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ENTERPRISE ZONES

Lessons From the Maryland Experience





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The Honorable Robert Garcia
House of Representatives

The Honorable Jack Kemp
House of Representatives

In response to your letter of September 10, 1986, we are submitting this report on the lessons to be learned from state-sponsored enterprise zone programs.

We studied the enterprise zone program in Maryland because of its similarity to previously proposed federal legislation. Our evidence generally indicated that the Maryland program did not stimulate local economic growth as measured by employment or strongly influence most employers' decisions about business location. On the basis of these findings, if the Congress should decide to create a federal enterprise zone program, we suggest consideration of a demonstration program with varied incentives rather than a large-scale program.

We are sending copies to interested congressional committees, and we will make copies available to others upon request.

A handwritten signature in cursive script that reads 'Eleanor Chelimsky'. The signature is written in black ink and is positioned to the left of a large, stylized closing bracket.

Eleanor Chelimsky
Director

Executive Summary

Purpose

Enterprise zones are economically distressed areas designated for preferential governmental treatment to promote investment and job creation by private industry. Incentives to businesses that hire employees or invest within enterprise zones can include substantial tax incentives and regulatory relief. The rationale behind enterprise zones is that reducing governmental burdens on industry (such as taxes and regulation) can compensate for costs associated with operating businesses in distressed areas (such as high crime and untrained labor). Most proposals for a federal enterprise zone program offer benefits to employers primarily through the tax system.

Despite administration support and numerous congressional attempts to create a federal enterprise zone program, no complete federal program currently exists. Legislation to establish a federal program that offers financial incentives has failed, in part because of lingering questions about the program's performance and cost. At the request of Congressmen Jack Kemp and Robert Garcia, GAO conducted a study of selected state-designated enterprise zones to address some of these questions. In particular, the study had the following objectives:

1. examine federal agencies' assumptions about the performance of a federal enterprise zone program, particularly as they relate to program cost offsets,
2. measure employment growth in state-designated enterprise zones,
3. measure offsets to the cost of an enterprise zone program resulting from program effects on workers,
4. measure reductions in welfare dependence associated with an enterprise zone program, and
5. assess the relative effectiveness of tax incentives and other local development strategies.

Background

Since 1980, numerous federal enterprise zone bills have been introduced. Title VII of Public Law 100-242, the Housing and Community Development Act of 1987, is the only law that has been enacted to establish an enterprise zone program. It provides for the Department of Housing and Urban Development (HUD) to designate up to 100 enterprise zones and offer incentives (such as waivers on some HUD regulations that otherwise would apply) to businesses that are located in the designated areas.

However, this program does not offer federal tax incentives to businesses. One reason for resistance to a federal program that offers tax incentives is the likelihood of its high cost in tax revenues forgone, which has been estimated at well over a billion dollars over the first 3 years of a program involving up to 75 enterprise zones.

Stalled efforts to pass a complete federal program contrast with the implementation of many state enterprise zone programs. Over 30 states currently have or will have programs. These programs vary considerably on zone designation criteria, number and size of zones, and the type of incentives offered.

GAO's study focused on the Maryland enterprise zone program because of its similarity to major proposed federal legislation, H.R. 3232, 99th Congress, the Enterprise Zone Development and Employment Act of 1985. Also, the Maryland program has been in operation long enough—almost 4 years by 1987—to allow for a fair test of its performance, especially with regard to increasing employment. Most of the findings are based on analysis of employment levels in three enterprise zones in this program, two of which were selected as “best instances” as defined by duration and efficient administration of the program. In addition, GAO surveyed almost 500 employers on factors influencing key business decisions in these three case sites, one other enterprise zone, and a community without an enterprise zone. While some lessons for a federal program can be drawn, the findings cannot be generalized beyond enterprise zone programs similar to the ones studied.

Results in Brief

The Department of the Treasury, the only federal agency to make official program cost estimates, assumed that an enterprise zone program would not increase economic activity but could only shift it to new locations. However, a theoretical basis exists for assuming net increases are possible. A prerequisite to the evaluation of these contending assumptions is an initial empirical finding that increases in employment attributable to an enterprise zone program have occurred. In the cases GAO examined, employment increases were found but they could not be attributed to the enterprise zone program. Therefore, neither local program cost offsets nor reductions in welfare dependence among workers could be expected to occur. Employers who responded to a GAO survey were less likely to cite enterprise zone incentives as important to business location decisions than to cite as important other factors that are not part of an enterprise zone program.

GAO's Analysis

Two Competing Assumptions

The methodology used by the Department of the Treasury to estimate the net cost of a federal enterprise zone program includes the assumption that a program would only redistribute economic activity from other locations to enterprise zones during the years covered by the estimates. Hence, Treasury assumes the program would not lead to net job creation, increases in national product, or offsets to program cost during this time. (Such offsets could accrue from increases in tax liability for and reduced transfer payments to some new workers who take jobs created by the program.) Based on these assumptions, one set of unofficial estimates puts the cost of an enterprise zone program at \$4.75 billion over the first 6 years of program operation.

GAO studied an alternative perspective that suggests that program-related increases in enterprise zone employment can lead to net increases in activity and cost offsets. That is, if the local employment increases represented a shift of activity from tight labor markets to labor surplus areas (that is, high unemployment areas such as enterprise zones), they could yield a beneficial effect on the national economy. Such an effect itself could lead to program cost offsets.

Employment Growth

GAO did not, however, find evidence of such effects in the case sites. In an approximately 4-year implementation period—from December 1982 (or October or December 1983, depending on the enterprise zone) through September 1987—employment increased by between 8 percent (63 workers) and 76 percent (555 workers) for participating businesses in the three Maryland enterprise zones that GAO examined. However, factors other than the program seemed to account for these increases.

Cost Offsets and Welfare Dependence

Because program-related employment increases are conceptually linked to cost offsets and reductions in welfare dependence, the findings on employment growth indicated that offsets or reductions would have been unlikely.

Tax Incentives and Local Development Strategies

The factors most amenable to government intervention may not be the most commonly decisive in business location decisions. Employers are less likely to cite regulatory practices, taxes, financial inducements, and

government-sponsored technical assistance as important than factors such as market access and community and site characteristics. Most enterprise zone incentives being in the form of financial inducements may explain the lack of employment growth attributable to Maryland enterprise zones.

However, the employers GAO surveyed reported that such financial inducements may influence hiring and investment decisions. This could mean that employers use the incentives after their businesses are located within the enterprise zone, but that the key decision about where to locate a business is more influenced by issues such as market access and community characteristics than by the enterprise zone incentives. If this explanation is correct, actions could be taken—such as better publicizing the enterprise zone program to businesses outside the area or strengthening enterprise zone incentives—that could possibly increase the effect of an enterprise zone program. Employers apparently viewed some proposed federal tax incentives as potentially influential in their business decisionmaking.

Matter for Congressional Consideration

Although the Maryland experience does not show that enterprise zones are effective, the Congress may decide to introduce a federal program along those lines. GAO's results suggest that a modest demonstration program might be more useful than the large-scale efforts proposed in several bills. It should be designed to test different program options and to allow sound evaluation of demonstration results. This demonstration should experiment with incentives that can influence important factors in employers' business decisions (such as market access and property taxes) and with program administration arrangements that might reduce the possibility of employers' receiving incentives for behavior that was incidental to the program. The demonstration also should vary the program features offered at different demonstration sites as well as the characteristics of the sites themselves (such as geographic location, industry mix, and economic conditions). In this way, the ability to generalize from evaluation results can be maximized and a large-scale follow-on program designed, if warranted.

Agency Comments

At the request of the congressmen who asked for this study, GAO did not solicit official agency comments.

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Abbreviations

ARIMA	Autoregressive integrated moving average
EZ	Enterprise zone
HUD	U.S. Department of Housing and Urban Development
ITS	Interrupted time series
OTA	Office of Tax Analysis, U.S. Department of the Treasury

Introduction

An enterprise zone (EZ) program is a package of incentives to businesses located in designated areas with the purpose of encouraging redevelopment and community revitalization. Although the Congress has debated a proposed federal EZ program since the early 1980's and several states have initiated EZ programs, no complete federal program exists.¹ A variety of questions surround the performance and cost of a federal program. This report, which was requested by two members of the Congress, addresses some of those questions.

Background

EZs are economically distressed areas designated for preferential governmental treatment to encourage investment and job creation by private industry. Businesses within the zones can be offered substantial tax incentives, regulatory exemptions, and other benefits for hiring and investing within EZs.

As originally implemented in the United Kingdom in the early 1980's, EZ programs were intended to encourage industrial and commercial activity by promoting the development of vacant or damaged land. In the United States, proposed and actual EZ programs typically have two objectives: the revitalization of depressed urban or rural areas and the creation of jobs.

The philosophy behind the EZ concept is simple: reducing governmental burdens on industry (for example, taxes and "red tape") in targeted areas encourages private investment and growth there. The idea is that removing the burdens associated with the taxes and requirements of federal, state, and local regulations can compensate for costs incurred when firms locate or operate in areas with high crime or an untrained labor force. Thus, an EZ program can increase the attractiveness of depressed areas to businesses.

Federal Interest in an EZ Program

The EZ philosophy has attracted substantial interest from the federal government. The present administration promoted the concept in several major addresses, and a number of bills have been submitted to the Congress at the request of the administration. Support in the Congress for a federal EZ program has been strong as well. Many bills have appeared since legislation was first submitted in 1980.

¹Title VII of Public Law 100-242, the Housing and Community Development Act of 1987, created a HUD EZ program that does not provide for federal tax credits, which have been a key feature in most proposals for a federal program.

Despite this interest, no complete federal EZ legislation has passed. Reasons for the failure of this legislation include its reliance on tax credits and the potentially high cost in forgone tax revenues. These aspects of EZ proposals have put this federal program squarely in the path of concern over the budget deficit and tax reform.

State EZ Initiatives

The failure of federal EZ legislation is in contrast with success at the state level. Since 1982, over 30 states have passed EZ legislation. The state EZ programs vary considerably on zone designation criteria, number and size of zones, and type of incentives that are offered. For example, Michigan has 1 zone, while Louisiana has 750. In Mississippi, entire counties are designated as EZs. Maryland has zones as small as 49 acres. Incentives may be targeted toward specific industries or be made available to all businesses locating in a zone.

Variation often also exists among zones within a particular state. Local governments may simply publicize the availability of the state incentives, or they may supplement state incentives with others such as reduced property taxes, service enhancement, and streamlined permit processing.

Issues for a Federal EZ Program

Several issues have fueled debate over a federal EZ program. The issues of greatest concern to EZ proponents and opponents concern program cost and the effectiveness of incentives for stimulating economic activity. As mentioned, estimates of high program cost have helped to derail federal EZ legislation. Indeed, administration estimates of tax revenues forgone through the awarding of credits have exceeded \$1 billion over the first 3 years of a program involving up to 75 EZs.

A related issue is the reasonableness of the cost estimates themselves and the assumptions about EZ performance on which the figures are based. The administration estimates have been challenged, partly because they appear to ignore potential cost offsets. Offsets could result from decreased transfer payments (for example, from the Aid to Families with Dependent Children and Food Stamp programs) to some new workers who receive jobs created by an EZ program and from these workers' increased tax liability.

Debate has also centered on the effectiveness of EZ incentives for creating jobs. Critics argue that rather than creating jobs, EZ incentives capture jobs that would have gone elsewhere in the absence of such

incentives. According to them, jobs are not created; they are transferred. That is, the net increase in jobs is zero because businesses in the zone gain at the expense of businesses and workers in other areas. Other questions that have been raised about the program's potential effectiveness include whether or not it could be structured to ensure that employers were rewarded only for increases in employment and investment that they made in response to the program. Rewarding coincident increases, which amount to financial windfalls to the employers involved, would make for a wasteful program.

Using the tax structure as an economic development tool raises additional questions. Several specific issues have been raised in relation to EZs. First, critics charge that only some segments of the community can take advantage of tax credits. Property tax credits are of value only if property is owned; the availability of credits may raise property values and thus increase rents for those who do not own property. Similarly, tax liability credits can be used only if profits are generated. This is of special concern for new small businesses, which are a major source of new jobs. Because they have limited tax liability over the first few years of operation, most small businesses cannot take immediate advantage of tax liability credits, although they may be able to carry over such savings if they become profitable in a later year. Yet, new businesses are the most in need of help during this earlier period.

A recent set of issues concerns the effectiveness of a federal EZ program under the new income tax code. The Tax Reform Act of 1986 eliminated certain tax preferences, thus broadening the tax base, and lowered tax rates. In doing so, it restructured the vehicle through which a federal EZ program would most likely operate. In addition, changes in state and local taxes as a consequence of the federal tax change also may have bearings on the potential effectiveness of a federal EZ program. Thus, the specific implications of the 1986 act for a federal EZ program are unclear.

Though proposed federal programs have relied heavily on tax incentives, other approaches exist. Alternative incentives are infrastructure improvements, employee job training, and other local programs. Like a federal EZ program, many of these approaches are of unknown effectiveness.

approaching a federal EZ program on an experimental basis so that questions about cost and effectiveness could be assessed. The approach taken was to identify critical issues for a federal program. State programs did not exist when work for the 1982 report was under way, so their experiences could not be described.

Since that report was issued, a number of empirical studies have been conducted on the performance of EZs.² These studies include comparative case studies, evaluations of state programs, and broad “surveys” of program results. While yielding some useful information, most of these studies either did not focus on program-related changes in employment or have flaws in such assessments that greatly reduce their usefulness. These flaws include the following: (a) reliance on data of unknown or of dubious quality, (b) measurement of program effects too soon after zone designation to allow time for them to occur, and (c) failure to use an adequate baseline for attributing observed effects to possible influences. For example, studies have relied on EZ administrators’ reports on program performance.³ Yet these reports treat any new job in the EZ or that was claimed by an EZ participant for a program incentive—regardless of whether or not it would have existed in the absence of the program—as directly resulting from the program.

One study, based on case studies, suggests that an EZ program may play a contributing rather than a critical role in increasing employment and investment in distressed areas.⁴ Zone designation seemed to be more important than specific program features. In some cases, it appeared to help build confidence in areas, which led to increases in investment. The researchers also observed that EZ designation could serve as a vehicle for organizing development activities in a community.

As discussed above, empirical work has not provided an adequate basis for understanding EZ program performance. This is especially true for understanding the causal relationship between program incentives and increases in employment and whether or not a program can generate offsets to its cost. The present report is designed to fill some of the gaps in research.

²References for the studies we reviewed are in the bibliography.

³For example, see Bonetto and Cowden (1983).

⁴U.S. Department of Housing and Urban Development (1986b).

Objectives, Scope, and Methodology

To help resolve some of the issues concerning a federal EZ program, Congressmen Jack Kemp and Robert Garcia asked us to address several questions.⁵ Our primary objectives, as defined by these questions, were to understand the assumptions about EZ performance made by federal departments in their estimates of program cost and to provide evidence on the reasonableness of the assumptions. The specific questions that we addressed are as follows:

1. What assumptions do federal departments, particularly Treasury and HUD, make about the potential performance of a federal enterprise zone program? Specifically, do they assume that such a program would create offsetting revenues through new job creation and possible reductions in welfare dependence?
2. How much employment growth has occurred within state-designated enterprise zones, especially in the programs that most closely approximate the types of tax incentives contained in congressional enterprise zone proposals?
3. What level of offsetting revenues has been realized as a result of decreases in federal transfer payments to workers employed by participating businesses within state-designated enterprise zones?
4. Has the level of welfare dependence declined among workers employed by participating businesses within state-designated enterprise zones?
5. What federal lessons can be drawn from state experiences with enterprise zones about the relative effectiveness of different tax incentives and other local business development strategies?

After discussion with our requesters, we modified question 4 so that it focused on EZ workers rather than on families that reside in EZs. This allowed question 4 to be parallel with question 3, since both are about EZ workers.

The scope of our work was defined by the areas we studied and the period covered. Our review focused on Maryland's EZ program and five communities in that state. It was conducted during 1987-88. The data are from the period 1980-87.

⁵The request letter is reproduced in appendix I.

We addressed our requesters' questions with information from a variety of sources and with different approaches. (See table 1.1.) For the first question, we conducted a descriptive analysis based on documents from the Department of the Treasury and interviews with agency officials. We also consulted with external experts in developing a perspective on the theoretical performance of a federal EZ program that is an alternative to the perspective used by the agency.

Table 1.1: Research Designs and Data Sources Used

Question	Design	Data source	Chapter
1. Federal department assumptions about EZ program performance and offsets	Descriptive analysis of Treasury assumptions	Agency documents and interviews with agency officials and experts	2
2. Employment growth in selected state EZs	Cause-and-effect analysis of employment growth in three EZs in one state program using interrupted time series analysis	Unemployment insurance records on employment levels of individual EZ participants 1980-87; interviews with participants	3
3. Level of offsetting revenues from decreases in transfer payments to EZ workers	Given a finding of program-related employment growth, estimate local offsets in "best instance" EZ based on number of new jobs from program and expected offsets from workers in jobs	Estimates of new jobs from employment growth analysis and of offsets per job from extant data ^a	3
4. Decline in level of welfare dependence among EZ workers	Given a finding of program-related employment growth, estimate decline in dependence in "best instance" EZ based on number of new jobs from program and expected proportion of new workers who depended on welfare	Estimates of new jobs from employment growth analysis and of decline in dependence from extant data ^b	3
5. Relative effectiveness of different tax incentives and other local development strategies	Descriptive analysis of the responses of employers to different tax incentives and other local development strategies	Mail survey of employers in 4 EZs and a non-EZ area	4

^aWe did not estimate the value of offsets per worker or the proportion of new workers who had depended on welfare because we did not find program-related employment growth.

^bSame as footnote a. We defined an individual as dependent on welfare if he or she is able to work and has received transfer payments for most of his or her income for at least 2 years.

