6.28	657,382,773
Transportation & Public Utilities	6.80	35.40	3,706,467,940
Wholesale Trade	5.76	1.90	198,808,085
Retail Trade	13.72	0.73	76,252,402
Finance, Insurance & Real Estate	15.93	35.74	3,742,695,140
Services	45.94	19.03	1,992,613,387
Unclassified	0.43	0.81	85,070,000
Total	100.00	100.00	10,470,716,144

Sources: Economic Development Corporation of NYC (2004), US Census Bureau (2004):

Table 3 Job targets (retained and created) by borough

	Jobs 1997	Jobs 2000	Jobs 2003	Share (%) 1997	Share (%) 2000	Share (%) 2003
Bronx	1508	6447	8412	1.43	2.50	2.71
Brooklyn	13986	19895	26294	13.29	7.71	8.46
Manhattan	75508	202484	241800	71.76	78.44	77.76
Queens	12036	20695	25791	11.44	8.02	8.29
Staten Island	2181	8618	8667	2.07	3.34	2.79

Source: Economic Development Corporation of NYC (2004)

Table 4 Total amount of incentives received by borough

	Share (%) 1997	Share (%) 2000	Share (%) 2003
Bronx	1.61	2.60	3.18
Brooklyn	29.26	11.32	9.67
Manhattan	46.22	71.68	68.29
Queens	18.99	12.38	17.15
Staten Island	3.91	2.02	1.71

Source: Economic Development Corporation of NYC (2004)