We addressed the remaining four questions with information on Maryland's EZ program. This program was chosen for two reasons: (1) it resembled the proposed federal program described in H.R. 3232, 99th Congress, the Enterprise Zone Development and Employment Act of 1985, which we chose as our benchmark, and (2) its EZs had been in operation long enough (almost 4 years by 1987) to show program-related employment increases and some related effects.⁶ While many of these related effects (such as improving the job skills of workers in distressed areas) may not be evident until many years after an EZ program

⁶The program described by H.R. 3232 and the Maryland EZ program are compared in appendix II.

begins, we believe that such a program would produce local employment increases within 4 years if it is to produce any at all.

To address our second question on employment growth, we conducted analyses in three Maryland EZs, two of which represent “best instances” as defined by duration and efficient administration of the program.⁷ These analyses used an interrupted time series (ITS) design and autoregressive integrated moving average (ARIMA) modeling.⁸ They detected abrupt and gradual changes in employment levels following the implementation date of the EZ program at each site, relative to the employment pattern that existed prior to implementation.

Finding a change in employment levels following program implementation, as indicated by ITS statistics and plots of the data over time, however, does not signify that the change stemmed from the program. Postintervention changes in employment levels in an EZ that appear to be program-related can result from a variety of influences. For example, a sudden increase in employment in one month may stem from a single large employer’s moving into an EZ because of anticipated high local demand for its product there rather than because of the attractiveness of program incentives. In this instance, one would be wrong to conclude that the employment increase was a result of the program, regardless of what the ITS statistics and plots indicate. To assess whether or not a program is primarily responsible for an observed change requires examining the plausibility of alternative explanations for the change. In instances in which modeling statistics and the plots of employment data indicated possible program effects, we considered alternative explanations by identifying the employers responsible for the apparent effects and collecting information from them on the reasons for their employment increases.

The data we used in these ITS analyses are the monthly employment levels of individual program participants from the Maryland unemployment insurance system for the period April 1980 through September 1987. These data are based on mandated monthly reports from employers; practically all commercial establishments with employees are covered by the system. Data for program participants in a given EZ and month were aggregated for analysis. (We did not verify the accuracy of the data in the Maryland unemployment insurance system files.)

⁷A Maryland state EZ official indicated that these two EZs were the most efficiently administered EZs in the program.

⁸These analyses are described in appendix III.

Our analyses focused on program participants because we expected them to be more sensitive than other employers to the effects of the EZ program on hiring. That is, we believe that if the program can stimulate hiring, it should be evident for participants first and most strongly. If a program achieves these effects, they could spread through the community as a direct result of increased participant hiring.

To address the third and fourth evaluation questions on offsets to program cost and on program-related reductions in welfare dependence, we planned to use the results of the employment growth analysis and extant data. As discussed in chapter 2, to conclusively demonstrate that an EZ program has achieved either offsets or reductions, there must be evidence of an increase in local employment. If we found such increases, we planned to estimate their implications for cost offsets and for reducing welfare dependence with extant data on transfer payments received by workers and on patterns of welfare program participation. We did not find evidence of any employment increases that are attributable to the program and, hence, we did not examine data on transfer payments or welfare program participation.

To address our fifth question on the relative effectiveness of different tax incentives and other local development strategies, we conducted a mail survey of employers in four EZs and one nonEZ area.⁹ We focused on employers because they are the decisionmakers who must ultimately respond to incentives and strategies in order for these approaches to achieve their objectives. We defined effectiveness in terms of the ability of an approach to influence an employer's hiring or investment decisions. Our questionnaire asked employers to assess the importance of features similar to those of the Maryland EZ program, the federal EZ program proposed in H.R. 3232, and the importance of several other local development strategies. We also asked them about their businesses and about the importance of a variety of potential influences on their most recent business location decision. (We cannot verify that the person completing the questionnaire was the most knowledgeable person at each firm.)

We surveyed the entire population of (a) employers—participants and nonparticipants—in the Hagerstown and Salisbury EZs (in which we analyzed employment growth); (b) program participants in two other EZs that began operating at about the same time as the three Maryland EZs; and (c) employers in one area in Maryland that did not have an EZ

⁹This survey is described in appendix IV.

but probably could have qualified for one. Our overall response rate was only 54 percent despite several follow-up mailings to nonrespondents and telephone calls to nonresponding participants. To determine whether or not the nonrespondents to our survey might differ in important ways from employers who did respond, we compared subgroups of respondents with their respective populations or with nonrespondents on key characteristics. We found no evidence of important potential bias in results because of poor representation.

We conducted both descriptive and inferential analyses of the survey data. We described employers' assessments of the importance of influences on their business location decisions and of different tax incentives and local development strategies on their hiring and investment decisions. Because we did not find any large differences in responses among program participants, nonparticipants as well as employers in the nonEZ, we pooled data on these groups in the descriptive analyses. In our inferential analyses, we compared employer groups (participants versus nonparticipants, and employers in different industrial and size groups) on their assessment of the importance of various program features. That is, we sought to understand how groups varied on their assessments of the relative importance of different program features. In the inferential analyses, we used data only on employers in two of the case EZs. The analyses were restricted in this way for the following reasons: (a) we wanted to compare participants and nonparticipants, and these case EZs were the only locations for which we had data on both participants and nonparticipants, and (b) we sought to make the results of the different inferential analyses comparable, which required using data on the same groups throughout. Achieving both these objectives required that we limit the analyses to employers in two of the case EZs.

Strengths and Limitation

One of the strengths of our study is that it is based on in-depth analyses. Some of these analyses also used complementary data from several sources. For instance, our analyses on employment growth combine objective information on the behavior of individual employers with self-report information on the same employers. The combination of in-depth analyses and multiple sources of data permit us to more confidently attribute observed economic patterns to different influences. Another strength is that we focus on individual employers, who are the decisionmakers who ultimately determine program performance.

The review has two major limitations. As with much research based on case studies, our study suffers from constraints on the ability to generalize. While we believe that our findings on a few EZs from one state are relevant to the proposed federal program, we cannot generalize to the performance of EZs that we did not study. The second limitation arises for our survey of employers. We asked them to rate the importance of program features for influencing their business decisions even though they may not have had any direct experience with the programs. Because of the hypothetical nature of some of these assessments, the results should be considered suggestive rather than hard evidence of the effectiveness of program incentives. In addition, because of time constraints, we did not verify the data from the Maryland unemployment insurance system. Except as noted above, our work was conducted in accordance with generally accepted government auditing standards.

Organization of the Report

The report is organized by the evaluation questions. In chapter 2, we address the question on EZ performance assumptions. In chapter 3, we examine the questions on employment growth, program cost offsets, and reductions in welfare dependence. In chapter 4, we report findings on the relative effectiveness of EZ incentives and other local development strategies. In chapter 5, we summarize findings presented in other chapters and draw conclusions. In the appendixes, we present a copy of our congressional request letter, a comparison of the Maryland and proposed federal EZ programs, technical information on our employment analyses and survey of employers, and detailed results from the survey.

Assumptions About the Potential Performance of a Federal Enterprise Zone Program

We found that only the Department of the Treasury made assumptions about the performance of an EZ program that influenced formal estimates of program cost. Two of these assumptions are that the program would not lead to any net increase in jobs and that its performance would not yield any offsets to program cost. We also studied a different perspective on assumptions about the performance of a federal EZ program based on a recent economic analysis. (Barrett, 1987) Our analysis of the Department of the Treasury's assumptions is based on a review of official and unofficial agency documents and on interviews with agency officials and experts.

Background

In 1982, the administration outlined a prospective EZ program that its framers hoped would be enacted. While the EZ plan was being developed, the Department of the Treasury made estimates of the prospective program's cost. Since no federal or even state program was in effect, the estimates could not be based on the experience of an existing program in this country. The agency's estimates, particularly as they concern cost offsets, depend on certain assumptions about program performance. The size of these estimates—over a billion dollars over the first years of the program—was frequently viewed by decisionmakers as a serious obstacle to the passage of EZ legislation, especially at a time when budget deficits were salient. The estimates and the assumptions that underlie them became among the most hotly debated aspects of the proposed program.

Cost Estimates

The Department of the Treasury's Office of Tax Analysis made cost estimates for a proposed EZ program soon after the administration-supported legislation was first drafted. Treasury's cost-estimating procedure focused on potential loss of revenue from tax credits offered to businesses participating in the program. The agency's estimates of the cost of the administration's program over its first 2 or 3 years appeared in the president's budgets for fiscal years 1983 through 1986. (See table 2.1.) Within a set of budget year estimates, the cost of the program accelerates over time. Indeed, one set of unpublished estimates puts the cost of a prospective program over its first 6 years at \$4.75 billion—considerably more than twice the cost of the program over its first 3 years. These increases in the estimated cost of the program for a given set of budget year estimates reflect the proposed designation of 25 zones per year for 3 years, estimates of employment growth in the EZs, and the administration's forecasts of inflation and interest rates. Differences among the sets of budget year estimates are caused by several factors,

Chapter 2
Assumptions About the Potential
Performance of a Federal Enterprise
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including changes in the administration's economic forecasts and changes in proposed EZ legislation over time.

Table 2.1: Budget Estimates of Reductions in Revenues From an Enterprise Zone Program for Fiscal Years 1983-88^a

Budget year	1984	1985	1986	1987	1988
1983	100	500	.	.	.
1984	100	400	800	.	.
1985	.	100	400	800	.
1986	.	.	100	500	900

^aIn millions of dollars. Budget estimates for fiscal year 1983 differed from later sets of estimates in that they covered only the first 2 years of program operation.

Source: The Budget of the United States Government (Washington, D.C.: Executive Office of the President, Office of Management and Budget, 1983-86).

Cost Estimate Methodology

The estimates of program cost were based on a methodology that was described in an unpublished manuscript. (Spilberg and Kern, 1982¹) The methodology can be described simply in terms of three steps that yield estimates over several years for a specific proposed program and set of economic conditions. First, it develops a simulation model for forecasting tax incentives per dollar of sales and value added for employers in various industries. The model estimates the total value of credits for an employer, using a mathematical equation that specifies the relationship among several program, employer, and economic variables.² The equation was estimated by using data from several sources to yield the value of incentives for an employer over the life of an EZ. These estimates are expressed in terms of fractions of dollars of annual sales and value added. For example, the incentives could be worth as much as 2 percent of annual sales or 6.9 percent of value added for a textile manufacturer over the life of a program.

In the second step, estimates are made of business activity or total annual sales in zip code areas, representing 25 potential enterprise zone areas, which was the number to be designated in the program's first year as proposed by the administration. These estimates are based on

¹When Mr. Spilberg co-authored this manuscript, he was an employee of the Department of the Treasury in the Office of Tax Analysis.

²These variables include the following: (a) credit type and size specified in a prospective program (for example, the disadvantaged worker credit was set at 50 percent of increased payroll for a disadvantaged worker up to a ceiling amount); (b) employer's tax and depreciation rates; (c) interest and inflation rates; and (d) value of employer's capital stocks and employer's payroll eligible for tax credit.

employment data in actual areas that would be likely to qualify for federal EZ designation. They are expressed in terms of total annual sales for employers in various industries. Combining these estimates with the estimates from step one on the value of incentives per dollar of total annual sales yields estimates of the annual cost of a program with 25 zones.

In the third step, the estimates described above are used as inputs into the estimates of federal revenue loss over the first 6 years of an EZ program's life. The simulation assumes that the program begins in 1984 with the designation of 25 EZs. In each of the two subsequent years, designation of an additional 25 EZs is assumed to occur. Separate estimates are made under different assumptions of employment growth in the EZs. For example, the final estimates of revenue loss described in the manuscript are based on a set proportion of designated small-city and large-city EZs, and on rates of growth in small-city and large-city EZs of 35 percent and 15 percent, respectively. Given these parameters, the model estimates revenue losses of \$4.75 billion over the first 6 years of an EZ program.

Treasury's Assumptions About Program Performance and Cost Offsets

The paper that presents the Department of the Treasury's cost estimation methodology indicates that Treasury assumes the EZ program would have no effect on net national product over its first 6 years of operation. As a consequence, the program is assumed to yield no offsets to program cost through the creation of jobs during this time.

Estimates of program cost should consider offsets to program cost that can result from program features as well as outlays (or revenue forgone) for the program. Considered together, outlays and offsets yield net program cost. For employment-related programs, offsets to program cost include the value of increased tax liability and reduced transfer payments for workers who received jobs created by the program in question. Hence, assumptions about program performance—for example, whether it creates jobs or not—play a critical role in developing cost estimates. An assumption of increases in net economic activity shrinks estimates of net program cost; an assumption of no increases or decreases in activity expands estimates of program cost.

Distressed areas place special burdens on businesses that operate there. These burdens, such as the need for higher insurance and for drawing on a local untrained work force, have a financial cost. Hence, businesses

that operate in distressed areas have higher costs than businesses in other areas.

The agency views EZ credits as a means of compensating firms for the costs of conducting business in distressed areas. Conceivably, an effective program could reduce costs to firms through reduced taxes and relaxed regulations to the point that they are the same or lower than they would be in other areas. If costs to firms are made lower, employers would be more likely to hire workers and invest and could actually stimulate local economic activity.

While the Department of the Treasury assumes that EZ incentives are sufficient to induce some employers to move to or expand in a distressed area, it also assumes that an EZ program cannot remove the burdens that cause the high operating costs during the period covered by its estimates. Over the short haul, the program would, at best, redistribute economic activity that would have occurred elsewhere in the absence of the program. At worst, the manuscript suggests that by inducing businesses to move from more-efficient locations to less-efficient locations, an EZ program could actually reduce national product.³

The agency's perspective on the program's performance is based on economic logic rather than on empirical evidence. This reliance on logic is appropriate, given that evidence on the performance of EZs in this country was unavailable when the cost estimation methodology was developed.

The cost estimation methodology and its assumptions are consistent with the Office of Tax Analysis's general approach to estimating costs associated with proposed programs. Gross national product is generally held constant while certain of its components (such as the mixture of state and local tax revenues) may be estimated to change as a result of a proposed change in tax law. (Nester, 1986)

Questions and Another Perspective

We have some concerns about one aspect of the agency's assumptions about a federal EZ program's effects. We also believe that other perspectives are possible with regard to the performance of EZs. One alternative

³The manuscript alludes to the potential for offsets through improving the skills of inner-city workers with on-the-job training programs, removing detrimental externalities associated with doing business in distressed areas, and possible shifts in production processes that would increase the employment of low-skilled workers. However, it concludes that these offsets would either occur outside the time for the cost estimates or be negligible.

perspective suggests that to the extent that it can redistribute activity from tight labor markets to labor surplus markets, an EZ program can increase national employment and partially offset program cost.

Direct Effects

The Department of the Treasury's assumptions about EZ program performance center on the idea that incentives would affect only the relative costs to firms of operating a business in one location over another (and hence firms may relocate into an EZ). That is, the subsidy to business may increase local activity; the agency does not believe the area would become less distressed within the years covered by the agency's estimates. While we have no quarrel on theoretical grounds with the agency's assumptions on direct program effects overall, we believe that its assumption about the timing of potential program effects cannot be made with confidence.

We are not as certain as the agency is that some of the paths to alleviating abnormal costs and negative externalities to which it alluded would require more than 6 years. All these paths first require that an EZ program increase local employment. We and the Office of Tax Analysis expect that an effective EZ program could increase employment within 6 years. We also agree that the second phase, in which employment increases could lead to other improvements in local conditions that decrease the costs of operating in a distressed area, would take more time.

Unlike the Office of Tax Analysis, however, we believe it is possible that some of these improvements could begin within 6 years of the program's implementation. For instance, sufficient expansion of business activity in a distressed area could conceivably lead to a more highly trained local labor force within this time. Funded in part through EZ employment credits, training programs offered by new or expanding businesses might enhance the job skills of a sizable number of workers. How long it would take to improve factors such as a local untrained work force—or whether these factors can be changed by an EZ program at all—is an unresolved empirical question.

Secondary Effects

Some economists believe that program-related increases in enterprise zone employment can, under certain circumstances, lead to an expansion of national output and employment without an associated increase in inflation. This favorable result can occur if the program succeeds in shifting employment from an area with a tight labor market, where a

further expansion in the demand for labor can drive wages up without creating much added employment and output, to an area with a labor surplus, where an increase in demand will translate into new jobs and output without an equivalent inflationary effect on wages. To the extent that such location shifts in employment are achieved, the use of enterprise zones can, for a given growth rate in aggregate demand, increase national employment while reducing inflationary pressures in the economy. However, for such effects to be detectable when using aggregate data, the enterprise zone program would likely have to be implemented on a large (that is, regional or national) scale.

This suggests viewing an EZ program as one means of correcting a market imperfection—namely, barriers to labor mobility. It also suggests that the effectiveness of EZ programs in this regard should be compared with the effectiveness of other means of reducing barriers to labor mobility, such as assistance for the relocation and retraining of unemployed workers and with the natural erosion of barriers to the movement of jobs and people that occurs in the presence of high wage differentials.

As with the direct effects discussed earlier, evidence of secondary effects would start with data indicating whether or not a program increased zone employment. Increased employment would have to result from a redistribution of activity from areas with tight labor markets to areas with labor surpluses. Ultimately, large-scale empirical tests would be required to determine the implications for net job growth and cost offsets.

Summary

In response to the question on assumptions made by federal departments on EZ program performance, we found that the Department of the Treasury made program cost estimates that relied heavily on assumptions about a program's direct effects. These assumptions were that an EZ program would, at best, redistribute economic activity from other locations to EZs during the first 6 years of program operation. Redistribution would yield neither net job creation nor offsets to program cost during this period.

We raised questions about the agency's assumption that costs associated with operating in a distressed area could not be sufficiently reduced over a 6-year period to yield increases in economic activity and cost offsets. This is an unresolved empirical question whose answer should

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guide assumptions about program performance and estimation of net cost for an EZ program.

We looked at an alternative perspective on a federal EZ program's potential for creating jobs and offsetting program costs through secondary effects. This perspective suggests that an EZ program, targeted on high labor surplus areas, can increase jobs with a smaller effect on the inflation rate than other broader, untargeted strategies.

Before arriving at the point at which the Treasury's or alternative assumptions can be tested, evidence that an EZ program can achieve net increases in local employment—increases above and beyond those that would have occurred in the absence of the program—is required. Only after that has been established can the direct and secondary effects of these net increases in employment be assessed. In the next chapter, we present evidence on whether or not the EZ program we studied was able to satisfy this requirement.

Effects of State-Designated Enterprise Zones

We focused on the Maryland EZ program because of its duration and because it was similar to one of the major proposed federal programs. Although we found that employment did increase in the three EZs that we studied, we were unable to show that the increase was related to the program. Our inability to find program-related employment growth indicates that the program yielded neither program cost offsets nor reductions in welfare dependence. Our findings on employment growth are based on interrupted time series analyses of employment levels for program participants in the case study EZs and on information on some of these employers. Our findings on cost offsets and reductions in welfare dependence are based on the employment growth findings and on the conceptual link between growth and offsets and between growth and reductions. These findings are discussed below.

Employment Growth

We focused on three EZs in the Maryland program—Hagerstown, Cumberland, and Salisbury. That state's program resembles the federal initiative proposed in H.R. 3232 of the 99th Congress, the Enterprise Zone Development and Employment Act of 1985. Both programs offer investment credits and employment credits that are aimed at hiring disadvantaged and nondisadvantaged workers.¹ (See table 3.1 and appendix II.) They differ, however, on the specific investment credits offered and on the maximum dollar value of the employment credits available; the federal program tends to offer larger potential employment credits than the Maryland program. The two programs also have some similar requirements for zone designation, although those for the federal program are overall more stringent.

¹H.R. 3232 and the administration-supported EZ legislation that we discussed in chapter 2 are also similar, especially on the tax incentives that they offer. The bill was introduced in the 99th Congress but not in the 100th. Robert Garcia, one of the chief sponsors of H.R. 3232, was the sponsor of title VII of the Housing and Community Development Act of 1987, which provided for an EZ program but excluded financial incentives.

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Effects of State-Designated Enterprise Zones

Table 3.1: H.R. 3232, 99th Congress, and the Maryland EZ Program Compared

H.R. 3232	Maryland
Eligibility and duration	
Area must satisfy all the following:	Area or proximity must satisfy at least one of the following:
Population of at least 4,000 if within a metropolitan statistical area of 50,000 or more; otherwise, population of 1,000 or within an Indian reservation	
Unemployment at least 1.5 times the national level	Unemployment at least 1.5 times the national or state level, whichever is higher
At least 20% of population below national poverty level	Population in area or proximity below 125% of national poverty level
At least 70% of population below 80% of local median income	At least 70% of families below 80% of local median income
Area experienced a 20% decrease in population 1970-80	Area or proximity experienced a 10% decrease in population in years between censuses and either chronic property abandonment or substantial property tax arrears
Wholly within jurisdiction of local government eligible for assistance under section 119 of Housing and Community Development Act of 1974	
State and local government agree to a probusiness course of action	
Designation for a maximum of 24 years	Designation generally effective for 10 years
A maximum of 100 areas may be designated	A maximum of 6 EZs may be designated in any 12-month period; no county may receive more than one new EZ in any calendar year
Employment tax credits	
10% credit for increased employment expenditures, up to \$17,500 per year ^a	Up to \$500 tax credit for each new job filled by worker not disadvantaged and not rehired
50% of wages paid to disadvantaged	Tax credit for each new job filled by disadvantaged worker who was not rehired, up to \$3,000 over 3 years
	Tax credit for a worker rehired after being laid off by the firm for more than 6 months, up to \$1,750 over 2 years
5% tax credit to qualified workers, up to \$10,500 in wages ^a	

(continued)

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Effects of State-Designated Enterprise Zones

H.R. 3232

Maryland

Investment and property incentives

10% investment tax credit for new construction property^a

Property tax credit of 80% of increase in assessment value from improvements, decreases after 5 years

Nonrecognition of capital gain on EZ business property

Deduction for purchase of stock of an EZ firm

Suspension of limitations on cost recovery deductions for property financed with industrial revenue bonds in the case of EZ property

Ordinary loss deduction for securities of EZ businesses that become worthless

Up to 100% guarantee for long-term loans to finance business activity

Higher loan limits for local government land acquisition and development projects

Funds of 25% over the maximum funds available from state redevelopment fund for use within an EZ

Research credit of 37.5% for research conduct in EZs

^aThe credit gradually decreases for last 3 years of the EZ.

Beginning operation in 1982, the Maryland program is among the first authorized state programs. Two that we studied have been fully operational since fall 1983; the third in December 1982. We believe that some employment effects would be evident by now if any occurred.

Employment Analyses

We conducted interrupted time series analyses of the employment levels of program participants in our three case study EZs by using ARIMA modeling and visual inspection of plots of the data over time.² These analyses detected abrupt and gradual changes in employment levels following the implementation date of the EZ program at each site, relative to the employment pattern that existed prior to implementation. But the analyses alone could not explain why the changes occurred. We had to identify the employers responsible for them and then draw on additional data to consider possible explanations for the participants' employment patterns (discussed later for each EZ).

²A program participant is an employer whose business is located within the boundaries of an EZ, who meets local EZ eligibility requirements, and who is certified by the local EZ administrator. These eligibility requirements include, among others, that the employer provide evidence to the local EZ administrator of increases in employment or investment above what they had been in the previous tax year. Once certified as a participant, an employer can claim EZ benefits.

The analyses used monthly data from the Maryland unemployment insurance system on individual program participants. This system records the mandated premiums paid by employers to the state in practically all commercial establishments. Employers are required to report monthly to the system on, among other things, total wages they paid and the number of workers they employ. We extracted monthly data from this system on the number of employees for individual participants for April 1980 through September 1987. This gave us a total of 90 monthly data points for use in our ARIMA models.

We focused on participants because they are more likely to experience the effects of the program than other employers. That is, we expected the program credits to influence employment in the community primarily through their influence on the behavior of participants. The analyses were intended to detect employment growth that could be program-related. We began by including all participants in a given EZ for whom we had unemployment insurance data. If growth is not found for the aggregate in an EZ, we know that the program could not have increased employment there. If growth exceeding a trend is found, then the results must be examined to determine whether or not the individual employers responsible for it were responding to the program. The results are discussed separately for Hagerstown, Cumberland, and Salisbury.

Hagerstown

Hagerstown is in Washington county in the northwestern part of the state. It has a population of about 34,000 and a balanced mixture of manufacturing, retail, wholesale, and service industries. Like many other communities in the early 1980's, Hagerstown suffered from the 1981-82 recession. From January 1981 through June 1982, its average rate of unemployment was over 14 percent, and it was reeling from the effects of losing a large employer and of substantial layoffs at another business. In October 1982, city and county officials applied jointly for enterprise zone designation in the new state program.

The Hagerstown EZ was designated by the state in December 1982. It covers about 2,000 acres, which include the old central business district, several industrial areas within or adjacent to the city limits, and a large industrial park located on county land. In 1982, approximately 3,300 workers were employed in businesses with at least 5 employees.

The EZ became fully operational in December 1983 when city and county officials agreed on a package of local incentives to businesses, which was required by the state. These incentives included local tax credits

and assistance in securing financing through other state programs. Once the EZ was operational, local officials began publicizing it to all eligible businesses.

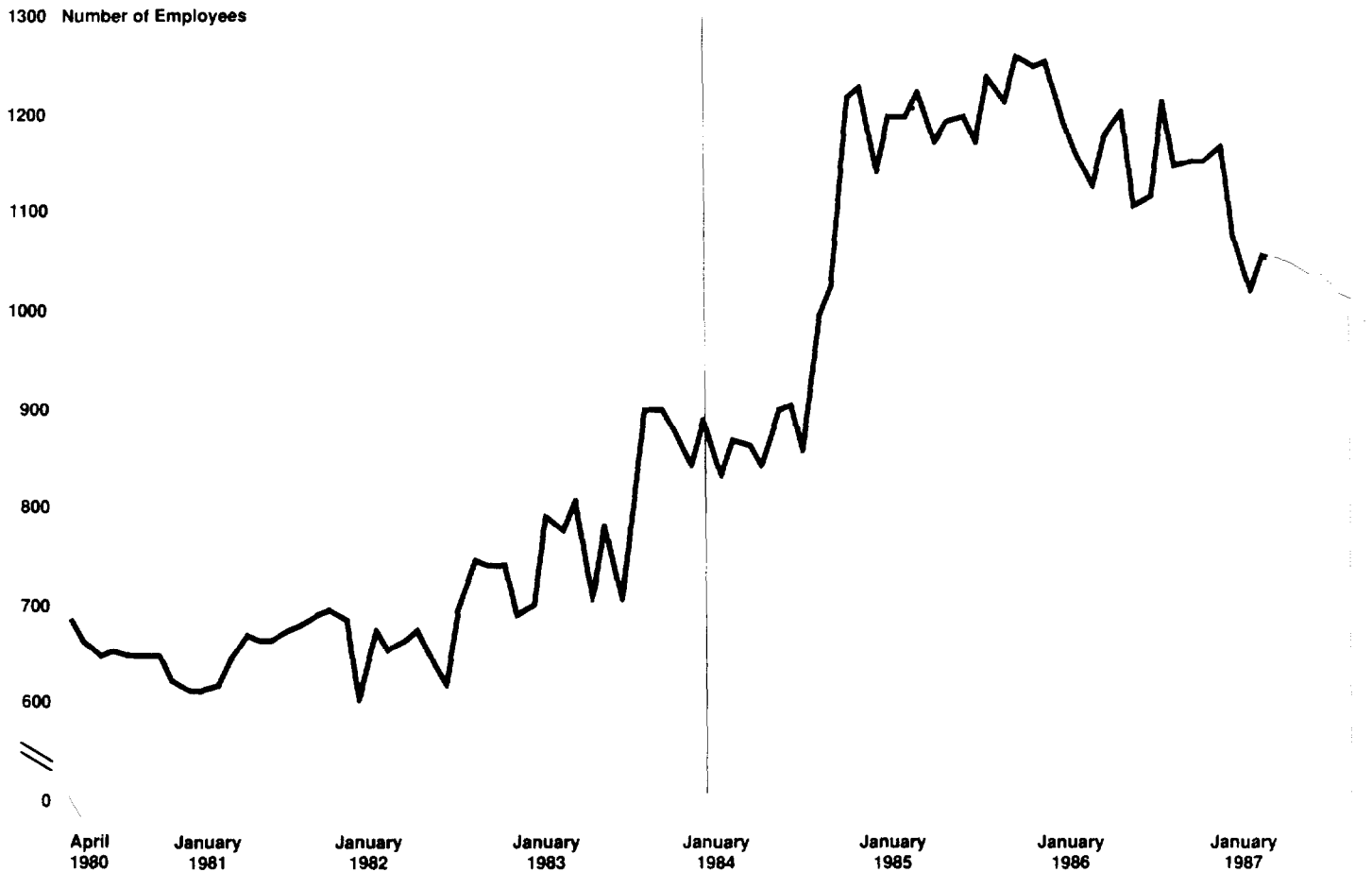
The Hagerstown EZ attracted over 64 participants during its first 4 years of operation. Most of them applied to the local administrator for program benefits within the first year of program implementation. The participants are diverse and most major industry groups are represented. Employers in service, finance, insurance, and real estate industries, the largest industrial group, account for over 40 percent of the participants. In June 1986, the mean and median number of employees for them was about 19 and 11, respectively. About 56 percent of the participants were in the EZ at the time of program implementation; the remainder is accounted for equally by new businesses and relocating businesses (about 22 percent each).

The initial analyses for the Hagerstown aggregate of participants showed that employment did increase in August and October 1984, 8 and 10 months after implementation began, respectively. This can be seen in figure 3.1 (on the next page) as two sharp increases in slope to the right of the vertical line, which indicates the start of program implementation. Employment increased in August by 134 workers (16 percent); it increased in October by 191 (19 percent). For each change, the question then became: Were the employers responsible for this growth actually responding to the program?

We began by identifying the sources of the employment increases. The increase that occurred in August 1984 was largely an employment increase for one employer, a store, that began full operation in Hagerstown then. To address whether or not this employer increased hiring in response to the program, we examined when the employer became aware of the program and what it claims its influence was on location and hiring decisions. The employer indicated that it did not become aware of the program until after the store had hired employees and begun operations in Hagerstown. Hence, the program was unrelated to the location decision; the store would have located in Hagerstown in the absence of the program.

The employment increase in October 1984 can again be explained nearly entirely by one large employer. This employer, a multistate retailer, began full operation in Hagerstown in that month. We sought to determine whether or not the program influenced hiring and location decisions. The employer claimed that it probably would have located in

Figure 3.1: Number of Employees for Participants in the Hagerstown EZ 1980-87^a



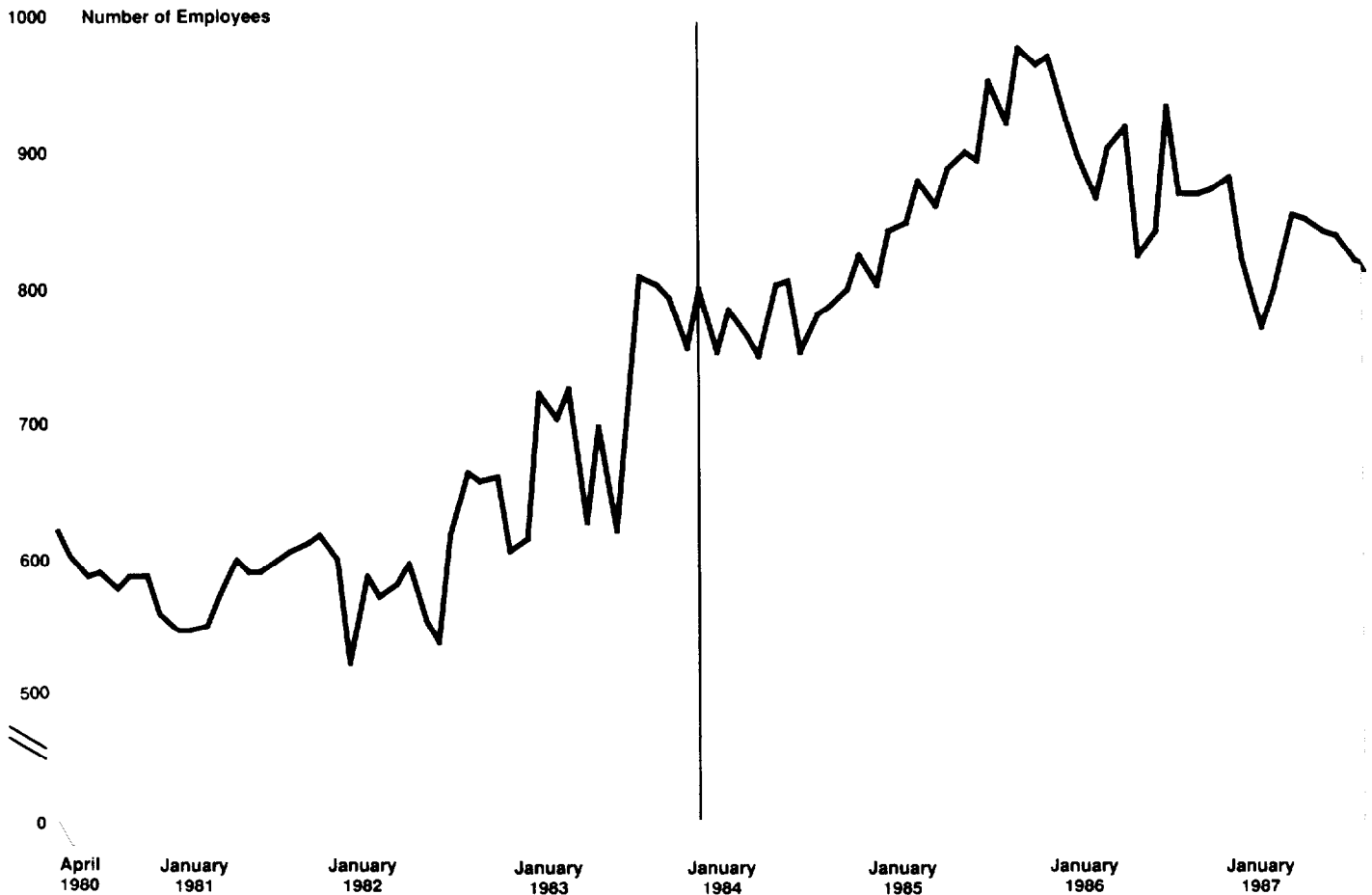
^aThe vertical line represents the intervention of the program.

Hagerstown in the absence of the program. Again, we found that the program was apparently unrelated to the employer's decision to relocate and to hire in the EZ. Figure 3.2 shows that when data for these two employers are removed, there is no observed change in the growth of employment attributable to the program. The modeling statistics are consistent with this interpretation.

Cumberland

Cumberland is in Allegany county in the mountains of northwestern Maryland. In 1980, it had a population of about 26,000. Cumberland and Allegany county have had a persistent unemployment problem for at

Figure 3.2: Number of Employees for Participants in the Hagerstown EZ With Two Participants Excluded 1980-87^a



^aThe vertical line represents the intervention of the program.

least the last 15 years. During the 1970's, the area experienced employment losses of over 2,700 workers from five companies alone. Between February 1981 and July 1982, the county had an unemployment rate of almost 13 percent; this was over one and a half times both the Maryland and the national rates. Local economic development officials attributed the pattern of high unemployment, in part, to the lack of an interstate highway nearby and to the topography of the region, which limits the amount of land available for industrial development.