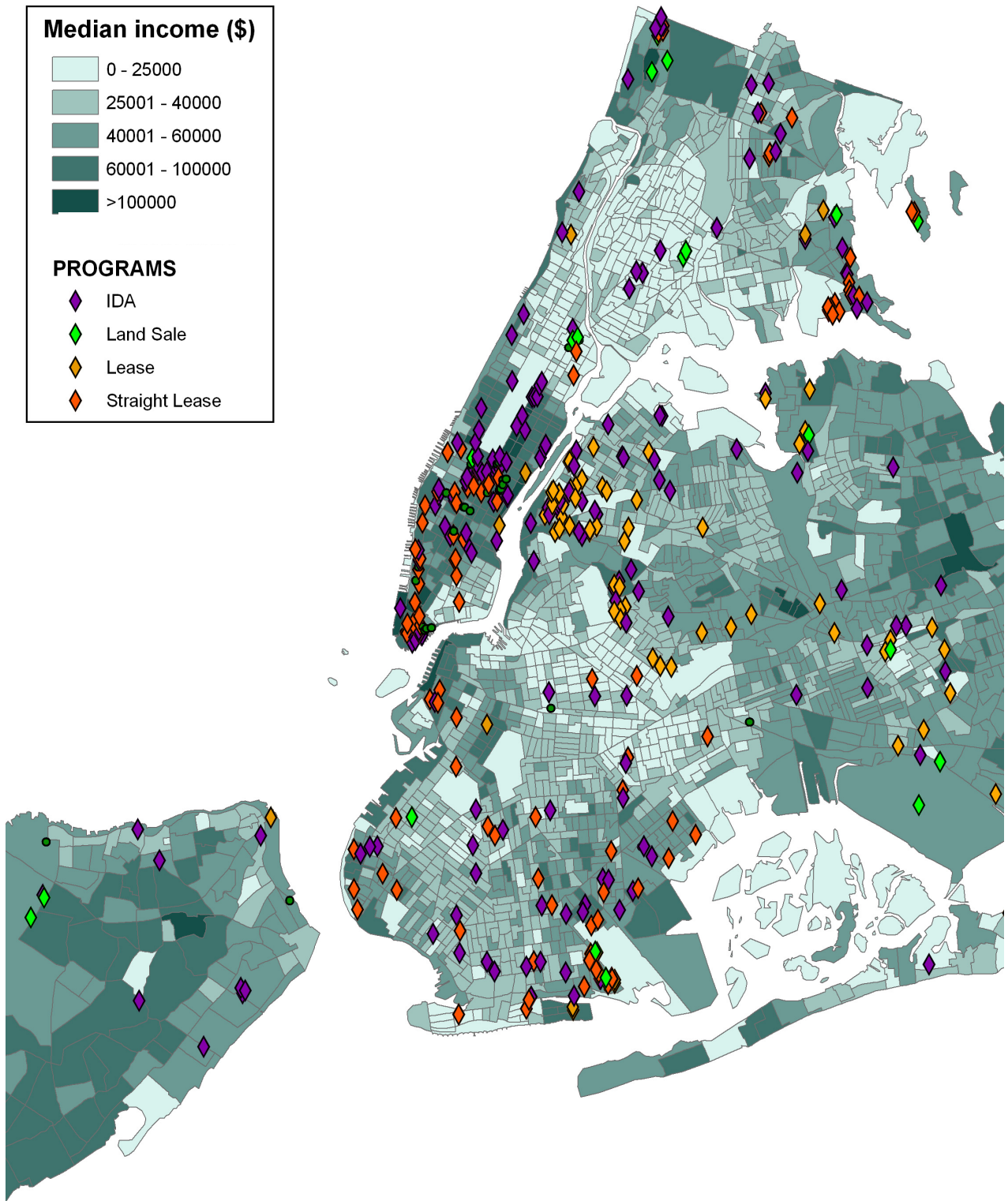


Figure 1: Locations of incentive recipients by program and median annual household income by census tract

Sources: Economic Development Corporation of NYC (2004), US Census Bureau (2000):

Table 5 Total job targets (retention and creation) and actual jobs (1995-2003)				
SIC_1DIG	Total job target	Actual jobs 2003	difference	N
Construction	2713	103	-2610	2
Manufacturing	29799	24953	-4846	94
Transportation & Public Utilities	25243	27460	2217	23
Wholesale Trade	2084	1831	-253	27
Retail Trade	1334	779	-555	8
Finance, Insurance & Real Estate	57382	41586	-15796	17
Services	62742	46472	-16270	102
Total	181297	143184	-38113	273

Source: Economic Development Corporation of NYC (2004)

*Valid cases only

Source: Economic Development Corporation of NYC (2004)

Table 6 Total job targets (retention and creation) and actual jobs (1995-2003) at the SIC 2 digit level				
SIC	Total job target	Actual jobs 2003	difference	N
08	35	30	-5	1
15	2713	103	-2610	2
17	638	1019	381	3
18	152	116	-36	3
20	230	196	-34	3
21	912	859	-53	9
22	150	136	-14	2
23	1302	1018	-284	9
24	238	209	-29	3
25	1094	886	-208	9
26	152	137	-15	2

27	PRINTING & PUBLISHING	1501	12504	-2511	10
28	CHEMICALS	5	5888	-1416	11
29	PETROLEUM REFINING	7304	73	-11	1
31	LEATHER	84	762	-90	6
32	STONE CLAY & GLASS PRODUCTS	852	40	-32	2
33	PRIMARY METAL INDUSTRIES	72	336	-82	4
34	FABRICATED METAL PRODUCTS	418	699	-87	6
35	INDUSTRIAL MACHINERY	786	135	-134	5
36	ELECTRICAL & ELECTRONIC EQUIP.	269	524	93	5
37	TRANSPORTATION EQUIPMENT	431	220	-91	4
38	INSTRUMENTS	311	286	157	2
39	MISCELLANEOUS MANUFACTURING IND.	129	901	-104	4
40	RAILROAD TRANSPORTATION	1005	1027	-348	9
41	LOCAL & SUBURBAN TRANSIT	1375	9	-3	1
42	TRUCKING & WAREHOUSING	12	396	-130	6
45	TRANSPORTATION BY AIR	526	640	-514	4
47	TRANSPORTATION SERVICES	1154	59	-4	2
48	COMMUNICATION	63	2286	3096	8
49	ELECTRIC GAS & SANITARY SERVICE	2	37	7	1
50	DURABLE GOODS	30	1077	-266	16
51	NONDURABLE GOODS	1343	2750	-55	25
52	BUILDING MATLS. HARDWARE GARDEN	2805	168	-8	3
53	GENERAL MERCHANDISE	176	88	-102	1
54	FOOD STORES	190	240	-125	1
57	FURNITURE HOME FURNISHINGS	365	315	-286	3
58	EATING & DRINKING	601	15	-35	1
59	MISCELLANEOUS RETAIL	50	816	-48	1
60	BANKING	864	3983	-1017	1
61	CREDIT AGENCIES	5000	196	-390	1
62	SECURITY & COMMODITY BROKERS	586	13922	-7845	4
63	INSURANCE CARRIERS	2176	14836	-5044	7
64	INSURANCE BROKERS	7	8446	-1543	3