The county and city jointly applied for EZ designation in October 1982 and received it 2 months later. The EZ encompasses about 10,000 acres

that include two industrial parks, one inside and one outside the city limits. In addition to the program benefits offered by the state, the Cumberland EZ offered several others, including additional "points" when applying for loans from the county or city, infrastructure (such as water, sewer, and access roads to property sites), and simplified permit processing. This EZ also imposed some eligibility restrictions not mandated by the state. Most notable among them are the following: (a) retail establishments, housing developments, and consumer services are ineligible; (b) existing businesses must demonstrate at least a 10-percent annual increase in jobs to be eligible; and (c) new businesses must create at least one new job per a given dollar amount of investment to be eligible. The first requirement appears to have been intended to target the program at potentially larger employers.

Implementation of the program began soon after designation in December 1982. The program administrator started to market the program to businesses at that time. In the view of a Maryland state EZ official, the Cumberland EZ is one of the two most efficiently administered EZs in the state program.

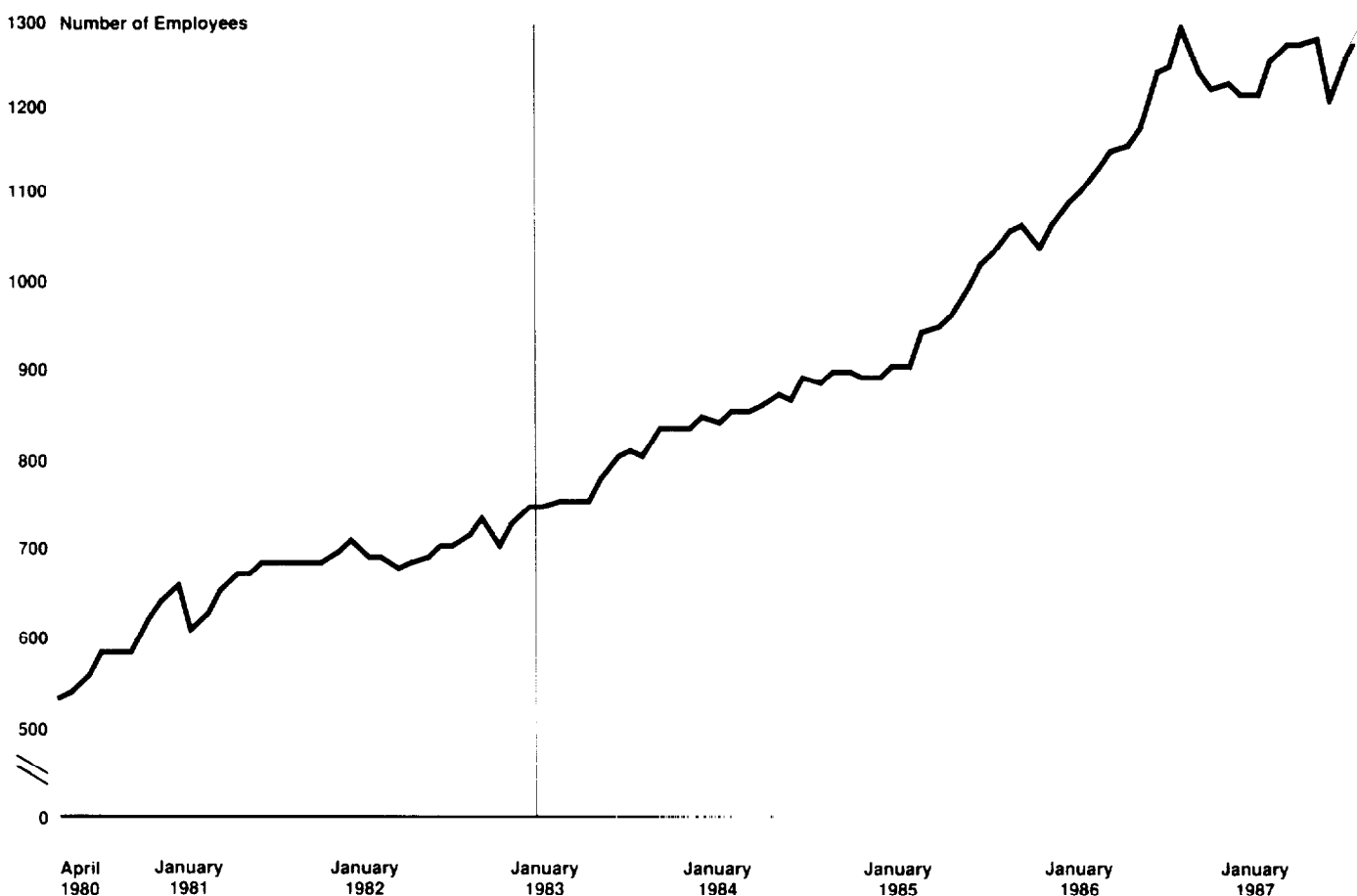
During 1987, 24 employers received incentives through participation in the program. Thirteen firms became certified during the first 2 years of the program. The largest number on whom information is available were in construction or manufacturing (approximately 40 percent). All other major industrial categories were represented by participants. In June 1986, the mean and median number of employees for participants were about 116 and 25, respectively. The relatively large discrepancy between the mean and median reflects the presence of a few large firms among mostly small and moderate-sized ones; for example, the largest firm employed well over 1,000 workers in June 1986. Over 71 percent of the participating businesses on whom information was available were located in the EZ at the time the program began operation; the remainder was accounted for by new businesses (19 percent) and relocated businesses (10 percent).

The first analysis on the employment levels of Cumberland participants included data on a participant with a very large number of employees. We found that severe fluctuations in this employer's employment levels over time distorted the overall employment pattern for participants. Because the fluctuations for the large employer appeared to be unrelated to the program, we excluded data on it from subsequent analyses.³

³For confidentiality, we do not report data that could identify its employment levels.

The available employment data for the remaining Cumberland participants are in figure 3.3. Employment increased by 555 workers (76 percent) from the start of the EZ to the end of our data collection period. The increase was fairly steady to February 1985, followed by a much more rapid increase. The modeling statistics indicated neither an abrupt nor a gradual effect on participants' employment levels.

Figure 3.3: Number of Employees for Participants in the Cumberland EZ With One Participant Excluded 1980-87^a



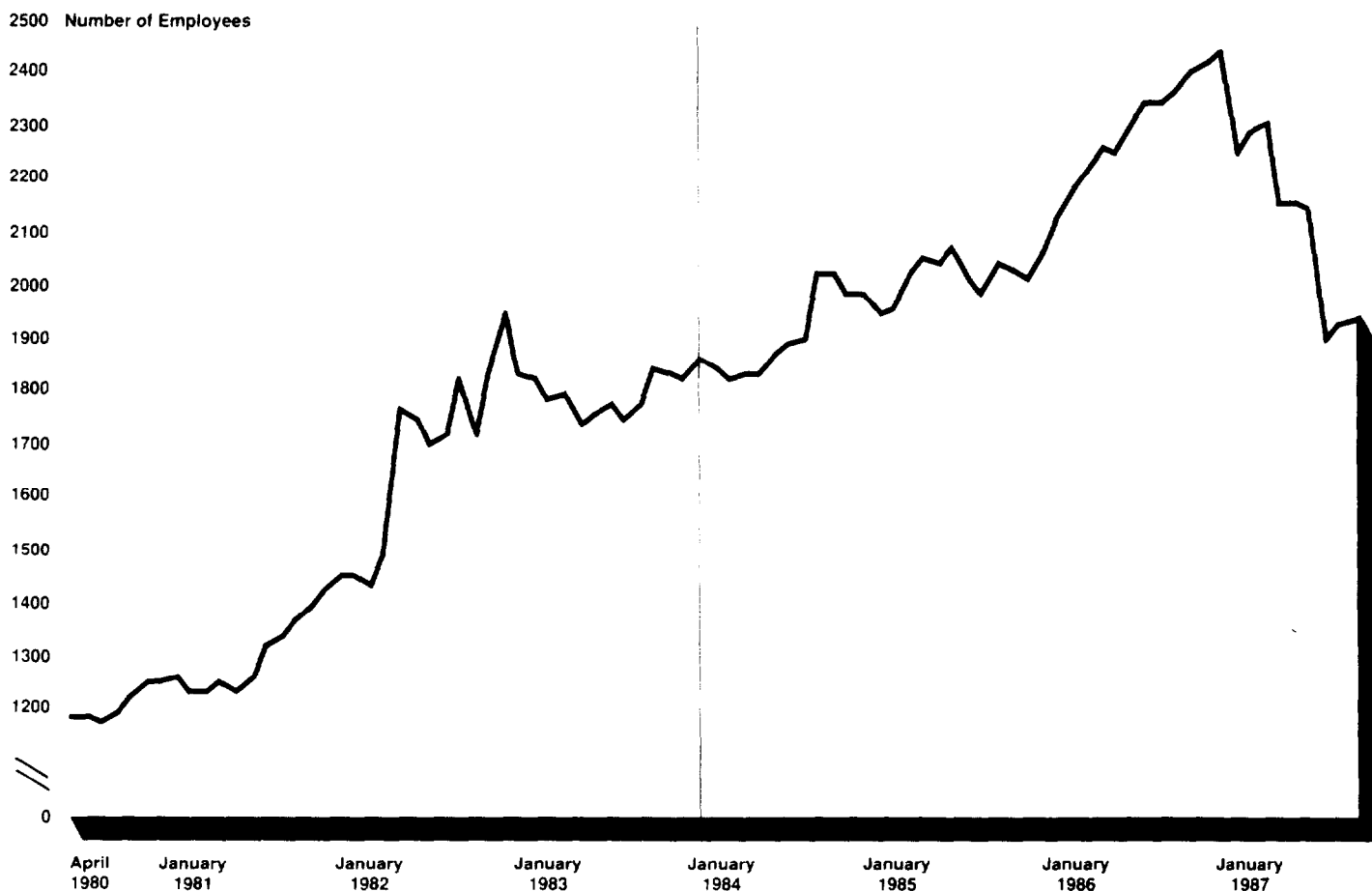
^aThe vertical line represents the intervention of the program.

Salisbury

Salisbury is in Wicomico county on Maryland's eastern shore. It has a population of about 16,000 and contains an industrial mixture of manufacturing, retail, wholesale, and services. Like Hagerstown, Salisbury felt the effects of the recession in the early 1980's. Its average rate of unemployment was over 15 percent for July 1981 through December 1982.

The city and county decided to jointly apply for EZ designation. The Salisbury EZ, which was approved by the state in June 1983, contains about

Figure 3.4: Number of Employees for Participants in the Salisbury EZ 1980-87^a



^aThe vertical line represents the intervention of the program.

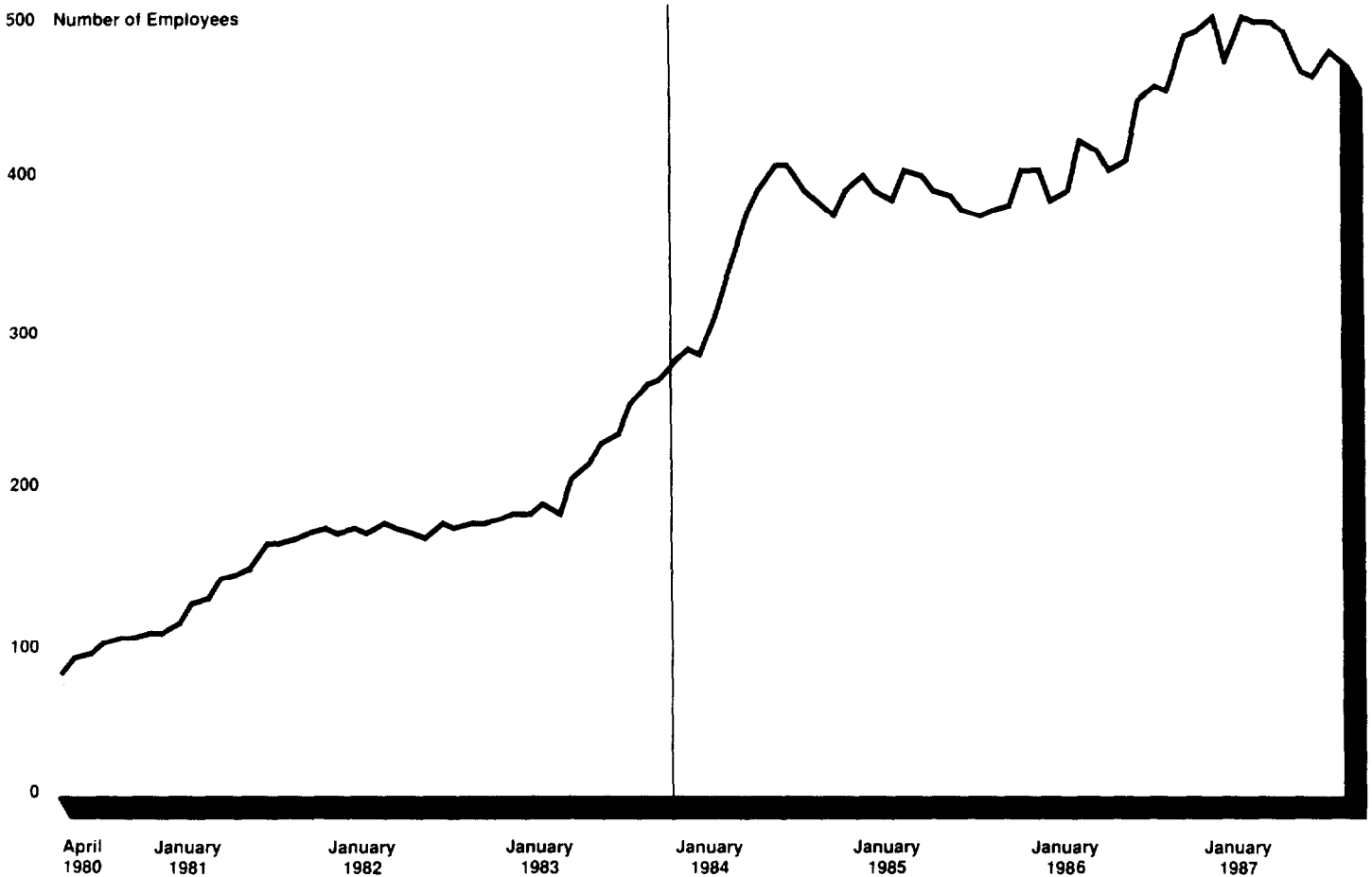
2,100 acres. It includes the old central business district, a mixed-use commercial area adjacent to the downtown area, and a large industrial park. The state-required local incentives upon which the county and city agreed included possible tax exemptions on machinery and equipment and help in securing state and federal assistance through programs such as HUD's small-cities program. Unlike officials in Hagerstown, the Salisbury officials sought to target their program to larger employers, especially manufacturers. This is reflected in the local requirement that employers must have created five new jobs over the previous year to be eligible for program participation.

After it became fully operational in October 1983, the Salisbury EZ attracted 15 participants. Almost half of these employers were certified for benefits within the first year of program operation. Consistent with how the program was targeted, participating employers were primarily engaged in construction and manufacturing. The mean and median number of employees for participants in June 1986 were 220 and 52, respectively; one employer accounted for more employees than the other employers combined. Eight of the participating employers were already operating in the EZ at the time that the program became fully operational in October 1983; the remainder were accounted for by new and relocating businesses. Most of the participants were located in the industrial park portion of the EZ.

The initial results of our analyses for the Salisbury EZ revealed no employment growth. (See figure 3.4.) We conducted additional analyses that excluded the one large employer because we were concerned that its employment pattern could be distorting or overwhelming the patterns of other smaller employers.⁴ The second set of analyses and a plot of the data showed that employment growth did occur in January and March 1984, 3 and 5 months after the program became operational in Salisbury. Employment increased by 31 workers (11 percent) in January; it increased by 35 (10 percent) in March. These increases are shown in figure 3.5. As we did for the increases shown in the Hagerstown analyses, we went on to identify the employers responsible for the growth

⁴The additional analyses also excluded an employer for whom employment data were erratic for several months. We believe that these data resulted from problems in reporting to the Maryland unemployment insurance system rather than from an erratic employment pattern.

Figure 3.5: Number of Employees for Participants in the Salisbury EZ With Two Participants Excluded 1980-87^a



^aThe vertical line represents the intervention of the program.

and to determine whether or not this increase in employment was attributable to the program and could, hence, be called a program effect.

Examination of the data for individual participants revealed that six employers were responsible for the increases in one or both of the months. One of these employers began participation in the program too late for it to have directly influenced hiring in 1984. For several of the five other firms, the marked increases are a continuation of a trend that began around the beginning of 1983—before the program could reasonably have been expected to influence hiring. We drew on self-report information from these employers to better understand the reasons for

the increases in January and March 1984. The self-report information was inconclusive for one employer, but this one was responsible for only a small employment increase in the months in question. In the four remaining cases, employers revealed that the employment increases stemmed from increased demand rather than the EZ program.

Summary

The employment analyses indicate no program effect on employment growth in Hagerstown, Cumberland, and Salisbury. The initial employment results on all Hagerstown participants showed an increase in employment at two points following program implementation. However, the examination of information on the individual employers responsible for the increases revealed that the program did not account for the increases. We found no evidence of program-related employment growth for participants in the Cumberland EZ. In Salisbury, the results indicate possible effects occurring a few months after program implementation. Additional evidence from the employers that were responsible for the employment increases revealed that the growth was unrelated to the EZ program.

Program Cost Offsets and Reductions in Welfare Dependence

We found no cost offsets at the national, state, county, or city levels in the three EZs that we studied. We also found no program-related reductions in welfare dependence among workers employed by EZ participants. These findings are based on our analyses of employment growth, described above, which indicate little or no program-related effect on employment.

Cost Offsets

As discussed in chapter 2, program-related employment growth is required for offsets.⁵ This is true for offsets at both the national and local levels. At the national level, the primary path to cost offsets begins with increasing EZ employment. This outcome could have the effect of redistributing economic activity from other areas to EZs. In turn, redistribution can create jobs by increasing the attractiveness of the EZs as business locations and by having a generally beneficial effect on the national economy. Job creation eventually may lead to employment for some workers who otherwise would be receiving transfer payments. Finally, employing these new workers in newly created jobs would yield offsets to the cost of the EZ program because the workers would no

⁵The cost of federal EZs would be largely the tax revenues forgone from the award of incentive credits.

longer draw transfer payments and would become liable for taxes on their earnings.

At the local level, the path to program cost offsets is more straightforward than it is at the national level. It requires, at the minimum, that jobs be attracted or redistributed from outside the jurisdiction bearing the program cost. For the state, this means attracting jobs from other states; for the city or county, this means attracting jobs from other cities and counties. Unlike offsets at the federal level, offsets at the local level could result from the redistribution of jobs from workers in one jurisdiction to workers in the jurisdiction containing the EZ.

The paths to offsetting EZ program costs at the federal and local levels share the requirement that the program increase employment in the EZs. We were unable to show that the EZs that we studied influenced employment growth. Hence, we did not find any offsets to program cost at either the federal or local levels.

Welfare Dependence

The question on reducing welfare dependence asks whether or not the level of welfare dependence declined for workers employed by participants in the EZ programs. It specifically has a local focus. The most important path to reducing welfare dependence at the local level requires that the program increase local employment; and at least some of the new jobs go to welfare-dependent workers.⁶ As with achieving program cost offsets, achieving reductions in welfare dependence requires that the program increase local employment. Since the program did not increase employment growth in the EZs, we conclude that it had no effect on reducing welfare dependence among EZ workers.

Summary

We addressed three questions that shared an emphasis on the ability of a state-designated EZ program to increase local employment. In response to the question on employment growth, we found that the program did not influence employment growth in three EZs. We based this finding on analyses of employment data on participating employers.

⁶By welfare-dependent workers, we mean workers who have relied on transfer payments for all or most of their income for at least 2 years. Another conceivable path is for jobs to be redistributed from workers in an EZ who are not welfare-dependent to workers in the same EZ who are welfare-dependent. This could happen, for instance, if program incentives induced employers to modify production procedures to emphasize low-skilled labor over more highly skilled labor. However, this path is less likely and less easily measured than the primary one.

In response to the questions on program cost offsets, we conclude that this state-designated program yielded neither local nor federal program cost offsets. We also conclude that the program did not achieve reductions in welfare dependence among workers employed by program participants. We base these findings on the conceptual link between program-related employment growth and cost offsets and between growth and reducing welfare dependence and on the finding of no program-related employment growth.

Tax Incentives and Other Local Development Strategies

To assess the possible effectiveness of tax incentives and other local development strategies, we conducted a survey of Maryland employers on the importance of an EZ program and other development strategies in their business decisions. We found that incentives like those in the Maryland and proposed federal EZ programs were less frequently cited as important influences on employers' business location decisions than such factors as market access and community characteristics. However, employers also reported that many of the federal and Maryland EZ program features were important factors in their hiring and investment decisions. We identified some types of firms that may be particularly responsive to some EZ incentives. Our findings are based on a mail survey of employers in four Maryland EZs and in one area that did not have an EZ. To provide context for our findings, we also selectively reviewed the literature on economic development issues.

For the purposes of this project, we define effectiveness as the ability of a program or program feature to influence an employer's decision to increase hiring or investment in an EZ. The program could affect the hiring and investment decisions of employers whose firms are already located in the EZ. Other employment and investment increases could come from new and relocating firms attracted by the EZ incentives.

Background

Policy tools available to state or local governments for the purpose of attracting new business investment can be grouped into three basic categories: direct financial assistance (loans, bonds, grants, and capital subsidies), tax concessions, and nonfinancial inducements. Direct financial assistance often provides funds to firms that are unable to obtain sufficient private funding. Direct loans usually have interest rates below market rates. Guaranteed loans are issued by a private lender but insured by the state through a default fund. Bonds can be either revenue bonds, for which the issuing body assumes no risk in case of default, or general obligation bonds, in which case the issuing body stands behind the bonds. These government-subsidized loans and bonds offer, to the borrowing firm, terms more favorable than are available in the private sector. They can take the form of an outright interest subsidy by the government, favorable repayment terms, or lower interest rates because of the low risk of default. Grants are, for the most part, made to localities and development authorities, who then use the funds for site preparation and acquisition of land to make the area more attractive to industry. States may charter venture capital corporations to purchase the stock of new or relocating firms.

Tax concessions are usually a state income tax credit or property tax abatement (for example, an exemption for a given number of years or a tax freeze). Property tax abatement is often used in conjunction with bonds. Nonfinancial inducements include services such as improvement of infrastructure, business consulting, and export market identification.

Research on the relative effectiveness of various factors in firms' hiring and location decisions is generally inconclusive because of the limited comparability of studies, weak and inconsistent findings, and the limited ability to generalize study findings (for example, a large proportion of the studies focuses on manufacturing). Because of these difficulties, researchers seem to agree on little more than that some factors do matter for some important decisions. Still, a few findings, based on survey data and econometric analyses, emerge that are relevant to our project.

Surveys that specifically asked employers about location decision factors have found that financial incentives were secondary factors.¹ Primary factors were product markets, raw materials, labor, transportation, energy, and perhaps "business climate," which is sometimes defined as tax and regulatory factors.² Researchers hypothesize that once these primary factors determine the region in which a firm will locate, secondary factors such as financial incentives can play a significant role in determining specific location.³ This may be especially true for sectors that are less dependent on one or more of the primary factors above.

Although tax rates and tax incentives can both influence firms' direct costs, the difference between them in terms of their influence on firms' location decisions should not be overlooked. Targeted incentives, as well as relatively lower tax rates, may be attractive to firms because they can reduce costs. But high overall personal income and property taxes, which would increase direct business costs, may also be positively correlated with an increase in firms to an area. For these latter firms, higher

¹Wasylenko (1981) describes a sample of these surveys.

²Although tax rates are never at the very top of the list of primary factors, whether or not they are included at all depends on the source consulted. For example, Ledebur and Hamilton (1986, p. 110) conclude that "Tax structures and rates and forms of financial incentives . . . do appear to be important considerations in the site selection process of corporations," but Netzer (1986, p. 20) states "only a minority of these surveys over the years have found respondents reporting that state-local taxes are an important factor in location decisions, and these are not the best done of the type." This inconsistency seems to come from, at least in part, the difficulty of comparing the factors analyzed in one study with those in another study.

³For example, see Kale (1984).

taxes could be associated with superior public services and a highly educated or skilled labor force.

Econometric research is not well suited to assessing the effectiveness of financial incentives because this approach may have difficulty detecting the potential influence of such incentives, which, as suggested above, tend to be of secondary importance.⁴ Most of the econometric studies that attempt to do so test the relationship between tax levels and variables such as employment growth or firm location. Two studies that actually did incorporate incentives found no significant effects. (Howland, 1985, and Carlton, 1979.) Although the econometric literature as a whole does not convincingly demonstrate any relationship between tax differentials and firms' behavior, researchers have noted a trend toward significant results in recently conducted studies. (See Kenyon, 1988, Netzer, 1986, and Newman and Sullivan, 1988.)

Ultimately, employers must respond to various opportunities offered by federal, state, and local governments if these policy tools are to achieve their intended objectives. The existence of findings that suggest employers' responses to different policy factors, including financial ones, vary by industry and perhaps by different economic conditions, highlights the need for information on how types of employers in EZs will respond. Our response to the question on the relative effectiveness of different policy tools provides some of this information.

Influence of Financial Incentives and Other Factors on Location Decisions

In this section, we analyze the perceptions of corporate respondents of the effectiveness of financial and nonfinancial inducements, such as those found in the Maryland and the proposed federal EZ programs, relative to a variety of other factors that can influence the location decision. A survey of employers in several Maryland EZs and in another comparable area without an EZ told us that financial incentives are relatively unimportant influences on location decisions. We also found that most other aspects of the existing or proposed EZ programs were relatively unimportant factors.

These findings are generally consistent with the results of other studies. They indicate that an economic development policy that emphasizes financial incentives, as an EZ program does, may face an uphill battle in competing with other influences that can affect location decisions. We

⁴For example, see Netzer (1986).

begin by briefly describing the survey on which most of the findings for this chapter are based.

Survey of Employers

Our findings are based on a mail survey of employers that we began in February 1988. (See appendix IV.) The survey was of all employers in two Maryland EZs (that is, Hagerstown and Salisbury), program participants and nonparticipants; participants in two other Maryland EZs (that is, Cumberland and Park Circle in Baltimore); and employers in a roughly comparable area that did not have an EZ (Cambridge, Maryland). We asked them to indicate the importance of various factors on their most recent location decision and the importance of features of the Maryland program and features similar to those of a proposed federal EZ program (as described in H.R. 3232) and nonfinancial inducements. We also asked them to provide information about their businesses and their experience with the state EZ program.

Program participants accounted for about 13 percent of our 493 respondents. The firms receiving the questionnaire employed from 1 to 1,650 full-time employees in 1986. Of the businesses that could be categorized, 18 percent were in construction and manufacturing; 11 percent were in transportation, utilities, or wholesale trade; 32 percent were in retailing; and 38 percent were in service industries. Unless stated otherwise, all respondents were included in the analyses.

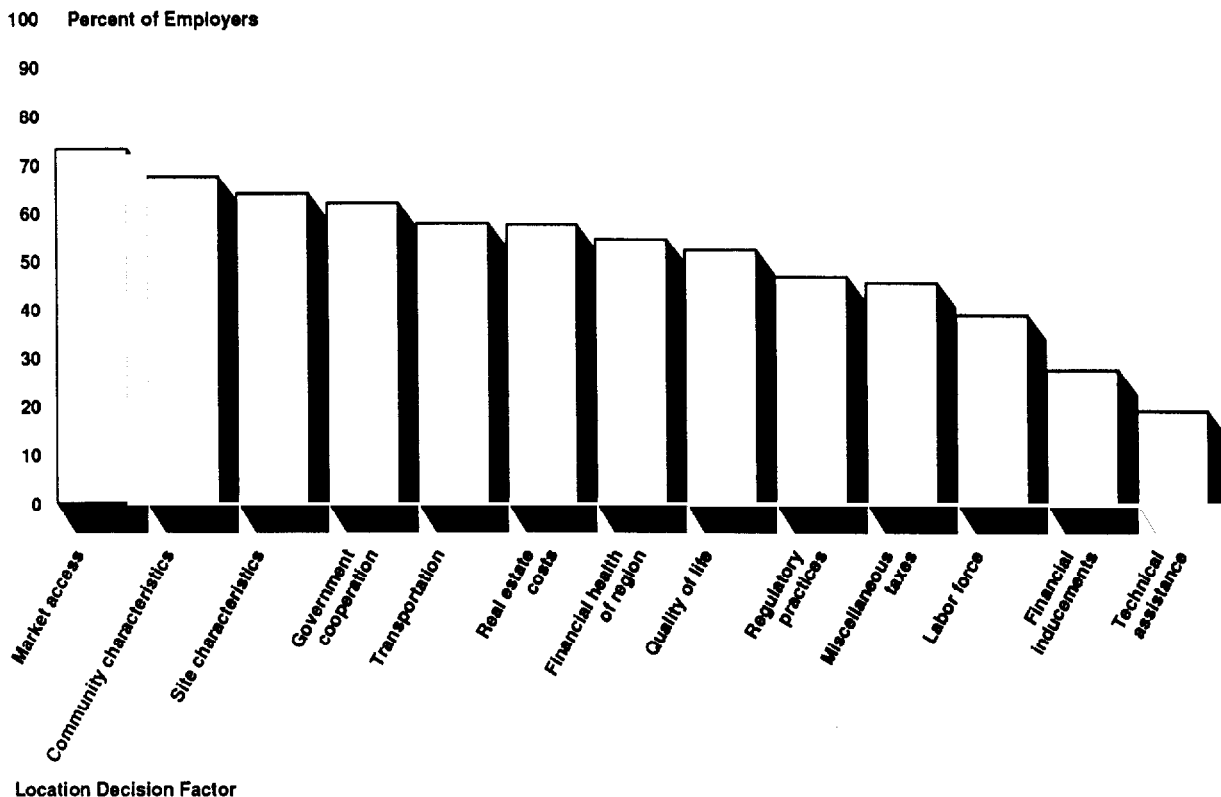
Location Decision Factors

The proportion of all respondents who rated various decision factors as important is shown in figure 4.1 in order of the factors' popularity with employers.⁵ Near the bottom of the list is financial inducements. This factor, which includes grants, special interest rates, and subsidies, is among the most important benefits offered to employers in an EZ program. Yet it was rated of little or no importance by 60 percent of the firms replying; only 14 percent of them rated it of great or very great importance in their location decision. We report on the importance of other location factors to put this finding in context.

Market access was of great or very great importance to over half the respondents. Features of the location—that is, community characteristics (for example, cost of living, crime rate, services available) and favorable site characteristics (room for growth, layout, and water and

⁵Appendix V contains tables with detailed results that correspond to each of the figures presented in this chapter.

Figure 4.1: Frequency of Employer Ratings of Location Decision Factors as Important^a



^a"Important" is defined by an employer rating of moderate, great, or very great importance on a 5-point index.

utility access and cost)—were nearly tied for second place in the ratings of importance. Favorable local and state attitudes, receptiveness to business, and cooperation taken together were rated of great or very great importance by 41 percent of the respondents but were thought to be of little or no importance by 27 percent; this indicates a wide diversity of opinion. Although the condition of and access to roads, bridges, and ports (transportation) and the financial health of the state and community (debt burden, regional growth, and potential growth) may be viewed as on-going features of location, whereas real estate and construction costs are intermittent, these three factors were rated similarly in importance in the location decision process. Quality of life, meaning the physical, cultural, and educational amenities of the community, were rated even lower in importance.

The remaining location decision factors were rated of little-or-no-importance by over one third of the respondents. They include factors most amenable to government incentives. Government regulatory practices and income, property, and employment taxes were rated of little or no importance by 35 percent and 38 percent of the respondents, respectively, but were rated of great or very great importance by only 22 percent and 23 percent. The labor force was considered of little or no importance by 46 percent and of great or very great importance by a total of 21 percent of those responding. As described above, the picture is even bleaker for financial inducements, coming in with a little-or-no-importance rating of 60 percent by the firms replying, but only 14 percent of them rated financial inducements (like grants, special interest rates, and subsidies) of great or very great importance in the location decision. Rejected as being of little or no importance by 66 percent of the respondents is technical assistance such as business consulting, employee job training, and export assistance.

Relative Effectiveness of EZ Incentives and Other Strategies on Hiring and Investment Decisions

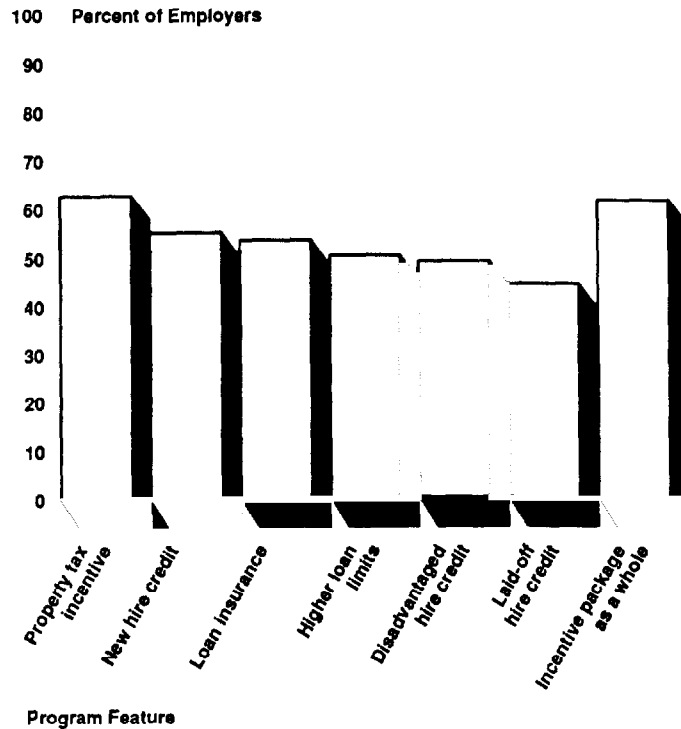
In this section, we describe employers' assessments of the relative importance of three sets of program features for influencing their hiring and investment decisions. The three sets are the Maryland EZ program, the proposed federal EZ program, and miscellaneous nonfinancial incentives.

Maryland EZ Program Incentives

The analysis of the data from both participants and nonparticipants showed clear preferences for certain types of Maryland EZ program incentives. Participants generally rated these program features more positively than nonparticipants.

Figure 4.2 shows the proportion of all respondents who rated the importance of six major Maryland EZ program incentives and the incentives as a whole. All the Maryland incentives had ratings of little or no importance by more than a quarter of the respondents who considered the incentive applicable to their situation. For every incentive, a sizable proportion of the firms judged that element of the program not to apply to their situation. Some of these firms may be in the designated control area in Cambridge and, therefore, not familiar with the effects of the Maryland program in promoting business activity.