65	REAL ESTATE	160	203	43	1
67	HOLDING & OTHER INVESTMENT	4100	7484	3384	1
72	PERSONAL SERVICES	354	286	-68	3
73	BUSINESS SERVICES	9041	9941	900	9
75	AUTO REPAIR SERVICES & GARAGES	9041	9941	900	9
78	MOTION PICTURES	7111	4282	-2829	2
79	AMUSEMENT & RECREATION SERVICES	26	35	9	1
80	HEALTH SERVICES	1568	1387	-181	13
81	LEGAL SERVICES	3114	21124	-10018	9
82	EDUCATIONAL SERVICES	2	4494	-176	33
83	SOCIAL SERVICES	1614	1254	-360	11
84	MUSEUMS GALLERIES GARDENS	3893	1841	-2052	11
86	MEMBERSHIP ORGANIZATIONS	1539	956	-583	1
87	ENGINEERING & MANAGEMENT SERVICE	590	488	-102	6
99	UNCLASSIFIED ESTABLISHMENTS	70	32	-38	1
Total		1909	156216	-34751	308

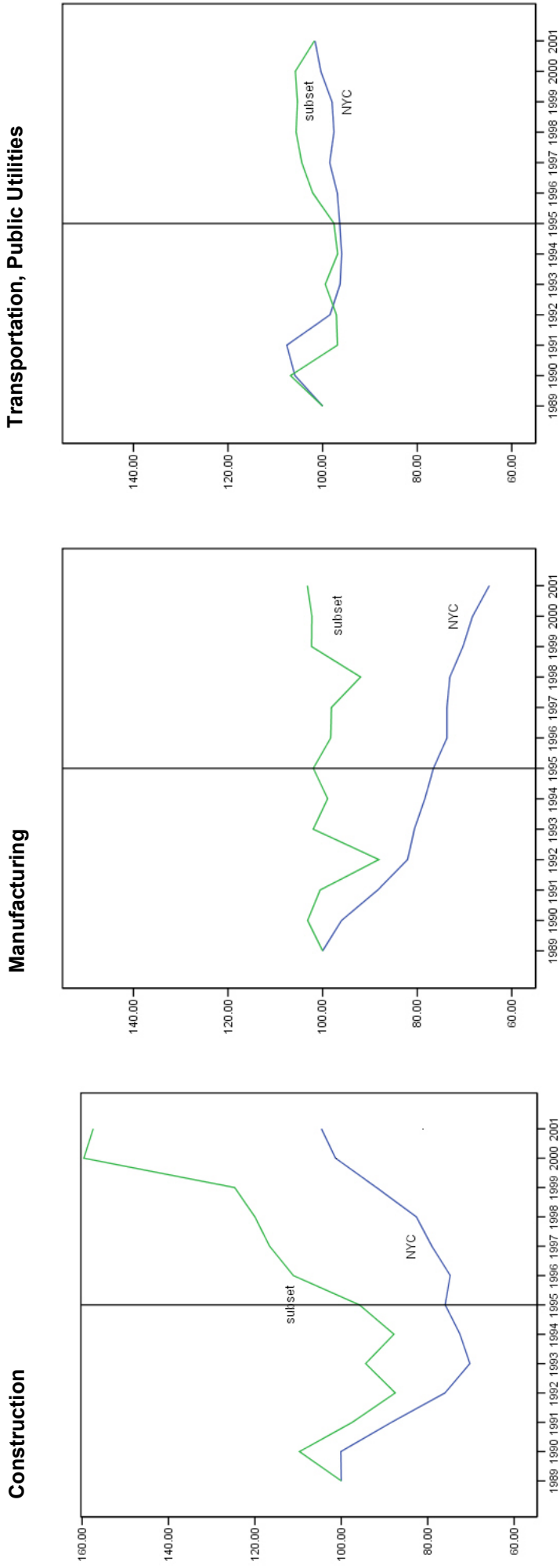
Source: Economic Development Corporation of NYC (2004)

Table 7
% of Companies not in compliance with job retention goals

compliance	1996	1997	1998	1999	2000	2001	2002
non-	83.10	80.30	80.90	71.4	71.10	66.40	67.60
compliance	16.90	19.70	19.10	28.60	28.90	33.60	32.40
	77	117	183	245	304	357	392