Figure 4.2: Frequency of Employer Ratings of Maryland EZ Program Features as Important^a

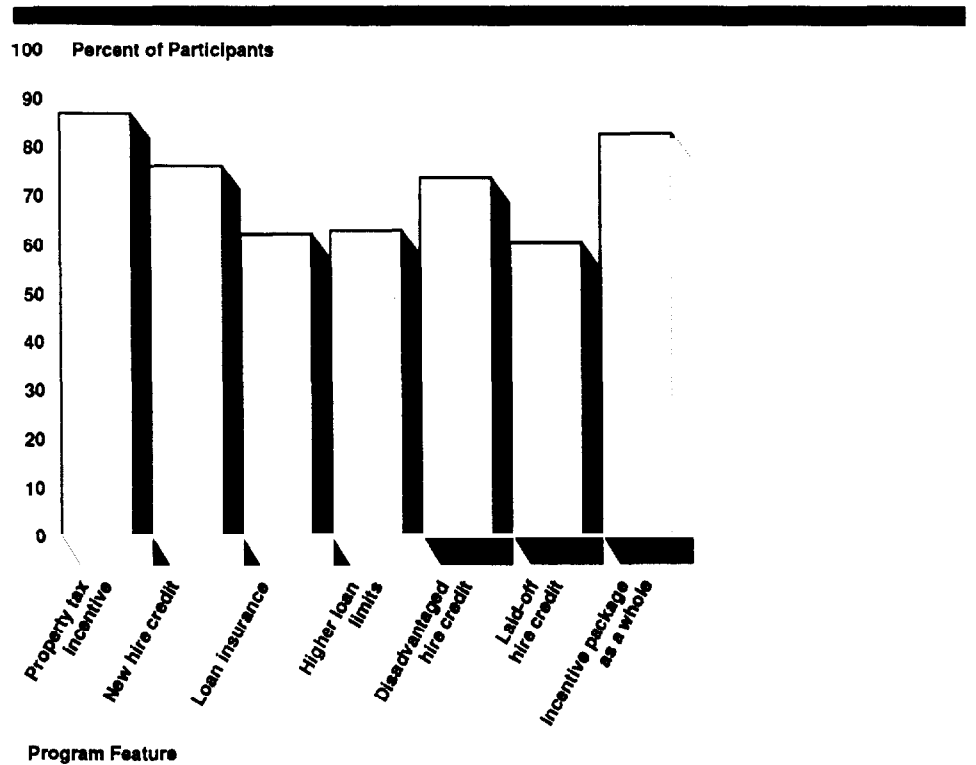


^a“Important” is defined by an employer rating of moderate, great, or very great importance on a 5-point index.

The property tax credit of 80 percent over 5 years for an increase in assessment from expansion, renovation, or capital improvement was clearly the most favored of the Maryland incentives. Loan insurance of up to 100 percent and a modest (\$500) tax credit for additional hires also had more supporters who rated these incentives of great importance or very great importance than naysayers who judged the incentives to be of little or no importance. Higher loan limits for projects financed through the Maryland Industrial Land Act or the Maryland Industrial and Commercial Redevelopment Fund had a similar level of support but a very high level of detractors (38 percent who rated the incentive as of little or no importance). The relatively important tax credits for hiring economically disadvantaged and laid-off workers (\$3,000 and \$1,750, respectively, over 3 years) were rated near the center of the scale. When respondents were asked what they thought of the incentives as a whole, they rated the package higher than any one of the incentives except the property tax credit.

Since the Maryland EZ program was an existing program, we decided to check what incentives were especially attractive to participants in the program. Information on this group could provide a better indication of the factors that motivate employers' investment and hiring decisions than information on a larger audience, which could include employers who are less informed or ineligible. The results for the participants only are shown in figure 4.3. Although differences in the ratings of the incentives remain, the ratings of little or no importance drop precipitously.

Figure 4.3: Frequency of Program Participant Ratings of Maryland EZ Program Features as Important^a



^a"Important" is defined by an employer rating of moderate, great, or very great importance on a 5-point index.

The property tax credit for expansion, renovation, or capital improvement was once again a clear winner, 73 percent of the participants rating it of great or very great importance. Tax credits for hiring additional workers or hiring the disadvantaged were endorsed by over half these respondents. Tax credits for hiring laid-off workers were somewhat less popular than the other incentives. Participants rated the disadvantaged hire credit and higher loan limits slightly more favorably than the group

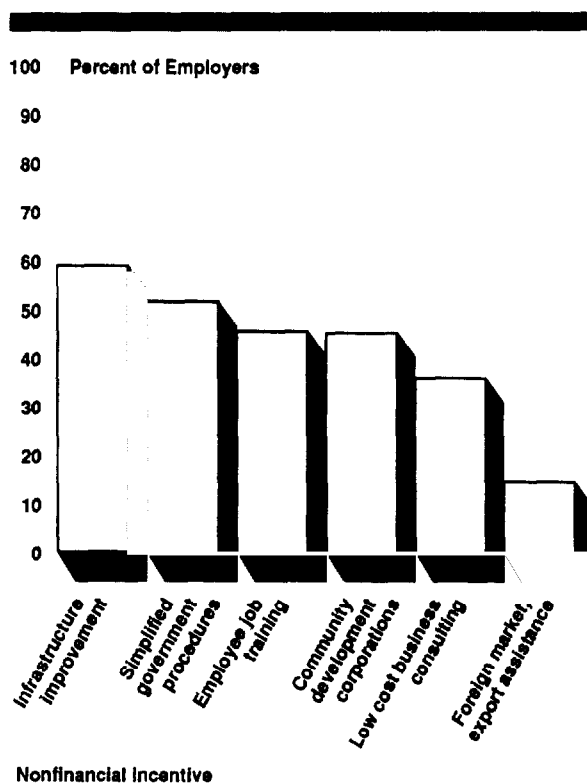
of all respondents; the two groups ranked these incentives in reverse order.

Nonfinancial Incentives

Although it is difficult to assign direct dollar values to nonfinancial incentives, they do incur costs for the sponsoring government, and they are expected to reduce costs for businesses. The respondents stated some support for two of these incentives but rated the others low.

The nonfinancial incentive that elicited the most support concerned the general improvement of the local infrastructure and services, including roads, lighting, and police and fire services. (See figure 4.4.) This is consistent with econometric studies that found low tax rates not necessarily appealing to business because they often meant lower levels of service.

Figure 4.4: Frequency of Employer Ratings of Nonfinancial Incentives as Important for Hiring and Investment Decisions^a



^a"Important" is defined by an employer rating of moderate, great, or very great importance on a 5-point index.

More respondents rated simplified procedures for permits, licensing, or approvals of great or very great importance than those who rated it of little or no importance. Employee job training was rated of little or no importance by over a third of the firms. The support of community or neighborhood development corporations was also rated of little or no importance by over a third of the respondents. Free or inexpensive business consulting was rated as having little or no importance by 44 percent of the firms, and export market identification and export assistance was rated in this category by 76 percent.

Proposed Federal Incentives

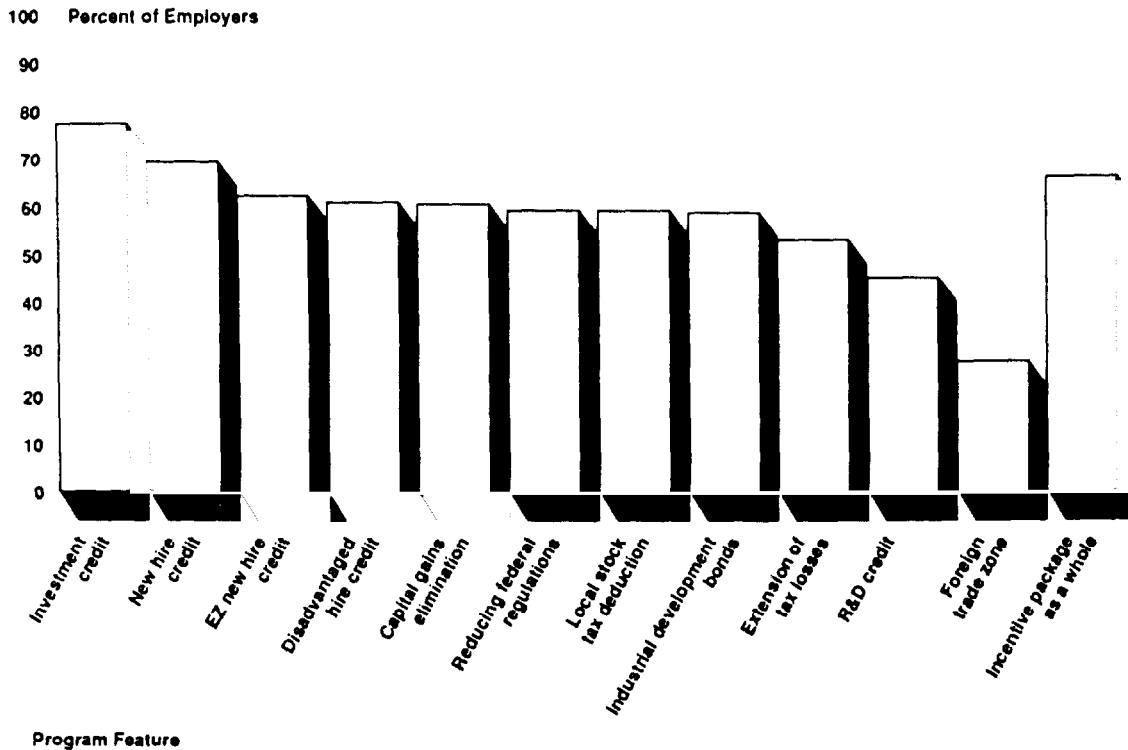
For the most part, the federal incentives proposed in H.R. 3232 are stronger than the Maryland EZ incentives. Taken individually, most of the federal incentives are rated higher than the individual Maryland incentives, although the programs as a whole elicit similar responses. The majority of the federal incentives are rated higher than even the highest-rated nonfinancial incentive. However, ratings of the federal incentives range widely, indicating preferences for some and little support for others.

The responses to the proposed federal incentives are shown in figure 4.5. The first two incentives seem to have strong support and a low level of opposition. The 10-percent investment tax credit for construction or renovation of tangible property received ratings of great importance and very great importance by 60 percent of the respondents; ratings of little or no importance were attributed to this incentive by only 14 percent of the firms. The federal income tax credit for additional hires also had many high ratings. Over 48 percent of the respondents rated this incentive as of great or very great importance.

Tax credits for hiring EZ residents or the disadvantaged and the elimination of capital gains on property sales have similar frequency distributions when the percentages are considered; however, many respondents determined that the capital gains provision would not be applicable to their situation. The next three incentives, reducing federal regulations, tax deductions for the purchase of local stocks, and making industrial development bonds available, have similar distributions by percentage; a sizable proportion of firms did not consider industrial development bonds applicable to their business.

The extension of deductibility of losses for EZ business stock and credit for research and development have low levels of support for the firms

Figure 4.5: Frequency of Employer Ratings of Proposed Federal EZ Program Features as Important^a



^a"Important" is defined by an employer rating of moderate, great, or very great importance on a 5-point index.

that were surveyed. The proposed federal incentive establishing foreign trade zones was thought to be of little or no importance by 60 percent of the respondents.

Additional Incentives Proposed by Employers

In the questionnaire, we asked the respondents if they had any suggestions for modifying the Maryland EZ program or the list of federal incentives. Seventy-two of the respondents offered at least one suggestion on how to modify the Maryland program. Most of the suggestions (29) centered on increasing the information about the program in Maryland. Ten more suggestions involved the modification of general or specific incentives.

In response to a request for suggestions on what types of federal incentives would be effective in encouraging businesses to hire additional

workers, 16 of 48 respondents sought a change in the proposed tax incentives. Fourteen suggestions were to subsidize on-the-job training or support training centers. In answer to the question regarding suggestions for incentives to increase investment in property or equipment, 42 of the 58 respondents who made suggestions wanted some change in the tax incentive. When asked about incentives to start, keep, or relocate business in the EZs, possible state and local measures were mentioned by 16 of the 49 people commenting. Suggestions for changes in tax incentives were offered by 13 respondents, and 10 suggested loans.

Firms' Characteristics and Employers' Response to an EZ Program

We compared employers' response to the proposed federal program and the extant Maryland EZ program in light of program participation, business sector, and firm size.⁶ We found that participants rated the incentives higher than nonparticipants, although the reactions of both participants and nonparticipants to the Maryland and federal incentive packages were about the same. Businesses in different sectors showed a differential preference for either the federal program or the Maryland program. The size of the firm had no significant effect on ratings of the programs as a whole.

Program Participation

To determine the effect of participation in an EZ program, we compared participants and nonparticipants in Hagerstown and Salisbury on their responses to the Maryland incentives taken as a whole and the proposed federal incentives taken as a whole. That is, each firm rated both the Maryland incentive package and the federal package.

Consistent with the literature, participants rated the Maryland and federal incentives as a whole as significantly more important than the nonparticipants. We found no significant difference between the Maryland package and the federal package as rated by all respondents; also, participants and nonparticipants did not rate either of the two programs as significantly important overall.

The picture was somewhat different when specific Maryland and federal incentives were compared. As one would expect, firms ranked higher the incentives that appear to have a higher dollar value. The federal income tax credit of 10 percent of wages for hiring each additional employee up to \$17,500 per employee was significantly more favored

⁶To make the comparisons described in this section, we used repeated measures analyses of variance, described in appendix IV.

than the state income tax credit of \$500 for hiring each additional employee to work in the EZ. Similarly, the federal income tax credit of 50 percent of wages for the first 3 years and 10 percent for 17 more years for hiring each additional economically disadvantaged employee was rated significantly higher than the Maryland income tax credit of \$3,000 over 3 years for hiring each additional economically disadvantaged employee to work in the EZ. The 80-percent property tax credit over 5 years for an increase in assessment from expansion, renovation, or capital improvement offered by Maryland was rated lower than the federal incentive of a 10-percent investment credit for construction, reconstruction, or renovation of tangible property in the EZ.

For this last pair of incentives, we found that the participants rated the federal incentive as being almost equal in importance to the state incentive but the nonparticipants rated the federal incentive higher than the Maryland one. All three of these analyses were consistent with the previous analysis that showed that participants rate the incentives higher than do nonparticipants.

Industry Group

In the survey, we collected information on type of business or standard industrial classification code. We used this information to categorize the firms into four categories. The first category included construction and manufacturing firms (78 firms). The second category included transportation, public utilities, and wholesale trade enterprises (53 firms). The third category was made up of retailers (142 firms). The fourth category included services, including financial, insurance, real estate, agricultural, and landscaping services (170 firms). These divisions were made on the basis of land use, labor requirements, capitalization, and the distribution of firms in our population.

We compared the firms in the four industrial categories from Hagerstown and Salisbury on their responses to the Maryland incentives taken as a whole and the proposed federal incentives taken as a whole. This analysis showed no significant difference for the business category taken separately; however, we found that some types of firms rated the Maryland and federal packages differently from other categories of firms. Businesses in the first category, construction and manufacturing; the second, utilities, transportation, and wholesale trade; and the fourth, services, rated the federal incentive package higher than the Maryland EZ incentive package. The third category, retailers, rated the Maryland group of incentives higher than the proposed federal incentive package.

To get a clearer picture of how specific incentives were operating on businesses in various categories, we analyzed three Maryland incentives and their federal counterparts. For the credits for new hires, the federal incentive was clearly preferred. Although there was no significant difference for the industrial categories, we found that the federal incentive for hiring the economically disadvantaged was clearly preferred over the state incentive. The federal incentive for construction or renovation was rated as significantly more important than its state counterpart. Industry groups did not differ on their response to these incentives.

Firm Size

To evaluate the effect of firm size on the ratings of the importance of the federal and Maryland incentive packages, we compared firms in different size categories from Hagerstown and Salisbury on their responses to the Maryland incentives taken as a whole and the proposed federal incentives taken as a whole. Since many of the firms had one or no full-time employees reported on the survey, we included them in the first category, which is probably made up of mostly sole proprietors. After that, we used the Bureau of Labor Statistics categorization as a guideline. Since we had fewer firms in our survey than the Bureau of Labor Statistics typically uses, we combined some of the nine categories. The second category included firms with 2 to 9 employees, the third with 10 to 49, the fourth with 50 to 249, and the fifth included firms with over 250 employees. Only firms in Salisbury and Hagerstown were used for this analysis.

The results consistently showed no effect for size of firm. This was true for comparisons of the federal and Maryland incentive packages and of the three pairs of incentives reviewed in the previous section.

Summary

To address our question on the relative effectiveness of different tax incentives and other local business development strategies, we conducted a survey of employers in areas that are targeted for such strategies. We focused on employers because they have to decide to alter their business decisions in response to strategies or programs in order for the programs' development objectives to be achieved. We defined effectiveness as the ability of a strategy to influence employers' hiring and investment decisions.

Among the various factors that can influence a business location decision, employers were less likely to view those most amenable to government intervention as important. Regulatory practices, taxes, financial

inducements, and government-sponsored technical assistance are not considered very important by most respondents. Market access is of critical importance, with community and site characteristics also rated high in importance. Community characteristics, which include services, can be enhanced by government as can the condition of roads, bridges, ports, and the like, which was also rated as important; however, they are not amenable as direct incentives to business.

Labor force, as defined on the questionnaire (quality, availability, skill level, productivity, and wage and salary levels), is not a highly important location decision factor for most Maryland businesses that responded to the survey. This means that government programs that seek to improve—from the employers' point of view—aspects of the workforce, for example, through job training, would be of little importance to these businesses in their location decision. However, this evidence on location decisions alone does not necessarily imply that incentives to hire more among targeted groups or to hire additional workers would be ineffective. The ratings of the importance of incentives for additional workers indicates that such a program would have quite a bit of support.

In the review of the ratings for the Maryland incentives, the proposed federal incentives, and the nonfinancial incentives, we found that only a few incentives were rated of great or very great importance by a sizable proportion of the businesses queried. For the Maryland EZ program incentives, the property tax credit for expansion, renovation, or capital improvement is clearly favored. A federal program could require a local incentive of this kind; however, a widely used credit could place an added tax burden on the other businesses and cause a reduction in services, which in turn could have a negative effect on location decisions. A 10-percent investment credit on federal taxes for construction or renovation, which was the highest-rated federal incentive, might be a good alternative to a federal requirement like this. We found that credits for additional hiring were viewed as more important incentives by program participants than by the population at large.

We found no meaningful difference between the ratings of importance for the Maryland incentives taken together and the proposed federal package. However, we did find some differences between specific comparable Maryland and federal incentives. One possible explanation for this apparent lack of difference between the programs overall is that the property tax credit, which was among the most favored features of the state program, may weight the attitude toward the Maryland program

as a whole in the positive direction. Or people may downgrade the overall rating of the federal program because it is not in operation; the results of the Maryland program are more tangible. Or, perhaps, the level of inducement in the Maryland program is sufficient overall to induce changes in hiring and location decisions.

In examining differences among firms on their assessments of the importance of various program features, we found that firms in some industrial groupings are likely to be more responsive to the proposed federal EZ program than to the state program and vice versa. This indicates that cost savings may be realized by targeting certain industries for a limited number of incentives that are more effective in those industries than creating omnibus programs.

Our finding that participants rated the Maryland incentives higher than nonparticipants is consistent with the literature and common sense. We would expect those attracted to the program to place greater significance on the incentives. We found no differences among firms of different size on their assessments of the two programs overall or on specific comparable program features.

Summary and Matter for Congressional Consideration

Our first objective, as defined by our congressional request, was to understand the assumptions about EZ performance made by the Department of the Treasury in its estimates of program cost. Our four other objectives involved providing evidence on the performance of an existing EZ program and the reasonableness of the agency's assumptions.

We found that the agency assumed that a federal EZ program would not affect national product and would not yield offsets to program cost during its estimation time, even if employment increased in the EZs. We studied an alternative perspective that claims net increases in activity and offsets are plausible. Results from our study of Maryland EZs that failed to indicate that observed employment increases were related to the program meant that we could not test the validity of either argument. Although we do not claim the ability to fully generalize from this one state program to a federal program, these results increase doubt that a similar federal program implemented under similar conditions could stimulate local employment growth, produce local program cost offsets, or reduce welfare dependence among workers. The apparent weak performance of the EZ program may be caused, in part, by a mismatch between EZ program features and the factors that employers claim are most important in their business location decisions.

Federal Department Assumptions About Program Performance

The Department of the Treasury's estimates of the cost of a federal EZ program first appeared in the president's budget in 1983. These estimates exceeded \$1 billion over the first 3 years of program operation. The methodology used by the agency assumed that any program-related local employment increases would produce shifts in economic activity rather than net increases in it over the period covered by the cost estimates. As a consequence, the agency assumed that an EZ program would not yield offsets. The exclusion of potential offsets from estimates of net program cost meant that the estimates were higher than they would have been otherwise. The agency's assumptions seem to be based on economic logic rather than on empirical evidence. They are consistent with the agency's approach to estimating costs associated with proposed programs.

We looked closely at the Department of the Treasury's assumption that local program-related employment increases could not, within the time covered by their estimates, alleviate conditions in distressed areas that place burdens on firms that operate there. We discussed a potential path to improving these conditions that emphasized the role of the program in enhancing local workers' job skills through on-the-job training and

that could bear fruit in this time. The agency did not establish that this scenario for improving blighted economic conditions, which it also considered (or others), was implausible.

An alternative (Barrett, 1987) focused on the potential secondary effects of a federal EZ program. This perspective suggests that an EZ program can yield net increases in activity and offsets to cost. These outcomes require program-related employment increases in EZs that result from shifts from tight labor markets to labor surplus areas. Such shifts could allow national employment increases with little effect on inflation. Based on this perspective, evidence of cost offsets would be program-related employment increases that resulted in the type of shifts described above.

In the end, though, the question of EZ employment and offsets should be answered empirically. We presented findings in chapter 3 from a study of three Maryland EZs that bear on these assumptions.

Program Performance

To provide evidence on the performance of an EZ program, we focused on whether or not Maryland's EZ program did in fact influence local employment increases and, if so, what the nature of those increases was. We chose to study Maryland's EZ program because it resembled a major proposal for a federal program (described in H.R. 3232), and it had been in operation long enough to show effects.

We found that although employment did increase in the EZs we studied over the 1980-87 period, we were unable to show that the increases resulted from the EZ program. Because offsets require local program-related employment increases, and we did not find such increases, we could not empirically assess which of the two sets of assumptions about net economic activity and cost offsets might be right. Therefore, we are unable to tell which assumptions a program that did produce such increases might support.

The apparent weak performance of the EZ program with respect to local employment growth also meant that reductions in welfare dependence among workers were unlikely. This performance could be explained, in part, by evidence that indicates an apparent mismatch between the factors that are most important to employers in their business location decisions (such as market access and property taxes) and EZ program

features. Indeed, employers report that the factors that are most amenable to government intervention are the least important to employers' business location decisions.

Matter for Congressional Consideration

Our assessment of the Maryland experience does not show that enterprise zones are effective. If the Congress nevertheless decides to introduce a federal program along those lines, we believe that the program should be a modest demonstration rather than the large effort proposed in several of the bills. From our results, we conclude that more should be known about the performance and net cost of a federal EZ program (both in absolute terms and in comparison with other alternatives) before one is implemented on a large scale. Valuable information on the necessary ingredients for an effective program could be gained from careful evaluation of a limited demonstration project implemented under a variety of different conditions, particularly if that were coupled with a parallel demonstration of a project designed to increase labor mobility. Such projects could experiment with different program features and with administrative arrangements that would reward only verifiable increases in employment or investment above and beyond what they would be in the absence of a program.

We base this call for additional research on the lack of evidence of local program-related employment increases in the few EZs that we studied. Under either the Department of the Treasury's assumptions about program performance or the alternative assumptions we examined, this outcome suggests no cost offsets for a potentially expensive program. It indicates the need for a cautious approach to developing a federal EZ program. A demonstration seems more warranted than a full-scale program as proposed in several bills. Our call for an "experimental" approach to developing a federal program echoes our earlier recommendation (Revitalizing Distressed Areas Through Enterprise Zones: Many Uncertainties Exist, GAO/CE-82-78, July 15, 1982).

While we have confidence in our findings for the EZs we studied, these findings are not generalizable. That is, we cannot say that implementing a similar program elsewhere or under different conditions would yield the same or different results. More should be known about a federal program under a broader variety of conditions before a large investment is made. We advocate the presence of a strong evaluation component for a demonstration project that emphasizes implementation under more diverse conditions and the varying of some program parameters.

Chapter 5
Summary and Matter for
Congressional Consideration

We also believe that a demonstration project should be designed to test ways of rewarding only firms' employment and investment increases that result from the program. Our findings suggest that many employers in the Maryland program may have legally won financial windfalls from program credits for behavior that they had already made or would have made in the absence of a program. A federal program should be designed to avoid this potentially expensive and wasteful trap. Federal programs that offer tax credits and other state EZ programs may provide guidance on how best to achieve this design objective.

Request Letter

Congress of the United States
Washington, DC 20515

September 10, 1986

Honorable Charles Bowsher
Comptroller General
U.S. General Accounting Office
441 G. Street N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

The economic health of local communities has long ranked with this country's leading domestic priorities. Unfortunately, many communities continue to face steep declines in business activity with attending problems of rising unemployment, population decline and structural decay. We believe that one approach to these persisting problems may be to stimulate business activity through the use of tax incentives targeted to local Enterprise Zones. Although Congressional action on such proposals has yet to be completed, a number of states have developed Enterprise Zone programs of their own.

Because Enterprise Zones rely heavily on tax incentives to stimulate business investment, the Congress needs to understand as fully as possible the gains and losses to federal revenues that might result from a federally sponsored Enterprise Zone program. Estimates have been made of the revenue losses resulting from such a program. We are concerned that these estimates may not fully represent program benefits. In order to provide a balanced picture of program benefits and costs, we request that GAO develop a method for estimating such offsetting revenues that may result from new employment opportunities in Enterprise Zones, including any reductions in transfer payments such as AFDC, food stamps and housing subsidies. We understand that the Program Evaluation and Methodology Division has been developing a methodology for estimating such program effects.

In particular, we would like GAO to examine the following issues:

- 1- What assumptions do federal departments, particularly Treasury and HUD, make about the potential performance of a federal Enterprise Zone program? Specifically, do they assume that such a program would create offsetting revenues through new job creation and possible reductions in welfare dependency?
- 2- How much employment growth has occurred within state designated Enterprise Zones, especially in those programs which most closely approximate the types of tax incentives contained in Congressional Enterprise Zone proposals?

**Appendix I
Request Letter**

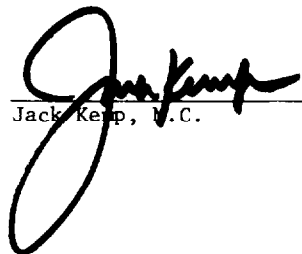
Hon. Charles Bowsher
Page 2

- 3- What level of offsetting revenues has been realized as a result of decreases in federal transfer payments to workers employed by participating businesses within state designated Enterprise Zones?
- 4- Has the level of welfare dependency declined among families residing in state designated Zones, particularly among those families with a history of welfare dependency spanning two or more generations?
- 5- What federal lessons can be drawn from state experiences with Enterprise Zones about the relative effectiveness of different tax incentives and other local business development strategies?

If you have any questions regarding this request, please contact Virginia Maya of Rep. Garcia's staff at 225-4361, or Mary Brunette of Mr. Kemp's staff at 225-5265.

Thank you for your cooperation in this matter.

Sincerely,


Jack Kemp, M.C.


Robert Garcia, M.C.

Comparison of H.R. 3232, 99th Congress, and the Maryland EZ Program Features

H.R. 3232	Maryland
Eligibility and duration	
<p>Area must satisfy all the following:</p> <ul style="list-style-type: none"> Population of at least 4,000 if within a metropolitan statistical area of 50,000 or more; otherwise, population of 1,000 or within an Indian reservation Unemployment at least 1.5 times the national level At least 20% of population below national poverty level At least 70% of population is below 80% of local median income Area experienced a 20% decrease in population 1970-80 Area wholly within jurisdiction of local government eligible for assistance under section 119 of Housing and Community Development Act of 1974 State and local government agree to a probusiness course of action (for example, decrease in tax rates and increase in level of services) Designation for a maximum of 24 years A maximum of 100 areas may be designated At least one fourth of the designated zones must be rural areas of less than 50,000 outside a metropolitan statistical area 	<p>Area must satisfy at least one of the following:</p> <ul style="list-style-type: none"> Unemployment in area or proximity at least 1.5 times the national or state level, whichever is higher Population in area or proximity below 125% of national poverty level At least 70% of families in area or proximity are below 80% of local median income Area or proximity experienced a 10% decrease in population between censuses and either chronic property abandonment or substantial property tax arrearage Designation for 10 years A maximum of 6 EZs may be designated in any 12-month period; no county may receive more than 1 new EZ in any calendar year
General hiring tax credit	
<p>10% tax credit for increased employment expenditures; for the last 3 years of EZ, the credit gradually decreases to 7.5%, 5.0%, 2.5%</p> <p>Credit excess over tax liability can be carried back 3 years and carried over 15 years</p> <p>Limited to 2.5 times the dollar limitation in effect under section 3306 (b)(1) of the Internal Revenue Code; January 5, 1987, the limit was \$7,000 limiting the employment credit to \$17,500</p>	<p>Up to \$500 tax credit for each new job filled by a worker not rehired after being laid off</p>
Disadvantaged worker hiring tax credit	
<p>Tax credit equal to % of wages paid to disadvantaged workers: 50% for years 1-3; 40% for year 4; 30% for year 5; 20% for year 6; 10% for years 7-20; for the last 3 years of EZ, these amounts decrease by 25%, 50%, and 75%</p> <p>Credit is lost if disadvantaged worker is fired within 270 days</p>	<p>Tax credit for 3 years for each new job filled by a disadvantaged worker not rehired after being laid off: \$1,500 for year 1; \$1,000 for year 2; \$500 for year 3</p> <p>Value of credit exceeding tax liability can be carried over 5 years from date of hire</p>

(continued)

**Appendix II
Comparison of H.R. 3232, 99th Congress, and
the Maryland EZ Program Features**

H.R. 3232

Maryland

Laid-off worker hiring tax credit

No laid-off worker provision prior to July 1, 1986; tax credit for 2 years for a worker rehired after being laid off by the firm for more than 6 months: up to \$1,000 for year one; up to \$750 for year 2

Tax credit to workers in EZ

5% income tax credit to qualified workers; for the last 3 years of the EZ, these amounts decrease to 3.75%, 2.50%, 1.25%

Limited to 1.5 times the dollar limitation in effect under section 3306 (b)(1) of the Internal Revenue Code; January 5, 1987, the limit was \$7,000 limiting the employee credit to \$10,500

Investment and property incentives

10% investment tax credit for new construction property; for the last 3 years of EZ, the credit reduces to 7.5%, 5.0%, and 2.5%

County or municipal property tax credit of 80% of increase in assessment value resulting from improvements for 5 years; credit then decreases by 10% each year for the next 5 years; prior to February 1, 1986, the credit was 80% for 5 years

Nonrecognition of capital gain on EZ business property when qualified replacement property of equal or greater value is purchased within 1 year

Deduction for purchase of enterprise stock equal to the aggregate amount paid, up to \$100,000 per year; gain on the sale of this stock is considered ordinary income (penalty imposed if property sold within 3 years)

Limits on cost recovery deductions for property financed with industrial revenue bonds do not apply to EZ property

1986 expiration date for exemption of small-issue (less than \$1 million) industrial revenue bond's tax-free status does not apply when the bonds are used to finance an EZ project

Ordinary loss deduction for worthless securities of EZ businesses

Up to 100% guarantee for long-term loans to finance fixed assets, working capital, and government contracts

Higher loan limits for local government industrial land acquisition, industrial park development, options to purchase industrial sites, and shell building projects

Funds of 25% over the maximum funds available from the Maryland industrial and commercial redevelopment fund to jurisdictions available for use within an EZ

Research and development incentive

Research credit for research conducted in EZs equal to 37.5% for qualified research expenses exceeding base year expenses (the standard R&D credit was 25% until 1986)

(continued)

**Appendix II
Comparison of H.R. 3232, 99th Congress, and
the Maryland EZ Program Features**

H.R. 3232

Maryland

Other features

Agencies are authorized to waive or modify rules when requested to do so, and when such action is expected to further job creation, community development, or economic revitalization within EZ

Foreign-Trade Zone Board shall expedite processing of an application for the establishment of a foreign-trade zone within an EZ

Employment Growth Analyses

We used an interrupted time series (ITS) design to evaluate the effects of the Maryland EZ program on employment growth for areas that had EZs. We analyzed the data with autoregressive moving average (ARIMA) modeling techniques.¹ Ideally, the intervention studied in an ITS analysis should be a discrete event that occurs at a well-defined point in time and that can be expected to be observable as an immediate change in the outcome measure. In regression terms, the intervention is specified as a dummy variable that changes from 0 to 1 when the event occurs. For example, in our analysis of an EZ's effect (the intervention) on the number of workers employed by program participants (the outcome), the dummy variable changed from 0 to 1 on the date on which the local EZ became operational. However, since we knew that several employers did not begin their participation in the program until many months later, our analysis also considered models that describe an EZ's effect as a gradual increase over several months until it reached a new and stable level. ARIMA modeling is particularly well suited for this situation.

The statistical analysis of an ITS is iterative: Alternative models are identified and tested until one is found that is both statistically adequate and parsimonious. The details of the process of identification, estimation, and diagnosis are in McCleary and Hay. We used the ARIMA program in the SAS/ETS program library for our statistical analysis.²

ARIMA modeling refers to a class of stochastic process models that empirically describe changes in a variable over time as a function of the past behavior of that variable. We used it as an alternative to classical regression approaches. However, as McCleary and Hay note, ARIMA models are not substantially different from regression approaches. Unlike the regression approaches, which can be built on the basis of theory or prior research, ARIMA approaches are built empirically, based on a long preintervention series of observations. The ARIMA approach is often conceptually more appropriate to the analysis of an ITS quasi-experiment.

As we described in chapter 3, we analyzed unemployment insurance data on the aggregated employment levels of program participants from

¹See, for example, R. McCleary and R. A. Hay, Applied Time Series Analysis for the Social Sciences (Beverly Hills, Calif.: Sage, 1980).

²See SAS Institute, SAS/ETS Users Guide (Cary, N.C.: 1982).

April 1980 to September 1987.³ We focused on participants because their employment patterns would be most likely to show the effects of the program. We analyzed the data separately for each study site.

Program intervention for the Hagerstown EZ occurred in December 1983. At this time, the first employers were certified to participate in the program and the local program administrator began to publicize it.⁴ We modeled EZ program effects for all Hagerstown participants on whom we had unemployment insurance data. Although we found no evidence of abrupt or gradual change at the point of program intervention, the plot of the time series (see figure 3.1) and statistically significant crosscorrelations between the employment level and intervention variable suggested the possibility of a delayed program effect at 8 and 10 months after intervention.

To pursue the possibility of delayed program related increases in employment, we first identified the participants who appeared to be responsible for the increases, as is discussed in chapter 3. We found that these employers apparently did not increase their number of employees in response to the EZ program. Therefore, we modeled the series again with these two employers excluded. The data series underlying this analysis is shown in figure 3.2. Again, we found neither an abrupt nor a gradual statistically significant change in employment levels after program implementation.

Program intervention for the Cumberland EZ occurred in December 1982. At this time, the first employers were certified to participate in the program and the local program administrator began to publicize it. Because we were concerned that one large participant—it had more

³Unemployment insurance data were unavailable for the third quarter of 1981. We estimated employment levels for these months so that they represent equal changes between the month prior to and the month after the missing series. Data also were unavailable for several program participants. We examined other information on these employers to assess the likely effect on our time series analyses of excluding them. Because of their small number of employees or the stability of their employment levels over time, we believe that excluding the employers for whom unemployment insurance data were unavailable did not seriously influence the analyses.

⁴Certification is the process through which an EZ administrator verifies that an employer has met state and local program requirements (e.g., hired disadvantaged workers) for it to claim program benefits (e.g., a state tax credit). Employers are eligible to receive program benefits for hiring retroactively. That is, they can claim benefits for hiring that occurred anytime within the previous tax year without any other earlier contacts with the program. However, we assume that the program incentives did not directly influence employers' hiring until after they became informed of the program's availability.

than twice the number of employees as the other participants combined—could overwhelm potential effects for other employers, we decided to exclude it from the time series analyses.