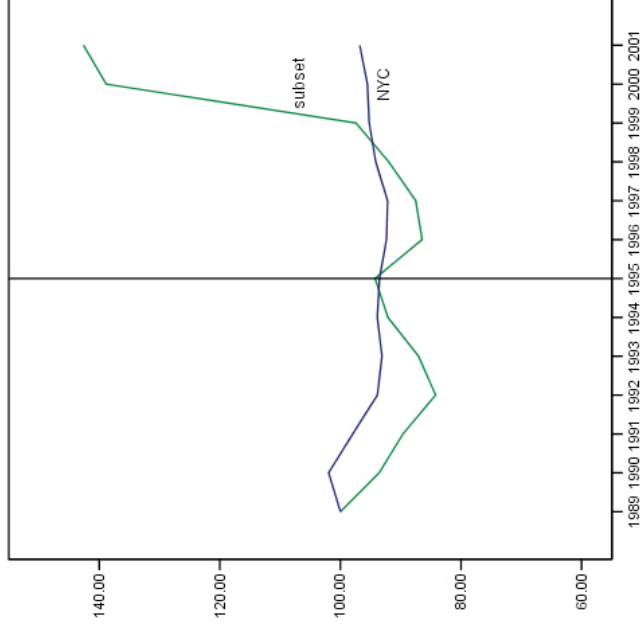
Source: Economic Development Corporation of NYC (2004)

Figure 2: Changes in employment in New York City and incentive-receiving subset (1989=100) by SIC division

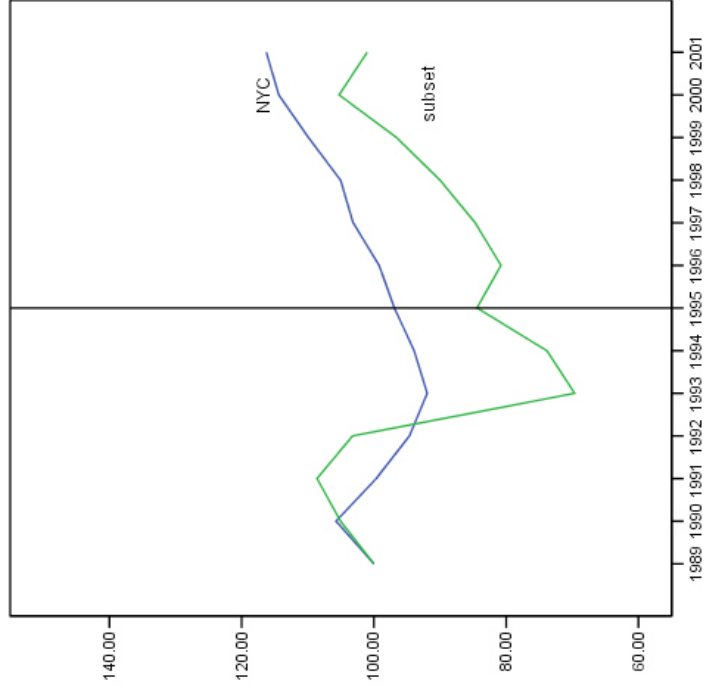


Sources: Economic Development Corporation of NYC (2004), New York State Department of Labor (2004).

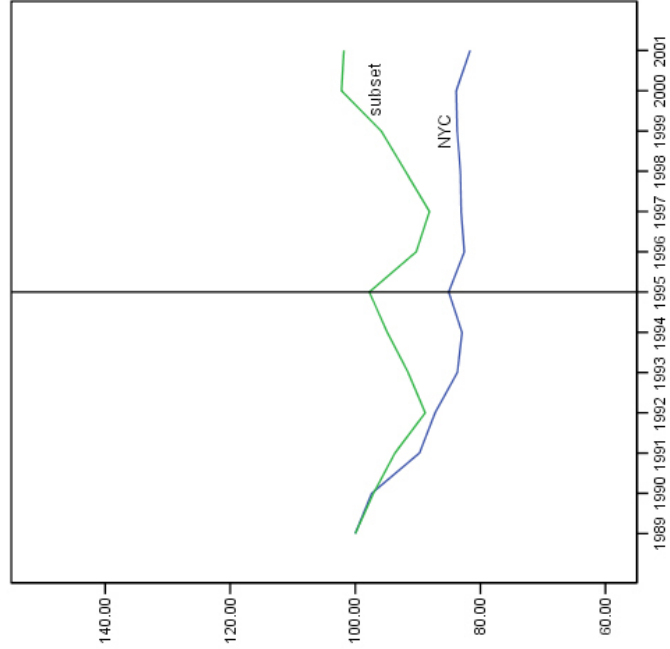
FIRE



Retail Trade



Wholesale Trade



Service Employment (except FIRE)