We estimated an ARIMA model using the data presented in figure 3.3. Neither an abrupt nor a gradual change was indicated by the parameter estimates. We did not observe any significant crosscorrelations between the employment level and time variables following intervention.

Program intervention for the Salisbury EZ occurred in October 1983. We modeled EZ program effects separately for all Salisbury participants on whom we had unemployment insurance data and for all participants except two, whom we excluded for reasons, described below, that are unrelated to the program. None of the parameter estimates for the series with all participants included (see figure 3.4) were statistically significant.

One of the employers included in the original series had substantially more employees than any of the other participants. Because we were concerned that its employment pattern could mask the effect of the EZ program on other employers, we decided to exclude this employer and model the series again. We also excluded an employer from the second series whose data were erratic in a way that suggested a reporting problem rather than an erratic employment pattern. The data for the series with these 2 cases removed are shown in figure 3.5.

The intervention components we estimated were either significant or approached significance. They reflected the sharp increases in employment that occurred 3 and 5 months after program implementation, which were also indicated by significant crosscorrelations between the employment level and time variables at these points. As we discussed in chapter 3, we identified six employers who were responsible for these increases. Self-reported data revealed that four of them increased employment for reasons unrelated to the EZ program. One of the two other employers was not participating in the program at the time of the increases; the other employer could not be contacted directly but accounted for only a small increase. Hence, we concluded that the employers did not increase their hiring in response to the program.

Survey of Employers

In this appendix, we describe the survey of employers that we conducted in four Maryland EZs and in one area in Maryland that did not have an EZ. The survey provided information primarily for addressing our question on the relative effectiveness of different tax incentives and other local development strategies. Our findings on this question are presented in chapter 4. Here, we describe our survey instrument, employer lists, mail survey procedures, response rates, and analyses.

Instrument

We developed three versions of a mail survey instrument that were tailored to our three main employer groups: program participants, nonparticipants, and the non-EZ area in Cambridge, Maryland. The versions all requested the following types of information from potential respondents:

1. employers' assessments of the importance of 13 various factors on employers' most recent location decision using a five-point Likert-type index of importance,
2. employers' assessments of the importance of 7 features similar to those of the Maryland EZ program and 12 features similar to those of a proposed federal EZ program on employers' hiring and investment decisions using a five-point Likert-type index of importance,
3. employers' assessments of the importance of six various nonfinancial economic development strategies on employers' hiring and investment decisions using a five-point Likert-type index of importance,
4. employers' suggestions for incentives that a federal EZ program could offer to achieve development objectives, and
5. characteristics of the employers' business located in the area of study such as location status, number of employees, and primary business activity.

Additional information was collected with one or more versions but not all, as appropriate: experience with the Maryland EZ program, influence of the EZ Maryland program on hiring and business location, reasons for not participating in the program, and suggestions for changing the Maryland EZ program. All the versions included instructions and a pledge of confidentiality.

The instrument was pretested with a judgment sample of employers in the communities we later surveyed. Pretesting was done in person with in-depth discussion of instrument items and instructions. The instruments were revised to reflect what we learned in pretesting.

Employer Lists

We intended to survey all currently operating businesses in the Hagerstown and Salisbury EZs, program participants and nonparticipants; participants in the Cumberland and Park Circle, Baltimore, EZs; and all employers in the Cambridge non-EZ area. The state of Maryland provided us with reports that contained lists of program participants (employers who were certified by local program administrators to receive EZ credits). These lists were current to at least the end of 1986.

While we had our employer list for program participants, we had to develop one for the nonparticipants and for employers in Cambridge. We began by examining existing lists of businesses for each community. These included lists assembled by local EZ administrators, chamber of commerce lists, county property tax rolls, a directory of state manufacturers, and reverse telephone directories. Each list was inadequate in its coverage of businesses in the areas. For example, the EZ administrators' lists were typically compiled when the local jurisdiction applied to the state for EZ designation and, hence, did not include businesses that had since begun operation in the area.

Because none of the existing lists was satisfactory alone, we combined all the lists available for a given EZ or area. To use the lists, we had to screen out businesses that were outside the boundaries of the EZs and non-EZ area. This required that we identify the streets and addresses within the boundaries of the EZs and the non-EZ area.¹ We did this by checking addresses and visiting the areas. We also took care to avoid duplicate entries that would result from businesses appearing on several lists. We believe that our employer lists for nonparticipants and employers in Cambridge are reasonably complete through 1986.

Mail Survey Procedures

We mailed each potential respondent a packet that contained a questionnaire, a personalized cover letter, and a stamped self-addressed return envelope. Nonparticipants also received a map that identified the EZ in

¹We tended to err on the side of overinclusiveness. That is, if we were in doubt as to whether an address was within one of our study areas, we included it. To compensate for this, we asked potential respondents to check whether or not they were within the study areas, as indicated by a map that we provided them with the questionnaire.

which we believed they were located. The packets were sent by first-class delivery.

The first set of packets was mailed during the last week of February 1988. We monitored responses and sent out additional materials to nonrespondents in 3-week to 4-week intervals. Some of these mailings were the same as the original ones but with revised cover letters. Later mailouts also included postcards that reminded recipients to return their questionnaires and provided a number to call for additional information. Because we were particularly interested in information from program participants, we phoned those who failed to respond to request their participation in our survey. Nonrespondents received as many as five contacts, including the original one.

Response Rates and Potential Bias in Results

Despite our best efforts, we did not receive responses from all the employers to whom we sent questionnaires. The overall response rate for our survey was about 54 percent. (See table IV.1.) The highest (86.7 percent) and lowest rates (51.2 percent) were for the Salisbury participants and employers in the non-EZ area, respectively. A greater proportion of participants responded (69.9 percent) than did either nonparticipants (52.6 percent) or employers in the non-EZ area (51.3 percent).

Table IV.1: Response Rates for the Survey of Employers by Location and Participation Status

Employer group	Total number of employers ^a	Number of responding employers	Response rate
Hagerstown			
Participants	48	31	64.6%
Nonparticipants	376	196	52.1
Salisbury			
Participants	15	13	86.7
Nonparticipants	192	103	53.6
Cumberland and Park Circle (participants)	30	21	70.0
Cambridge (non-EZ area)	240	123	51.2
Overall	901	487	54.1%

^aThe total number of employers excludes employers who reported that they were outside the EZ or had ceased operations and employers to whom questionnaires could not be delivered.

The relatively low response rate, especially for the EZ nonparticipants, raises concern about the representativeness of our respondent group. Lower rates increase the likelihood that respondents do not adequately

Appendix IV
Survey of Employers

represent the population from which they were drawn and lead to potential bias in our results. To identify the extent and nature of bias in our results, if any, we compared the respondents with their respective populations or with nonrespondents. In table IV.2, we compare the responding participants with the entire population of participants on industrial group and size (number of employees). These are the same categories that we used in the analyses described in chapter 4; we believe that they are important characteristics on which to judge the representativeness of our respondent group. These comparisons suggest that, overall, the participant respondents represented their populations well.

Table IV.2: Comparison of Responding and All Participants on Percent in Industrial and Size Categories by Location^a

Characteristic	Hagerstown		Salisbury		Cumberland and Park Circle	
	Responding participants	All participants	Responding participants	All participants	Responding participants	All participants
Industrial group						
Construction and manufacturing	19.4%	16.3%	60.0%	63.6%	41.7%	33.3%
Transportation, utilities, and wholesale trade	13.9	12.2	10.0	9.1	16.7	15.2
Retail trade	25.0	28.6	•	•	20.8	24.2
Services	41.7	42.9	30.0	27.3	20.8	27.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	36	49	10	11	24	33
Number of employees						
1 or fewer	11.1	10.2	10.0	9.1	4.2	12.1
2 to 9	30.6	34.7	20.0	18.2	29.2	27.3
10 to 49	47.2	42.9	20.0	18.2	29.2	30.3
50 to 249	11.1	12.2	50.0	45.4	29.2	24.2
250 or more	•	•	•	9.1	8.3	6.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	36	49	10	11	24	33

^aData on participant characteristics are from unemployment insurance records. The N for each participant group may be less than the total number of participants in the group because unemployment insurance data were unavailable.

The only group that may have severely misrepresented its population is the one composed of Cumberland and Park Circle participants. These respondents tended to overrepresent manufacturing and construction businesses. They also tended to underrepresent the smallest businesses and to underrepresent the category of firms with 50 to 249 employees. Since data on these participants were used only in analyses with all

**Appendix IV
Survey of Employers**

other participants or with participants and nonparticipants combined, the biases are likely to be diluted. That is, they are unlikely to seriously affect results.

In table IV.3, we compare responding and nonresponding nonparticipants and non-EZ employers on the frequency of industrial and size groups.² These comparisons used survey data on all respondents and unemployment insurance data on a random sample of nonrespondents. Sampling error meant that frequencies for respondents and nonrespondents were equivalent if they were within 10 percentage points of each other.

Table IV.3: Comparison of Responding and Nonresponding Nonparticipants and Non-EZ Employers on Percent in Industrial and Size Categories by Location^a

Characteristic	Hagerstown		Salisbury		Cambridge	
	Respondents	Nonrespondents	Respondents	Nonrespondents	Respondents	Nonrespondents
Industrial group						
Construction and manufacturing	12.0%	19.4%	13.6%	4.9%	17.2%	13.2%
Transportation, utilities, and wholesale trade	9.9	9.7	13.6	12.2	9.0	15.1
Retail trade	42.7	41.9	23.6	34.1	36.9	41.5
Services	35.4	29.0	49.1	48.8	36.9	30.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	192	62	110	41	122	53
Number of employees						
1 or fewer	28.0	14.5	15.4	25.6	36.1	17.0
2 to 9	44.0	45.2	49.0	46.5	43.5	54.7
10 to 49	21.1	25.8	30.8	25.6	14.8	20.8
50 to 249	5.7	12.9	4.8	•	1.9	5.7
250 or more	1.1	1.6	•	2.3	3.7	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	175	62	104	43	108	53

^aData on the characteristics of nonparticipant and Cambridge (non-EZ) employer respondents are from the survey of employers. Data on the characteristics of nonparticipant and Cambridge (non-EZ) employer nonrespondents are from unemployment insurance records. The N for each participant group may be less than the total number of participants in the group because unemployment insurance data were unavailable. While the frequencies for respondents are for the entire group, those for nonrespondents are based on a random sample; the estimates for the nonrespondents have a sampling error of plus or minus 10 percent.

²We were unable to compare respondents with the population as we did for the participants because data were unavailable on the population. We used a random sample of nonrespondents; estimates of nonrespondent characteristics have a sampling error of plus or minus 10 percent.

Overall, the comparisons indicate that respondents adequately represented their respective populations. The only instances that suggest potential bias in our results are the following: Hagerstown respondents somewhat overrepresented the category of businesses with 1 or fewer employees, Salisbury respondents slightly underrepresented retail businesses and the category of businesses with 1 or fewer employees, and Cambridge respondents overrepresented the category of businesses with 1 or fewer employees and underrepresented the category with 2 to 9 employees.³ We believe that none of these instances is severe enough to invalidate our findings.

Analysis of Survey Data

The findings that we reported in chapter 4 are based primarily on descriptive analyses of the survey data. We do not report sampling error for these descriptive analyses because we use data on the entire populations rather than on samples. This is true even though, as indicated above, we do not have data from all members of the populations.

We also reported the results of comparisons among groups on their assessments of the relative importance of different EZ programs and features. These findings on comparisons are based on repeated measures analyses of variance. Repeated measures analyses were appropriate because we compared the same employers' responses on multiple items. The differences and interactions that we reported were statistically significant at the 0.05 confidence level.

³Note that if the category of firms with 1 or fewer employees is combined with the category with 2 to 9 employees, the respondents and nonrespondents for Cambridge are roughly equivalent.

Detailed Results From Our Survey of Employers

Table V.1: Frequency of Employer Ratings of the Importance of Factors for Their Location Decision^a

Factor	Of little or no importance	Of some importance	Of moderate importance	Of great importance	Of very great importance
Market access	68 14.5%	55 11.8%	78 16.7%	154 32.9%	113 24.1%
Community characteristics	89 18.9%	65 13.8%	135 28.6%	111 23.5%	72 15.3%
Site characteristics	96 20.3%	75 15.9%	110 23.3%	126 26.7%	65 13.8%
Government cooperation	129 27.3%	51 10.8%	99 21.0%	113 23.9%	80 16.9%
Transportation	123 26.0%	78 16.5%	95 20.1%	119 25.2%	58 12.3%
Real estate costs	143 30.6%	57 12.2%	122 26.1%	90 19.2%	56 12.0%
Financial health of region	139 29.7%	75 16.0%	105 22.4%	92 19.7%	57 12.2%
Quality of life	156 33.0%	71 15.0%	115 24.3%	89 18.8%	42 8.9%
Regulatory practices	162 34.8%	87 18.7%	114 24.5%	65 14.0%	37 8.0%
Miscellaneous taxes	179 38.2%	78 16.6%	103 22.0%	66 14.1%	43 9.2%
Labor force	217 45.9%	74 15.6%	84 17.8%	57 12.1%	41 8.7%
Financial inducements	277 59.7%	60 12.9%	64 13.8%	33 7.1%	30 6.5%
Technical assistance	311 66.5%	68 14.5%	64 13.7%	16 3.4%	9 1.9%

^aNumbers with decimals are the valid percent of employers who responded.

**Appendix V
Detailed Results From Our Survey
of Employers**

Table V.2: Frequency of Employer Ratings of the Importance of Maryland EZ Program Features^a

Feature	Of little or no importance	Of some importance	Of moderate importance	Of great importance	Of very great importance	Not applicable
Property tax incentive	89 26.7%	34 10.2%	59 17.7%	72 21.6%	79 23.7%	130
Incentive package	102 28.1%	37 10.2%	97 26.7%	71 19.6%	56 15.4%	86
Loan insurance	120 34.6%	41 11.8%	56 16.1%	63 18.2%	67 19.3%	108
New hire credit	106 29.4%	55 15.3%	84 23.3%	61 16.9%	54 15.0%	99
Higher loan limits	128 38.0%	39 11.6%	61 18.1%	54 16.0%	55 16.3%	117
Disadvantaged hire credit	115 33.2%	61 17.6%	73 21.1%	52 15.0%	45 13.0%	112
Laid-off hire credit	120 35.6%	68 20.2%	68 20.2%	40 11.9%	41 12.2%	119

^aNumbers with decimals are the valid percent of employers who responded.

Table V.3: Frequency of Program Participant Ratings of the Importance of Maryland EZ Program Features^a

Feature	Of little or no importance	Of some importance	Of moderate importance	Of great importance	Of very great importance	Not applicable
Property tax credit	6 11.5%	1 1.9%	7 13.5%	19 36.5%	19 36.5%	12
New hire credit	9 15.5%	5 8.6%	14 24.1%	14 24.1%	16 27.6%	6
Disadvantaged hire credit	9 16.1%	6 10.7%	12 21.4%	16 28.6%	13 23.2%	8
Laid-off hire credit	12 21.8%	10 18.2%	13 23.6%	9 16.4%	11 20.0%	9
Loan insurance	14 28.0%	5 10.0%	10 20.0%	13 26.0%	8 16.0%	14
Higher loan limits	14 27.5%	5 9.8%	12 23.5%	13 25.5%	7 13.7%	13
Incentive package	6 10.7%	4 7.1%	14 25.0%	23 41.1%	9 16.1%	8

^aNumbers with decimals are the valid percent of employers who responded.

**Appendix V
Detailed Results From Our Survey
of Employers**

Table V.4: Frequency of Employer Ratings of the Importance of Nonfinancial Incentives^a

Incentive	Of little or no importance	Of some importance	Of moderate importance	Of great importance	Of very great importance
Infrastructure improvement	108 23.4%	81 17.6%	111 24.1%	91 19.7%	70 15.2%
Simplified government procedures	136 29.5%	87 18.9%	90 19.5%	86 18.7%	62 13.4%
Employee job training	167 36.2%	84 18.2%	92 20.0%	70 15.2%	48 10.4%
Community development corporations	163 35.6%	87 19.0%	100 21.8%	68 14.8%	40 8.7%
Low cost business consulting	202 43.9%	93 20.2%	84 18.3%	46 10.0%	35 7.6%
Foreign market, export assistance	345 76.2%	42 9.3%	35 7.7%	13 2.9%	18 4.0%

^aNumbers with decimals are the valid percent of employers who responded.

Table V.5: Frequency of Employer Ratings of the Importance of Proposed Federal EZ Program Features^a

Feature	Of little or no importance	Of some importance	Of moderate importance	Of great importance	Of very great importance	Not applicable
Investment credit	54 13.7%	36 9.1%	69 17.5%	107 27.1%	129 32.7%	66
New hire credit	74 18.2%	51 12.6%	85 20.9%	81 20.0%	115 28.3%	51
EZ new hire credit	98 24.3%	54 13.4%	95 23.5%	64 15.8%	93 23.0%	53
Capital gains elimination	91 24.8%	54 14.7%	74 20.2%	64 17.4%	84 22.9%	92
Incentive package	59 16.1%	66 18.0%	106 29.0%	93 25.4%	42 11.5%	44
Disadvantaged hire credit	99 24.6%	58 14.4%	89 22.1%	67 16.7%	89 22.1%	57
Reducing federal regulations	110 28.9%	45 11.8%	86 22.6%	59 15.5%	80 21.1%	78
Local stock tax deduction	111 29.3%	44 11.6%	91 24.0%	55 14.5%	78 20.6%	77
Industrial development bonds	104 29.6%	41 11.7%	76 21.7%	66 18.8%	64 18.2%	104
Extension of tax losses	121 34.8%	43 12.4%	73 21.0%	52 14.9%	59 17.0%	101
R&D credit	132 40.2%	48 14.6%	59 18.0%	45 13.7%	44 13.4%	126
Foreign trade zone	172 59.9%	37 12.9%	38 13.2%	20 7.0%	20 7.0%	174

^aNumbers with decimals are the valid percent of employers who responded.

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